



Restorepoint 5.6 User Guide

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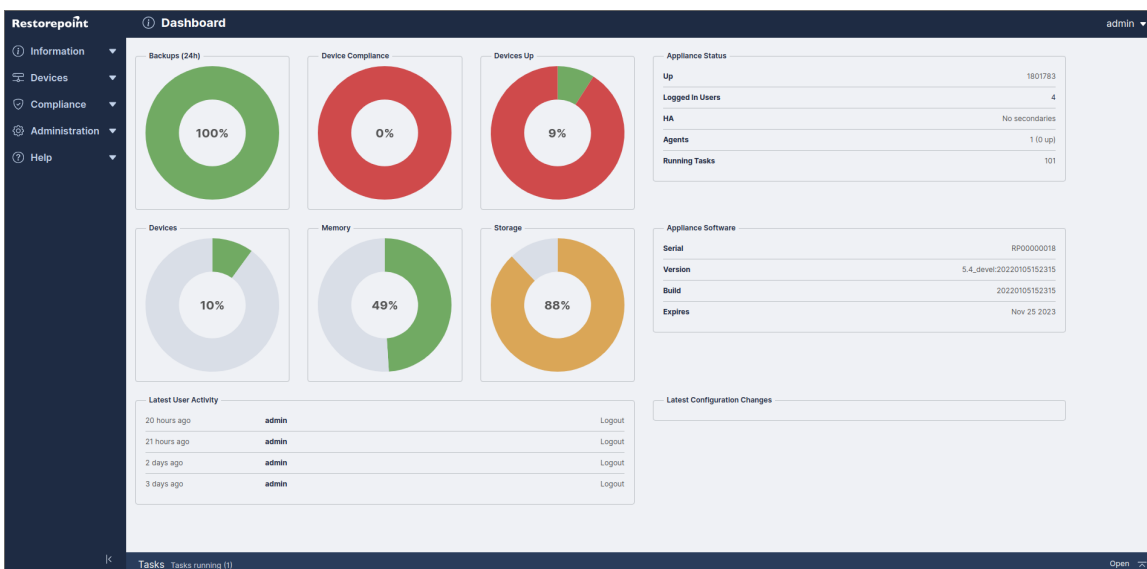
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Chapter 1

Overview of Restorepoint version 5.6

Overview

Restorepoint is a Disaster Recovery and Secure Configuration Management appliance for network devices such as, routers, switches, proxies, and firewalls. Restorepoint can automatically retrieve your network device configurations, detect changes and compliance violations, and report these automatically to network administrators.



Overview of Restorepoint Capabilities

Restorepoint offers you the ability to add, configure, monitor, and control devices. You can perform these actions through a simple user interface that gives you access to all your devices, stored backups, user configurations, and

activity logs. You can also set the backup frequency for each device individually or as a group. When your device configurations are stored on Restorepoint, you can restore network devices when needed. Your devices are secure as all backups, device configurations, and passwords are encrypted and cannot be accessed by an unauthorized user.

You can find a list of devices that are currently supported by Restorepoint in the **Plugin Guide** (Help > Plugin Guide) on the [Restorepoint website](#).

Restorepoint also has its own RESTful API that allows you to trigger all of Restorepoint's operations automatically. For more information, see the [Restorepoint Developer Documentation](#).

You can find all Restorepoint Release notes and maintenance release notes on ScienceLogic's [Release Notes](#) site.

Chapter

2

Installing Restorepoint

Overview

Restorepoint is available as a hardware appliance or a VMware virtual appliance. This section describes how to perform the initial configuration of your Restorepoint appliance and configure it to communicate with other devices on your network.

This chapter covers the following topics:

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Before You Begin

Before you install your Restorepoint appliance, ensure you meet the following requirements:

- For hardware installations, 1U of rack space available to install the appliance, with a standard 240V power socket
- For hardware installations, allocate a port on your Ethernet switch for the appliance
- The appliance has an allocated static IP address
- You have configured your firewall to allow traffic between the appliance, and the network devices and servers that Restorepoint will control
- For virtual deployments, verify that you are running VMware ESX vSphere 6.7U2 or later
- For virtual deployments, verify your ESX host has 4 GB RAM available and the datastore where the virtual machine will be deployed has 256 GB available
- Configure your firewall to allow outbound traffic from Restorepoint to the Internet. If you have a firewall between any of your devices and Restorepoint, you may need to open additional ports. For more information, see device-specific details in the **Plugin Guide** (Help > Plugin Guide) on the [Restorepoint website](#).
- Configure your mail server to allow Restorepoint to relay email

Firewall Requirements

This section lists the ports used to by clients connecting to Restorepoint and the ports used by Restorepoint to connect to network devices and other servers.

NOTE: Your firewall policy might need to be modified for Restorepoint to function correctly.

Traffic from Clients to Restorepoint

The following table lists traffic from Restorepoint to network devices:

Port	Purpose
443/tcp	Restorepoint user interface
22/tcp	Restorepoint shell access
161/udp	(optional) SNMP monitoring

Traffic from Restorepoint to Network Devices

Restorepoint connects to network devices in a variety of ways, depending on the vendor. Sometimes, devices use back-connections to transfer their configuration to Restorepoint. See the device-specific details in the **Plugin Guide** (Help > Plugin Guide).

Other Traffic Originating from Restorepoint

The following table lists outbound firewall requirements:

Port	Purpose
443/tcp	Download updates from Restorepoint update servers and HA database sync
53/udp	Lookup to DNS servers
25/tcp	Send notification emails using SMTP
123/udp	Time synchronization with NTP servers (optional)
22/tcp	Initiate remote support requests (<i>jmp1.restorepoint.com</i> and <i>jmp2.restorepoint.com</i>), or communicate with an agent's manager. (optional)

Browser requirements

Restorepoint requires a modern browser with JavaScript enabled. Restorepoint has been tested with the following:

- Chrome (v35)
- Firefox (v25)
- Internet Explorer 10
- Safari (v6)
- Opera (v12.10)

Restorepoint Virtual Appliances

You can install Restorepoint with the following virtual appliances:

Amazon Web Services

If you want to deploy Restorepoint on your AWS instance, you must request an AMI from ScienceLogic Support. When making the request, you will supply your Amazon EC2 account ID and the Region to which you want to deploy your Restorepoint instance to your Support contact. Then Support will share the AMI to your Amazon EC2 account.

To launch a Restorepoint instance:

1. Log in to the EC2 Console and click **[Launch Instance]**.
2. Give your instance a name and tag your instance, if desired.
3. On the **My AMIs** tab, select the *Share with me* radio button, and then select the Restorepoint AMI by searching "Restorepoint" in the **Search** field.
4. Select an **Instance Type**. You can change the sizing at a later stage. Click **[Next]** after you make your selection. Note the following guidelines:

- For evaluation purposes, t3.micro is usually sufficient
 - For production purposes, t3.medium or t3.large are recommended
5. In the **Key pair (login)** pane, create an SSH key pair or select an existing one from the **Key pair name** drop-down field. After you select the SSH key pair, you can configure the instance details on the next screen.

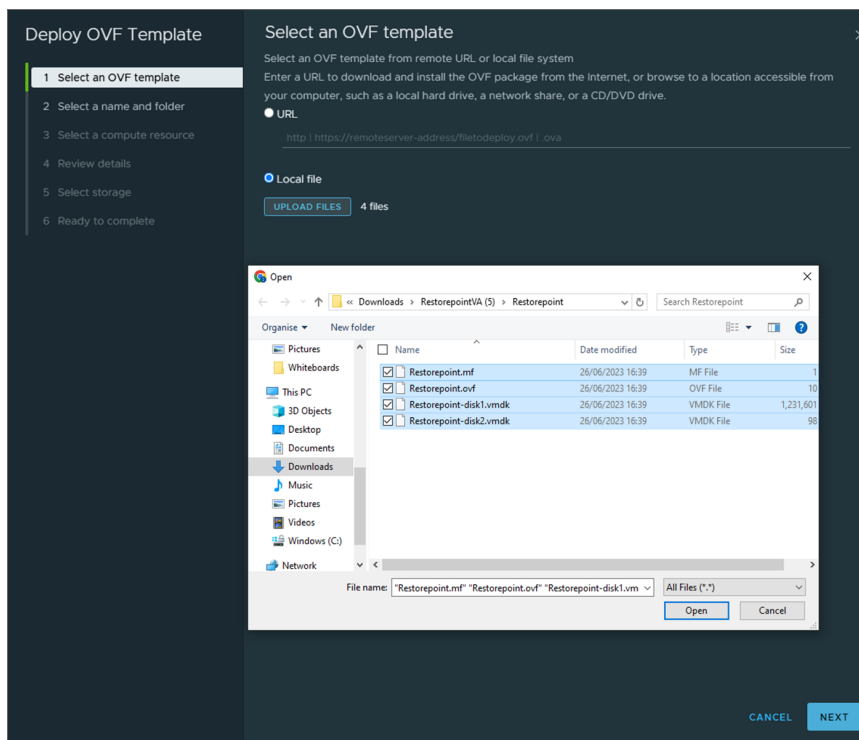
WARNING: Restorepoint uses DHCP for private IP address assignment. Ensure that the VPC/Subnet are configured to auto-assign the instance private IP address or enter the instance IP address in the **Advanced Details** section. **You will not be able to change the instance IP address after you create it.**

6. On the **Network settings** pane in the **Firewall (security groups)** section, select the *Select existing security group* radio button or select the *Create security group* radio button. Ensure that you can communicate to the instance via HTTPS (port 443) and SSH (port 22). For more information, see the [Firewall Requirements](#) section in the Restorepoint User Guide.
7. In the **Configure storage** pane, two volumes are listed: *Root volume* and *EBS volume*. Both are 40GB by default. If you wish to change the size of your appliance, ScienceLogic recommends you change the second volume labeled **EBS volume**.
8. Review your settings and if they are correct, click **[Launch instance]**. The instance will launch. The first boot will take longer to launch than usual due to the initial volume encryption.
9. When the launch is complete, you should be able to connect to the Restorepoint instance via HTTPS. Log in with **admin** as the username and password for the initial login, and the initial setup screen will appear. Change your password after your first login.

VMware vSphere 6.7

The Restorepoint Virtual Appliance can be downloaded as a .ZIP file from the Restorepoint website. The following steps refer to VMware ESX vSphere 6.7U2 or later:

1. Expand the Restorepoint ZIP file in a suitable location on your PC.
2. Launch the vSphere HTML Client.
3. Right-click on the desired destination in the left-hand column and choose **Deploy OVF Template**, select **Deploy from file** and browse to the OVF file inside the extracted folder.



4. Select all the files in the folder. There should be a .mf file, an .ovf file, and 2 .vmdk files. Click **[Next]**.
5. Enter a name (or keep the default name) for the virtual machine and select the inventory location, then click **[Next]**.
6. Choose the host or cluster, then click **[Next]**.
7. Select which datastore should be used, then click **[Next]**.
8. Choose **Network Mapping**, then click **[Next]**.
9. Check the summary information, then click **[Finish]**.
10. The virtual machine will now deploy. After completion, click **[Close]** in the completion dialog box.

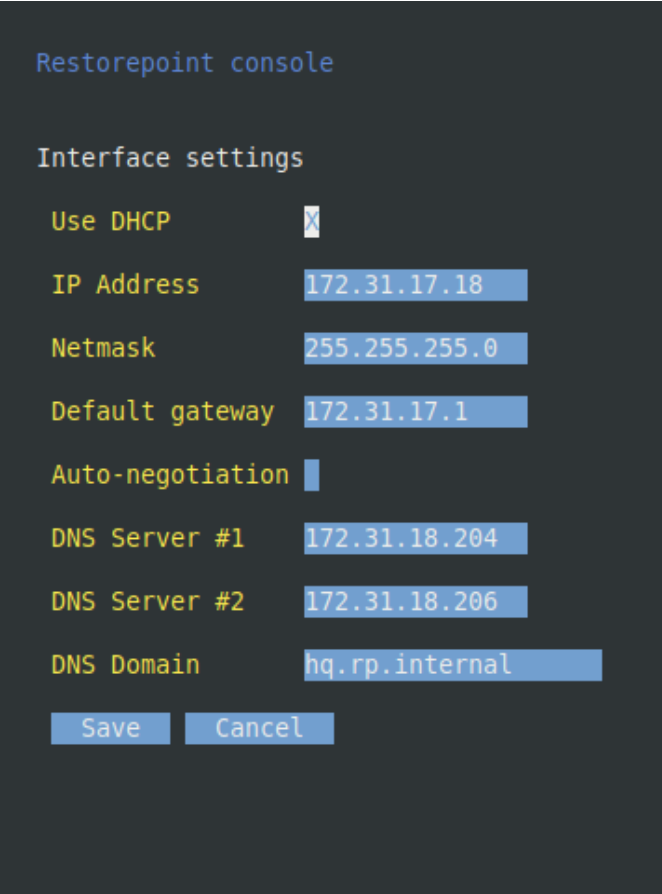
IMPORTANT: Restorepoint is encrypted-at-rest for the secure storage of backups and databases. Any use of third-party tools to perform a scan of Restorepoint backups or databases may result in an error message.

IMPORTANT: ScienceLogic provides this procedure as a courtesy and does not offer support for third-party systems. For more information, including troubleshooting procedures for a VMware vSphere system, see the VMware documentation at <https://vmware.com>.

IP Address Setup

To set up Restorepoint, you must configure the network parameters, which include the static IP address you have allocated to the appliance, and the DNS and gateway settings for your network. Follow these steps:

1. Connect a monitor and keyboard to suitable ports on the rear panel of the appliance, or open the virtual machine console in the Virtual Infrastructure client.
2. At the login prompt, typed the default user name (*admin*) and password (*admin*) for the device and then choose option 1 on the console menu:



The screenshot shows a terminal window titled "Restorepoint console". Below the title is the section "Interface settings". The settings are as follows:

Setting	Value
Use DHCP	<input checked="" type="checkbox"/>
IP Address	172.31.17.18
Netmask	255.255.255.0
Default gateway	172.31.17.1
Auto-negotiation	<input type="checkbox"/>
DNS Server #1	172.31.18.204
DNS Server #2	172.31.18.206
DNS Domain	hq.rp.internal

At the bottom of the settings list are two buttons: "Save" and "Cancel".

3. Type the IP address, Netmask, default gateway, and primary DNS server as prompted. The DNS server must be able to resolve public names (for example, support.restorepoint.com), otherwise the appliance cannot retrieve software updates.
4. Enter *y* to confirm the settings. If the settings are applied successfully, the console menu will be redisplayed. You can **exit** now.

You can disconnect your monitor and keyboard. To continue the initial setup, open a browser window on a network connected PC and enter the IP address you set for the appliance in the URL bar.

Alternative Method for Setting the IP Address

You can also connect to the Restorepoint appliance for initial setup over a network using the factory-configured default IP address/netmask (192.168.1.1/255.255.255.0), if these settings do not conflict with any devices already on your network. Use a browser to connect to `https://192.168.1.1` and set the IP address as shown above.

If these settings are in use on your network, you may connect the device directly to a PC using an Ethernet cross-over cable. Configure your PC to use an address in the 192.168.1.2 - 254 range, then use a browser to connect to `https://192.168.1.1`.

Connecting to Restorepoint for the First Time

After you set the IP address for Restorepoint, use a browser on a network-connected PC to connect to the IP address and complete the initial configuration.

IMPORTANT: Restorepoint initially uses a self-signed certificate. Because of this, your web browser will warn you of an invalid (untrusted) certificate. This is normal behavior because the appliance certificate is not signed by a Trusted Certificate Authority. The session will still be encrypted. Refer to your browser instructions on how to proceed and accept the unsigned certificate. A valid (signed) certificate can be uploaded to Restorepoint after the initial configuration is completed.

To connect to Restorepoint for the first time:

1. Log in with the default username and default password.
2. Restorepoint displays the **End-User License Agreement**. Read the terms of the Agreement, then click **[Accept]** to signify that you accept the Agreement. You will not be able to use Restorepoint if you do not accept the Agreement.
3. The **Installation Wizard** page appears. You can use this page to configure your network settings.

4. Supply values in the following fields:

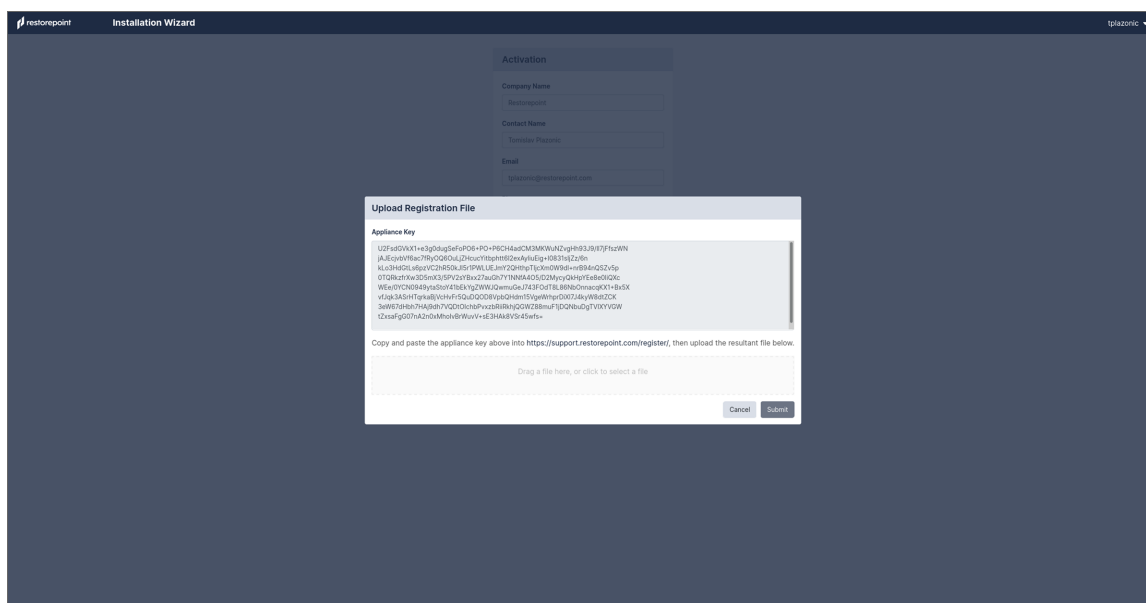
- **Interface**. Select an interface from the drop down list.
- **Use DHCP**. Select this checkbox if you want to use a DHCP server for your interface and other options will be disabled.
- **IP Address**. Type your Restorepoint IP address. Restorepoint and its agents can add IPv4 and IPv6 IP addresses. "Host" fields across Restorepoint can now accept an IPv4/IPv6 address or a hostname (excluding DNS servers (IP address-only)).
- **Subnet Mask**. Type your subnet mask associated with the IP address
- **Speed/Duplex**. Select the link speed and duplex from the drop down list.
- **DNS Server 1**. Type the DNS Server address for your network. Click **[Ping]** to check connectivity.
- **DNS Server 2**. Type the second DNS Server address from your network. This field is optional. Click **[Ping]** to check connectivity.
- **Gateway**. Type the default gateway for your network. Click **[Ping]** to check connectivity.
- **Domain Name**. Type the default domain name.
- **Use Proxy**. Select this checkbox if proxy is required for internet access.
- **NAT Address**. Type the NAT address if connection is required by your firewall.
- **Additional Static Routes**. If the devices that you want to add to Restorepoint are located on different networks, you may need to define additional static routes. If required, type the network IP address and the destination gateway IP address and click **[Add]**.
- **Throttle SCP/SFTP**. Select this checkbox to limit the amount of network bandwidth Restorepoint uses.

5. Click **[Next]** and the **Alerts** and **SMTP** page appears. You can use this page to configure credentials for system notifications. Supply values in the following fields:

- **Email errors to.** Type the email address you would like the error alerts to be delivered to.
 - **Email from.** Type the email address you want the email to originate from.
 - **Host.** Type the IP address of your mail server. Click **[Ping]** to check connectivity.
 - **Port.** Click the arrows in the right of the field to navigate to the correct port number for your mail server. Click **[Test]** to test the connection.
 - **Username.** Type the username for your mail server.
 - **Domain Name.** Type the password for your mail server.
 - **From.** Type an email address to use in the "From" field for notifications.
 - **To.** Type a default email address to send email alerts to.
6. Click **[Next]** and the **Admin User** page appears. You can use this page to configure the account for an admin level user. Supply values in the following fields:
- **Username.** Type a Restorepoint username.
 - **Email.** Type an email for the administrator user.
 - **Password.** Type a password for the administrator user. Your password must be a minimum of 8 characters with mixed case, numbers, symbols, and cannot be a dictionary word. Your password must be different from your encryption password. Click **[Show]** to display the password.
 - **Encryption Password.** Type an encryption password for the admin user. Encryption passwords are required for decryption after a restart. Click **[Show]** to display the password.
 - **Recovery Question.** Type a recovery question to be used if the user forgets their password. A recovery token will be sent to you from ScienceLogic via email.
 - **Recovery Answer.** Type the answer to the recovery question.
7. Click **[Next]** and the **Activation** page appears. You can use this page to configure contacts and other settings to activate Restorepoint. Supply values in the following fields:
- **Company Name.** Type the name of the company that is using the Restorepoint system.
 - **Contact Name.** Type a name for a point of contact regarding the Restorepoint system.
 - **Email.** Type an email for a point of contact regarding the Restorepoint system.
 - **Phone.** Type a phone number for a point of contact regarding the Restorepoint system.
 - **Address.** Type an address for a point of contact regarding the Restorepoint system.
 - **Reseller.** Type the company name of the reseller, if applicable.
 - **Activation Code.** Type the activation code you received from ScienceLogic if you are connected to the internet.
 - **Offline?.** Select this checkbox if you are using Restorepoint offline.

NOTE: If the **The appliance is not connected to the Internet** option is checked, the appliance will operate in offline mode and will not attempt to contact the update server. The **[Force Check]** button changes to **[Manual Upgrade]**, which you can click to download an update package to your workstation and manually upload it to Restorepoint. For more information, see [Offline Installation/Upgrade](#).

8. Click **[Finish]**.
9. If you entered an activation code, you will be redirected to the Restorepoint login page once installation is complete.
10. If you selected the **Offline?** checkbox, the **Upload Registration File** pane appears.



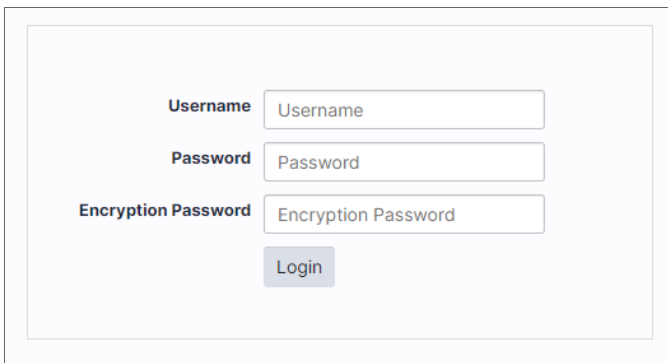
11. Copy the **Appliance Key** provided in the pane and click the Restorepoint support link (<https://support.restorepoint.com/register>) provided in the middle of the pane.
12. On the **Restorepoint Support** page, paste the **Appliance Key** that you copied above and click **Register**.
13. Restorepoint provides a file to download with a filename similar to `rpupdate_20250106154424.bin`. Click **[Download]**.
14. Navigate back to your Restorepoint system and drag the file to the **Upload Registration File** pane to upload it or click inside the pane to select the file.
15. Click **[Submit]** and you will be redirected to the Restorepoint login page once installation is complete.

IMPORTANT: The Restorepoint installation process time can vary and may take up to 30 minutes. ScienceLogic recommends that you do not click **[Submit]** more than once, but wait for Restorepoint to redirect you to the login page.

Connecting to Restorepoint After a Reboot

When Restorepoint is rebooted, it will start in a locked state. It is not able to perform any operations until the encryption password is entered, and only admin-level operators can log in to the appliance.

To enter the encryption password, use a browser to connect to the appliance and provide your administrator credentials and the encryption password:



The screenshot shows a web-based login form for the Restorepoint appliance. It contains three input fields: 'Username', 'Password', and 'Encryption Password'. Below these fields is a 'Login' button. The form is enclosed in a light blue border.

The appliance will then transition to the normal operation mode, and subsequent administrator logins will not require an encryption password.

Converting Restorepoint to Oracle Linux 8

Depending on the version of Restorepoint, the application runs on either CentOS or Oracle Linux 8 (OL8). Updates and releases of CentOS Linux 8 were discontinued on December 31, 2021, and will be discontinued for CentOS Linux 7 on June 30, 2024. Restorepoint has moved to make OL8 as the primary supported operating system. This topic covers how to migrate from the CentOS operating system to the OL8 operating system.

The Restorepoint release is completely independent of the SL1 platform.

Prerequisites

- Acquire a new virtual machine or machines with Oracle Linux 8 operating system and similar or better specifications (CPU, memory, disk size) to the existing virtual machine for the primary Restorepoint appliance and all existing agents (if using agents).
- Before migrating, make sure that you are running the latest Restorepoint version 5.6 release. You will need to upgrade Restorepoint to version 5.6 before you can convert to OL8.
- Take a virtual machine snapshot or archive of the Restorepoint appliance in case a rollback is required. For more information about archiving, see [System Archive](#).
- Make sure you have the encryption password, administrator password, and serial number of the old Restorepoint appliance.

Updating a Restorepoint Appliance

NOTE: The following steps are for virtual deployments only.

By default, the Restorepoint appliance checks for software and plugin updates every 24 hours and installs them automatically. The installation only occurs when there are no tasks running, so there is no service downtime. Automatic updates use an HTTPS connection to the update server at support.restorepoint.com, either direct or through a proxy.

In addition, you can force a manual update by clicking the **[Force Check]** button on the **Administration > System Settings > Appliance** tab.

If either or both **Disable Automatic Version Upgrades** and **Disable Automatic Minor Updates** are selected, you will need to do a force check for the update. For more information about disabling updates, see [How to Disable Automatic Updates?](#)

To force a check for an update:

1. In the Restorepoint user interface, go to the **Administration > System Settings > Appliance** tab.
2. In the **Software Updates** section, click **[Force Check]**. Restorepoint checks for available updates, but does not install them. If updates are available, an **[Update Now]** button appears.
3. Click **[Update Now]** to update the appliance.

NOTE: If the **The appliance is not connected to the Internet** option is checked, the appliance will operate in offline mode and will not attempt to contact the update server. The **[Force Check]** button changes to **[Manual Upgrade]**, which you can click to download an update package to your workstation and manually upload it to Restorepoint. For more information, see [Offline Installation/Upgrade](#).

Upgrade Matrix and Migration Paths

First, you should [create a case with Restorepoint Support](#) for upgrade tracking so the Restorepoint Support team can set your appliance to the required version in the backend. If you are unsure about the operating system for your system, the support engineer assigned to your case will be able to clarify.

CentOS 5-based Virtual Machines

These appliances run Restorepoint version 5.3 (or earlier unsupported versions).

1. **Required:** Migrate from a Restorepoint 5.3 CentOS 5 appliance to a 5.3.1 CentOS 8 appliance.
2. After you have migrated to CentOS 8, follow the steps for CentOS 8, below.

CentOS 6-based Virtual Machines

These appliances can run Restorepoint version 5.3, 5.3.1, 5.4 or 5.5.

1. **Required:** Upgrade to at least Restorepoint version 5.3.1. If required, the Restorepoint support engineer will set the appliance to version 5.3.1, and then you can run an update.
2. After you have migrated to CentOS 8, follow the steps for CentOS 8, below.

CentOS 8-based Virtual Machines

If your system is running Restorepoint version 5.3.1:

1. Engage with the support engineer to set the appliance to version 5.4 in the Restorepoint backend.
2. Update to Restorepoint version 5.4.

If your system is running Restorepoint version 5.4:

1. Engage with the support engineer to set the appliance to version 5.6.
2. Update to Restorepoint version 5.6.

When your system is updated to Restorepoint version 5.6, a migration to an Oracle Linux Virtual Machine is recommended. This process requires you to create a new appliance, then follow the migration steps in the following procedure.

Restorepoint Appliance Migration

This section covers how to migrate your data to a new hardware or virtual appliance.

Before you Begin the Migration

1. Install and configure the new appliance. For more information, see [Installing Restorepoint](#).
2. Configure the appliance IP address on your network and complete the online registration.
3. Provide the old serial number to Support so a new activation code be generated. Using the activation code, install the new license. The activation code is single use, so once it is submitted, do not refresh the page.
4. Make sure that both Restorepoint appliances are running the same software version.
5. The appliances normally update themselves by connecting to the Restorepoint update servers, but you can force an update from the **Administration > System Settings > Appliance** tab. The same page shows the current software version and build number.

Migration Paths

There are two migration paths:

1. **Partial Migration**. Migrates the device information, such as IP addresses, credentials, and so on.
2. **Full Migration**. Includes all of the device backups.

Most users choose a partial migration, because it is extremely easy, and you can complete it quickly, in a few minutes. However, if you need to keep all past device backups, the only option is a full migration.

Also, only a full migration will restore the appliance SSH keys. This is an important consideration if you are using SSH Public Key Authentication (PKA), because devices will not allow the new appliance to log in until the new appliance SSH key is authorized. Devices that perform strict SSH checks may also prevent logins, even if using SSH password authentication.

Partial Migration

This migration moves over only your device settings. Device configuration files and Restorepoint settings are not migrated.

1. Log in to the old Restorepoint appliance and click **Devices** in the left-side menu.
2. Select the check box next to the column title **Name** to select all devices (or select which devices to export individually).
3. Click **[Export]** to generate a CSV file with the device data.
4. Log in to the new appliance, and then click **Devices** in the left-side menu.
5. Click **[Import]**. A dialog appears, from which you need to choose the CSV file exported above (typically from the **Downloads** folder). All of the devices should appear in the list.

Full Migration

This migration uses the Restorepoint Archive feature, which exports all of the system configuration to an external server.

1. Configure archiving on the old appliance. This should already be in place, as it is an essential disaster recovery function.
2. Go to the **Administration > System Settings > Archive** page.
3. Configure the file server to which Restorepoint uploads its archive and set up an automated disaster recovery Archive. Restorepoint supports FTP, SCP, SFTP, or Windows file servers for archiving.
4. Create a new archive on the server by clicking **[Archive Now]**. This operation may take a long time, depending on the amount of data stored on the appliance.
5. On the new appliance, import the archive from the server.
6. On the **Administration > System Settings > Archive** page, configure archiving in the same way as the old appliance (IP address, protocol, path and credentials), and then click **[Restore Archive]**. Restorepoint displays a list of archives available on the remote server.
7. Choose the most recent archive and click **[Restore]**.
8. During the process, you might be prompted for the password and encryption password of the old appliance. Provide the details for the admin account. Again, this may take a long time to complete; at the end of the process, all of the Restorepoint settings (except the IP address for the appliance) and all data stored on the old appliance will be restored on to the new one.

For more information about archiving, see [System Archive](#).

To perform migration when your environment has Agents:

1. Deploy new agents on a new virtual machine with the Oracle Linux 8 operating system and perform the Initial Master Setup in the agent.
2. Set the IP address of the new appliance for each agent.
3. Restorepoint supports agent deployment within an RPM. Additionally, Restorepoint also supports communication from agent to Restorepoint appliance over a port of your choosing. The default port 22 can be changed when setting up the agent.

NOTE: If you need HTTPS enabled on the new appliance, you must create a new certificate. For more information, see [HTTPS Certificates](#).

Common Questions

Why migrate to an Oracle Linux 8 appliance?

- Old appliances are on either CentOS 8 or CentOS 6, neither of which are supported by Red Hat any longer. Leaving the appliance on this Linux Kernel could lead to serious security issues in the future.
- OL8 provides IPv6 support.

What downtime can I expect?

- Usually, each update only takes a few minutes and will only proceed when no other tasks are running. If you have a busy system, you might need to pause the scheduler to process the upgrade.
- Depending on the number of devices you have, creating or restoring an archive can take a long time. Restorepoint recommends that you allocate at least 12 hours for the migration after the pre-requisites have been gathered.

I am on version 5.4. Do I have to update to version 5.5 and then to version 5.6?

- No. Direct update from version 5.4 latest version to version 5.6 is supported on CentOS or Oracle Linux 8 operating systems.

Will my license be migrated?

- No. Support will generate a new activation code license based on the serial number of the new appliance. You can copy and paste the new code during the deployment of the new appliances.

Will my device certificates be migrated?

- Yes. Device certificates will be migrated if restoring an archive on to the new appliance. (Full Migration)

I have agents on CentOS. How do I migrate them?

- See [Full Migration](#) above.

Will SSH keys for agents be migrated?

- Yes. SSH keys for agent will be migrated during an archive and restore.

Will SSH host keys of the appliance be migrated?

- Yes. SSH host keys will be migrated during an archive and restore.

I have High Availability enabled in CentOS. How do I migrate the secondary appliance?

- To migrate a High Availability appliance set up, you must first set up the new HA cluster and then follow the full migration or partial migration steps above on the primary appliance.

- Ensure the secondary appliance is running the identical Restorepoint and operating system version as the primary.
- Complete the set up on the secondary appliance. For more information, see the [High Availability](#) section in the Restorepoint guide.

Will my existing users be migrated?

- Yes. All existing local and LDAP users (and LDAP settings) will be migrated if restoring an archive onto the new appliance. (Full Migration)

Known Issues

- [Issues with Agents](#). This topic encompasses a wide range of problems, but usually the cause is the agents have not been migrated to Oracle like the primary and there are conflicting ciphers, macs, and Kexs.
- [Domain not Found](#). This error message can appear when viewing a device. Follow the steps in the article to resolve the issues.
- [Converting Last Alert Policy](#). This is a common database issue that occurs if the customer uses the Generic Push device plugin.

If you run into any of these problems, contact a support engineer.

Rolling Back After Upgrading to Version 5.4

If you experience a major issue after upgrading to version 5.4, you can roll back to the previous version, provided that you have a working snapshot of that virtual appliance. This is why we recommend taking a snapshot of the appliance before upgrading to 5.4.

To roll back to version 5.4:

1. Power down the current virtual appliance.
2. Contact Restorepoint Support and let them know that you need to roll back. You will need to know the serial number of the appliance.
3. Restorepoint Support will set the appliance back to version 5.3 on our administrator server and contact you when we are finished.
4. After you receive confirmation from us that we have reverted your appliance back to version 5.3, you can restore the snapshot of the appliance using your hypervisor standard snapshot restore function.
5. When the snapshot has been restored and powered on, your appliance should function as expected.

Chapter

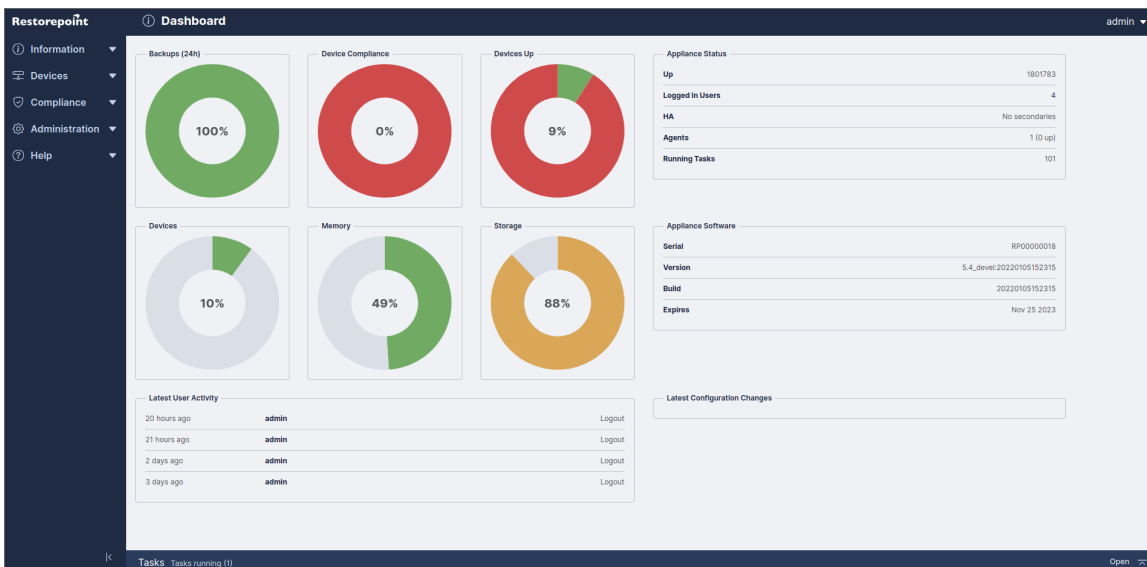
3

Basic Operation

Overview

The Restorepoint user interface pages share some common features. These features include:

- A menu bar at the top of the page, for navigating between the different functions
- The username of the logged in user at the top right-hand side of the screen
- A footer that displays the current software version, serial number, license expiry, and time



Tables display a gray header. For example, in the **Device** page shown below, you can change column widths by double-clicking on the header, or by clicking and dragging the heading separators. You can change the sorting criterion by clicking on a column heading. You can also perform a full text search by typing in the **Search** field.

