Setting Up Quest® QoreStor™ as a Commvault® Backup Target

Technical White Paper

Quest Engineering

August 2018

Patents

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Legend

A WARNING icon indicates a potential for property damage, personal injury, or death

A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

, NOTE, TIP, MOBILE, or VIDEO: An information icon indicates supporting information.

Setting Up Quest® QoreStor™ as a Commvault® Backup Target

Updated – August 31, 2018

Contents

Executive Summary

This document provides information about how to set up QoreStor software with Commvault, including:

- Configuring QoreStor as a CIFS/NFS storage unit for Commvault 10 and 11.

For additional information, see the QoreStor documentation and other data management application best practices whitepapers at:

https://support.quest.com/qorestor/

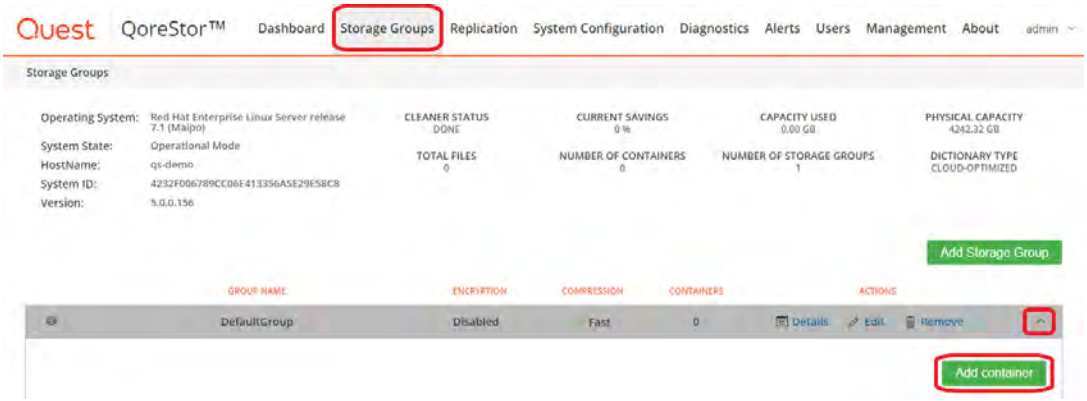
vault build version and screenshots used for this paper may vary slightly, depending on the version of QoreStor/Commvault software you are using.software you are using.software you are using.software you are using.

1

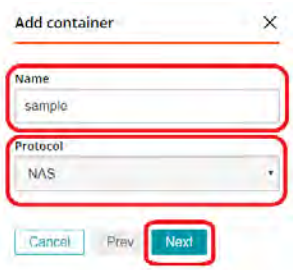
Configuring QoreStor as a CIFS/NFS Magnetic Library

Creating a CIFS container for use with Commvault

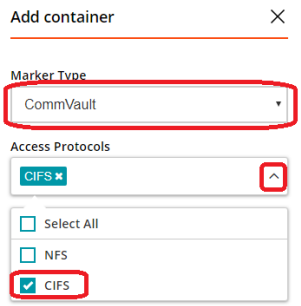
1 Select the **Storage Groups** tab, then expand the storage group into which you would like to add the container. Click **Add container**.



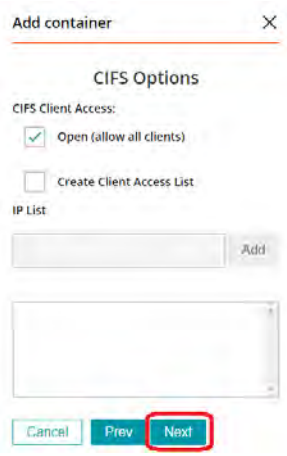
2 Enter a **Container Name**, and select **NAS** from the **Access Protocol** menu. Click **Next**.



3 Click the **Marker Type** dropdown and select **Commvault**. In the **Access Protocols** field, select **CIFS**. Leave **Marker Type** on **Auto**. Click **Next**.

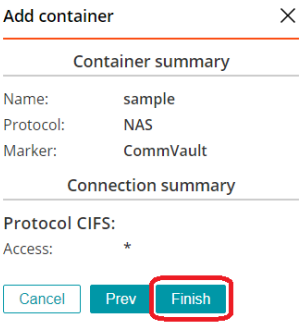


4 Fill in backup container information for **CIFS** options, then click **Next.**



recommends adding IP addresses for the Backup console (Commvault Server, Commvault Media Agents). (Not all environments will have all components)Commvault Media Agents). (Not all environments will have all components)

