



RBMR For Linux

Bare Machine Recovery for Rubrik CDM

User Guide

Version 9.5.1 released September 2023

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1 Document Conventions

The following typographical conventions are used throughout this guide:

<code>/etc/passwd</code>	represents command-line commands, options, parameters, directory names and filenames
<code>Next ></code>	used to signify clickable buttons on a GUI dialogue
Note:	describes something of importance related to the current topic



2 Introduction

Bare Machine Recovery for Rubrik CDM provides disaster recovery capability for Rubrik CDM protected Linux Intel hosts.

It is possible to recover the original system to the same or dissimilar hardware. To protect a system, backups can be taken periodically, along with configuration information, which includes details of hard disks, network interfaces, etc.

This Guide shows the user how to save system configuration information, backup and recover a Linux Intel machine using RBMR. More detailed information is available from `man` pages for the RBMR components. The `man` pages are available after installation of RBMR.

This guide relates to RBMR for Linux Intel version 9.5.1 only.

Note: RBMR can only be used in conjunction with Rubrik CDM.

This guide describes how to:

- Save Configuration data using `rbmr_cfg`
- Configure and run your Rubrik CDM Client backup
- Perform a Disaster Recovery

2.1 Limitations

There are limits to what this version of RBMR for Linux Intel will support. It will NOT support:

- Platforms other than Intel 64-bit only.
- Multi-boot operating systems
- Recovery of files that are being written to at the time of backup.

2.2 Further Information

Further information and advice on using RBMR may be found in the **Cristie Knowledge Base** (<https://kb.cristie.com>) or the **Cristie Forum** (<https://forum.cristie.com>).



3 System Requirements

RBMR for Linux Intel can only be installed on a x86_64 Linux Intel (i.e. 64-bit) machine.

RBMR requires Rubrik CDM client version 6.0.2 or later is already installed.

A minimum memory of **6 GB RAM** is required for booting the recovery environment and running a recovery.

Please refer to this web page <https://www.cristie.com/support/matrix/> to determine the latest OS and Rubrik CDM client/server support for RBMR Version 9.5.1.

Before RBMR can be used it must also be correctly licensed. Cristie provides a 30 day trial license with the product.



4 Supported Filesystems

Please refer to this web page <https://www.cristie.com/support/matrix/> to determine the latest file system support for RBMR Version 9.5.1.



5 uEFI and MBR BIOS Support

Note: recovery support is provided for conversion from uEFI to MBR BIOS. Conversion from legacy MBR BIOS to uEFI is not currently supported.

The recovery ISO is configured for both MBR (legacy) and uEFI boot. It can therefore boot into either environment. There are no special considerations that need to be made by the customer for uEFI machines. If your machine boots with elilo, prior to performing a backup please run:-

```
rbmr cfg -b elilo
```

All Christie Bare Metal Recovery software handles the recreation of the uEFI partitions during the recovery of the machine, this is transparent to the user.

When recovering an uEFI enabled OS you must recover to uEFI capable hardware.

When recovery is to a different machine, you may need to manually configure the uEFI boot stanza in order to boot the recovered uEFI OS. Please refer to the Christie Knowledgebase for further information on editing the boot stanza.

Note: when recovering an uEFI enabled OS, it is recommended that the recovery environment is booted in uEFI mode.



6 Using RBMR For Disaster Recovery

This section describes the steps involved in using Rubrik CDM in conjunction with RBMR for disaster recovery.

This description assumes that the Rubrik CDM client software has already been installed and configured correctly.

To ensure your system is protected observe the following steps:

1. *Install RBMR on the system you wish to protect.*
2. *Use the `rbmrcfg` program to capture and store the configuration of the system.*
3. *Use the Rubrik CDM server to backup the system as usual.*

6.1 Saving the System Configuration

Configuration is always saved to `/RBMRCFG` - it can't be saved anywhere else. This guarantees it is always stored in the backup.

When saving the configuration information to the backup location, this must be done **before** the backup is run.

To save the configuration information for each machine, the supplied command line program `rbmrcfg` is used. It is recommended that this is run prior to running each backup to ensure the configuration is up to date.

6.2 RBMRcfg

To use the command line configuration saving program, type `rbmrcfg`. The configuration will automatically detect the machine boot loader and boot partition, however, if either are incorrectly detected you may specify additional options.

The available options of `rbmrcfg` can be shown using:

```
rbmrcfg --help
```

Some examples are shown here:

To save configuration information from a machine that boots using `grub` installed on `/dev/sda` to the backup location, use:

```
rbmrcfg -b grub -d /dev/sda
```

To save configuration information from a machine that boots using `grub` installed on `/dev/hda`, use:

```
rbmrcfg -b grub -d /dev/hda
```

There is a full manual page for `rbmrcfg` available by typing `man rbmrcfg`.



This is a full list of options:

Option	Description
<code>-b<name>, --bootloader=<name></code>	Set boot loader to <name> (default is grub)
<code>-d<name>, --bootdevice=<name></code>	Set boot device name to <name>
<code>-l<file>, --logfile=<file></code>	Set log file (default is cbmrcfg.log)
<code>-o<file>, --output=<file></code>	Set output file (default is disrec.ini)
<code>-p<permissions></code>	Set output file permissions (default 0600)
<code>-v, --verbose</code>	Verbose mode
<code>--autorelabel=<n></code>	Automatically relabel SELinux if <n> != 0
<code>--disk_pattern=<pattern></code>	Only include disks matching <pattern>
<code>--disk_regex=<regex></code>	Only include disks matching <regex>
<code>--disk_skip=<pattern></code>	Don't include disks matching <pattern>
<code>--disk_skip_regex=<regex></code>	Don't include disks matching <regex>
<code>--disshw=<n></code>	Use dissimilar hardware support if <n> != 0
<code>--filedev_mount_options=<string></code>	Set file device mount options
<code>--filedev_mount_target=<string></code>	Set file device mount target
<code>--format_pattern=<pattern></code>	Only format devices matching <pattern>
<code>--format_regex=<regex></code>	Only format devices matching <regex>
<code>--format_skip=<pattern></code>	Don't format devices matching <pattern>
<code>--format_skip_regex=<regex></code>	Don't format devices matching <regex>
<code>--mpath=<n></code>	Don't scan for mpath devices if <n> = 0
<code>--partition_pattern=<pattern></code>	Only partition devices matching <pattern>
<code>--partition_regex=<regex></code>	Only partition devices matching <regex>
<code>--partition_skip=<pattern></code>	Don't partition devices matching <pattern>
<code>--partition_skip_regex=<regex></code>	Don't partition devices matching <regex>
<code>--local_fs</code>	Don't include remote filesystems
<code>--local_disks</code>	Don't include remote disks, e.g. iscsi
<code>--rc=<n></code>	Set return code to <n>
<code>--rescale_pattern=<pattern></code>	Only rescale devices matching <pattern>
<code>--rescale_regex=<regex></code>	Only rescale devices matching <regex>
<code>--rescale_skip=<pattern></code>	Don't rescale devices matching <pattern>
<code>--rescale_skip_regex=<regex></code>	Don't rescale devices matching <regex>
<code>--save_mpath_list</code>	Save mpath details
<code>--vg_pattern=<pattern></code>	Only create VGs matching <pattern>
<code>--vg_regex=<regex></code>	Only create VGs matching <regex>
<code>--vg_skip=<pattern></code>	Don't create VGs matching <pattern>
<code>--vg_skip_regex=<regex></code>	Don't create VGs matching <regex>
<code>--help, --usage</code>	Print this message and exit
<code>--version</code>	Print the version and exit



7 Housekeeping

In order to ensure that you can recover to the latest version of the operating system that was installed on your Linux Intel machine, you must ensure that a Rubrik CDM backup is performed every time the operating system files change. In addition you should also configure a run of the RBMRCfg.exe program using a pre-script on the server (if supported) prior to the backup.

This is not always possible, so **Cristie Software Ltd.** recommends that the Rubrik CDM backup be performed regularly. However, you should choose a period which reflects the rate of change of data in your own organisation. Although the configuration data will change less frequently than the operating system, it is a wise precaution to update this regularly. For example, this can be achieved by creating a cron job for your schedule or by defining a scheduled backup for the required client machine on the Rubrik CDM server.

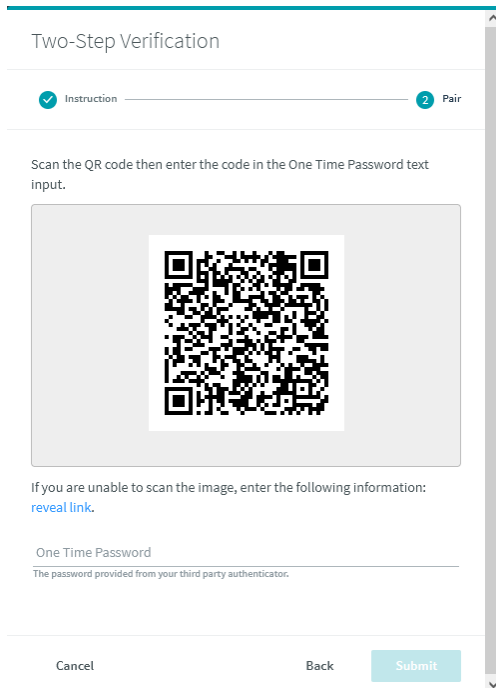


8 Multi-factor Authentication

If your Rubrik CDM server is configured to use Multi-factor Authentication (MFA) you will be prompted during an interactive recovery sequence for an MFA code.