	Name ↑	Plugin	Domain	Agent	Address	Disabled	Backup Interval	Last Backup	Last Attempt	Next Backup	Protocol
<input type="checkbox"/>	smarcenter77...	Check Point Gaia	Global		172.16.21.72	No	Manual				scp
<input type="checkbox"/>	gaiaR7720	Check Point Gaia	Global		172.16.21.14	No	Manual				ssh
<input type="checkbox"/>	Gaia	Check Point Edge	Global		172.16.21.197	No	Manual				ssh
<input type="checkbox"/>	Checkpoint Sg8...	Check Point Embedd...	Global		55.62.147.104	No	Every hour, on the h...		2021-11-10 13:25	2 months ago	ssh
<input type="checkbox"/>	Checkpoint Sg8...	Check Point Embedd...	Global		6.11.50.67	No	Every hour, on the h...		2021-11-10 13:23	2 months ago	ssh
<input type="checkbox"/>	Checkpoint Sg8...	Check Point Embedd...	Global		86.71.157.63	No	Every hour, on the h...		2021-11-10 10:41	2 months ago	ssh
<input type="checkbox"/>	Checkpoint Sg8...	Check Point Embedd...	Global		185.1.216.111	No	Every hour, on the h...		2021-11-10 13:03	2 months ago	ssh
<input type="checkbox"/>	Checkpoint Sg8...	Check Point Embedd...	Global		71.44.158.45	No	Every hour, on the h...		2021-11-10 12:53	2 months ago	ssh
<input type="checkbox"/>	Checkpoint Sg8...	Check Point Embedd...	Global		94.103.200.2	No	Every hour, on the h...		2021-11-10 12:18	2 months ago	ssh
<input type="checkbox"/>	Checkpoint Sg8...	Check Point Embedd...	Global		18.243.244.130	No	Every hour, on the h...		2021-11-10 12:47	2 months ago	ssh
<input type="checkbox"/>	Checkpoint Sg8...	Check Point Embedd...	Global		103.36.142.122	No	Every hour, on the h...		2021-11-10 13:17	2 months ago	ssh

This chapter covers the following topics:

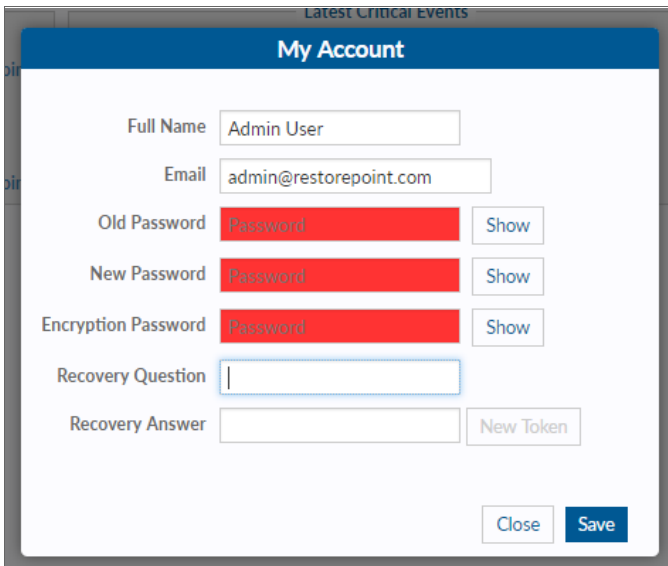
<i>My Account</i>	30
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My Account

You can hover over the username on the top of the user interface and two options appear. A **Logout** option that features a clock that shows how many minutes until a user is automatically logged out, and the **My Account** option that allows you to edit the following user settings:

- **Full Name**
- **Email**
- **Password**
- **Encryption Password**
- **Recovery Question**
- **Recovery Answer**

NOTE: To change a password, you need to specify the **Old Password**.



The screenshot shows a 'My Account' settings window. At the top, it says 'Latest Critical Events' and 'My Account'. The form contains the following fields and buttons:

- Full Name:** Text input field containing 'Admin User'.
- Email:** Text input field containing 'admin@restorepoint.com'.
- Old Password:** Password input field (red background) with a 'Show' button.
- New Password:** Password input field (red background) with a 'Show' button.
- Encryption Password:** Password input field (red background) with a 'Show' button.
- Recovery Question:** Text input field.
- Recovery Answer:** Text input field with a 'New Token' button.
- Close:** Button.
- Save:** Button.

For more information on the **My Account** options, see [Adding a new user](#).

Activity Display

The **Activity Display**, shown below, displays a list of tasks that are currently running. This list is displayed on every page while tasks are in progress:

Tasks Tasks running (2) Collapse							
Type	Device Name	Progress	Initiator	Start Time	Last Command	Duration	Status
Schedule Paused		<div></div>	system	2021/11/02 09:16	la -al	17 hours, 33 minutes	Running
Backup Zhone Ead 2320		<div></div>	system	2021/11/03 02:49	la -al	29 seconds	Running


You can click on the magnifying glass icon to show the **Progress Log**, which displays real-time information about the running task:

```

Details:
Startup device
Startup Device: backup rsa_appliance ssh (v25421)
Created New Transfer File: /var/restorepoint/spool/rp_203.209.146.191_386
/usr/bin/ssh -p 22 203.209.146.191 -t bash --norc
Running ssh Login sequence
Wait Cmd (98s): No route to host,IDENTIFICATION HAS CHANGED,connection refused,connection timed out,co...l major versions differ: 2 vs. 1,no matching host key,emission denied>User,assword,passwd;PASSCODE
Error - Timeout
Status: Error

```

Editing Views

In addition to the built-in views, every data table in Restorepoint can have multiple customized views. You can access these by clicking on the menu icon () at the top left of a table. You can use this icon to reorder columns by clicking the up/down arrows and selecting the checkbox to show/hide columns.

You can define a name and save column orders, widths, and display settings using the **[Save]** button. You can delete saved views using the **[Delete]** button.

NOTE: Views stored in your browser's local storage are only available on the browser and workstation where they were set. If you clear your browser storage, you will clear any saved views.

Encryption

All sensitive data stored in Restorepoint, including device configurations, is protected by encryption. Restorepoint encrypts data when it is written to a disk and decrypts it as it is read. Cleartext data is only held in volatile memory. Therefore, the data disappears when the appliance is shut down or rebooted, which renders data theft impossible without a valid encryption key. It is important to note that Restorepoint is encrypted-at-rest for the secure storage

of backups and databases. Any use of third-party tools to perform a scan of Restorepoint backups or databases may result in an error message.

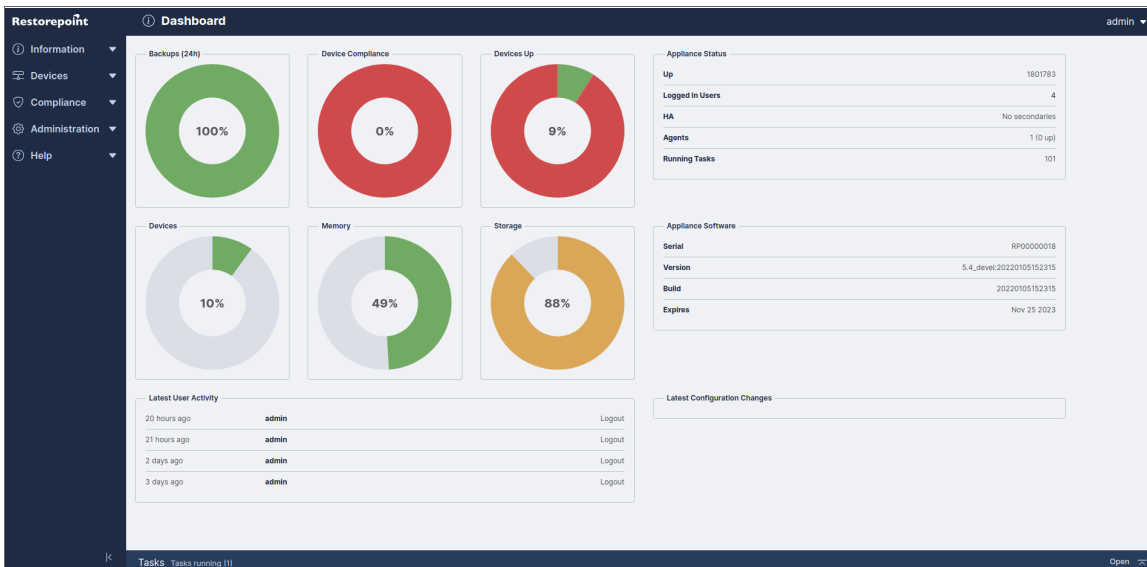
Restorepoint has two operational states:

- **Locked State.** When the appliance is powered up and no encryption password is entered by an administrator. In this state, Restorepoint cannot read its own database and therefore cannot perform any operations. An administrator must log in and provide the encryption password to unlock the database.
- **Normal State.** Once an administrator provides the encryption password at login, all system functions are enabled. Subsequent administrator logins will not require an encryption password until the appliance is powered down or rebooted.

CAUTION: The entire Restorepoint database is encrypted. Therefore, it is vital that administrators remember both their normal and encryption passwords. Administrators must also keep their emailed password-recovery tokens safe. For more information, see [Connecting to Restorepoint After a Reboot](#) and [Password Reset](#).

System Status Page

The **System Status** page or **Dashboard**, displays an overview of the health of your Restorepoint system and displays the number of devices that are being backed up. The following image is the default page when you first login to Restorepoint. You can display this page at any time by clicking **Info** on the menu:



The following type of graphs can be displayed on the **Dashboard** page:

- **Backups (24h).** Successful and failed scheduled backups in the last 24 hours. Additionally, mouseover mention devices not scheduled for backup.
- **Device compliance.** The number of compliant and non-compliant devices, and the number of devices with no policy assigned.

- **Device Baseline.** The number of devices that are running a *baseline* configuration, non-baseline configuration, and no baseline configuration set. For more information, see [Configuration Baselines](#).
- **Devices Up.** The number of devices that are currently being monitored and responding to Restorepoint. If you click on the graph, a moving average chart covering the past 24 hours is displayed.
- **Storage.** The amount of disk space used and the total amount of disk space for the Restorepoint appliance
- **Devices.** The total number of devices configured on the appliance, and the maximum devices allowed on your current license.
- **Memory.** The amount of RAM currently being used by the Restorepoint appliance and the total amount of RAM available.
- **Network Activity.** The current network activity, as seen by the Restorepoint appliance
- **Load Average.** The [Load Average](https://en.wikipedia.org/wiki/Load_(computing)) [https://en.wikipedia.org/wiki/Load_(computing)] of the Restorepoint appliance, over the last 30s.

The following information is displayed in text panes on the **Dashboard** page:

- **Appliance Status.** The uptime, number of logged in users, [High Availability](#) status (if enabled), [Agents](#) status (if enabled), and number of running tasks.
- **Appliance Software.** The serial number, version, build number (including a link to the change log for that version), and license expiration date of the Restorepoint installation. This information is also available in the footer.
- **Latest User Activity.** Administrator logins/logouts, and other user-initiated operations.
- **Latest Critical Events.** Any backup failures, bad logins, or other important information.
- **Latest Configuration Changes.** Any devices that have reported modified configurations.
- **Activity Display.** Appears on the left-hand side if any background processes are running. It also displays real-time task details and terminating a task details.

Scheduled Tasks

The **Schedule** page (Information > Schedule) displays upcoming scheduled tasks, including the next backup for each device.

Schedule				
<input type="button" value="Postpone"/> <input type="button" value="Pause Scheduler"/>				
<input type="checkbox"/>	Date	Event	Type	Object
<input type="checkbox"/>	2021-09-14 19:00	Backup device (Overdue)	device	A Cisco Switch
<input type="checkbox"/>	2020-12-04 16:00	Backup device (Overdue)	device	Z_wkg2asa2
<input type="checkbox"/>	2021-11-10 12:00	Backup device (Overdue)	device	Fortinet Fortigate 1
<input type="checkbox"/>	2021-11-10 11:00	Backup device (Overdue)	device	Nortel 8010 3
<input type="checkbox"/>	2021-11-10 12:00	Backup device (Overdue)	device	A10 Thunder 4
<input type="checkbox"/>	2021-11-10 12:00	Backup device (Overdue)	device	Threecom Superstack5500 5
<input type="checkbox"/>	2021-11-10 11:00	Backup device (Overdue)	device	Radware Linkproof 7
<input type="checkbox"/>	2021-11-10 11:00	Backup device (Overdue)	device	Crossbeam Xos 8
<input type="checkbox"/>	2021-11-10 11:00	Backup device (Overdue)	device	Trend lwsya 10
<input type="checkbox"/>	2021-11-10 13:00	Backup device (Overdue)	device	Radware Appdirector 11
<input type="checkbox"/>	2021-11-10 11:00	Backup device (Overdue)	device	Cisco Acac 12
<input type="checkbox"/>	2021-11-10 11:00	Backup device (Overdue)	device	Cisco Csa 13
<input type="checkbox"/>	2021-11-10 11:00	Backup device (Overdue)	device	Rsa Appliance 15
<input type="checkbox"/>	2021-11-10 12:00	Backup device (Overdue)	device	Aruba Controller 16
<input type="checkbox"/>	2021-11-10 11:00	Backup device (Overdue)	device	Juniper Firewall 17
<input type="checkbox"/>	2021-11-10 12:00	Backup device (Overdue)	device	Trend lwsya 19
<input type="checkbox"/>	2021-11-10 11:00	Backup device (Overdue)	device	Nortel 8010 20
<input type="checkbox"/>	2021-11-10 12:00	Backup device (Overdue)	device	Aruba Controller 21

For each task, the **Schedule** page displays the following information:

- **Date.** Date and time when the next task is due.
- **Event.** Name of the scheduled event.
- **Type.** Type of task. Possible types are backup, discovery, archive, etc.
- **Object.** Device, user, or system configuration object to which the task refers.

Postponing Tasks

You can postpone any scheduled event to remove the next occurrence of a scheduled task. To postpone a scheduled task:

1. Find the task that you want to postpone and select its checkbox.
2. Click the **[Postpone]** button.

Pausing Tasks

You can pause a scheduled task so it doesn't run until you unpause the task. To pause a scheduled task:

1. Find the task that you want to pause and select its checkbox.
2. Click the **[Pause Scheduler]** button.

Adding Devices to Restorepoint

You can add devices to Restorepoint using the following methods:

- [Manually Adding a New Device](#)
- [Importing Multiple Devices Using a CSV File](#)
- [Automatic Discovery](#)

The **Device** page allows you to:

- Display all the existing backups for a device
- Compare the configurations of two devices

The **Discovery** page allows you to:

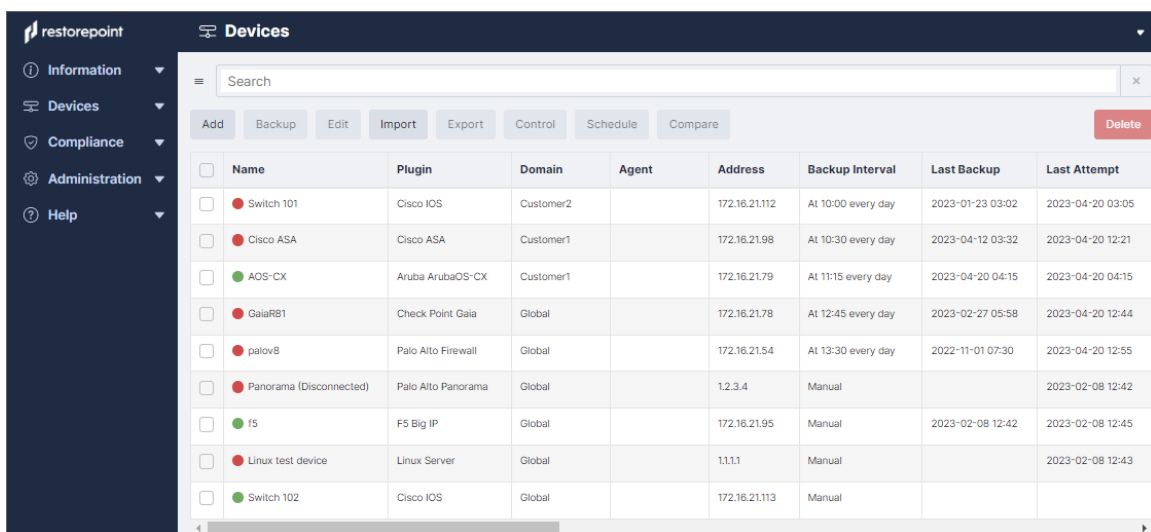
- Define the networks you wish to scan
- Schedule a periodic network scan
- Import discovered devices into the main device list

Adding a New Device Manually

How you configure a new device may vary slightly from one device to another. Please see device specific information in the Plugin Guide (**Help > Plugin Guide**).

To create a new device:

1. Go to the **Device Management** page (Devices > Device List).



The screenshot shows the 'Devices' page in the Restorepoint interface. On the left is a navigation menu with 'Information', 'Devices', 'Compliance', 'Administration', and 'Help'. The main area has a search bar and a toolbar with buttons: 'Add', 'Backup', 'Edit', 'Import', 'Export', 'Control', 'Schedule', 'Compare', and a red 'Delete' button. Below the toolbar is a table with columns: Name, Plugin, Domain, Agent, Address, Backup Interval, Last Backup, and Last Attempt. The table lists several devices including Switch 101, Cisco ASA, AOS-CX, GaliaR81, palov8, Panorama (Disconnected), f5, Linux test device, and Switch 102.

	Name	Plugin	Domain	Agent	Address	Backup Interval	Last Backup	Last Attempt
<input type="checkbox"/>	Switch 101	Cisco IOS	Customer2		172.16.21.112	At 10:00 every day	2023-01-23 03:02	2023-04-20 03:05
<input type="checkbox"/>	Cisco ASA	Cisco ASA	Customer1		172.16.21.98	At 10:30 every day	2023-04-12 03:32	2023-04-20 12:21
<input type="checkbox"/>	AOS-CX	Aruba ArubaOS-CX	Customer1		172.16.21.79	At 11:15 every day	2023-04-20 04:15	2023-04-20 04:15
<input type="checkbox"/>	GaliaR81	Check Point Galia	Global		172.16.21.78	At 12:45 every day	2023-02-27 05:58	2023-04-20 12:44
<input type="checkbox"/>	palov8	Palo Alto Firewall	Global		172.16.21.54	At 13:30 every day	2022-11-01 07:30	2023-04-20 12:55
<input type="checkbox"/>	Panorama (Disconnected)	Palo Alto Panorama	Global		1.2.3.4	Manual		2023-02-08 12:42
<input type="checkbox"/>	f5	F5 Big IP	Global		172.16.21.95	Manual	2023-02-08 12:42	2023-02-08 12:45
<input type="checkbox"/>	Linux test device	Linux Server	Global		1.1.1.1	Manual		2023-02-08 12:43
<input type="checkbox"/>	Switch 102	Cisco IOS	Global		172.16.21.113	Manual		

2. Click the **[Add]** button on the top left hand corner of the page. The **Add device** page appears. Complete the following fields:

- **Device Name.** Type a name for the device that is up to 64 characters long.
- **Type.** Select the device type. You can start typing in the *Select Plugin* field to filter the list. This list only displays the device types that are currently available on your license. The **[Fingerprint]** button can return data regarding header banners, like SSH or FTP, if you enter an IP address in the device **Address** field.
- **Domain.** Select the domain that the device is assigned to. This field is only present if Domain Administration is enabled on your appliance. For more information, see [Administration Domains](#).
- **Agent.** If the device is managed via an agent, select the appropriate agent from the dropdown list.
- **Labels.** Select and set Labels to be applied to your devices; these help filter and group devices.
- **Address.** Type the device IP address. You can click the **[Resolve]** button to automatically fill the **IP Address** field. Restorepoint will keep the IP address up to date with your DNS and manual changes to the IP address will be ignored.
- **Open Terminal.** You can click this button to open a web-based virtual terminal to the device that you can use for troubleshooting. If you select **Restorepoint Credential**, the field uses the credentials you have defined on the **Connection** tab. Otherwise, you will need to provide your own credentials for logging into the device. For more complex terminal use, ask your account manager about **Restorepoint Universal Console**.
- **Owner Email.** Type the email address(es) of the device administrator(s). By default, this field is filled with the notification email address defined on the **System Configuration** page.
- **Email on Config Change.** Select this checkbox to automatically trigger an email notification to the device owner when a device configuration change is detected. This option is not available for all device types.
- **Email on Start Backup.** Select this checkbox to automatically trigger an email notification before a backup starts for this device. This notification creates a 1 minute delay before the backup starts.
- **Email on End Backup.** Select this checkbox to automatically trigger an email notification when a backup completes. If this checkbox is not selected, Restorepoint will only send an email notification if the backup fails, or if a configuration change is detected and **Email Config Change** is selected.
- **Syslog Change Detection.** If this field is available on your Restorepoint system, select the checkbox for Restorepoint to automatically detect when a device is modified and automatically retrieve its configuration. Note that this feature is only available for specific devices. For more information, see the Plugin Guide (**Help > Plugin Guide**).
- **Log Transcript.** Select this checkbox to create a full transcript log for this device for debugging purposes. A transcript log is automatically saved if the backup fails, so this is rarely needed.
- **Types.** Select the types of configurations to backup for this device.
- **Filename Prefix.** Optionally type a custom filename prefix for the device configuration files, and check the relevant fields to include. A preview of the filename will appear in the **Preview** field.

- **Monitor.** Select this checkbox to monitor the device. For more information, see [Device Monitoring](#).

3. Click the **[Connection]** tab and complete the following fields:

- **Protocol.** Select the appropriate connection protocol for your device, such as telnet or SSH. The options may vary depending on the device type.
- **Username.** Type the administrator account username for the target system.
- **Password.** Type the password associated with the administrator account. For some devices you may need to enter more than one password. The field color ranges from red to green to indicate the password strength, according to the policy set in the [Password Policies](#) page.
- **Use Restorepoint Credentials?.** You can select this checkbox and select a **Credential Set** instead of entering a username and password. Credential sets are reusable username/password combinations that can be shared among different devices (See [Credential sets](#)).
- **Back Connection NAT.** Select this checkbox if Restorepoint accesses this device through a NAT router or firewall. This option will only be displayed if the device requires back-connections and if Use NAT is selected in the **System** page. If a **NAT IP Address** is configured here, it will override the corresponding Domain (Section [Administration Domains](#)) and System (Section [Network Address Translation \(NAT\)](#)) settings.
- **Use SSHv2 PKA.** Select this checkbox if you want to use SSH Public Key Authentication instead of password-based authentication when connecting to the device. Click the **[Show Keys]** button to display Restorepoint's public SSH keys.
- **Disable SSH Strict Host Key Checking.** Disables the SSH host key validation and logs when the key changed.

- **Clear Cache.** If you have replaced a device, Restorepoint may refuse to connect to it because it will detect that the device key has changed and display a connection error. This is a security feature of SSH. In order to override this feature, click the **[Clear Cache]** button.
 - **Backup Port.** If required for your device, enter the backup port you want to use.
4. Click the **[Schedule]** tab to configure the backup schedule for the device and click **[Add Entry]** to add one or more backup intervals. You can bulk add or remove schedules if multiple are selected on the **Device Management** page.

NOTE: For each schedule interval, you can override the config types to backup by selecting any of the **Config Type** checkboxes, or override the default retention policies by unselecting **Use Default Policy**. You can also override the Failure Policy on this page. For more information, see [Backup failures](#).

5. Click the **Assets** tab and enter optional asset management details for the device:
- **Serial.** Type the serial number for the device.
 - **Firmware.** Type the firmware the device has.
 - **Asset ID.** Type the device ID for the device.
 - **Notes.** Type any additional notes that you would like to include for the device.
 - **Purchase Date.** Select the date you or your organization purchased the device.
 - **Purchased From.** Type the business that you purchased the device from.
 - **Manufacturer.** Type the manufacturer of the device.
 - **Model.** Type the device model.
 - **History.** Type any relevant history related to the device.
 - **Owner.** Type the device owner.
 - **Customer No.** Type the customer number.

- **Build Document.** Select **[Upload]** to upload a build document or **[Remove]** to remove a build document.

NOTE: Custom fields can be added in the **Custom Asset Fields** page. For more information, see [Asset Fields](#).

6. The **[Additional Info]** tab, if available, displays additional information retrieved from the device, such as license details, routing table, and network interfaces. You can also display the output of a saved action on this page using the **New Info Command** drop-down field. For more information on creating actions, see [Controlling a device](#).
7. Click the **[Compliance]** tab and assign compliance policies to this device. For more information on compliance policies, see [Device Policies](#).
8. Click the **Notifications & Monitoring** tab and enter optional notification details for the device:
 - **Owner Emails.** Type the email address(es) that you want to receive device notifications.
 - **Email on.** Select a task that you want to trigger a notification.
 - **Log transcript.** Select this checkbox if you want the notification to include a transcript of the task.
 - **Monitor Device.** Select this checkbox if you want to monitor the device.
 - **Type.** Select how you want to monitor the device, using TCP connection or ping.
 - **Email when down.** Select this checkbox if you want a notification to trigger when the device is down.
 - **Fail after.** Type a number or use the scroll to define after how many attempts connecting to a device that a notification should be triggered.
 - **Email when up.** Select this checkbox if you want a notification to trigger when the device connects after failing.
9. Click **[Save Changes]** to finish creating the new device. The **Device** page appears and the new device is added.

<input type="checkbox"/>	Checkpoint Sg8...	Check Point Embedd...	Global	55.62.147.104	No	Every hour, on the h...	2021-11-10 13:25	2 months ago	ssh
--------------------------	-------------------	-----------------------	--------	---------------	----	-------------------------	------------------	--------------	-----

10. Once you add the device, you can select the checkbox next to the device and click the **[Backup]** button to perform a manual backup, if required. The backup progress and completion will be shown in the **Activity Display**. If the backup is completed successfully, the indicator next to the device name is green, and the date of the last backup is added to the **Device Management** page.

Importing Multiple Devices Using a CSV File

If you need to add a large number of devices, you can click the **Import** button and select a comma-separated values (.CSV) file, that contains the device details.

When you create a comma-separated value (CSV) text file to import, include a line at the top of the file to indicate the columns for the attributes you want to import. Fields can be in any order. For example:

```
name,plugin,protocol,ip_address,username,password,password2,backup_
port,keep_backup,owner,serial_no,asset_id,location,notes
```

The following table lists the column name and its description:

Field	Description
domain_name	If there is not a domain_name present and you have permissions to create devices on the global domain, then the device will be saved on a global domain. If not, Restorepoint will find a domain with the same name and if you have permissions to create devices on that domain, it will be created there. <i>This field is optional.</i>
name	The device name. <i>This field is required.</i>
plugin	The device type (e.g. 'Cisco ASA' or 'cisco_asa').
protocol	The connection protocol (e.g. 'telnet' or 'ssh'). <i>This field is required.</i>
ip_address	The device IP address.
username, password, password2	The login credentials for the device.
backup_port	The port to use to connect to the device, if required
keep_backup	The backup retention policy (days).
owner, serial, no, asset_id, location, notes	Device details and descriptors. <i>These fields are optional.</i>

Device Discovery

The Restorepoint device discovery engine uses a variety of methods to discover hosts on your network that can be imported to the main device list. You can also be notified by email of new devices that are installed on your network.

NOTE: Device discovery is not guaranteed to discover all the relevant devices on your network. Firewalls or the device configuration itself may negatively affect the discovery process. Similarly, the device type may not always be detected correctly. When you import a device, you are able to override the detected type.

Discovery Setup

To configure discovery:

1. Go to the **[Setup]** tab (Devices > Discovery > Setup).
2. Type one or more network ranges (in CIDR notation) to scan in the **Search Networks** field, for example: 10.20.0.0/16 and click **[Add]**.
3. If you do not wish to scan a particular range, for example 10.20.10.0/24, add this to the **Ignored Ranges** list.
4. You can optionally add one or more SNMP communities in use on your network: choose the SNMP version, enter a community string, and then click the **[Add]** button.
5. If you want to be notified of a new device, select the **Notify of new devices** checkbox.
6. If you want to use the [Cisco Discovery protocol](https://en.wikipedia.org/wiki/Cisco_Discovery_Protocol) (https://en.wikipedia.org/wiki/Cisco_Discovery_Protocol), select the **Use CDP** checkbox.
7. If you want to use the [Link Layer Discovery protocol](https://en.wikipedia.org/wiki/Link_Layer_Discovery_Protocol) (https://en.wikipedia.org/wiki/Link_Layer_Discovery_Protocol), select the **Use LLDP** checkbox.
8. Choose a scan schedule.
9. Click **[Update]**.
10. Click **[Scan Now]** to start the scan.

Device Discovery admin

Setup Devices Ignored Device Types Auto-import **Update**

Schedule

Schedule: Every 3 Day at 00 00

Last Scan: Never **Scan Now**

Notify of new devices ☒

Search Networks

172.16.18.0/24 [None] **Delete**

IP Address/Mask [None] **Add**

Ignored Ranges

IP Address/Mask **Add**

SNMP Communities

Version	Community / Username	Security Level	Auth Protocol	Auth Password	Priv Protocol	Priv Password	
1	public						Delete
3	public	authNoPriv	MD5	blsadfks			Delete

1

Add

Discovered Devices

At the end of a discovery scan, a list of discovered devices is displayed in the **[Devices]** tab:

Discovery

Setup

Devices

Ignored

Device Types

Auto-import

Import

Ignore

Rescan

<input type="checkbox"/>	IP Address	Hostname	Device
<input type="checkbox"/>	172.16.18.25	Unknown	fortinet_fortianalyzer
<input type="checkbox"/>	172.16.18.26	DEMO.hq.rp.internal	
<input type="checkbox"/>	172.16.18.38	admintest.hq.rp.internal	fortinet_fortianalyzer
<input type="checkbox"/>	172.16.18.50	wkg2vm2-drac.hq.rp.internal	restorepoint
<input type="checkbox"/>	172.16.18.51	wkg2vm3-drac.hq.rp.internal	restorepoint
<input type="checkbox"/>	172.16.18.52	wkg2vm4-drac.hq.rp.internal	restorepoint
<input type="checkbox"/>	172.16.18.100	iMac.hq.rp.internal	
<input type="checkbox"/>	172.16.18.200	wkg2vc1.hq.rp.internal	juniper_sa
<input type="checkbox"/>	172.16.18.204	wkg2srv1.hq.rp.internal	
<input type="checkbox"/>	172.16.18.206	wkg2srv2.hq.rp.internal	
<input type="checkbox"/>	172.16.18.209	wkg2vm2.hq.rp.internal	juniper_sa

Tasks Tasks running (1)

You must import the newly added devices into the main device list. To manually import your devices:

NOTE: To automatically import your devices, see [Automatic Import](#).

1. Go to the **[Devices]** tab (Devices > Discovery > Devices).
2. Once the list of discovered devices is displayed, select the checkbox to the left of one or more devices.
3. Click **[Import]**.
4. You must then finish the configuration:
 - If you only select one device to import, the **New Device** page appears which includes automatically populated discovery information. After you review the information and make any required changes, click **[Save]**.
 - If you selected multiple devices, the devices will be imported without review. The devices are marked as incomplete and are displayed in red in the devices list. You can then complete the configuration and add authentication details or edit any default parameters and click **[Save]**.

Ignored Devices

The **Ignored devices** page displays a list of devices that will be ignored in future scans. To remove devices from the ignore list, select the devices then click **Un-ignore**.

You can review the list of ignored devices and make changes. To remove devices from the Ignored Devices list:

1. Go to the **Ignored** tab (Devices > Discovery > Ignored).
2. Once the list of ignored devices is displayed, select the checkbox to the left of one or more devices.
3. Click **[Unignore]**.
4. Click **[Update]**.

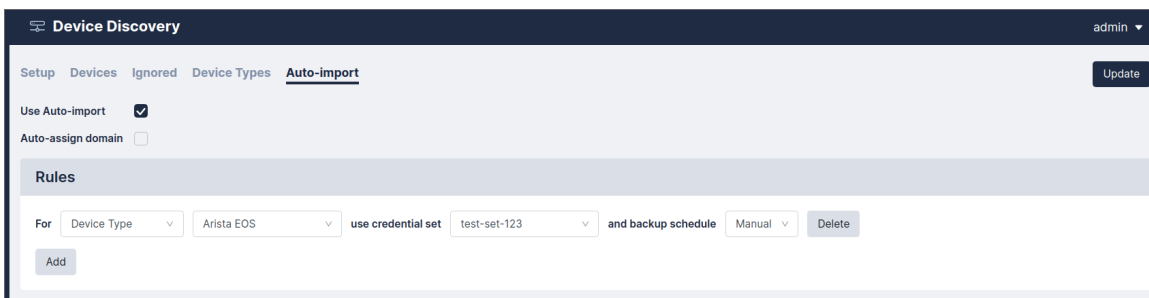
Device Types

The **Device Type Override** page allows you to force discovery scans to import a device as a certain type based on a hostname pattern. To override a device type:

1. Go to the **Device Types** tab (Devices > Discovery > Device Types).
2. Click **[Add]** and enter values in the following fields:
 - **For hostname pattern**. Enter a hostname value to be assigned the device type.
 - **use plugin**. Select a device type.
3. Click **[Update]**.

Automatic Import

You can automatically import your devices to the **Device** page after setting up discovery. To automatically import your devices:



The screenshot shows the 'Device Discovery' interface with the 'Auto-import' tab selected. The page has a dark blue header with 'Device Discovery' and a user dropdown 'admin'. Below the header is a navigation bar with tabs: 'Setup', 'Devices', 'Ignored', 'Device Types', and 'Auto-import'. The 'Auto-import' tab is active. On the right of the navigation bar is an 'Update' button. Below the navigation bar, there are two checkboxes: 'Use Auto-import' (checked) and 'Auto-assign domain' (unchecked). Below these is a section titled 'Rules'. Inside the 'Rules' section, there is a form with the following fields: 'For' (a dropdown menu showing 'Device Type'), 'Arista EOS' (a text input field), 'use credential set' (a text input field), 'test-set-123' (a text input field), and 'and backup schedule' (a text input field). To the right of these fields is a 'Manual' dropdown menu and a 'Delete' button. At the bottom left of the 'Rules' section is an 'Add' button.

1. Go to the **Auto-import** tab (Devices > Discovery > Auto-import).
2. Select the **Use Auto-import** checkbox.
3. Click **[Update]**.

Running a Manual Backup

To run a manual backup:

1. Go to the **Device** page (Devices > Device List).
2. Select the checkbox to the left of the devices that you want to back up and click **Backup**.

NOTE: You can also run a manual backup by clicking the **Backup Now** button on the **Edit Device** page (Devices > Device List > Select Device > Edit).

Scheduling an Automatic Backup

You can automatically schedule backups for a large group of devices by spreading the backups over a day, a week, or a month. To automatically schedule backups:

1. Select the checkbox to the left of the relevant devices on the **Devices** page (Devices > Device List), and click the **[Schedule]** button.
2. Select the desired time interval, and the daily Start/End time and/or the Start/End day. For example, you can configure the schedule to run backups only at night or during the weekend.

Exporting the Device List

Click the **[Export]** button to save the device database in a CSV file.

Editing an Existing Device

To edit an existing device:

1. Go to the **Devices** page (Devices > Device List).
2. Click on the name of the device that you want to edit. The **Edit Device** page appears.
3. Make any required changes and click the **[Save changes]** button.

Editing Multiple Devices

To edit multiple devices:

1. Go to the **Devices** page (Devices > Device List).
2. Select the checkbox to the left of the devices that you want to edit and click **[Edit]**. The **Edit devices** page appears.

3. Edit your desired fields and click **[Save Changes]**.

NOTE: Fields that have different values between devices display a *[Multiple]* value.

Deleting an Existing Device

To delete an existing device:

1. Select the device(s) you want to remove.
2. Click **[Edit]**, and ensure that the **Disabled** field is set to Yes to prevent accidentally deleting a device you have not disabled.
3. Click **Save**.
4. The devices you want to remove are selected. Click **[Delete]**.

Device Monitoring

Restorepoint can monitor devices by periodically checking that the TCP port used for backup (for example, telnet or SSH) is accepting connections, or by sending ICMP Echo Requests (pings) to the device. Monitoring is disabled by default and can be enabled or disabled for each individual device.

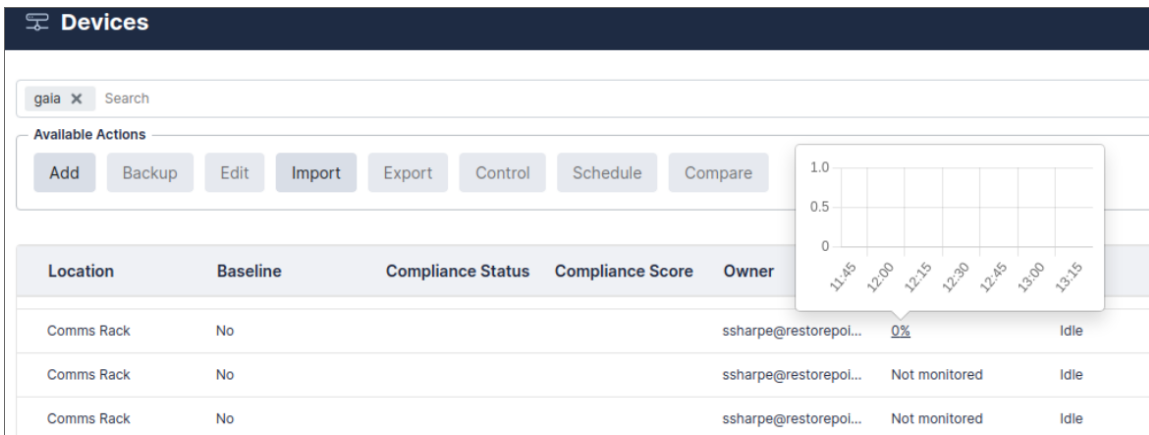
Enabling Monitoring

To enable monitoring, open the relevant device **Edit** screen:

1. Select the **Monitor Device** checkbox
2. Select the **Type** of monitoring required. Normally, the device's TCP port used for backup is polled; if the *Ping* option is selected, the ICMP Echo Request (ping) will be used.
3. You can select **Email when down** to send an email notification if the device appears to be down. You can also choose to receive **Email when up**.
4. If the device fails to respond after the number of attempts specified in the **Fail after** box, it is considered "down".

