



Cristie Virtual Appliance

BMR Backup and Recovery Guide

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1 Introduction

The Cristie Virtual Appliance (VA) provides central management, deployment and licensing of Cristie's range of backup, recovery and replication software. It is provided free of charge to licensed users of Cristie software products. The Cristie VA is a Linux-based virtual machine that manages Windows, Linux, AIX, Power and Solaris installations of Cristie software products.

This document discusses how to configure and invoke the Cristie VA BMR Backup and Recovery feature. Internally backup functionality is implemented using the **Cristie CBMR** product. Recovery functionality is implemented using the **Cristie ABMR, CBMR, CoBMR, NBMR, RBMR or TBMR** products.

The following discussion assumes your Cristie VA is already deployed and has the latest updates.

This documentation relates to version 4.8.1 of the Cristie VA product.

1.1 Web Browser Support

Once installed Cristie recommends using the VA in conjunction with Google Chrome. However, Firefox, Opera or Microsoft Edge can also be used as alternatives.

Note: Microsoft Internet Explorer is not supported.

The browser Window should be set to a minimum screen resolution of 1366 x 768 pixels.

1.2 OS Support

OS support for **Backup and Recovery** is summarised in the [Cristie Backup/Recovery OS Support Matrix](#). Currently Windows and Linux are fully supported for backup, recovery and monitoring, whereas Solaris and AIX are only supported for backup and recovery monitoring.



2 Prerequisites

Before beginning a BMR Backup or Recovery operation the Cristie VA must be configured correctly. These are the configuration steps needed.

Note: Cristie VA cannot control backups using 3rd party backup products - just Cristie's own backup product CBMR. However recoveries are supported from all Cristie BMR backup products including those that use 3rd party backup products.

2.1 Enable the Backup and Recovery Feature

On the Cristie VA Dashboard, navigate to **Options**  and then select **Feature settings**. This will show a list of enabled Features. Please ensure that one or more of the ABMR, CBMR, CoBMR, NBMR, RBMR or TBMR Features is enabled.

At the moment only CBMR scheduled **backups** can be controlled from the Cristie VA. However scheduled **test recoveries** can be configured for any of the BMR products as long as their respective host backups have the appropriate **BMR Agent** installed. Deployment of the BMR Agents is controlled by **Estate Management** in the Cristie VA.

Only CBMR is required for Cristie Backups. Backups for all the other products must be configured manually on their respective hosts or servers (e.g. IBM Spectrum Protect).

Note: It is not necessary to add the CBMR Feature to perform Recoveries for any of the other BMR products.

Feature Settings

Features must be enabled before being used, if you have an internet connected VA we recommend using the **Online** option. This will automatically download and install the latest feature packages onto your Appliance (You will automatically be logged out to apply the new features). Users without an internet connection should select the **Offline** option to upload and enable features. If you do not have any feature bundles [click here](#).

Online Offline

- ABMR** Enables recovery & simulation of EMC Avamar backups. [more info](#)
- CBMR** Enables Protection of physical (or virtual) machines, recovery & simulation of Cristie CBMR backups. [more info](#)
- CoBMR** Enables recovery & simulation of Cohesity backups. [more info](#)
- NBMR** Enables recovery & simulation of EMC Networker backups. [more info](#)
- Replicate** Enables replication, and migration of live machines. [more info](#)
- RBMR** Enables recovery & simulation of Rubrik backups. [more info](#)
- TBMR** Enables recovery & simulation of IBM TSM (Spectrum Protect) backups. [more info](#)
- Protect for VMs** Enables vSphere virtual machine backup and recovery. [more info](#)

Note: The Cristie VA Configuration Guide describes how to add Features to the Cristie VA.



2.2 Add Licenses

You must ensure your Cristie VA has sufficient **BMR Licenses**. These licenses are consumed every time a new BMR product agent is deployed to a host via **Estate Management**.



To check this, click **Options** on the Cristie VA Dashboard and then select **Licensing settings**. You will then see all the available **BMR** licenses.

Licensing Settings

Import Licenses Return Licenses

Licenses (active features only)

Signature Required by Cristie to manually generate a license D4DBCF5V-KYCJT5YW-BUA3B4T2-9QFYCYF

Contract	Product	Usage	Expiry	
6	ABMR	41 of 41 remaining	31 Dec 2024	more details
23	CBMR <small>Rental</small>	44 of 44 remaining	30 Jun 2025	more details
32	CBMR	0 of 0 remaining	30 Nov 2022	more details
1	CBMR	62 of 65 remaining	31 Dec 2024	more details
33	CoBMR	30 of 32 remaining	31 Dec 2024	more details
4	NBMR	33 of 33 remaining	31 Dec 2024	more details
35	RBMR	49 of 50 remaining	31 Dec 2024	more details
8	TBMR	10 of 10 remaining	31 Dec 2022	more details
3	TBMR	40 of 41 remaining	31 Dec 2024	more details
18	CloneManager <small>Rental</small>	4 clone tokens & unlimited sync tokens remaining	31 Dec 2024	
19	Protect For VMs <small>Rental</small>	4 of 20 hosts protected	31 Dec 2024	manage hosts
0 <small>*Trial</small>	Protect For VMs	0 of 10 hosts protected	31 Dec 2023	manage hosts
62	Virtual Appliance	11 OS upgrade tokens & 10 staging upgrade tokens remaining	03 Sept 2030	

Alternatively it is also possible to obtain **Rental** licenses. These allow backups/recoveries for a host to be made for a fixed time period (usually 1-3 years). Note the time period begins from the purchase date.

Note: Licenses shown in red have expired.

2.3 Deploy Backup Agent

Before running a backup operation (either via CBMR or a supported 3rd party backup product), the appropriate **BMR Agent** must be deployed to the host or hosts to be backed up and subsequently recovered.

To do this, click **Estate Management** on the Cristie VA Dashboard and then click **Deploy Software**.



Deploy Software

Enter the IP address(es) and credentials of the machine(s) you wish to add. You can change the port & installation path (Windows only) in the advanced section.

Trial: You have 5 trial licenses remaining

Product: CBMR

Schedule Deployment: Schedule the deployment for a later time

Bulk Credentials:

	Hostname / IP	Username	Password / SSH Key Passphrase	SSH Key
<input type="checkbox"/>	<input style="width: 100%;" type="text" value="10.10.11.40"/>	<input style="width: 100%;" type="text" value="Administrator"/>	<input style="width: 100%;" type="password" value="*****"/>	Select
Add				

	Contract Number	Physical Activations Available	Virtual Activations Available	Desktop Activations Available
<input checked="" type="checkbox"/>	23	2	40	2
<input type="checkbox"/>	32	0	0	0

Import from CSV

Cancel Confirm

In the above example the product is set to **CBMR**. Add the **Hostname** or **IP address** of the host to deploy the agent to. Add the **host access credentials**.

Note: For Linux, Solaris and AIX systems, a ccess credentials do not have to be 'root'. Deployment uses 'sudo' when root credentials are not supplied. Obviously the credentials used must allow 'sudo' to be used.

Also select the **Contract Number** from which the product activation token will be decremented.

Click the Add button to deploy the agent to multiple hosts in one operation.

Finally click Confirm to begin the agent deployment. While the deployment runs you will see this event:

Alerts						
Event	Source	Status	Details	Start Time	End Time	User
Software Deployment	VA → 10.10.11.40	In Progress	Deploying CBMR to 10.10.11.40	26 Oct 2023, 10:55:50		Administrator

When the deployment completes you will see this event:

Alerts						
Event	Source	Status	Details	Start Time	End Time	User
Software Deployment	VA → 10.10.11.40	Completed	Successfully deployed CBMR to 10.10.11.40	26 Oct 2023, 11:10:06	26 Oct 2023, 11:11:30	Administrator

At this point your host is ready for backup.

Deployment of all other BMR Products is identical to the process described above. Just select one of ABMR, CoBMR, NBMR, RBMR or TBMR instead of CBMR.



Note: The host may be Windows, Linux or Solaris based.

2.3.1 Bulk Credentials

Where you wish to deploy the agent to multiple machines and all the machines use the same access credentials (for example the Domain Administrator on Windows) you can avoid entering the same credentials separately for every machine with **Bulk Credentials**. To do this run the same menu sequence as before to reach the Deploy Software dialogue and click **Bulk Credentials:**

The dialogue will then allow you to set a single common **Username/Password** to be used for all:

Hostname / IP	Username	Password
<input type="checkbox"/> 10.10.11.100	Software\Administrator	.....
<input type="checkbox"/> 10.10.11.101	Software\Administrator	.....
<input type="checkbox"/> 10.10.11.102	Software\Administrator	.....
<input type="checkbox"/> 10.10.11.103	Software\Administrator	.....

All the selected hosts will then be displayed with the bulk credentials pre-filled.

Note: For Linux, Solaris and AIX systems, a ccess credentials do not have to be 'root'. Deployment uses 'sudo' when root credentials are not supplied. Obviously the credentials used must allow 'sudo' to be used.

2.3.2 Import from CSV

Rather than setup each machine target manually using the **Deploy Software** dialogue it is possible to import a list of machines previously prepared offline.

The list of machines to deploy to must be created in CSV format and must follow the format below:

Hostname/IP, Port Number, Username, Password

An example of a CSV file is as follows:



```
10.10.30.2,22,root,p@ssw0rd!
10.10.30.3,5986,Administrator,p@ssw0rd
windows-test,5986,Domain\User,p@ssw0rd
```

Note: For Linux, Solaris and AIX systems, a access credentials do not have to be 'root'. Deployment uses 'sudo' when root credentials are not supplied. Obviously the credentials used must allow 'sudo' to be used.

To import the file first click **Import from CSV** on the Deploy Software dialogue. This will display a browser dialogue allowing you to locate your CSV file. The contents will be read and the hosts displayed in the dialogue as shown.

Deploy Software ✕

Enter the IP address(es) and credentials of the machine(s) you wish to add. You can change the port & installation path (Windows only) in the advanced ⚙️ section.

Trial: You have 5 trial licenses remaining

Product: CBMR ?

Bulk Credentials: ?

	Hostname / IP	Username	Password
<input type="checkbox"/> ?	<input type="text" value="10.10.30.2"/>	<input type="text" value="root"/>	<input type="password" value="....."/>
<input type="checkbox"/> ?	<input type="text" value="10.10.30.3"/>	<input type="text" value="Administrator"/>	<input type="password" value="....."/>
<input type="checkbox"/> ?	<input type="text" value="windows-test"/>	<input type="text" value="Domain\User"/>	<input type="password" value="....."/>

Add

Contract Number	Physical Activations Available	Virtual Activations Available
<input type="checkbox"/> 1	2	17

Import from CSV ? Cancel Confirm

Note: After importing a CSV file the dialogue may take a while to populate.



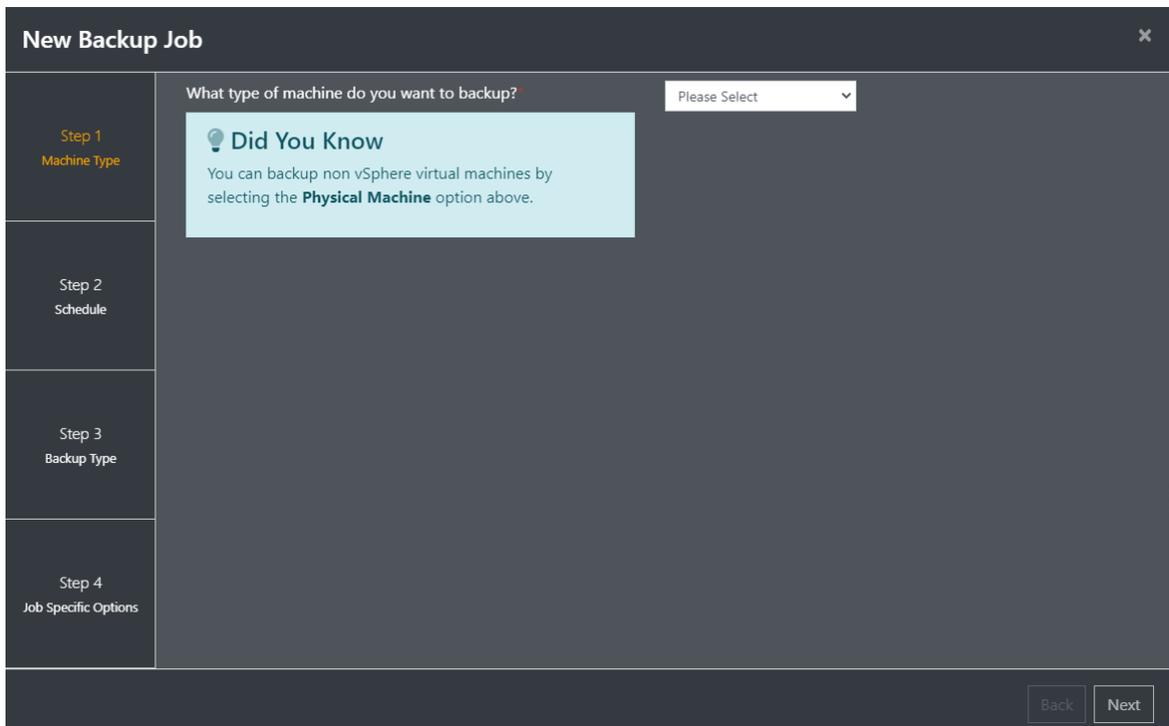
3 Backup

Cristie backup is provided by the **CBMR** product on all supported platforms. Backups are available in 2 forms - a network share file backup in VTD format (no incremental support) or a network share backup in **targz** format (incremental supported). The latter is supported in **Linux, Solaris** and **AIX** only.

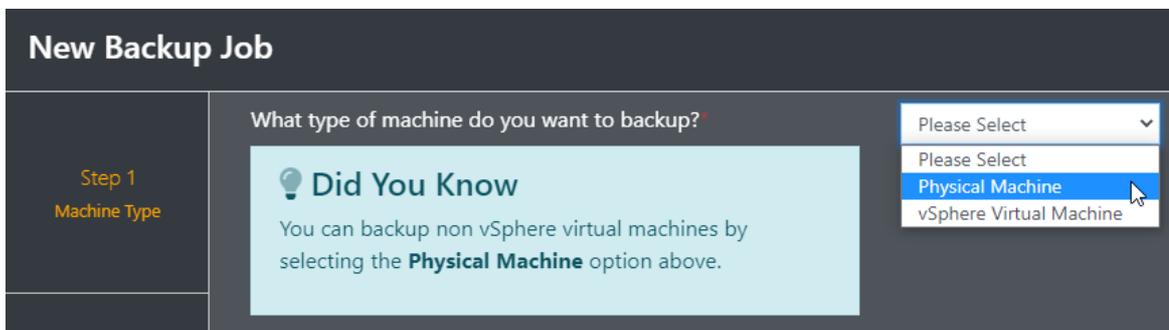
3.1 Create a Backup Job

To control a Backup you must first create a **Backup Job** and then add one or more **Backup Hosts** to the job. The hosts should already have **CBMR Agents** installed from **Estate Management**.

On the Cristie VA Dashboard, navigate to **Backup**  and then select **New Job**. You will then see this dialogue.



You will then be taken through a wizard sequence to define the **Physical Machine** for BMR backups. So select **Physical Machine** from the drop-down machine type:



Note the **Physical Machine** machine type also includes any VM host running on a Hypervisor reachable by the Cristie VA **Discovery Settings**. The target VM could also be running in one of the



supported clouds.

Please note the warning displayed when you choose this option.

i Before you begin

Physical machine jobs require an agent to be installed on each machine. Before this can be done you will need to ensure you have the following

Machine address/hostname

Machine username & password

WinRM configured for Windows machines. For more information [click here](#)

SSH enabled for Linux/AIX/Solaris machines

Firewall configured for communication. For more information [click here](#)

For further information click on [click here](#) where provided.

Click **Next** to continue to **Step 2** in the wizard.

Note: the **Back** button can be used at any point in the wizard to return to the previous step.

New Backup Job

Step 1
Backup Type

Step 2
Schedule

Step 3
Backup Type

Step 4
Include & Exclude List

Job Name: *

Frequency: Daily

Every: 1 day(s)

Starting

On: 26 Oct 2023

At: 11 : 47

Back Next

Give the new job a unique **Name**.

Specify the backup **Frequency** and the **Interval**. The frequency/interval can be set as summarised in the table below.

Frequency	Description
Once	Backup runs once only at the specified date/time
Hourly	Backups run every user specified number of hours at a selected time
Daily	Backups run every user selected number of days at a selected time
Weekly	Backups run on specific user selected day(s) of the week (Monday/ Tuesday etc.) at a selected time
Monthly	Backups run only on a specified day of the month at a selected time

You may also specify when the first backup run will occur. This first backup will always be a full backup.

New Backup Job

Step 1
Machine Type

Step 2
Schedule

Step 3
Backup Type

Step 4
Include & Exclude List

Job Name: NP-CBMR-Backups

Frequency: Daily

Every: 1 day(s)

Starting On: 26 Oct 2023

Starting At: 11 : 30

Back Next

Click **Next** to move on to **Step 3** where the **Backup Type** can be selected.



The screenshot shows the 'New Backup Job' configuration interface. On the left sidebar, the steps are: Step 1 (Backup Type), Step 2 (Schedule), Step 3 (Backup Type), and Step 4 (Include & Exclude List). The main configuration area includes: 'Backup Type' dropdown set to 'Please Select'; 'Backup Retention' input field set to '5'; and 'Periodic Full' slider positioned towards 'Faster Restore Time'. 'Back' and 'Next' buttons are located at the bottom right of the window.

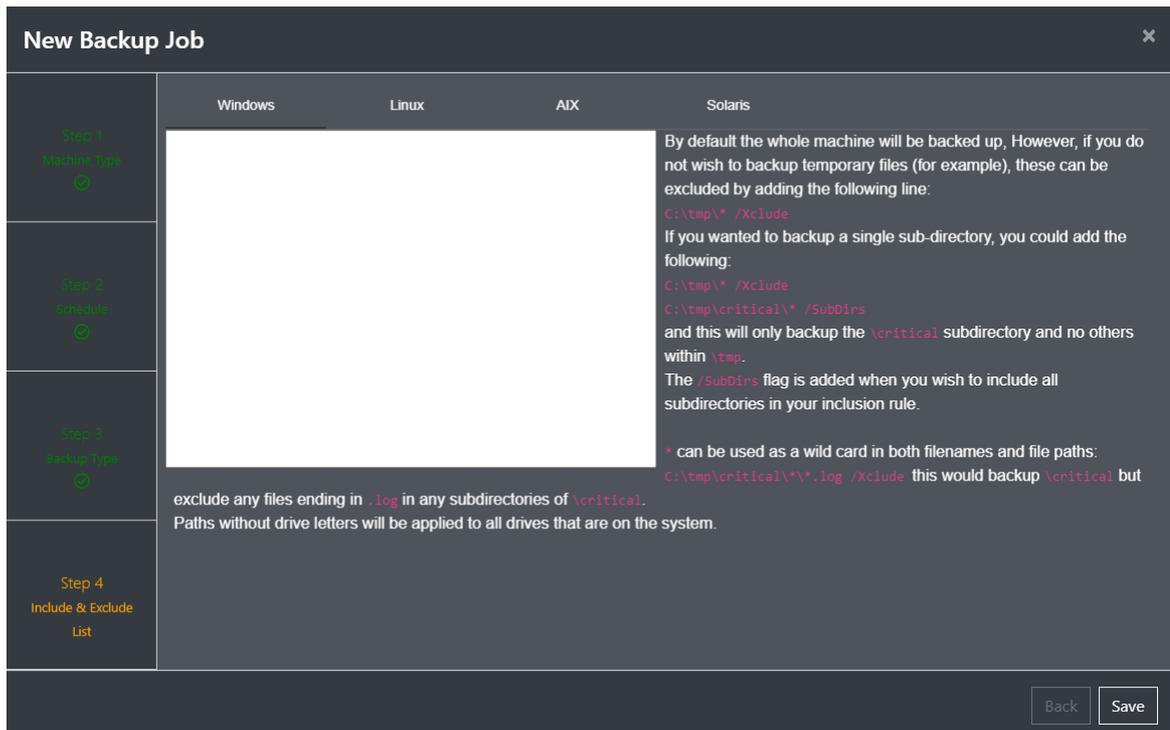
From the **Backup Type** drop-down list select **Full** or **Incremental**. When the backup target is a VTD file on a network share, Full backups are always made regardless of this setting.

Backup Retention specifies the number of historical backups to be retained. The larger the number the more space the backups will occupy, but it will also provide you with more versions to restore in case of machine failure. In particular this is important should you find the latest stored backup is not the version you require.

Periodic Full allows you to specify how frequently a Full backup is made. Move the adjuster to the left to reduce restore time (more Full backups). Move it to the right to reduce the backup storage required (fewer Full backups).

Click  to move on to **Step 4** where files can be excluded from the backup. Note the format of the file exclusions varies according to platform type (Windows, Linux, AIX and Solaris). Please refer to the **Platform** tab for an on-screen discussion of the file/directory format for that platform.





This is the last Step in the wizard sequence. Now click  to create the new job.

3.2 Add a Host to a Job

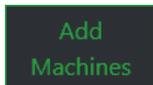
With a **Backup** job in place you can now add the host or hosts to the job. The required host obviously needs to be running and have the BMR agent pre-installed.

Note: The hosts can be a mix of any of the supported platforms.

SMB support must be installed for Linux/AIX/Solaris systems if SMB backup storage is used as it isn't part of the core OS. NFS support is however.

To add a host, navigate to **Backup**  and then select the job.





Click **Add Machines**. This will bring up a dialogue where you can select the host to be added. Click the **Hostname** field and then the host from the drop-down list.

Note: Only hosts configured with the CBMR agent will be included in the drop-down list.

The **Port** field is normally set to 22 to access SSH on Linux targets or 5905 for WinRM on Windows targets. For Linux, Solaris and AIX hosts please change the port if this differs from your configuration. It is not possible to change the port for Windows hosts.

After selecting the host you will now be presented with this dialogue:



Hostname / IP	Port	Username	Password	Storage
<input type="checkbox"/> NP-Win2019-Data	5905	Administrator	.....	Please Select

The host access credentials (the **Password** can be changed here) are pre-filled.

You must now select the **Storage** location for the backup. If you click in the Storage field you will see the options.

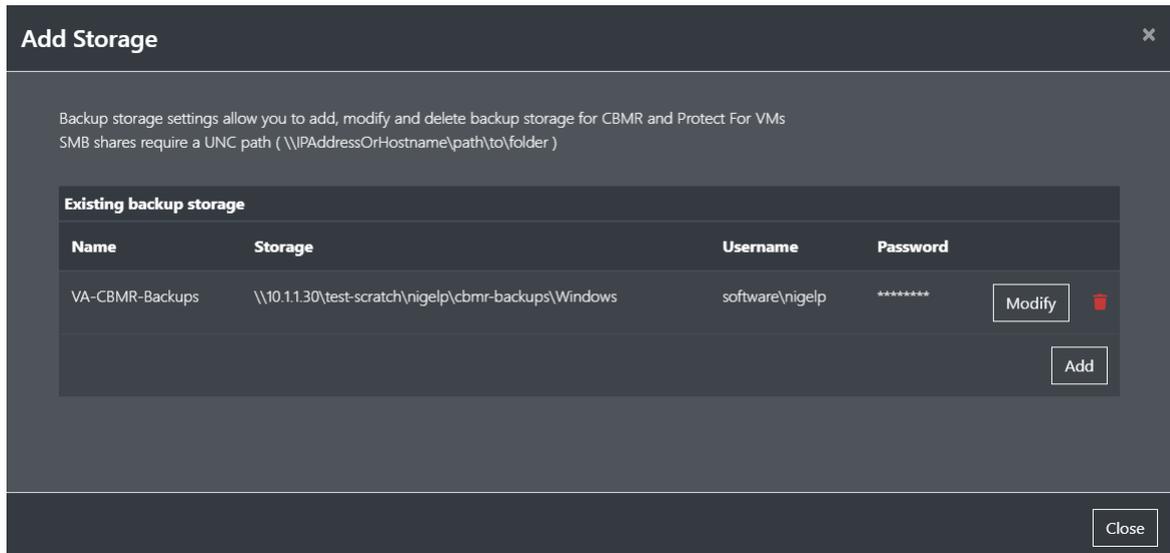
- New Storage Location
- Please Select
- CBMR-Linux-SMB
- CBMR-Linux-NFS
- CBMR-Linux-SMB1
- CBMR-Windows-SMB
- New Storage Location

You can select an existing Storage Location or create a new one. In this example a new Location is being configured.

Name	Storage	Username	Password
VA-CBMR-Backups	\\10.1.1.30\test-scratch\nigelp\	software\nigelp	.....



Click **Save** to add this location. One created you can **Modify** it as required.

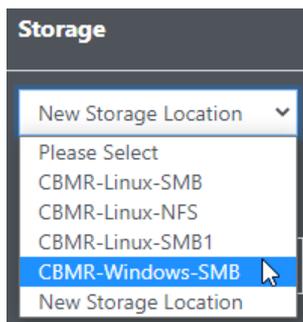


The storage location can be defined in either SMB or NFS format. Use the following format to specify the different formats:

- **SMB example path:** \\10.1.1.30\path\to\folder
- **NFS example path:** 10.1.1.30:/path/to/folder

Note: only the SMB format is supported for Windows backups.

Click **Close** to continue. You can now select the newly created location from the Storage drop-down:



Click **Add** to add another machine or **Confirm** to continue and save the Backup setup for the host.

3.2.1 Bulk Credentials

Where you wish to add multiple machines to a job and all the machines use the same access credentials (for example the Domain Administrator on Windows) you can avoid entering the same credentials separately for every machine with **Bulk Credentials**. To do this run the same menu sequence as before to reach the Add Machines to Job dialogue and click **Bulk Credentials:**

Hostname / IP	Port	Username	Password	Storage
<input type="checkbox"/> np-centos8	22	Software\Administrator	.....	Please Select
<input type="checkbox"/> NP-Win2019-Data	5905	Software\Administrator	.....	Please Select

All the selected hosts will then be displayed with the bulk credentials pre-filled.

3.3 Run Backups

With the Backup job created and at least one machine added to the job it will continue to backup indefinitely until either manually booted, the job is suspended or the job or machine is deleted.

It is possible to add multiple machines to the same job. The machines in the job do not need to be the same platform type. Here is an example with 1 Windows machine and 1 Linux machine.

Jobs	Machines
NP-CBMR-Backups Completed	NP-Win2019 Completed
	np-rhel83-1 Completed

There is no constraint on how many machines can be added to a job. Cristie suggests grouping machines in the same job where they need to be controlled together.