To generate such a code you will need an authentication app installed on a mobile device (e.g. phone or tablet) and an entry added for your server. For example Microsoft and Google provide such Authenticator apps.


When configuring an entry in the app for your server you will need to use the server generated QR code to do this. For example:



Two-Step Verification

✓ Instruction 2 Pair

Scan the QR code then enter the code in the One Time Password text input.



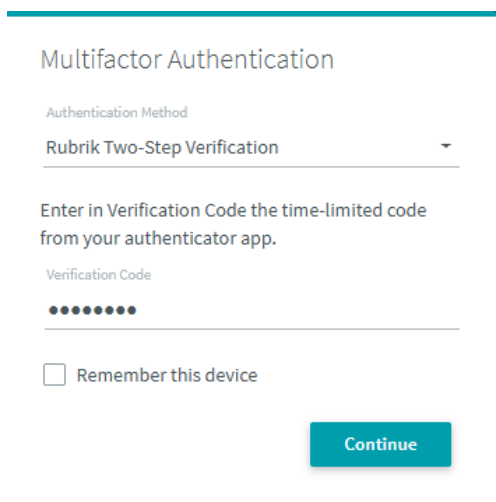
If you are unable to scan the image, enter the following information:
[reveal link.](#)

One Time Password
The password provided from your third party authenticator.

Cancel Back Submit

Scan the code with your mobile device to setup an entry for the server in the authenticator app.

Then to login to the server you will see a prompt like this:



Multifactor Authentication

Authentication Method
Rubrik Two-Step Verification

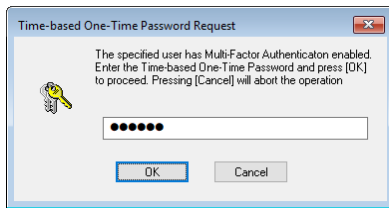
Enter in Verification Code the time-limited code from your authenticator app.

Verification Code
●●●●●●

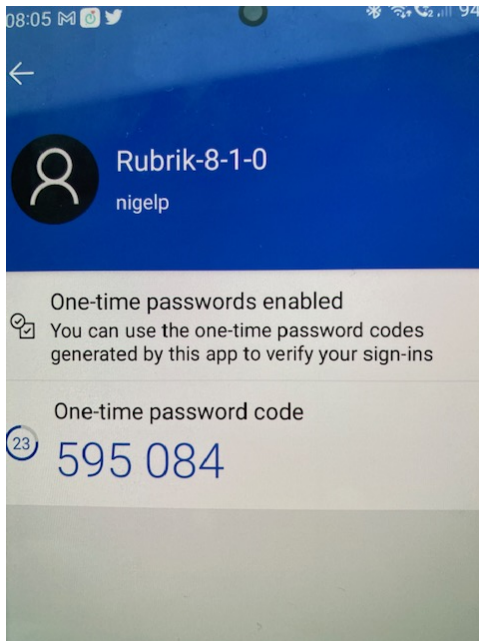
Remember this device

Continue

During a recovery operation you will be prompted for an MFA code. Use the entry in your authenticator app to generate an MFA code. For example:



The MFA app will show something similar to this when the code is generated:



Note: The MFA codes are only valid for a short period of time (e.g. 30 seconds). If you take too long to enter the code it will be incorrect. Re-generate the code and re-enter if this occurs.



9 Performing a Recovery

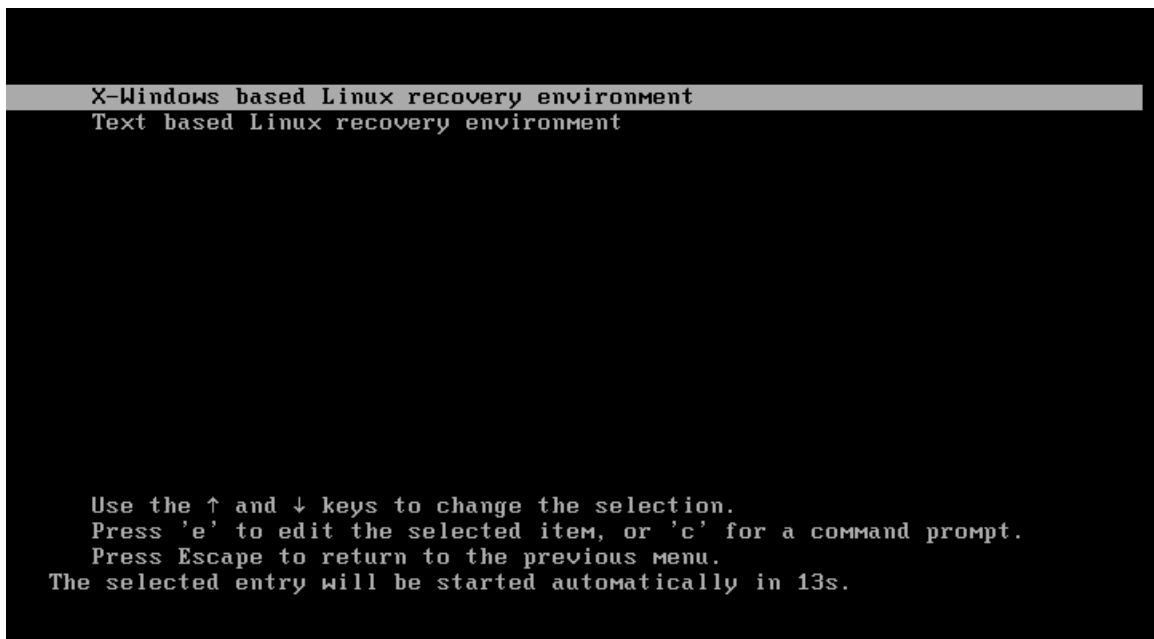
When a machine has failed, it can be recovered using the XBMR bootable product CD/DVD-ROM or DR ISO (if your host supports this capability). XBMR is a separate product to RBMR. It is a generic Recovery Environment for all Cristie Linux BMR products.

You should ensure your machine's BIOS is set up to boot from CD/DVD-ROM or ISO as appropriate.

The process encompasses the following stages:

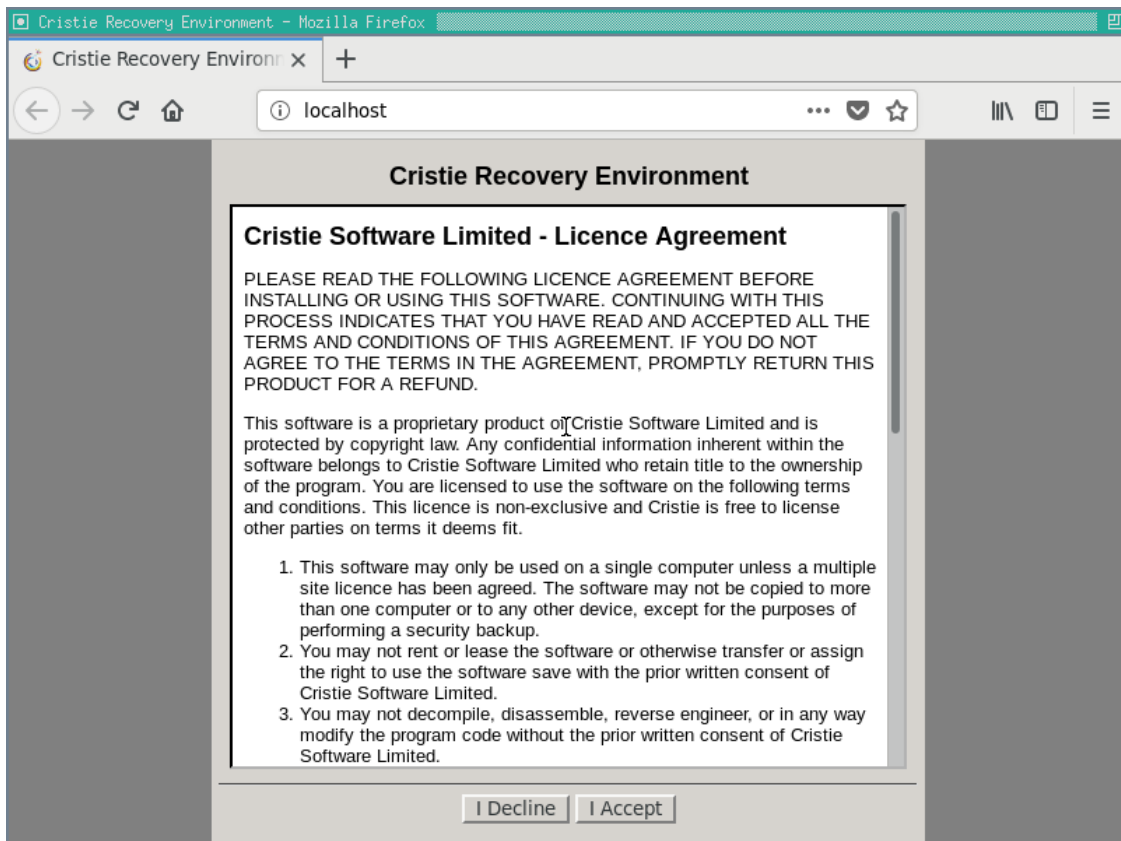
- **Boot** into XBMR Recovery Environment and configure as required
- **Read** Configuration Data from your backup
- **Restore** Files from your backup
- **Load** additional drivers (if necessary)
- **Reboot** into recovered OS