Displaying Monitoring Information

You can hover over status information to display a Round Trip Time graph between Restorepoint and the device, in 5 minute intervals.



Clicking **[Uptime]** will display the monitoring graph for the device.

You can select any other monitored device from the field at the top of the page to display its graphs.

Configuration Templates

Templates are configurations that can be pushed to multiple devices. For example, during a large deployment of similarly configured devices. Each template can contain parameters, which are substituted for entered values for each device. For example, a section may be marked "IP Address", and the field will be applied when pushed to devices.

Creating and Editing Templates

1. Navigate to the Template page (Devices > Templates). Click **Add**, or click on an existing template name.
2. For new templates, select a device and configuration to base the template on.
3. After your template has loaded, select the configuration fields that you want to be substituted.
4. Click **Mark Variable** to name and store a highlighted value.
5. Once your template is created, the template values can be renamed or deleted with the relevant buttons.

- Click **[OK]**. If you don't provide a name and comment, a name and comment will be automatically generated.

Add Template

Name
Name

Device
A Cisco Switch

Configuration
2-20201210002849 (v. 1 startup)

Notes
Leave notes here

! Last configuration change at 20:59:39 UTC Sun Nov 29 2020 by admin
! NVRAM config last updated at 20:59:40 UTC Sun Nov 29 2020 by admin
!
version 12.1
no service pad
no service timestamps debug uptime
no service timestamps log uptime
no service password-encryption
!
hostname wkg2sw1
!
logging rate-limit 1
aaa new-model
aaa group server radius RadiusServers
server 172.16.17.206 auth-port 1812 acct-port 1813
!
aaa authentication login default group RadiusServers local
aaa authorization exec default group RadiusServers if-authenticated

Mark variable

Pushing Templates

To push a template to a device, select the template from the **Template Management** page. Choose one or more devices using the device selector, and click **Push**.

Push Template

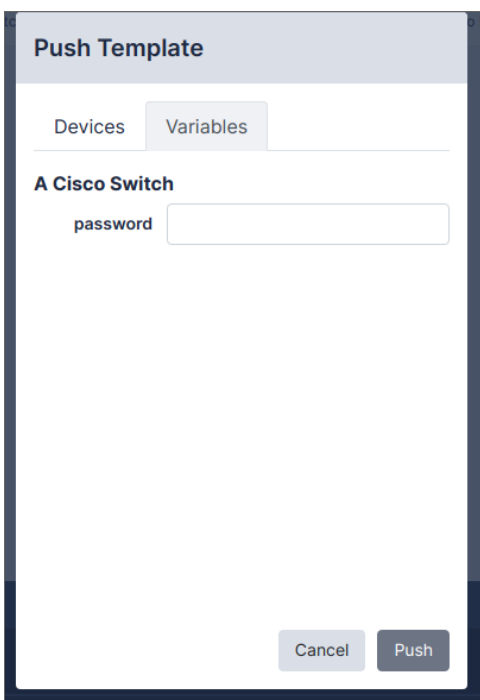
Devices Variables

☐ Search

☐ A Cisco Switch
☐ Cisco IOS_172.16.21.241
☐ wkg2sw2

Cancel Push

If the template has any parameters, you must enter the values for each of the devices selected above:

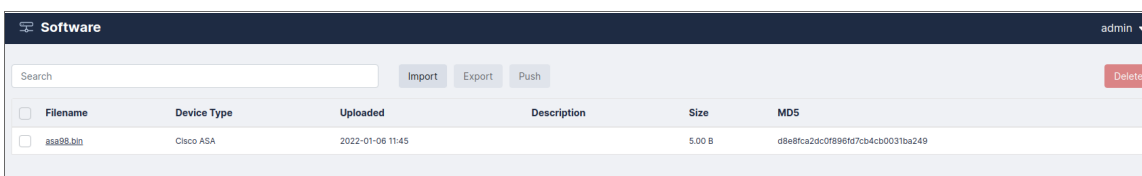


The image shows a 'Push Template' dialog box with two tabs: 'Devices' and 'Variables'. The 'Variables' tab is active, showing a section titled 'A Cisco Switch' with a 'password' label and an empty text input field. At the bottom of the dialog are 'Cancel' and 'Push' buttons.

Click **OK** to complete the operation.

Software Management

Restorepoint can be used as a repository for device firmware/software that allows you to upload files like firmware images and ISO images to the appliance. Software images can also be pushed to supported devices.

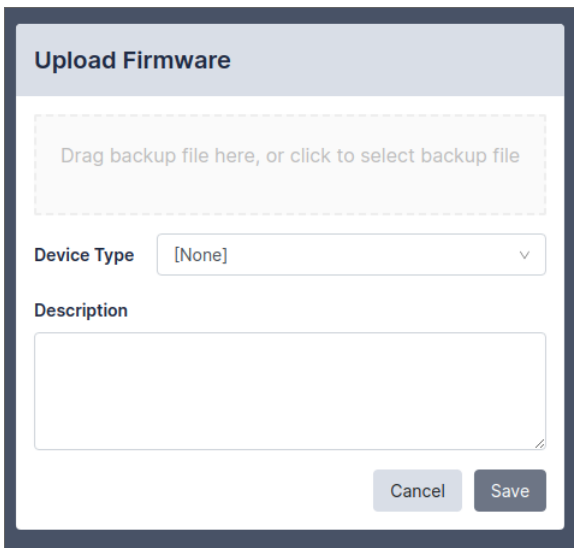


The image shows the 'Software' management interface. It includes a search bar, 'Import', 'Export', and 'Push' buttons, and a 'Delete' button. Below is a table with columns: Filename, Device Type, Uploaded, Description, Size, and MD5.

Filename	Device Type	Uploaded	Description	Size	MD5
<input type="checkbox"/> asa98.bin	Cisco ASA	2022-01-06 11:45		5.00 B	d8e8fca2dc0f896fd7cb4cb0031ba249

Uploading and Editing Firmware Images

1. Click **[Import]**, or an existing firmware name.
2. For new firmware, click the **[Browse]** button and navigate to the file from your hard drive.
3. Supply values in the **Device Type** and **Description** fields.
4. Click **[Save]**.



Upload Firmware

Drag backup file here, or click to select backup file

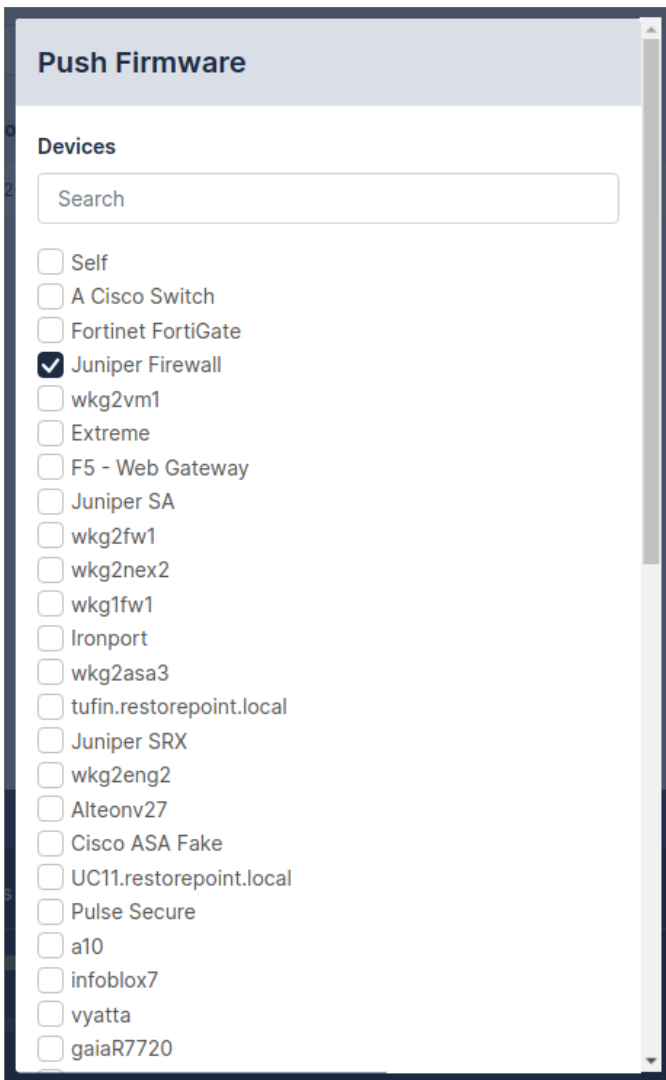
Device Type [None] ▾

Description

Cancel Save

Pushing Firmware

Restorepoint can upgrade the firmware of a supported device using an image stored in the repository. Select a firmware image using the tickboxes, then click **[Push]**. Select the device from the menu, then click **[Push]** again; Restorepoint will perform the upgrade procedure recommended by the device vendor.



Please check the Plugin Guide (**Help > Plugin Guide**) for a list of devices that support this function.

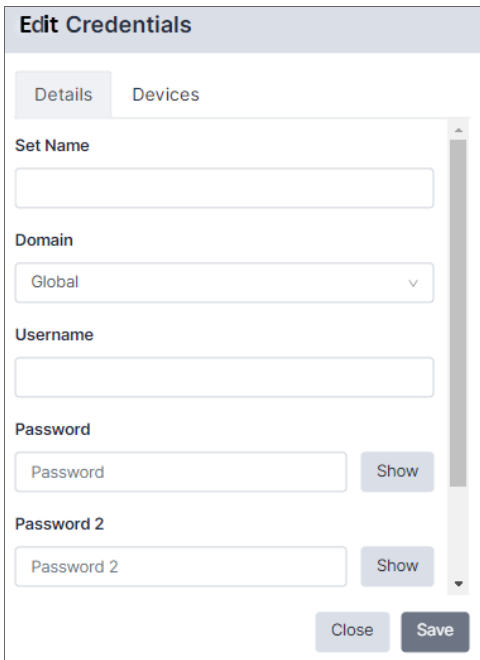
Credential Sets

Restorepoint can use predefined **Credential Sets** to authenticate to a device instead of individual usernames and passwords. Credential Sets are useful if several devices share the same authentication credentials. To create a Credential Set:

1. Go to the **Credential Sets** page (Devices > Credential Sets).
2. Click **[Add Set]**, or click on an existing Credential Set name.
3. Type a name for the set and type your authentication details .
4. Select a **Domain** from the drop-down menu to restrict the scope of this set to a particular domain;

otherwise choose *Global* to make this set available to all domains.

5. Click **[OK]**.



The screenshot shows a dialog box titled "Edit Credentials". It has two tabs: "Details" (selected) and "Devices". The "Details" tab contains the following fields and controls:

- Set Name**: A text input field.
- Domain**: A dropdown menu with "Global" selected.
- Username**: A text input field.
- Password**: A text input field with the placeholder "Password" and a "Show" button to its right.
- Password 2**: A text input field with the placeholder "Password 2" and a "Show" button to its right.
- At the bottom right, there are two buttons: "Close" and "Save".

Using Credential Sets

To authenticate to a device using an existing credential set, leave the authentication details empty, check **Use Credentials**, and then select the correct credential set. Click **[Save]**.

Edit device

Device Details
Connection
Schedule
Assets
Additional Info
Compliance
Notifications & Monitoring
Configurations
Logs
Syslogs
Action Outputs

Connection

Protocol
ssh

☐ Use Restorepoint Credentials?

Username
admin

Password

.....

Show

Password 2

.....

Show

Backup Port
22

Extra Files
/etc/resolv.conf/etc/sysconfig

Backup Logs

☐ Back Connection NAT

☐ Use SSHv2 PKA

SSH Public Key

Clear Cache

To view which devices are currently using a selected Credential set, click the name on the **Devices > Credential Sets** page, and navigate to the **Devices** tab.

Integrating Restorepoint and CyberArk

You can integrate your CyberArk Vault with Restorepoint to populate credential information. To integrate CyberArk with a predefined Restorepoint device:

1. Identify the device and credential field that you want populated by the CyberArk Vault.
2. Go to the **Credential Sets** page (Devices > Credential Sets).
3. Click **[Add Set]** and supply values in the following fields:
 - **Set Name.** Type a name for the credential.
 - **Username.** Type your device username. If you want CyberArk to populate this value, leave this field blank.
 - **Password.** Type your device password. If you want CyberArk to populate this value, leave this field blank.
 - **Password 2.** Type your second device password. If you want CyberArk to populate this value, leave this field blank.
 - **Add Custom Fields.** Click the **[Add Custom Fields]** button and type the name of the field that you want to query from CyberArk so that CyberArk can populate the corresponding value in Restorepoint.

4. Click **[Save]**.
5. Go to the **System Settings** page (Administration > System Settings) and select the **[Security]** tab.
6. In the **Credential Providers** pane, click **[Add]**, and supply values in the following fields:
 - **Name**. Type a name for the credential provider.
 - **URL**. Enter the URL for your CyberArk Vault, specifically the [GetPassword Web Service](#) endpoint of the [Central Credential Provider](#) (CCP). You should not include any query parameters here, but add them to the **Query Mappings** section below.
 - **Application ID**. Type the application ID that identifies Restorepoint application to your CyberArk vault.
 - **Request Timeout (sec)**. Type a value, in seconds, after which Restorepoint will stop trying to communicate with CyberArk. Default value is 10 seconds.
 - **RootCA Certificate**. Upload the PEM-encoded X.509 Root CA certificate required for secure TLS communication with CyberArk.
 - **Client Certificate**. Upload the PEM-encoded X.509 client certificate required for secure TLS communication with CyberArk.
 - **Client Key**. Upload the PEM-encoded client private key required for secure TLS communication with CyberArk.

Query Mappings

Click **[Add query mapping]** and supply values in the following fields:

- **Credential**. Select the credential that you created in steps 2-4 of this section.
- **Field**. Select the field that you want CyberArk to populate.
- **Query**. Type the query to retrieve field data from CyberArk. This is a required parameter to retrieve a secret value from the vault in conjunction with the **Application ID**.

Query. The query is a string with the following format:

```
'Property=Value;Property=Value;...Property=Value'
```

where **Property** is one of the properties of the CyberArk account where the credentials are stored. Different types of accounts contain different properties, but most contain **UserName** and **Address**.

For a successful query, you must include enough properties to return exactly one account, otherwise you will receive an error. For example:

```
'safe=test;Database=hr;UserName=sa;Address=dbserver1.cyberark.local'
```

7. Click **[Save]**.
8. Go to the **Devices** page (Devices > Device List).
9. Select the checkbox to the left of your device and click **[Edit]**.
10. Go to the **[Connection]** tab.
11. Select the **Use Restorepoint Credentials?** checkbox and select the credential that you created in steps 2-4

of this section from the drop-down.

12. Click **[Save changes]**.

NOTE: If the field does not populate in the user interface, you can click **[Backup Now]** when editing the device to view the device logs and the value that was populated from CyberArk.

Asset Fields

In addition to the built-in Asset Management fields, you can also define custom fields. To do this, navigate to the Assets Fields page (**Devices > Asset Fields**). Custom fields can be of type **Date**, **Text** (single-line), **Textarea** (multiple-line), and **File**.

Once defined, date fields can be set to give an **Expiry Notification**:

- 60 days before
- 30 days before
- When Reached

If set, an email is automatically sent to the device's owner on the specified expiration date. Expiry date is also used in reports.

Custom Fields

Name	Type	Notify	
Documentation	File	N/A	Delete
History	Textarea	N/A	Delete
Maintenance Expiry	Date	30 days before	Delete
Purchase Date	Date	None	Delete
Purchased From	Text	N/A	Delete
Renewal	Date	30 days before	Delete
Support End Date	Date	30 days before	Delete
<input type="text"/>	Text		Add Field

Notifications

Notify Owner ☒

Update

Any custom fields defined in this page become immediately available in the **Assets** page of all devices managed by Restorepoint.

Global Search

Restorepoint offers two types of searches to find the correct configuration backups on the **Global Search** page (Devices > Global Search). You can search via a string search or with a regular expression search.

To perform a string search:

1. Select the search criteria in the **Filter** field that you want to search for. Click the **and/or** operator toggle to narrow your search. The **Filter** field will filter as you select or type your search criteria and will update the results in the table below the search modal.
2. Select **String** from the drop-down menu and type in any text you want to match specifically in the **Match String** field. For more information, click (?) for String Search Criteria help.
3. If desired, select a time limit and version limit from the **Limit Time** and **Limit Versions** drop-down menus.
4. Select the devices you want to search and click **[Go]**. The Global Search will display a preview of every search result in the **Results** pane on the right.

The screenshot displays the 'Global Search' interface. At the top, there are filters for 'Plugin' (Cisco IOS), 'Type' (String), 'Match String' (version), 'Limit Time' (All), and 'Limit Versions' (All). A 'Go' button is present. Below the filters, a table shows search results with columns: Name, Plugin, Domain, Agent, Address, Backup Interval, Last Backup, Last Attempt, and a checkbox. The table lists 12 results, with 11 selected. On the right, a 'Results (Files: 15) (Devices: 11)' pane shows a list of configuration files for the selected devices, including simulator-device-3008-0, simulator-device-3006-1, simulator-device-3005-0, simulator-device-3004-1, simulator-device-3007-1, simulator-device-3005-1, simulator-device-3009-0, simulator-device-3000-1, simulator-device-3007-0, simulator-device-3004-0, and simulator-device-3000-0.

To perform Regex search:

1. Select **Regex** from the drop-down menu to search by regular expression for a more advanced search.
2. Type in any text you want to match specifically in the **Match Regex** field. For more information, click (?) for Regex Search Criteria help.
3. If desired, select a time limit and version limit from the **Limit Time** and **Limit Versions** drop-down menus.
4. Select the devices you want to search and click **[Go]**. The Global Search will display a preview of every search result in the **Results** pane on the right.

Global Search

admin

Filters

Search

and

x

Regex

version 15.4

Go

Type

Match Regex

Limit Time

Limit Versions

Total: 21; Showing: 21; Selected: 1

Selected only

Name	Plugin	Domain	Agent	Address	Backup Interval	Last Backup	Last Attempt	Next
<input checked="" type="checkbox"/> simulator-device-3008-0	Cisco IOS	Global	asdad	172.29.0.100	Manual	2024-03-04 15:38	2025-05-07 14:09	
<input type="checkbox"/> simulator-device-3006-1	Cisco IOS	Global	RPAgent30	172.29.0.101	Manual	2024-02-02 00:01	2025-05-14 14:28	
<input type="checkbox"/> simulator-device-3005-0	Cisco IOS	Global		172.29.0.100	Manual	2024-09-24 00:01	2024-11-18 10:36	
<input type="checkbox"/> simulator-device-3004-1	Cisco IOS	Global		172.29.0.101	Manual	2025-05-07 00:00	2025-05-07 00:00	
<input type="checkbox"/> simulator-device-3007-1	Cisco IOS	Domain 2		172.29.0.101	Manual	2025-05-07 00:00	2025-05-07 00:00	
<input type="checkbox"/> simulator-device-3005-1	Cisco IOS	Global		172.29.0.101	Manual	2025-05-07 00:00	2025-05-07 00:00	
<input type="checkbox"/> simulator-device-3001-1	Cisco IOS	Global		172.29.0.101	Manual	2024-02-02 00:01	2024-12-04 14:01	
<input type="checkbox"/> simulator-device-3009-0	Cisco IOS	Global		172.29.0.100	Manual	2025-01-08 00:15	2025-05-07 14:24	

Results (Files: 9) (Devices: 1)

Export

simulator-device-3008-0

Version 15.4 (running) (1 result)

version 15.4

Version 15.4 (running) (1 result)

version 15.4

Version 15.4 (running) (1 result)

version 15.4

Version 15.4 (running) (1 result)

version 15.4

Version 15.4 (running) (1 result)

version 15.4

5. Select the results that you want to export and click the **[Export]** button to export to a .csv file.

Viewing the List of Configurations for a Device

You can access the list of configurations for a device from the **Device Management** page by clicking the **last backup** column of the corresponding device, or by clicking the **[Configurations]** tab when you edit the device.

A configuration may contain more than one file. For example, a Cisco IOS device has a start-up and a running configuration; you can choose which configurations should be backed up in the **Device Details** page.

Configurations

Filename Prefix

Filename Include

☒ Device ID
 ☐ Device Name

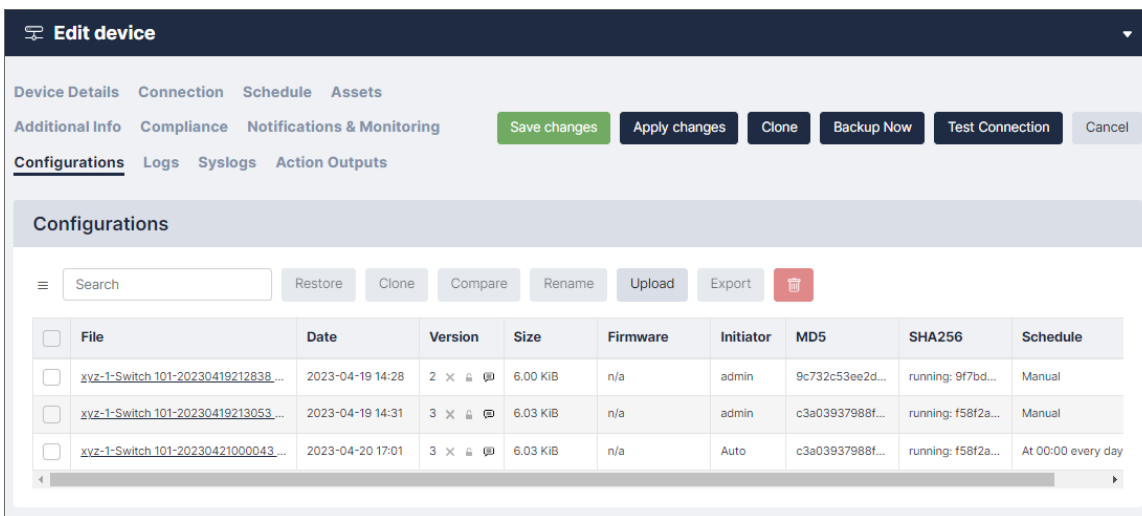
Preview

50-[timestamp]

Default Config Types

☐ Startup Config
 ☐ Running Config
 ☐ VTP Database

If a device supports firmware identification, Restorepoint will display the firmware version detected at the time of backup, next to each configuration. A sample list is shown below:



Restorepoint keeps track of configuration changes by assigning a version ID to each unique configuration retrieved from a device. Identical configurations are not stored multiple times.

View	<p>There are three available views:</p> <ol style="list-style-type: none"> 1. Default View: A list of all the configurations retrieved from the device. 2. Group by: This view groups the configurations by File, Size, Firmware version, Initiator, or configuration version. 3. Version Changes: This view does not display consecutive entries with the same version ID, and therefore highlights configuration changes.
Baseline version	<p>The checkmark shows the baseline version of a configuration. To set a baseline version, select the checkmark. The checkmark will become solid. Restoring a non-baseline configuration version to a device with a baseline configuration version will cause a compliance alert. For more information, see Configuration Baselines.</p>
Retaining a version	<p>You may want to retain a configuration indefinitely (a <i>milestone</i> configuration), that overrides your configured retention policy. For example, a backup taken just before a device upgrade. To retain a configuration, click the padlock icon next to the file name; the padlock will become solid. To undo this action, click the padlock icon again.</p>
Adding comments	<p>You can add a comment to a configuration by clicking the gray note icon next to the relevant configuration. Enter your comment in the pop-up dialog box and click OK; the icon will change color. To remove a comment, click the icon, delete the text, and click OK.</p>

NOTE: The above options apply to a configuration version, rather than an individual backup.

Compare configurations	<p>The Compare option is only available for the devices with text file or a tar/tgz archive of text files configurations. To compare two configurations, select two items using the checkbox to the left of the item, and click Compare. If the configurations are archives, Restorepoint will expand the archives and compare the individual files. Restorepoint will display the chosen configuration files side by side and highlight the differences; inserted lines will be displayed in blue and changed lines will be displayed in red. When Only differences is selected,</p>
-------------------------------	--

	<p>Restorepoint will not display lines which are identical in both files, except those preceding or following a change.</p> <p>Note: Some devices embed a timestamp or fingerprint in the configuration every time a backup is performed. Wherever possible, Restorepoint ignores lines that only differ by such fingerprints when comparing configurations, so that only relevant changes are displayed.</p>
Delete a configuration	Select a configuration using the checkbox and click Delete . This operation is usually only required to delete a milestone configuration (one you have chosen to retain indefinitely), because old configurations are automatically removed according to the retention policy.
Restore a configuration	To restore a configuration, select a configuration using the checkbox and click Restore . Additional options may be displayed, for instance which configuration type should be restored, or whether the device should be reset to complete the operation.
Upload Backup	This option allows you to upload a new device configuration file to Restorepoint from your PC.
Export Backup	You can export a device configuration from Restorepoint through your browser, email, make it available for FTP/TFTP/SFTP collection by a device, or export it to one of your pre-configured file servers.

Comparing Device Configurations

Restorepoint allows you to compare Device Configurations and sift through whole files to analyze any changes between them. You can use the compare function located on either the **Device Management** page (Devices > Device List) or **Configurations** tab on the **Edit device** page. You can also select **Show ignored changes** in the **Compare Devices** window to view any changes that Restorepoint deems "not actual changes".

Examples of "not actual changes" that can be ignored include:

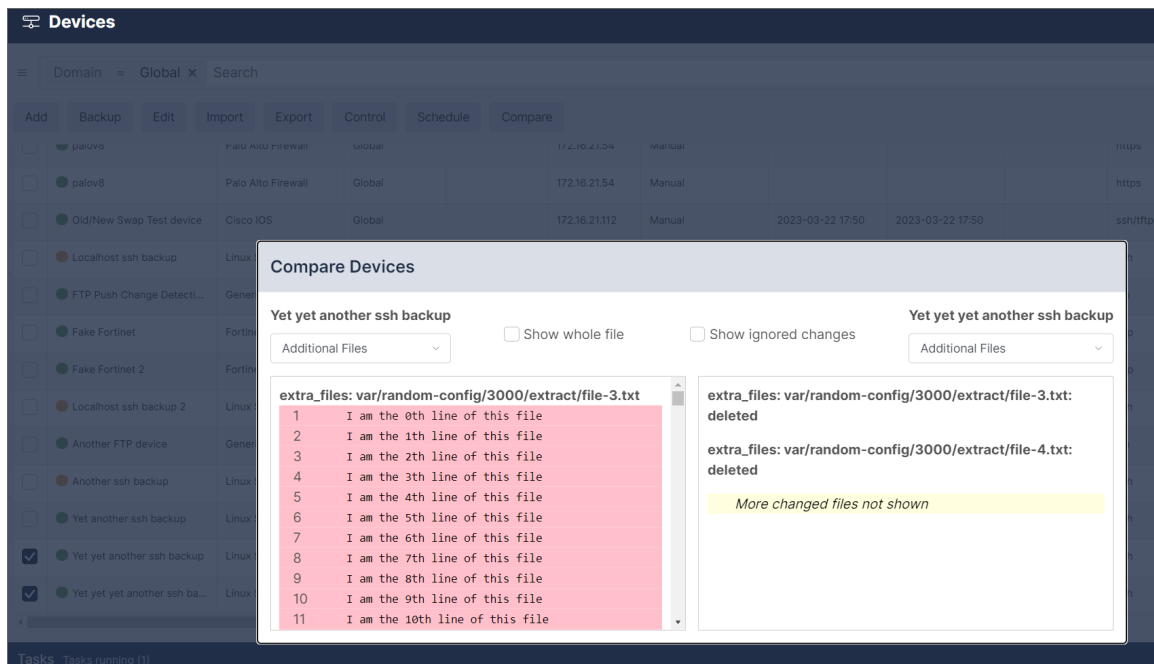
- Run-time variables (e.g. Cisco IOS ntp clock-period value)
- Salted hashes (e.g. hashed passwords, certificates, keys)
- Log files

You can now set Restorepoint to specifically ignore phrasing/words (like matching a regex), entire text-blocks (given the start/stop delimiters), and entire files (within tar/tgz/zip/xz config files).

To compare device configurations from the **Devices** page (Devices > Device List) or **[Configurations]** tab on the **Edit device** page:

1. Select the checkboxes next to the two devices/configurations you want to compare.
2. Click **[Compare]**. The **Compare Devices** window or **Compare Configurations** window appears.

- You can view configuration changes between the selected files in this window. To help refine your viewing, you can select the **Show ignored changes** checkbox to view any "non-actual changes" and/or view the entire files by selecting **Show whole file** checkbox to review entire files.



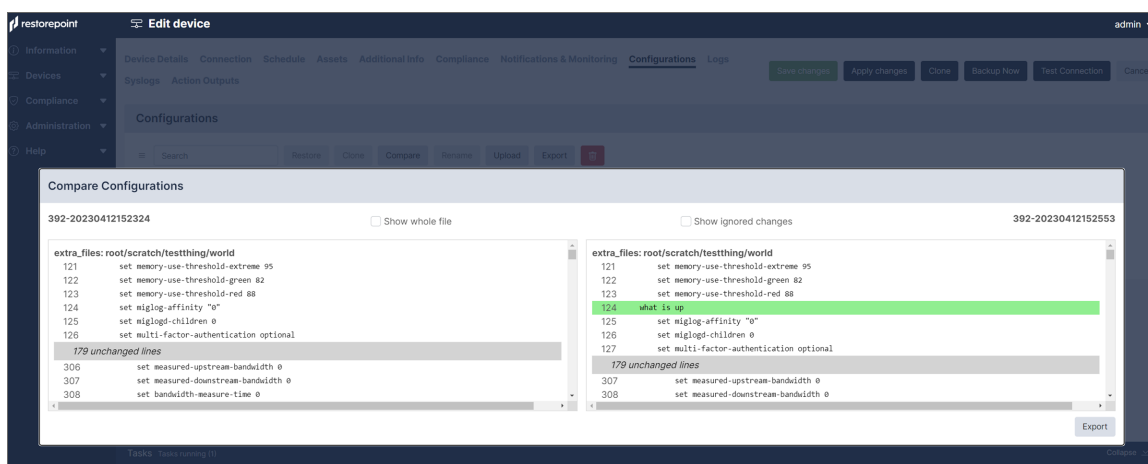
There are multiple parameters regarding specific config diff limits when you are comparing configs:

- 1 000 lines is a cutoff for HTML diff before only changes are forced to be shown.
- 2000 lines is a cutoff for HTML diff when the diff gets truncated (for `rpcmd diff`, it is 5000).
- 2 million lines is a max number of lines for any of the two files before the diff is considered too large to be displayed.

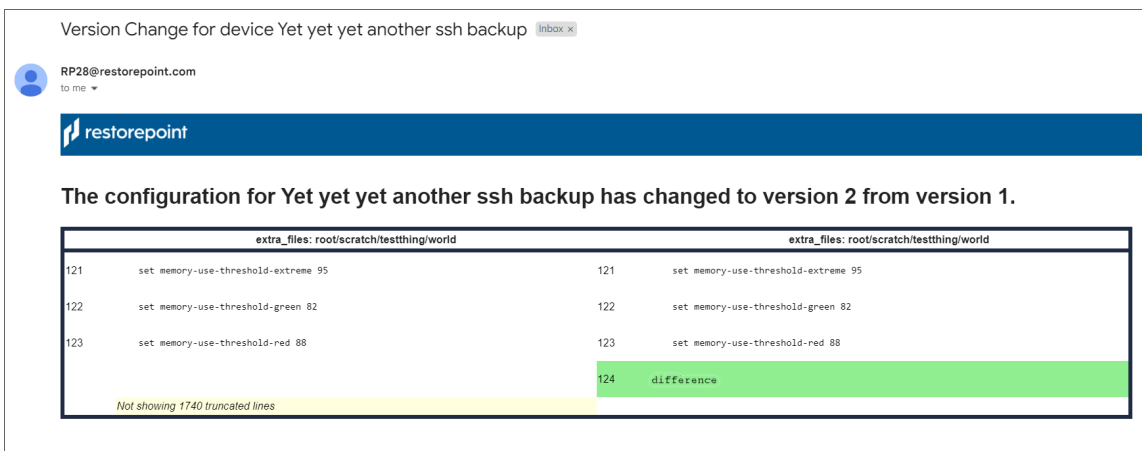
It is important to note that both 1 000 lines and 2000 lines refer to the number of lines in the diff, not the configs themselves. "Diff" in this context refers to the whole set of lines to be displayed including unchanged lines, added lines, and deleted lines.

For example, if the produced diff has more than 1 000 lines, it will be forced to show changes only.

Another example is if the diff has more than 2000 lines, it will be truncated and only the first 2000 lines of the diff will be used for generating the HTML output. The remainder or its changes will not be shown in the user interface. A message alerting you that the output was truncated will display at the bottom of the modal.



An Email Alert of your compare results is also sent when finished comparing configurations and/or devices.



Backup File Operations

If a device configuration is a plain text file or a tar/tgz archive of text files, you can view the configuration contents by clicking the relevant tab or file name in the configuration page. If the configuration is an archive of text files, Restorepoint will attempt to unpack the archive and display each individual file. If the configuration is a binary file, or if the file is too large, Restorepoint will not display the contents.

From this page, you can copy this file to your local machine by clicking the **[Export]** button. After you export the file, you can use a text editor to edit the backup file, and then upload it back to Restorepoint using the **[Upload Backup]** button on the **[Configurations]** tab. You can push the edited configuration file to the device by clicking the **[Restore]** button.

Backup Failures

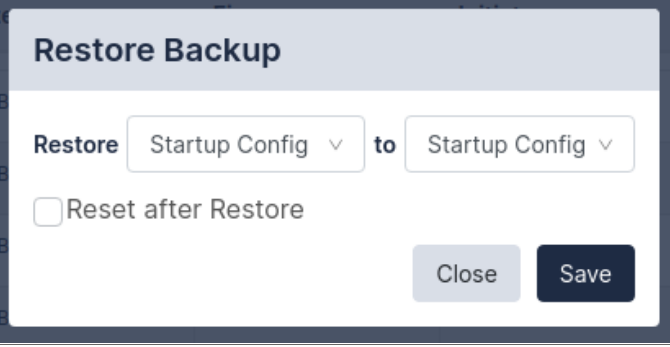
By default, after a device fails to back up, Restorepoint will retry the operation every hour until it succeeds, and it will send an error notification by email on every failed attempt. This behavior can be modified by changing the **Failure Policy**, configured in the device **[Schedule]** tab:

- From the **Retry** field, choose how many times to retry a failed backup. Backups are attempted every hour.
- Next, choose whether to revert to the set schedule or disable further backups when the last allowed failure occurs.
- Finally, choose when to be notified of a failure.

Restoring to an Existing Device

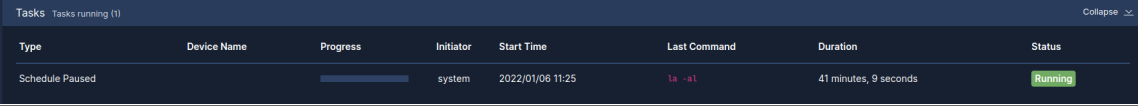
To restore a device:

1. Select **Devices** from the menu. Restorepoint displays the **Device Management** page.
2. Click the entry in the **Last Backup** column next to the device you want to restore. Restorepoint displays all the available configurations.
3. Select a configuration by selecting its checkbox and click **[Restore]**. Restorepoint prompts you to confirm the restore operation. Depending on the device type, you may be prompted for additional options.



The image shows a 'Restore Backup' dialog box. It has a title bar 'Restore Backup'. Below the title bar, there is a 'Restore' button, followed by a dropdown menu showing 'Startup Config', then the word 'to', followed by another dropdown menu also showing 'Startup Config'. Below this, there is a checkbox labeled 'Reset after Restore'. At the bottom right, there are two buttons: 'Close' and 'Save'.

4. If the restore operation fails, you will see an activity in the activity display. You can click on the magnifying glass icon next to the progress bar to show a real-time progress log, which will aid in determining the cause of the failure. There is also a **Transcript** in the **Logs** tab for failed backups, which contains the details of the conversation with the device.



Tasks Tasks running (1)							Collapse
Type	Device Name	Progress	Initiator	Start Time	Last Command	Duration	Status
Schedule Paused		<div></div>	system	2022/01/08 11:25	ls -al	41 minutes, 9 seconds	Running

Restoring to a New Device

When a device is replaced, for instance due to failure, the following conditions must be met:

- The new device must run the same software version as the original.
- The new device must be configured with the same IP address and authentication details as the old device. Alternatively, you can temporarily change the IP addresses or credentials stored on Restorepoint to match those of the new device.
- If Restorepoint connects to the device using SSH, you may need to clear the SSH cache in Restorepoint in the **[Connection]** tab of **Device Management**.