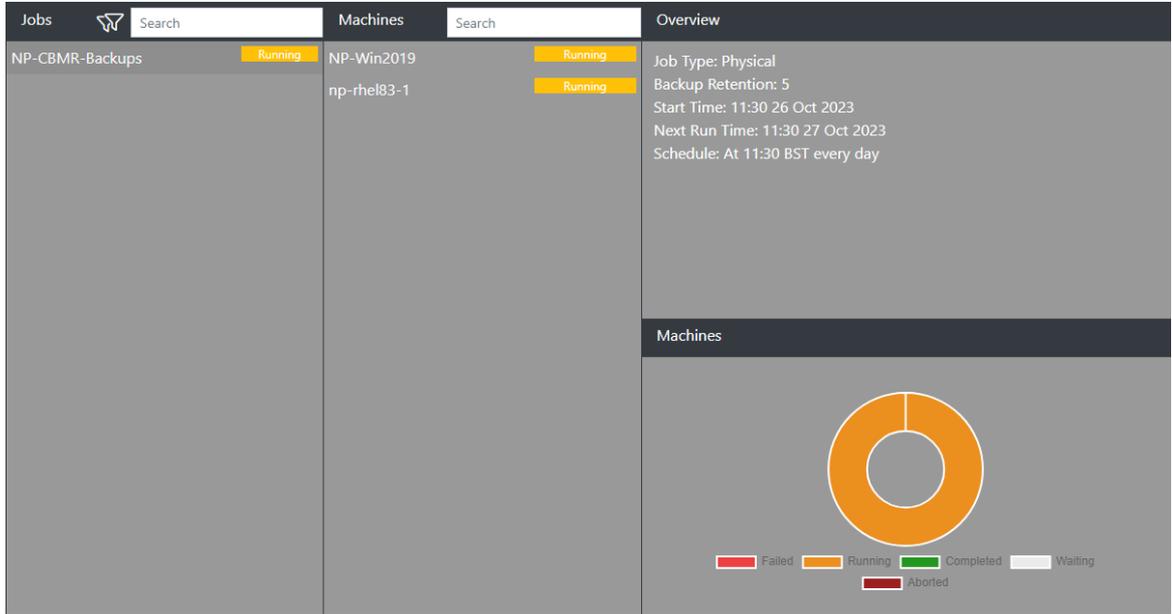
These are the job/machine icons you will see in the Backup section and their meanings.



 - job or machine suspended.

3.3.1 Normal Operation

This is an example of backups running.

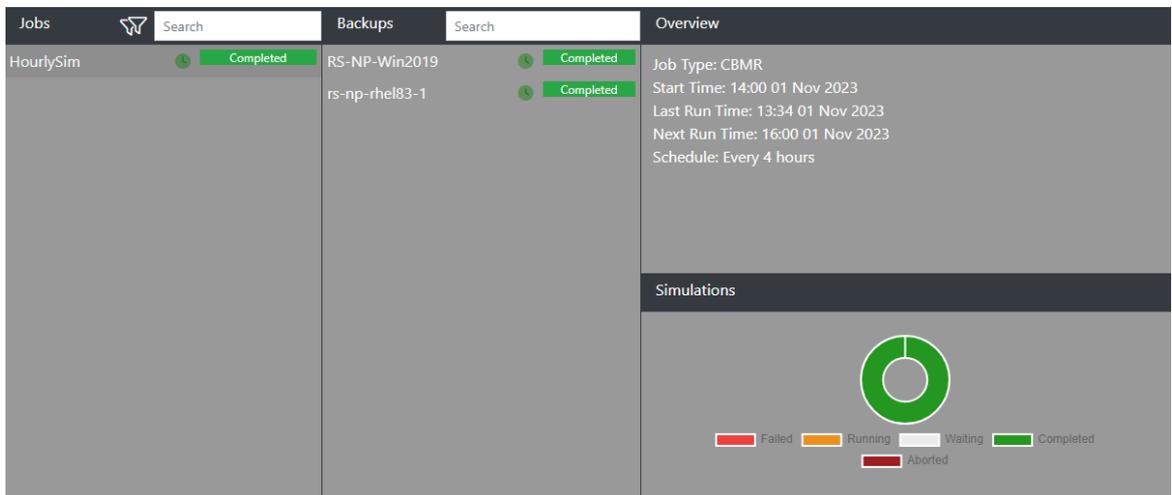


The screenshot shows the backup management interface with three main sections: Jobs, Machines, and Overview. The Jobs section shows 'NP-CBMR-Backups' with a 'Running' status. The Machines section shows 'NP-Win2019' and 'np-rhel83-1', both with 'Running' status. The Overview section displays job details: Job Type: Physical, Backup Retention: 5, Start Time: 11:30 26 Oct 2023, Next Run Time: 11:30 27 Oct 2023, and Schedule: At 11:30 BST every day. Below the Overview section is a donut chart showing the progress of machines, with a legend indicating Failed (red), Running (orange), Completed (green), Aborted (dark red), and Waiting (white).

You will also see the Alerts updated with the job progress:

Event	Source	Status	Details	Start Time	End Time	User
 CBMR Backup	NP-Win2019	In Progress	Backup in progress: 12%	26 Oct 2023, 12:00:34		Administrator
 CBMR Backup	np-rhel83-1	In Progress	Backup in progress: 50%	26 Oct 2023, 12:00:34		Administrator

The machines in the job will backup independently of each other and so will progress at different rates and finish at different times. When the backups are complete you will see this:



The screenshot shows the backup management interface with three main sections: Jobs, Backups, and Overview. The Jobs section shows 'HourlySim' with a 'Completed' status. The Backups section shows 'RS-NP-Win2019' and 'rs-np-rhel83-1', both with 'Completed' status. The Overview section displays job details: Job Type: CBMR, Start Time: 14:00 01 Nov 2023, Last Run Time: 13:34 01 Nov 2023, Next Run Time: 16:00 01 Nov 2023, and Schedule: Every 4 hours. Below the Overview section is a donut chart showing the progress of simulations, with a legend indicating Failed (red), Running (orange), Waiting (white), Completed (green), and Aborted (dark red).

The **Next Run Time** will now show an updated value on completion for the next run.



3.3.1.1 Job Overview

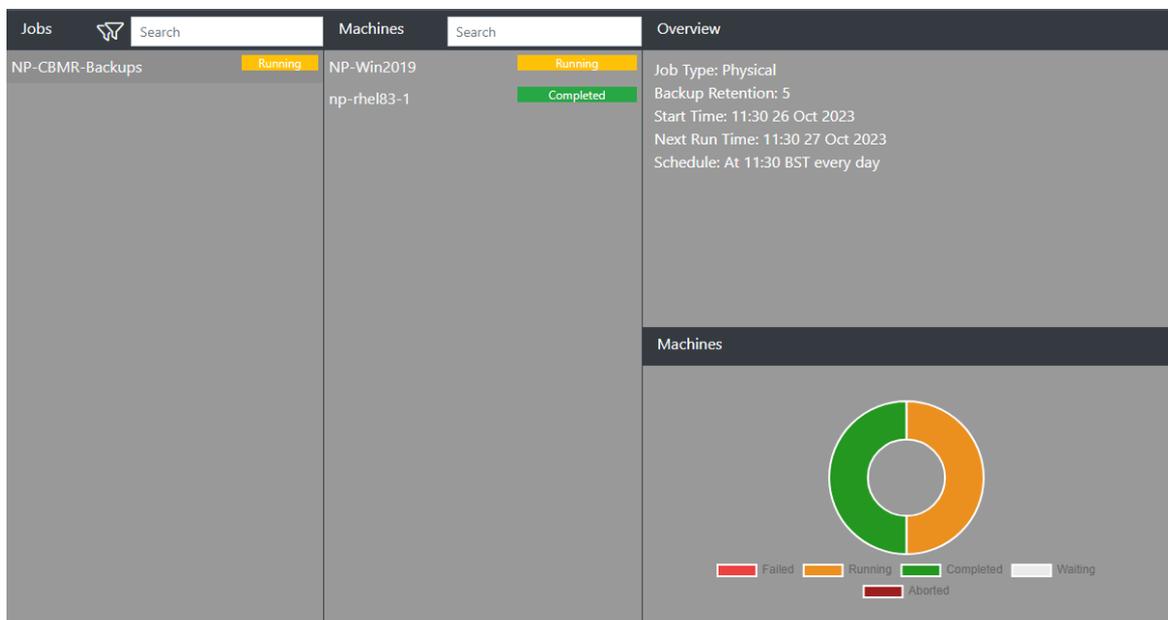
Certain job backup statistics will be shown in the **Overview** section for a job. Click on the job of interest (not a machine). You will then see something like this:

Overview

Job Type: CBMR
Start Time: 14:00 01 Nov 2023
Last Run Time: 13:34 01 Nov 2023
Next Run Time: 16:00 01 Nov 2023
Schedule: Every 4 hours

The information shown is self-explanatory.

In the machines section for the job, you will be provided with a small pie-chart. This shows the break down of machines in the job and their current state.



In the example shown the chart shows the state for the 2 machines in the job. One is **Running** and the other is **Complete**.



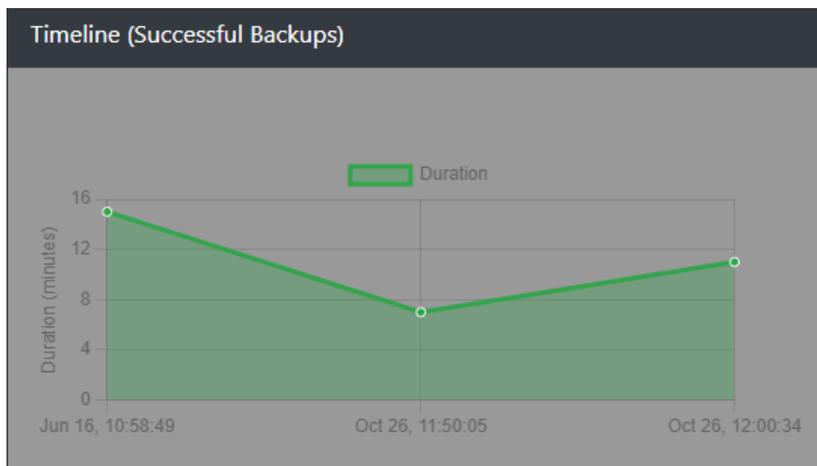
3.3.1.2 Machine Overview

Certain machine backup statistics will be shown in the **Overview** section for a machine in a job. Click on the machine of interest (not the job). You will then see something like this:

Overview
Hostname: np-rhel83-1
IP Address: 10.10.76.21
Username: root
Hypervisor Type: vSphere
Backup Progress: 100%
Backup Status: Backup finished
Product: CBMR - 9.5.2
License Type: Rental
License Expires: 30 Jun 2025

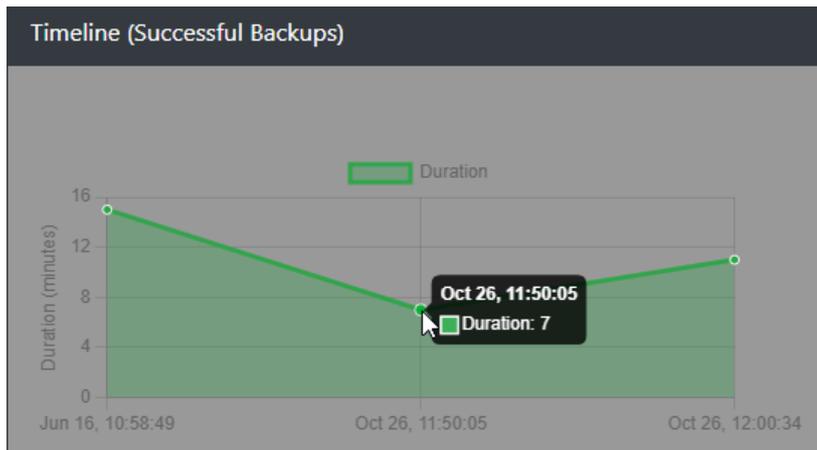
The information shown is self-explanatory.

In the machines section, when the machine has replicated a few times, you will be provided with a small graphical summary display of the duration of each backup (in green). Note that for Linux/Solaris/AIX the initial run, which is a full clone, will always take longer than subsequent incremental backups.



You can click on any of the Backup data points in the graph for further information on the duration of the backup.





3.3.2 Modify

This option allows certain settings for the Backup job or any of its associated machines to be changed.

3.3.2.1 Job Settings

To modify a whole job (note backups for all machines in the job will be affected in this case), click on the job and then the **Modify Job** button.

The screenshot shows the Backup management interface. On the left, there is an 'Actions' menu with buttons for 'New Job', 'Modify Job' (highlighted with a mouse cursor), 'Suspend Job', 'Delete Job', 'Run Now', and 'Add Machines'. The main area is divided into 'Jobs' and 'Machines' sections. The 'Jobs' section shows a job named 'NP-CBMR-Backups' with a 'Completed' status. The 'Machines' section shows two machines: 'NP-Win2019' and 'np-rhel83-1', both with 'Completed' status.

You will then see **Step 1** of the wizard.



Modify Backup Job ✕

<p style="text-align: center; color: green;">Step 1 Modify Job</p>	<p>Job Name: <input type="text" value="NP-CBMR-Backups"/></p> <p>Frequency: <input type="text" value="Daily"/></p> <p>Every: <input type="text" value="1"/> day(s)</p>
<p style="text-align: center; color: orange;">Step 2 Schedule</p>	<p>Starting On: <input type="text" value="26 Oct 2023"/></p> <p>At: <input type="text" value="11"/> : <input type="text" value="30"/></p>
<p style="text-align: center;">Step 3 Backup Type</p>	
<p style="text-align: center;">Step 4 Include & Exclude List</p>	

Note: the **Back** button can be used at any point in the wizard to return to the previous step.

Modify the job **Name** if required.

Modify the backup job **Frequency** and the **Interval**. The frequency/interval can be set as summarised in the table below.

Frequency	Description
<i>Once</i>	The backup is run once only at the specified date/time
<i>Hourly</i>	Backups run every user specified number of hours at a selected time
<i>Daily</i>	Backups run every user selected number of days at a selected time
<i>Weekly</i>	Backups run on specific user selected day(s) of the week (Monday/Tuesday etc.) at a selected time
<i>Monthly</i>	Backups run only on a specified day of the month at a selected time

You may also specify when the next backup run will occur.



Modify Backup Job

Step 1 Machine Type

Job Name: NP-CBMR-Backups

Frequency: Hourly

Every: 2 hour(s)

Starting On: 26 Oct 2023

At: 12 : 00

Step 2 Schedule

Step 3 Backup Type

Step 4 Include & Exclude List

Back Next

Click **Next** to move on to **Step 3** where the **Backup Type** can be selected.

Modify Backup Job

Step 1 Machine Type

Backup Type: Full

Backup Retention: 5

Periodic Full: Faster Restore Time (5) Less Data Usage

Step 2 Schedule

Step 3 Backup Type

Step 4 Include & Exclude List

Back Next

From the **Backup Type** drop-down list select **Full** or **Incremental**. When the backup target is a VTD file on a network share, Full backups are always made regardless of this setting.

Backup Retention specifies the number of historical backups to be retained. The larger the number the more space the backups will occupy, but it will also provide you with more versions to restore in case of machine failure. In particular this is important should you find the latest stored



backup is not the version you require.

Periodic Full allows you to specify how frequently a Full backup is made. Move the adjuster to the left to reduce restore time (more Full backups). Move it to the right to reduce the backup storage required (fewer Full backups).

Next

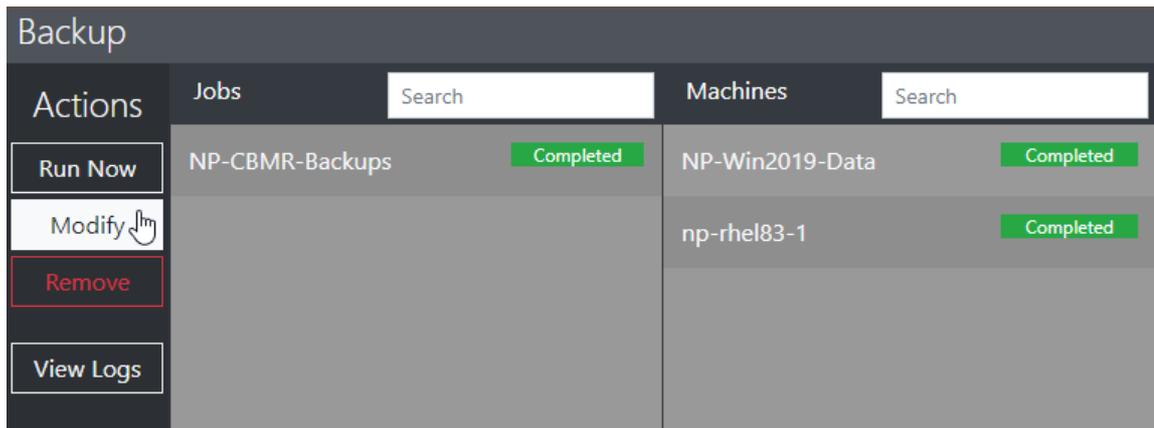
Click **Next** to move on to **Step 4** where files can be excluded from the backup. Note the format of the file exclusions varies according to platform type (Windows, Linux, AIX and Solaris). Please refer to the **Platform** tab for an on-screen discussion of the file/directory format for that platform.

This is the last Step in the wizard sequence. Now click **Save** to modify the job.

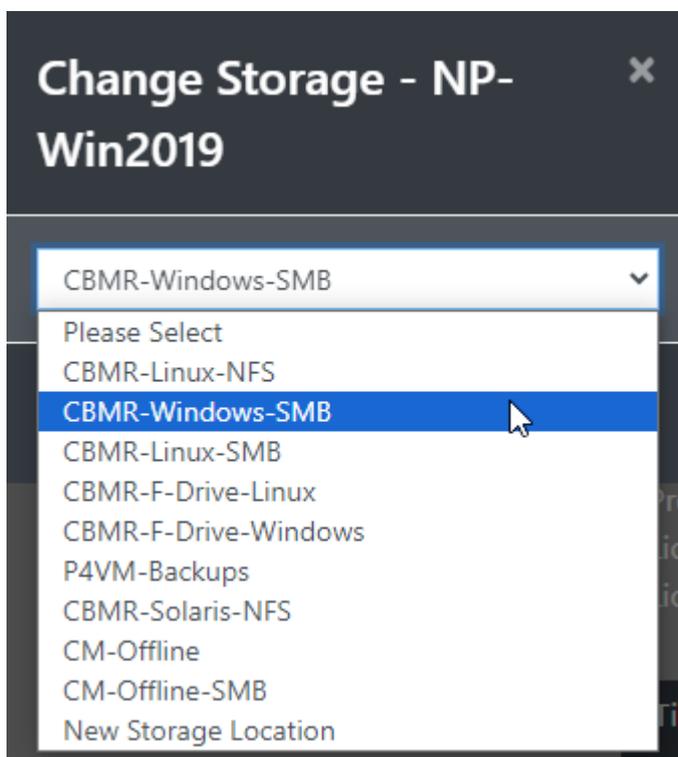
3.3.2.2 Machine Settings

To modify the settings for a single machine in a job click on the machine and then the

Change Storage



You will be prompted with:



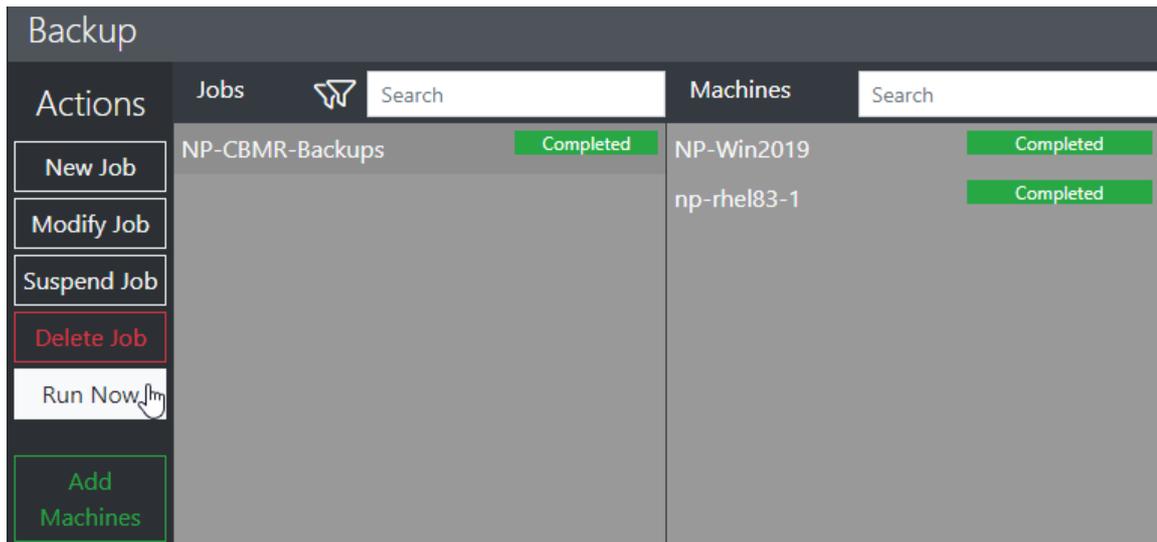
Select a new location and click . You can also define a new storage location from this dialogue if you wish.

3.3.3 Run Now

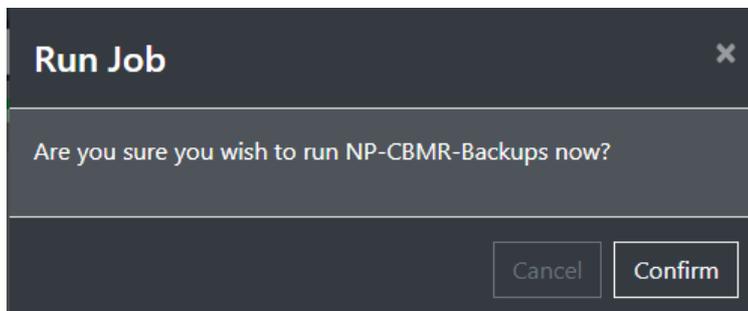
It's possible to bypass the scheduled backups of either a job or an individual machine without disturbing the configured scheduling. This feature allows a user to create a new Backup on demand, say after a major update to a host.

To do this highlight either the complete job or the individual machine and click .





You will then be prompted to confirm the action:



Click **Confirm** to proceed. The job or machine backup will then be initiated. If a backup is already running the Run Now request will be ignored.

An appropriate **Alert** will also be generated for the running backups:

Event	Source	Status	Details	Start Time	End Time	User
CBMR Backup	NP-Win2019	In Progress	Backup in progress: 24%	26 Oct 2023, 13:28:39		Administrator
CBMR Backup	np-rhel83-1	In Progress	Backup in progress: 52%	26 Oct 2023, 13:28:39		Administrator

3.3.4 Suspend/Resume

With a backup job running normally you may wish to temporarily suspend the whole job. This may be required for example if the source host is to undergo temporary maintenance.

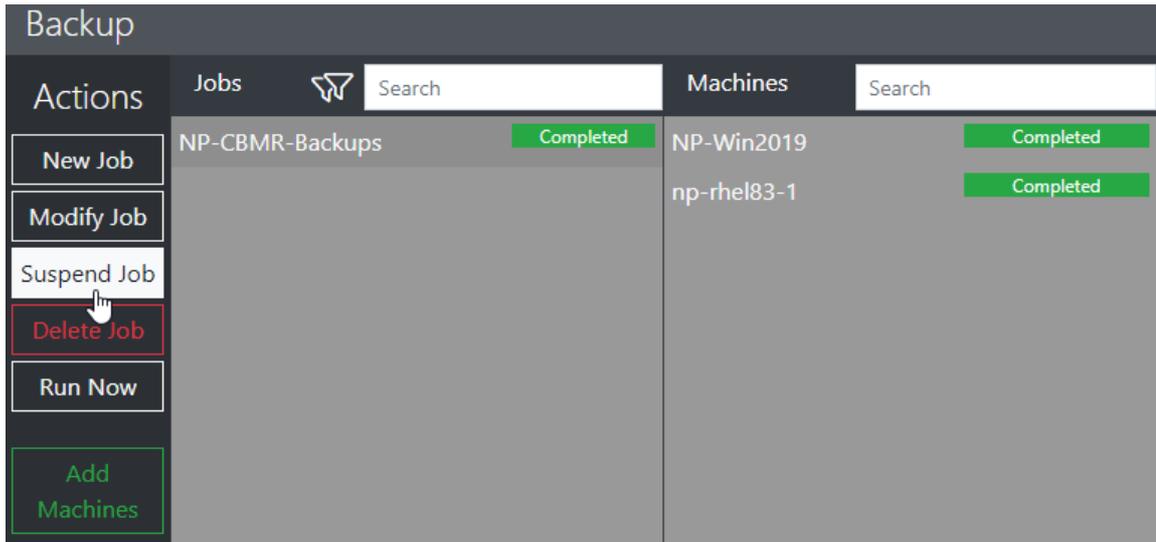
Backups can then be resumed when the maintenance is finished.

Note: Its not possible to Suspend/Resume individual machines within a backup job.

Suspend

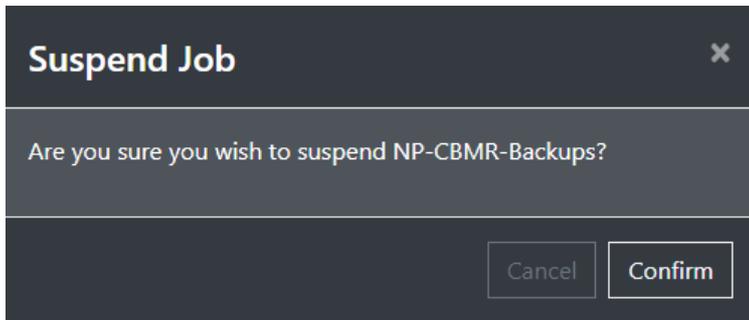
To suspend a whole job (note backups for all machines in the job will be suspended in this case), click on the job and then the **Suspend Job** button.





The screenshot shows the Backup application interface. On the left, there is an 'Actions' menu with buttons for 'New Job', 'Modify Job', 'Suspend Job', 'Delete Job', 'Run Now', and 'Add Machines'. The 'Delete Job' button is highlighted with a red border and a mouse cursor. The main area is divided into two columns: 'Jobs' and 'Machines'. The 'Jobs' column contains one entry: 'NP-CBMR-Backups' with a green 'Completed' status. The 'Machines' column contains two entries: 'NP-Win2019' and 'np-rhel83-1', both with green 'Completed' status. Search bars are present above each column.

You will then be prompted to confirm the suspension.



The screenshot shows a 'Suspend Job' dialog box. The title bar says 'Suspend Job' with a close button (X). The main text asks: 'Are you sure you wish to suspend NP-CBMR-Backups?'. At the bottom, there are two buttons: 'Cancel' and 'Confirm'.

Click **Confirm** to proceed. The job will then be disabled and this indication  will be shown on the job.

Note: Attempting to Suspend a running job will only take effect when the job completes.

Resume

To resume a suspended job click on the job and then click **Resume**.



You will then be prompted to confirm the job resumption.

Click **Confirm** to proceed. The job will then be resumed and all machines will begin backing up at the next scheduled date/time. The indication  on the job will be removed.

You will also see Alerts associated with the job Suspend/Resume activity.