Boot the machine using the **XBMR** bootable CD ROM or ISO. You will then be presented with the screen below:

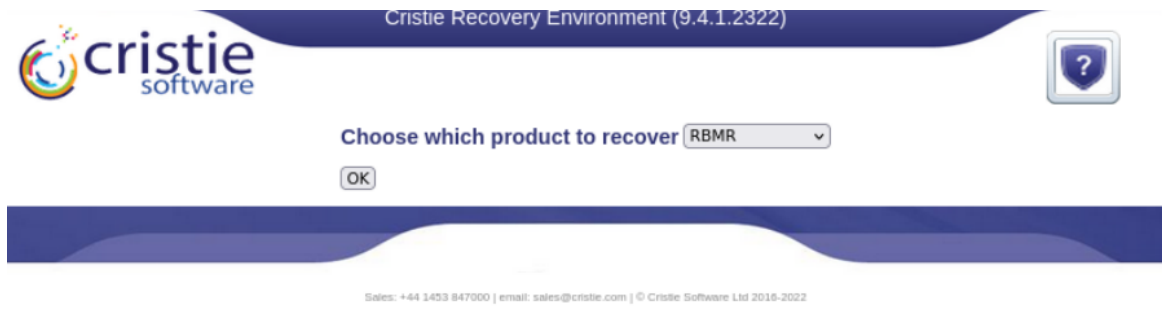


Cristie recommends that you choose the graphical X-Windows recovery environment mode which loads the **Cristie Recovery Environment**. You will be presented with the **license** screen. Click **Accept** if you agree with the licencing terms.





The Product Selection drop-down menu will then be shown. Now select the Cristie product used during the backup - RBMR in this case.



Click **OK**. You will then see the **RBMR Recovery Environment** main menu.





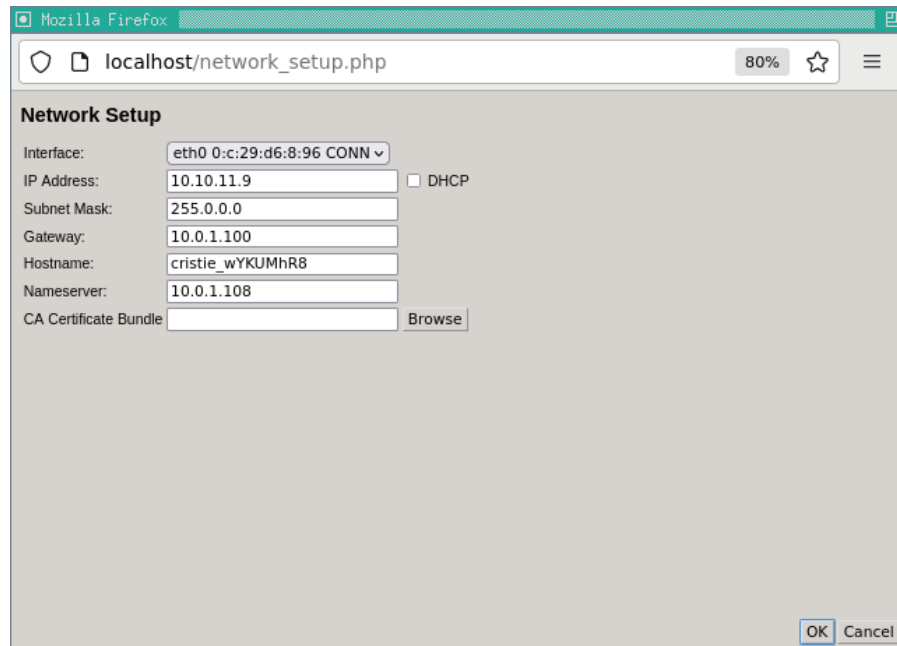
Cristie recommends selecting the **Automatic Recovery Wizard** option from the **Recovery Environment** main menu. This will then display the **Setup Rubrik CDM Server** dialogue.

Now enter the Server details (of the Rubrik CDM Server where the backup resides).

Note the **Port** used is associated with the API interface (443 by default). Change this if your server uses a non-standard port otherwise leave blank. Click the **Verify SSL certificate validity** tick-box if you wish the server's certificate to be checked during the DR. If it is found to be invalid the recovery will be aborted. This check is enabled by default but can be disabled if (say) your server uses a self-signed/default certificate. Untick the tick-box in this case. Contact your Rubrik CDM administrator if you are unsure of any of the settings.

If it is required to configure the local network settings (i.e. the XBMR Recovery Environment), click the **Network Setup** button. Now enter your new network settings. If

you are recovering a backup to the original host (specifically the host with the original network interface MAC address), then the original host IP address must be set first, otherwise the recovery will fail. If you are recovering to a different host this is not required.

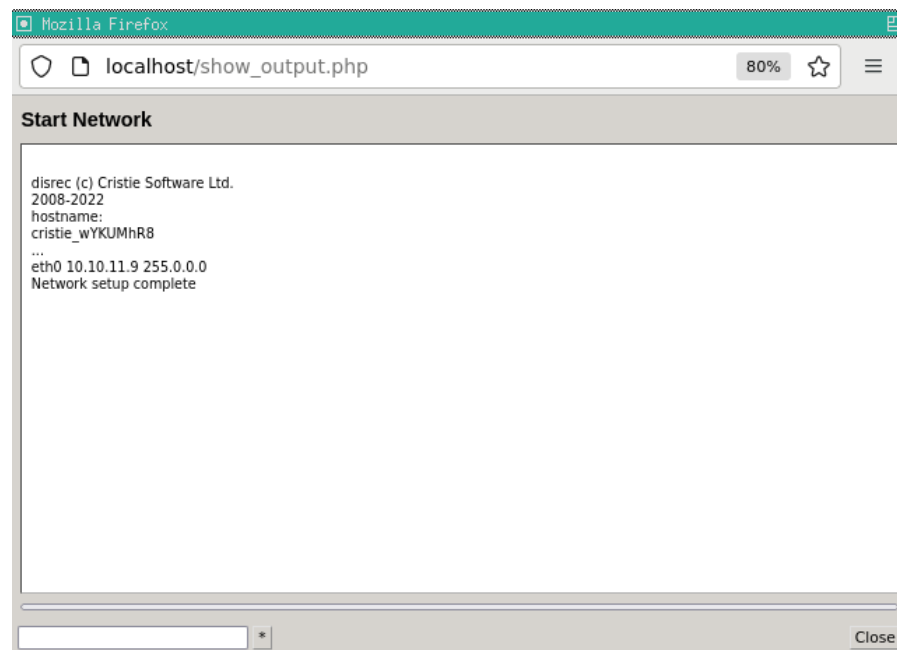


The screenshot shows a web browser window with the address bar displaying 'localhost/network_setup.php'. The page content is titled 'Network Setup' and contains the following fields:

- Interface: eth0 0:c:29:d6:8:96 CONN (dropdown menu)
- IP Address: 10.10.11.9 (text input)
- Subnet Mask: 255.0.0.0 (text input)
- Gateway: 10.0.1.100 (text input)
- Hostname: cristie_wYKUMhR8 (text input)
- Nameserver: 10.0.1.108 (text input)
- CA Certificate Bundle: (text input) with a 'Browse' button

At the bottom right of the form, there are 'OK' and 'Cancel' buttons.

Select **OK** to save your changes. The Start Network screen will then display the network changes being implemented.



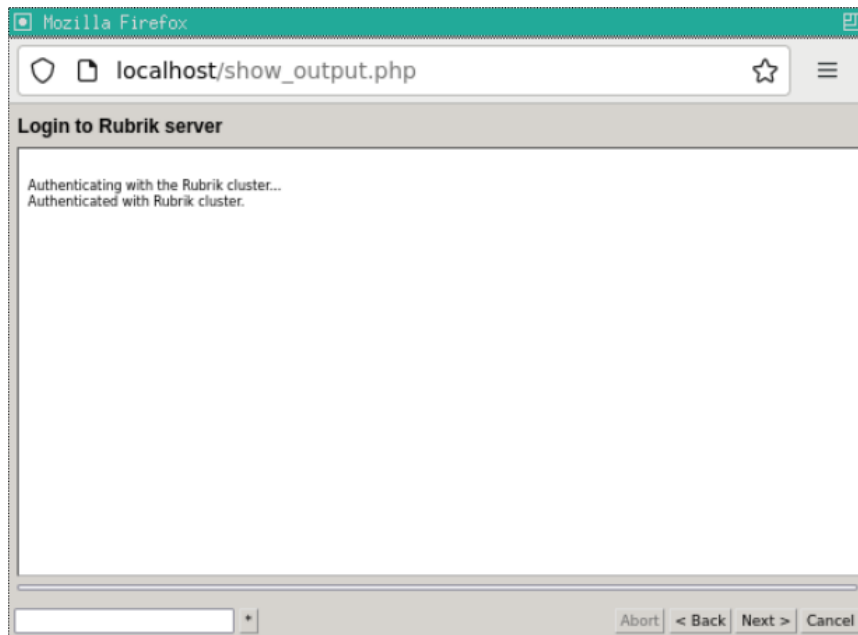
The screenshot shows a web browser window with the address bar displaying 'localhost/show_output.php'. The page content is titled 'Start Network' and displays the following output:

```
disrec (c) Cristie Software Ltd.  
2008-2022  
hostname:  
cristie_wYKUMhR8  
...  
eth0 10.10.11.9 255.0.0.0  
Network setup complete
```