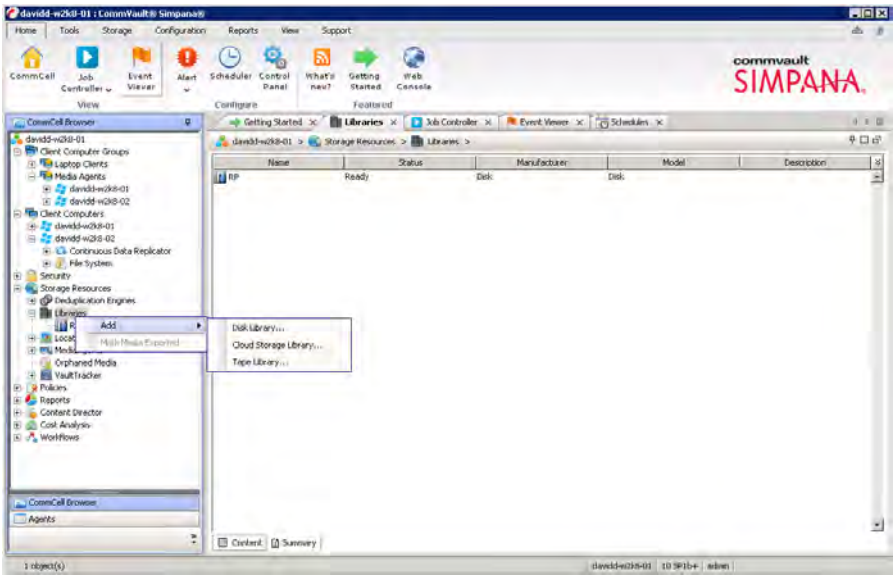
5 Confirm the settings and click **Finish**. Confirm that the container is added.



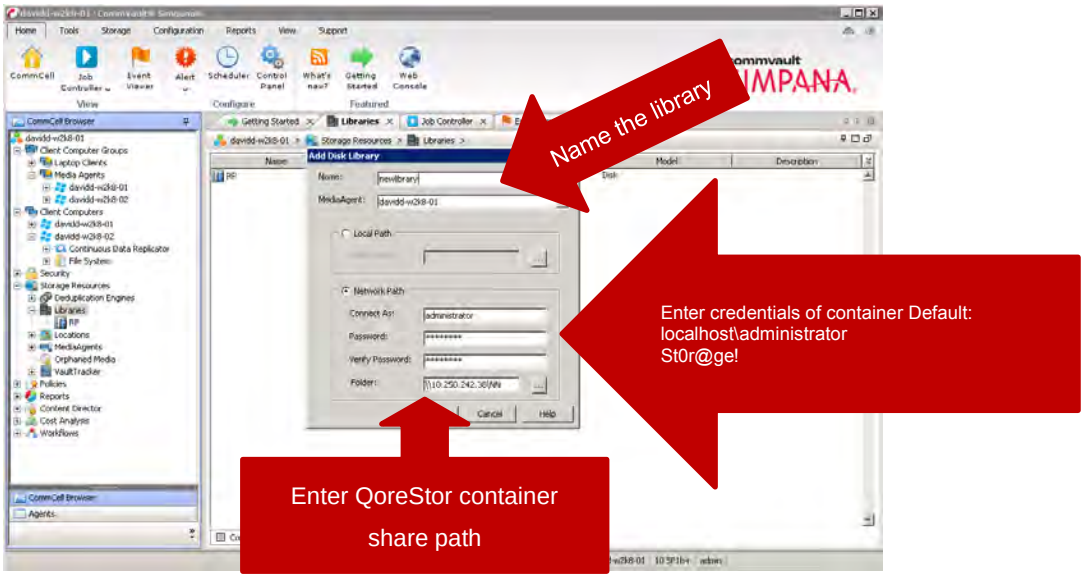
Adding the QoreStor CIFS container as a Magnetic Library in Commvault

Follow these steps to add the container to Commvault.

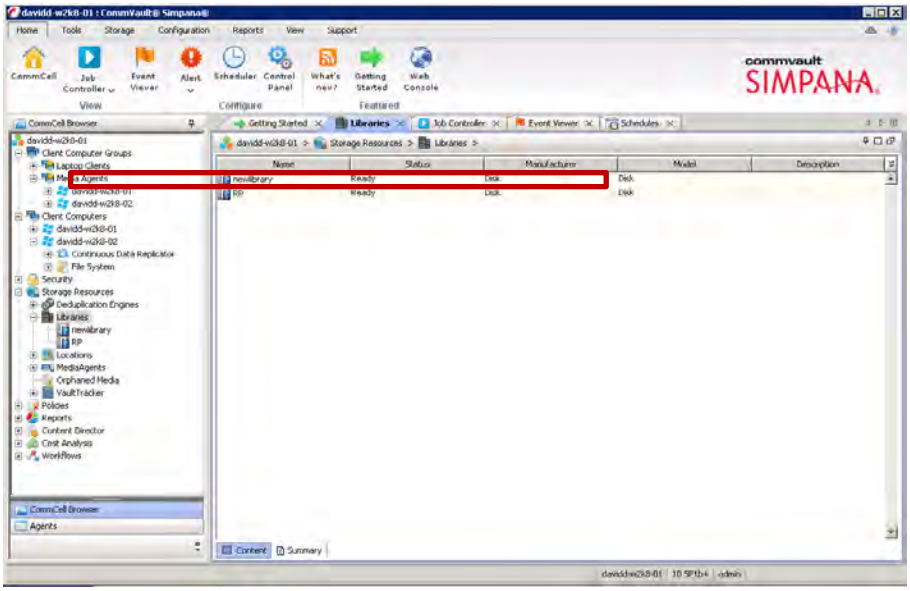
1 In the CommCell® Console, expand **Storage Resources**, right-click **Libraries**, and select **Add –> DiskLibrary….**