Event	Source	Status	Details	Start Time	End Time	User
 Backup	NP-CBMR-Backups	Completed	NP-CBMR-Backups was enabled successfully	26 Oct 2023, 13:50:57	26 Oct 2023, 13:50:57	Administrator
 Backup	NP-CBMR-Backups	Completed	NP-CBMR-Backups was disabled successfully	26 Oct 2023, 13:49:02	26 Oct 2023, 13:49:02	Administrator

3.3.5 Delete

When you no longer need to run Backups for either a complete job or an individual machine it can be removed from the Cristie VA.

3.3.5.1 Whole Job

To delete a whole job (note all machines in the job will be deleted), click on the job and then the **Delete Job** button.



The screenshot shows the Backup application interface. On the left, there is an 'Actions' menu with buttons for 'New Job', 'Modify Job', 'Suspend Job', 'Delete Job' (highlighted in red with a mouse cursor), 'Run Now', and 'Add Machines'. The main area is divided into 'Jobs' and 'Machines' sections, each with a search bar. Under 'Jobs', there is one entry: 'NP-CBMR-Backups' with a green 'Completed' status bar. Under 'Machines', there are two entries: 'NP-Win2019' and 'np-rhel83-1', both with green 'Completed' status bars.

You will then be prompted to confirm the deletion.

The screenshot shows a 'Delete Job' dialog box. The title is 'Delete Job' with a close button (X) in the top right corner. The main text asks: 'Are you sure you wish to delete NP-CBMR-Backups?'. At the bottom, there are two buttons: 'Cancel' and 'Confirm'.

Click **Confirm** to proceed. The job and its associated machines will then be deleted.

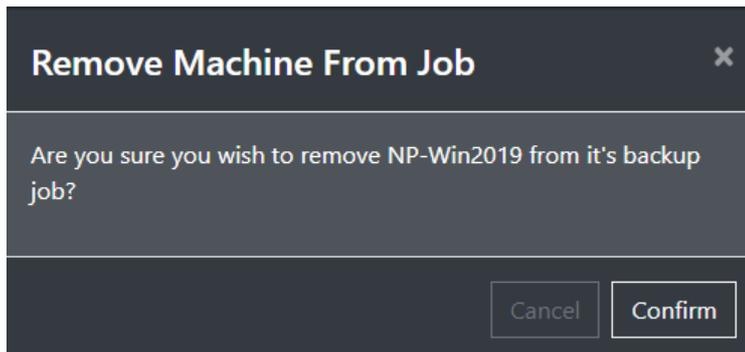
3.3.5.2 Individual Machine

To delete a single machine from a job click on the machine and then the **Remove** button.

The screenshot shows the Backup application interface. The 'Actions' menu on the left has buttons for 'Run Now', 'Change Storage', 'Remove' (highlighted in red with a mouse cursor), and 'View Logs'. The main area shows the same 'Jobs' and 'Machines' sections as in the previous screenshot. The 'Remove' button is highlighted, indicating the user is about to delete a machine from the selected job.

You will then be prompted to confirm the deletion.

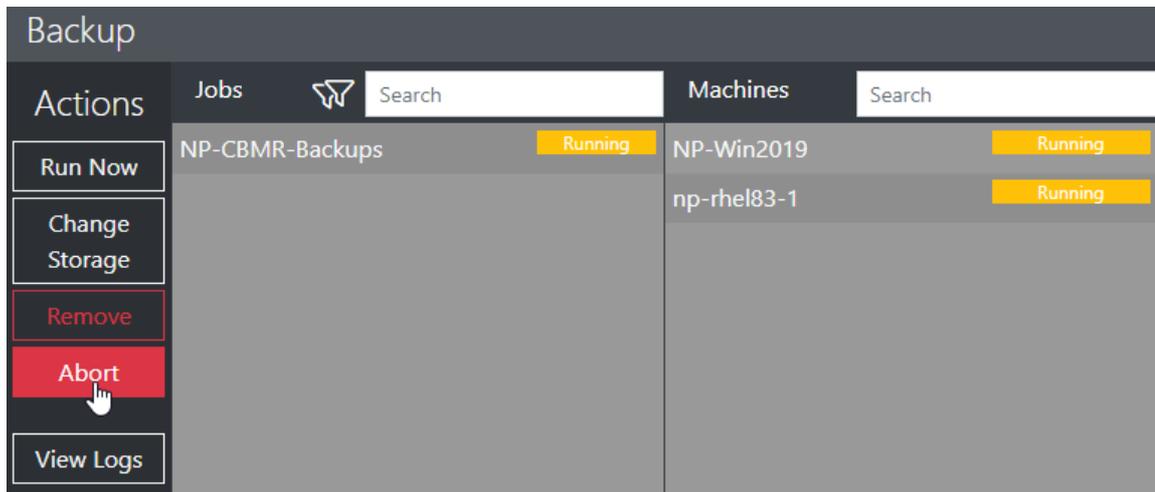




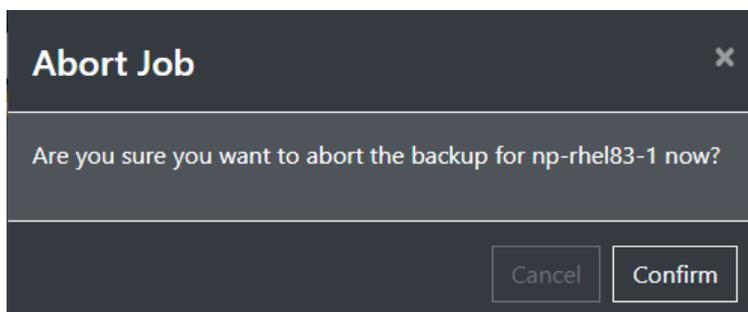
Click  to proceed. The machine will then be removed from the job. If other machines are associated with the job they will continue to backup normally.

3.3.6 Abort

If you wish to cancel a running backup machine highlight it and select

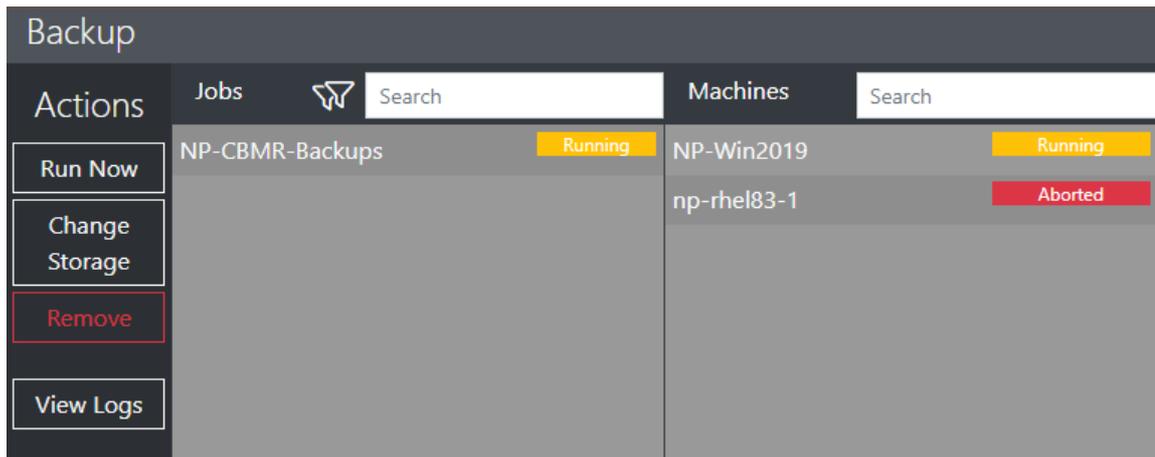


You will then be prompted to confirm the abort.



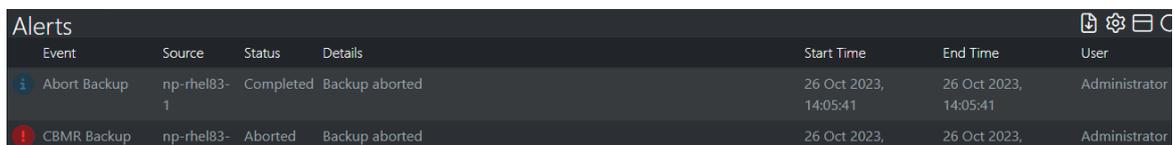
Click  to proceed. The machine backup will then be cancelled. Note it may take a few minutes for the backup to come to a halt.





The screenshot shows the Backup interface with a table of jobs and machines. The 'Jobs' column shows 'NP-CBMR-Backups' with a yellow 'Running' status. The 'Machines' column shows 'NP-Win2019' with a yellow 'Running' status and 'np-rhel83-1' with a red 'Aborted' status. On the left, there is an 'Actions' menu with buttons for 'Run Now', 'Change Storage', 'Remove', and 'View Logs'.

You will also see Alerts associated with the job Abort activity.

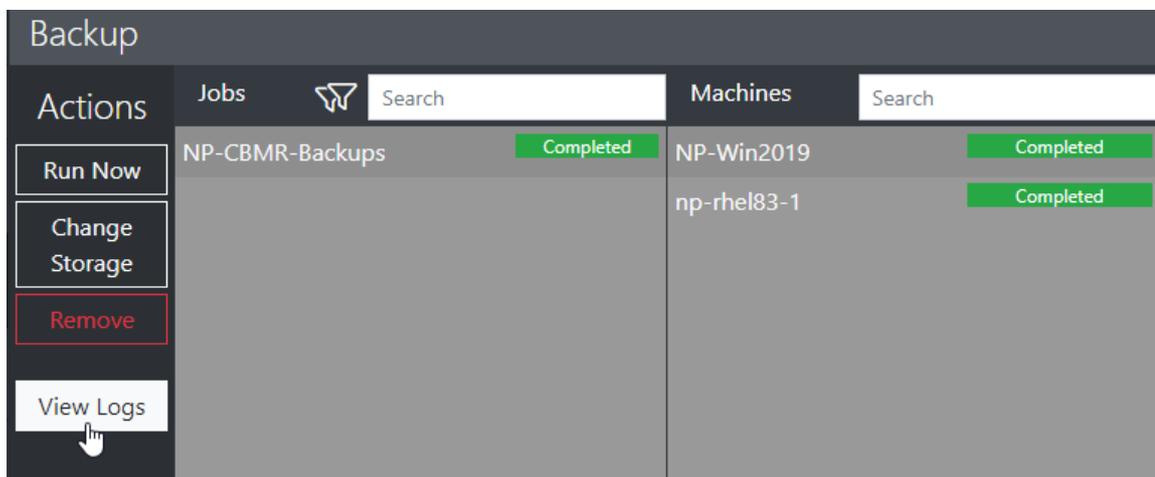


Event	Source	Status	Details	Start Time	End Time	User
Abort Backup	np-rhel83-1	Completed	Backup aborted	26 Oct 2023, 14:05:41	26 Oct 2023, 14:05:41	Administrator
CBMR Backup	np-rhel83-	Aborted	Backup aborted	26 Oct 2023,	26 Oct 2023,	Administrator

If other machines are associated with the job they will continue to backup normally.

3.4 View Logs

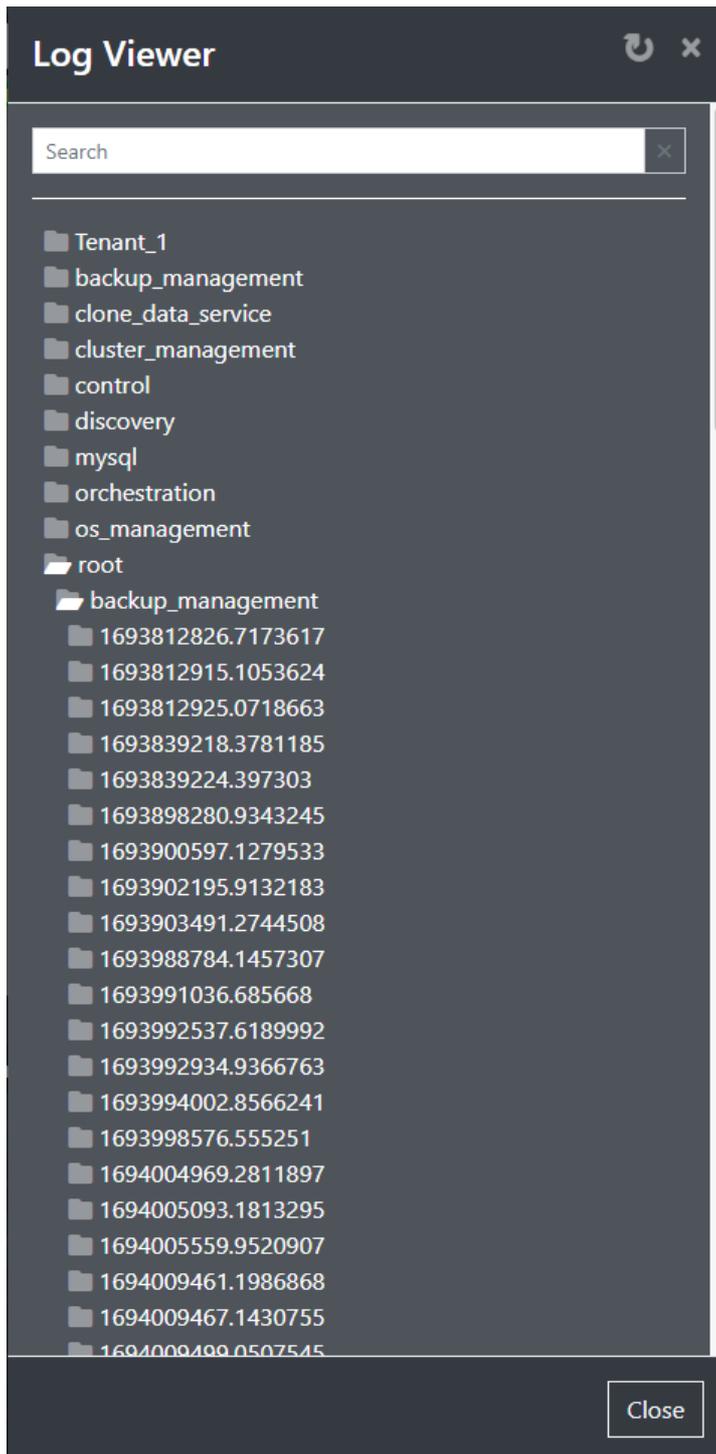
If you want to view backup logs for a machine click the job first and then the desired machine. Then click **View Logs**.



The screenshot shows the Backup interface with a table of jobs and machines. The 'Jobs' column shows 'NP-CBMR-Backups' with a green 'Completed' status. The 'Machines' column shows 'NP-Win2019' with a green 'Completed' status and 'np-rhel83-1' with a green 'Completed' status. On the left, there is an 'Actions' menu with buttons for 'Run Now', 'Change Storage', 'Remove', and 'View Logs'. A mouse cursor is pointing at the 'View Logs' button.

The Log Viewer will then be displayed with the Log directory open at the correct point for the job/machine:





To view the log file for a particular backup click on file for the desired host:



```
NP-Win2019.log x
[2023-10-26 13:00:26+0000] :: [INFO] :: backup_management_root_NP-Win2019 :: Running backup
of 954d9edd-4db6-3906-97f7-e6543c51a88b from job 3
[2023-10-26 13:00:26+0000] :: [INFO] :: backup_management_root_NP-Win2019 :: Checking license
is valid
[2023-10-26 13:00:28+0000] :: [INFO] :: backup_management_root_NP-Win2019 :: Setting up new
backup location
[2023-10-26 13:00:31+0000] :: [INFO] :: backup_management_root_NP-Win2019 :: Setup new backup
location
[2023-10-26 13:00:33+0000] :: [INFO] :: backup_management_root_NP-Win2019 :: Starting Windows
backup monitoring
[2023-10-26 13:00:33+0000] :: [INFO] :: backup_management_root_NP-Win2019 :: Starting Windows
full backup
[2023-10-26 13:10:56+0000] :: [INFO] :: backup_management_root_NP-Win2019 :: Windows full
backup finished
[2023-10-26 13:10:56+0000] :: [INFO] :: backup_management_root_NP-Win2019 :: Windows full
backup finished
[2023-10-26 13:11:01+0000] :: [INFO] :: backup_management_root_NP-Win2019 :: Backup finished
with status: COMPLETED
[2023-10-26 13:11:01+0000] :: [INFO] :: backup_management_root_NP-Win2019 :: Finished Windows
full backup monitoring
[2023-10-26 13:11:01+0000] :: [INFO] :: backup_management_root_NP-Win2019 :: Validating backup
consolidation
[2023-10-26 13:11:02+0000] :: [INFO] :: backup_management_root_NP-Win2019 :: Found 5 full
backups
[2023-10-26 13:11:02+0000] :: [INFO] :: backup_management_root_NP-Win2019 :: Not enough
backups available to consolidate, exiting
[2023-10-26 13:11:03+0000] :: [WARNING] :: backup_management_root_NP-Win2019 :: Failed to
mount backup storage, error: CommandException: System error 85 has occurred.

The local device name is already in use.

[2023-10-26 13:11:03+0000] :: [WARNING] :: backup_management_root_NP-Win2019 :: Attempting
```

Download Close

At this point you can optionally [Download](#) the Log file to your browser's default download location or click [Close](#) to remove the Log Viewer from the screen.



4 Recovery

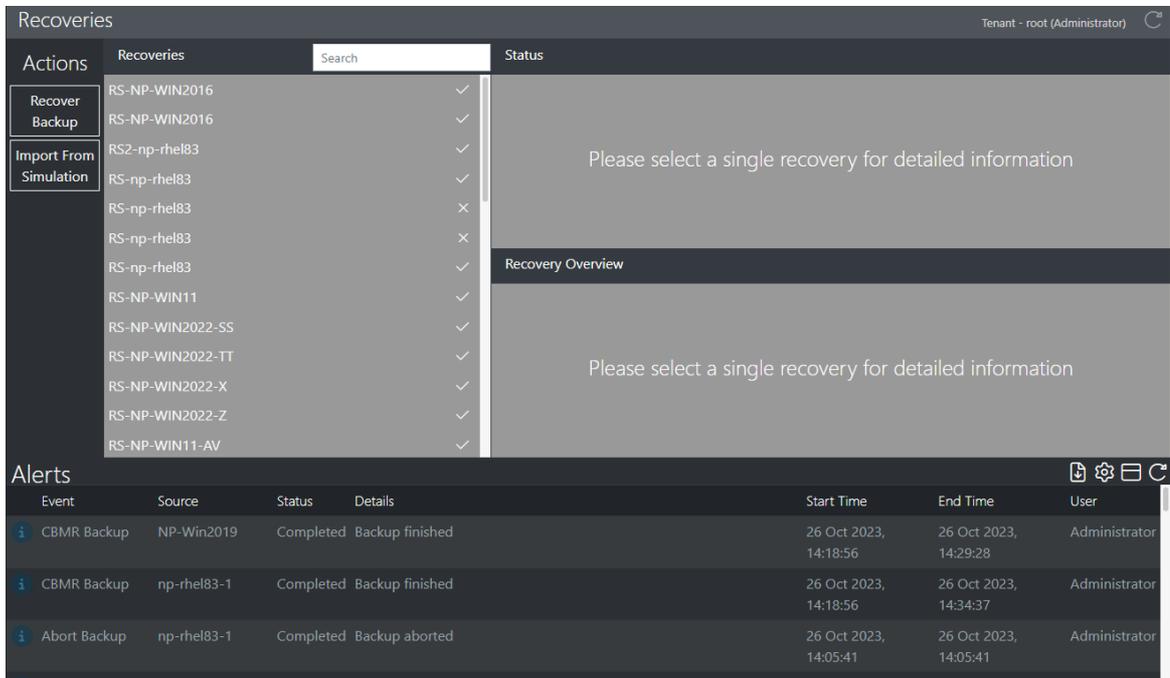
The **Backup Recovery** features of the Cristie VA are divided into **Recover** and **Simulation** modes.

Recover allows a fast single-shot recovery of an existing backup and this option should be used for a quick validity check of a backup. There is no scheduling option available in this mode. **Simulation** allows a recovery job to be created and regular scheduled test recoveries made for one or more selected machines.

The Cristie VA only supports recoveries for Windows/Linux machines. Solaris/AIX recovery monitoring is supported by manually hooking into the VA via the DR environment.

4.1 Recover

To start a test recovery of an existing backup using **Recover** firstly open the Cristie VA Dashboard, and then navigate to **Recover** . You will then see this dialogue.



Event	Source	Status	Details	Start Time	End Time	User
 CBMR Backup	NP-Win2019	Completed	Backup finished	26 Oct 2023, 14:18:56	26 Oct 2023, 14:29:28	Administrator
 CBMR Backup	np-rhel83-1	Completed	Backup finished	26 Oct 2023, 14:18:56	26 Oct 2023, 14:34:37	Administrator
 Abort Backup	np-rhel83-1	Completed	Backup aborted	26 Oct 2023, 14:05:41	26 Oct 2023, 14:05:41	Administrator

There are 2 main ways to start a recovery - **Recover Backup** and **Import From Simulation**.

Recover Backup allows a previously created CBMR backup to be restored. Note this option can also be used for recovering Protect for VMs backups. This option is covered in the **Protect for VMs User Guide**.

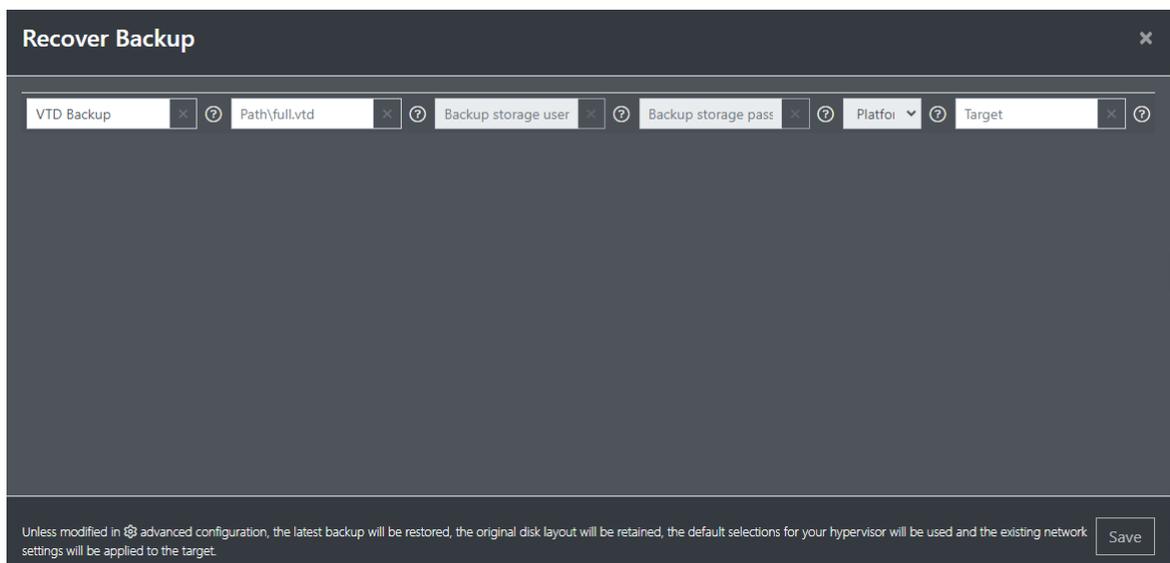
Recover Backup

So click **Recover Backup** and select **VTD Backup Location** from the Backup Source drop-down list to begin the process.





You will then be presented with a dialogue that allows the recovery details to be configured.

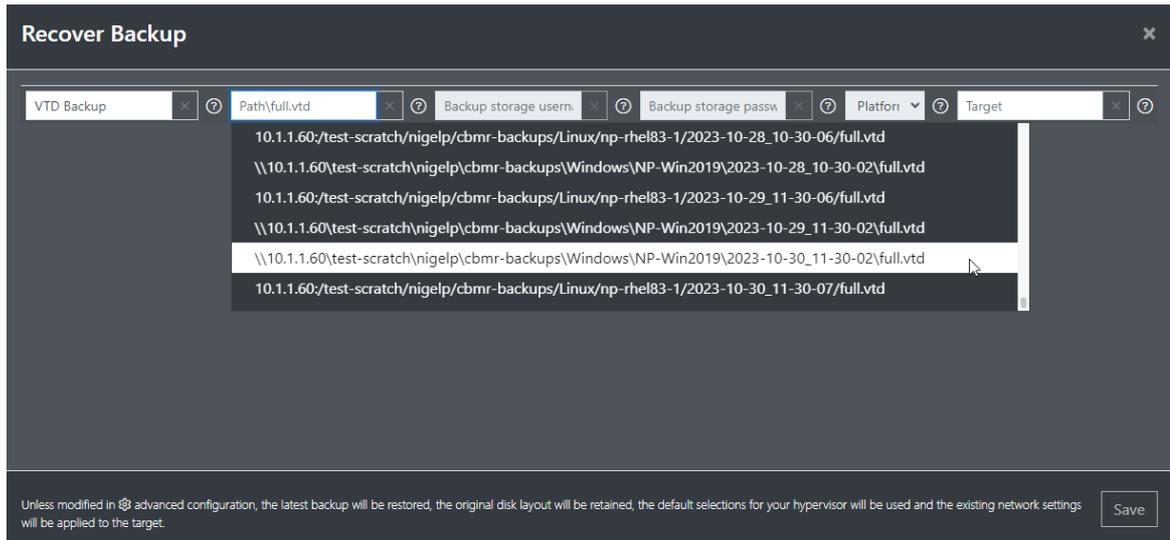


The fields to be filled in are:

Path\full.vtd

The full path to the CBMR VTD backup file. Clicking this field displays a drop-down list with several further choices.





- **Specify manually** - A manually entered path to the backup CBMR VTD of interest.
- **Choose from backup job** - Select a backup direct from a current backup job.
- **A list of historical VTD backups made by the Cristie VA** - Select one that corresponds to the system and date/time you want to restore.

Backup Storage Username/Password

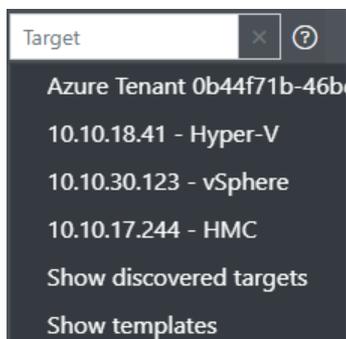
Network share access credentials for the VTD path above. These will get filled automatically if the path is recognised by the Cristie VA. Note this is required for SMB shares only.