Cloning

The **Clone** button restores a configuration to a device that is different than the original, which produces a duplicate of the original device. This operation should be used with caution, as it may produce a duplicate IP address on your network.

Chapter 4

Compliance

Overview

You can use Restorepoint to create policies to verify that your devices comply with corporate or regulatory guidelines.

This chapter covers the following topics:

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<i>Configuration Baselines</i>	72

Device Policies

Use the **Device Policies** page (Compliance > Device Policies) to create configuration compliance policies and assign the policies to devices. Policies are groups of one or more rules. A rule is a pattern that is applied to configurations or device firmware version to test whether the configurations or firmware contain a certain phrase or Regular Expressions, or if they match an existing device template. If the tests fail, a compliance violation is triggered and an email alert is sent to the device owner.

Configuration Policies can be configured for devices that have a text configuration file or a TGZ archive of text configuration files.

Device Policies

Search

Add Policy

Export

Import

Test

Delete

<input type="checkbox"/>	Policy	Alerts	Devices	Device Type
<input type="checkbox"/>	ScreenOS - Disable insecure management	Never / Never / Always	0	
<input type="checkbox"/>	ASA/PIX - Disable insecure management	Never / Never / Always	0	
<input type="checkbox"/>	ASA - Enable SSH inside	Always / Never / Never	0	
<input type="checkbox"/>	ASA - SSH but not telnet	2 violations / Never / 2 violati...	0	
<input type="checkbox"/>	IOS - Enable Secret Is Set	Always / Always / Always	0	
<input type="checkbox"/>	Secureplatform - Restrict SSH access	Always / Always / Always	0	
<input type="checkbox"/>	IOS - No public SNMP community	Always / Always / Always	0	
<input type="checkbox"/>	ScreenOS - Set Management Timeout	Always / Always / Always	0	
<input type="checkbox"/>	Cisco Router - ISO 27001	Always / Always / Always	0	

Creating a Policy

To create a new policy:

1. Click **[Add Policy]** to create a new policy or click **[Import]** to import a previously exported policy. The **Add new device policy** page appears.

The screenshot shows the 'Add new device policy' form with the 'Details' tab selected. The form includes the following fields:

- Name:** A text input field containing 'New Policy'.
- Device Type:** A dropdown menu with '[None]' selected.
- Low-risk Alert:** A dropdown menu with 'Always' selected.
- Medium-risk Alert:** A dropdown menu with 'Always' selected.
- High-risk Alert:** A dropdown menu with 'Always' selected.
- Additional Comments:** A large text area for notes.
- Version:** A field showing the number '1'.

2. Enter the following details on the **[Details]** tab:

- **Name.** Type a name for the new device policy.
- **Device Type.** Select a device type from the drop-down field.
- **Set the Alert.** Choose which alert to set for your device policy.

Individual rules can be given a risk level, either *Low*, *Medium* or *High*. For each level, a trigger point can be set, to determine whether or not to generate an alert. This ranges from *Never*, through two, three, four, or five violations, to *Always*. For example, you may want an alert only if three or more low-risk rules are broken, but always if a single high-risk fails. You can also specify a **Device Type** that the policy will apply to, and add a **Comment** to explain the purpose of the policy.

If you want to copy an existing policy, open the existing policy and click **Clone**.

Rules Tab

Click **[Add rule]** located in the **Rules** tab of the **Add new device policy** page to define and add a rule to a policy. Once a rule is defined, it can be edited, removed, cloned, or tested against an existing backup using the appropriate buttons. When finished, click **[Save Changes]**.

Add Rule

Name

Name

Severity

Low

Rule

Firmware Version

Remediation

None

Must Match

Match Type

Phrase

Case Insensitive

☐

Value

Value

Cancel

Add Rule

Supply values in the following fields:

- **Rule Name.** A label that is used to identify a rule in a report or email.
- **Rule Type.** Whether the rule applies to a configuration, software version, runtime command, or the output of a scheduled action.
- **Requirement.** Select whether the rule *Must Match* or *Must Not Match* from the drop-down field.
- **Match Type.** Phrase, [Regular Expressions](#), Lua function, device, or device templates. The **Phrase** match type matches any (case sensitive) number of characters, including multi-line. The **Regex** match type (see [Regular Expressions](#)) takes a Perl-flavoured regular expression, and applies it to the whole configuration, or firmware string.
- **Severity.** Select an alert level of *None*, *Low*, *Medium*, or *High*.
- **Remediation Type.** Select a remediation type of *None*, *Manual*, *Automatic*, or *Command*. For more information, see [Remediation](#).

Add new device policy

Details

Rules

Devices

Auto-Apply

Add Rule

Test All Rules

Test

Clone

Delete

<input type="checkbox"/>	Name	Rule	Severity
<input type="checkbox"/>	test1	Firmware version must match phrase	Low

Cancel

Apply changes

Save changes

Summary

Details

Name

Device Type

Low-risk Alert

Medium-risk Alert

High-risk Alert

Version

Last Updated

New Policy

[None]

Always

Always

Always

1

N/A

Rules (1)

Devices (0)

Auto-Apply

Remediation

You can use remediation when a compliance rule is not met, generally intended to rectify the violation. The following remediation types can be configured:

- **Manual.** The remediation text is appended to the notification email to signify that the recipient should take the appropriate action.
- **Command.** One of the stored **Actions** on the device is executed. For more information, see [Device Control](#).
- **Automatic.** The text specified in the textbox is used as a command and executed on the device.

If the rule match type is **Regex**, the remediation can make use of the **Capture** feature, whereby parts of the pattern in brackets can be captured and then referred to in the remediation text (as `$1`, `$2`, etc.). For example, a rule may state that a configuration must not contain the regex:

```
set telnet (\d+\.\d+\.\d+\.\d+)
```

Where the command in brackets is a match for an IP address. If this rule is violated, the configuration can be remedied using the phrase:

```
unsettelnet$1
```

In this case, the brackets in the rule will capture the IP address, and apply it when the command is performed. The rule is then expanded:

```
unsettelnet1.2.3.4
```

Devices Tab

Each policy can be assigned to, or removed from devices by selecting the relevant checkbox. Alternatively, this can be done from individual devices in the **[Devices]** tab on the **Edit Device policy** page.

The screenshot shows the 'Edit device policy' interface with the 'Devices' tab selected. The interface includes a header with a shield icon and the title 'Edit device policy'. Below the header are four tabs: 'Details', 'Rules', 'Devices' (selected), and 'Auto-Apply'. To the right of the tabs are three buttons: 'Cancel', 'Apply changes', and 'Save changes'. The main content area is divided into two panels. The left panel, titled 'Devices', contains an 'Apply to:' section with a 'Name' dropdown and a 'Search' input field. Below this is a list of checkboxes for various device types: 'Select all', 'AOS-CX', 'Cisco ASA', 'Cisco IOS', 'f5', 'Fortigate 1', 'Fortigate 2', 'GaiaR81', 'IPv6 Router', 'Palo Alto v6', 'palov8', and 'Switch 101'. The right panel, titled 'Summary', contains a 'Details' section with a list of policy attributes and their values: 'Name' (ASA - Enable SSH inside), 'Device Type' ([None]), 'Low-risk Alert' (Always), 'Medium-risk Alert' (Never), 'High-risk Alert' (Never), 'Version' (1), and 'Last Updated' (N/A). Below the 'Details' section are three expandable sections: 'Rules (1)', 'Devices (0)', and 'Auto-Apply'.

Summary	
Details	
Name	ASA - Enable SSH inside
Device Type	[None]
Low-risk Alert	Always
Medium-risk Alert	Never
High-risk Alert	Never
Version	1
Last Updated	N/A

Rules (1)	
Devices (0)	
Auto-Apply	

When your policy is assigned to, or removed from, its devices, you can choose when their policies should be applied. To apply the policies:

1. Go to the **[Auto-Apply]** tab (Compliance > Device Policies > your policy) . Choose an option from the **Apply this policy when** drop-down field to refine when a policy should be applied to a device that was created with Use Auto-Applied Rules

Regular Expressions

A regular expression specifies a set of strings as a pattern, rather than a list. For example, the pattern `C(o|a)s?` matches the strings *Cot*, *Cat*, and *Cast*, but not *Coast*. Restorepoint uses Perl-flavor Regular Expressions.

Most characters can be used in a regular expression. Some characters, called *metacharacters*, have special meanings:

- `()` denote grouping: `(a|b)b` matches *ab* and *bb*
- `|` denotes an alternative (see above)
- `^` matches the beginning of a line
- `$` matches the end of a line
- `.` matches any character
- `+` denotes one or more occurrences of the previous character: `a+b` matches *ab*, *aab*, *abb*, but not *b*
- `*` denotes zero or more occurrences of the previous character: `a*b` matches *b*, *ab*, *aab*, *aaab*
- `?` denotes zero or one occurrences of the previous character: `a?b` matches *b* and *ab*, but not *aab* or *aaab*

Character classes are matches for sets of possible characters, rather than just a single character. For example:

- `[bcr]at` matches *bat*, *cat* and *rat*
- `-` can be used as a range operator in a character class. For example, `[a-g]` matches any character from *a* to *g*

There are some abbreviations for common character classes:

- `\d` matches a digit
- `\s` matches whitespace (a space or a tab)
- `\w` matches a word character (alphanumeric or a `_`)

For example, `\d\d:\d\d:\d\d` matches time in a *hh:mm:ss* format.

Lua Functions

You can use Restorepoint to define rules using Lua functions. For information on using Lua to run commands on your devices, see [Lua Applets](#).

Available functions for compliance rules are:

- `nextline()` returns the next line of text
- `getline(n)` returns the given line of text
- `numlines()` returns the number of lines
- `addmessage(m)` allows you to replace a series of variables in the remediation text. For example, `addmessage("Hello")` with a remediation text of `$1World!` would output *Hello World!*. The next `addmessage` call would replace `$2`, and so on.

This function checks that the number of lines containing *configure* matches the lines containing *port*:

```
num1 = 0

num2 = 0

line, next = nextline()

while next do

    if line:match("configure") then num1 = num1+1 end

    if line:match("port") then num2 = num2+1 end

    line, next = nextline

end

if num1 > num2 then addmessage("more")

else if num2 < num1 then addmessage("less") end

return num1 == num2
```

Remediation Text: `Config contains $1 configures than ports.`

Variable Definitions

Items defined in this section can be used in compliance rules as variable replacements, referenced with the `$replace$` format, where `replace` is the variable you have defined. This enables you to use a variable as shorthand for configuration elements, that are likely to be referenced multiple times.

For example, if you create a definition for *Gateway*, and assign it a **Value** of `192.168.0.1`, you can then use it in a compliance rule, as shown below:

Add Rule

Name

Show default gateway

Rule

Configuration

Must Match

Match Type

Regex

Case Insensitive

☐

Value

ip default-gateway \$Gateway\$

Test

This rule will be expanded to `ip default-gateway 192.168.0.1`. If the gateway address changes, update the **Value** in the Gateway variable definition and all rules that use the `$Gateway$` variable will be automatically updated.

NOTE: A variable name can only consist of letters, numbers, and the underscore character `_`. If the value contains escape sequences (such as `\n`), the sequence must be double-escaped (`\\n`).

Password Policies

You can use password policies to configure various rules to enforce password strength for devices and users. These settings are used in the **strength meter** that is displayed in all password fields : the background of the field will change color, from red for an unacceptable password, to yellow for a weak password, to green for a good password. Password Strength reports are available on the **Reports** page.

You can use the following rules for device passwords and user passwords:

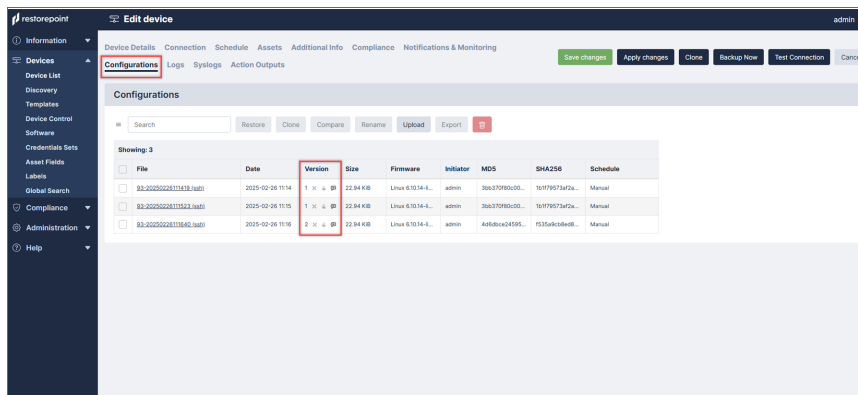
- **Minimum Length.** Type a minimum number of characters for a password to be accepted.
- **Good Length.** Type a recommended number of characters to be considered good.
- **Reject Common Passwords.** Select this checkbox to reject easy-to-guess passwords, such as *1234* or *password*.
- **Reject Dictionary Words.** Select this checkbox to reject common words from the dictionary, such as *backup* or *admin*.
- **Must Mix Case.** Select this checkbox to require users to use mixed-case passwords.

- **Must Include Numbers.** Select this checkbox to require users to include numbers in their passwords.
- **Must Include Symbols.** Select this checkbox to require users to include symbols in their passwords.
- **Expiration.** User Passwords only. Type the number of days until the user passwords expires.

Configuration Baselines

Configuration versions can be marked as *Baseline* by the *checkmark* symbol in the *Version* column of the [Configurations] tab. When you perform subsequent backups, an email notification is sent if the configuration differs from a baseline version. This allows you to quickly check if the current configuration is an approved version.

1. Go to the **Devices** page and select your device. The **Edit Device** page appears.
2. Click the [Configurations] tab and set the **Baseline** toggle (✓), **Retention** toggle (🔒), or **Comment** (💬) for your device in the **Version** column.
 - **Baseline toggle on.** If you use the (✓), your configuration version will be marked as Baseline.
 - **Baseline toggle off.** If you toggle to (✕), your configuration is not Baseline.



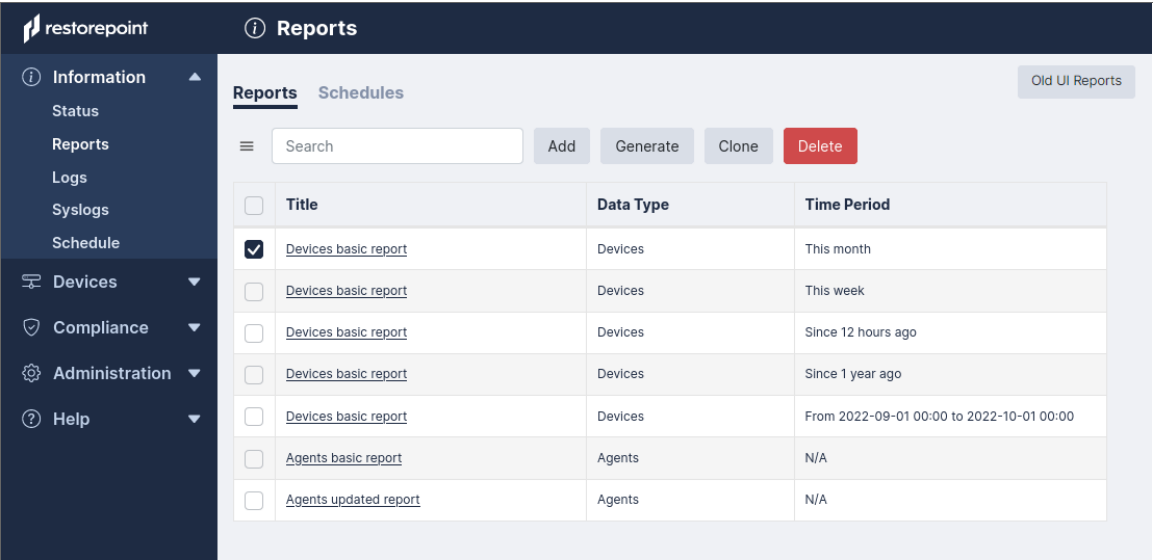
Chapter

5

Reports

Overview

This chapter describes how you can perform a multitude of report-related functions in Restorepoint. The **Reports** page (Information > Reports) primarily allows you to add, generate, and schedule reports to your set specifications. However, you can also clone and delete reports/report schedules for better data refinement. You can select multiple individual reports, also called multireports, on this page. The check-boxes located to the left of the listed reports and schedules allow you to multiselect.



This chapter covers the following topics:

Adding a Report	75
Editing a Report	76

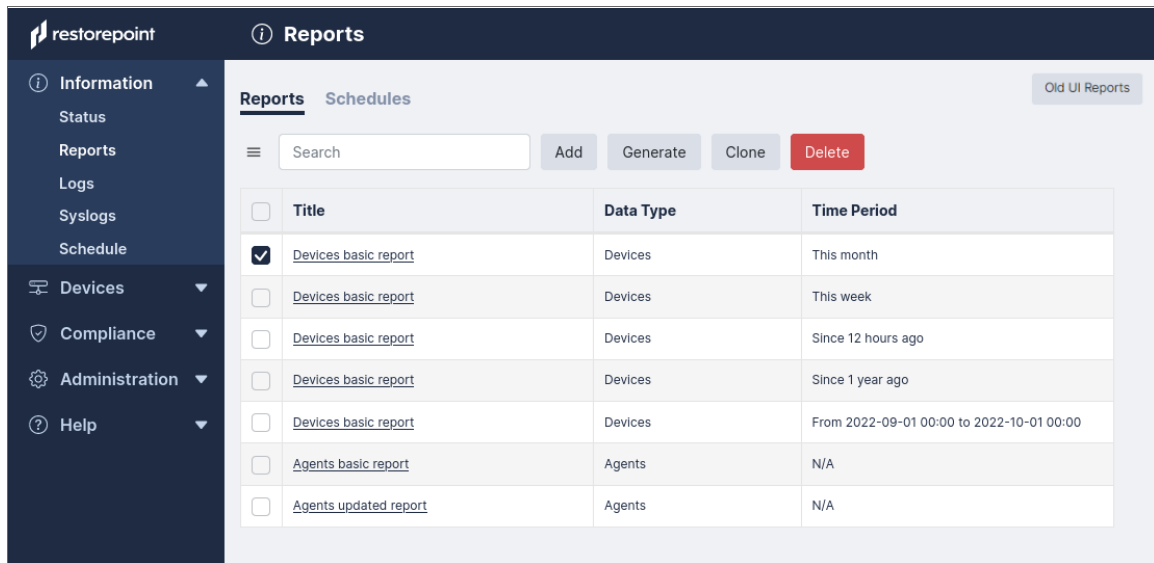
<i>Generating a Report</i>	<i>77</i>
<i>Cloning a Report</i>	<i>78</i>
<i>Adding a Report Schedule</i>	<i>79</i>
<i>Editing a Report Schedule</i>	<i>80</i>
<i>Deleting a Report or Report Schedule</i>	<i>80</i>
<i>Viewing Old User Interface Reports</i>	<i>81</i>

Adding a Report

You can add reports that provide device data suited to your selected fields.

To add a new report:

1. Go to the **Reports** tab (Information > Reports) and click **[Add]**.



2. The **Add Report** modal appears. Complete the following fields on the **[Details]** tab:
 - **Title**. Enter your report's title.
 - **Data Type**. Select your report data type.
 - **Sort by**. Determine which column field that the generated table on your report will be sorted by.
3. On the **[Fields]** tab, select the check boxes for the data fields you want to appear in the report.
4. On the **[Filters]** tab, click **[Add]** to add the filters you want on your report. Select your **Plugin (=)**, **Label (=)**, and their associated plugins/labels. Filters limit, or exclude, a specific **Domain**, **Location**, **Device Type**, or **Device**. A device must match *all* filters to be included in the report; there are a wide range of combinations that can be met for your report.

Add Report

Details

Fields

Filters

Title

Report title

Data Type

Devices

Sort By

Select field

Generate

Close

Submit

- Click **[Submit]** to add the report. Your report will appear in the **Report** page list.

Editing a Report

You can edit existing reports to reflect any report updates that come after creation or perform additional report functions.

To edit a report:

- Click the **Reports** (Information > Reports) tab and select your *Report Title* from the Reports list to edit that specific report.

restorepoint

Information

Status

Reports

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Syslogs

Schedule

Devices

Compliance

Administration

Help

Reports

Reports

Schedules

Search

Add

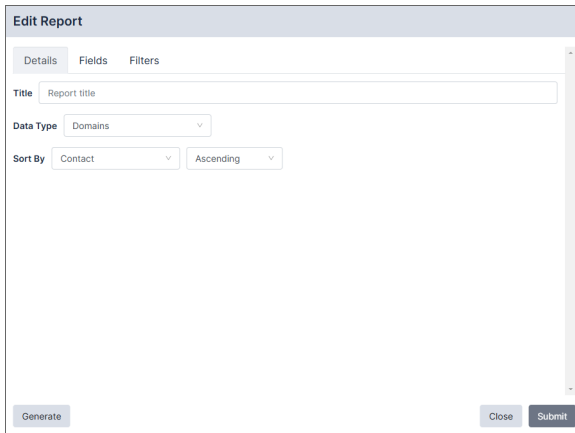
Generate

Clone

Delete

	Title	Data Type	Time Period
<input checked="" type="checkbox"/>	Devices basic report	Devices	This month
<input type="checkbox"/>	Devices basic report	Devices	This week
<input type="checkbox"/>	Devices basic report	Devices	Since 12 hours ago
<input type="checkbox"/>	Devices basic report	Devices	Since 1 year ago
<input type="checkbox"/>	Devices basic report	Devices	From 2022-09-01 00:00 to 2022-10-01 00:00
<input type="checkbox"/>	Agents basic report	Agents	N/A
<input type="checkbox"/>	Agents updated report	Agents	N/A

2. The **Edit Report** modal appears. Update the fields you want to edit:



The 'Edit Report' modal is a light gray box with a title bar. It contains three tabs: 'Details', 'Fields', and 'Filters'. The 'Details' tab is active. It has a 'Title' field with the placeholder text 'Report title'. Below it is a 'Data Type' dropdown menu with 'Domains' selected. At the bottom left is a 'Sort By' dropdown menu with 'Contact' selected, and next to it is an 'Ascending' dropdown menu. At the bottom right are three buttons: 'Generate', 'Close', and 'Submit'.

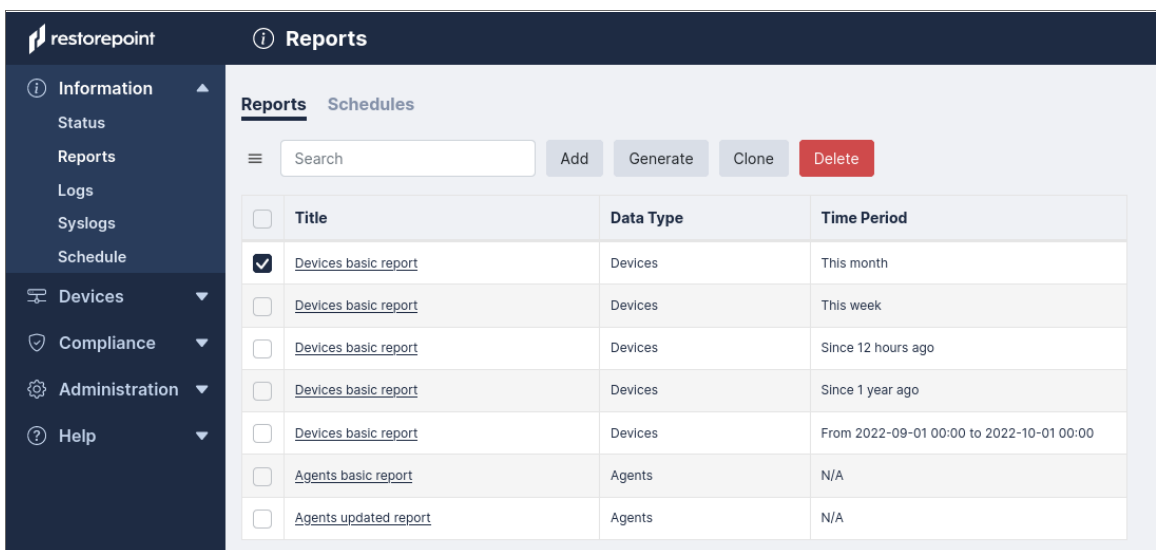
3. Click **[Submit]** to submit your report edits.

Generating a Report

You can generate reports to view device data suited to your report's selected fields.

To generate a report:

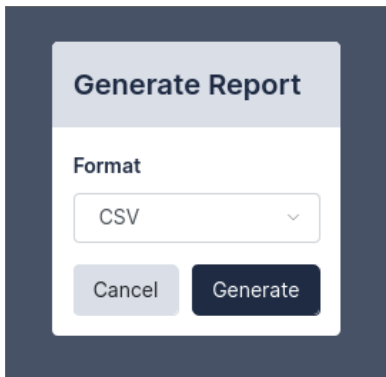
1. Click the **Reports** (Information > Reports) tab and select the checkbox next to your report to generate and click **[Generate]**.



The screenshot shows the 'Reports' page in the RestorePoint interface. On the left is a dark blue sidebar with a menu: 'Information' (expanded), 'Status', 'Reports', 'Logs', 'Syslogs', 'Schedule', 'Devices', 'Compliance', 'Administration', and 'Help'. The 'Reports' section is active. The main area has a header 'Reports' with a sub-tab 'Schedules'. Below the header is a search bar and four buttons: 'Add', 'Generate', 'Clone', and 'Delete'. A table lists reports with columns 'Title', 'Data Type', and 'Time Period'. The first report, 'Devices basic report', is selected with a checked checkbox. The table has 7 rows.

<input type="checkbox"/>	Title	Data Type	Time Period
<input checked="" type="checkbox"/>	Devices basic report	Devices	This month
<input type="checkbox"/>	Devices basic report	Devices	This week
<input type="checkbox"/>	Devices basic report	Devices	Since 12 hours ago
<input type="checkbox"/>	Devices basic report	Devices	Since 1 year ago
<input type="checkbox"/>	Devices basic report	Devices	From 2022-09-01 00:00 to 2022-10-01 00:00
<input type="checkbox"/>	Agents basic report	Agents	N/A
<input type="checkbox"/>	Agents updated report	Agents	N/A

2. The **Generate Report** modal appears. Select your report's *Format*. Reports can be produced in these formats: CSV and PDF.

A modal window titled "Generate Report" with a "Format" dropdown menu set to "CSV". Below the dropdown are two buttons: "Cancel" and "Generate".

Generate Report

Format

CSV

Cancel Generate

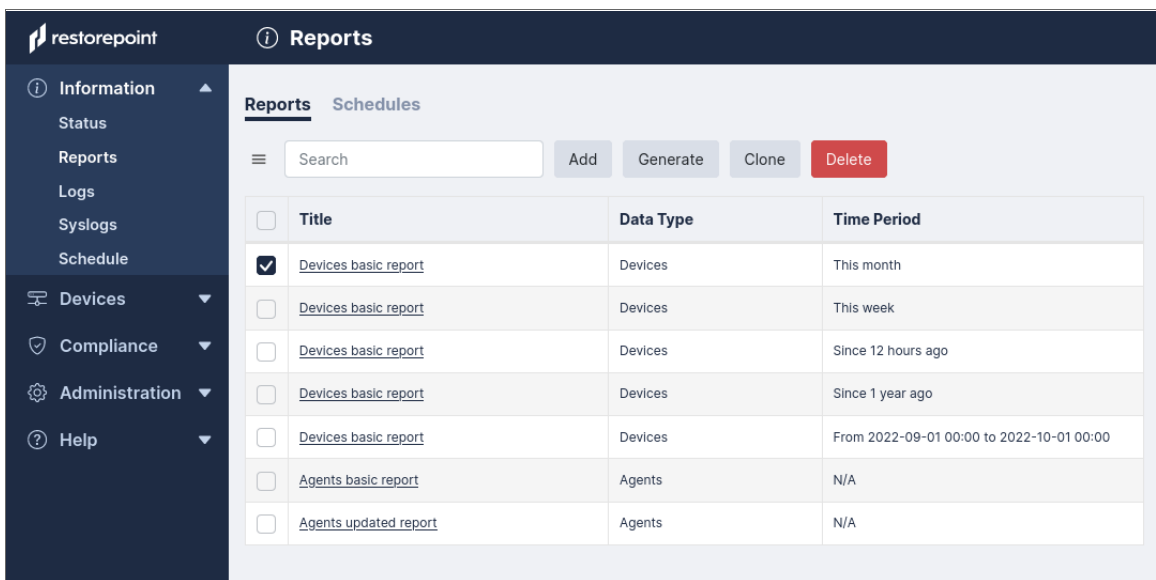
3. Click [**Generate**] to view the report in your selected format.

Cloning a Report

You can clone existing reports to add a new report that is similar to another.

To clone a report:

1. Click the **Reports** (Information > Reports) tab and select the checkbox next to the report you want to clone and click [**Clone**].

A screenshot of the "Reports" interface in the restorepoint application. The left sidebar shows a navigation menu with "Information" selected. The main area shows a table of reports with columns "Title", "Data Type", and "Time Period". The first report, "Devices basic report", is selected with a checkbox. Above the table are buttons for "Add", "Generate", "Clone", and "Delete".

restorepoint

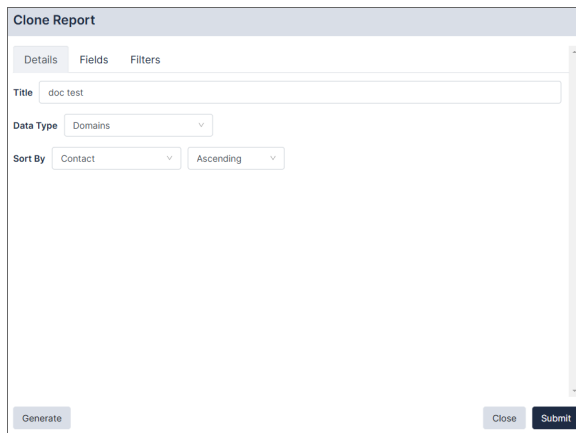
Reports

Reports Schedules

Search Add Generate Clone Delete

	Title	Data Type	Time Period
<input checked="" type="checkbox"/>	Devices basic report	Devices	This month
<input type="checkbox"/>	Devices basic report	Devices	This week
<input type="checkbox"/>	Devices basic report	Devices	Since 12 hours ago
<input type="checkbox"/>	Devices basic report	Devices	Since 1 year ago
<input type="checkbox"/>	Devices basic report	Devices	From 2022-09-01 00:00 to 2022-10-01 00:00
<input type="checkbox"/>	Agents basic report	Agents	N/A
<input type="checkbox"/>	Agents updated report	Agents	N/A

2. The **Clone Report** modal appears. Complete the following fields:



The 'Clone Report' modal is shown with tabs for 'Details', 'Fields', and 'Filters'. The 'Details' tab is active, showing a 'Title' field with 'doc test', a 'Data Type' dropdown set to 'Domains', and a 'Sort By' section with 'Contact' and 'Ascending' dropdowns. At the bottom are 'Generate', 'Close', and 'Submit' buttons.

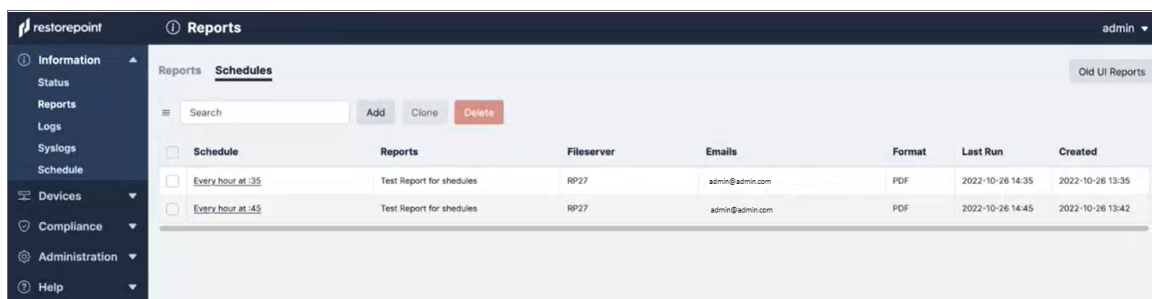
3. Click **[Submit]** to finish adding the clone report.

Adding a Report Schedule

You can schedule reports to run automatically at a selected time. Every schedule requires a minimum of one email or fileserver to be set.

To add a scheduled report to run automatically:

1. Click the **[Schedules]** (Information > Reports > Schedules) tab.



The 'Reports Schedules' table shows a list of scheduled reports. The table has columns for 'Schedule', 'Reports', 'Fileserver', 'Emails', 'Format', 'Last Run', and 'Created'. There are two rows of data.

Schedule	Reports	Fileserver	Emails	Format	Last Run	Created
<input type="checkbox"/> Every hour at :35	Test Report for schedules	RP27	admin@admin.com	PDF	2022-10-26 14:35	2022-10-26 13:35
<input type="checkbox"/> Every hour at :45	Test Report for schedules	RP27	admin@admin.com	PDF	2022-10-26 14:45	2022-10-26 13:42

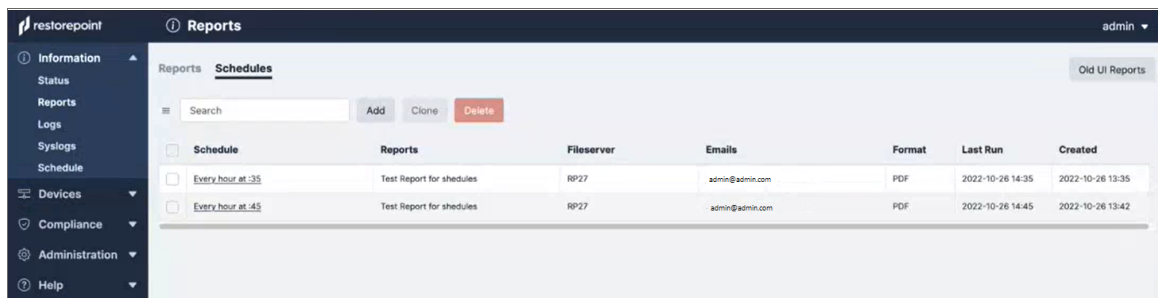
2. Click **Add**.
3. The **Add Schedule** modal appears. Complete the following fields.
 - **Every [Number] [Time increment] at [Number]**. Enter your report schedule's run frequency.
 - **Fileserver**. Select your fileserver.
 - **Emails**. Enter the email address(es) that will receive the report.
 - **Format**. Reports can be produced in these formats: HTML, CSV, PDF, and XML.
 - **Reports**. Select a report to test.
4. Click **[Submit]** to complete your new report schedule.

Editing a Report Schedule

You can edit existing report schedule to reflect any schedule updates that come after creation or perform additional schedule functions.

To edit a report schedule:

1. Click the **[Schedules]** (Information > Reports > Schedules) tab and select your *Schedule Title* from the Schedules list to edit that specific schedule.



2. The **Edit Schedule** modal appears. Update the fields you want to edit.

The 'Edit Schedule' modal form contains the following fields and options: 'Every' set to 1, 'Hour' selected from a dropdown, 'at' set to 10, and '+00:00 (Europe/London)' for the time zone. Below these are 'Next Due' dates for Local, Appliance, and another Local instance. The 'Fileserver' dropdown is set to '[None]'. The 'Emails' field has a placeholder 'Write value and hit ENTER or SPACE'. The 'Format' dropdown is set to 'CSV'. The 'Reports' section has a search bar and a list of checkboxes: 'Select all', 'Assets', 'Configuration compliance', 'Configuration compliance last', 'Devices', 'doc test', 'Password compliance', 'passwords', 'report', and 'Test' (which is checked). 'Close' and 'Submit' buttons are at the bottom right.

3. Click **[Submit]** to submit your schedule edits.

Deleting a Report or Report Schedule

You can delete existing reports, or report schedules, from their respective lists.

To delete a report or report schedule:

1. From either the **[Reports]** or **[Schedules]** tab, select the check-box next to your report(s), or report schedule(s), to remove.

2. Click **[Delete]**. The selected report(s) or report schedule(s) will no longer appear in the list.

The screenshot shows the Restorpoint interface with the 'Reports' tab selected. The left sidebar contains navigation links: Information, Status, Reports, Logs, Syslogs, Schedule, Devices, Compliance, Administration, and Help. The main content area has a 'Reports' sub-tab and a search bar. Below the search bar are buttons for 'Add', 'Generate', 'Clone', and 'Delete'. A table lists reports with columns for 'Title', 'Data Type', and 'Time Period'. The first two reports are selected with checkboxes.

<input type="checkbox"/>	Title	Data Type	Time Period
<input checked="" type="checkbox"/>	Devices basic report	Devices	This month
<input checked="" type="checkbox"/>	Devices basic report	Devices	This week
<input type="checkbox"/>	Devices basic report	Devices	Since 12 hours ago
<input type="checkbox"/>	Devices basic report	Devices	Since 1 year ago
<input type="checkbox"/>	Devices basic report	Devices	From 2022-09-01 00:00 to 2022-10-01 00:00
<input type="checkbox"/>	Agents basic report	Agents	N/A
<input type="checkbox"/>	Agents updated report	Agents	N/A

Viewing Old User Interface Reports

You can view old Restorpoint user interface reports that have been migrated over from the old user-interface.