2 In the **Add Disk Library** dialog box, enter a name for the **Disk Library** and information about the QoreStor container. Click **OK**.

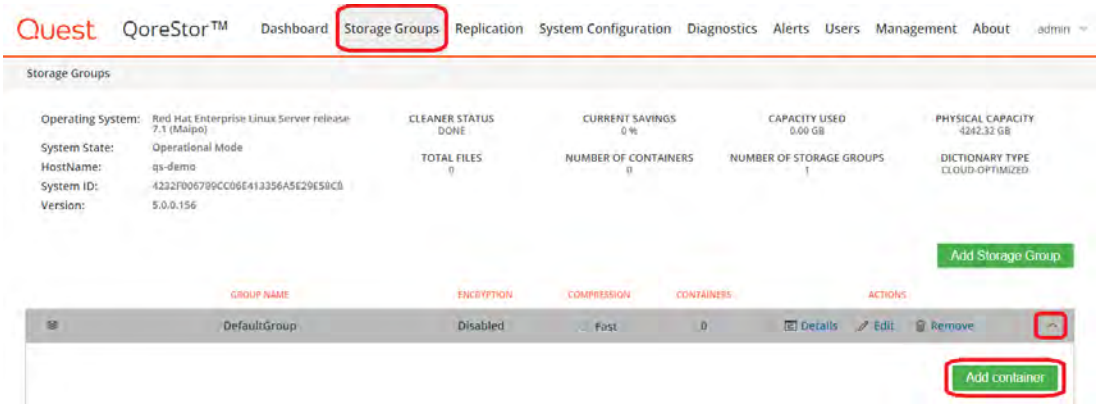


3 Confirm that the library is created, and that the status is **Ready**.

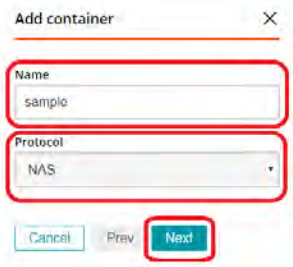


Creating a NFS container for use with CommVaullt

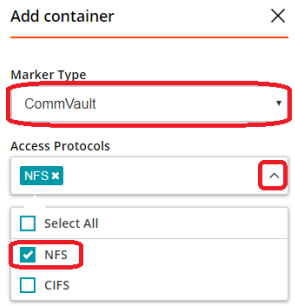
1 Select the **Storage Groups** tab, then expand the storage group into which you would like to add the container. Click **Add container**.



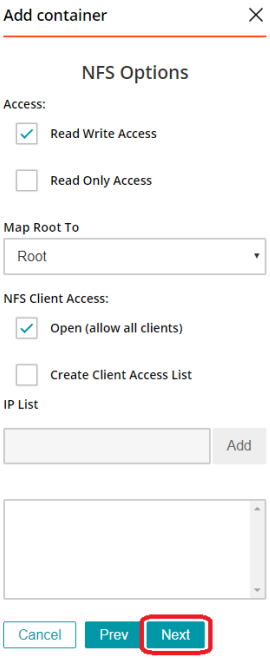
2 Enter a **Container Name**, and select **NAS** from the **Access Protocol** menu. Click **Next**.



3 Click the **Marker Type** dropdown and Select **Commvault**. Click **Access Protocols** and select **NFS**. Leave **Marker Type** on **Auto**. Click **Next**.