Platform

Windows/Linux/AIX

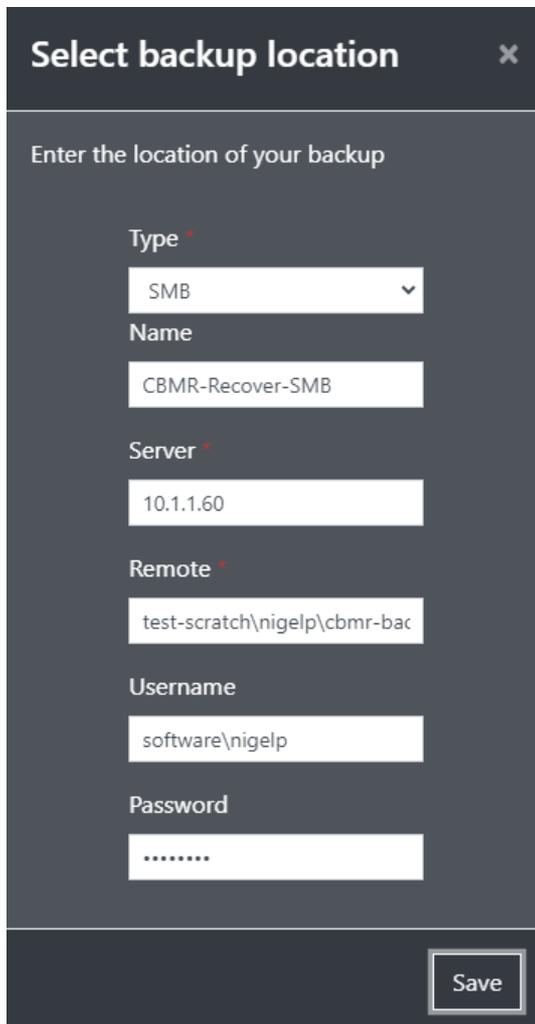
Target

The backup will be recovered to a new VM on the specified Hypervisor. The hypervisor must have been previously configured in the VA. Alternatively the target could be a physical target manually booted into the appropriate recovery environment. Select **Show discovered targets** or **Show templates** for the latter option.



4.1.1 Specify Manually

Select this option to choose recovery from any CBMR VTD Backup located on a network share. First specify the location of where your VTD backup resides. Configure either an NFS or SMB network share.



Select backup location ✕

Enter the location of your backup

Type ▾
SMB ▾

Name
CBMR-Recover-SMB

Server
10.1.1.60

Remote
test-scratch\nigelp\cbmr-bac

Username
software\nigelp

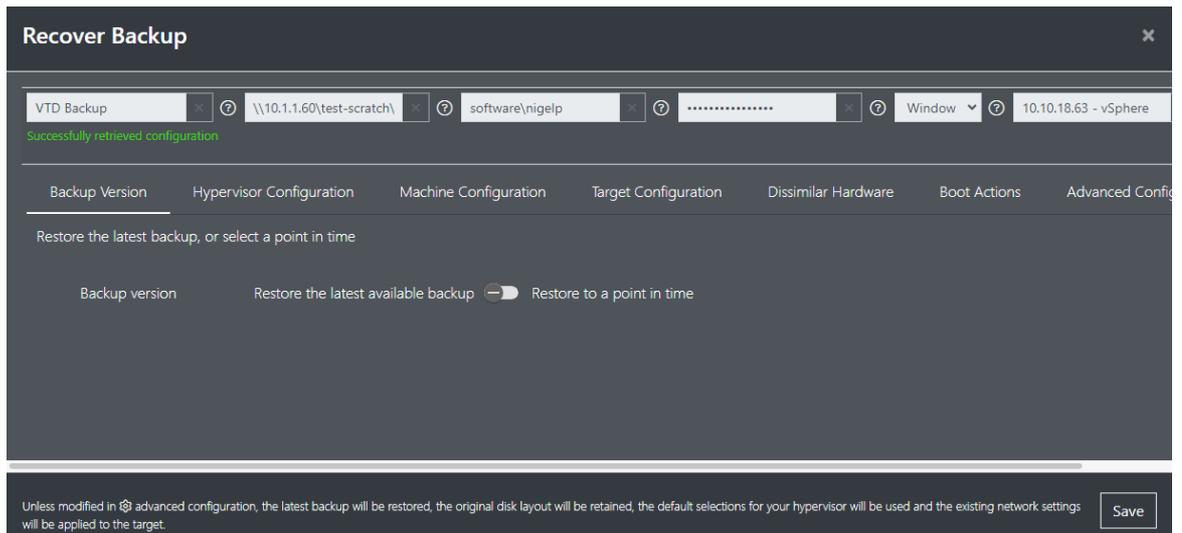
Password
.....

Save

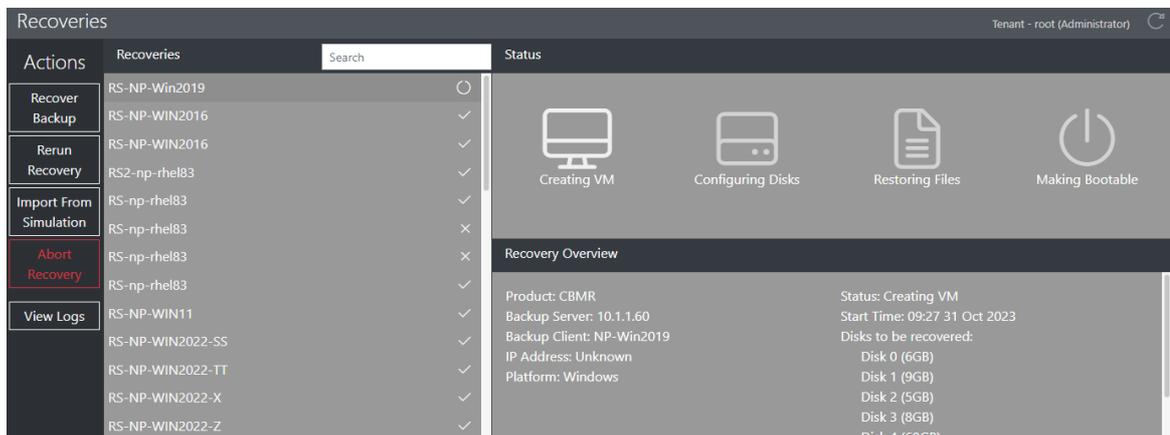
Note the VTD does not have to have been created by a Cristie VA CBMR backup job.

Click  to continue. Unless modified in advanced configuration the latest backup will be restored, the original disk layout will be retained, the default selections for your hypervisor will be used and the existing network settings will be applied to the target. If you wish to change the recovery configuration click  to see:





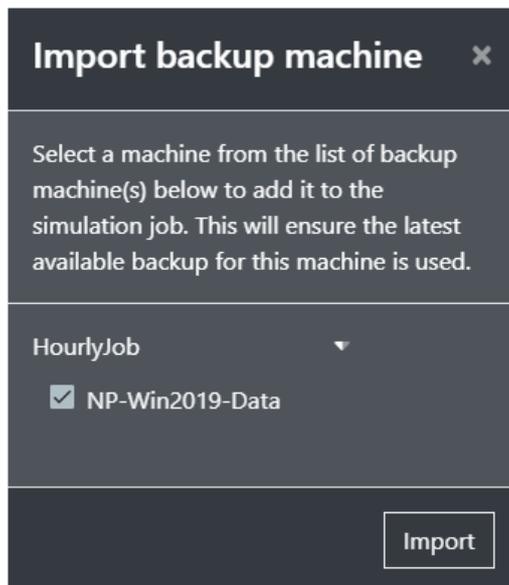
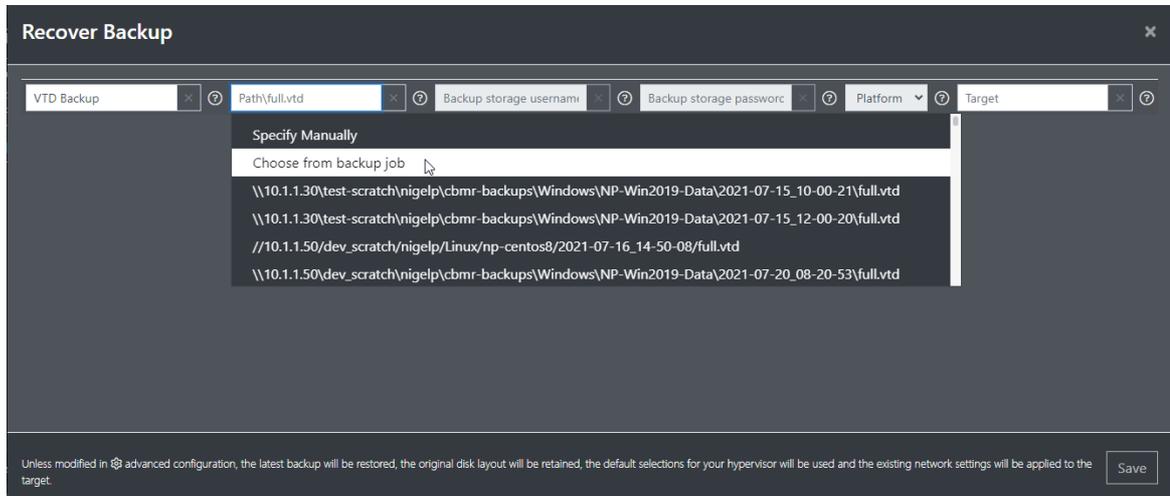
Click  to begin the recovery.



Refer to the section entitled [Recover Sequence](#) for the next steps which are common.

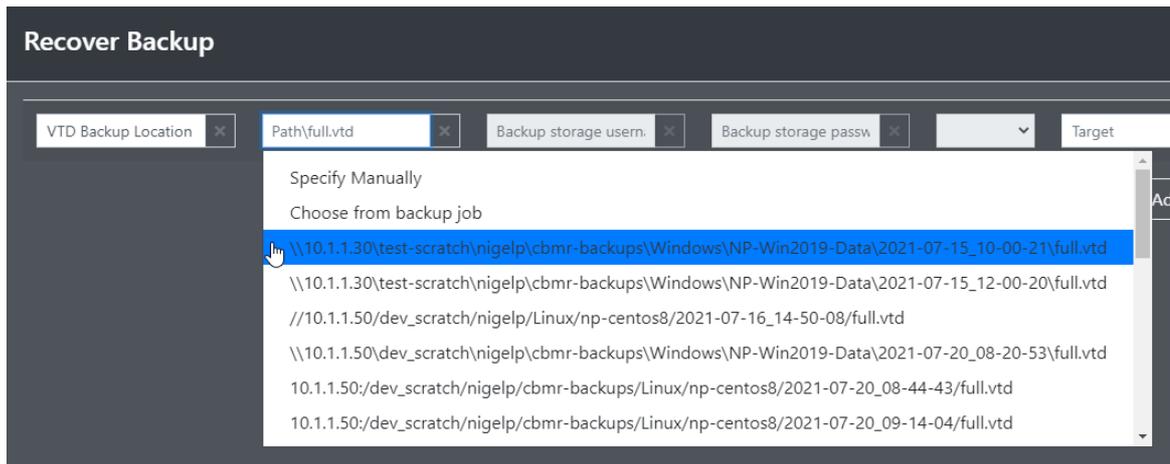
4.1.2 Choose From Backup Job

After selecting VTD Backup, select this option to choose recovery from an existing Cristie VA CBMR backup job.



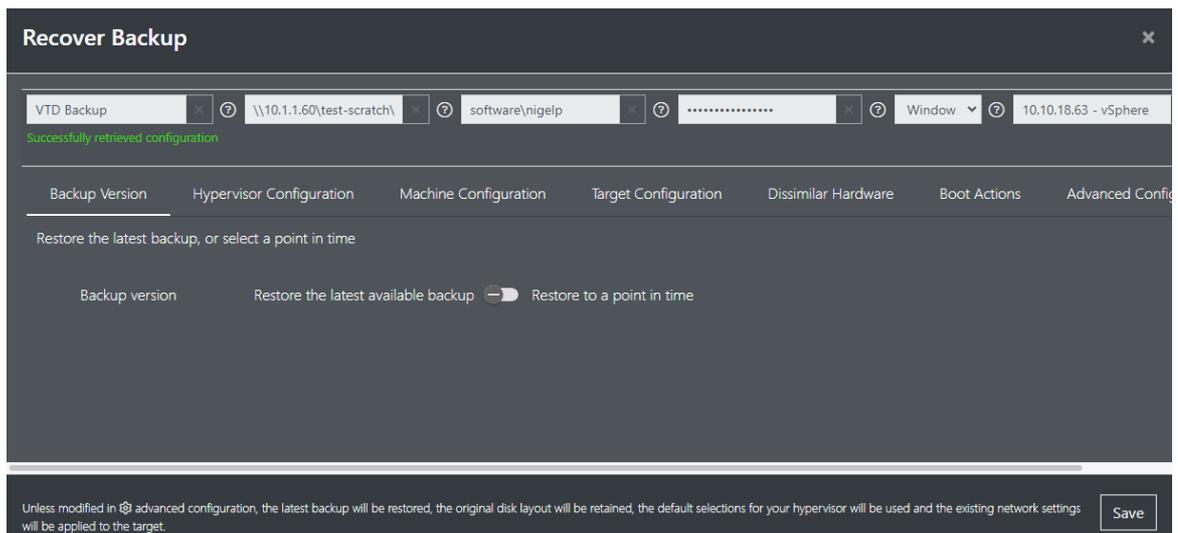
Click the job containing the host backup you wish to recover and click **Import**. If you then re-display the **Path\full.vtd** field you will get a list of all backups for that job:





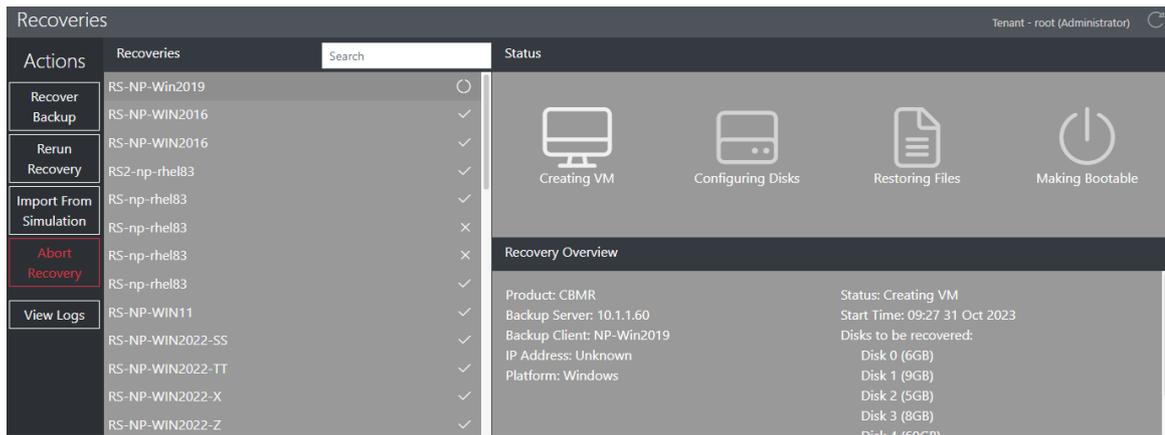
Click the required **Host** and **Date/Time** from the list. You will then need to set the share credentials if not pre-set, the Platform and the Target.

Unless modified in advanced configuration the latest backup will be restored, the original disk layout will be retained, the default selections for your hypervisor will be used and the existing network settings will be applied to the target. If you wish to change the recovery configuration click  to see:



Click  to begin the recovery.



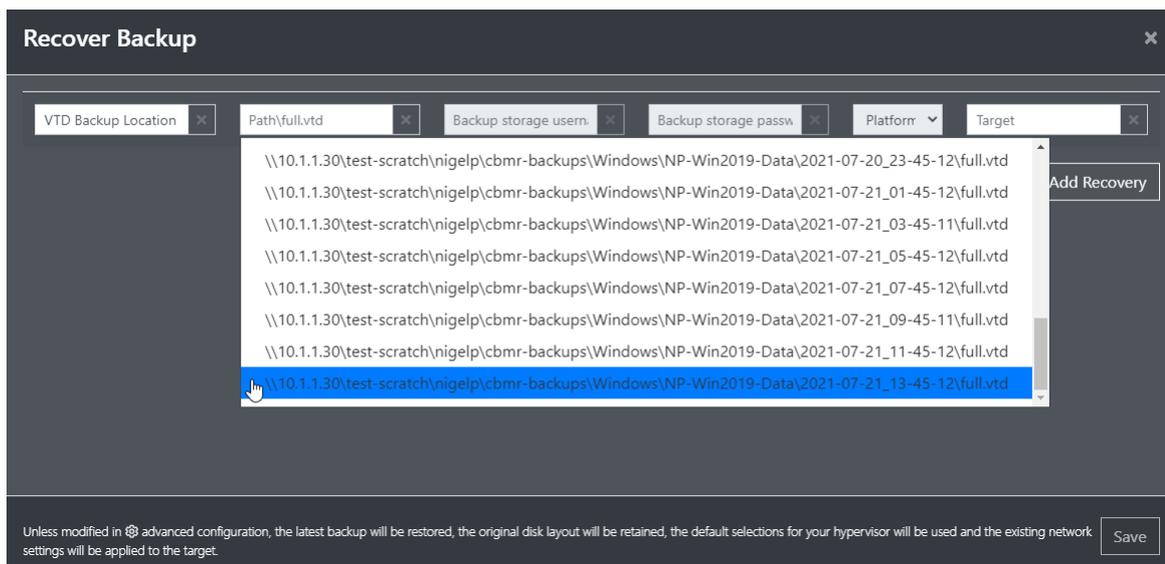


Refer to the section entitled [Recover Sequence](#) for the next steps which are common.

4.1.3 List of Historical VA Backups

Select this option to choose recovery from any historical Cristie VA CBMR backup job.

If you then re-display the **Path\full.vtd** field you will get a list of all backups:

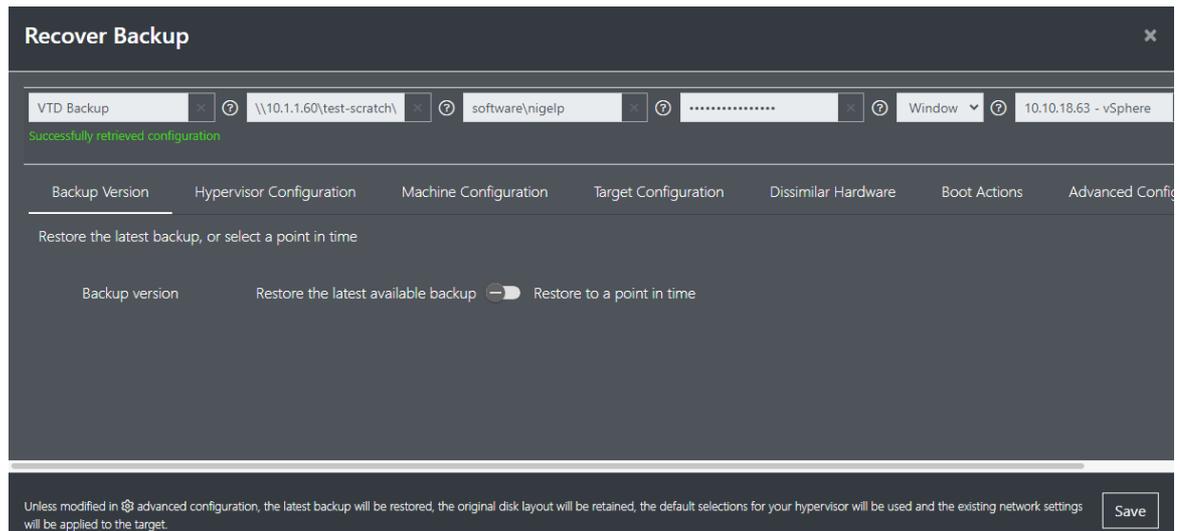


Click the required **Host** and **Date/Time** from the list. You will then need to set the share credentials if not pre-set, the Platform and the Target.

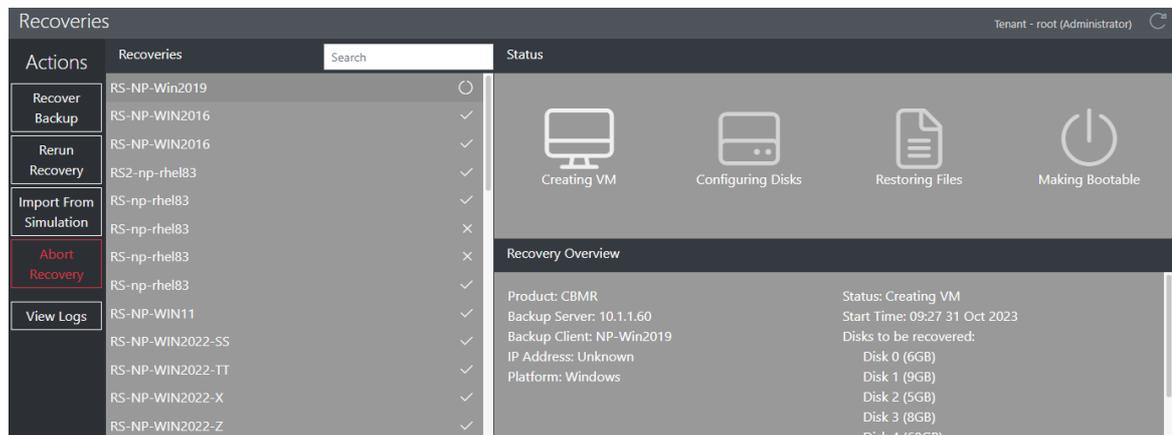
Unless modified in advanced configuration the latest backup will be restored, the original disk layout will be retained, the default selections for your hypervisor will be used and the existing network settings will be applied to the target. If you wish to change the recovery configuration click

 to see:





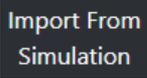
Click  to begin the recovery.



Refer to the section entitled [Recover Sequence](#) for the next steps which are common.

4.1.4 Import from Simulation

This option allows a **Recover** operation to be quickly created directly from an existing **Simulation**

job. Click  to start the import process.

4.1.5 Recover Sequence

When the Recovery starts it will go through various stages which are reported in the Status section of the main Recover dialogue. Corresponding Alerts for each stage will also be generated. The

completion of a stage is signified with a .

Creating VM

Recoveries Tenant - root (Administrator)

Actions	Recoveries	Status
Recover	RS-NP-Win2019	○
Backup	RS-NP-WIN2016	✓
Rerun	RS-NP-WIN2016	✓
Recovery	RS2-np-rhel83	✓
Import From Simulation	RS-np-rhel83	✓
Abort Recovery	RS-np-rhel83	✗
View Logs	RS-NP-WIN11	✓
	RS-NP-WIN2022-SS	✓
	RS-NP-WIN2022-TT	✓
	RS-NP-WIN2022-X	✓
	RS-NP-WIN2022-Z	✓

Recovery Overview

Product: CBMR
 Backup Server: 10.1.1.60
 Backup Client: NP-Win2019
 IP Address: 10.1.10.130
 Platform: Windows

Status: Initiating recovery on VM
 Start Time: 09:27 31 Oct 2023
 Progress: 0%
 Throughput: 0 MB/s
 Recovered: 0 of 0 files and 0 of 0 MB
 Disks to be recovered:
 Disk 0 (6GB)
 Disk 1 (6GB)

Configuring Disks

Recoveries Tenant - root (Administrator)

Actions	Recoveries	Status
Recover	RS-NP-Win2019	○
Backup	RS-NP-WIN2016	✓
Rerun	RS-NP-WIN2016	✓
Recovery	RS2-np-rhel83	✓
Import From Simulation	RS-np-rhel83	✓
Abort Recovery	RS-np-rhel83	✗
View Logs	RS-NP-WIN11	✓
	RS-NP-WIN2022-SS	✓
	RS-NP-WIN2022-TT	✓
	RS-NP-WIN2022-X	✓
	RS-NP-WIN2022-Z	✓

Recovery Overview

Product: CBMR
 Backup Server: 10.1.1.60
 Backup Client: NP-Win2019
 IP Address: 10.1.10.130
 Platform: Windows

Status: Restoring backup
 Start Time: 09:27 31 Oct 2023
 Progress: 7%
 Throughput: 43 MB/s
 Recovered: 7774 of 454553 files and 3102 of 23644 MB
 Disks to be recovered:
 Disk 0 (6GB)

Restoring Files

Recoveries Tenant - root (Administrator)

Actions	Recoveries	Status
Recover	RS-NP-Win2019	○
Backup	RS-NP-WIN2016	✓
Rerun	RS-NP-WIN2016	✓
Recovery	RS2-np-rhel83	✓
Import From Simulation	RS-np-rhel83	✓
Abort Recovery	RS-np-rhel83	✗
View Logs	RS-NP-WIN11	✓
	RS-NP-WIN2022-SS	✓
	RS-NP-WIN2022-TT	✓
	RS-NP-WIN2022-X	✓
	RS-NP-WIN2022-Z	✓

Recovery Overview

Product: CBMR
 Backup Server: 10.1.1.60
 Backup Client: NP-Win2019
 IP Address: 10.1.10.130
 Platform: Windows

Status: Injecting new drivers
 Start Time: 09:27 31 Oct 2023
 Progress: 100%
 Throughput: 6 MB/s
 Recovered: 454577 of 454577 files and 23644 of 23644 MB
 Disks to be recovered:
 Disk 0 (6GB)

Making Bootable



The screenshot shows the 'Recoveries' interface. On the left, there is a table of recovery actions with columns for 'Actions', 'Recoveries', and 'Status'. The 'Remove Recovery' action is highlighted in red. On the right, there is a 'Recovery Overview' section with a 'Status: Recovery successful' and various statistics.

Actions	Recoveries	Status
Recover	RS-NP-Win2019	✓
Backup	RS-NP-WIN2016	✓
Rerun	RS-NP-WIN2016	✓
Recovery	RS2-np-rhel83	✓
Import From Simulation	RS-np-rhel83	✓
Reboot	RS-np-rhel83	✗
Recovery	RS-np-rhel83	✓
Remove Recovery	RS-NP-WIN11	✓
	RS-NP-WIN2022-SS	✓
View Logs	RS-NP-WIN2022-TT	✓
Download	RS-NP-WIN2022-X	✓
Log Bundle	RS-NP-WIN2022-Z	✓

Recovery Overview

Product: CBMR
 Backup Server: 10.1.1.60
 Backup Client: NP-Win2019
 IP Address: 10.1.10.130
 Platform: Windows

Status: Recovery successful
 Start Time: 09:27 31 Oct 2023
 Finish Time: 10:41 31 Oct 2023
 Progress: 100%
 Throughput: 6 MB/s
 Recovered: 454577 of 454577 files and 23644 of 23644 MB
 Disks to be recovered:

**Abort
Recovery**

At any point during the recovery sequence you can use **Abort Recovery** to cancel the operation. You will see an Alert of the following form to confirm the current state of the recovery.

The alert dialog box displays the following information:

Recovery | NP-Win2019 → RS-NP-Win2019 | Completed | Recovery successful | 31 Oct 2023, 09:27:00 | 31 Oct 2023, 10:41:22 | Administrator

The **Recovery Overview** summarises the statistics for the operation.

The Recovery Overview summary provides the following details:

Product: CBMR
 Backup Server: 10.1.1.60
 Backup Client: NP-Win2019
 IP Address: 10.1.10.130
 Platform: Windows

Status: Recovery successful
 Start Time: 09:27 31 Oct 2023
 Finish Time: 10:41 31 Oct 2023
 Progress: 100%
 Throughput: 6 MB/s
 Recovered: 454577 of 454577 files and 23644 of 23644 MB
 Disks to be recovered:

- Disk 0 (6GB)
- Disk 1 (9GB)
- Disk 2 (5GB)
- Disk 3 (8GB)
- Disk 4 (60GB)
- Disk 5 (4GB)

Click **View Logs** to examine the Recovery Logs for the currently selected recovery.