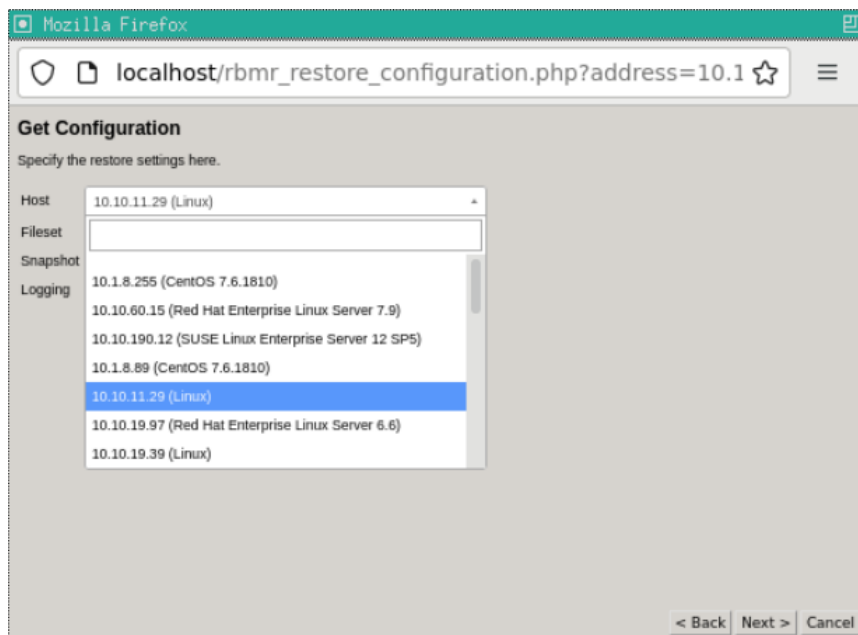
At the bottom right of the screen, there is a 'Close' button.

Click **Close** to return to the **Setup Rubrik CDM Server** dialogue. Now click **Next >** and an attempt will be made to login to the server using the credentials provided.



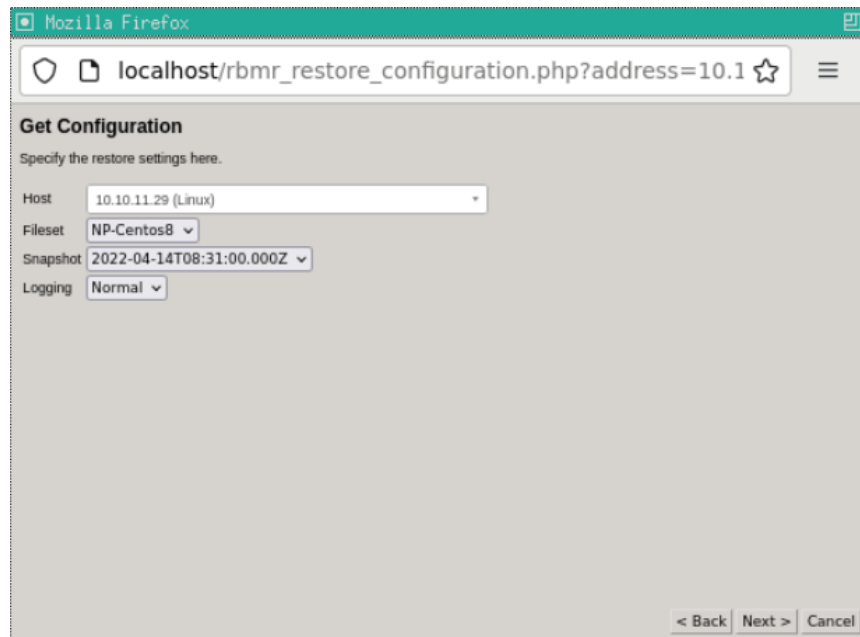


Now click **Next >** and the **Get Configuration** dialogue will be shown. Select the source backup to restore from the drop-down list.

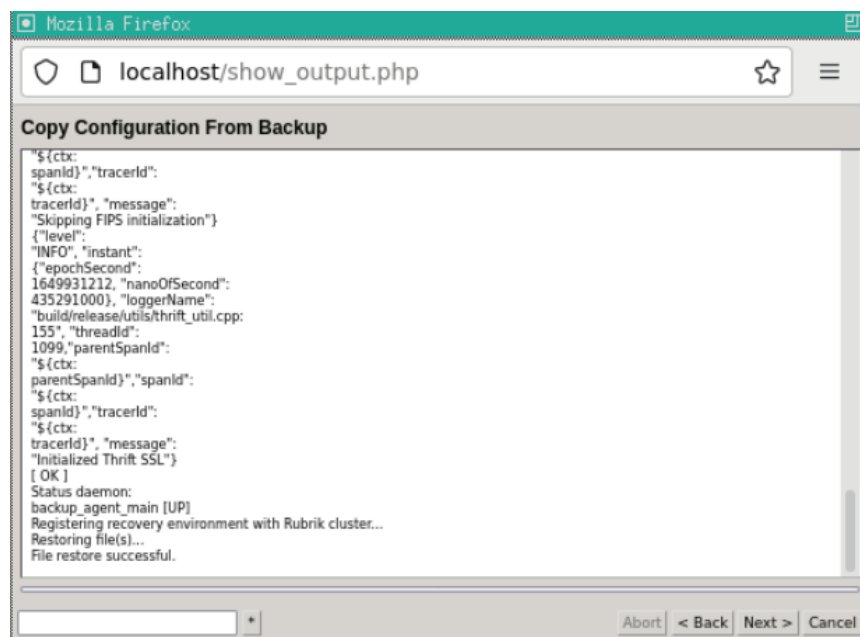


If you wish to recover a backup other than the latest (the default) select a particular date/time - a Point-in-Time (PIT). Select the required backup from the drop-down list:





Click **Next >** to continue. This will then restore the configuration from the backup.



Click **Next >** to continue to the **Start Recovery** phase. You will then be presented with the Start Recovery options. Here you can change the configuration of the system being restored.

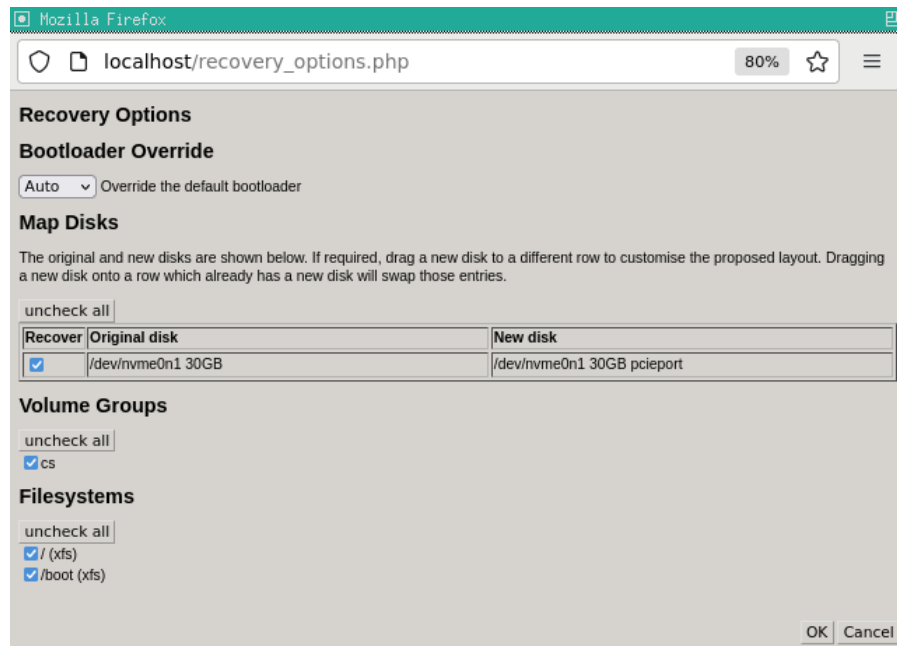


If you are recovering Multipath disks, you must check the box for **Multipath Support**. Not doing so will cause the disks to be treated as non-Multipath disks. You can then select and customise your Multipath disk layout by clicking on the **Multipath Options** button. Note this option is only enabled if multipath disks are set in the configuration.

Recover	Original device	New device
<input checked="" type="checkbox"/>	boot 3600c0ff000d70ba1a95c0c5a01000000 20G /dev/sda,/dev/sdc	3600c0ff000d70ba16c7d0c5a01000000 20G /dev/sda,/dev/sdd
<input checked="" type="checkbox"/>	mpathb 3600c0ff000d70ba1c4dc435a01000000 17G /dev/sdb,/dev/sdd	3600c0ff000d70ba1a95c0c5a01000000 20G /dev/sdb,/dev/sdc

If you wish, you may customise your disk layout, volume group or filesystem selection by clicking on the **Recovery Options** button.