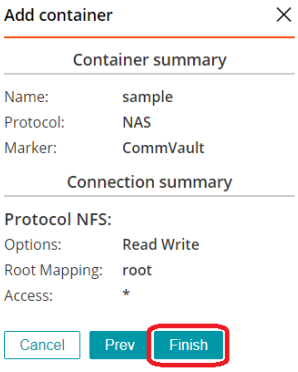


4 On the **NFS Options** dialog, enter the backup container information and click **Next.**



adding IP addresses for only NetBackup Media Serversadding IP addresses for only NetBackup Media Servers

5 Confirm the settings and click **Finish**. Confirm that the container is added.

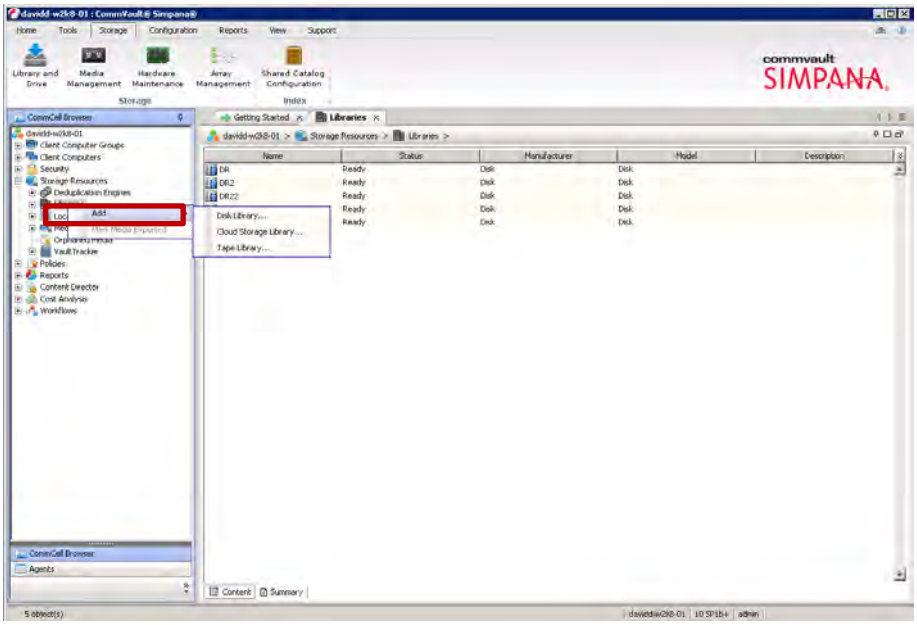


Adding the QoreStor NFS container as a Magnetic Library in Commvault

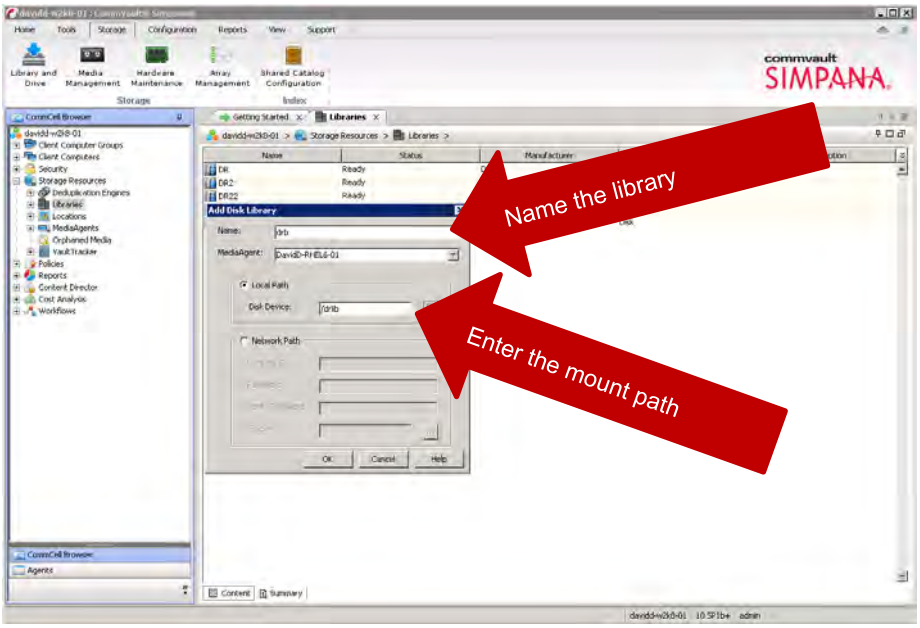
1 Mount the QoreStor container NFS export onto a Unix/Linux Media Agent.

```
[root@r320-sys-41 ~]#
[root@r320-sys-41 ~]# mkdir /mnt/sample
[root@r320-sys-41 ~]# mount -t nfs 6300-07:/containers/sample /mnt/sample
[root@r320-sys-41 ~]#
```