**Remove
Recovery**

The recovery will stay listed on the dialogue until removed by using **Remove Recovery**.

4.2 Simulation

A **Simulation** allows scheduled test recoveries of **any supported Cristie BMR product** backups to be made - not just CBMR.

To start a test recovery using **Simulate** firstly open the Cristie VA Dashboard, and then navigate to **Simulate** . You will then see this dialogue.



You will now need to [Add a Job](#).

4.2.1 Add a Job

On the Cristie VA Dashboard, navigate to **Simulate**  and then select **New Job**. You will then see this dialogue.

The 'New Simulation Job' dialog box contains the following fields:

- Job Name:
- Product:
- RTO Target: minute(s)
- Frequency:
- Starting On:
- Starting At: :
- Save button

Give the new job a unique **Name** and select the correct Cristie Product.

The 'New Simulation Job' dialog box is shown with the 'Product' dropdown menu open. The 'Job Name' field contains 'HourlySimJob'. The 'Product' dropdown menu lists the following options:

- Select Product
- Select Product
- ABMR
- CBMR
- CoBMR
- NBMR
- RBMR
- TBMR
- Protect For VMs



Specify the simulation **Frequency** and the **Interval**. The frequency/interval can be set as summarised in the table below.

Frequency	Description
Once	Run once only at the specified date and time
Hourly	Syncs run every user specified number of hours at a selected time
Daily	Syncs run every user selected number of days at a selected time
Weekly	Syncs run on specific user selected day(s) of the week (Monday/Tuesday etc.) at a selected time
Monthly	Syncs run only on a specified day of the month at a selected time

Set the **Recovery Time Objective** (RTO) in minutes if required otherwise leave blank.

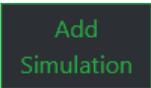
You may also specify when the first simulation run will occur.

Now click  to create the new job.

4.2.2 Add Recovery to Job

With a **Simulation** job in place you can now add the recovery backup or backups to the job. This discussion is very specific to CBMR simulations, but the process of adding the recovery backup for the other supported BMR products is very similar.

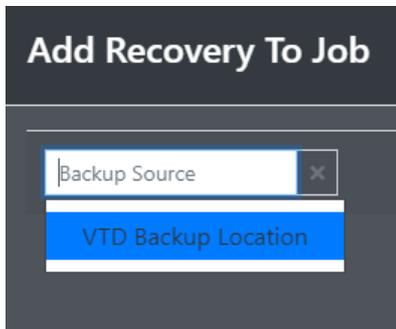
Note: The backups can be a mix of Windows and/or Linux.

Select the job and then click . This will bring up a dialogue where you can select the source backup to be added. Click the **Backup Source** field and then the backup location type from

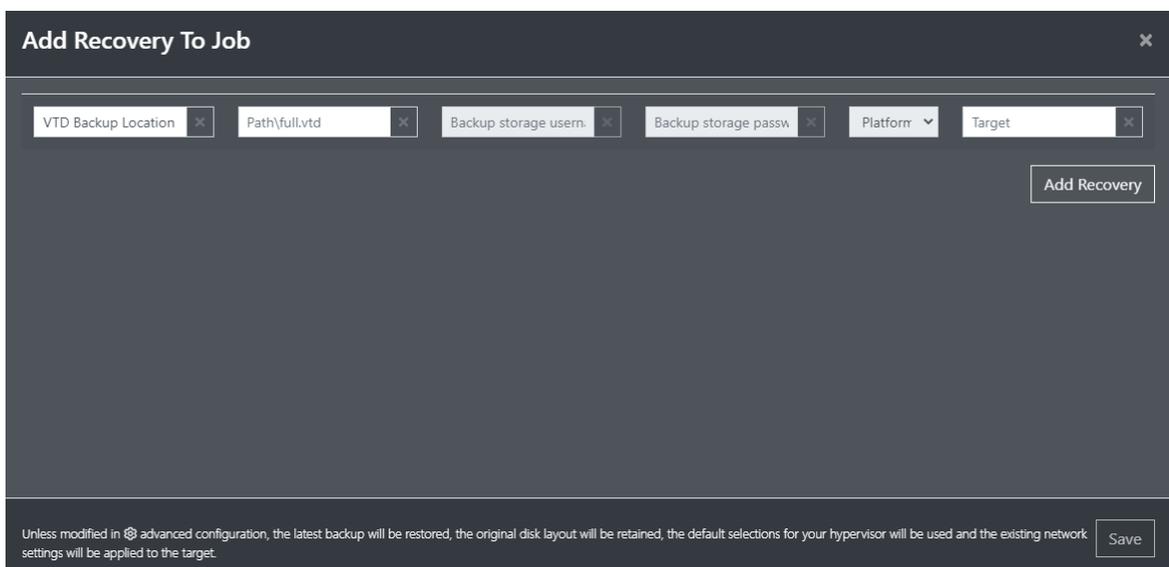


the drop-down list. Since we selected CBMR as product type for the job in this example the only choice offered is a VTD backup location.

Note: The backup location choices offered will be dictated by the Cristie BMR product selected for the job.



You will then be presented with a dialogue that allows the recovery details to be configured.

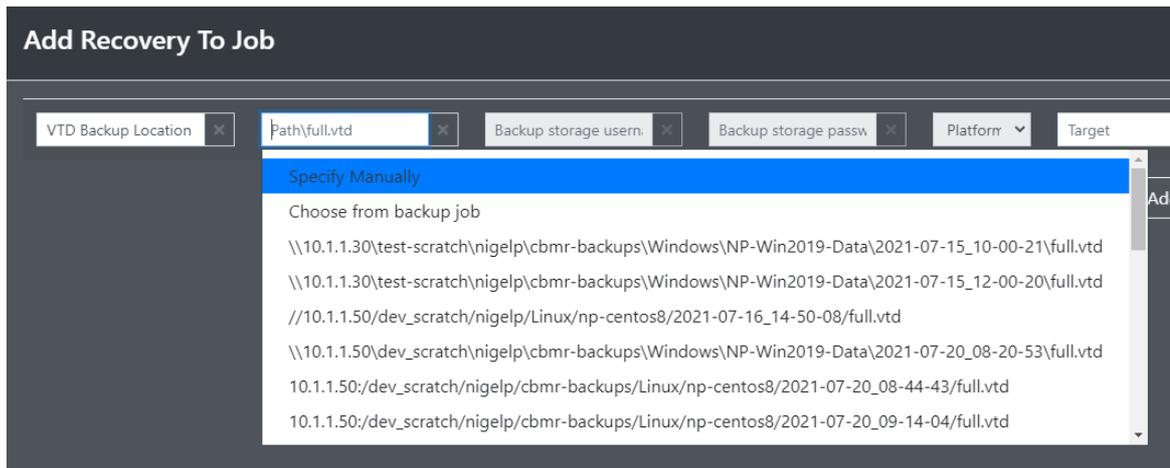


The fields to be filled in are:

Path\full.vtd

The full path to the CBMR VTD backup file. Clicking this field displays a drop-down list with several further choices.





- **Specify manually** - A manually entered path to the CBMR VTD of interest. Please refer to the section [Specify Manually](#) for more information.
- **Choose from backup job** - Select a backup direct from a current backup job. Please refer to the section [Choose From Backup Job](#) for more information.
- **A list of historical VTD backups made by the Cristie VA** - Select one that corresponds to the system and date/time you want to restore. Please refer to the section [List of Historical VA Backups](#) for more information.

Backup Storage Username/Password

Network share access credentials for the VTD path above. These will get filled if the path is recognised by the Cristie VA. Note this is required for SMB shares only.

Platform

Windows/Linux/AIX

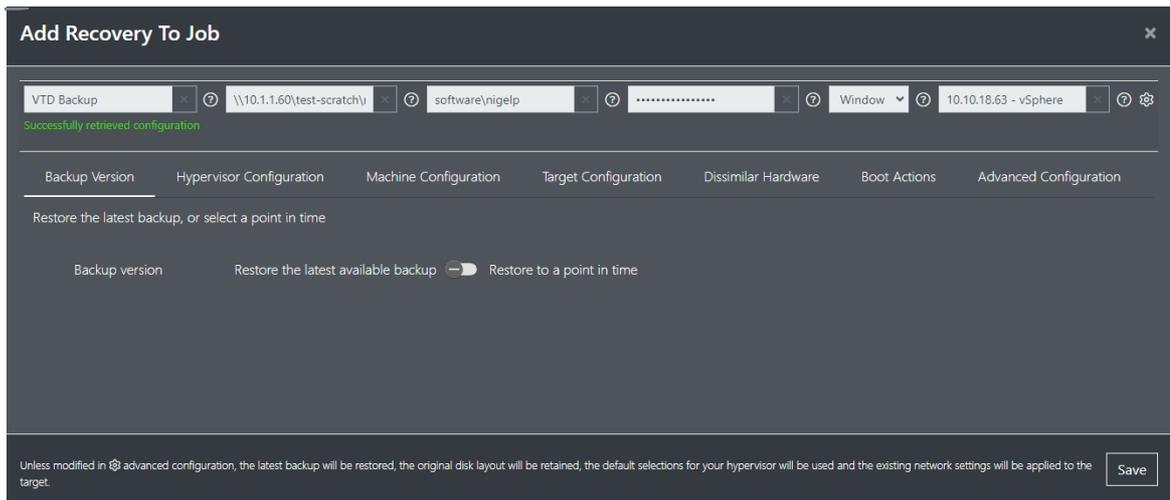
Target

The backup will be recovered to a VM on the selected Hypervisor. This must have been previously configured in the VA.

4.2.2.1 Settings

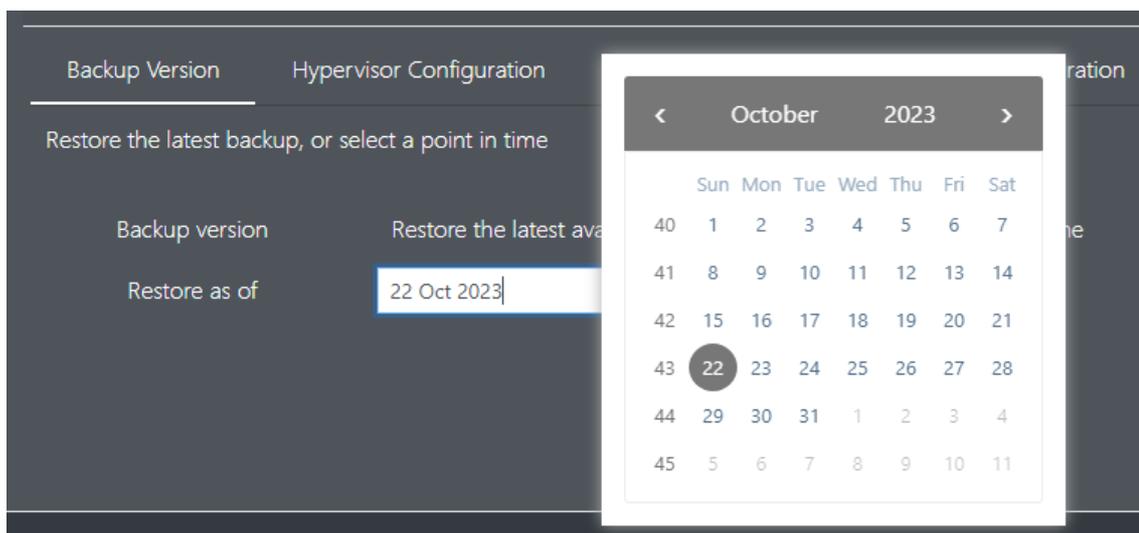
To configure non-default recovery settings for a host machine click the Settings icon  after the configuration has been retrieved. This will then display a dialogue like this containing several tabs:



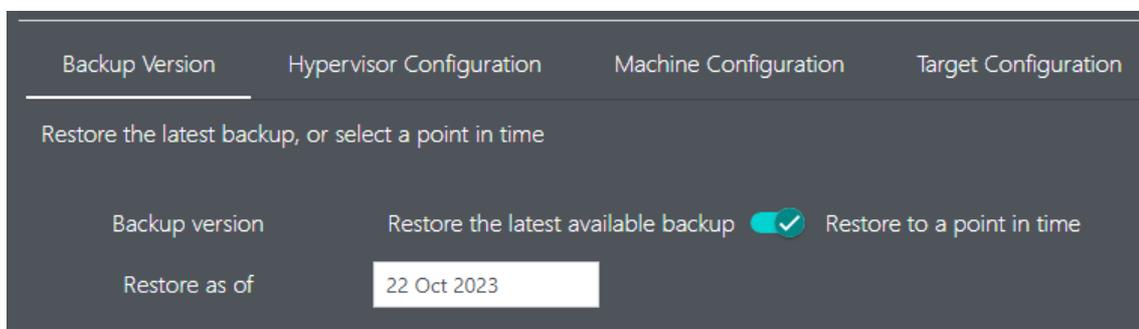


Backup Version tab

Here you can select a backup version - not just the latest version (the default). Click the slider to Restore to a point in time. This will display a new Date field where you can select a date.



Click on a date or manually enter one. Add a time as required.



Hypervisor Configuration tab

This tab allows the default settings for the Hypervisor to be set:



Backup Version Hypervisor Configuration Machine Configuration Target Configuration Dissimilar Hardware Boot Actions Advanced Configuration

You can override the default Hypervisor options below. Please note: The ISO is automatically populated and we do not recommend changing this field unless told to do so by Cristie Support

Please note: RDP needs to be enabled on the source machine prior to replication.

Datacenter (1)	<input type="text" value="softtestdatacenter"/>
Host (4)	<input type="text" value="10.10.18.81"/>
Folder (2)	<input type="text" value="Optional VM Folder"/>
VM Datastore (5)	<input type="text" value="Equalogic-DevTest"/>
ISO (60)	<input type="text" value="/cbmr-windows-pe10-late"/>
Controller Type	<input type="text" value="Auto Detect"/>
Network Adapter Type	<input type="text" value="VMXNET3"/>
Load Balance SCSI Controllers	<input type="checkbox"/>

Machine Configuration tab

Use this tab to set the recovered target machine configuration. The default is to copy the source machine OS and disk settings but it can be modified here.

Backup Version Hypervisor Configuration Machine Configuration Target Configuration Dissimilar Hardware Boot Actions Advanced Configuration

Customise your target machine configuration using the options below.

VM Name	<input type="text" value="RS-NP-Win2019"/>
BIOS	<input type="text" value="EFI"/>
OS	<input type="text" value="Windows 2019"/> <input type="text" value="x64"/>
RAM (MB)	<input type="text" value="6144"/>
CPU Count	<input type="text" value="2"/>

Boot Disk	<input type="text" value="4"/>
Disk Mapping	<input type="checkbox"/>
Override Disk Storage	<input type="checkbox"/>

Source Disks					
ID	Size (GB)	Type	Recover	Thin	
0	6	Local Disk	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1	9	Local Disk	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	5	Local Disk	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	8	Local Disk	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	60	Local Disk	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	4	Local Disk	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Target Configuration tab

Use this tab to set the recovered target machine hostname and network configuration. The default is to copy the equivalent source machine settings but it can be modified here.

Backup Version Hypervisor Configuration Machine Configuration Target Configuration Dissimilar Hardware Boot Actions Advanced Configuration

Customise the network configuration of the recovered system using the options below.

Hostname

DR Environment Networking Post Recovery Networking

Interface	IP	Subnet Mask	Gateway	DNS Server	DHCP	DHCP (VA)
0 (Intel(R) 82574L Gigabit Network Connection)	<input type="text" value="10.10.11.40"/>	<input type="text" value="255.0.0.0"/>	<input type="text" value="10.0.1.100"/>	<input type="text" value="10.0.1.108"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Dissimilar Hardware

This tab allows you to configure any additional drivers for dissimilar targets.

Click the slider to enable Dissimilar HardWare (DHW) mode. Then add a path to where the drivers can be found:

The screenshot shows the 'Dissimilar Hardware' tab in a software interface. At the top, there are navigation tabs: Backup Version, Hypervisor Configuration, Machine Configuration, Target Configuration, Dissimilar Hardware (selected), Boot Actions, and Advanced Configuration. Below the tabs, there is a heading: 'If you are recovering to dissimilar hardware, enter the driver path here.' The main content area contains a 'Dissimilar' section with a slider that is currently checked, indicating 'I am recovering to dissimilar hardware'. Below this, there are four input fields: 'Driver UNC path' with the value '\\10.1.1.60\test-scratch\nti', 'Username' with the value 'software\nigelp', and 'Password' with a masked value '*****'.

These drivers will be injected into the replication target system at boot.

Boot Actions tab

Use this tab to set the recovered target machine boot actions. The default is to leave the target as is for both successful and unsuccessful recoveries, but it can be modified here.

The screenshot shows the 'Boot Actions' tab in a software interface. At the top, there are navigation tabs: Backup Version, Hypervisor Configuration, Machine Configuration, Target Configuration, Dissimilar Hardware, Boot Actions (selected), and Advanced Configuration. Below the tabs, there is a heading: 'Specify what you want your system to do after it boots.' The main content area contains several settings: 'Boot Scripts' with a slider set to 'Run boot scripts'; 'After successful recovery' with a dropdown menu set to 'Reboot the target'; 'After unsuccessful recovery' with a dropdown menu set to 'Leave the target as it is'; 'Boot Ordering' with a slider set to 'Enabled'; 'Boot Order' with a text input field containing the value '1'; and 'Boot Delay (seconds)' with a text input field containing the value '30'.

Boot Order

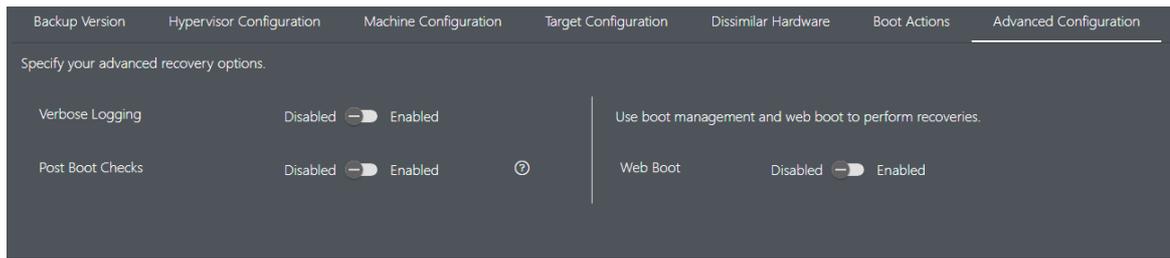
This setting allows the boot order of all machines in a job to be set. So when a job is booted the order and boot delay can be set. Default behaviour is to boot all machines in the job together which may not always be sensible.

To set the order move the slider to **Enabled** and then select the boot order of this target and delay. This is not necessary if the target is the only machine in the job.

Advanced Configuration

There are some Replication settings which do not need to be changed very frequently from their default values. They are grouped in this tab. You should consult Cristie Support for guidance before you change these settings.



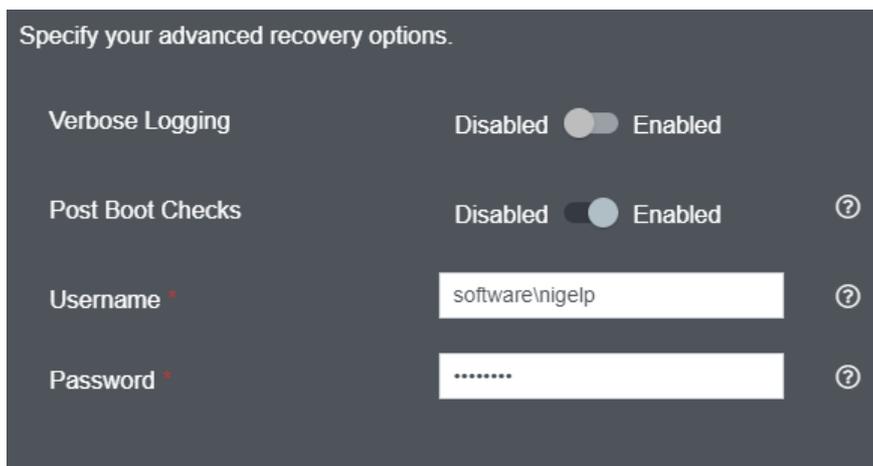


Verbose Logging

Enable **Verbose Logging** if you are having problems with the replication and have been directed to do so by **Cristie Support**. Otherwise leave this setting at Disabled.

Post Boot Checks

After a replication target has been booted its system integrity can be checked to give an indication that the booted system is viable. To do this enable the option and enter the target Login credentials.

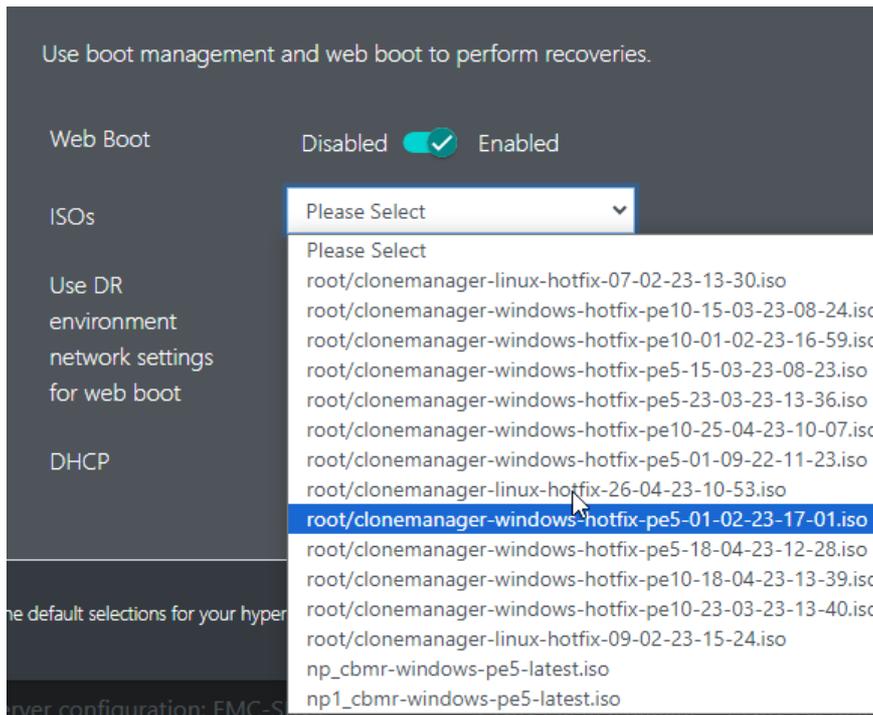


Note running these checks is not a guarantee of a useable recovered system.

Web Boot

This option allows a custom build replication ISO to be used for the target (this may have custom drivers or be a hotfix test ISO for example). Enable the option and then select the ISO from the drop-down.



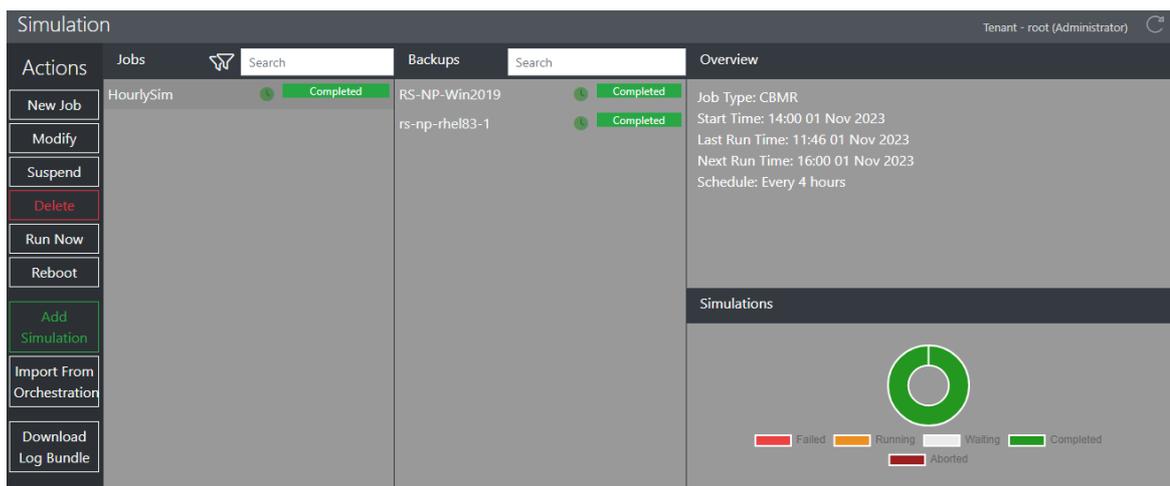


You may override the network settings of the selected ISO as required.

4.2.3 Run Simulations

With the Simulate job created and at least one recovery machine added to the job it will continue to restore simulations indefinitely until either manually booted, the job is suspended or the job or machine is deleted.

It is possible to add multiple simulation machines to the same job. The machines in the job do not need to be the same platform type. Here is an example with 1 Windows machine and 1 Linux machine.



There is no constraint on how many machines can be added to a job. Cristie suggests grouping machines in the same job where they need to be controlled together.

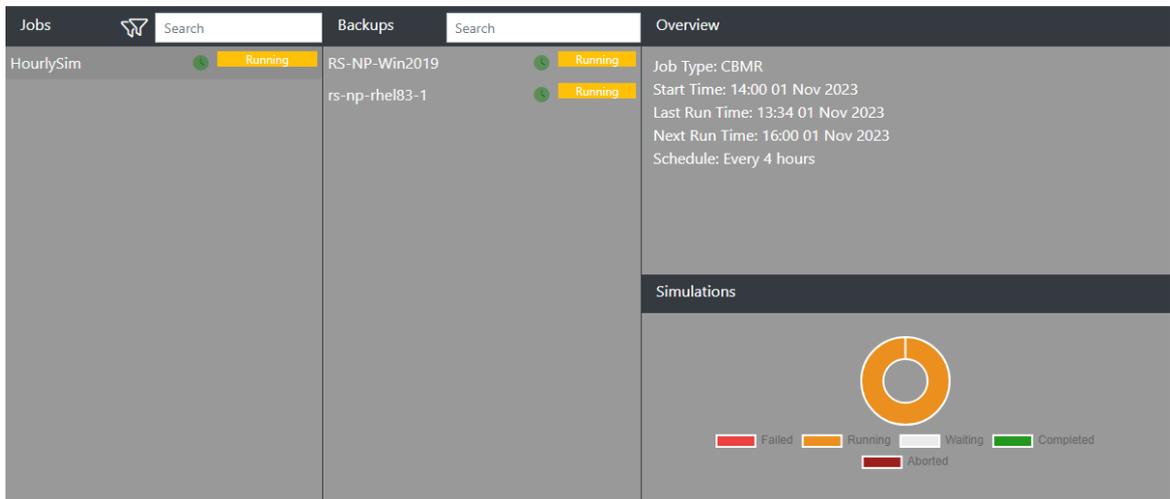
These are the job/machine icons you will see in the Backup section and their meanings.