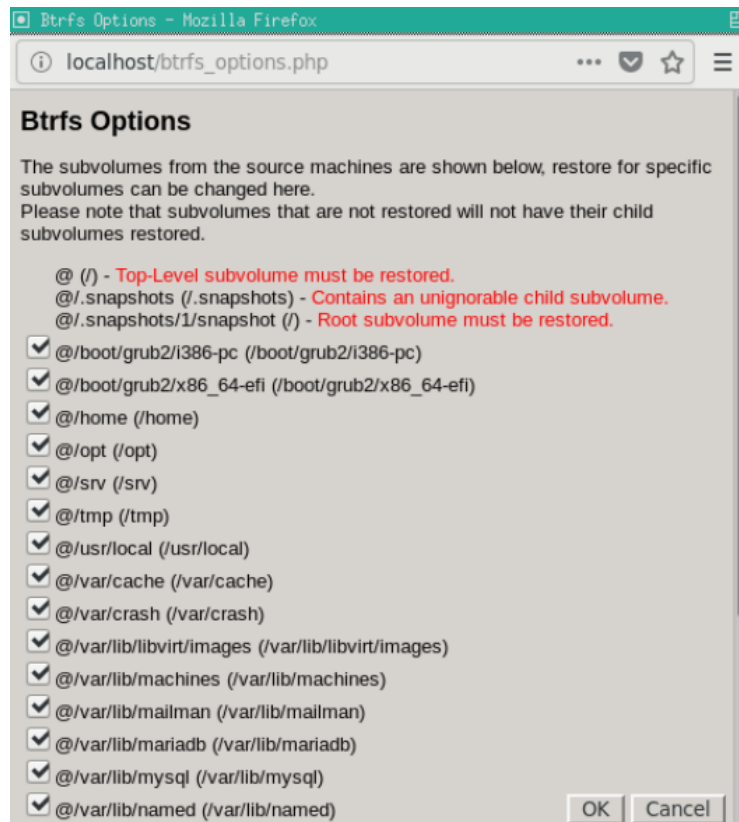




Note: disks that have been configured in the Multipath Options menu will not be visible on the Recovery Options menu.

Note: de-selecting a filesystem will disable filesystem creation and file restore.

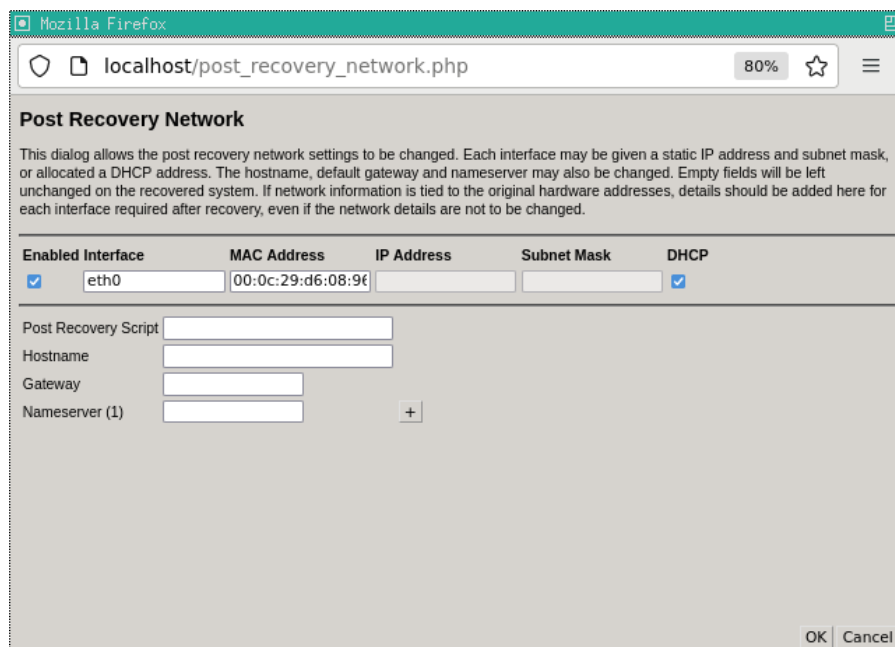
If the system to be recovered contains BTRFS subvolumes you may configure whether they are recreated during recovery. Click the [Btrfs Options](#) button to bring up the menu (note this option is only displayed if BTRFS volumes are present).



De-selecting a checkbox will prevent the recovery from recreating the subvolume. Click **OK** to save and continue.

Note: Some subvolumes can not be de-selected due to a child subvolume dependency or if it is a root subvolume.

If you wish to change the Network Settings in advance of recovery, select **Post Recovery Network**. This option is only available for SLES 11 or later, and Red Hat 6 or later.



The screenshot shows a web browser window titled "Mozilla Firefox" with the address bar displaying "localhost/post_recovery_network.php". The page content is titled "Post Recovery Network" and includes a descriptive paragraph: "This dialog allows the post recovery network settings to be changed. Each interface may be given a static IP address and subnet mask, or allocated a DHCP address. The hostname, default gateway and nameserver may also be changed. Empty fields will be left unchanged on the recovered system. If network information is tied to the original hardware addresses, details should be added here for each interface required after recovery, even if the network details are not to be changed."

Enabled Interface	MAC Address	IP Address	Subnet Mask	DHCP
<input checked="" type="checkbox"/> eth0	00:0c:29:d6:08:9f			<input checked="" type="checkbox"/>

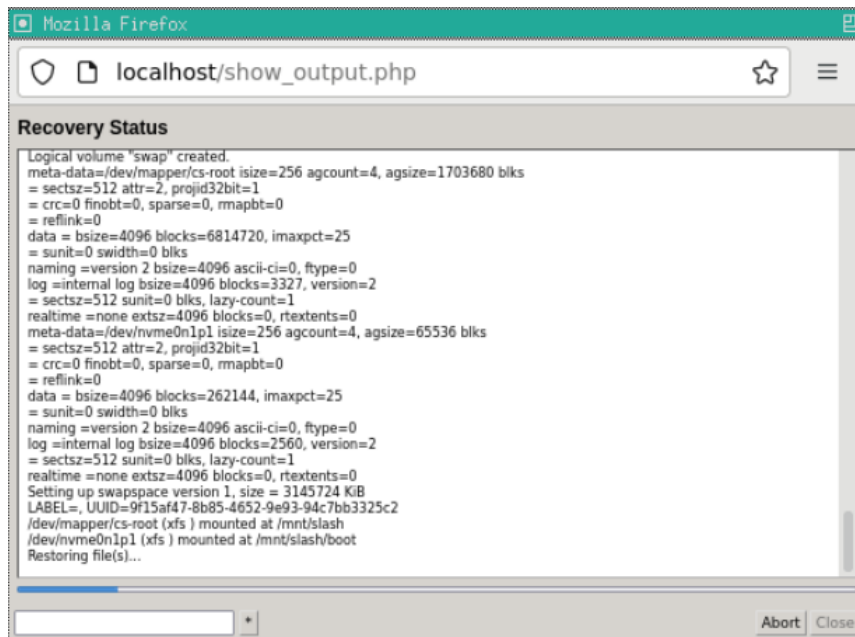
Below the table, there are input fields for "Post Recovery Script", "Hostname", "Gateway", and "Nameserver (1)". A "+" button is next to the Nameserver field. At the bottom right, there are "OK" and "Cancel" buttons.

When you are satisfied that all options are correct, click **OK** to confirm.

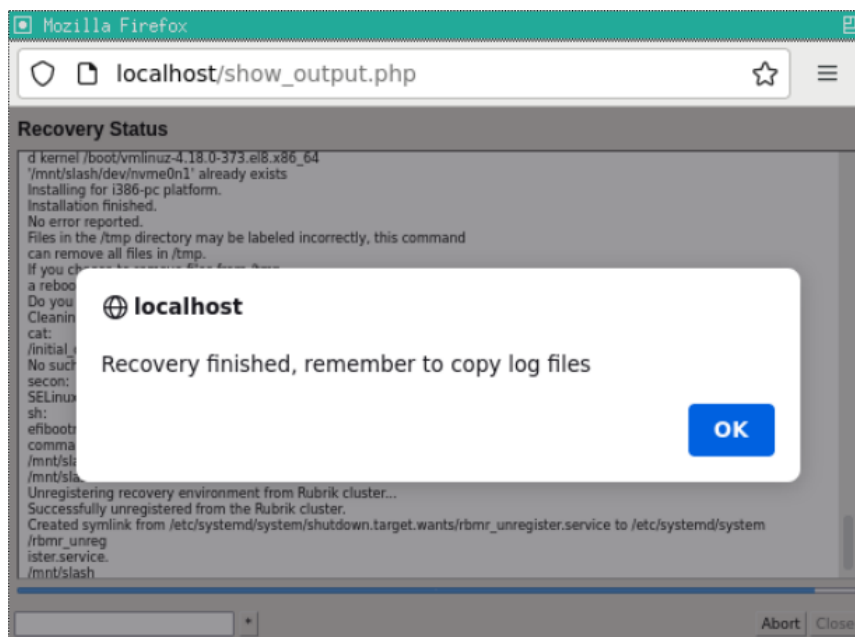
Note: The Post Recovery Network button will only be displayed if the functionality of this feature can actually be performed on the restored system.