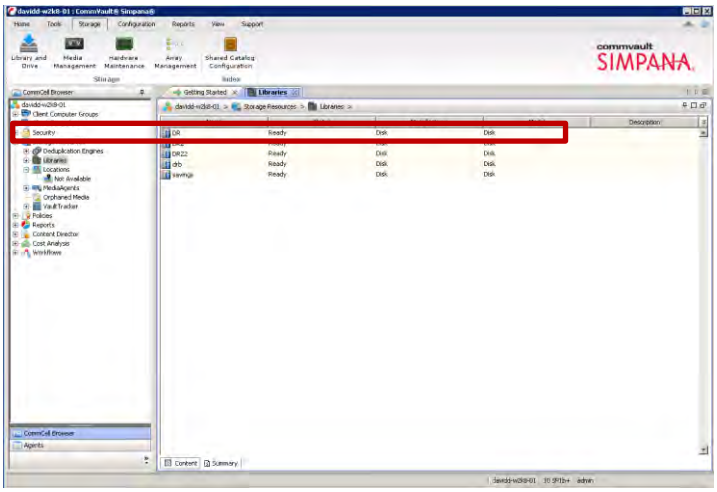
2 Open the CommCell Console, expand **Storage Resources**, right-click Libraries, and select **Add –> DiskLibrary….**



3 In the **Add Disk Library** window, enter the name for the **Disk Library** and the mount path of the QoreStor container export. Click **OK**.



4 Confirm that the library is created, and the **Status** is **Ready**.



Configuring Rapid CIFS with Commvault

Rapid CIFS is a Quest developed protocol that accelerates writes to CIFS shares on the QoreStor system. This is done by only sending unique data to the appliance. This usually causes significant network savings and even sometimes performance boosts.

Windows prerequisites

- The Media Agent OS must be the 64-bit version of Windows 2008 R2, Windows 2012/R2, or Windows 2016.

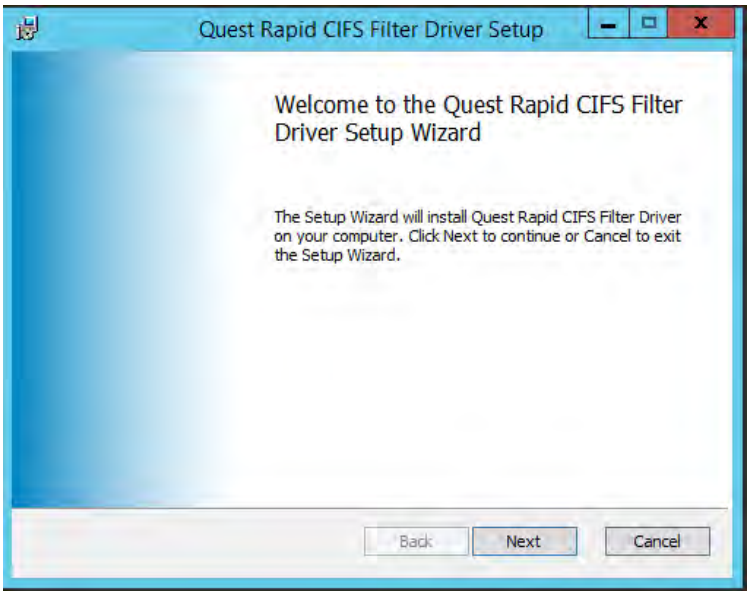
Commvault, you should install RDCIFS on the media agents.Commvault, you should install RDCIFS on the media agents.Commvault, you should install RDCIFS on the media agents.

Installing Rapid CIFS on a Commvault Windows media agent

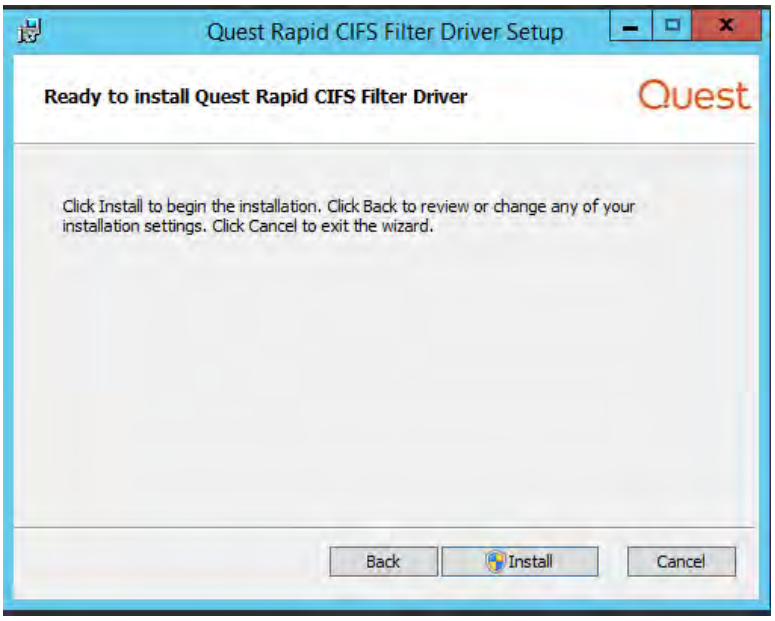
Follow these steps to install Rapid CIFS.