-  - job or machine simulation suspended.
-  - job or machine RTO on target.
-  - job or machine RTO not on target.
-  - shown on the job - one or more machine recoveries has not met the specified RTO target.

4.2.3.1 Normal Operation

This is an example of simulations running.



You will also see the Alerts updated with the job progress:

Event	Source	Status	Details	Start Time	End Time	User
 Simulation	RS-NP-Win2019 → RS-NP-Win2019	In Progress	Configuring local disks	1 Nov 2023, 13:34:12		Administrator
 Simulation	rs-np-rhel83-1 → RS-np-rhel83-1	In Progress	Restore in progress: 80%	1 Nov 2023, 13:34:12		Administrator

The machines in the job will recover independently of each other and so will progress at different rates and finish at different times. When the recoveries are complete you will see this:



Jobs	Backups	Overview
HourlySim Completed	RS-NP-Win2019 Completed rs-np-rhel83-1 Completed	Job Type: CBMR Start Time: 14:00 01 Nov 2023 Last Run Time: 13:34 01 Nov 2023 Next Run Time: 16:00 01 Nov 2023 Schedule: Every 4 hours

Simulations

Failed Running Waiting Completed Aborted

The **Next Run Time** will now show an updated value on completion for the next run.

Job Overview

Certain job simulation statistics will be shown in the **Overview** section for a job. Click on the job of interest (not a machine). You will then see something like this:

Overview

Job Type: CBMR
Start Time: 14:00 01 Nov 2023
Last Run Time: 13:34 01 Nov 2023
Next Run Time: 16:00 01 Nov 2023
Schedule: Every 4 hours

The information shown is self-explanatory.

In the machines section for the job, you will be provided with a small pie-chart. This shows the break down of machines in the job and their current state.

Jobs	Backups	Overview
HourlySim Running	RS-NP-Win2019 Running rs-np-rhel83-1 Completed	Job Type: CBMR Start Time: 14:00 01 Nov 2023 Last Run Time: 13:34 01 Nov 2023 Next Run Time: 16:00 01 Nov 2023 Schedule: Every 4 hours

Simulations

Failed Running Waiting Completed Aborted

In the example shown the chart shows the state for the 2 machines in the job. One is **Running** and the other is **Complete**.



Machine Overview

Certain machine simulation statistics will be shown in the **Overview** section for a machine in a job. Click on the machine of interest (not the job). You will then see something like this:

Overview

Last Run Time: 13:34 01 Nov 2023
Next Run Time: 16:00 01 Nov 2023

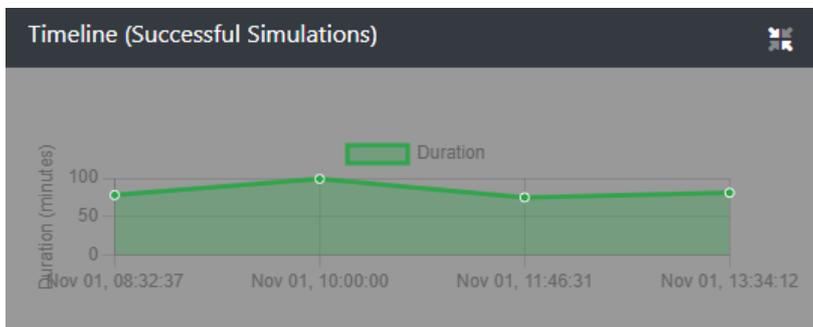
Hostname: RS-NP-Win2019
Target IP Address: 10.1.10.102
Target ISO: Version: 9.5.2
Target Type: vSphere

Status: Recovery successful
Progress: 100%
Throughput: 5 MB/s
Recovered: 455103 of 455103 files and 24084 of 24084 MB

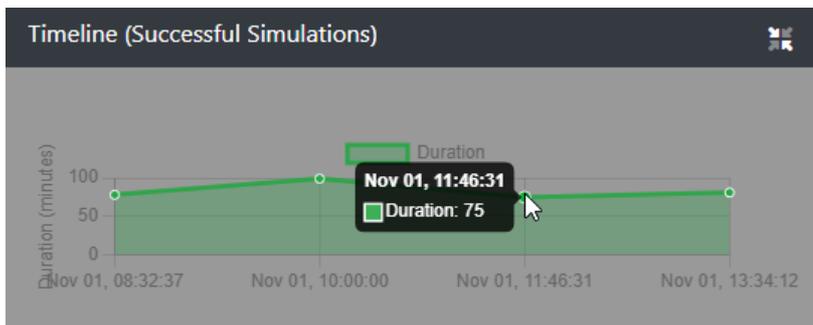
Disks to be recovered:
Disk 0 (6GB)

The information shown is self-explanatory.

In the machines section, when the machine has recovered a few times, you will be provided with a small graphical summary display of the duration of each backup (in green).



You can click on any of the simulation data points in the graph for further information on the recovery duration (in minutes).



4.2.4 Run Now

It's possible to bypass the scheduled simulations of either a job or an individual machine without disturbing the configured scheduling. This feature allows a user to create a new simulation on demand, say after a major update to a host.

To do this highlight either the complete job or the individual machine and click **Run Now**.

The screenshot shows the 'Simulation' management interface. On the left, there is an 'Actions' menu with several options: 'New Job', 'Modify', 'Suspend', 'Delete', 'Run Now', 'Reboot', 'Add Simulation', 'Import From Orchestration', and 'Download Log Bundle'. The 'Run Now' option is highlighted with a mouse cursor. The main area is divided into two columns: 'Jobs' and 'Backups'. Under 'Jobs', there is a single entry 'HourlySim' with a green 'Completed' status. Under 'Backups', there are two entries: 'RS-NP-Win2019' and 'rs-np-rhel83-1', both with green 'Completed' status. Search bars are present at the top of both columns.

You will then be prompted to confirm the action:

The screenshot shows a 'Run Job' confirmation dialog box. The title is 'Run Job' with a close button (X). The main text asks: 'Are you sure you wish to run HourlySim now?'. At the bottom, there are two buttons: 'Cancel' and 'Confirm'.

Click **Confirm** to proceed. The job or machine simulation will then be initiated. If a simulation is already running the Run Now request will be ignored.

An appropriate **Alert** will also be generated for the running simulations:

Event	Source	Status	Details	Start Time	End Time	User
Simulation	RS-NP-Win2019 → RS-NP-Win2019	In Progress	Creating VM	1 Nov 2023, 15:12:38		Administrator
Simulation	rs-np-rhel83-1 → RS-np-rhel83-1	In Progress	Creating VM	1 Nov 2023, 15:12:38		Administrator

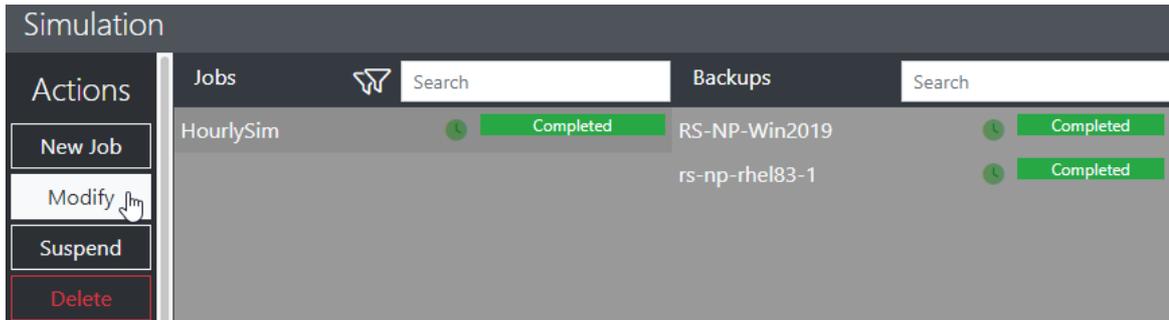


4.2.5 Modify

This option allows certain settings for the simulation job or any of its associated machines to be changed.

4.2.5.1 Job Settings

To modify a whole job (note simulations for all machines in the job will be affected in this case), click on the job and then the **Modify Job** button.



You will then see the current scheduling settings.

Modify the job **Name** if required.

The Product cannot be changed.

Modify the simulation job **Frequency** and the **Interval**. The frequency/interval can be set as summarised in the table below.



Frequency	Description
Once	Run once only at the specified date and time
Hourly	Backups run every user specified number of hours at a selected time
Daily	Backups run every user selected number of days at a selected time
Weekly	Backups run on specific user selected day(s) of the week (Monday/ Tuesday etc.) at a selected time
Monthly	Backups run only on a specified day of the month at a selected time

You may also specify when the next backup run will occur.

Starting On: 01 Nov 2023

At: 14 : 00

Now click **Save** to modify the job.

4.2.5.2 Machine Settings

To modify the settings for a single machine in a job click on the machine and then the **Modify** button.

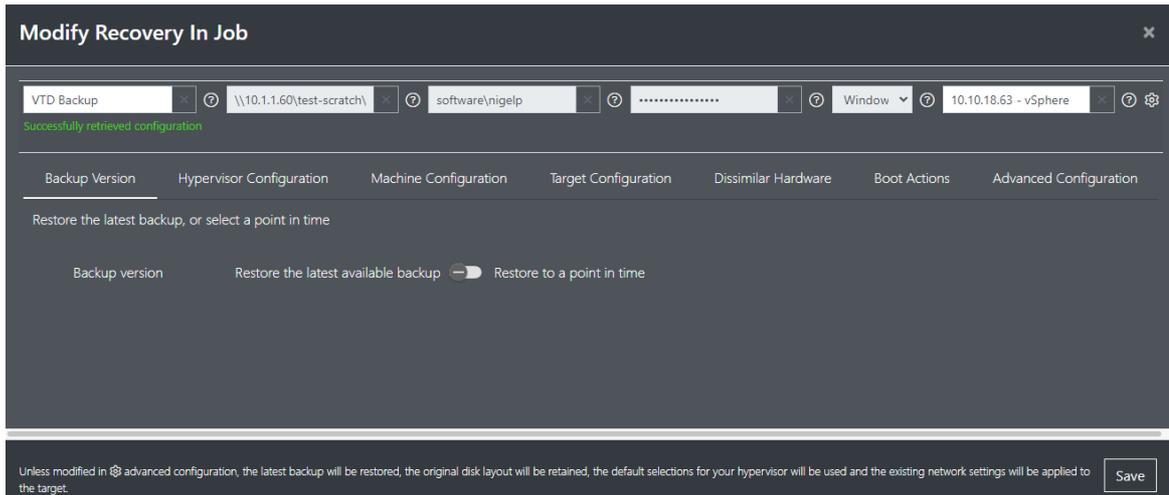
Simulation

Jobs Backups

Actions	Jobs	Backups
Run Now	HourlySim	RS-NP-Win2019
Modify		rs-np-rhel83-1
Suspend		
Remove		
Reboot		
View Logs		
Download Log Bundle		

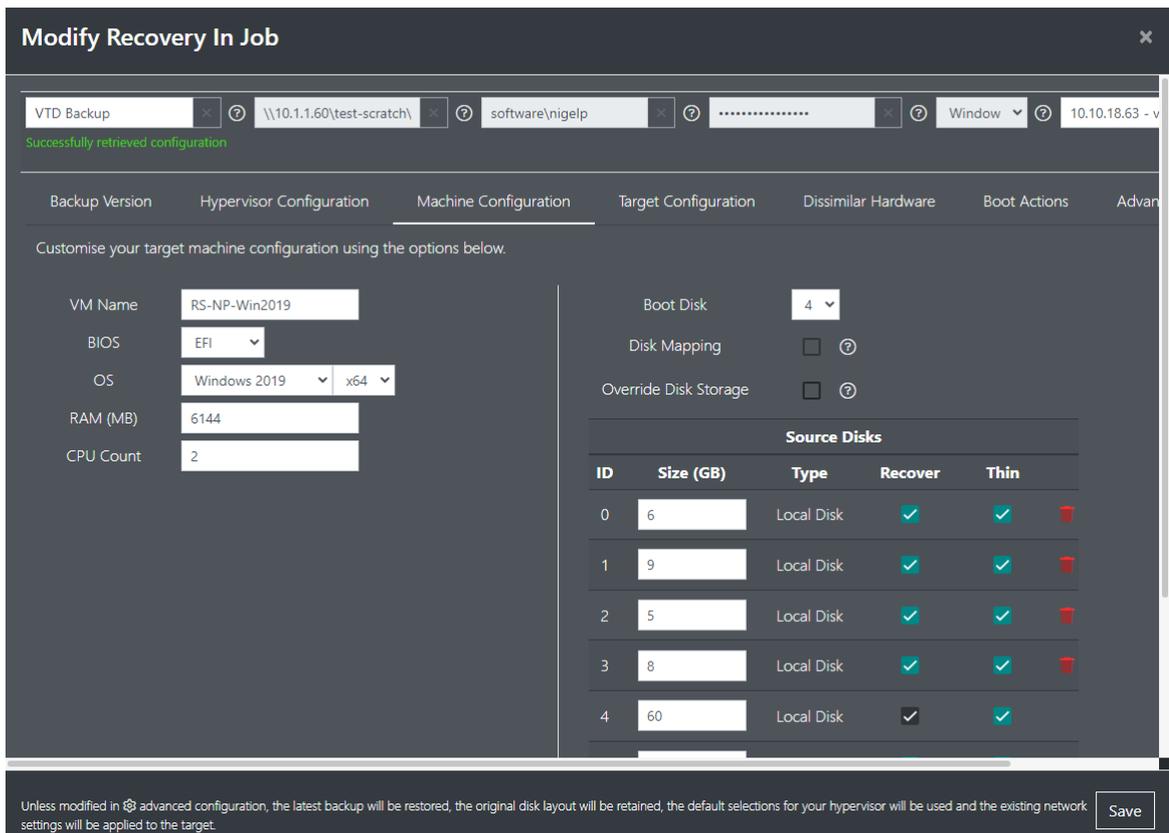
The selected machine backup configuration will be restored and this dialogue displayed.





Re-add the storage location password and then click the advanced settings icon . Click on any of the settings tabs and make the changes you require.

Advanced settings is described in the section [Advanced Configuration](#) under [Add Recovery to Job](#).



Click  to confirm and save your changes.



4.2.6 Suspend/Resume

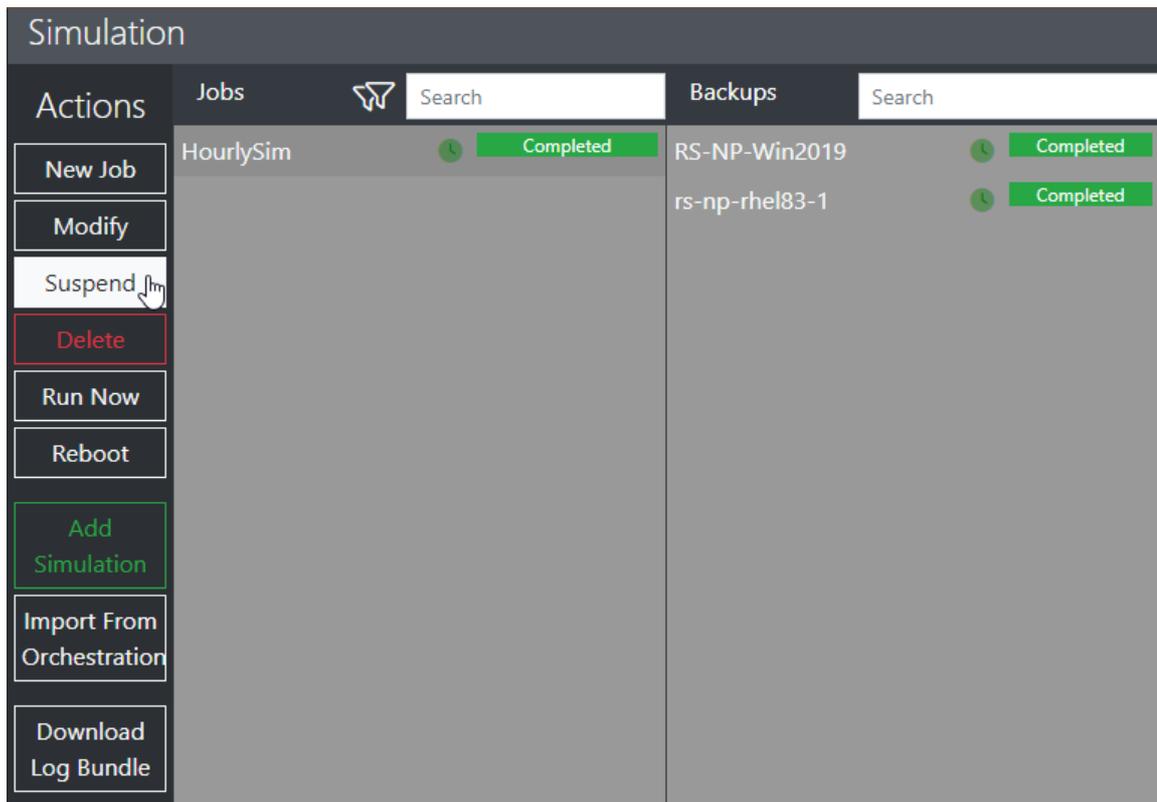
With a simulation job running normally you may wish to temporarily suspend the whole job or one of the machines associated with the job. This may be required for example if the target Hypervisor host is to undergo temporary maintenance.

Simulations can then be resumed when the maintenance is finished.

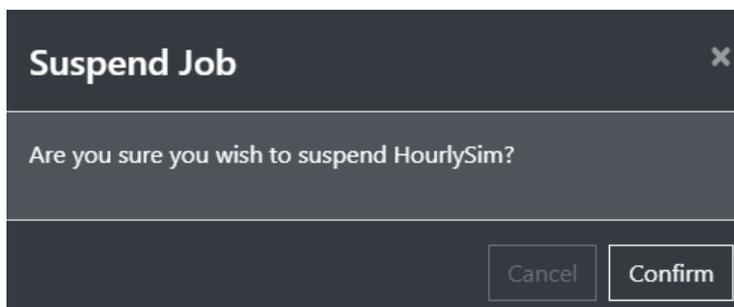
4.2.6.1 Whole Job

Suspend

To suspend a whole job (note simulations for all machines in the job will be suspended in this case), click on the job and then the **Suspend** button.



You will then be prompted to confirm the suspension.

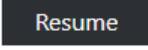


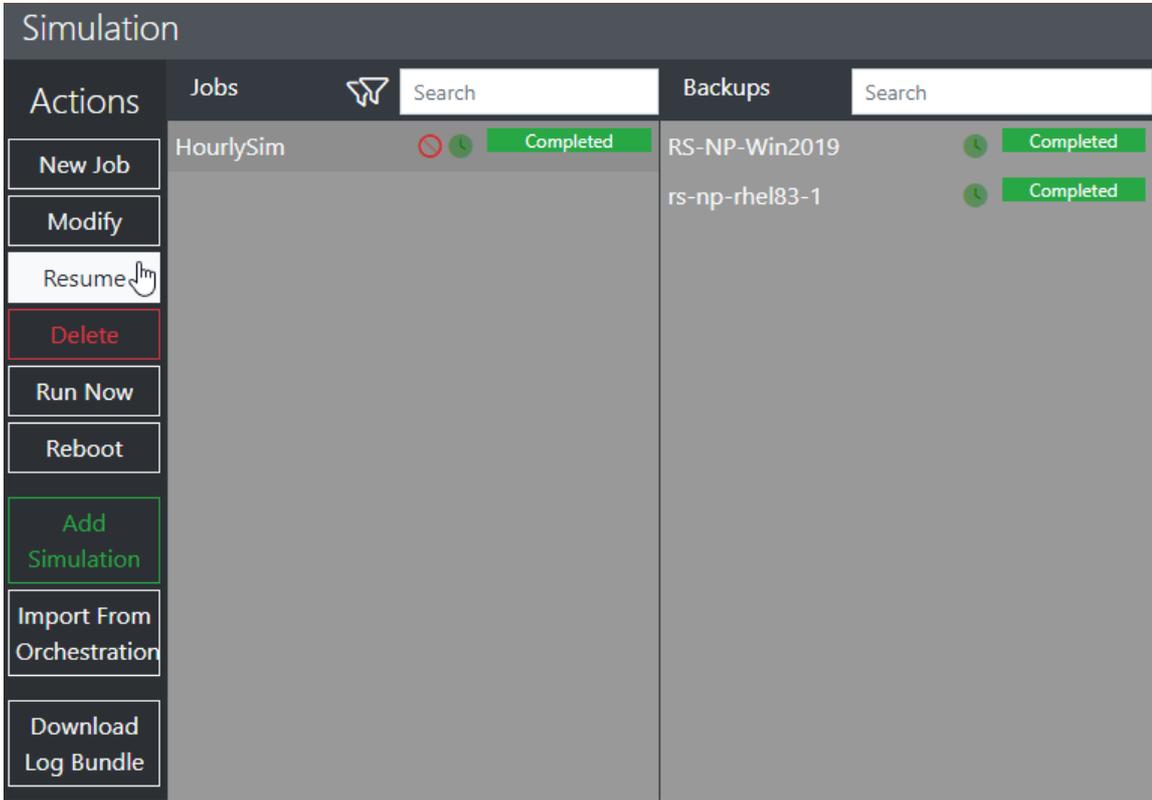
Click **Confirm** to proceed. The job will then be disabled and this indication  will be shown on the job.



Note: Attempting to Suspend a running job will only take effect when the job completes.

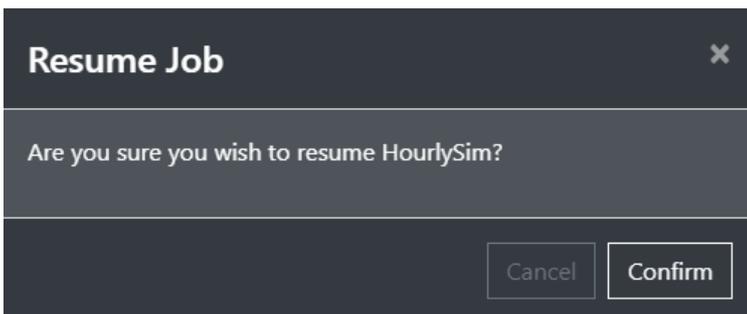
Resume

To resume a suspended job click on the job and then click .



The screenshot shows the 'Simulation' interface with two main sections: 'Jobs' and 'Backups'. The 'Jobs' section has a search bar and a list of jobs. The 'HourlySim' job is highlighted, and its status is 'Completed' with a green bar. The 'Backups' section also has a search bar and a list of backups. The 'RS-NP-Win2019' and 'rs-np-rhel83-1' backups are listed, both with 'Completed' status and green bars. On the left side, there is an 'Actions' menu with buttons for 'New Job', 'Modify', 'Resume', 'Delete', 'Run Now', 'Reboot', 'Add Simulation', 'Import From Orchestration', and 'Download Log Bundle'. The 'Resume' button is highlighted with a mouse cursor.

You will then be prompted to confirm the job resumption.



The screenshot shows a 'Resume Job' dialog box with a close button (X) in the top right corner. The text inside the dialog asks: 'Are you sure you wish to resume HourlySim?'. At the bottom of the dialog, there are two buttons: 'Cancel' and 'Confirm'.

Click  to proceed. The job will then be resumed and all machines will begin running simulations at the next scheduled date/time. The indication  on the job will be removed.

You will also see Alerts associated with the job Suspend/Resume activity.



Event	Source	Status	Details	Start Time	End Time	User
Simulation		Completed	HourlySim was enabled successfully	1 Nov 2023, 17:08:31	1 Nov 2023, 17:08:31	Administrator
Simulation		Completed	HourlySim was disabled successfully	1 Nov 2023, 17:07:27	1 Nov 2023, 17:07:27	Administrator

4.2.6.2 Individual Machine

Suspend

To suspend one machine in a job, click on the machine and then the **Suspend** button.

The screenshot shows the 'Simulation' interface with a 'Jobs' tab selected. The 'HourlySim' job is shown with a 'Completed' status. The 'Actions' menu is open, and the 'Suspend' button is highlighted with a mouse cursor. Other buttons in the menu include 'Run Now', 'Modify', 'Remove', 'Reboot', 'View Logs', and 'Download Log Bundle'. The 'Backups' tab is also visible, showing two backup entries: 'RS-NP-Win2019' and 'rs-np-rhel83-1', both with 'Completed' status.

You will then be prompted to confirm the suspension.

The screenshot shows a 'Suspend Machine' dialog box. The text inside the dialog asks: 'Are you sure you wish to suspend RS-NP-Win2019 in job HourlySim?'. At the bottom of the dialog, there are two buttons: 'Cancel' and 'Confirm'.

Click **Confirm** to proceed. The job will then be disabled and this indication  will be shown on the job.

Note: Attempting to Suspend a running job will only take effect when the job completes.

Resume

To resume a suspended job click on the job and then click **Resume**.



The screenshot shows the 'Simulation' interface with two main sections: 'Jobs' and 'Backups'. The 'Jobs' section has a search bar and a list of jobs. The 'Backups' section also has a search bar and a list of backups. The 'Resume' button in the 'Actions' menu is highlighted with a mouse cursor.

Actions	Jobs	Backups
Run Now	HourlySim 🕒 Completed	RS-NP-Win2019 🕒 Completed
Modify		rs-np-rhel83-1 🕒 Completed
Resume 👤		
Remove		
Reboot		
View Logs		
Download Log Bundle		

You will then be prompted to confirm the job resumption.

The 'Resume Machine' dialog box asks for confirmation to resume the job 'RS-NP-Win2019' in the job 'HourlySim'. It includes 'Cancel' and 'Confirm' buttons.

Click **Confirm** to proceed. The job will then be resumed and all machines will begin running simulations at the next scheduled date/time. The indication 🕒 on the job will be removed.

You will also see Alerts associated with the job Suspend/Resume activity.