When you are satisfied that all options are correct, click **OK** to confirm and return to the **Start Recovery** dialogue. Finally select **Next >** to start the recovery, which will begin with a dialog like this:





The completion of the recovery is signified with a pop-up box like this:



Cristie recommends that the log files are always saved. If the machine fails to boot after the restore Cristie Support will require copies of the log files to diagnose any problems. Details on how to save log files are described in the section [Copy Log Files](#).

Note: if you are recovering to dissimilar hardware: RBMR will find the required module(s) automatically. Normally this will happen with no further user intervention.

Click **OK** to close the pop-up box, followed by the **Close** button to return to the Main Menu.

Finally select **Reboot** from the Main Menu to boot the restored machine, if post recovery options are not required.



9.1 Selective Restores

Selective restores with RBMR are not possible due to the nature of how Rubrik CDM restores data - there is no file/directory exclusion facility. This becomes a problem when a full backup is made that has a SAN attached and the SAN data is included in the backup.

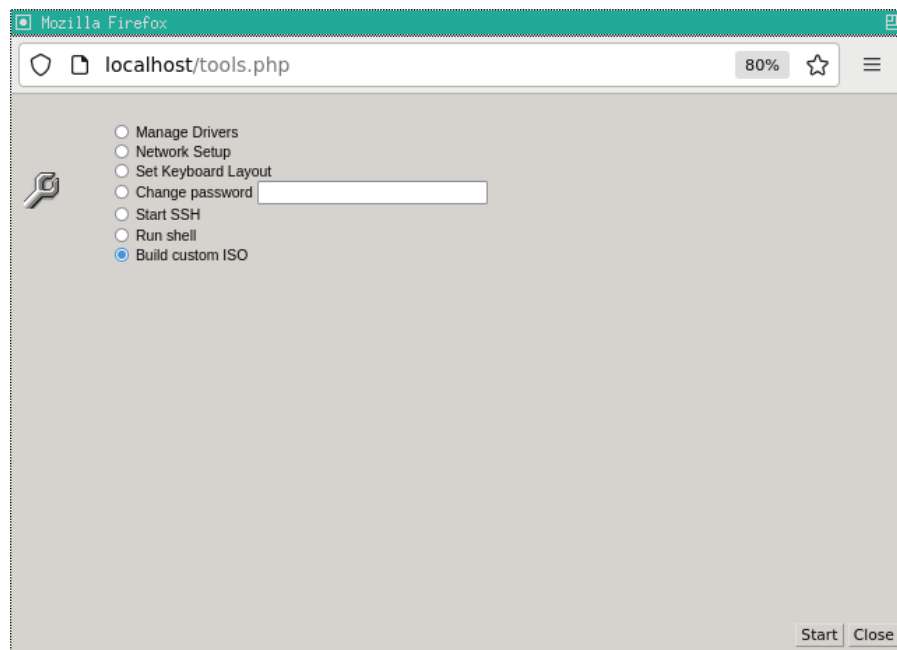
This causes recovery issues when the SAN data needs to be excluded from the recovery (say when only a single node in a cluster is to be recovered).

So to circumvent this issue configure the backups instead. You can either:

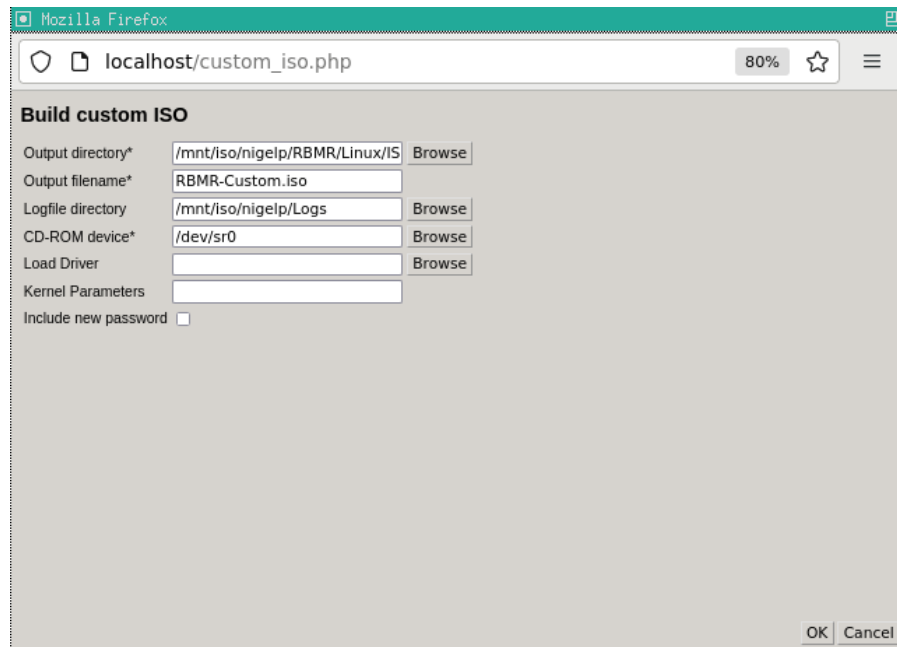
- Create multiple backup jobs - one for the root Volume Group and one for everything else.
- Create SAN mount point exclusions on the main backup job.

9.2 Build Custom ISO

To create a custom recovery ISO, firstly boot the supplied XBMR DR ISO on a suitable host system and select the appropriate XBMR product. Then select the **Tools** menu.



Now select **Build custom ISO** and click **Start**. The main build ISO dialogue is shown:



The screenshot shows a web browser window titled 'Mozilla Firefox' with the address bar displaying 'localhost/custom_iso.php'. The page content is a form titled 'Build custom ISO'. The form contains the following fields and controls:

- Output directory***: Text input field containing '/mnt/iso/nigelp/RBMR/Linux/IS', followed by a 'Browse' button.
- Output filename***: Text input field containing 'RBMR-Custom.iso'.
- Logfile directory**: Text input field containing '/mnt/iso/nigelp/Logs', followed by a 'Browse' button.
- CD-ROM device***: Text input field containing '/dev/sr0', followed by a 'Browse' button.
- Load Driver**: Text input field, followed by a 'Browse' button.
- Kernel Parameters**: Text input field.
- Include new password**: A checkbox that is currently unchecked.

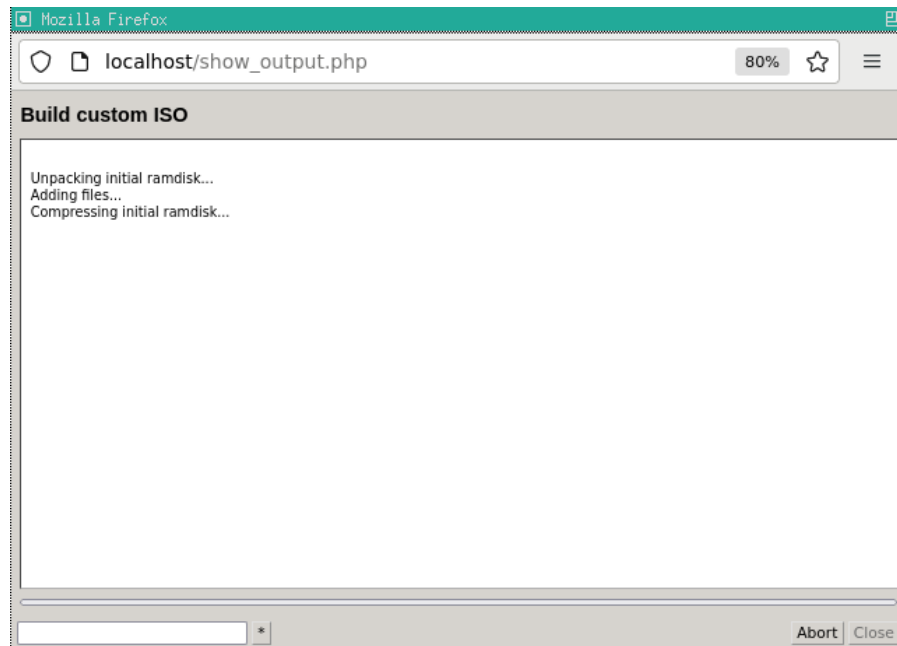
At the bottom right of the form, there are 'OK' and 'Cancel' buttons.