Veeam server or Proxy.Rapid CIFS should only be installed on a Veeam server or Proxy.

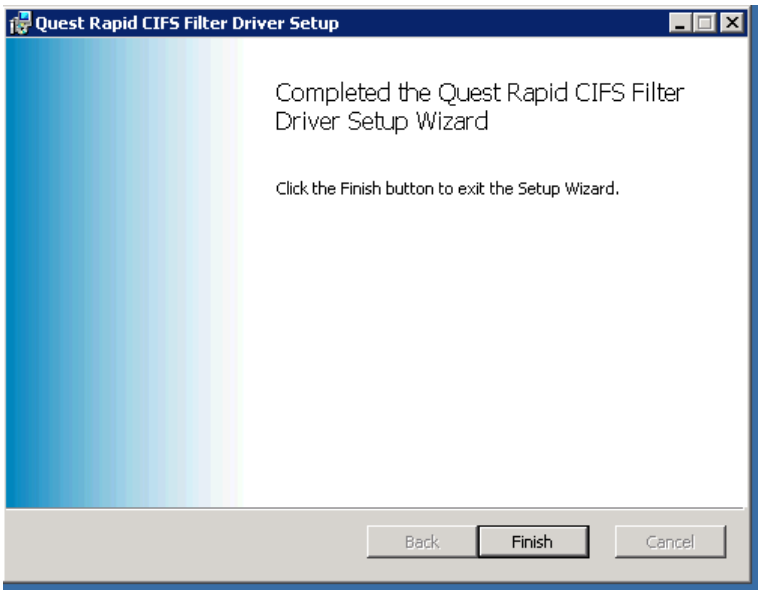
1. Download the MSI to the Server/Proxy by doing the following:
   a. Go to https://support.quest.com/qorestor/ and select your version.
2. On the support page for your product, click **Software Downloads**.
3. For the RDCIFS plugin for your QoreStor version, click the **Download** icon to download the installer package (*.msi* file).
4. Run the MSI and follow the instructions in the installation wizard as shown in the screenshots below. Click **Next** on the first screen.



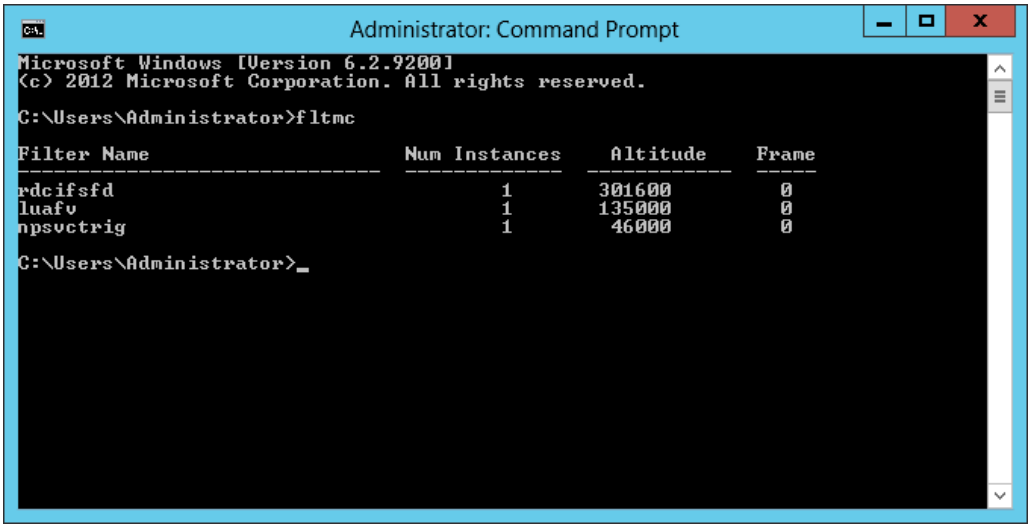
5 Click **Install.**



6 Click **Finish.**



7 Verify that the “rdcifsfd” driver is loaded automatically; this can be checked by using the command **fltmc**.



Configuring Rapid NFS with Commvault

Linux prerequisutes

- The Media Agent OS must be the 64-bit version of CentOS or SUSE.
- The FUSE module should already be installed, as follows:

  On NFS Media Agent, run the command below and verify the command output:

  ```
  # rpm -qa | grep fuse
  fuse-2.8.3-4.el6.x86_64
  gvfs-fuse-1.4.3-15.el6.x86_64
  fuse-libs-2.8.3-4.el6.x86_64
  ```

- The plug-in must be installed on the designated Linux-based media agent in the following directory, */usr/openv/lib/.*

QoreStor system and not pass through a media agent. If that is the case, you should install RDNFS on the media agent.QoreStor system and not pass through a media agent. If that is the case, you should install RDNFS on the media agent.