IMPORTANT: Old user interface reports (Information > Reports > Old UI Reports) will be deprecated in upcoming releases. To prevent any data loss, you should migrate any old reports to the new reports (Information > Reports). For more information, contact ScienceLogic Support.

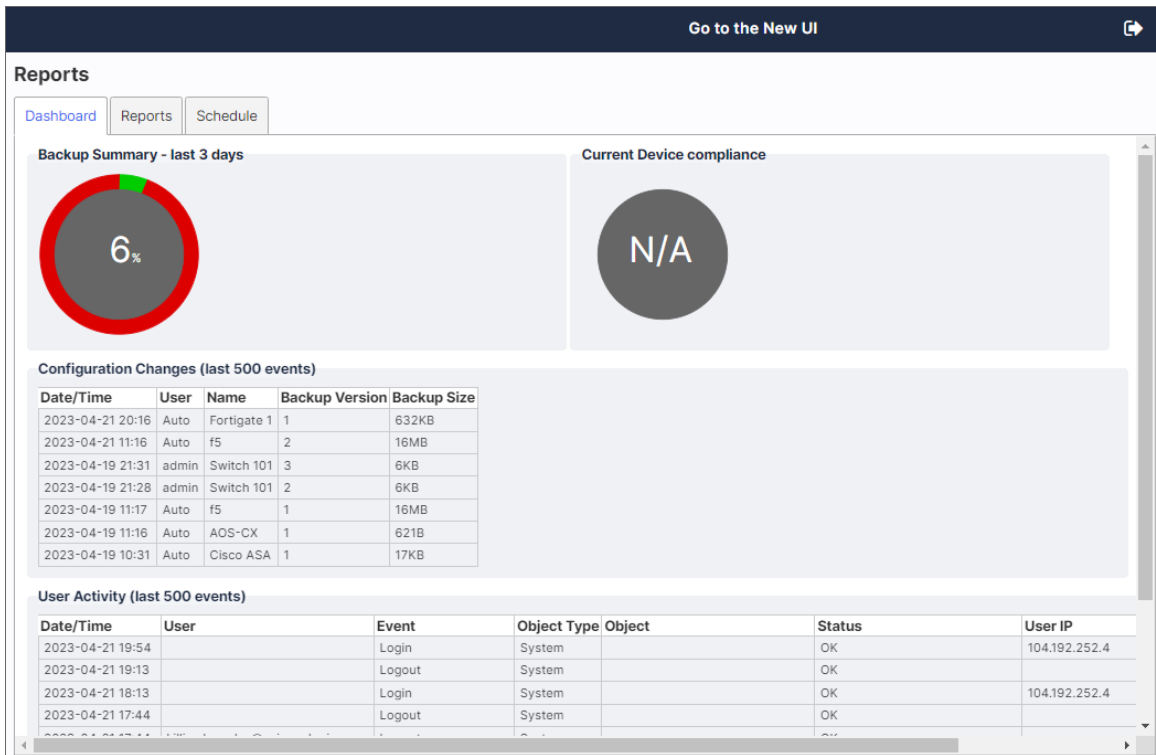
To view old reports:

1. From the **Reports** tab, click **[Old UI Reports]**.

The screenshot shows the Restorpoint interface with the 'Reports' tab selected. The left sidebar is the same as the previous screenshot. The main content area has a 'Reports' sub-tab and a search bar. Below the search bar are buttons for 'Add', 'Generate', 'Clone', and 'Delete'. A button labeled 'Old UI Reports' is visible in the top right corner of the main content area. The table below the buttons is identical to the one in the previous screenshot.

<input type="checkbox"/>	Title	Data Type	Time Period
<input checked="" type="checkbox"/>	Devices basic report	Devices	This month
<input type="checkbox"/>	Devices basic report	Devices	This week
<input type="checkbox"/>	Devices basic report	Devices	Since 12 hours ago
<input type="checkbox"/>	Devices basic report	Devices	Since 1 year ago
<input type="checkbox"/>	Devices basic report	Devices	From 2022-09-01 00:00 to 2022-10-01 00:00
<input type="checkbox"/>	Agents basic report	Agents	N/A
<input type="checkbox"/>	Agents updated report	Agents	N/A

- The old version of the Restorepoint **Reports** page appears and is available for reviewing. Click **[Go the New UI]** to return to the new user-interface's **Reports** module.



Chapter

6

Managing Users

Overview

This chapter describes how you can add administrators to Restorepoint and configure administrator roles.

Restorepoint supports three levels of user access:

- **Admin.** Super User who has full access (can create/modify/delete devices and users, initiate backups/restores and change the appliance configuration). Admins also have an encryption password that allows Restorepoint to transition from the locked state to the normal state.
- **Backup.** Backup Operator who can perform device backups and restores, but cannot modify devices, users, or appliance settings.
- **View Only.** Monitor Operator who can only view existing backups, access logs, and verify that the system is operating normally.

This chapter covers the following topics:

<i>Listing Logged-in Users</i>	84
<i>Adding a New User</i>	84
<i>Editing an Existing User</i>	86
<i>Broadcasting to Users</i>	87
<i>Deleting a User</i>	87
<i>Password Reset</i>	87
<i>Custom User Roles</i>	89
<i>Authentication Servers</i>	91

Listing Logged-in Users

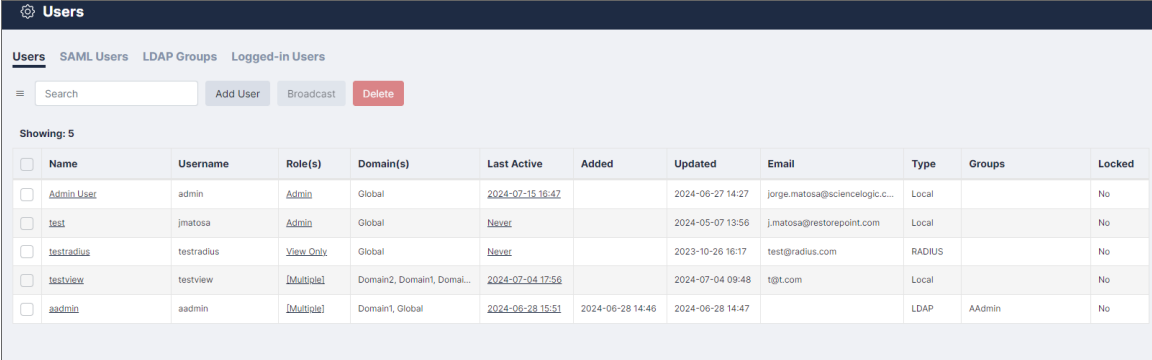
You can view a list of currently logged in users in the **[Logged-in Users]** tab (Administration > Users > Logged-in Users). The number of Logged-in users is also displayed on the **Dashboard** (Info > Status).

Adding a New User

To add or modify administrators, navigate to the **Users** page (Administration > Users). Administrator passwords and encryption passwords, by default, must be at least 8 characters long. For more information, see [Password Policies](#).

To add a new user:

1. Navigate to the **Users** page (Administration > Users). The **User Management** page appears.



The screenshot shows the 'Users' management interface. At the top, there are tabs for 'Users', 'SAML Users', 'LDAP Groups', and 'Logged-in Users'. Below the tabs is a search bar and three buttons: 'Add User', 'Broadcast', and 'Delete'. A 'Showing: 5' indicator is present above the table. The table lists five users with columns for Name, Username, Role(s), Domain(s), Last Active, Added, Updated, Email, Type, Groups, and Locked.

<input type="checkbox"/>	Name	Username	Role(s)	Domain(s)	Last Active	Added	Updated	Email	Type	Groups	Locked
<input type="checkbox"/>	Admin User	admin	Admin	Global	2024-07-15 16:47		2024-06-27 14:27	jorge.matosa@sciencelogic.c...	Local		No
<input type="checkbox"/>	test	jmatosa	Admin	Global	Never		2024-05-07 13:56	j.matosa@restorepoint.com	Local		No
<input type="checkbox"/>	testradius	testradius	View Only	Global	Never		2023-10-26 16:17	test@radius.com	RADIUS		No
<input type="checkbox"/>	testview	testview	Multiple	Domain2, Domain1, Domai...	2024-07-04 17:56		2024-07-04 09:48	t@t.com	Local		No
<input type="checkbox"/>	aadmin	aadmin	Multiple	Domain1, Global	2024-06-28 15:51	2024-06-28 14:46	2024-06-28 14:47		LDAP	AAdmin	No

2. Click **Add User**. The **New User** page appears:

The screenshot shows the 'Add User' form with the following details:

- Full Name:** John Doe
- Email:** some@email.com
- Disabled:** ☐
- Locked:** ☐
- Allowed Networks:** IP Address/Mask (text box) and Add (button)
- Buttons:** Close and Save

3. Complete the following fields on the **Details** tab:

- **Full Name.** Type the full name of the user.
- **Email.** Type the user email address.
- **Disabled.** Select this checkbox to prevent the user from logging in.
- **Allowed Networks.** If set, this field allows the user to connect to Restorepoint only from certain subnets. Enter an IP range in CIDR format in the IP Address/Mask box, and click **Add**.

4. Complete the following fields on the **Auth** tab.

- **Username.** Type the new username. Usernames may be up to 16 characters long.
- **Password.** Enter the password for the new user. By default, passwords must be between 8 and 24 characters long. The field color will range from red to green to indicate the password strength, according to the policy set in the **Password Policies** page. For more information, see [Password Policies](#).
- **Encryption Password.** This field appears if an *Admin*-level administrator is selected. The encryption password must be between 8 and 24 characters long, and must be different from the administrator password. The field color will range from red to green to indicate the password strength.
- **Email Activation Link.** This field allows you to set up a user without specifying a password. The user will receive an activation email to let them set their own password.
- **Expire Password.** This field allows you to override the global password expiry rules for this user. See [Timeouts](#) for the global password expiry settings.
- **Use RADIUS.** Select this checkbox if you want the user to authenticate against an external RADIUS server. See [RADIUS Authentication](#) on how to configure a RADIUS server.

5. Complete the following fields in the **Domains** tab.

- **Role.** Assign a role to one or more domains. Choose between No Role, View Only, Back Up, or Admin.
 - **Domain.** Assign a domain to each role. Choose from Global, Domain 1, Domain 2, Domain 3.
6. Click **[Save]**.

NOTE: When a new administrator first logs in, they will be prompted to configure a password recovery question and answer. Restorepoint suggests that administrators assign an email and recovery question and answer in case you need to reset your password. For more information, see [Password Reset](#).

Editing an Existing User

To edit the details of an existing user:

1. Navigate to the **Users** page (Administration > Users).
2. Click on the name of the user that you want to edit.
3. Edit the user as needed and then click **Save**.

The screenshot shows the 'Edit User' form with the 'Details' tab selected. The form contains the following fields and controls:

- Full Name:** A text input field containing 'testradius'.
- Email:** A text input field containing 'test@radius.com'.
- Disabled:** A checkbox that is currently unchecked.
- Locked:** A checkbox that is currently unchecked.
- Allowed Networks:** A section with a text input field labeled 'IP Address/Mask' and an 'Add' button next to it.
- Buttons:** At the bottom right, there are 'Close' and 'Save' buttons.

4. When editing an administrator's user details, there are two additional fields in the **Auth** tab:
 - **Recovery Question/Answer.** Type a Recovery Question / Answer for password recovery.
 - **New Token.** Generates and emails a new recovery token to the user. This allows the user to recover their encryption password, if forgotten. For more information, see [Password Reset](#).

NOTE: A new token is generated any time an administrator's recovery details are updated. Take note of the new token as this token will be used later if you forget your password.

Broadcasting to Users

You can use Restorepoint to send a notification message to a user or group of users. Select the checkbox next to the users you want to message and click **[Broadcast]**. This opens the **Broadcast Message** dialog, where you can enter the message. When finished, click the **[OK]** button to send the message.

A message type appears as a pop-up in the user's session while logged into Restorepoint. If the user is not currently logged in, the message will appear when they log in to the appliance until the *Persist* time is reached. An *Email* message type will send the notification to the user's email address registered on the appliance.

Deleting a User

To delete one or more existing users:

1. Select the checkbox of the user you want to remove. You can remove multiple users at a time.
2. Click **[Delete]**.

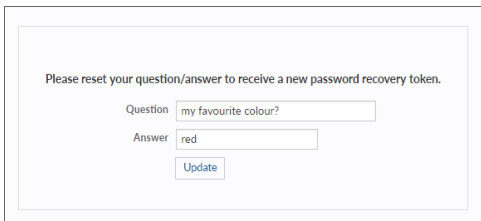
Password Reset

Restorepoint provides a password reset mechanism based on two-factor authentication.

Password Recovery Configuration

During the initial configuration procedure, or when an administrator logs in for the first time, the following information must be set:

- A password recovery question and related answer. For security reasons, only an administrator should know these.
- The administrator's email address.

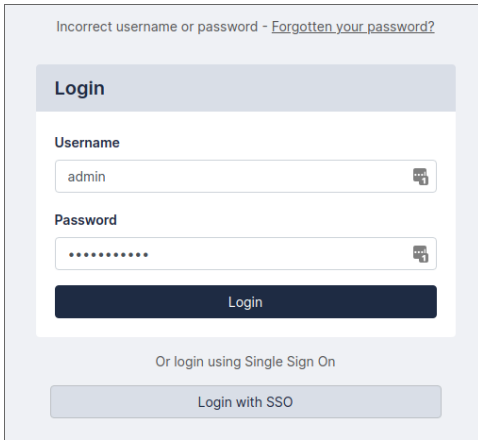


The screenshot shows a web-based form for configuring password recovery. The title is "Please reset your question/answer to receive a new password recovery token." Below the title, there are two input fields: "Question" with the text "my favourite colour?" and "Answer" with the text "red". Below the answer field is a blue "Update" button.

Restorepoint will then email a **recovery token**, which can be used by the administrator to reset their password and encryption password, if the administrator knows the recovery question and answer.

Recovery Procedure

When logging on with an incorrect password for the given account, the **Forgotten password** link displays:



The screenshot shows a login interface with a light blue header. At the top, it says "Incorrect username or password - [Forgotten your password?](#)". Below this is a "Login" section with a white background. It contains a "Username" field with the text "admin" and a "Password" field with masked characters "*****". Both fields have a small icon on the right. Below the fields is a dark blue "Login" button. Underneath the button, it says "Or login using Single Sign On" and "Login with SSO" with a light blue button.

To reset your password:

1. Click the **Forgotten password?** link and the **Reset Password** pane displays.
2. Complete the following fields:
 - **Username.** Type your Restorepoint username.
 - **Recovery Token.** Enter your recovery token. This field only displays and is only required for administrators.
 - **Recovery Question.** Administrators should have entered a recovery question when you set up your Restorepoint account. Your recovery question displays then type your recovery question answer. This field only displays and is only required for administrators.
 - **New Password.** Type a new password.
 - **Confirm Password.** Type the same password you entered above.
 - **New Encryption Password.** Type a new encryption password. This field is only required for administrators.
 - **Confirm New Encryption Password.** Type the same password you entered above. This field is only required for administrators.
3. Click **[Reset Password]** and if your reset is successful, a notification appears.

NOTE: Users with specific permissions can change another user's password.

Custom User Roles

In addition to the standard built-in administrator roles (**Admin**, **Backup**, and **View Only**), which cannot be edited, it is possible to define custom roles that define which product elements are accessible to the user. This feature is only available with an Enterprise license.

In order to define a custom role:

1. Navigate to the **User Roles** page (Administration > User Roles).
2. Click **[Add Role]**, and enter a name for the role.
3. Select the allowed actions for this role on the **[Permissions]** tab. Scroll down for a the full range of choices.

The screenshot shows the 'Add Role' dialog box. At the top, there's a 'Name' field with a placeholder 'Name'. Below it are two tabs: 'Permissions' (selected) and 'Users'. The 'Permissions' tab contains several sections of checkboxes:

- Devices**:
 - ☐ Modify Device
 - ☐ Command Device
 - ☐ Add Device
 - ☐ Modify Labels
 - ☐ Backup Device
 - ☐ View Deviceauth
 - ☐ Delete Device
 - ☐ Open Terminal
 - ☐ Restore Device
 - ☐ View Devices
 - ☐ Export Devices
- Asset Fields**:
 - ☐ Modify Assets
 - ☐ View Assets
- Credentials**:
 - ☐ View Credentials
 - ☐ Modify Credentials
- Backups**:
 - ☐ List Backups
 - ☐ Modify Backup
 - ☐ View Backup
 - ☐ Export Backup
- Schedule**:
 - ☐ (No visible options listed)

At the bottom right of the dialog are 'Close' and 'Save' buttons.

4. Click **Save**.

After you add a role, it is immediately available in the list on the **User Roles** page. Note that any changes to custom roles take effect immediately upon save.

For example, you can create a user role called *Compliance Officer* that can only create and modify compliance rules, and apply those to devices.

Edit Role

Name

Compliance Officer

Permissions

☐ Devices

☐ Modify Device
 ☐ Backup Device
 ☐ Restore Device

☒ Command Device
 ☐ View Deviceauth
 ☐ View Devices

☐ Add Device
 ☐ Delete Device
 ☐ Export Devices

☐ Modify Labels
 ☐ Open Terminal

☐ Asset Fields

☒ Modify Assets
 ☐ View Assets

☒ Credentials

☒ View Credentials
 ☒ Modify Credentials

☐ Backups

☐ List Backups
 ☐ View Backup
 ☐ Export Backup

☐ Schedule

Close

Save

In addition to the global **View** (read-only) and **Modify** (read-write) permissions, you can allow the following actions:

Reports	
Backup	Allows backup reports
Config	Allows configuration reports
Assets	Allows assets reports
Compliance	Allows compliance reports
Admin	Allows administration reports
Monitor	Allows monitoring reports
Dashboard	Allows dashboard reports
Modify	Allows users to modify and schedule reports

Logs	
View Logs	Allows users to view the system log
View Syslogs	Allows users to view the device syslogs

Devices	
View	Allows users to view the device list and device details (excluding authentication details)
View Auth	Allows users to view device authentication details
Backup	Allows device backup operations
Command	Allows device remote control

Configurations	
List	Allows users to view the device configuration list

Configurations	
Export	Allows users to export device configurations
Restore	Allows users to restore a configuration to a device

Templates	
List	Allows users to view the template list
Push	Allows users to push templates to devices

Firmware	
Push	Allows users to push firmware images to devices

Assets	
List	Allows users to view custom asset fields

Compliance Rules	
Apply	Allows users to apply compliance rules to devices

System	
Archive	Allows system archive operations

Users	
View	Allows user to view the user list and user details (excluding authentication details)
View Auth	Allows users to view user authentication details

Authentication Servers

External servers (such as LDAP, RADIUS, storage, SMTP, SNMP, NTP, Syslog, and/or DNS) can be v4 or v6. Host fields across Restorepoint can accept an IPv4/IPv6 address or a hostname (excluding DNS servers (IP address-only)). If a **hostname** field is specified, it is resolved at run-time.

RADIUS Authentication

You can use this page to configure parameters for authenticating administrators via RADIUS. If **Use RADIUS** is selected for a user, Restorepoint will use RADIUS instead of the internal authentication database. Restorepoint supports the PAP and CHAP (not MS-CHAP) authentication protocols.

The following fields are:

- **NAS Identifier.** A string identifying Restorepoint to the RADIUS server
- **Primary Server.**
 - *Address.* IP address of the RADIUS server
 - *Port.* UDP port used by the RADIUS server (usually 1812)
 - *Secret.* a string shared between Restorepoint and the RADIUS Server
- **Secondary Server.** (optional) A second RADIUS server, configured as above.
- **Resolve button.** The **[Resolve]** button is available for you to attempt DNS-resolution for hostname verification.

LDAP Authentication

This page can be used to connect to an LDAP (Active Directory) user authentication server.

The following fields are:

- **Base DN.** The top-level LDAP DN. This is usually (but not always) the DNS domain name, such as *dc=company,dc=com*.
- **User Search.**
 - *Base DN.* For example, *cn=users,dc=company,dc=local*.
 - *Username Field.* The LDAP field to use as the Restorepoint login id, for instance *uid* or *samAccountName*.
- **Group Search.**
 - *Base DN.* For example, *cn=security groups,dc=company,dc=local*.
 - *Search String.* The group search filter, for instance *objectClass=Group* or *objectClass=posixGroup*, depending on the directory type.

- **Primary Server.**
 - *Address.* The IP address of the LDAP server.
 - *Port.* UDP port used by the LDAP server (usually 389). LDAP over SSL may use 636. Use 3268 to query the Active Directory Global Catalogue (useful for multi-domain forests).
 - *Bind DN.* The DN to bind the LDAP with. For instance, gbh.
 - *Bind Password.* The the bind password for the LDAP Server.
 - *Use TLS.* Allows you to require encrypted connections to the LDAP Server.
- **Secondary Server.** (optional) A second LDAP server, configured as above.
- **Resolve button.** The **[Resolve]** button is available for you to attempt DNS-resolution for hostname verification.

NOTE: LDAP groups will need user roles and domains configured on the **Administration >Users>LDAP Groups** tab before they can log in. You will also need to enter the Group DN string:
`cn=users,ou=Groups,dc=mycompany,dc=com.`

SAML Authentication

This page can be used to connect to a SAML authentication server. The following fields are:

- **Service Provider Settings.**
 - *ACS URL.* The ACS URL to communicate with your SAML server.
 - *Entity URL.* The entity ID to communicate with your SAML server.
- **Identity Provider Settings.**
 - *IdP Metadata.* The IdP metadata for your system.

Chapter

7

Device Control

Overview

This chapter describes how you can use Restorepoint to send a command-line interface (CLI) command to a device or group of devices and capture the output of the command. This tool can be used to perform a task concurrently on a group of devices.

This chapter covers the following topics:

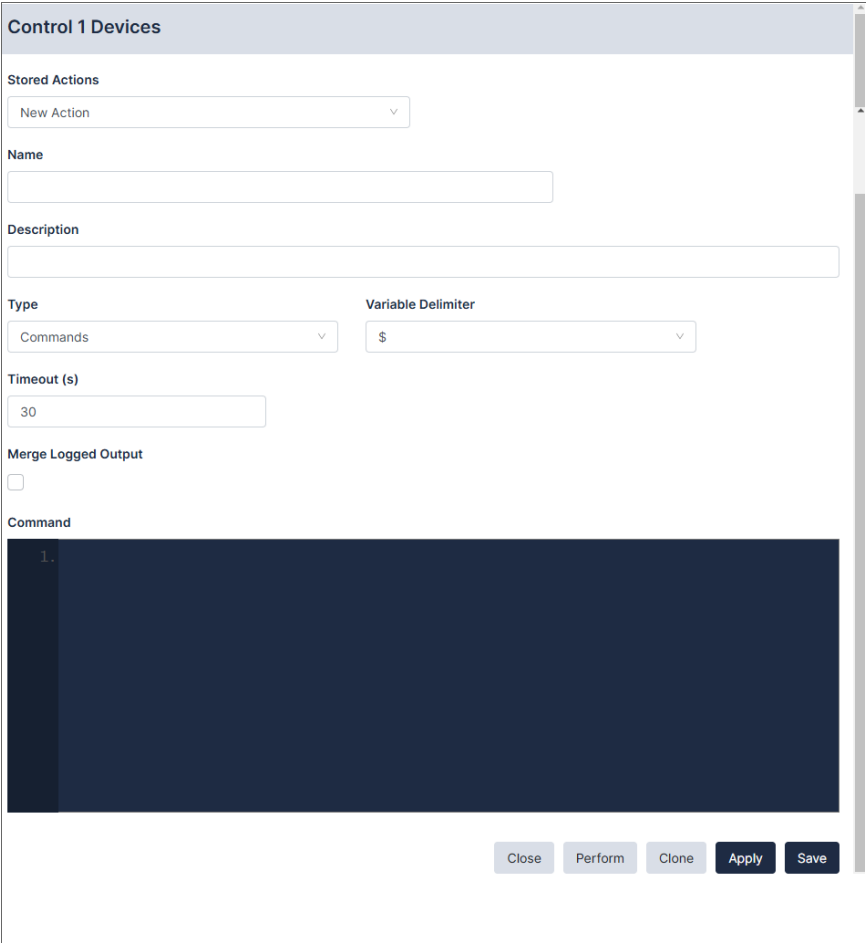
<i>Controlling a Device</i>	95
<i>Using Parameters</i>	96
<i>Scheduled Actions</i>	96

Controlling a Device

You can use Restorepoint to send a CLI command to a device or group of devices and capture the output of the command. This tool can be used to perform a task concurrently on a group of devices, such as changing the administrator password.

To use this function:

1. Go to the **Devices** page and select the your device check box. Then, click the **[Control]** tab. The **Control Devices** modal appears.



The screenshot shows a modal window titled "Control 1 Devices". It contains the following fields and controls:

- Stored Actions:** A dropdown menu with "New Action" selected.
- Name:** A text input field.
- Description:** A text input field.
- Type:** A dropdown menu with "Commands" selected.
- Variable Delimiter:** A dropdown menu with "\$" selected.
- Timeout (s):** A text input field with "30" entered.
- Merge Logged Output:** An unchecked checkbox.
- Command:** A large text area with a dark blue background and a light blue border. The number "1." is visible in the top left corner of the text area.
- Buttons:** At the bottom right, there are five buttons: "Close", "Perform", "Clone", "Apply", and "Save".

2. Select **New Action** from the drop-down menu, then complete the following fields:
 - **Name.** Type a name for your action.
 - **Description.** Give a unique descriptions for your action.
 - **Type.** Select the type of command from the drop-down menu.
 - **Variable Delimiter.** Select the variable delimiter from the drop-down menu.

- **Timeout (s).** Type the number of seconds for the timeout.
 - **Merge Logged Output.** Select the checkbox if you want to merge the logged output.
3. Type your commands in the text area.
 4. Click **[Apply]** or **[Save]**.

Device Control Actions can also be defined from the **Device Control** page (Devices > Device Control), by clicking **New Action**. If required, you can **Save** these commands as an **Action** for later execution, or for use in **Compliance Remediation**. Stored Actions can also be scheduled. For more information, see [Scheduled Actions](#). Click **Perform** to execute the commands. Restorepoint will display the output of the commands for each of the selected devices. Device Control outputs are stored in the **Output** tab of the Device Control page.

Using Parameters

You can use action parameters for different devices, using the format `$`parameter`$`, where `$` is the **Variable Delimiter** you've set for your Action.

For instance, to change the administrative password for a number of ScreenOS devices, select the devices and enter the command:

```
setadminpassword$password$
```

After you click **Perform**, you will be asked for a replacement string for each device. An unlimited number of parameters can be replaced this way.

NOTE: A parameter can only consist of letters, numbers, and the underscore character `_`. If the replacement string contains escape sequences (such as `\n`), they must be double-escaped (`\\n`).

Scheduled Actions

Actions can be scheduled and run automatically.

To add a new schedule to your device:

1. Go to the **Device Control** (Devices > Device Control) page and click on the **[Schedule]** tab. Next, click the **[New Schedule]** button. The **New Schedule** modal appears.

New Schedule

Action

Ls Gorila

Devices

Search

and

x

Total: 70; Showing: 50

	Name	Plugin	Domain	Address
<input type="checkbox"/>	RP41	Linux Server	Global	10.2.14.141
<input type="checkbox"/>	T_Test	Linux Server	Global	10.2.14.144
<input type="checkbox"/>	RP49	Linux Server	Global	10.2.14.149
<input type="checkbox"/>	Test	Linux Server	Global	123.6.6.2
<input type="checkbox"/>	f5	F5 Big IP	Domain1	172.16.21.95
<input type="checkbox"/>	RP41 Simulator	Cisco IOS	Global	10.2.14.141
<input type="checkbox"/>	Cisco	Cisco IOS	Global	172.29.0.100
<input type="checkbox"/>	self	Generic Single File C...	Global	127.0.0.1
<input type="checkbox"/>	A10_aGalaxy	A10 aGalaxy	Global	10.2.14.143
<input type="checkbox"/>	Palo Alto	Palo Alto Firewall	Global	10.2.14.50
<input type="checkbox"/>	Arista EOS	Arista EOS	Global	10.2.14.55

Perform

Scheduled

Every

1

Hour

at

00

+00:00 (Europe/London)

Next Due:

2025-02-18 17:00+00:00 (Europe/London) (Local)

2025-02-18 17:00+00:00 (Europe/London) (Appliance)

Keep Last

1

Merge Output

☐

Email Log

☐

Apply Policy

[None]

Close

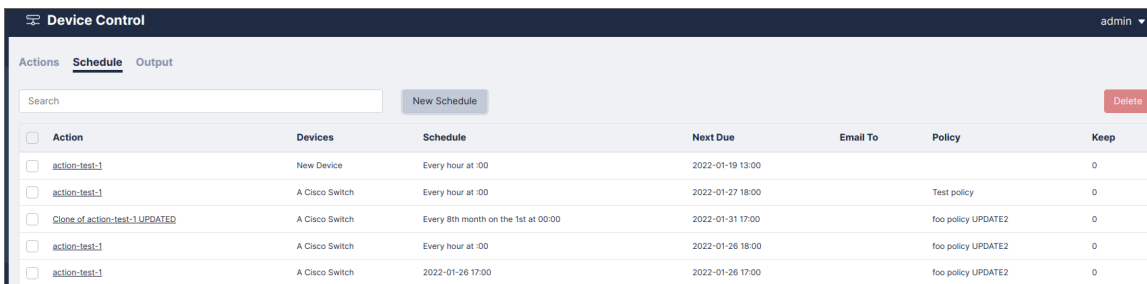
Save

2. Complete the following fields:

- **Action.** Choose a option from the **Actions** drop-down field.
- **Devices.** Select the device or devices on which to perform the action
- **Perform.** Select a frequency, either *Scheduled* or *Once At* and a time interval or date.
- **Merge Output.** Select the **Merge Output** checkbox if you want to merge the output.
- **Email Log.** Select the **Email Log** check box and enter an email address if you want to email the output of an action after execution.
- **Apply Policy.** (Optional) Select a compliance policy to apply to the output of the action. For more information, see [Device Policies](#).

NOTE: All logs are now stored in Restorepoint.

3. Click **[Save]** and the updated **Scheduled Action** page appears.



<input type="checkbox"/>	Action	Devices	Schedule	Next Due	Email To	Policy	Keep
<input type="checkbox"/>	action-test-1	New Device	Every hour at :00	2022-01-19 13:00			0
<input type="checkbox"/>	action-test-1	A Cisco Switch	Every hour at :00	2022-01-27 18:00		Test policy	0
<input type="checkbox"/>	Clone of action-test-1 UPDATED	A Cisco Switch	Every 8th month on the 1st at 00:00	2022-01-31 17:00		foo policy UPDATE2	0
<input type="checkbox"/>	action-test-1	A Cisco Switch	Every hour at :00	2022-01-26 18:00		foo policy UPDATE2	0
<input type="checkbox"/>	action-test-1	A Cisco Switch	2022-01-26 17:00	2022-01-26 17:00		foo policy UPDATE2	0

NOTE: Scheduled Actions cannot contain parameters.

Chapter

8

Lua Applets

Overview

Device Control (Device > Device Control) features a more powerful way to interact with devices using the Lua programming language. Instead of sending a single command to a device, Lua offers control structures loops, conditionals, match functions, etc. Using Lua, you can perform more complex tasks, including making decisions based on the device output.

To create a Lua action, go to the **Device Control** page (Devices > Device Control) and click **[New Action]**. Then select *Lua* from the **Type** drop-down menu.

The syntax is straightforward, and it does not require any specific programming experience or knowledge of markup languages like XML. For more information about Lua, see <https://www.lua.org/docs.html>.

This chapter covers the following topics:

<i>Restorepoint Built-in Functions</i>	100
<i>Examples</i>	100

Restorepoint Built-in Functions

The following functions can be used in a Lua applet:

- `timeout (seconds)` - set the maximum timeout when waiting for device output
- `sleep (seconds)` - do nothing for the given number of seconds.
- `send (command)` - send `command` to the device
- `wait (string)` - wait for timeout seconds for `string` from the device
- `sendget (command, output)` - combined send/wait
- `before ()` - used after `wait()` or `sendget()`; it contains the output from the device up to the expected string.
- `print (string)` - displays the value of `string`
- `splitlines (string)` - split a multi-line string (for example, the output of a command) into an array of lines.

Other standard Lua commands that may be useful include, `string.match`, `string.gsub`, and `string.trim`.

NOTE: You do not need to write any code to connect and authenticate to the device. Restorepoint will automatically connect and authenticate the device for you.

CAUTION: Users are not permitted to run any “os” or “system” functions when making Lua scripts. This restriction is in place to maintain the security of your Restorepoint appliance.

Examples

Show Version (Cisco)

A basic example is to display the output of the `show version` command on a Cisco switch:

```
timeout(20)
send('show version')
wait('#')
out=before()
print(out)
```

The `send ()` & `wait ()` commands can also be combined into a `sendget ()`:

```

timeout(20)
sendget("show version","#")
out=before()
print(out)

```

Show Interface (Cisco)

The following is a more complex example using control structures. It runs `show interfaces` on a Cisco switch and checks that all interfaces that are not connected (line protocol is down) are also administratively down. Note that everything after `--` is a comment, and is not executed:

```

timeout(20)                                -- set the timeout to 20 seconds
sendget("terminal length 0","#")           -- send command to the device, and
                                           -- wait for the prompt
sendget('show interfaces', '#')
out = before()                             -- set "out" to the output
lines = splitlines(out)                   -- split the output lines into array
for k,v in pairs(lines) do                -- loop over each line, and
                                           -- set k=number and v=text

```

```

    int,st1,st2 = v:match(
    "^(%S+Ethernet[0-9/]+) is ([a-z ]+), line protocol is ([a-z]+)"
    )
                                           -- extract the interface name,
                                           -- interface status, and the
                                           -- line protocol status

```

```

    if int ~= nil and
    ( st1 ~= 'administratively down' and st2 == 'down' ) then
    print("Interface "..int.." is disconnected but not shutdown")
    end

```

```

end                                           -- end loop

```

IP Spoofing (ScreenOS)

For ScreenOS, use the following script to check for ip-spoofing:

```

timeout(5)
sendget("set console page 0",>)
sendget("get zone | inc L3",>)
ret = before()
sendget("get config | inc ip-spoofing",>)
conf = before()

```

```

for zone in ret:gmatch(" [0-9]+ (.-)%s+Sec") do

    if conf:match('zone "'..zone.." screen ip%-spoofing') then

        print('Zone '..zone..': antispoofing enabled')

    else

        print('Zone '..zone..': antispoofing disabled')

    end

end

```

IP Spoofing (Palo Alto)

You can use the following script to check for ip-spoofing, but for Palo Alto devices:

```

timeout(5)
sendget("set cli pager off",">")
sendget("set cli config-output-format set",">")
waitprompt()
sendget("configure","#")
send("show zone")
sleep(1)
waitlast("#")
ret = before()
sendget("exit",">")
tbl = {}

for key in ret:gmatch("set zone (.-) ") do

    tbl[key] = true

end

for k, _ in pairs(tbl) do

    send('show zone-protection zone '..k)
    sleep(1)
    waitlast('>')
    ret = before()

    if ret:match('discard%-ip%-spoof:%s+enabled: yes') then

        print('Zone '..k..': antispoofing enabled')

    end

end

```

```
else
    print('Zone '..k..': antispoofing disabled')
end
end
```

Chapter

9

File Storage

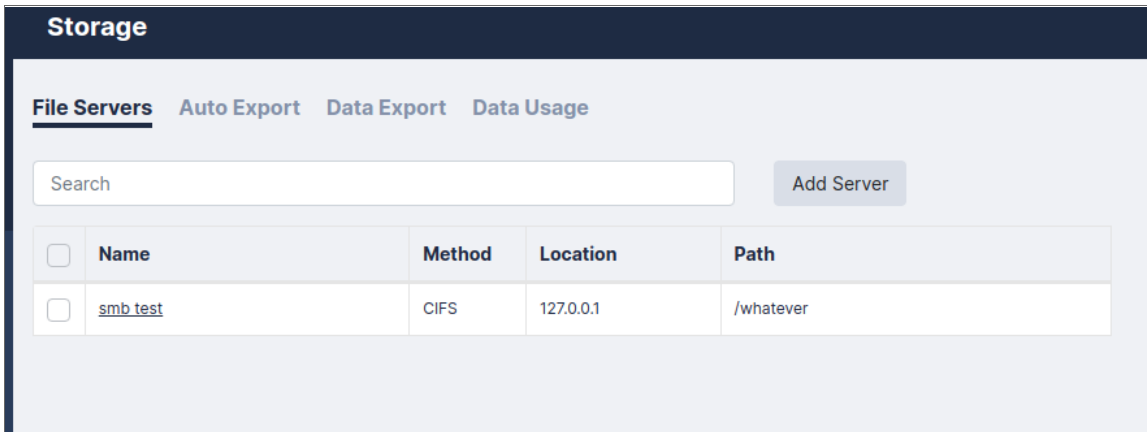
Overview

This chapter describes how to use file storage in Restorepoint. You can use the **Storage** page (Administration > Storage) to save file storage configurations in Restorepoint. These can be used in the **Archive** or **Logs** page, or for automated configuration export from Restorepoint.