You will need to configure the following fields:

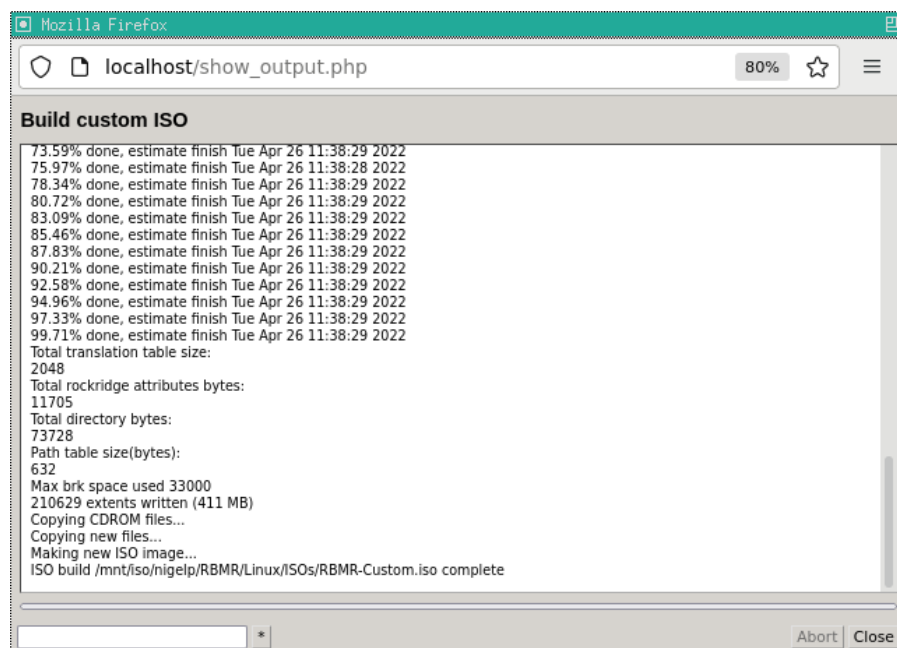
- **Output directory** is a network share (use **Browse** to select and mount a share).
- **Output filename** must include the .iso extension.
- **Logfile directory** is a network share (use **Browse** to select and mount a share).
- **CD-ROM device** (use **Browse** to select a CD/DVD-ROM device from /dev).
- **Load Driver** select the path to an optional driver file. Ensure this is compatible with the system being recovered.
- **Kernel Parameters** specify any extra parameters to be passed to the kernel at boot time. Be careful - this is not syntax checked.
- **Include new password** option will include your new ssh/http password if you have changed it in the tools menu prior to building the custom ISO.

Populate the fields as required, for example. Then click **OK** to begin the ISO creation.





The following progress screen will show when the ISO is successfully built.



Click **Close** to complete the operation. At this point you may either cancel the recovery operation or continue as required.

The created ISO may now be used to directly recover the host from the backup. However operator intervention will be required to specify the backup location details.

9.3 Command Line Recoveries

XBMR also has the ability to control all aspects of a DR sequence without using the web or curses based GUIs. To do this it uses a script based command line manually run from the built-in bash prompt. This is an advanced feature and should not be used until the User becomes familiar with RBMR DR principles and procedures.



The command line parameters supplied to the script are divided into 3 groups, **Network**, **Mount**, and **General**, as follows:

Network options:

--network_number=<number> Set network number (default is 0)
--route_number=<number> Set route number (default is 0)
--ip_address=<ip_address> Set recovery environment IP address
--netmask=<ip_address> Set recovery environment network mask
--hostname=<string> Set recovery environment hostname
--gateway=<ip_address> Set recovery environment default gateway
--ethtool=<command> Pass options to ethtool

Mount options:

mount_number=<number> Set mount number (default is 0)
mount_path=<path> Set mountpoint
mount_share<device> Set mount device
mount_username=<name> Set mount username
mount_passwd=<passwd> Set mount password
mount_ip_address<ip_address> Set mount IP address
 >

General options:

--help Show help message and exit
--sshd=<1|0> Start ssh daemon if value=1
--reload=<string> Reload module with options
--passwd=<string> Set password for SSH and HTTP
--find_multipaths=<yes|no> Set find_multipaths option in multipath.conf
--disshw=<1|0> Turn on dissimilar hardware support if value=1
--mpath=<1|0> Turn on multipath support if value=1
--sleep=<number> Sleep for <number> seconds
--log_dir=<path> Copy logs to mounted <path>
--bootloader=<name> Set bootloader to <name>
--autorelabel=<1|0> Turn on SELinux autorelabel if value=1
--convert_to_mbr Supply when recovering an EFI system to an MBR target
--product=<type> One of abmr, cbmr, cobmr, nbmr or tbmr

Example (a TBMR recovery)

```
restore --product=tbmr --reload="ibmveth old_large_send=1" --ethtool="-K eth0 tso c
--ip_address="10.10.10.186" --netmask="255.0.0.0" --hostname="cristie1"
--gateway="10.0.1.100" --tsm_ip_address="10.10.11.98" --convert_to_mbr
--tsm_node="chrisw-sles11-hyperv-mpath" --tsm_passwd="chrisw"
```



```
--find_multipaths="no" --mpath="1" --disshw="1" --sshd="1"  
--log_dir="/mnt/log/log" --bootloader="yaboot" --autorelabel="0"  
--mount_path="/mnt/log" --mount_share="//10.1.1.26/chris$"  
--mount_username="chris" --mount_passwd="mypassword"
```

Since this is a complex command line, and easy to get wrong during data entry, we advise preparing the command line in an editor elsewhere and pasting it into the bash prompt.



10 Post Recovery Options

After performing a recovery, it is possible to undertake the following actions:

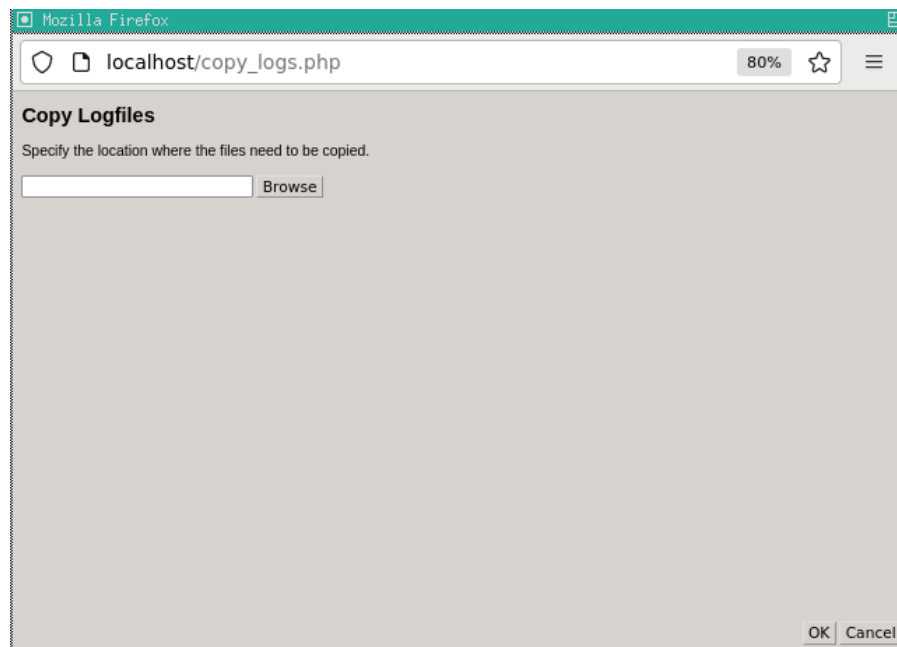
- Copy Log Files (Cristie recommends that this action is always undertaken after a recovery)
- View Log Files

10.1 Copy Log Files



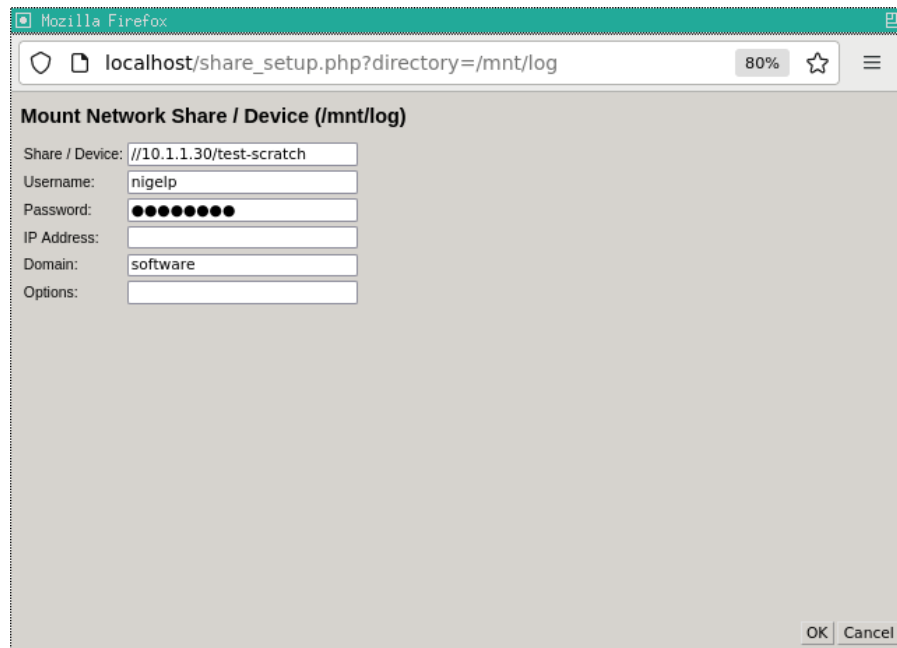
Select the  icon from the **Cristie Recovery Environment** main menu.

Click **Browse** to select a location to copy the log files to.