Event	Source	Status	Details	Start Time	End Time	User
Simulation	RS-NP-Win2019	Completed	RS-NP-Win2019 was enabled successfully in job HourlySim	1 Nov 2023, 17:14:16	1 Nov 2023, 17:14:16	Administrator
Simulation	RS-NP-Win2019	Completed	RS-NP-Win2019 was disabled successfully in job HourlySim	1 Nov 2023, 17:11:54	1 Nov 2023, 17:11:54	Administrator

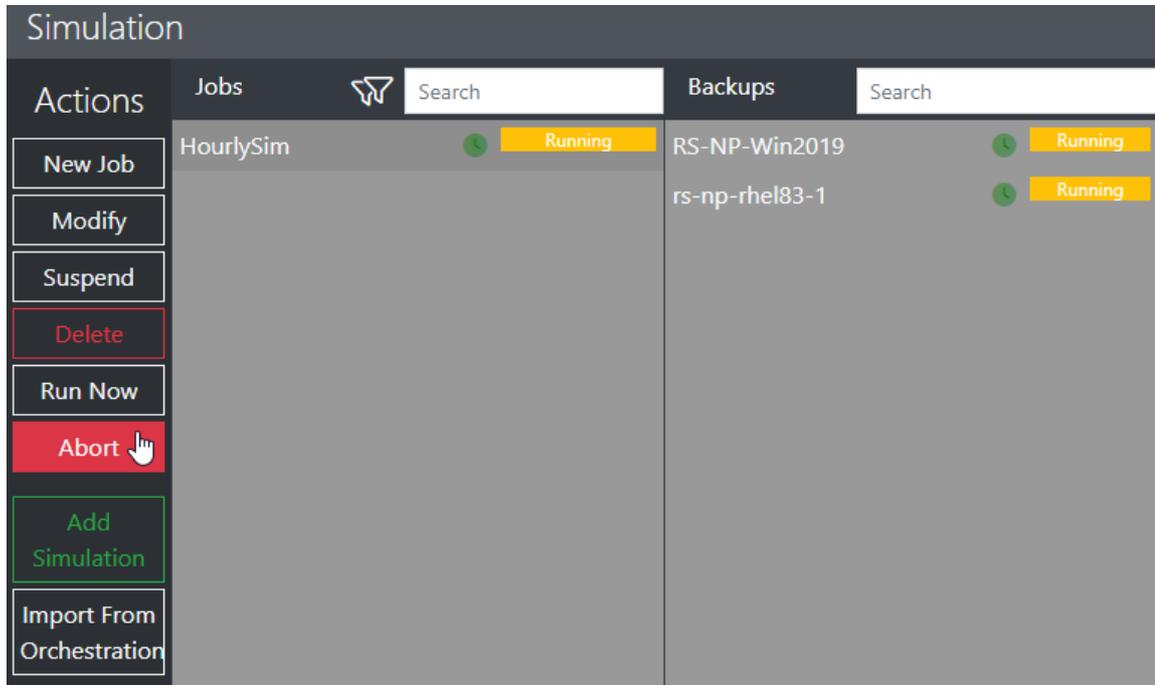
4.2.7 Abort

While a simulation is running it is possible to abort the operation before it completes if necessary. As a consequence the target VM or VMs will be deleted since it or they would now be in an inconsistent state.

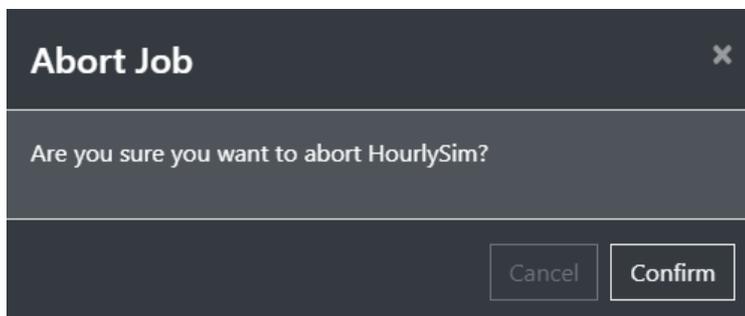


4.2.7.1 Whole Job

To abort simulations for a whole job (note all machines in the job will be be aborted), click on the job and then the **Abort** button.



You will then be prompted to confirm the abort action.



Click **Confirm** to proceed. Any simulations currently in progress for the selected job and its associated machines will then be stopped. The associated target VMs will be deleted.



You will also see an Alerts of this form:

Event	Source	Status	Details	Start Time	End Time	User
Delete VM	RS-NP-Win2019	Completed	Deleted VM	1 Nov 2023, 15:15:36	1 Nov 2023, 15:15:36	Virtual Appliance
Delete VM	RS-np-rhel83-1	Completed	Deleted VM	1 Nov 2023, 15:15:34	1 Nov 2023, 15:15:34	Virtual Appliance
Aborting Operation	VA → RS-NP-Win2019	Completed	Simulation aborted successfully	1 Nov 2023, 15:15:31	1 Nov 2023, 15:15:36	Administrator
Aborting Operation	VA → RS-np-rhel83-1	Completed	Simulation aborted successfully	1 Nov 2023, 15:15:31	1 Nov 2023, 15:15:34	Administrator

Note: Scheduled simulations for the aborted job and its associated machines will continue to run at the next scheduled time. New target VMs will be created.

4.2.7.2 Individual Machine

To abort the simulation for a single machine from a job click on the machine and then the

Abort

button. Note the machine must be in the **Running** state for this to work.



The screenshot shows the 'Simulation' interface. On the left, there is an 'Actions' menu with buttons for 'Run Now', 'Modify', 'Suspend', 'Abort', and 'View Logs'. The 'Abort' button is highlighted in red. The main area is divided into 'Jobs' and 'Backups' sections. Under 'Jobs', there is a table with one entry: 'HourlySim' with a green clock icon and a yellow 'Running' label. Under 'Backups', there are two entries: 'RS-NP-Win2019' and 'rs-np-rhel83-1', both with green clock icons and yellow 'Running' labels.

You will then be prompted to confirm the abort action.

The screenshot shows a dialog box titled 'Abort Job'. The text inside asks: 'Are you sure you want to abort RS-NP-Win2019 now?'. At the bottom, there are two buttons: 'Cancel' and 'Confirm'.

Click **Confirm** to proceed. The simulation for the selected machine will then be stopped and the associated target VM will be deleted. If other machines are associated with the job they will continue to run simulations normally.

The screenshot shows the 'Simulation' interface after the abort action. The 'Actions' menu now includes 'Remove' and 'Reboot' buttons. In the 'Jobs' section, 'HourlySim' is still 'Running'. In the 'Backups' section, 'RS-NP-Win2019' is now 'Aborted' (indicated by a red clock icon and a red 'Aborted' label), while 'rs-np-rhel83-1' remains 'Running'.

You will also see an Alerts of this form:

Event	Source	Status	Details	Start Time	End Time	User
Delete VM	RS-NP-Win2019	Completed	Deleted VM	1 Nov 2023, 15:20:39	1 Nov 2023, 15:20:39	Virtual Appliance
Aborting Operation	VA → RS-NP-Win2019	Completed	Simulation aborted successfully	1 Nov 2023, 15:20:27	1 Nov 2023, 15:20:39	Administrator



Note: Scheduled simulations for the aborted machine will continue to run at the next scheduled time. A new target VM will be created.

4.2.8 Delete

When you no longer need to run simulations for either a complete job or an individual machine it can be removed from the Cristie VA.

4.2.8.1 Whole Job

To delete a whole job (note all machines in the job will be deleted), click on the job and then the **Delete** button.

The screenshot shows the 'Simulation' management interface. On the left is an 'Actions' menu with buttons for 'New Job', 'Modify', 'Suspend', 'Delete', 'Run Now', 'Reboot', 'Add Simulation', 'Import From Orchestration', and 'Download Log Bundle'. The 'Delete' button is highlighted with a mouse cursor. The main area is divided into 'Jobs' and 'Backups' sections, both with search bars. Under 'Jobs', there is one entry: 'HourlySim' with a green 'Completed' status. Under 'Backups', there are two entries: 'RS-NP-Win2019' and 'rs-np-rhel83-1', both with green 'Completed' status.

You will then be prompted to confirm the deletion.

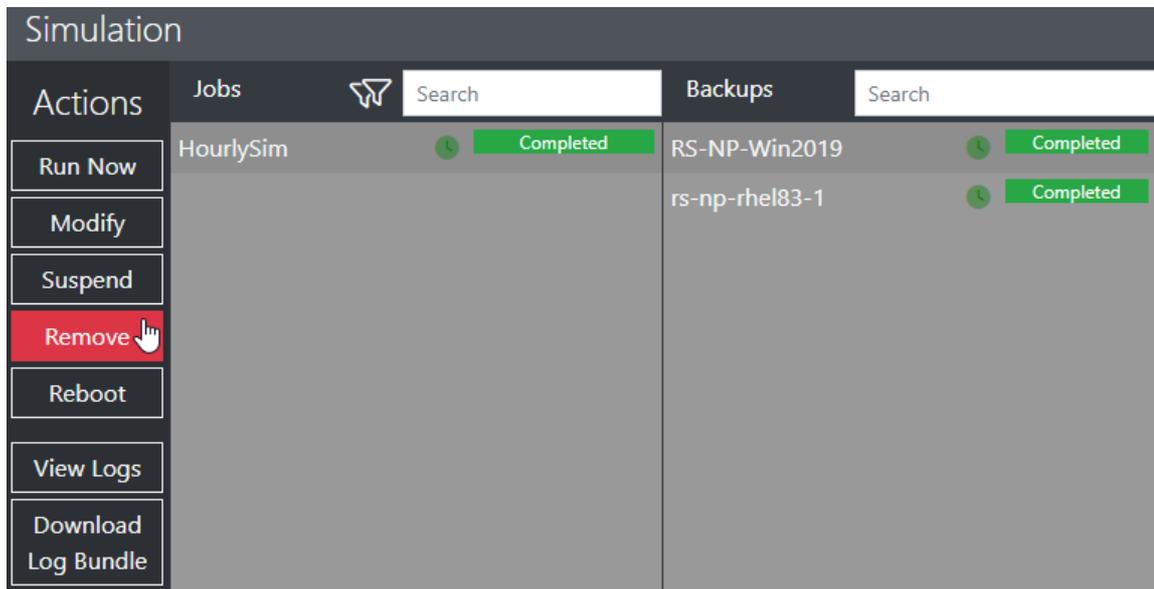
The screenshot shows a 'Delete Job' dialog box with a close button (X) in the top right corner. The text inside the dialog asks: 'Are you sure you wish to delete HourlySim?'. At the bottom of the dialog are two buttons: 'Cancel' and 'Confirm'.

Click **Confirm** to proceed. The job and its associated machines will then be deleted.



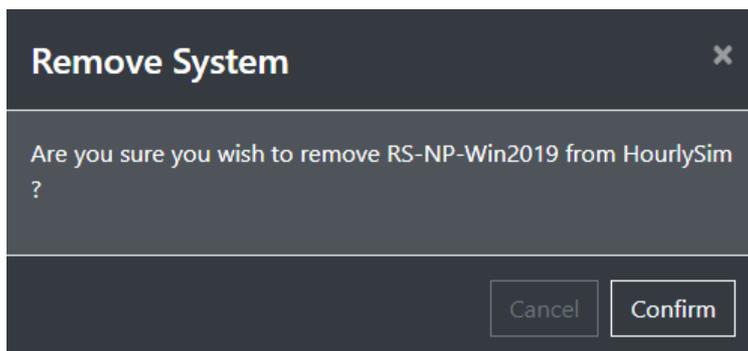
4.2.8.2 Individual Machine

To delete a single machine from a job click on the machine and then the **Remove** button.



The screenshot shows a 'Simulation' interface with a table of jobs and machines. The 'Actions' column on the left contains buttons for 'Run Now', 'Modify', 'Suspend', 'Remove', 'Reboot', 'View Logs', and 'Download Log Bundle'. The 'Jobs' column shows 'HourlySim' with a green 'Completed' status. The 'Backups' column shows two machines: 'RS-NP-Win2019' and 'rs-np-rhel83-1', both with green 'Completed' status. A mouse cursor is hovering over the 'Remove' button in the 'Actions' column.

You will then be prompted to confirm the deletion.



The screenshot shows a 'Remove System' dialog box with a close button (X) in the top right corner. The text inside the dialog asks: 'Are you sure you wish to remove RS-NP-Win2019 from HourlySim?'. At the bottom of the dialog are two buttons: 'Cancel' and 'Confirm'.

Click **Confirm** to proceed. The machine will then be removed from the job. If other machines are associated with the job they will continue to run simulations normally.

4.2.9 Reboot

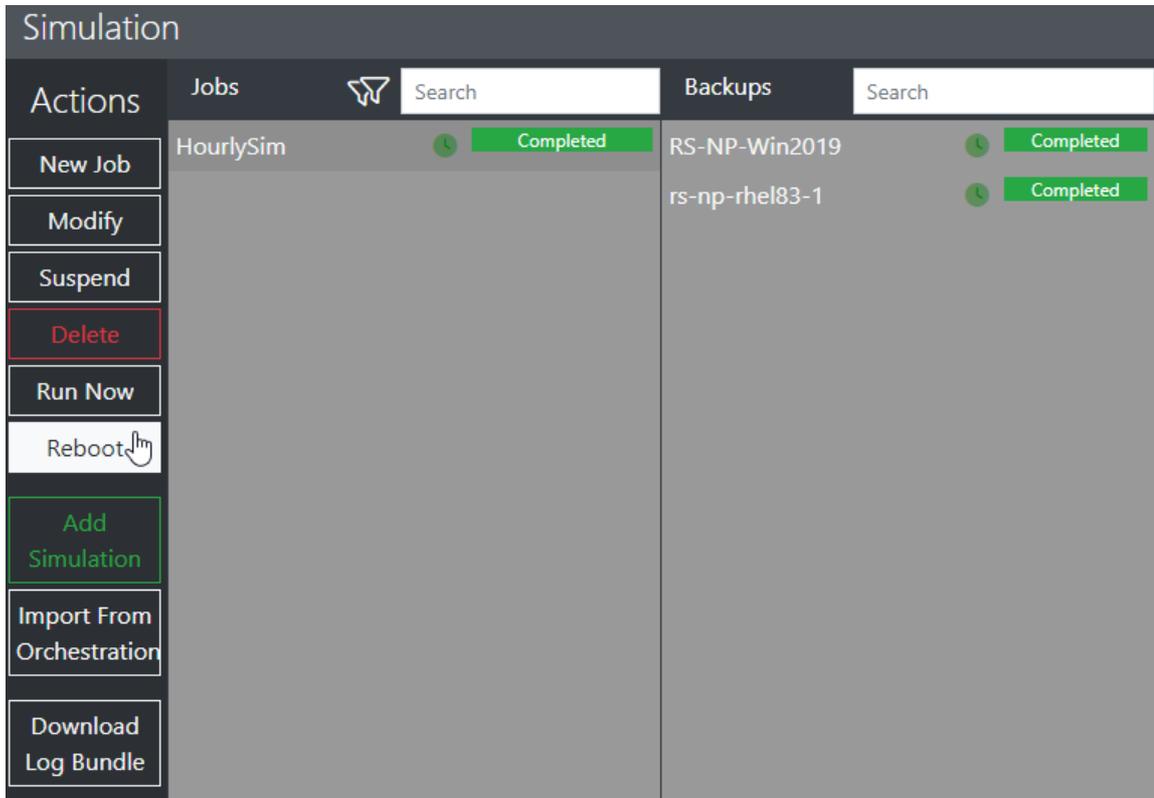
After a simulation has completed either the job or a selected machine in the job can be booted using the **Reboot** action.

Note: If you reboot the target and still have the original source machine active there could be either a hostname or a network IP address conflict when the target boots.



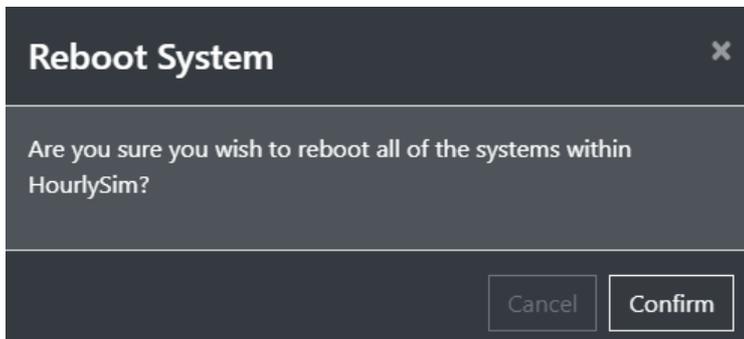
4.2.9.1 Whole Job

To boot all machines in a job, click on the job and then the **Reboot** button.



The screenshot shows the 'Simulation' interface. On the left, there is an 'Actions' sidebar with buttons for 'New Job', 'Modify', 'Suspend', 'Delete', 'Run Now', 'Reboot', 'Add Simulation', 'Import From Orchestration', and 'Download Log Bundle'. The 'Reboot' button is highlighted with a mouse cursor. The main area is divided into 'Jobs' and 'Backups' sections. Under 'Jobs', there is a table with one entry: 'HourlySim' with a green 'Completed' status. Under 'Backups', there are two entries: 'RS-NP-Win2019' and 'rs-np-rhel83-1', both with green 'Completed' status.

You will then be prompted to confirm the boot operation.



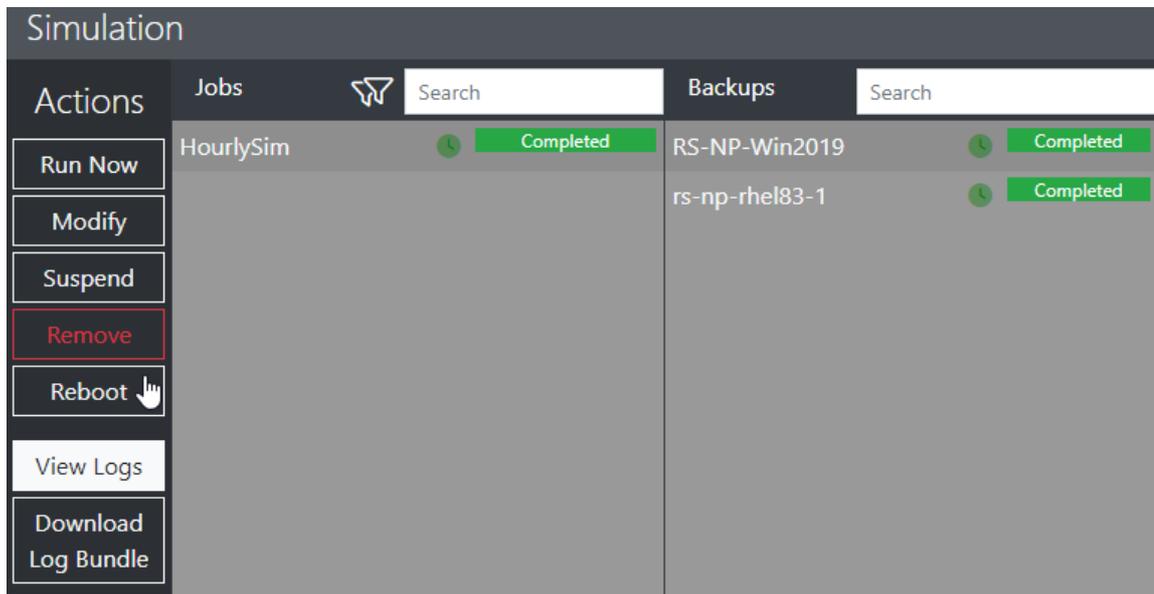
The screenshot shows a 'Reboot System' dialog box. The title bar says 'Reboot System' with a close button. The main text asks: 'Are you sure you wish to reboot all of the systems within HourlySim?'. At the bottom, there are two buttons: 'Cancel' and 'Confirm'.

Click **Confirm** to proceed. The job will be suspended and all its associated machines will then be booted.



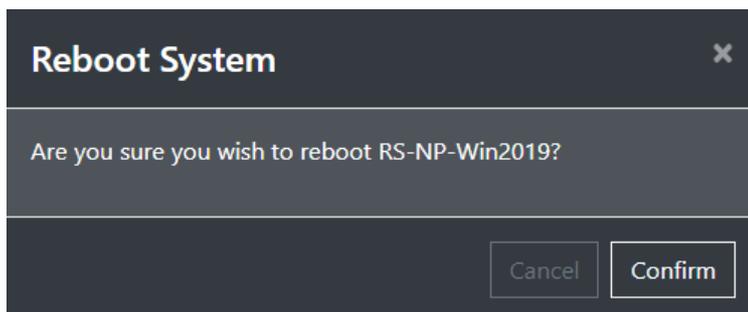
4.2.9.2 Individual Machine

To boot a single machine from a job click on the machine and then the **Reboot** button.



The screenshot shows a 'Simulation' interface with a table of jobs and backups. The 'Actions' column on the left contains buttons: Run Now, Modify, Suspend, Remove, Reboot (highlighted with a mouse cursor), View Logs, and Download Log Bundle. The table has columns for Jobs and Backups, each with a search bar. The 'Jobs' column shows 'HourlySim' with a green 'Completed' status. The 'Backups' column shows 'RS-NP-Win2019' and 'rs-np-rhel83-1', both with green 'Completed' status.

You will then be prompted to confirm the boot operation.



The dialog box is titled 'Reboot System' and contains the text 'Are you sure you wish to reboot RS-NP-Win2019?'. At the bottom, there are two buttons: 'Cancel' and 'Confirm'.

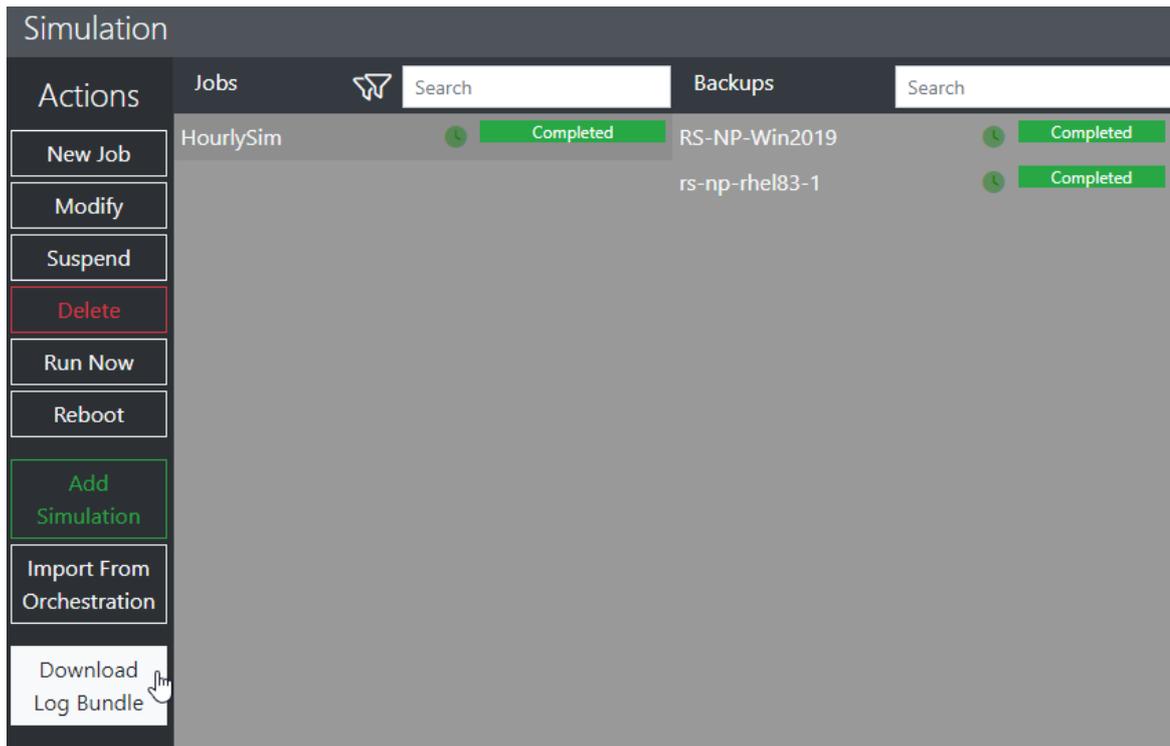
Click **Confirm** to proceed. The machine will then be booted and suspended from the job. If other machines are associated with the job they will continue to run simulations normally.

4.2.10 Download Log Bundle

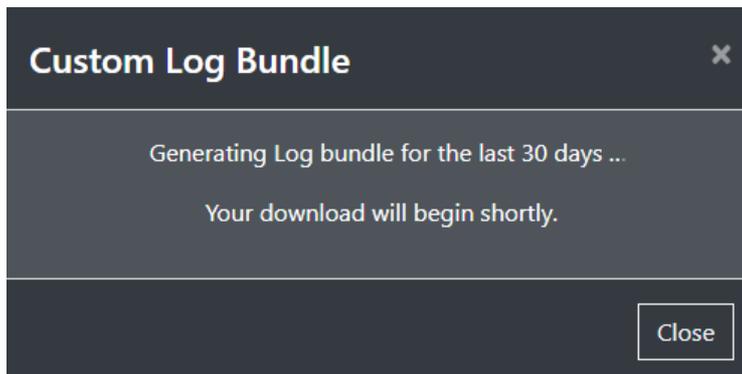
Select **Download Log Bundle** to generate a complete set of entire Cristie VA logs in ZIP file format. By default this bundle will contain log files for the last 30 days. However this can be changed in [Options/Advanced Settings](#).

To generate a log bundle for all machines in a job, click on the job and then the **Download Log Bundle** button.

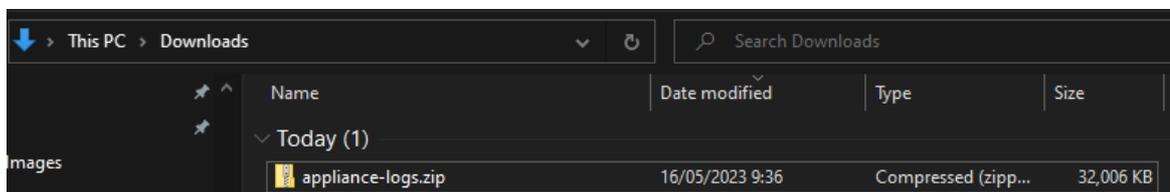




Once selected the bundle will be generated but may take a little time if the logs are large:



Once created the ZIP file will be downloaded to your configured browser downloads folder.



This file may be needed by Cristie Support when trying to diagnose any replication issues.

4.2.11 View Logs

This feature applies only to machines - not jobs.