This chapter covers the following topics:

<i>File Servers</i>	105
<i>Auto Export</i>	105
<i>Data Export</i>	106
<i>Data Usage</i>	106

File Servers



The screenshot shows the 'Storage' section of a web interface, specifically the 'File Servers' tab. At the top, there are four tabs: 'File Servers' (selected), 'Auto Export', 'Data Export', and 'Data Usage'. Below the tabs is a search bar with the placeholder text 'Search' and an 'Add Server' button. A table below the search bar lists the configured file servers. The table has five columns: 'Name', 'Method', 'Location', and 'Path'. There is one entry in the table with the name 'smb_test', method 'CIFS', location '127.0.0.1', and path '/whatever'.

<input type="checkbox"/>	Name	Method	Location	Path
<input type="checkbox"/>	smb_test	CIFS	127.0.0.1	/whatever

For each file server, you can define the following fields:

- **Name.** Type a name for the file server.
- **Protocol.** Select CIFS (Windows Server), FTP, SCP or SFTP from the drop down menu.
- **Server IP.** The IP address and port of the remote server.
- **Path.** The full path on the remote server. For example, */home/user1* (FTP) or *share1directory2subdirectory3* (CIFS).
- **Username.** The username. This will be an FTP user, or a valid windows user if using CIFS.
- **Password.** The password for the associated username.
- **Use NTLMv2 (CIFS Only).** If you are using CIFS with the NTLMv2 authentication protocol, you can select this checkbox.

Auto Export

For each policy, you can define the following fields:

- **Server.** The files server to store the exported configurations. You can also define a new server by using the *[New Server]* option. For more information on details on the configuration, see [File Servers](#).
- **Policy.** When to automatically export configurations to your external server. **Always Export** will export when the backup is complete, **Only Export new Versions** will export when the backup is complete and the version number of the backup has changed, and **Export before automatic deletion** will export only the backups that are due to be removed from the Restorepoint appliance.

There are additional options you can apply to your new policy:

- **Use GPG.** Users must enter a **passphrase** to securely encrypt the exported configurations before transfer to your external server.

- **Include Domain/Device.** The filename / path on the remote server will contain the domain name/device name. For example, `/home/user1` (FTP) or `share1directory2subdirectory3` (CIFS).
- **Disabled.** If this checkbox is selected, the policy will not run. This options allows you to temporarily disable an auto-export policy.

Data Export

You can use this page to export device configurations on-demand.

- **Configurations.** **No configs**, only the **Most Recent** version of the config, or **All Configs**.
- **Data.** Includes the device's **Logs**, and/or the **Device Data** in your export.
- **For.** The devices or domains to export.
- **As.** The format to export the configurations. They can be exported as *TGZ* or *ZIP* archives, or directly export the individual config files.
- **Chunk size.** If you've selected an archive format, you can choose the size to create the archive files.
- **To.** The server to store the exported configurations. For more information, see [File Servers](#). Alternately, you can choose to export device configurations directly to your workstation, via the browser.

Data Usage

The Data Usage page displays statistics on the storage disk of your Restorepoint appliance.

- **Total Disk Size.** The size of the encrypted volume that Restorepoint uses to store device configurations and settings.
- **Total Used.** The total amount of that volume's space that has been used.
- **Backup Size.** Space used by device configurations.
- **Index Size.** Space used by Restorepoint's search index (used primarily for the [Global Search](#) function).
- **Cache Size.** Space used by the Restorepoint cache. This is usually device configurations that needed to be extracted for viewing or comparisons. Restorepoint will automatically remove this cache, if needed. You can also manually clear the cache and click **[Clear Cache]** to clear the cache.
- **Debug Size.** Space used by Restorepoint debugging logs, such as Appliance Debug Logs. Appliance Debug Logs are cleared if a new Debug Log is started. You can manually clear the Appliance Debug Logs and click **[Clear Debug]**.

Chapter

10

Agents

Overview

Agents allow a Restorepoint appliance to manage devices located on a remote or otherwise disjoint network, not directly routable by Restorepoint, without complex firewall changes, Network Address Translation, or VPNs. For instance, a Service Provider can set up a central Restorepoint appliance and deploy agents on customer networks and enable device backups on remote sites.

An agent can be deployed as a Virtual or Hardware appliance on the remote network. The agent provides fast operations by locally performing all the tasks that would typically require extensive network interaction. Configurations, logs, etc., are processed locally by the agent, and uploaded to the master Restorepoint appliance.

NOTE: Device firmware updates via agents are not yet supported.

Agents are only available with an Enterprise license.

This chapter covers the following topics:

<i>Agent Firewall Requirements</i>	109
<i>Agent Installation</i>	109
<i>Adding an Agent to Restorepoint</i>	111
<i>Changing the Master IP Address</i>	112
<i>Remote Operations Using Agents</i>	113
<i>Managing Agents</i>	114
<i>RPM Agent</i>	114
<i>RPM Agent Limitations</i>	115

<i>Installing and Updating the RPM Agent</i>	<i>115</i>
<i>Configuring the RPM Agent</i>	<i>115</i>
<i>Troubleshooting the RPM Agent</i>	<i>117</i>
<i>Docker Agent</i>	<i>118</i>
<i>Configuring CrowdStrike Using Agents</i>	<i>120</i>

Agent Firewall Requirements

An agent initiates and maintains an SSH connection to the master Restorepoint appliance to receive tasks to execute, upload and download device configurations, task output and logs, and download software updates.

Your firewall policy must allow SSH traffic (TCP port 22) from the agent to the master for an agent to function correctly.

Agent Installation

An agent virtual appliance is deployed in a similar manner to a Restorepoint appliance (for more information, see the section on [Restorepoint Virtual Appliance](#)). Agents are kept up-to-date with software updates via the connection to the master appliance.

Connecting the Agent to the Master

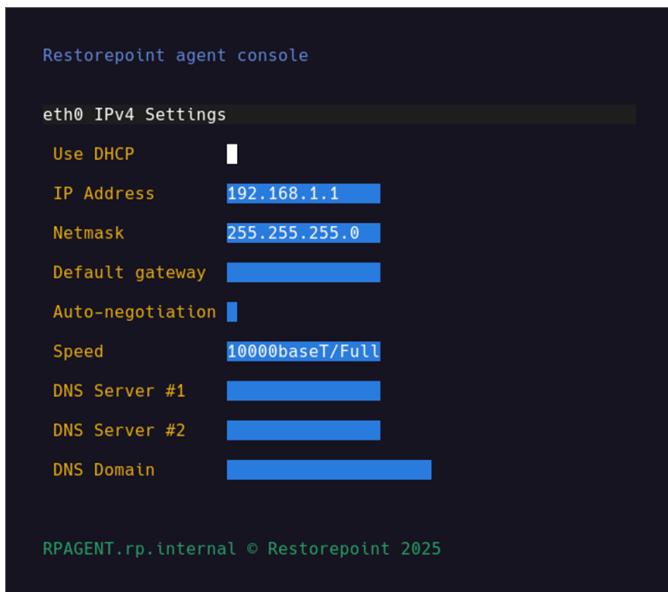
The agent initially establishes an SSH connection to the master using a one-time password that is generated when creating the agent on Restorepoint. After the password is accepted, the agent and the master communicate via a secure socket using the agent's RSA key.

Initial Setup

To set up an agent, you must configure the network parameters and the details of the connection to the master:

1. Open the virtual machine console in your Virtual Infrastructure client.
2. In the login prompt, enter the default username and password for the agent. If you are unsure which username and password to use, contact ScienceLogic Support.
3. Follow the prompts to change the agent shell password.

4. Select **IP Address Configuration** at the console menu:

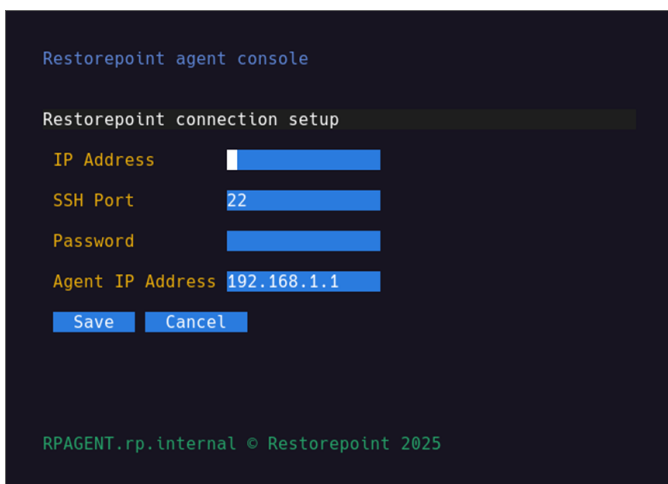


The screenshot shows a terminal window titled "Restorepoint agent console". A menu titled "eth0 IPv4 Settings" is displayed with the following options and values:

- Use DHCP: ☐
- IP Address: 192.168.1.1
- Netmask: 255.255.255.0
- Default gateway: [empty field]
- Auto-negotiation: ☐
- Speed: 10000baseT/Full
- DNS Server #1: [empty field]
- DNS Server #2: [empty field]
- DNS Domain: [empty field]

At the bottom, it says "RPAGENT.rp.internal © Restorepoint 2025".

5. Enter the settings for **IP Address**, **Netmask**, **Default gateway**, and **DNS Server and Domain** settings as prompted.
6. Enter Y to confirm the settings. If the settings are applied successfully, the console menu will be redisplayed.
7. Next, select **Initial Restorepoint Master Setup**:



The screenshot shows a terminal window titled "Restorepoint agent console". A menu titled "Restorepoint connection setup" is displayed with the following options and values:

- IP Address: [empty field]
- SSH Port: 22
- Password: [empty field]
- Agent IP Address: 192.168.1.1

At the bottom, there are "Save" and "Cancel" buttons. At the very bottom, it says "RPAGENT.rp.internal © Restorepoint 2025".

8. Enter the **IP Address** of the master Restorepoint appliance, and a one-time password to verify the agent to the master (used only for initial pairing). Optionally, you can also specify which **SSH Port** and **Agent IP Address** you want to use for the connection.

Adding an Agent to Restorepoint

To add a configured agent to Restorepoint, navigate to the Agents page (**Administration > Agents**) and click **Add Agent**. The **Add Agent** dialog appears:

Add Agent

Details Devices

Name

Name

Location

Location

Domain

Global

Email

some@email.com

Config Policy

Keep on Master

Alert on disconnect ☐

Alert on reconnect ☐

Disable TFTP Server ☐

Disable FTP Server ☐

Use agent address ☒

Address

The password is now generated by the application and will be provided once you click the Save button

Close Save

Enter the following details:

- **Name.** Type a name for the agent.
- **Location.** Choose a new or existing location for the agent.
- **Domain.** (Optional) The domain of the devices that this agent will manage. For more information, see [Administration Domains](#).
- **Email.** (Optional) The email for the user that is responsible for the upkeep of the agent.

- **Config Policy.** Defines the backup storage policy. Select from one of the following options:
 - *Keep on master.* Backups are stored only on the master appliance.
 - *Keep on agent.* Backups are stored only on the agent appliance.
 - *Keep on both.* Backups are stored on both the master and the agent appliances.
- **Alert on disconnect.** Select this checkbox to automatically email an alert if the agent goes offline. If the **Email** field is not filled in, the default notification address is used.
- **Alert on reconnect.** Select this checkbox to automatically email an alert if the agent comes back online. If the **Email** field is not filled in, the default notification address is used.
- **Disable TFTP Server.** Select this checkbox to disable TFTP servers.
- **Disable FTP Server.** Select this checkbox to disable FTP servers.
- **Secondary To.** Type the ID of an agent this agent is secondary to in a HA setup.
- **Secondary Master IP Address.** Type the IP address of the secondary master IP in an HA setup.
- **Use Agent Address.** Select this checkbox to enter the IP Address into the **Address** field.
- **Address.** The specified address must be the address the agent uses to connect to the master. The address option for agents will not work if multiple agents use the same NAT address.

NOTE: Restorepoint will generate an eight-character password upon registering a new agent.

After the agent is added, Restorepoint will display the agent list. The address and port will be automatically filled in once the agent has connected successfully for the first time. Note that only one agent can be set up at a time.



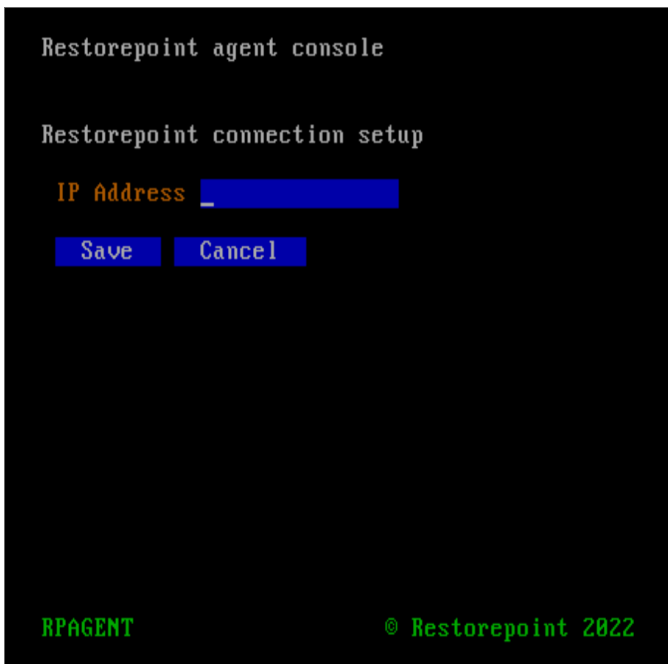
	Name	Address	ID	Domain	Location	Last Seen	Secondary	Version
<input type="checkbox"/>	IPv6 Agent	172.16.18.27	9001	Global		2023-04-21 14:36		202304211...

Changing the Master IP Address

If the IP address of the master Restorepoint appliance changes, any agents connected to that master need to be reconfigured with the new master details. To reconfigure an agent with the new master details:

1. SSH to the agent (or open the virtual machine console).
2. Log in using the agent's *admin* account.
3. Select **Change Restorepoint Master IP address** in the console menu, and apply the new master IP address.

NOTE: Do not use the option **Initial Restorepoint Master Setup** to set the new master IP address. If you use this option, it invalidates the master-agent authentication and would require re-pairing the agent to the master Restorepoint appliance.



Remote Operations Using Agents

Once you configure an agent, you can perform any operation (backup, restore, control etc.) on a device via the agent. The Restorepoint appliance will not connect directly to the device, the appliance will instruct the agent to perform the operation on its behalf.

To move an existing device to an agent, select one or more devices from the **Device Management** List, and click **Edit**, then select the correct Agent in the drop-down menu as shown:

Device Details

Device Name

Gaia

Resolve

Type

Check Point Edge

Info

Fingerprint

Labels

Select labels

Address

172.16.21.197

Ping

TCP Dump

Disabled

☐

Open Terminal

☐ Use Stored Credentials

Operations using agents are completely transparent for the user. For instance, bulk operations can be started for agent-managed and directly-managed devices simultaneously.

Managing Agents

You can view a list of the paired agents from the **Administration > Agents** page. To edit an agent's settings, click the name of the agent.

The settings include the **Name**, **Location**, **Domain**, **Email**, whether to **Alert on Disconnect/Reconnect**, or allow you to factory **Reset** the Agent for re-pairing. There are additional settings for Debugging agent connections.

- **Debug > Start** works similarly to Appliance Debugging. It records a debug log that can be viewed using the **Debug > View** button.
- **Debug > Info** collects and displays a series of system information from the Agent, such as RAM usage, Disk usage, and Uptime.
- **Debug > Remote** allows remote management of an agent. This option will displays a port number. You can connect to that port on your Restorepoint master appliance to redirect to the agent so that trickier issues can be diagnosed.

RPM Agent

The RPM agent is a standalone agent that you can deploy onto your operating system to connect to various devices.

RPM Agent Limitations

The following features are not supported on the RPM agent:

- Storage on the agent
- Encryption on the agent
- Collection from plugins that use FTP or TFTP
- Auto-upgrade of the RPM Agent

Installing and Updating the RPM Agent

To install or update the RPM agent, perform the following:

1. Set SELinux to permissive.
2. Run `rpm -Uvh rpagent_standalone.X.rpm`.
3. A new, unprivileged user will be created along with a new group `rpuser:restorepoint`. This user and group are the owner of the Restorepoint installation under `/var/restorepoint`.

Configuring the RPM Agent

To run the RPM agent you must configure `rpagent_standalone`. You can choose to keep `rpagent_standalone` under the default directory `/var/restorepoint/bin/agentconf.json` or you can store it in a directory of your choice. To configure the RPM agent, perform the following:

1. Follow the default configuration given in `agentconf.min.json` and store it under `agentconf.json`:

```
{
  "SpoolDir": "/var/restorepoint/spool",
  "BackupDir": "/var/restorepoint/backups",
  "BinDir": "/var/restorepoint/bin",
  "PluginDir": "/var/restorepoint/plugins",
  "CertsDir": "/var/restorepoint/certs",
  "ConfDir": "/var/restorepoint/bin",
  "MasterAddress": "HOST",
  "MasterPort": "",
  "NATAddress": "",
  "Password": "PASSWORD",
  "ChangedAdmin": 0,
  "SecondaryAddress": "",
  "PushDevices": "",
  "DisableTFTP": false,
```

```
"DisableFTP": false,  
"RPPath": "/var/restorepoint"  
}
```

2. Replace `HOST` and `PASSWORD` (one-time password) to connect the agent for the first time. Keep the remaining configuration as is.
3. A new service has been created for `rpagent`. Run the following:

```
systemctl enable rpagent  
systemctl start rpagent
```

4. The agent's logs are stored under `/var/log/rpagent`. If desired, you are able to configure the agent service to show the logs directly in `journalctl`. The agent service is stored under `/usr/lib/systemd/system/rpagent.service`.

Optional RPM Agent Configurations

Device Back-Connection

NOTE: The Device Back-Connection optional configuration is a Beta feature.

To set up a Device Back-Connection, perform the following:

1. Create a user with the correct SSH credentials and permissions. This user must be part of the `restorepoint` group to be able to access the `spool` directory.

IMPORTANT: If you are using Cisco devices, the back connection username length must not exceed six characters.

2. Add the following configurations to `agentconf.json`:

```
"BackConnectionUser": "",  
"BackConnectionPassword": ""
```

NOTE: Back-connection has only been tested for `ssh/scp` protocols.

If you want to rotate the `BackConnectionPassword`, complete the following:

1. Add a new password to the `agentconfig.json` file in the form `"BackConnectionPassword": "{NEW_PASSWORD}"`.
2. Restart your agent service.

Initial Master SSH Connection Port

To connect to a port other than Port 22 when performing initial SSH connection to the master, add the following to `agentconf.json`:

```
"MasterSSHPort": ""
```

You can also connect to multiple ports using the agent configuration option `ADDITIONALMASTERSHHPORTS` when you add ports separated by commas:

```
"AdditionalMasterSSHPorts": "1,22,23"
```

NOTE: The port you choose must be outside of system ports range (>1023).

Back Connection NAT

If needed, the agent can have a NAT address set for back connection. Devices that are managed by the agent will use the NAT address you set unless it is already set in Restorepoint. To set the agent's NAT address, update the following configuration value in `agentconf.json`:

```
"NATAddress": ""
```

NOTE: Upon connection with the master, the agent will encrypt the back connection password. It will remove the plain text variant from the configuration file and replace it with the encrypted version in the form `"EncryptedBackConnectionUserPassword": "{ENCRYPTED_BACK_CONN_PASSWORD}"`.

TFTP and FTP Servers

This agent does not directly start TFTP and FTP servers. If you manually start a TFTP server on Port 69 on your appliance, these plugins may work as intended but they are untested.

Disable Strict SSH Host Key Configuration

To disable the Strict SSH Host Key configuration on the agent, enter:

```
"DisableStrictHostKeyChecking":true
```

Troubleshooting the RPM Agent

If you experience issues connecting the RPM agent, for example, by not correctly configuring SELinux before trying to connect the agent to the master, complete the following:

1. Delete the contents of the folder `/var/restorepoint/certs`.
2. Reset the agent in Restorepoint.
3. Setup the new password again on `/var/restorepoint/bin/agentconf.json`.
4. Delete the auto-generate port if it exists.

Docker Agent

The Docker agent allows you to run multiple agents simultaneously and under any operating system you choose because you can run applications in different environments.

Installing and Configuring the Docker Agent

To install the Docker agent you must have a Harbor account so that you can acquire an API token to access the images contained in the ScienceLogic registry.

Acquiring the API Token

To use the Docker agent you must first acquire an API token from Harbor to authenticate via CLI.

To get your API token:

1. Got to <https://registry.scilo.tools>
2. Click the **[Login with OIDC Provider]** button
3. The Harbor home page will load after authentication has been completed.
4. Click on your username, found in the top-right corner, and then choose **User Profile**. The User Profile prompt appears with your username to authenticate.
5. You will also see the **CLI Secret** field with contains your API key. Be sure to copy and paste this somewhere for later use.
6. After you have your API key, click the **[Close]** button to close the session.

You are now able to use this username and API token to authenticate with the Harbor services.

Configuring rpagent

To run an `rpagent` image:

1. Log in with your Harbor username and API token to authenticate to the ScienceLogic container registry:

```
docker login registry.scilo.tools -u <USERNAME> -p <API_TOKEN>
```
2. Create an `.env` file (or any other name) and set the following two environment variables to run the image:

```
MASTER=<hostname | address>
PASSWORD=<password>
```

 - `MASTER`. Enter your Restorepoint appliance address or hostname.
 - `PASSWORD`. Enter the password generated by the Restorepoint appliance upon registering a new agent.

NOTE: Restorepoint will generate an eight-character password upon registering a new agent.

3. Run the container as follows:

```
docker run \
  -d \
  -it \
  -v $PWD/tmp:/mnt/cryptfs:Z \
  --network=host \
  --tmpfs /mnt/ram \
  --env-file .env \
  --name rpagent \
  --restart unless-stopped \
  registry.scilo.tools/sciencelogic/rpagent
```

- `-d`. Daemonizes the container
- `-it`. Allocates an interactive terminal (good for initial verification)
- `-v $PWD/tmp:/mnt/cryptfs:z`. Mounts `tmp` in the current directory in the container as `/mnt/cryptfs` (`tmp` must be writable)
 - `:z`. Configures the SELinux label for hosts that support SELinux.

CAUTION: ScienceLogic recommends you use caution with the `:z` option as you can render your host machine inoperable which may require you to relabel host machine files by hand.

- `--network=host` or `--network=bridge`. In host mode, the container will share the host's network stack. For more information, see [Host Networking](#).
- `--tmpfs /mnt/ram`. This is the in-memory storage for runtime data.
- `--env-file <file>`. This file contains environment variables.
- `--name <name>`. Name the running container.
- `--restart unless-stopped`. This allows the container to keep running unless stopped by the Docker daemon.

Host Networking

ScienceLogic recommends that, because the Restorepoint agent container is required to accept incoming connections from other devices (SSH, SCP, SFTP), the preferred networking model is to assign an individual IP address to the container. When the container has its own IP address, you can run the SSH server on the standard Port 22 instead of Port 2222. It is possible to run with `--network=host`, however the Docker host firewall must be configured to forward the incoming connections to the container.

Additional Run Options

You have the option to override default options when configuring the Docker Agent. The following options can be set to override the defaults:

- `SSHDPORT`. This is the port for the SSH/SCP/SFTP server. Bind port for SSHD (default: 2222).
- `CONFDIR`. This is the path where the agent configuration file is stored (default: /var/restorepoint/bin)
- `SSHDHOSTKEYDIR`. This is the path where SSH host keys are stored (default: /etc/ssh)
- `DEBUG`. Setting `DEBUG=1` will enable debug mode. This is useful for testing the setup for the first time.
- `DISABLESSHSTRICTHOSTKEYCHECK`. Setting this option to `DISABLESSHSTRICTHOSTKEYCHECK=1` disables the SSH host key validation for all devices and logs when the key changed.
- `SECONDARY`. This is the secondary appliance address.
- `MASTERSHHPORT`. This option allows you to change the default port (Port 22) used to connect to the master appliance.
- `NATADDRESS`. This is the NAT Address option.
- `NOANONFTP`. Setting this option to `NOANONFTP=1` disables the anonymous FTP authentication.
- `ADDITIONALMASTERSHHPORTS`. This option expects a string with multiple comma-delimited ports. For example: Enter Port 1, Port 22, and Port 23 as `1, 22, 23`.

NOTE: The `CONFDIR` and `SSHDHOSTKEYDIR` parameters can be used to store configuration files on a mounted volume which makes them persistent if the container is replaced.

Troubleshooting the Docker Agent

If you experience a failed handshake between the agent and device, try resetting the agent in Restorepoint.

1. Go to the agent's configuration modal and select the **Reset** checkbox.
2. Re-enter the password you previously chose and click **[Save]**.

```
Retrying in 10 seconds ssh: handshake failed: ssh: unable to authenticate,
attempted methods
[none password], no supported methods remain
```

Configuring CrowdStrike Using Agents

If you have CrowdStrike Sensor installed, you can configure the Sensor on the agent console menu. To configure CrowdStrike using your Restorepoint agent:

1. SSH to the agent (or open the virtual machine console).
2. Log in using the agent's *admin* account.

3. Select **CrowdStrike Sensor** in the console menu and select *Enter CS Customer ID*.
4. Type your CrowdStrike Customer ID and click **[Save]**.

NOTE: If you type an invalid Customer ID, an error message appears.

5. Using the **CrowdStrike Sensor** menu, you can also select the following options:
 - *Enable/Disable CS at boot (currently disabled)*. Select this option to enable Crowdstrike to start when you boot the agent. The value changes to *Enable/Disable CS at boot (currently enabled)* when enabled.
 - *Start/Stop Crowdstrike Sensor (currently stopped)*. Select this option to start the CrowdStrike Sensor. The value changes to *Start/Stop CrowdStrike Sensor (currently started)* when enabled.

Chapter 11

Administration Domains

Overview

The **Domains** page (Administration > Domains) lets you organize devices into separate domains and delegate their management to domain administrators.

Service providers typically use this feature to restrict the scope of administrators to a subset of network devices.

IMPORTANT: Domains are only available with an Enterprise license.

This chapter covers the following topics:

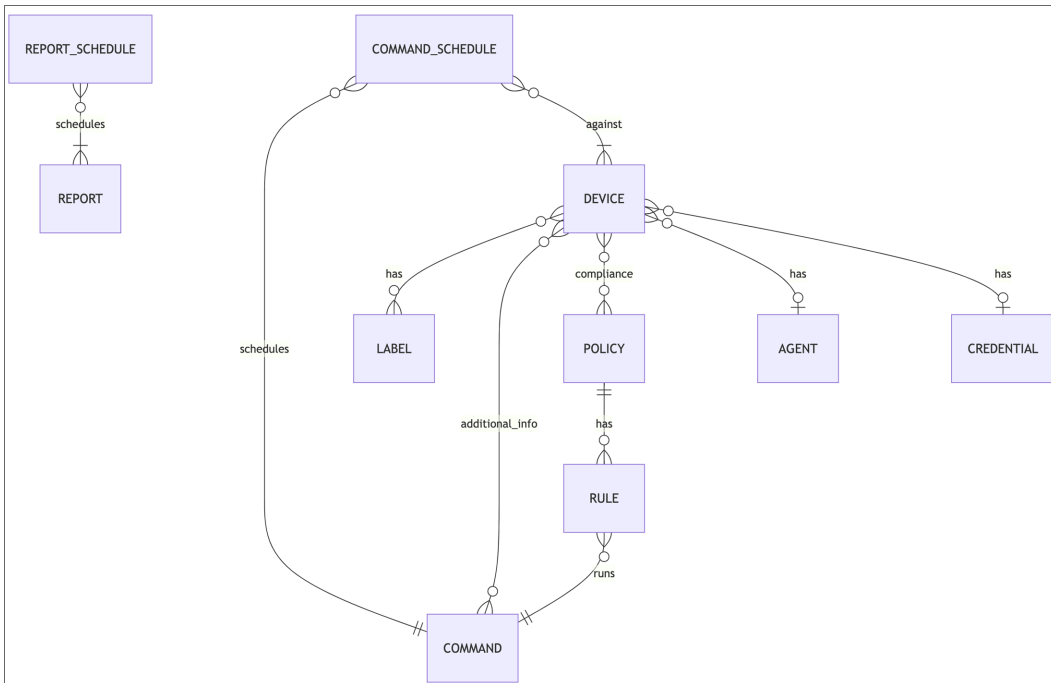
<i>Restorepoint Domains</i>	123
<i>Managing Domains</i>	128
<i>Administrator Roles</i>	131
<i>Adding a New Domain User</i>	132
<i>Editing Devices</i>	135

Restorepoint Domains

Access to administer Restorepoint domains is highly controlled by the use of different access permissions assigned to the user.

How Domains Work

Restorepoint has a concept of a global domain and domains specific to a customer or administrative group. This section explains the hierarchical nature of the elements controlled within a domain. As you can see in the diagram, control flows from the bottom elements to the top. For example, Rules are part of a Policy. A Policy is applicable to a Device, and so on. This is important to understand when configuring domain permissions, since domain permissions respect this hierarchy.

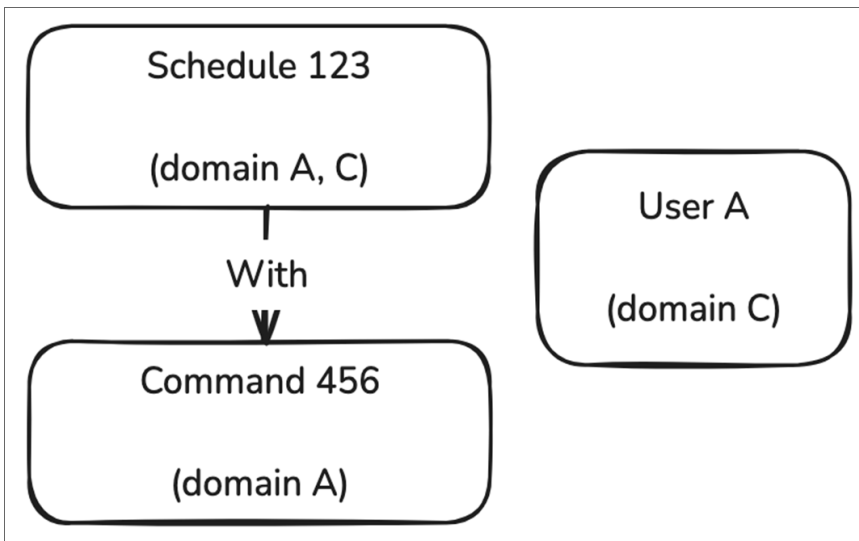


Rules That Govern Domains

The following rules and examples are provided to give you context into how domains work. This is not something that requires user configuration.

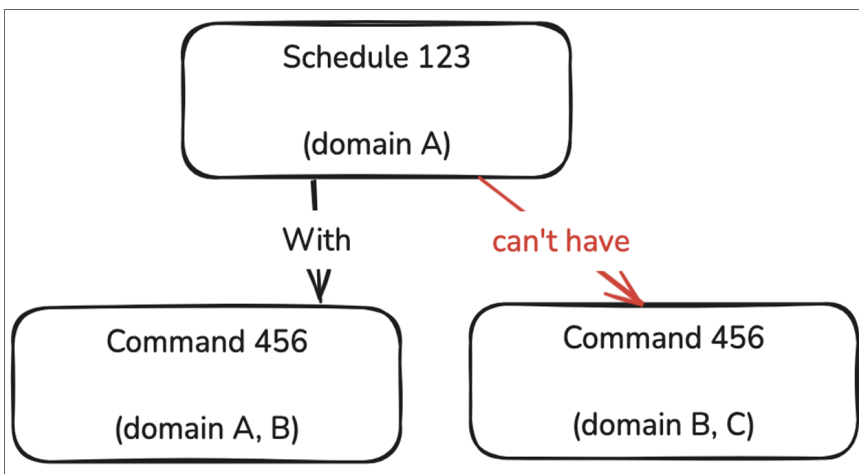
Rule: If any entity can be assigned other domain-specific entities, then the entity cannot belong to more than one domain.

Example: If a user and a schedule are in Domain C, but a given command is in Domain A **and** the schedule is also in Domain A, then the user cannot see a schedule that contains the command belonging to Domain A. This prevents the user from seeing anything that doesn't belong to the Domain to which the user belongs.



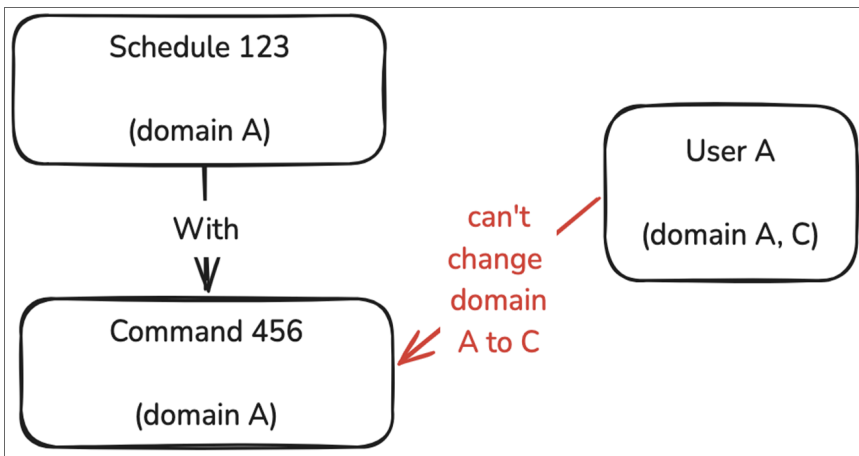
Rule: A relationship between non-global entities can only exist if they share a Domain.

Example: If a schedule belongs to Domain C, it cannot contain commands that belong to Domain A.



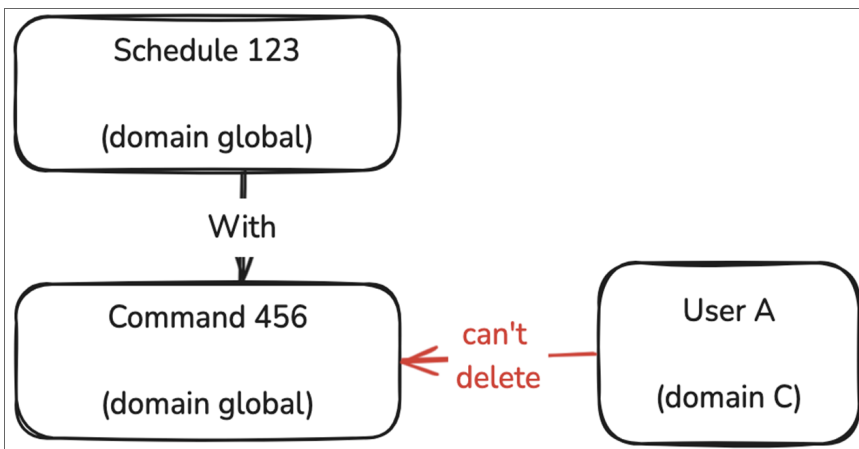
Rule: If two entities share a Domain, a user cannot remove the shared Domain without breaking the relationship. However, a user can change the shared Domain to global.

Example: If a command is in a schedule and both share Domain A, a user cannot remove Domain A.



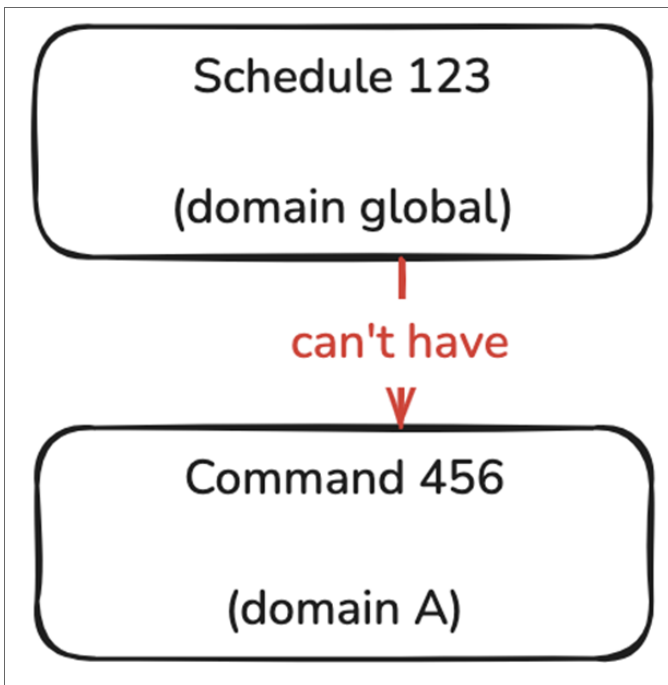
Rule: If a resource is assigned to another, the relationship must be removed before deleting the resource.

Example: A user cannot delete a command that is assigned to a schedule.



Rule: A non-global entity cannot be assigned to global entities.

Example: A non-global command cannot be assigned to a global schedule.