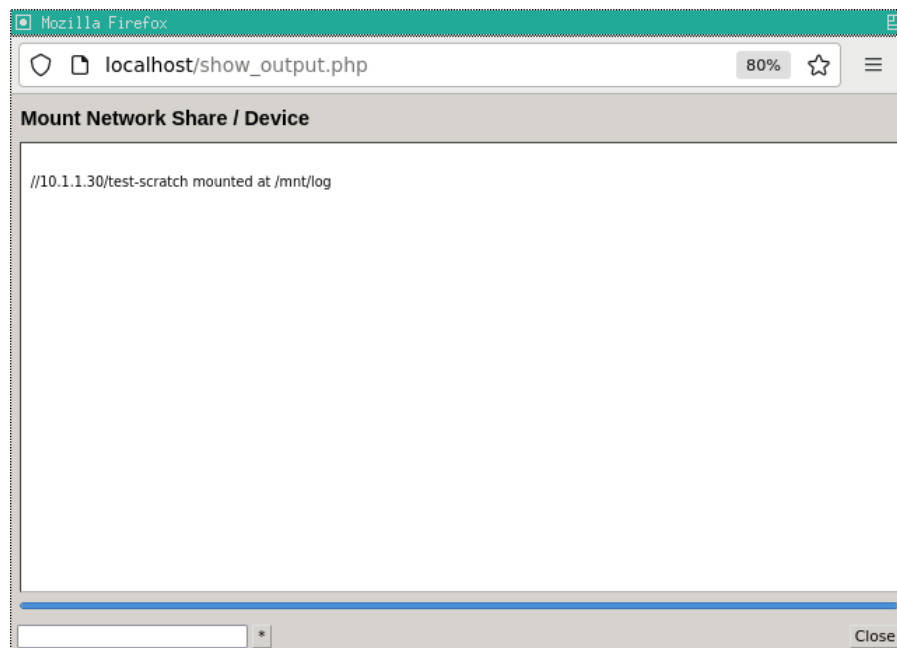


Select **Browse** to mount a network drive.



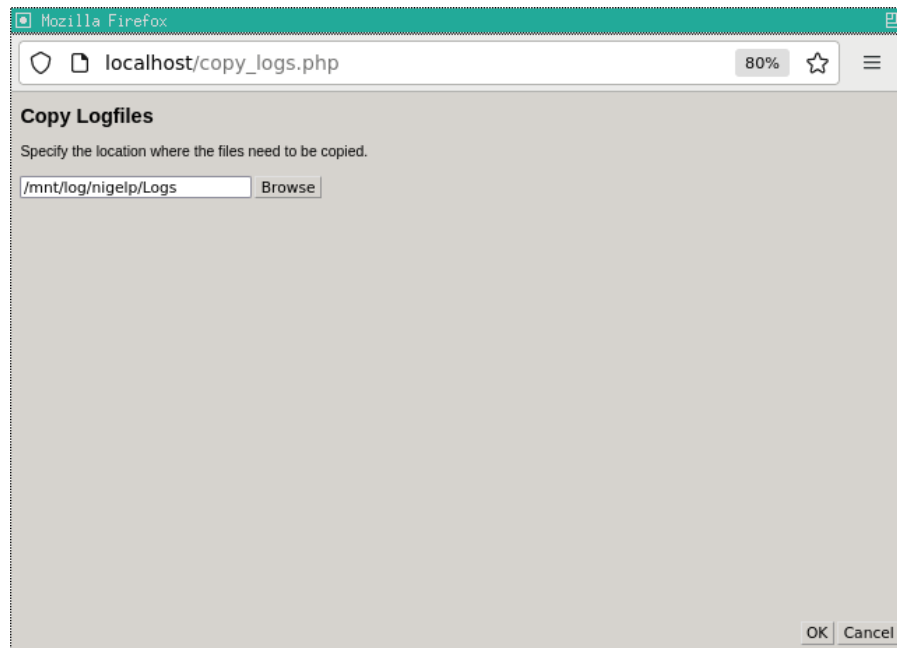


A successful mount is signified by:

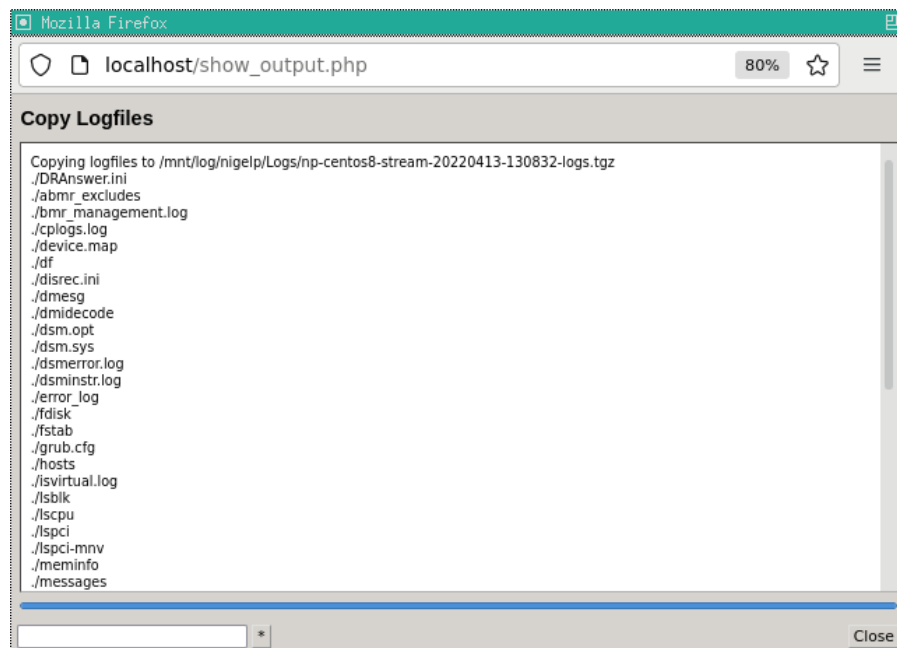


Select a directory on the mounted share:





Click **OK** to copy the logfiles.



Ensure this is a location which can be easily accessed in case there is a need to email the log files to Cristie for support purposes.


Click **Close** to return to the **Recovery Environment** Main Menu.

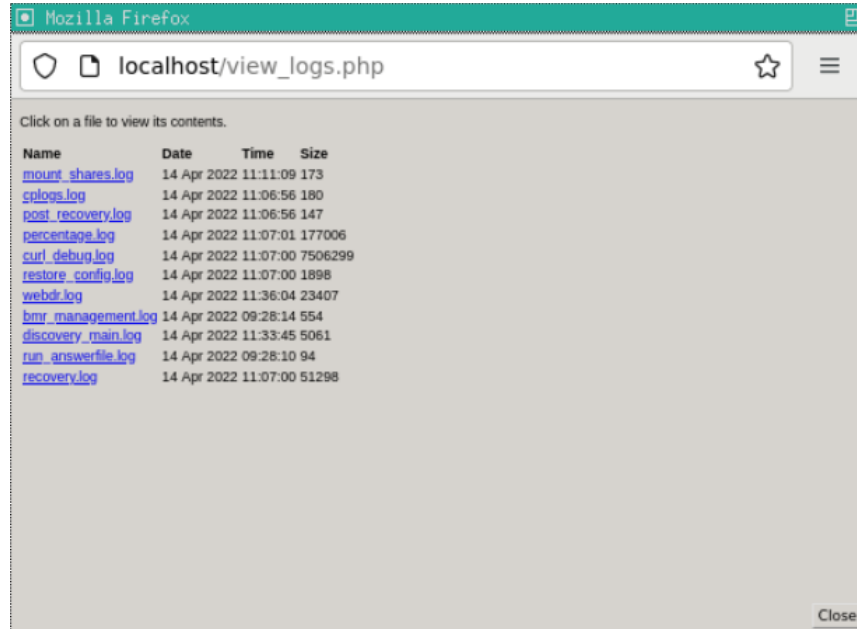
Note: log files are essential if you require support from Cristie. They detail exactly what has happened during the recovery on your system. Without them, it is very difficult for Cristie to offer meaningful support.



10.2 Show Log Files



To view log files, select the  icon from the Main Menu. This will display the list of available logfiles:



Click on the log you wish to view. Check the summary information at the bottom of the recovery status report for any errors.

Click [Close](#) to finish.



11 Cristie Technical Support

If you have any queries or problems concerning your Bare Machine Recovery for Rubrik CDM product, please contact Cristie Technical Support. To assist us in helping with your enquiry, make sure you have the following information available for the person dealing with your call:

- RBMR Version Number
- Installed OS type and version
- Any error message information (if appropriate)
- Description of when the error occurs
- All Cristie log files relating to the source or recovery machine. This is very important to help us provide a quick diagnosis of your problem

Contact Numbers - Cristie Software (UK) Limited

Technical Support	+44 (0) 1453 847 009
Toll-Free US Number	1-866-TEC-CBMR (1-866-832-2267)
Knowledgebase	kb.cristie.com
Forum	forum.cristie.com
Sales Enquiries	sales@cristie.com
Email	support@cristie.com
Web	www.cristie.com

Support Hours

05:00 to 17:00 Eastern Standard Time (EST) Monday to Friday

Out-of-Hours support available to customers with a valid Support Agreement - Severity 1 issues* only

UK Bank Holidays** classed as Out-of-Hours - Severity 1 issues only.

*Severity 1 issues are defined as: a production server failure, cannot perform recovery or actual loss of data occurring.

**For details on dates of UK Bank Holidays, please see www.cristie.com/support/

Cristie Software Ltd. are continually expanding their product range in line with the latest technologies. Please contact the Cristie Sales Office for the latest product range.