Installing Rapid NFS on a Commvault Linux media agent

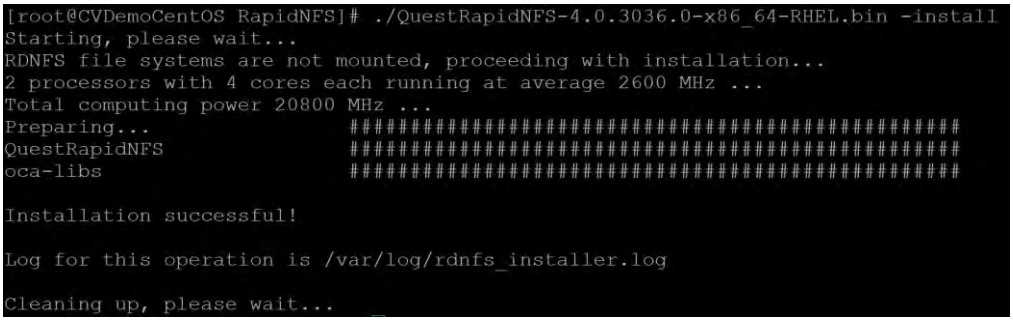
Follow these steps to install Rapid NFS.

1. Download the installation package to the Media Agent using the following steps:
2. Go to support.quest.com/qorestor/ and select your version.
3. On the support page for your product, click **Software Downloads**.
4. For the RDNFS plugin for your QoreStor version, click the **Download** icon to download the installer package (*.bin.gz* file).
5. Use WinSCP or a similar utility to copy the package to the NFS Media Agent. The plug-in must be installed on the NFS Media Agent in the following directory, */usr/openv/lib/.*
6. On the NFS Media Agent, assuming that the current working directory has the installation package named *QuestRapidNFS-4.0.3036.0-centos5.7-x86_64.bin.gz*, run the following commands in order:

   ```
   gunzip ./ QuestRapidNFS-4.0.3036.0-centos5.7-x86_64.bin.gz
   chmod a+x ./QuestRapidNFS-4.0.3036.0-centos5.7-x86_64.bin
   ```

7. Run the installer:

   ```
   ./QuestRapidNFS-4.0.3036.0-centos5.7-x86_64.bin –install
   ```

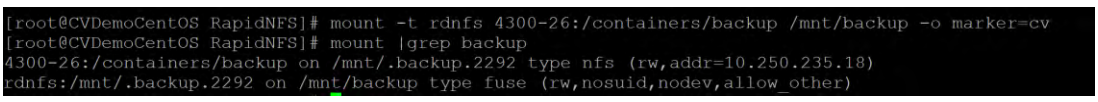


8. Create a directory on Media Agent:

   ```
   mkdir /mnt/backup
   ```

9. Mount the QoreStor NFS container on the Media Agent with the Commvault marker:

   ```
   mount -t rdnfs 4300-26:/containers/backup /mnt/backup –o marker=cv
   ```



Setting up QoreStor system replication

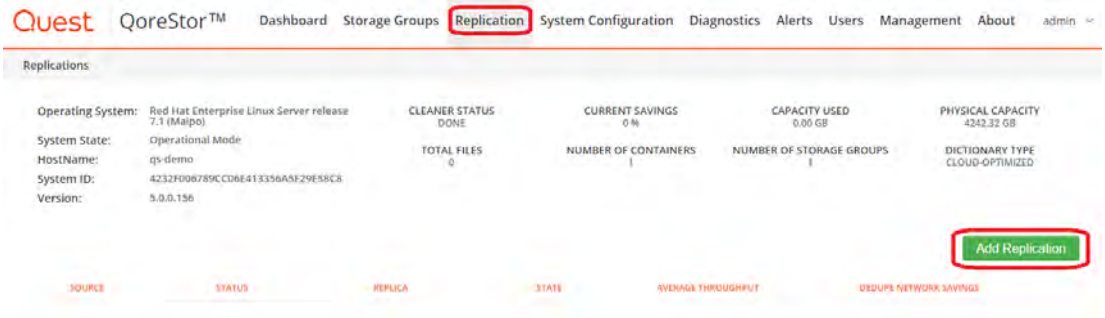
QoreStor system, and QS2 is the replication target QoreStor system. ‘source’ is the replication source container, and ‘target’ is the replication target container.For the steps in this procedure, assume QS1 is the replication source QoreStor system, and QS2 is the replication target QoreStor system. ‘source’ is the replication source container, and ‘target’ is the replication target container.