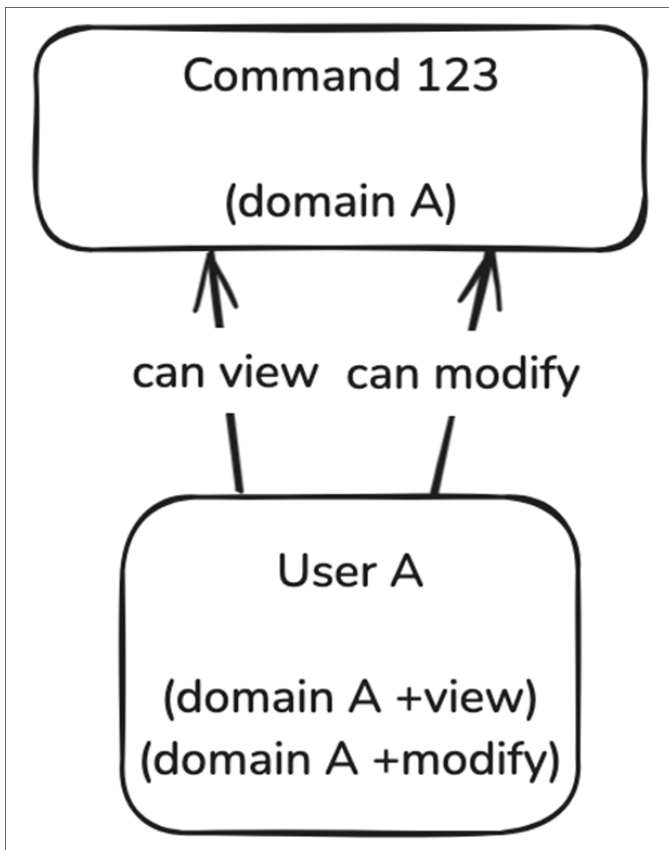
Domain Permissions

The following rules apply when you need to consider user permissions as they apply to domains:

Domain Permission Rules

- **Rule 1:** If a resource is assigned to a single domain, user permissions under that domain should be used to allow the user to view or modify the resource.

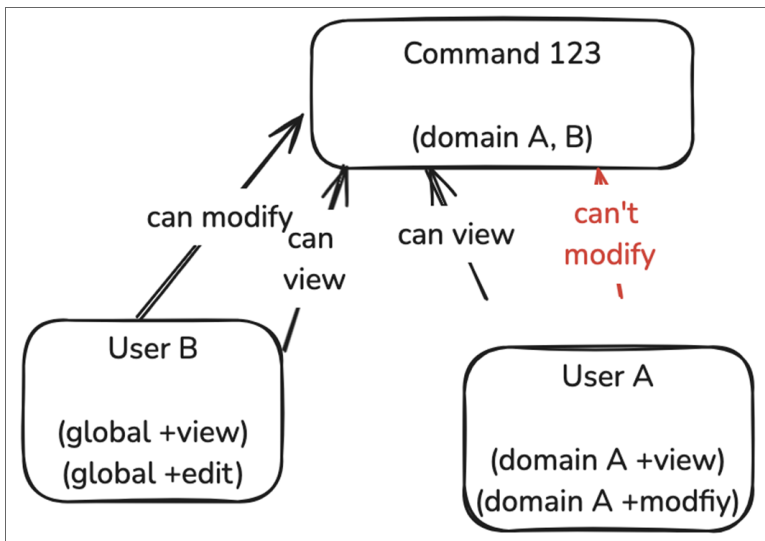
Example: Because User A in Domain A has both the *Command View* and *Modify* permissions under Domain A, the user can view and modify every command assigned to Domain A.



- **Rule 2:** If a resource is assigned to more than one domain, only users assigned to the global domain (or users with the permissions to modify that resource on the specified domains) can modify the resource if they have the permissions. Users within the same domain as the resource can view it if they have the correct permission assigned in that domain.

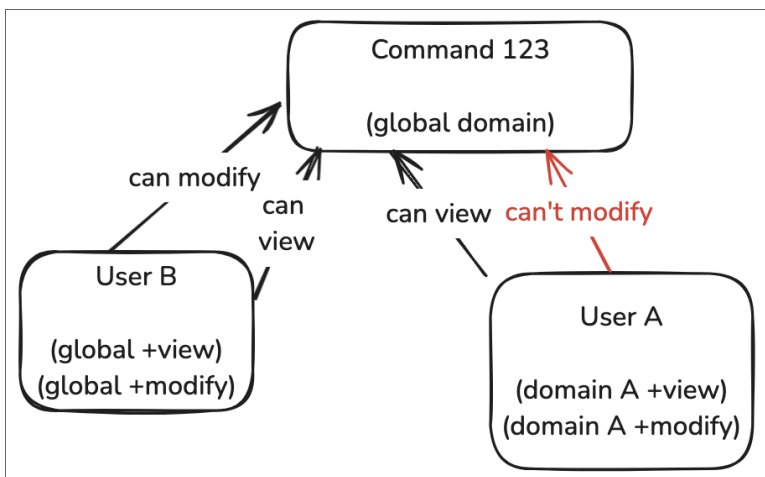
Example: "Command 123" has both Domain A and B. User A (from Domain A) has both the Command View and Modify permissions and is able to see "Command 123", but not modify it.

User B has Command View and Modify permissions under the Global domain, so they can both modify and view "Command 123".



- **Rule 3:** If a resource is assigned to the global domain, all users can see the resource but only users with the *Modify* permission in global domain can modify the resource.

Example: User A belongs to Domain A and can see the "global Command 123", but can't modify it even if they have the *Modify* permission because they are in Domain A. However, User B has the *Modify* permission and is in the Global domain, so they can edit the global "Command 123".



Managing Domains

The **Domain Management** page allows you to create, modify, and delete Administration Domains. This page is only displayed if you are logged in as a Global Administrator.

Click **Administration > Domains** on the menu to display the domain list:

Domains admin ▾						
<input type="text" value="Search"/>		Add Domain Delete				
<input type="checkbox"/>	Name	Contact	Email	Max Devices	Num Devices	Licence Expiry
<input type="checkbox"/>	test1				0	2021-01-06
<input type="checkbox"/>	some name	contact	foo@bar.com	1	0	N/A
<input type="checkbox"/>	domain2				0	N/A
<input type="checkbox"/>	domain070621	Foo Bar			1	N/A
<input type="checkbox"/>	Domain Test 070621				0	N/A
<input type="checkbox"/>	Domain-test-1				0	N/A
<input type="checkbox"/>	Test domain 23				0	N/A
<input type="checkbox"/>	test2212				0	N/A
<input type="checkbox"/>	test32302				0	N/A
<input type="checkbox"/>	down01da2				0	N/A
<input type="checkbox"/>	new domain whoa! edit!	Hey Ho		3	0	N/A

To add a new domain:

1. Click **[Add Domain]**. The **New Domain** page appears:

Add Domain

Details

Devices

Branding

Licence

Name

Name

Contact

John Doe

Telephone

Phone

Email

some@email.com

Address

Address

Notes

Notes

Close

Save

2. Complete the following details:
 - **Name.** Type a name for the domain, for example Customer Name, Business Unit, and so on.
 - **Contact.** (Optional) Type the name of the main contact for the domain.
 - **Telephone.** (Optional) Type a contact telephone number.
 - **Email.** (Optional) Type a contact email.
 - **Address.** (Optional) Type a customer or Business Unit address.
 - **Notes.** (Optional) Type any additional information.
3. Click the **[Devices]** tab to use the device selector and add devices to the domain. Additionally, you can configure the following:
 - **Max. devices:** the maximum permitted number of devices that can be added to this domain.
 - One or more IP address ranges that are allowed for this domain.
 - A domain-wide NAT IP address, which overrides the system-wide setting. For more information, see [Network Address Translation \(NAT\)](#). This setting can be overridden by the device-specific setting.
 - The devices that are part of the new domain.
4. Click the **[Branding]** tab (optional) to customize the top left-hand side corner image that will be displayed to a Domain Administrator. Click **[Choose File]** to locate a suitable image file on your PC. For best results, the logo should be exactly 100 pixels wide and up to 100 pixels tall, and no more than 40KB in size.
 - **Remove License Info.** Hides the expiration date for users in this domain.
 - **Remove Serial Number.** Hides the appliance serial number for users in this domain.
 - **Remove Help Menu.** Disables access to help for users in this domain.
5. Click the **[License]** tab (optional) to restrict the domain to expire on a certain date. Click **[Enforce License]** to enable the function, and choose a date.
 - **Disable Schedule.** Stops all scheduled jobs for this domain when a defined date is reached.
 - **Prevent User Login.** Disables users of this domain from accessing the appliance when a defined date is reached
6. Click **Save**. The system returns to the domain list.

To edit an existing domain, click the name of the domain.

Administrator Roles

If Administration Domains are enabled, administrators have either a global or a domain scope:

- **Global Users.** Have visibility and can operate on all the devices on the system, regardless of the domain the devices are assigned to. Logs and status pages display information about all the devices defined on the system. Global users can also assign global credentials to a device that is assigned to a domain.
- **Domain Users.** Users with at least one domain set. Their visibility is restricted to devices in their own domains. Logs and status pages only display information on the devices in the selected domains.

Restorepoint supports six built-in user roles:

- **Global Admin.** A "Super User" that has full control on any aspect of the appliance:
 - create/modify/delete devices in any domain
 - create/modify/delete global and domain administrators
 - initiate backups and restores
 - change the appliance configuration
 - an encryption password that allows Restorepoint to transition from the lock-down state to the normal state
- **Global Backup.** Backup Operator; can perform backups/restores of devices in any domain, but cannot modify devices, users, or appliance configuration.
- **Global View Only.** Monitor Operator; can only view existing backups and verify that the system is operating normally.
- **Domain Admin.** Has full control of devices and users in their domain. Does not have visibility of devices in other domains, cannot modify the appliance configuration, or transition the appliance from lock-down state to normal state. Logs and status screens only display information related to the domain.
- **Domain Backup.** Can perform backups and restores of devices in their domain.
- **Domain View Only.** Can only view existing backups, access logs, and status information of devices in their domain.

You can also define custom user roles. For more information, see [Custom User Roles](#).

You can use the **Users** page to add or delete administrator or modify their password, scope, or permissions.

Adding a New Domain User

To add a new domain user:

1. Select **Administration > Users** from the menu. Restorepoint displays the **User Management** page.
2. Click **Add User**. Restorepoint displays the **New User** page as shown:
3. Complete the following fields:
 - **Full Name.** Type the full name of the user.
 - **Username.** Type the new username (up to 16 characters).
 - **Password.** Type the password for the new user (passwords must be between 8 and 24 characters long).
 - **Role.** Select the privilege level from the drop-down list. See for the privileges associated with each admin level.

Privileges	View Only	Backup	Admin
View devices/configurations	Y	Y	Y
Run device operations	N	Y	Y
Add users/devices; modify system	N	N	Y

Table 4 : Default Administrator privilege levels (simplified)

Encryption Password	This field appears if an Admin-level administrator is selected. The encryption password must be between 8 and 24 characters long and must be different from the administrator password.
Domains	Assign the user to one or more domains to restrict the user's scope:

Add User Broadcast Delete

Edit User

Details Auth Domains

Search

- ☒ test
- ☒ some name
- ☒ domain2
- ☒ domain070621
- ☒ Domain Test 070621
- ☐ Domain-test-1
- ☐ Test domain 23
- ☐ test2312
- ☐ idj32d302
- ☐ dqw0jdq0
- ☐ new domain whoa! edit!

Close Save

4. Click **Update**. The updated **Users** page appears:

User Managementadmin

All UsersSAML UsersLogged-in UsersAPI Tokens

Search

Add UserBroadcastDelete

<input type="checkbox"/>	Name	Username	Role	Domain(s)	Last Active	Added	Updated	Email	Type	Disabled
<input type="checkbox"/>	Admin User	admin	Admin		2022-01-06 11:58	2020-11-18 16:12	2020-11-18 16:34	admin@demo.com	Local	No
<input type="checkbox"/>	Admin User	admin	Admin	Domain Test 070621	Never	2021-07-07 09:32	2021-07-07 09:32	admin@demo.com	Local	No
<input type="checkbox"/>	Admin User	admin	Admin		Never	2021-11-24 09:53	2021-11-24 09:53	admin@demo.com	Local	No

Editing Devices

If Administration Domains are enabled, you can use the **Domain** drop-down menu in the **Edit Device** modal to move a device from a domain to another.

Device Details

Device Name

Zhone Ead 544

Resolve

Type

Zhone EAD

Info

Fingerprint

Domain

Global

Agent

Search agents

[None]

testagent1

Add new

177.10.100.77

Ping

TCP Dump

The domain selector will only be displayed if you are logged on as a Global Administrator.

Chapter

12

Logs

Overview

The **Logs** page displays detailed information about system activity.

This chapter covers the following topics:

<i>Event Log</i>	137
<i>Syslog</i>	138

Event Log

These are the log messages for user activity, device operations, and system messages. A typical entry displays:

- **Date.** The specific time of an event.
- **Action.** The event type.
- **Object.** The device, user, or system configuration object to which the event refers.
- **Object Name.** The device, user, or server that an action was performed on.
- **Message.** The status, return, or error message associated with the event.
- **User.** The user associated with the event (or Auto for scheduled events).
- **Status.** OK or Error
- **IP Address.** The IP Address that is associated with the event, or *localhost*.

Logs							
<input type="text" value="Search"/>				<button>Export</button>			
Date	Action	Object	Object Name	Message	User	Level	IP Address
2022-02-10 16:20	Control	Device	A Cisco Switch	Performing Adhoc Command show version I uptime	admin	Info	127.0.0.1
2022-02-10 15:11	Discovery	System		17 devices found	admin	Info	127.0.0.1
2022-02-10 14:05	Monitor	Device	A Cisco Switch	Device Back Up	Auto	err	127.0.0.1
2022-02-10 14:00	Monitor	Device	A Cisco Switch	Device Down	Auto	err	127.0.0.1
2022-02-10 13:53	Entitlement	System		Updated Licence. About to upgrade to version 5.4_devel:220210. [Changelog]	Auto	Info	127.0.0.1
2022-02-10 13:53	Entitlement	System		Update to 5.4_devel:20220210104450 successful	Auto	info	127.0.0.1
2022-02-10 13:53	Entitlement	System		Starting upgrade to 5.4_devel:20220210104450	Auto	Info	127.0.0.1
2022-02-10 13:53	Startup	System		Restorepoint startup	Auto	Info	127.0.0.1
2022-02-10 13:52	Entitlement	System		Updated Licence. About to upgrade to version 5.4_devel:220210. [Changelog]	Auto	Info	127.0.0.1
2022-02-10 13:52	Entitlement	System		Update to 5.4_devel:20220210104450 successful	Auto	info	127.0.0.1
2022-02-10 13:52	Startup	System		Restorepoint startup	Auto	Info	127.0.0.1
2022-02-10 13:52	Entitlement	System		Starting upgrade to 5.4_devel:20220210104450	Auto	Info	127.0.0.1
2022-02-10 13:51	Startup	System		Restorepoint startup	Auto	Info	127.0.0.1
2022-02-10 13:51	Entitlement	System		Updated Licence. Installed plugin Cisco ASA rev. 25626. Installed plugin Riverbed Steelhead rev. 25618. About to upgrade to version 5.4_devel:220210. [Changelog]	admin	Info	127.0.0.1

Use the **[Export]** button to export the event log as a CSV file.

Entries in the system log will be deleted according to the retention policy set on the [Log Settings and Alerts](#) page.

Syslog

The following messages are logged to the Restorepoint syslog service by both the appliance itself and any devices configured to log to it.

Date/Time	Date/time of an event
Process	Syslog Process
Level	Syslog level (Alert, Critical, Error, Warning, Notice, or OK, corresponding to severity levels 1 - 6).
Message	Status/Error message associated with the event.
Facility	Syslog Facility
Source	The IP Address that is associated with the event or <i>localhost</i> .

Chapter

13

Appliance Administration

Overview

The **System Settings** page allows you to configure appliance-related settings, such as networking parameters and date/time settings.

This chapter covers the following topics:

<i>System Settings</i>	139
<i>Advanced Settings</i>	159

System Settings

To access the **System Settings** page, expand the **Administration** menu and select **System Settings**.

Network Settings

On the **[Network]** tab (Administration > System Settings), you can configure your interfaces, network access, IP configuration, manage bandwidth, and configure additional IPv4 and IPv6 static routes.

The screenshot shows the 'System Settings' window with the 'Network' tab selected. The interface is divided into several sections:

- Interfaces:** A dropdown menu shows 'eth0' selected.
- IPv4 Settings:** Includes a 'Use DHCP' checkbox (checked), 'IP Address' (172.31.20.30), 'Subnet Mask' (255.255.255.0), 'Speed / Duplex' dropdown, and 'Auto Negotiation' checkbox (unchecked).
- IPv6 Settings:** Includes a 'Mode' dropdown (set to 'Auto (SLAAC)'), 'IPv6 Address' (2a05:d01c:a9f:5a14:e4eb:63df:b62f:fi), and 'IPv6 Gateway' (fe80::82f:f7ff:fea7:3db8).
- IP Configuration:** Includes fields for 'DNS Server 1' (172.31.18.204), 'DNS Server 2' (172.31.18.206), 'DNS Server 3' (IP Address), 'Gateway' (172.31.20.1), and 'Domain Name' (hq.rp.internal). Each DNS server field has a 'Ping' button.
- Network Access:** Includes a 'Use Proxy' checkbox (unchecked) and a 'NAT Address' dropdown (set to 'IP Address').
- Bandwidth Management:** Includes a 'Throttle SCP/SFTP' checkbox (unchecked).
- Additional IPv4 Static Routes:** A table with columns for 'IPv4 Address/Mask', 'via', 'IPv4 Address', and an 'Add' button.
- Additional IPv6 Static Routes:** A table with columns for 'IPv6 Address/Prefix', 'via', 'IPv6 Address', and an 'Add' button.

A 'Save' button is located in the top right corner of the settings window.

Network Interfaces

Use the drop-down menu to override the default auto-detect setting of the Ethernet interface(s).

Primary / Secondary Interface

Use the **[Network]** tab (Administration > System Settings > Network) to set or update the network address for Restorepoint. The initial settings are entered when you first set up your appliance. Select your **Interface** first and then supply values in the following fields. Click **Save** when all updates have been made.

- **Use DHCP.** Select this checkbox if you use DHCP for your interface. When you select the checkbox, all other options on the page are disabled.
- **IP Address.** Complete the specific address fields for your **IPv4** and/or **IPv6 Settings**.
- **Subnet Mask.** Enter the subnet mask associated with the IP address.
- **Speed/Duplex.** Select the link speed and duplex from the drop-down list.
- **Auto Negotiation.** Check whether or not you'd want to include **Auto Negotiation** for your interface.
- **Mode.** Select your **Mode** type from the drop-down list. If you select this checkbox, **Speed/Duplex** is disabled, and the **Auto-Negotiated Speed** field appears. This contains a value showing the value it set.

IP Configuration

To set up your IP routing configuration, complete the following fields:

- **DNS Server.** The DNS server addresses for your network. You can configure up to three servers. The DNS servers must be able to resolve public names (for example, *support.restorepoint.com*), or the Restorepoint appliance cannot retrieve software updates and license details. This option is for IPv4 addresses only.

NOTE: ScienceLogic recommends that you ping the servers you entered to ensure they are reachable.

- **DNS Server 2.** (Optional) A second DNS server. This option is for IPv4 address only.
- **DNS Server 3.** (Optional) A third DNS server. This option is for IPv6 address only.
- **Gateway.** The default gateway for your network. You can **Ping** these servers to check connectivity.
- **Domain Name.** The default domain name of the network where this appliances is hosted.

Network Access

Restorepoint needs internet access (HTTP/HTTPS) to retrieve software and plugin updates. If a proxy is required for Internet access, select **Use Proxy**, and supply the following information:

- IP address of the proxy server. Complete the specific address fields for your servers.
- Proxy port. Type the port for your proxy port.
- Username/password, if your proxy requires authentication. Otherwise, leave this field empty. Use the **Test Proxy** button to verify that the configuration is correct.

Network Address Translation (NAT)

Restorepoint may use back connections (typically TFTP or FTP) to backup certain devices. If Restorepoint is accessing a device using back connections through a NAT router or firewall, back connections will fail because the device will attempt to connect to the original, untranslated IP address. To avoid this problem:

- On your firewall, create a 1:1 NAT mapping (often referred to as Static NAT or Mapped IP) to translate the Restorepoint IP address to a public/routable IP address.
- Enter the public IP address for Restorepoint in the **NAT Address** box. The system-wide NAT IP address defined here can be overridden in the Domain settings, or in each individual device's settings.

The **Back Connection NAT** option needs to be selected in any device that is accessed by Restorepoint through NAT. For more information, see [Adding a New Device Manually](#).

IMPORTANT: Restorepoint supports multiple NAT addresses. The NAT IP address defined in this page can be overridden by the Domain or Device NAT IP setting.

Additional IPv4 and/or IPv6 Static Routes

If the devices that you want to add to Restorepoint are located on different networks, you might need to define additional IPv4 or IPv6 static routes.

To define a static route:

1. **IP Address / Mask length:** Enter the network address/netmask (in CIDR notation).
2. **Via IP address:** Enter the destination gateway IP address.
3. Click **Add**.
4. Click **Save**.

To remove a static route:

1. Click **Delete** next to the static route you want to remove.
2. Click **Save**.

Bandwidth Management

You may limit the amount of network bandwidth Restorepoint uses by selecting **Throttle SCP/SFTP** and specifying a speed (in kbps).

Appliance Settings

You can manage your appliance operations on the **[Appliance]** tab (Administration > System Settings). Complete your desired platform, software updates, branding, and date/time operations, and click **[Save]**.

The screenshot shows the 'System Settings' page with the 'Appliance' tab selected. The page is divided into four main sections: Platform, Branding, Software Updates, and Date / Time.

- Platform:** Contains buttons for 'Restart software', 'Abort all tasks', 'Reboot', and 'Shutdown'. Below these are 'Remote Support' (Start, Console, Open) and 'Debug' (Start, Download, Stack Trace) buttons. At the bottom is an 'After Power On' dropdown menu set to 'Run Due Schedule'.
- Branding:** Contains a 'Logo' section with 'Change' and 'Reset' buttons.
- Software Updates:** Shows the 'Current version' as '5.6_devel:20230421152843'. There is a checkbox 'This appliance is not connected to the Internet' (unchecked) and a 'Force Check' button. Below are two checked checkboxes: 'Disable Automatic Version Upgrades' and 'Disable Automatic Minor Updates'.
- Date / Time:** Shows the 'Date' as '04/21/2023' and 'Time' as '09:41:58 PM'. The 'Time Zone' is set to 'Europe/London'. There is a 'Set to current time' button and a 'Use NTP' checkbox (unchecked).

A 'Save' button is located in the top right corner of the settings area.

Platform

To manage your platform, enable the following buttons and/or complete the following fields:

- **Restart Software.** Restarts the Restorepoint domain. May leave the system in an unstable state, use when directed by Restorepoint support.
- **Abort All Tasks.** Aborts all currently-running tasks. This could leave network devices in an unstable state.
- **Reboot.** Enables you to reboot your Restorepoint appliance. However, try to **Restart software** first.

- **Shutdown.** Enables you to shutdown and power off your Restorepoint appliance. This is the safest way to shut down your Restorepoint appliance. Wherever possible, avoid using the front panel buttons to reset or shutdown Restorepoint.
- **Remote Support.** Click **Start** to enable Technical Support to securely connect to your Restorepoint appliance for troubleshooting. To stop the remote support tunnel, click the **Stop** button on this page, or click the running task in the [Activity Display](#). Then, click **Stop Remote Support** to terminate the secure connection.

Note: The **Remote Support** feature requires that your firewall allows SSH connections (TCP port 22) from Restorepoint to `jmp1.restorepoint.com` and `jmp2.restorepoint.com`. For more information, see [Firewall Requirements](#) for notes on firewall configuration.

- **Open Console.** Opens a console terminal to Restorepoint's shell menu to allow users to access the terminal via HTTPS.
- **Debug.** Generates an appliance debug file that may help Technical Support diagnose your issue. Click the **[Start]**, **[Stop Debug]**, **[Stack Trace]**, or **[Download]** buttons to debug your appliance.
 - The **[Start]** button launches the debug process, removing any previous debug logs and setting the log level of the application to debug. It also starts collecting logs and system information like memory usage, CPU usage, stack trace, and so on.
 - The **[Stop Debug]** button only appears after the debug process has started. It stops the debug collection by changing the log level back to the information level logs.
 - The **[Stack Trace]** button generates and downloads the file containing the stack trace of all the running routines in the application.
 - The **[Download]** button allows users to download the debug log that was written as the debug process was started.
- **After Power On.** Defines what Restorepoint should do when returning from a power-off state. If Restorepoint should *Run Due Schedules*, and treat any missed backups as *Overdue*, or *Recalculate Schedule* and just return to the normal backup schedule.

Branding

You can replace the Restorepoint logo with your company's logo in the upper-left corner of the appliance user interface. Click **[Change]** and then **Browse** to locate a suitable image file on your PC. For best results, the logo should be exactly 30 pixels tall and up to 150 pixels wide, and no more than 40KB in size. Click **[Revert]** to return the logo to the default Restorepoint logo.

You can further customize the user interface for Domain users in the Domains page. For more information, see [Managing Domains](#).

Software Updates

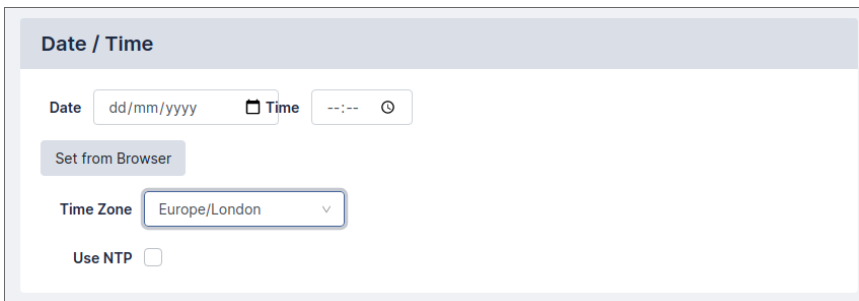
You can view the following software details in this section:

- The current Restorepoint version.
- The appliance's connection to the Internet. If your system is air-gapped, the checkbox ***This appliance is not connected to the internet*** should be selected. In this case, click **Force Check** to check for appliance updates and to perform a **Manual Upgrade** of the version. A license statement will be displayed that indicates the license status and the installed plug-in(s).
- You can control the configuration of your appliance updates by selecting one of the check boxes that follow. To accept all updates, do not select the check boxes:
 - **Disable Automatic Version Upgrades.**
 - **Disable Automatic Minor Updates.**

For more information, see [System Updates](#).

Date and Time

Use the selectors to set the Time Zone on the appliance. Alternatively, you can choose to use a Network Time Protocol server by selecting **Use NTP** and entering up to two NTP servers. [Network Time Protocol \(NTP\)](#) and enter up to two NTP servers, such as *pool.ntp.org*.



The screenshot displays the 'Date / Time' configuration window. At the top, there's a header 'Date / Time'. Below it, the 'Date' field is set to 'dd/mm/yyyy' and the 'Time' field is set to '--:--'. A 'Set from Browser' button is located below these fields. The 'Time Zone' dropdown menu is set to 'Europe/London'. At the bottom, the 'Use NTP' checkbox is unchecked.

Archive

On the **[Archive]** tab (Administration > System Settings) you can configure your schedule, set the primary and secondary server archiving, and set the operations archive.

The screenshot displays the 'System Settings' page with the 'Archive' tab selected. The top navigation bar includes 'Network', 'Appliance', 'Archive' (active), 'Logs / Alerts', 'SNMP', 'Security', 'HA', and 'Device Defaults'. A 'Save' button is in the top right corner.

Schedule Section:

- Schedule:** Manual (dropdown)
- Fallover Mode:** Always Use Both (dropdown)
- Last Archived:** 2024-08-08

Primary Server Section:

- Server:** Archives (dropdown) with a 'Test' button
- Retain:** 4 (input field)
- Max Backups:** Last two versions (dropdown)

Operations Section:

- Archive Certs and Keys:** ☐
- Write Archive Max Retries:** 0 (input field)
- Write Archive Retry Interval:** 0 (input field)
- Buttons:** Archive Now, Restore Archive

Secondary Server Section:

- Server:** [None] (dropdown)

You can prepare for disaster recovery scenarios by archiving the Restorepoint configuration from the **Administration > System Settings > Archive** tab. Archiving the Restorepoint configuration allows you to back up the Restorepoint appliance automatically to up to two remote servers, including all device configurations stored on Restorepoint.

Taking an Archive

You can define the following settings for archiving:

- For Primary and Secondary Archive servers, you can use a pre-defined server, or select *[New Server]* to enter the details for a server that you have not defined. For details on how to define a file server, See [File Storage](#).
- For each Archive Server, you can define the following:
 - Retain.** Enter the maximum number of archives to keep on the chosen fileserver. As you reach this number, older archives will be removed.
 - Max Backups.** Select the maximum number of backups that will be stored in the archive.

NOTE: To be clear, **Retain** settings control the number of archives while **Max Backups** pertains to the number of backups in a particular archive.

Then , you have the options to:

- Click **[Save]**.
- Click **[Archive Now]** to start a manual archive operation.

Restoring from an Archive

Restoring from an archive allows you to quickly recover from a failure. For example, when installing a replacement appliance after a hardware problem. To restore the appliance from an archive:

1. Click the **[Restore Archive]** button on the **System Archive** page to display the list of available archives.
2. Select the archive to be restored.
3. Click **[Restore]**.

NOTE: You will need the password and encryption password for the *admin* account in order to complete the operation.



Restore Archive

Archive

RP00000099 2021-01-24 01:00 smb test

Password

..... Show

Encryption Password

Encryption Password Show

Cancel Restore

Workstation DB Archives

You can also a database-only export/import to a workstation instead of a fileserver. While not suitable for most disaster recovery scenarios, it allows for a quick migration of your Restorepoint settings from one appliance to another. You can use the **Export/Import DB Archive** buttons to save the Restorepoint database through your browser and reimport a previously saved database.

Log Settings and Alerts

You can use the log settings and alerts section to define your default log retention policy and the email address for system error notifications.

Navigate to the **[Logs/Alerts]** tab (Administration > System Settings) and supply values in the given fields. Then, click **[Save]** when finished.

- **Delete logs after.** Enter a maximum age for events. Events older than this value are permanently deleted from the system. The default value is one month.
- **Send Syslogs.** Select this checkbox to forward all log messages to an external syslog server. Log entries will still be available by clicking on **Information > Logs** or **Information > Syslogs**. If you use a syslog server, you will need to enter its IP address and choose the syslog facility. If you want to use the Restorepoint hostname as the syslog message source, add the hostname to Syslog Source Hostname. Note that the facility setting only applies to forwarded Restorepoint logs, not forwarded operating system events.
- **Syslog Version.** Choose the syslog version from the drop-down menu.
- **Syslog Source Hostname.** Type in the hostname for your Syslog source.
- **Protocol.** Chose the protocol from the drop-down menu.
- **Primary Server.**
 - **Host.** Type the Host name or IP address for your primary server. You can also click **[Ping]** to verify communication.
 - **Port.** Type the port you primary server will use. For more information, see [Firewall Requirements](#).
- **Secondary Server.**
 - **Host.** Type the Host name or IP address for your primary server. You can also click **[Ping]** to verify communication.
 - **Port.** Type the port you secondary server will use. For more information, see [Firewall Requirements](#).
 - **Facility.** Select the facility for your server from the drop-down menu.
- **Use SNMP Traps.** Select this checkbox to forward log messages as SNMP traps to a Network Management Server (NMS). You will need to enter the NMS IP Address, the SNMP Version, and the community string.
- **Enable Email Alerts.** Select this checkbox to receive emails if an alert is triggered.

SNMP

If your network has a Network Management System, you can use SNMP to perform some basic monitoring of your Restorepoint appliance. Restorepoint supports SNMP v1, v2c, and v3. To configure SNMP:

1. Navigate to the **SNMP** page (Administration > System Settings > SNMP).
2. Supply values in the following fields:
 - Select which SNMP versions should be enabled by selecting the relevant checkbox.
 - If you enable SNMP v1 or v2c, you must enter a **Community String** in the appropriate field.
 - If you enable SNMP v3, you must define a username. Depending on the SNMP v3 security level, you may need to enter additional integrity/encryption passwords and integrity/encryption algorithms.

Click **Save**.

The screenshot shows the 'System Settings' interface with the 'SNMP' tab selected. The page is divided into three main sections: 'SNMP Version', 'SNMP Version Details', and 'SNMP System Details'. In the 'SNMP Version' section, checkboxes for 'SNMP v1', 'SNMP v2c', and 'SNMP v3' are all checked. Below these are buttons for 'Download MIBs', 'Restorepoint MIB', and 'Appliance MIB'. The 'SNMP Version Details' section contains fields for 'Community String' (12345678), 'SNMP v3 Username' (12345678), 'Security Level' (authPriv), 'Authentication Password' (masked with asterisks), 'Authentication Type' (MD5), 'Privacy Password' (masked with asterisks), and 'Privacy Type' (AES). There are 'Show' buttons next to the password fields. The 'SNMP System Details' section contains fields for 'system.sysContact.0' (Restorepoint <support@restorepoint.com>), 'system.sysName.0' (Restorepoint Appliance), and 'system.sysLocation.0' (Restorepoint). A 'Save' button is located in the top right corner of the interface.

NOTE: SNMP settings (Administration> System Settings>SNMP) may need to be reset/updated after upgrading to 5.6.

Security

The **Security** tab (Administration > System Settings) allows you to configure various global settings to mandate a higher level of network security for the Restorepoint appliance.

IMPORTANT: Applying some of these settings may cause compatibility problems with legacy devices and clients.

The screenshot shows the 'System Settings' interface with the 'Security' tab selected. The interface is divided into several sections:

- Protocol Versions:** Includes dropdowns for 'Min. UI TLS Version' and 'Min. Client TLS Version', both set to 'TLS 1.1'.
- TLS Cipher Options:** A list of checkboxes to disable specific ciphers: 'Non-ECC Ciphers', 'CBC Ciphers', 'ARCFOUR Ciphers', and '3DES Ciphers'.
- Session:** Includes input fields for 'UI Timeout' (60 min), 'Console Timeout' (15 min), and 'Max login attempts' (0 / min).
- Services:** Includes checkboxes for 'Disable Inbound HTTP' (checked), 'Disable Inbound TFTP', and 'Disable Inbound FTP'.
- HTTPS Certificate:** A section with a 'Change' button.
- Admin Allowed Networks:** Includes an input field for 'IP Address/Mask' and an 'Add' button.
- Allowed SSH Ciphers:** A section with 'Server Ciphers' (Enabled/Disabled lists), 'Server MACs', 'Server Kex Algorithms', 'Client Ciphers', 'Client MACs', and 'Client Kex Algorithms'.
- Additional SSH Settings:** Includes an 'Additional SSH Server Port' input field and a 'Disable SSH Strict Host Key Checking' checkbox.
- Credential Providers:** A section with 'Add', 'Edit', and 'Remove' buttons.

Protocol Versions

The Protocol tab allows you to specify the minimum version of TLS that the Restorepoint UI can use and can communicate with devices. You can also prevent Restorepoint from falling back to SSHv1, if TLS is unavailable.

TLS Cipher Options

To set your TLS Cipher Options, select the checkbox that you desire.

Services

You may wish to disable some functionality of Restorepoint for reasons such as PCI Compliance.

HTTPS Certificate

Click **Change** to modify the HTTPS certificate used by Restorepoint. The following dialog appears:

Update Certificate

Type: Self-signed

Common Name: Restorepoint Ltd

Country Code: GB - United Kingdom of Great Britain and Northern Ireland (the)

State / Province: Surrey

Locality / City: Woking

Organisation: Restorepoint Ltd

Org. Unit: Engineering

Email: some@email.com

SubjectAltNames: Email support@restorepoint.com

Buttons: Remove, Add, Cancel, Submit

The **Type** drop-down will show you the different options available:

- **Self-Signed.** Generates a self-signed HTTPS certificate with the current keypair.
- **New Key.** Allows you to generate a new private/public keypair of the given length.
- **Create CSR.** Allows you to generate a Certificate Signing Request, which your Certificate Authority (CA) will need to produce a signed certificate.
- **Upload Certificate.** Once you have a signed certificate from the CA, you can upload it here.
- **Upload All.** Alternatively, if you have a key/certificate pair already from your CA, you can upload both of them here.

Session

To set the timeout values, complete the following fields:

- **UI Timeout.** How long a user may stay logged-in to the Restorepoint user interface without making a change or initiating an action. Default value is *60 minutes*.
- **Console Timeout.** How long to keep a session for the VM Console open without an action. The default value is *15 minutes*.
- **Max login attempts.** Allows you to automatically set users' maximum login attempts per minute. Default value is *0 minutes*. For more information, see [Managing Users](#).

Admin Allowed Networks

This pane allows you to set a range of IPs (in CIDR format) that administrator accounts can connect from. For a per-user setting, see [Managing Users](#).

Allowed SSH Ciphers

Restorepoint allows you to configure several different SSH ciphers. The **Allowed SSH Ciphers** pane (Administration > System Settings > Security) contains the following allowed SSH ciphers:

- Server Ciphers
- Server MACs
- Server Kex Algorithms
- Client Ciphers
- Client MACs
- Client Kex Algorithms

Additional SSH Settings

The additional SSH Settings allow you to configure your system settings further.

- **Additional SSH Server Port**. Enables users to define another SSH host port the appliance should listen to for incoming SSH connections. This allows the agent to establish the initial SSH connection to the appliance. Defining the value changes the `sshd_config` to listen on that port in addition to port 22 and adapts the firewall rule accordingly.
- **Disable SSH Strict Host Key Checking**. Disables the SSH host key validation for all devices and logs when the key changed.