To download logs corresponding to a simulation run this highlight the individual machine and click

View Logs

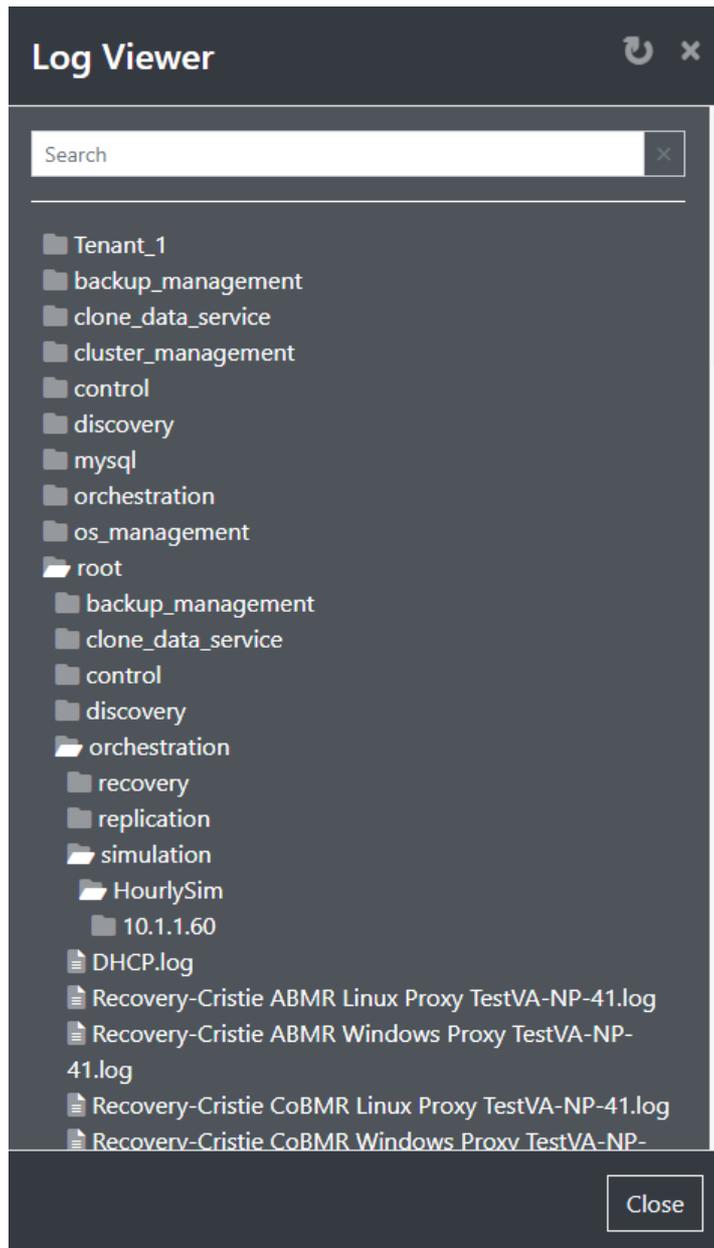


The screenshot displays a web interface for managing simulations. At the top, there is a 'Simulation' header. Below it, the interface is divided into two main sections: 'Jobs' and 'Backups'. Each section has a search bar and a list of simulation entries. The 'Jobs' section shows a single entry 'HourlySim' with a status of 'Completed'. The 'Backups' section shows two entries: 'RS-NP-Win2019' and 'rs-np-rhel83-1', both with a status of 'Completed'. On the left side, there is a vertical 'Actions' menu with buttons for 'New Job', 'Modify', 'Suspend', 'Delete', 'Run Now', 'Reboot', 'Add Simulation', 'Import From Orchestration', and 'Download Log Bundle'. A mouse cursor is hovering over the 'Run Now' button.

Actions	Jobs	Backups
New Job	HourlySim Completed	RS-NP-Win2019 Completed
Modify		rs-np-rhel83-1 Completed
Suspend		
Delete		
Run Now		
Reboot		
Add Simulation		
Import From Orchestration		
Download Log Bundle		

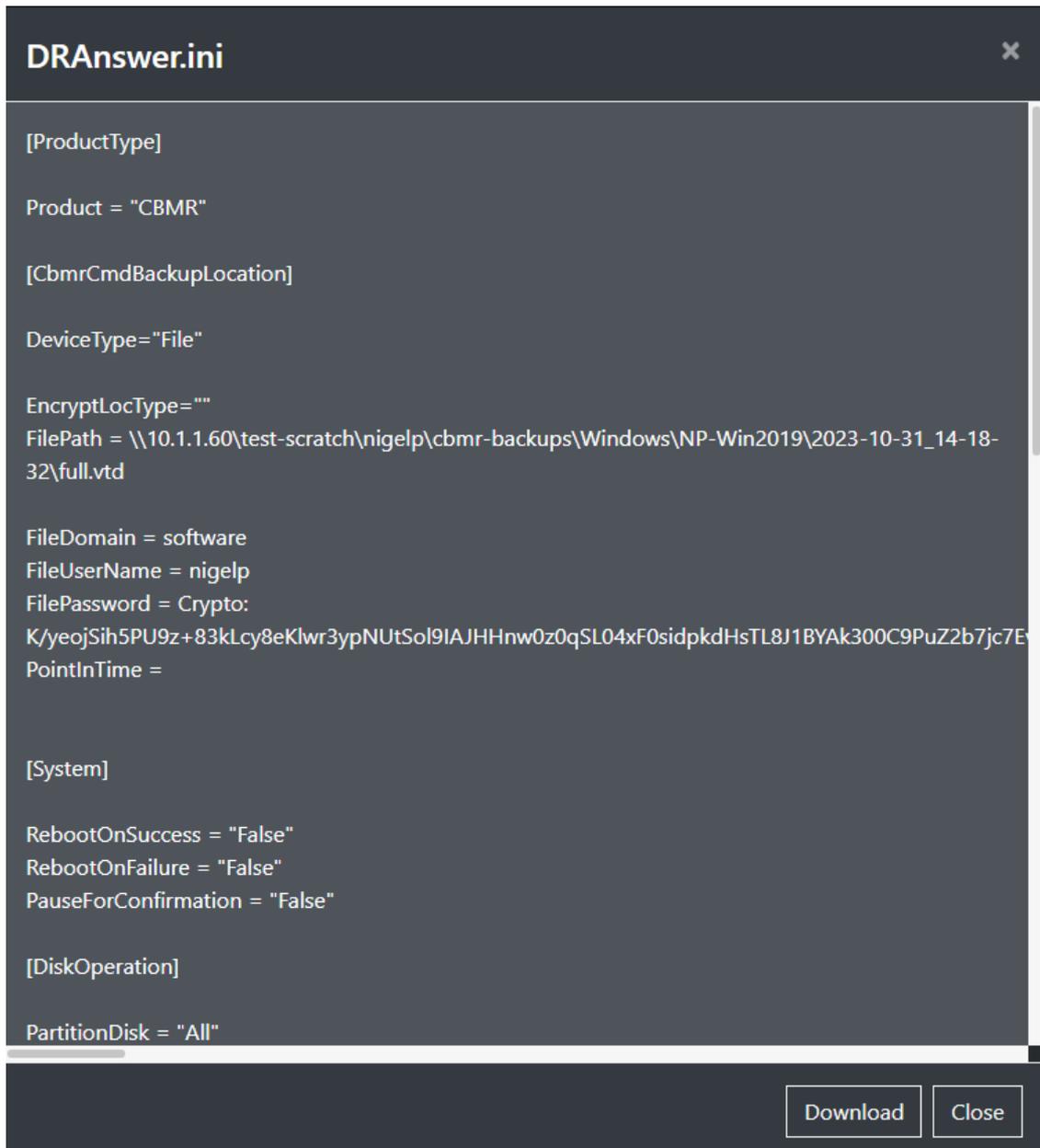
This will display a View Logs dialogue open at the files corresponding to the selected simulation machine:





At this point you can click a particular log file to view:





```
[ProductType]

Product = "CBMR"

[CbmrCmdBackupLocation]

DeviceType="File"

EncryptLocType=""
FilePath = \\10.1.1.60\test-scratch\nigelp\cbmr-backups\Windows\NP-Win2019\2023-10-31_14-18-32\full.vtd

FileDomain = software
FileUserName = nigelp
FilePassword = Crypto:
K/yeojSih5PU9z+83kLcy8eKlwr3ypNUtSol9IAJHHnw0z0qSL04xF0sidpkdHsTL8J1BYAk300C9PuZ2b7jc7E
PointInTime =

[System]

RebootOnSuccess = "False"
RebootOnFailure = "False"
PauseForConfirmation = "False"

[DiskOperation]

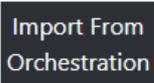
PartitionDisk = "All"
```

This file can also be downloaded to your browser's default download folder.

Click  to exit.

4.2.12 Import from Orchestration

You may import an existing recovery task from an Orchestration job as a new machine into an existing Recovery job .

To do this select an existing Recovery job and then click . This brings up a dialogue where you can select the recovery task from the Orchestration.



Import From Orchestration ✕

Select an existing orchestration recovery to import.
To ensure this test is as reliable as possible, only the target and post recovery networking can be changed. Everything else will be as specified in the Orchestration Job.

New 1 New

Select orchestration recovery Target ✕

Save

Select the recovery task from the drop-down list and then configure the recovery parameters:

Import From Orchestration ✕

Select an existing orchestration recovery to import.
To ensure this test is as reliable as possible, only the target and post recovery networking can be changed. Everything else will be as specified in the Orchestration Job.

Orch-Win2019 - New

Select orchestration recovery Orch-Win2019 ✕

Select Target 10.10.18.63 - vSphere ✕

Datacenter (1) softtestdatacenter ✕

Host (4) 10.10.18.81 ✕

Folder (2) Optional VM Folder ✕ ?

VM Datastore (5) Equalogic-DevTest ✕

Controller Type Auto Detect ?

Network Adapter Type VMXNET3 ?

Load Balance SCSI Controllers ?

Hostname Orch-Win2019

DR Environment Networking
Post Recovery Networking

Add
Revert

Interface	Network	IP	Subnet Mask	Gateway	DNS Server	DHCP	DHCP (VA)
0 (Intel(R) 82574L Gigabit Network Connection)	VM Network	10.10.11.40	255.0.0.0	10.0.1.100	10.0.1.108	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Save

Finally click Save to save the recovery. The machine will then be added to the Recovery job:



The screenshot shows a 'Simulation' interface with a sidebar of actions and a main table. The sidebar includes buttons for 'New Job', 'Modify', 'Suspend', 'Delete', 'Run Now', 'Reboot', 'Add Simulation', 'Import From Orchestration', and 'Download Log Bundle'. The main table has two columns: 'Jobs' and 'Backups'. The 'Jobs' column lists 'HourlySim' with a 'Completed' status. The 'Backups' column lists 'RS-NP-Win2019' (Completed), 'rs-np-rhel83-1' (Completed), and 'Orch-Win2019' (Waiting).

Jobs	Backups
HourlySim	RS-NP-Win2019
	rs-np-rhel83-1
	Orch-Win2019

Note: Only the target and post recovery networking can be changed for the new recovery. Everything else remains as configured in the source Orchestration task.

4.3 DHCP Not Available

By default new BMR recovery or replication target VMs are created with the assumption that DHCP is available in the network. Where DHCP is not available in a customer network static IPs must be used instead throughout the recovery/replication sequence.

In this case recovery requires a different approach and can be performed by creating a Custom BMR DR/Replication ISO and selecting this during a standard Recover/Simulation operation.

4.3.1 Use a Custom ISO with Pre-Defined Network Configuration

Use this option to create a custom ISO with a pre-defined network configuration including a static IP address. When you use this ISO no manual network configuration is required post-boot.

There are 3 steps required to create and use a custom ISO.

- 1. Create a custom ISO boot image for the recovery.**
- 2. Run a Hypervisor refresh to pick up the new custom ISO image.**
- 3. Add a new recovery (Recover or Simulation job) and select the custom ISO image for the recovery.**

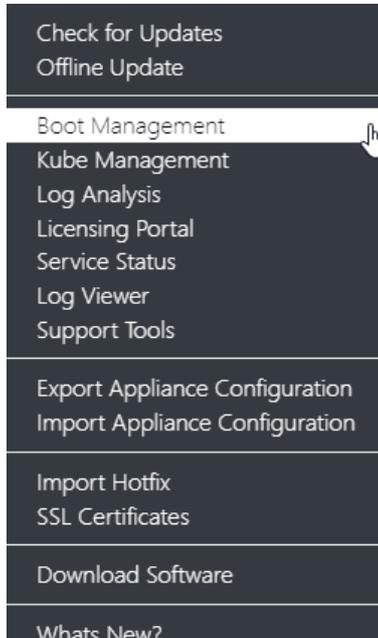
These steps are now discussed in further detail. The Cristie product CBMR for Windows is used as an example.



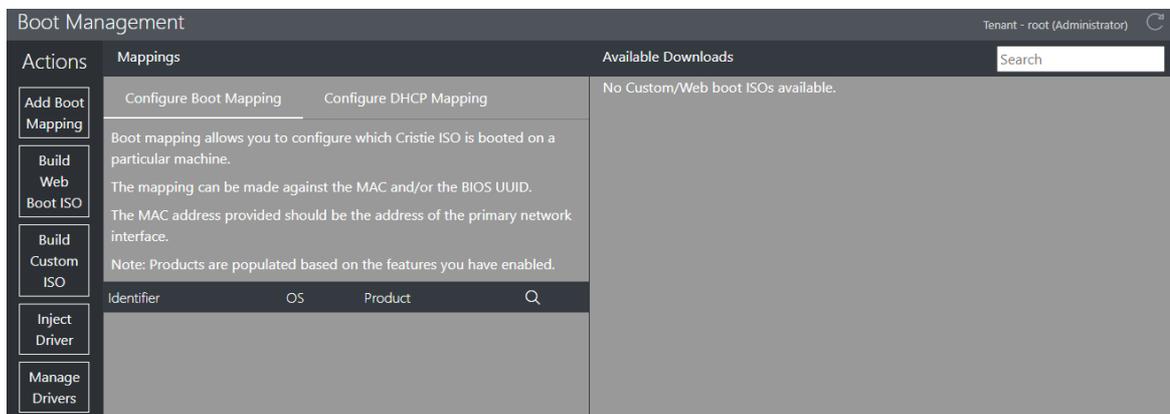
4.3.1.1 Create a Custom ISO

To create a custom BMR recovery or custom replication ISO for use in non-DHCP environments follow these instructions.

To start firstly open the Cristie VA Dashboard, and then navigate to **Tools** . You will then see this dialogue.



Click **Boot Management** and you will see this:



**Build
Custom
ISO**

Now click the **Configure Boot Mapping** tab and then click the **Build Custom ISO** option. This will display a new dialogue where you can provide a static network configuration for your custom recovery/replication ISO.



Build Custom ISO ✕

If you do not have DHCP available in your environment, you can create a bootable ISO with pre-configured networking. Please enter the required networking information below. The simple form (recommended) allows you to specify one IP address, the advanced option (for systems that require multiple IP addresses configured) allows you to specify which MAC address you want to assign a specific IP.

Manual build Import from CSV

ISO cbmr-windows-pe10-latest.iso ▼

ISO Name Static-IP

Enable insecure TLS ?

Enable insecure SSL ?

SSL Certificate Select ?

Simple Networking [Advanced Networking](#)

DHCP ?

IP Address 10.10.76.77

Netmask 255.0.0.0

Gateway 10.0.1.100

DNS Servers 10.0.1.108

Cancel Confirm

These are the fields you will need to set for static IP use:

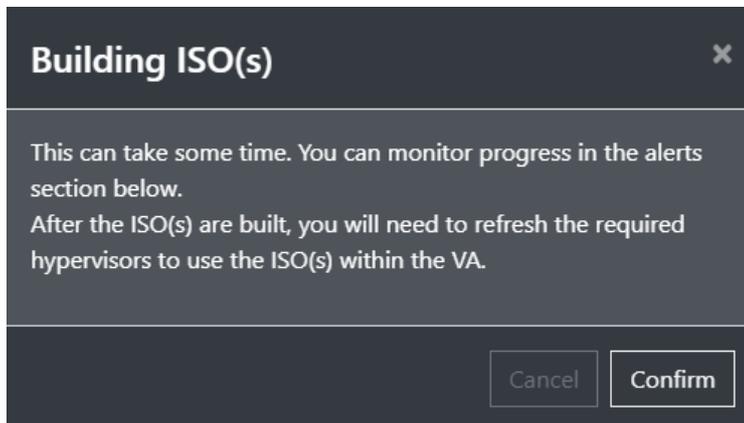
ISO	Select an appropriate Cristie BMR or replication ISO name from the drop-down list. In this example CBMR is selected.
ISO Name	Give the ISO a meaningful name.
Enable insecure TLS	By default TLS 1.2+ is enabled for the management service. If your environment requires TLS 1.0 or 1.1 select this option (not recommended).
Enable insecure SSL	By default TLS 1.2+ is enabled for the management service. If your environment requires SSL v2 or v3



	select this option (not recommended).
SSL Certificate	By default the management service will use a self-signed certificate. If you wish to use your own certificate add it here.
IP Address	Provide the static IP address you wish to give the ISO when booted.
Netmask	Provide a suitable network mask.
Gateway	Provide a suitable gateway IP.
DNS Servers	Provide a DNS server IP.

Select the **Simple Networking** tab to enter basic IP details or select **Advanced Networking** to add a specific MAC address.

Now click to generate the ISO. You will see a confirmation pop-up like this:

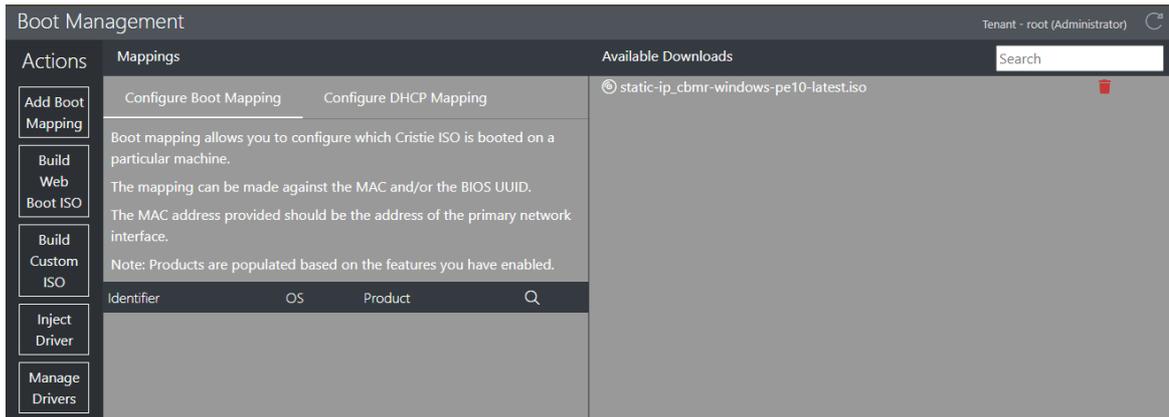


Please note the warning in the dialogue. Click for the final time and the ISO will be created with the configuration specified. When the ISO has been created you will see this alert:

Event	Source	Status	Details	Start Time	End Time	User
Custom ISO Build	Web Boot	Completed	Finished building custom ISO static-ip_cbmr-windows-pe10-latest.iso	2 Nov 2023, 11:12:43	2 Nov 2023, 11:13:01	

The ISO file is stored in the default VM datastore for the hypervisor chosen. It will however be listed for use when you set up a new host recovery. The new ISO will also be listed on the Boot Management dialogue as an available ISO. The ISO can also be deleted from this dialogue when it is no longer of use.



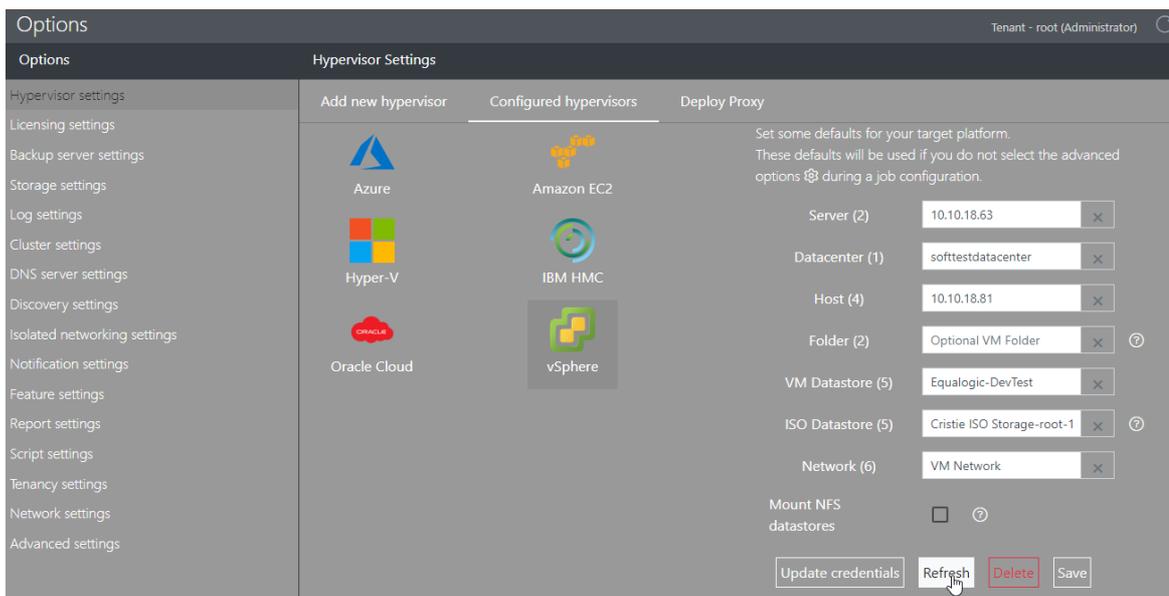


4.3.1.2 Running a Hypervisor Refresh

To make the newly built custom ISO visible for recoveries you must first run a **refresh** of the Hypervisor.

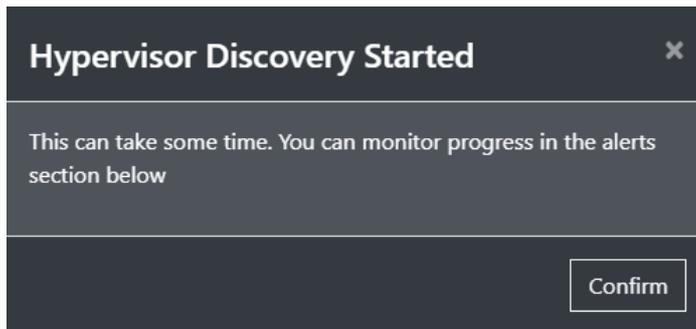
To do this select **Options** from the main VA dashboard and then **Hypervisor settings**. Next select the **Configured hypervisors** tab and finally click the Hypervisor that will contain your recovered target VM.

Click the **Refresh** button to start the hypervisor refresh.



You will then see a confirmation message displayed indicating you should monitor the Alerts section to determine when the refresh is complete.





You will see this alert when the refresh is complete.

Alerts								🔍	⚙️	📄	🔊
Event	Source	Status	Details	Start Time	End Time	User					
 Hypervisor Discovery	VA → vSphere 10.10.18.63	Completed	Discovery of vSphere 10.10.18.63 successful	2 Nov 2023, 11:19:15	2 Nov 2023, 11:19:27	Administrator					

4.3.1.3 Selecting a Custom ISO for Recoveries

To use the custom ISO for recoveries you should select it when setting up a new **Recover** or **Simulation** job.

Note: Ensure you have run a target Hypervisor refresh otherwise the custom ISO will not be visible.

Recover

For a new Recover operation select the new ISO in the Hypervisor Configuration tab of recovery setup. In the example below the CBMR custom ISO created earlier is being selected in the ISO field drop-down.



Recover Backup

VTD Backup x ? \\10.1.1.60\test-scratch\ x ? software\nigelp x ? x ? Window 10.10.18.63 - vS

Successfully retrieved configuration

Backup Version Hypervisor Configuration Machine Configuration Target Configuration Dissimilar Hardware Boot Actions Advance

You can override the default Hypervisor options below. Please note: The ISO is automatically populated and we do not recommend changing this field unless told to do so by Support

Please note: RDP needs to be enabled on the source machine prior to replication.

Datcenter (1)	softtestdatacenter x
Host (4)	10.10.18.81 x
Folder (2)	Optional VM Folder x ?
VM Datastore (5)	Equalogic-DevTest x
ISO (59)	/static-ip_cbmr-windows- x
Controller Type	/static-ip_cbmr-windows-pe10-latest.iso
Network Adapter Type	VMXNET3 ?
Load Balance SCSI Controllers	<input type="checkbox"/> ?

Unless modified in advanced configuration, the latest backup will be restored, the original disk layout will be retained, the default selections for your hypervisor will be used and the existing network settings will be applied to the target. **Save**

When complete the Hypervisor Configuration should look like this:

Recover Backup

VTD Backup x ? \\10.1.1.60\test-scratch\n x ? software\nigelp x ? x ? Windows 10.10.18.63 - vSphere x ?

Successfully retrieved configuration

Backup Version Hypervisor Configuration Machine Configuration Target Configuration Dissimilar Hardware Boot Actions Advanced Configuration

You can override the default Hypervisor options below. Please note: The ISO is automatically populated and we do not recommend changing this field unless told to do so by Cristie Support

Please note: RDP needs to be enabled on the source machine prior to replication.

Datcenter (1)	softtestdatacenter x
Host (4)	10.10.18.81 x
Folder (2)	Optional VM Folder x ?
VM Datastore (5)	Equalogic-DevTest x
ISO (59)	/static-ip_cbmr-windows- x
Controller Type	Auto Detect ?
Network Adapter Type	VMXNET3 ?
Load Balance SCSI Controllers	<input type="checkbox"/> ?

Unless modified in advanced configuration, the latest backup will be restored, the original disk layout will be retained, the default selections for your hypervisor will be used and the existing network settings will be applied to the target. **Save**

Click **Save** to save the settings. Now when the recovery runs the target will boot with the custom ISO configured to use the given static IP, mask, gateway and DNS.



PE10



PE10

CBMR

```

Administrator: X:\windows\system32\cmd.exe
X:\PROGRAM~1\Cristie\CBMR>ipconfig /all

Windows IP Configuration

Host Name . . . . . : minint-one0agj
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No

Ethernet adapter Ethernet0:

Connection-specific DNS Suffix . . . . . :
Description . . . . . : vmxnet3 Ethernet Adapter
Physical Address. . . . . : 00-50-56-8E-F2-F0
Dhcp Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::4c70:51f0:9585:5968%3(Prefered)
IPv4 Address. . . . . : 10.10.76.77(Prefered)
Subnet Mask . . . . . : 255.0.0.0
Default Gateway . . . . . : fe80::290:7fff:fedc:85ae%3
10.0.1.100
DHCPv6 Iaid . . . . . : 50352214
DHCPv6 Client DUID. . . . . : 00-01-00-01-2C-D5-A4-93-00-50-56-8E-F2-F0
DNS Servers . . . . . : 10.0.1.100
NetBIOS over Lcpip. . . . . : Enabled

X:\PROGRAM~1\Cristie\CBMR>

```

PE10

PE10

Simulation

The procedure for using a custom ISO in a **Simulation** job is very similar. Navigate to the **Add Recovery To Job** dialogue and select the new ISO in the **ISO** field. See the example below.

Add Recovery To Job
✕

VTD Backup \\10.1.1.60\test-scratch\ software\migelp Windows 10.10.18.63 - vSphere

Successfully retrieved configuration

Backup Version
Hypervisor Configuration
Machine Configuration
Target Configuration
Dissimilar Hardware
Boot Actions
Advanced Configuration

You can override the default Hypervisor options below. Please note: The ISO is automatically populated and we do not recommend changing this field unless told to do so by Cristie Support

Please note: RDP needs to be enabled on the source machine prior to replication.

Datacenter (1)	<input type="text" value="softtestdatacenter"/>
Host (4)	<input type="text" value="10.10.18.81"/>
Folder (2)	<input type="text" value="Optional VM Folder"/>
VM Datastore (5)	<input type="text" value="Equalogic-DevTest"/>
ISO (59)	<input type="text" value="/static-ip_cbmr-windows-"/>
Controller Type	<input type="text" value="Auto Detect"/>
Network Adapter Type	<input type="text" value="VMXNET3"/>
Load Balance SCSI Controllers	<input type="checkbox"/>

Unless modified in advanced configuration, the latest backup will be restored, the original disk layout will be retained, the default selections for your hypervisor will be used and the existing network settings will be applied to the target.

Click  to save the settings. Now when the simulation runs the target will boot with the custom ISO configured to use the given static IP, mask, gateway and DNS.