Request Settings

Request settings allows you to configure the maximum body size for requests. These new options enhance system security:

- **Max body size** (in MB). Sets the maximum requests for body size for all requests. The default is 100MB.
- **Max file size** (in MB). Sets the maximum file size for requests that upload files. The default is 10MB.

Credential Providers

The **Credential Providers** pane is currently only available for CyberArk users. The credential provider allows you to import credential sets and assign them to devices.

Credential Provider

Name

URL

Application ID

Request Timeout (sec)

10

RootCA Certificate

Selected file: [No file selected]

Client Certificate

Selected file: [No file selected]

Client Key

Selected file: [No file selected]

Query Mappings

Add query mapping

Close

Save

High Availability

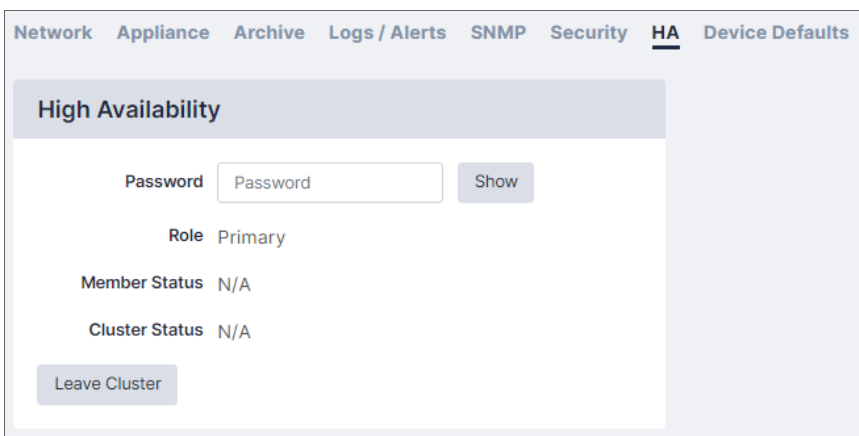
High Availability (HA) provides a way to minimize the effects of hardware failure, by configuring two Restorepoint appliances in a cluster.

Under normal operating conditions, the primary cluster member is active and the secondary is in standby mode; the active appliance performs all network operations, and replicates all settings and device configurations to the standby appliance. Restorepoint replicates data both incrementally (for example, just after a backup is retrieved from a device) and by performing full synchronizations on a regular basis.

If the primary member becomes unavailable because of a hardware failure, other network problem, or from losing power, the secondary member will automatically become Active, and carry on as normal. If the primary recovers, it will automatically take over from the secondary and become active.

HA does not require the appliance to be installed on the same network, as long as the traffic requirements are met (see below).

Software updates and upgrades are managed at the cluster level; updating the active appliance will automatically update the standby appliance.



The screenshot shows the 'High Availability' configuration page. At the top, there is a navigation bar with tabs: Network, Appliance, Archive, Logs / Alerts, SNMP, Security, HA (selected), and Device Defaults. Below the navigation bar, the page title 'High Availability' is displayed. The main content area includes a 'Password' field with a 'Show' button, a 'Role' dropdown set to 'Primary', 'Member Status' showing 'N/A', and 'Cluster Status' showing 'N/A'. At the bottom left, there is a 'Leave Cluster' button.

HA Requirements

- HA is a separately licensed feature.
- Only appliances of the same model can be clustered and appliances must be running the same software version.
- Cluster members must be able to communicate over HTTPS to exchange heartbeat information and data synchronization. TCP/443 traffic should be permitted bidirectionally between the appliances.

Creating a Cluster

To create a cluster, on the Primary Restorepoint appliance:

1. Click **[Create Cluster]**.
2. Type a password to be used between appliances in the cluster.
3. Click **Save**.

On the secondary Restorepoint appliance:

1. Click **[Join Cluster]**.
2. Enter the same password you entered on the Primary appliance.

3. Enter the IP Address of the Primary appliance.
4. Click **[Save]**. The cluster will perform the initial full sync.

After the cluster is created, this screen can be used to monitor the status of the cluster or to leave the cluster.

- **Role** displays which position the appliance takes in the cluster (*Primary* or *Secondary*).
- The **Member Status** displays if the current appliance is *Active* or *Standby*.
- The **Cluster Status** displays the status of the Secondary appliance on the Primary or the amount of time between heartbeat synchronizations on the Secondary.

You can use the **Leave Cluster** button to break the cluster. When you click Leave Cluster, all synchronization will stop, the two appliances will keep the existing configuration, and the appliances will carry on independently.

Device

The **[Device]** tab allows you set the device defaults for your system. Complete the following fields in the **Device Defaults** section for your device's default settings:

- **Global Device Settings.** Set the backup size alert when you have reached backup size limits. Available for administrators only. See [Global Devices](#).
- **Device Defaults.**
 - **Retention Policy.** First, select what versions to keep. Then, choose when to **Always delete after** (in days/weeks/months) and **Never delete before** (in days/weeks/months).
 - **Config Filename.** Enter your **Filename Prefix**, what to include (**Device ID** or **Device Name**), and see your selection's **Preview**.
 - **Email Alerts.** Choose whether or not you'd like an email to be sent when there is a **Config Change**, **Backup Start**, and/or **Backup End**.
 - **Monitoring.** Choose your monitor device settings. These include your **Type**, **Email when down**, and **Email when up**.
 - **Failure Policy.** Set when your failure policy should **Retry, alert** (Always, First Failure, or Never), and/or when to **Retry after** (in minutes).

- **Plugins.** Configure your plugin options and redact rules. See [Plugins](#).

System Settings admin

Network Appliance Archive Logs / Alerts SNMP Security HA **Device** Save

Backup Size Alert MB

Device Defaults

Retention Policy

Keep Versions

Always delete after ☐

Never delete before ☐

Config Filename

Filename Prefix

Filename Include ☒ Device ID ☐ Device Name

Preview [ID]-[timestamp]

Email Alerts

Config Change ☐

Backup Start ☐

Backup End ☐

Monitoring

Monitor ☒

Type

Email when down ☒

Fail after

Email when up ☒

Failure Policy

Retry

Alerts

Retry after

Plugins

Name	Manufacturer	Model	Config Types	Protocols
3Com SuperStack 4400	3Com	SuperStack 3 4400	Default	telnet
3Com SuperStack 5500	3Com	SuperStack 5500	Default	ssh, telnet
A10 Thunder	A10 Networks	Thunder Series	Full Backup, Startup Config, ...	ssh
A10 aGalaxy	A10 Networks	aGalaxy	Default	ssh
ADVA FSP 150-XG100 Series	Adva	FSP150-XG100 Series	Database Only, Database end...	ssh
APC NMC	APC	NMC	Default	scp
Avi Networks Vantage	Avi Networks	Vantage	Default	ssh
Accedian	Accedian		Default	ssh
Accedian Skylight Flex 100	Accedian	Skylight Flex 100	Running Config	ssh
Alcatel OmniSwitch	Alcatel	OmniSwitch	Default	sftp, ftp
Alcatel Omnistack	Alcatel	Omnistack	Default	telnet, ssh
Allied Telesis Switch	Allied Telesis	AT Switches	Startup Config, Running Config	ssh, telnet
Appgate SDP Controller	Appgate	SDP Controller	Appliances	https

Global Devices

The **Global Device Setting** on the **[Device]** tab allows users to set backup size alerts when you reach the backup size limits.

- **Global Device Setting.** Select the **Backup Size Alert** to a value in megabytes (MB).
 - If the value is larger than 0, every new backup size will be compared against this value. If the backup size exceeds this value, an alert will trigger an email to the appliance owner.
 - If the value is 0, no alert will be triggered and no email will be sent.

Click **[Save]** when finished.

System Settings admin

Network Appliance Archive Logs / Alerts SNMP Security HA **Device** Save

Global Device Settings

Backups

Backup Size Alert MB

Device Defaults

Retention Policy

Keep Versions

Always delete after ☐

Never delete before ☐

Config Filename

Filename Prefix

Filename Include ☒ Device ID ☐ Device Name

Preview `[ID]-[timestamp]`

Email Alerts

Config Change ☐

Backup Start ☐

Backup End ☐

Monitoring

Monitor ☒

Type

Email when down ☒

Fail after

Email when up ☒

Failure Policy

Retry

Alerts

Retry after

Plugins

Plugins

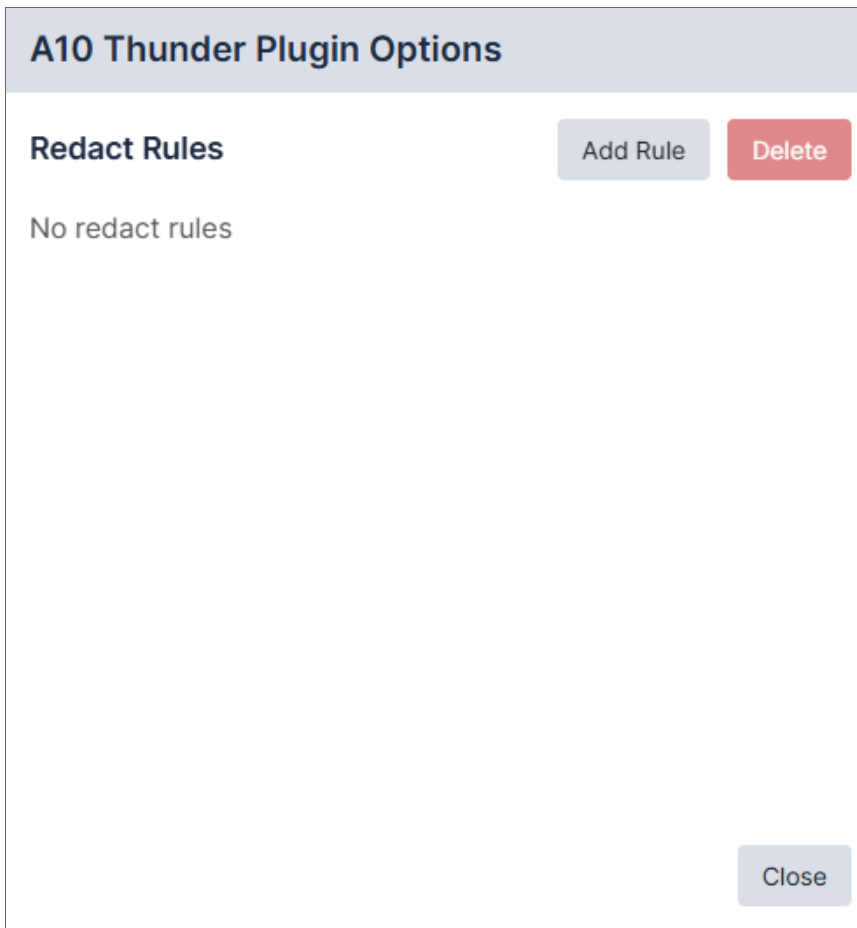
The **Plugins** on the **[Devices]** tab allows users to set the **Redact Rules** for each of your plugins. Users must have permissions for `ViewPluginOptions` and `ModifyPluginOptions` to view and edit the plugin options and the **Redact Rules** for the plugin.

Plugins

Name	Manufacturer	Model	Config Types	Protocols	Redact Rules
3Com SuperStack 4400	3Com	SuperStack 3 4400	Default	telnet	0
3Com SuperStack 5500	3Com	SuperStack 5500	Default	ssh, telnet	0
A10 Thunder	A10 Networks	Thunder Series	Full Backup, Startup Config, ...	ssh	0
A10 aGalaxy	A10 Networks	aGalaxy	Default	ssh	0
ADVA FSP 150-XG100 Series	Adva	FSP150-XG100 Series	Database Only, Database and...	ssh	0
APC NMC	APC	NMC	Default	scp	0
AVI Networks Vantage	AVI Networks	Vantage	Default	ssh	0
Accedian	Accedian		Default	ssh	0
Accedian Skylight Flex 100	Accedian	Skylight Flex 100	Running Config	ssh	0
Alcatel OmniSwitch	Alcatel	OmniSwitch	Default	sftp, ftp	0
Alcatel Omnistack	Alcatel	Omnistack	Default	telnet, ssh	0
Allied Telesis Switch	Allied Telesis	AT Switches	Startup Config, Running Config	ssh, telnet	0
Appgate SDP Controller	Appgate	SDP Controller	Appliances	https	0

To add a **Redact Rule**:

1. Go to **Plugins** on the **[Device]** tab.
2. Click on your plugin. The **Plugin Options** modal appears.



3. Click the **[Add Rule]** button for **Redact Rules**. The **Add Plugin Redact Rule** modal appears.

Add Plugin Redact Rule

Name

Regex

Config Types

Full Backup

Startup Config

Running Config

Enabled

☐

Close

Save

4. Complete the following fields:

- **Name.** Type a name for your **Redact Rule**.
- **Regex.** Choose the Regex Expression to redact the file. You can redact a whole or partial line.
 - To redact a whole line, use a Regex without a capture group. Any lines that match will be completely redacted. For example:
Line: Server IP: 1.2.3.4
Regex: IP: \d+\.\d+\.\d+\.\d+
Result: [REDACTED]
 - To redact part of a line, use a Regex with a capture group to specify the exact part of the line to redact. For example:
Line: Password = "secret"
Regex: Password = "(.*)"

Result: Password= "[REDACTED]"
- **Config Types.** Select the type of configuration that applies to your **Redact Rule**.
- **Enabled.** Select the checkbox to enable your **Redact Rule**.

5. Click **[Save]**.
6. The **Redact Rule** will appear under your plugin options.

A10 Thunder Plugin Options

Redact Rules Add Rule Delete

Showing: 1

<input type="checkbox"/>	Name	Regex	Config Types	Enabled
<input type="checkbox"/>	Redact foo	foo	Startup Config, Running Config	Yes

Close

Plugin Redact Rules Caveats

The following permissions apply to the Plugin **Redact Rules**:

- Users can configure plugin **Redact Rules** on a plugin basis.
- All users with the `ViewBackup` permission also have the `ViewUnredactedBackup` permission which allows you to view unredacted backups.
- When you configure a rule, users without the `ViewUnredactedBackup` permission will see the backups redacted.
- Redaction rules were applied to the following backups:
 - View Backup
 - Compare Config
 - Download Config
 - View Config on the Global Search
- Emails are not redacted for email notifications when a configuration is changed.
- Adding redaction rules to devices with large backups (> 100mb) might significantly increase their download time.

Advanced Settings

You can configure several advanced settings on the **[Advanced Settings]** tab of the **Administration** page (Administration>System Settings>Advanced Settings).

TIP: To access the **[Advanced Settings]** tab, Restorepoint requires that you contact ScienceLogic Support to enable it. Access will be restricted until you contact Support.

To configure your advanced settings complete the following fields:

The screenshot shows the 'System Settings' page in the Restorepoint interface, specifically the 'Advanced Settings' tab. The left sidebar contains a navigation menu with options: Information, Devices, Compliance, Administration (expanded), System Settings, Domains, Agents, Users, User Roles, API Tokens, Auth Servers, Storage, and Help. The 'Advanced Settings' tab is selected, showing a list of configuration options: 'Full Transcript' (checkbox), 'No Redact' (checkbox), 'Clip Progress' (text input with value 1), 'LDAP Nested Groups' (checkbox), 'Max Concurrent Monitors' (text input with value 300), 'Max Replication Buffer' (text input with value 20000), and 'Max Jobs' (text input with value 50). A red note at the bottom states: 'The number of concurrent jobs is directly related to the number of cores available. Please refer to Restorepoint documentation to choose the right number.'

- **Full Transcript.** Select this option to enable or disable the ability to write the entire transcript file or to maximize size buffer. The default is set to False.
- **No Redact.** Select this option to enable or disable the ability to redact sensitive information from log messages, such as passwords. The default is set to False.
- **Clip Progress.** Number of characters to clip from the beginning and end of a progress message. The minimum value is 0 and the maximum value is 500. The default value is set to 0.
- **LDAP Nested Groups.** Select this option to enable or disable the use of nested LDAP groups. The default is set to False.
- **Max Concurrent Monitors.** Maximum number of rpmonitors that can be enabled. The minimum value is 50 and the maximum value is 300. The default value is set to 300.
- **Max Replication Buffer.** Maximum buffer size for jobs a replication worker can have. The minimum value is 15000 and the maximum value is 25000. The default value is set to 20000.
- **Max Jobs.** Maximum number of concurrent jobs that you can run. The minimum value is 50 and the maximum value is 150. The default value is set to 50.

Chapter

14

Labels

Overview

You can use Labels to filter and group devices. Labels can be created by users and confined to a specific domain. When you create a new device or edit an existing device, you can set Labels for that device.

Here is an example of real world label-usage:

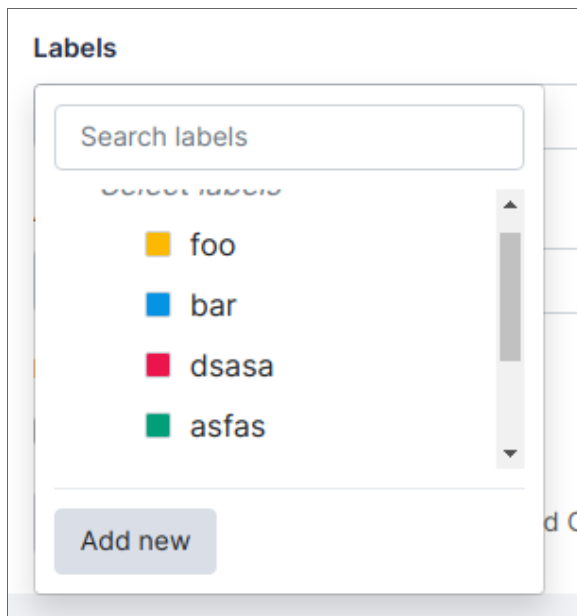
In an office, a user consistently works with a set of devices because these devices are in that office. A label can be assigned to these devices. Use the label "Office Name"; this "Office Name" label, when set, can be used to filter and view any devices in the user's Device Table that are relevant devices to the "Office Name" label.

Labels can be found and edited on:

- The **Device Details** tab when adding a device (Devices > Add) or editing a device (Devices > Select Device).
- The **Labels** page (Devices > Labels).

To add or edit a label from the **Device Details** tab:

1. Click your desired device from the Device Management page.
2. In the **Device Details** tab, click inside the **[Labels]** search field.
You can search labels and/or add labels by clicking **[Add new]**.



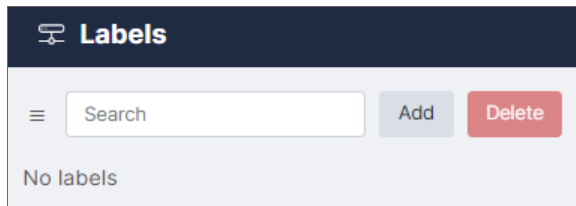
3. Enter your new label's **Name**, **Description**, **Colour**, and **Domain**.

A screenshot of a form titled "Add Label". The form contains four input fields: "Name" with the placeholder "Name", "Description" with the placeholder "Description", "Colour" with a green color picker, and "Domain" with a dropdown menu showing "Global". At the bottom of the form, there are two buttons: "Close" and "Save".

4. Click **[Save]**.

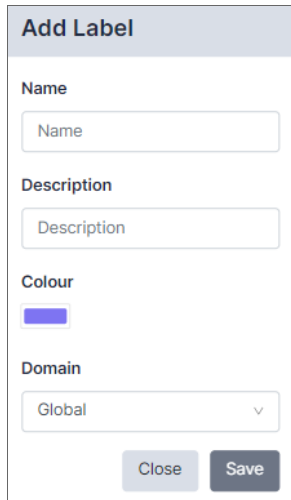
To add a label from the **Labels** page (Devices > Labels):

1. Click **[Add]**.



The image shows a 'Labels' management interface. It has a dark blue header with a label icon and the title 'Labels'. Below the header is a light gray area containing a search bar with the placeholder text 'Search', an 'Add' button, and a 'Delete' button. At the bottom of this area, it says 'No labels'.

2. Enter your new label's **Name**, **Description**, **Colour**, and **Domain**.



The image shows a 'Add Label' form. It has a light gray header with the title 'Add Label'. Below the header are four input fields: 'Name' (text input), 'Description' (text input), 'Colour' (color picker with a blue square), and 'Domain' (dropdown menu with 'Global' selected). At the bottom of the form are two buttons: 'Close' and 'Save'.

3. Click **[Save]**.

These label options are also described in [Adding a new user](#). For more information, see the [Developer Documentation](#).

Chapter

15

SAML

Overview

A “Single Sign On” (SSO) option is available via SAML authentication. You can configure SSO in the **[SAML]** tab (Administration > Auth Servers):

On the **[SAML]** tab there are two fieldsets:

1. Service Provider Settings
2. Identity Provider Settings

The screenshot displays the SAML configuration interface with two tabs: 'RADIUS' and 'SAML' (selected). The 'SAML' tab is divided into two sections: 'Service Provider Settings' and 'Identity Provider Settings'.

Service Provider Settings:

- ACS URL: `https://10.2.14.143/saml/auth`
- Entity ID: `https://10.2.14.143/saml/metadata`
- Groups Claim: `http://schemas.microsoft.com/ws/2008/06/identity/claims/groups`
- Email Claim: `http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailaddress`
- Given Name Claim: `http://schemas.xmlsoap.org/ws/2005/05/identity/claims/givenname`
- Surname Claim: `http://schemas.xmlsoap.org/ws/2005/05/identity/claims/surname`

Identity Provider Settings:

The 'IdP Metadata' field contains the following XML snippet:

```
<?xml version="1.0" encoding="utf-8"?><EntityDescriptor
ID="_57cf237b-34b1-451c-96d7-9738d586a23d"
entityID="https://sts.windows.net/f011bb64-8ef1-4fe3-88f4-
5dec8d7bdaba/"
xmlns="urn:oasis:names:tc:SAML:2.0:metadata"><Signature
xmlns="http://www.w3.org/2000/09/xmldsig#"><SignedInfo>
<CanonicalizationMethod
Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
<SignatureMethod
Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-
sha256" /><Reference URI="#_57cf237b-34b1-451c-96d7-
9738d586a23d"><Transforms><Transform
Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature" /><Transform
Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
```

To set up SAML take note of the following entries:

- **ACS URL**. Enter this URL value into the relevant field of your SAML IdP.
- **Entity ID**. Enter this URL value into the relevant field of your SAML IdP.

- **IdP Metadata.** Add the ACS URL and Entity ID to your SAML IdP to generate the IdP Metadata. Enter the IdP Metadata (usually XML) into the **IdP Metadata** field in the **Identity Provider Settings** window.
- **Groups Claim.** To use the custom SAML groups, enter the groups claim according to your XML provider schema. If this claim remains unfilled, new users will be created without roles.
- **Email Claim.** This field will populate the user's email address field on the **User** page.
- **Given Name Claim.** This field will populate the user's given (first name) name field on the **User** page.
- **Surname Claim.** This field will populate the user's surname (last name) field on the **User** page.

Click **[Save]** to store your input. The metadata is then uploaded to Restorepoint. For more information, see [SAML Authentication](#).

Now that SAML is setup, a new button will appear on the login page called "Login with SSO". You can click this button without entering values in the other fields and it will either:

- Redirect the user to their SAML IdP to login
- Log them in to Restorepoint if the user already has a valid SAML SSO session

SAML Groups

You can add, edit, or delete SAML Groups on the **Users** menu (Administration > Users).

Adding a SAML Group

To add a new SAML Group:

1. Navigate to the **Users** page and click the **[SAML Groups]** tab (Administration > Users).

Users

SAML Groups

LDAP Groups

Logged-in Users

≡

Add Group

Delete

Showing: 2

<input type="checkbox"/>	Name	Object ID	Members in Restorepoint	Roles
<input type="checkbox"/>	Digital Initiative Pu...	db075eb4-be07-458a-a4f0-222a0d60f0b8	1	Global: Admin
<input type="checkbox"/>	MSET	78084c87-f1b3-4838-a48f-4bda8dff46f8	1	Global: Admin

2. Click the **[Add Group]** button. The **Add SAML Group** dialog appears:

Add SAML Group

Name

ID

Roles and Domains

3. Enter the following information:

- **Name.** SAML Group name. You can set any name to identify this group. You must specify the Group name as this is information Restorepoint cannot access from the SAML provider.
- **ID.** Identifier of the SAML group. (e.g. Microsoft Entra ID uses the Object ID as the group identifier). The group identifier claim is set on <https://yourapp/ui/auth-servers/saml>.
- **Roles and Domains.** Multiple roles and domains can be assigned to the SAML Group using the menu options.

4. Click **[Submit]** to save your changes.

Editing an Existing SAML Group

To edit an existing SAML Group:

1. Navigate to the **Users** page and click the **[SAML Groups]** tab (**Administration>Users>SAML Group**).
2. Click on the SAML Group name that you want to edit. The **Edit SAML Group** dialog appears:

Edit SAML Group

Name

ID

Roles and Domains

3. Enter the following information:

- **Name.** SAML Group name.
- **ID.** Enter the identifier for your SAML Group.
- **Roles and Domains.** Multiple roles and domains can be assigned to the SAML Group using the menu options.

4. Click [**Submit**] to save your changes.

Editing an Existing SAML User

You can assign specific roles for each SAML user and see roles inherited from SAML groups. Roles assigned to SAML users remain intact even if the SAML group is changed or updated.

NOTE: This feature is currently only available for SAML users.

To edit an existing SAML user:

1. Navigate to the **Users** page (Administration > Users).
2. Click on the user you want to edit. The **Edit User** dialog appears:

Edit User

Details

Roles and Domains

SAML group roles

Admin

Global

User specific roles

View Only

Domain1

Remove

Add

3. Click on the **[Roles and Domains]** tab.
4. Click the **[Add]** button to assign a new role and domain to the user. You can add or remove as many user specific roles as needed.
5. Click **[Save]** to update your user profile.

Chapter

16

System Updates

Overview

System updates are managed centrally by Restorepoint from the **Appliance** tab (Administration > System Settings > Appliance). By default, the appliance checks and automatically installs any available software upgrades and updates, including:

- System software updates
- Device plug in updates
- License updates

Ensure that your firewall is configured correctly to allow system updates. For information on firewall configuration, see [Firewall Requirements](#).

Disabling Automatic Updates

Although Restorepoint strongly recommends that all updates are automatically applied, you can override this behavior and disable automatic version upgrades:

1. Navigate to the **Software Updates** pane (Administration > System Settings > Appliance).
2. Select the **Disable Automatic Version Upgrades** checkbox.
3. Click **[Save]**.

Minor software updates that do not change the user interface or modify any Restorepoint functions are automatically downloaded and applied, to override this behavior and disable automatic minor updates:

1. Navigate to the **Software Updates** pane (Administration > System Settings > Appliance).
2. Select the **Disable Automatic Minor Updates** checkbox.
3. Click **[Save]**.

Manual Updates

Use the **[Force Check]** button to manually check for updates. To force check for updates:

1. Navigate to the **Software Updates** pane (Administration > System Settings > Appliance).
2. Click **[Force Check]**.
3. A notification appears that an appliance is checking for an update and the task is added to the task bar.
4. If an update is available, an **[Update Now]** button displays. Click **[Update Now]**.
5. Once the update downloads, you are redirected to a **Service** page while Restorepoint verifies the update.
6. Once the update is verified and complete, you are redirected to the **Login** page.

If Restorepoint is deployed on an isolated network and cannot connect to the update server, you can also use the **Software Updates** pane to manually update the appliance offline. To update the appliance offline:

1. Navigate to the **Software Updates** pane (Administration > System Settings > Appliance).
2. Select the ***This appliance is not connected to the Internet*** checkbox.
3. A **[Manual Upgrade]** button displays. Click **[Manual Upgrade]**.
4. Instructions display on how to download an update package using a computer without an internet connection and upload it to the appliance. Follow these instructions to manually update your appliance.

<p>NOTE: When this option is enabled, all update and upgrade operations (including enabling software features or applying new license details) must be manually performed by the administrator.</p>
--

Chapter

17

Getting Help

Overview

Click **Help** to display Restorepoint documentation for your current page.

You can also click **Help > Help Index** to access the HTML userguide, download a PDF copy, or access the Plugin Guide (**Help > Plugin Guide**).

This chapter covers the following topics:

<i>Error Messages</i>	172
<i>Using the System Shell</i>	174
<i>Factory Reset</i>	175
<i>Restorepoint Plugins</i>	176
<i>Frequently Asked Questions</i>	177
<i>Contacting ScienceLogic Support</i>	177

Error Messages

If you experience an error, review the descriptions and solutions below.

Errors During Backup Operations

Error	Description	Solution
Connection timeout (Cause 1)	Restorepoint can't connect to the device using the specified protocol.	Check that the protocol is correct and that there is connectivity to the device (e.g., no firewall is blocking the required ports). If the device uses back-connections, also check that this is not blocked, and/or NAT is correctly configured on Restorepoint. Check Help > Plugin Guide to verify the connectivity requirements for this particular device.
Connection timeout (Cause 2)	The device is not sending the expected output to Restorepoint within the allocated time.	Check that you have selected the correct plugin and that the device firmware/operating system is supported by Restorepoint.
Connection failed: Device SSH key has changed	Restorepoint has detected that device's SSH key has changed	This error typically occurs because the device has been replaced. If the device has been replaced, edit the device and click [Clear Cache]
Timeout waiting for username prompt	Restorepoint can connect to the device but did not receive a username prompt.	Check that you are using the correct plug-in. If the device is not configured to prompt a username, leave the Username field empty in the device definition.
Timeout waiting for password prompt	Restorepoint can connect to the device but did not receive a password prompt.	Check that you are using the correct plug-in and that the device username and password are correct.
Timeout waiting for device prompt	Restorepoint can connect to the device but did not receive the device CLI prompt.	Check that you are using the correct plug-in and that the device username and password are correct.
Error creating backup	Restorepoint can connect to the device but is not able to create a backup on the device. This can be caused by a number of circumstances, usually a lack of available disk space.	Connect to the device manually from your PC or from the Restorepoint system shell and attempt to create a backup to determine the cause of the error.

Error	Description	Solution
Error transferring backup	Restorepoint can connect to the device and create a backup on the device but is not able to transfer it back. This is usually due to a firewall blocking a required port (e.g., TFTP) between Restorepoint and the device. If your device has a large backup file (several Mbytes) and you are backing up over a WAN, this error message can be caused by a timeout during file transfer.	Check the Plugin Guide (Help > Plugin Guide) and ensure that the TCP or UDP ports required by your device are not blocked by any firewalls.
Incorrect checksum after transfer	Wherever possible, Restorepoint calculates an MD5 checksum of the backup file before and after transfer to ensure the integrity of the file. If the checksum changes, this indicates that the file got corrupted in transit.	Retry the backup. An isolated error of this type may indicate a problem on the network (e.g., faulty switches or cables). A reoccurring error may be caused by a large backup file and/or a slow network, where only part of the file is transferred. Try and reduce the size of the backup if possible; use SCP or FTP instead of TFTP wherever possible.
Wrong parameter found at . ^ . position		Check that you have specified the correct unit when backing up a 3Com 5500 switch.
Error backing up the device/Could not hold conversation with device	Although a failure will normally generate a specific error message, you may occasionally encounter a generic error.	Check that the device credentials are correct, that you are using the correct device plug-in, and that the required TCP/UDP traffic is allowed between Restorepoint and the device. If you are still unsuccessful, contact Technical Support.

Other Messages

It is possible to experience messages that are not included above. The following errors message may also result:

Error	Description	Solution
Cryptfs not mounted	The encrypted storage was not mounted correctly after a reboot. This may happen if the appliance is powered off without a clean shutdown.	Login with your username, password, and encryption password. Restorepoint will attempt to check and mount the encrypted storage. If you keep receiving this message every few minutes, contact Technical Support.
Couldn't connect to update server	Restorepoint needs to communicate to the update server (Check the following:

Error	Description	Solution
	support.restorepoint.com) to check whether new software or device plug-ins are available.	<ol style="list-style-type: none"> 1. Check that the DNS servers configured in the System page are correct and are working properly. 2. Check that a firewall is not blocking HTTPS traffic from Restorepoint to support.restorepoint.com. 3. If Restorepoint uses a proxy to access the internet, check that the correct proxy username and password are being used and that the password for the proxy user account has not expired. 4. If Restorepoint is located on a network without internet access, disable automatic updates by selecting This appliance is not connected to the Internet in the System page.
Connection failed: Device SSH key has changed	Restorepoint has detected that device's SSH key has changed	This error typically occurs because the device has been replaced. If the device has been replaced, edit the device and click [Clear Cache]
License expired	You've either received a license has expired message or can't obtain software updates.	Contact ScienceLogic Support.

Using the System Shell

The system shell provides some useful command line network tools that can be used to troubleshoot connectivity problems. To start the system shell, log in to the Restorepoint console using an *admin* account and select **System Shell**.

```
RESTOREPOINT CONSOLE

1) IP address configuration
2) Static routes
3) System shell
4) Remote Support
5) Shutdown
6) Reboot
7) Restart Restorepoint
8) Factory reset
9) Exit

System Shell - type 'exit' or CTRL+D to return to the menu

shell> _
```

Ensure that you are familiar with these tools before using the system shell. The available commands are:

- **help**. Lists the available commands.
- **ping**. Sends an ICMP Echo Request packet to a network host.
- **traceroute**. Displays the route packets take to a network host.
- **nslookup**. Query a DNS name server.
- **telnet**. Connect to a host using the TELNET protocol.
- **ssh**. Connect to a host using the SSH protocol.
- **tcpdump**. Displays the network traffic.
- **exit**. Returns you to the main menu.

Factory Reset

If you need to reset your Restorepoint appliance to factory settings, you can follow the factory reset procedure. Note that the factory reset will permanently erase **ALL** of the information stored on the appliance, not just the system settings. In particular:

- The encryption key will be deleted.
- All the device data (configuration and backups) will be erased.
- All the administrators (except *admin*) will be deleted.
- All plugins will be deleted.
- System settings will be reset to their default values.
- The password for the *admin* user will be reset to *admin*.

Note : To reset the appliance, you must have the admin password. If you need to reset Restorepoint and you do not know the admin password, contact ScienceLogic Support.

To start the factory reset procedure:

1. Log in as *admin* on the Restorepoint console.
2. Choose the **Factory reset** option.
3. Confirm that you understand and accept that your data will be lost and enter Yes, otherwise enter No to abort.

```
RESTOREPOINT CONSOLE

1) IP address configuration
2) Static routes
3) System shell
4) Remote Support
5) Shutdown
6) Reboot
7) Restart Restorepoint
8) Factory reset
9) Exit

Factory Reset

Are you sure you want to reset the system to factory settings?

*** ALL DATA WILL BE LOST ***

and the appliance IP address will be reset to 192.168.1.1.

Please enter Yes or No: Yes_
```

The system will then erase the database and reset the system settings to their default values. This can take some time, depending on how much data is stored on the appliance. Do not shut down or power off the system before the reset has completed or you may damage the appliance. Restorepoint will automatically shut down at the end of the procedure.

Restorepoint Plugins

All Restorepoint Plugins that are currently supported can be found on the ScienceLogic Support Plugins page. For more information on Plugins to enable your Restorepoint appliance, see [Restorepoint Plugins](#). For additional information, see the Knowledge Base article <https://support.sciencelogic.com/s/article/14984>.

Frequently Asked Questions

Error	Solution
I have forgotten my encryption password.	See Connecting to Restorepoint after a reboot and Password Reset for more information.
I cannot connect to the web interface.	Check that you have network connectivity. The power and network LEDs on the front panel of your Restorepoint appliance should be lit. If you are in an environment using a proxy server, check that you are connecting to the device on port 443, or that your browser is set to bypass connection to the device.
I cannot add a device.	Check that the model and firmware version of the device you are adding is on the list of supported devices. The list of supported devices can be found in the Plugin Guide (Help > Plugin Guide).
I do not get notifications.	Check that the task is not paused in the Info > Schedule page.
Scheduled tasks are not running.	Check that the task is not paused in the Info > Schedule page.
I have a device that is not supported but would like to see support for it.	Contact Technical Support and let us know the vendor, product, model, and version of the device. Wherever possible, Restorepoint will endeavor to add support for your device.
I still need assistance and require remote support.	If you are having problems and need a support engineer from Restorepoint to help troubleshoot the issue, click the Remote Support option on the Restorepoint appliance to create an SSH tunnel to our support server which allows a support engineer to assist you. Alternatively, our support team can set up a web session with you (WebEx, join.me, GoToMeeting, or similar).

Contacting ScienceLogic Support

Restorepoint Technical Support is now linked to ScienceLogic Support. If you need support, contact the [ScienceLogic Support Portal](#). From there, you can search knowledge base articles and other resources, or open a case with ScienceLogic Support. Access to the portal requires registration and a valid software license.

Chapter

18

Copyright and Contact Information

Overview

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Other

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In the U.S. and other jurisdictions, trademark owners have a duty to police the use of their marks. Therefore, if you become aware of any improper use of ScienceLogic Trademarks, including infringement or counterfeiting by third parties, report them to Science Logic's legal department immediately. Report as much detail as possible about the misuse, including the name of the party, contact information, and copies or photographs of the potential misuse to: legal@sciencelogic.com. For more information, see <https://sciencelogic.com/company/legal>.



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