Creating a CIFS/NFS replication session

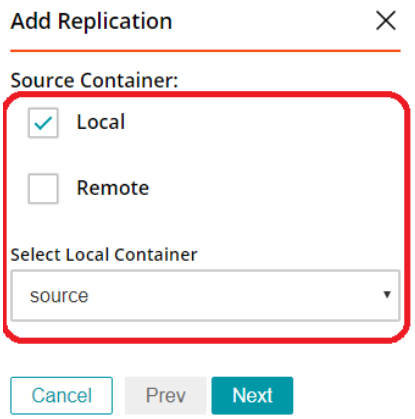
1 Create a source container on the source QoreStor system.

2 Create a target container on the target QoreStor system.

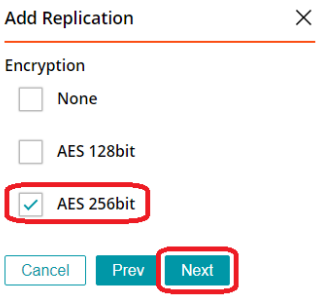
3 On the source QoreStor system, go to the **Replication** Tab. Click the **Add Replication** button.



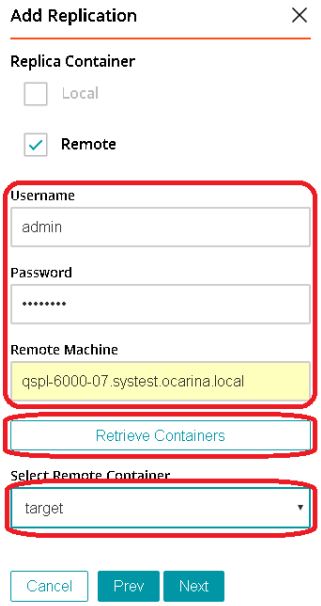
4 Select the source container for Replication and click **Next**.



5 Select the **Encryption Type** for the source container and click **Next**.



6 Enter the target QoreStor systems related information then click **Retrieve Remote Containers**. Select a target container from the populated list, and click **Next**.



7 Verify the summary and click **Finish**.

8 Check replication is added successfully and confirm the replication details

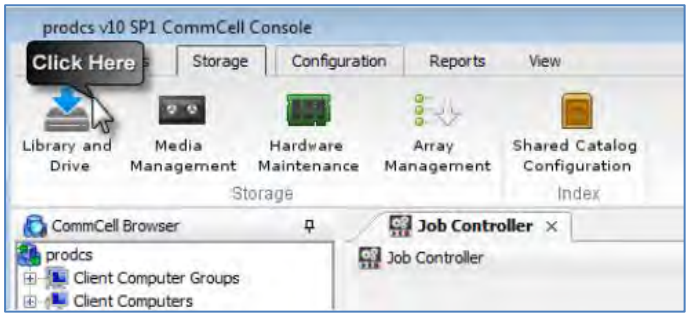
Setting up a Commvault Replica Library

Commvault has a feature called a Replica Library. This feature is useful to prepare Commvault for a Disaster Recovery restore from a QoreStor replication target before the event occurs. With a Replica Library both the replication source and target containers are added to Commvault. Anything written to the source will be assumed as accessible on the target. Information from Commvault can be found here:

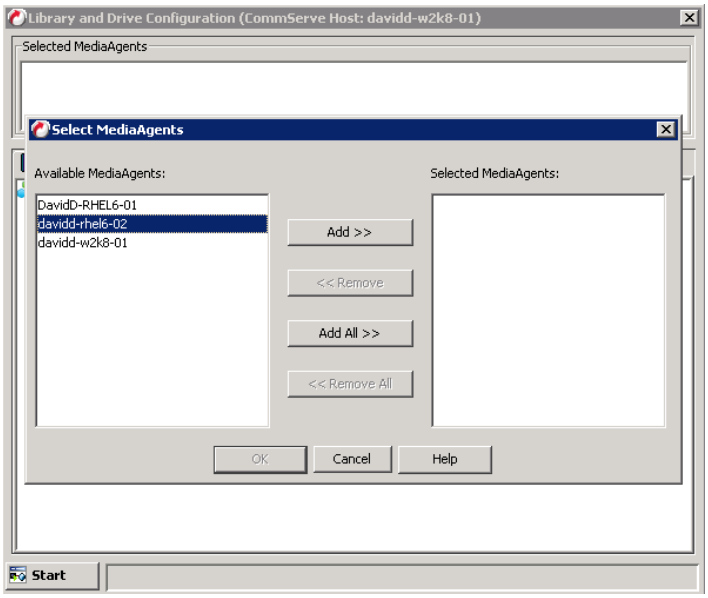
http://documentation.commvault.com/commvault/v11/article?p=9560.htm

Follow these steps to set up replication.

1 In the CommCell Console, on the **Storage** tab, click **Library and Drive**.



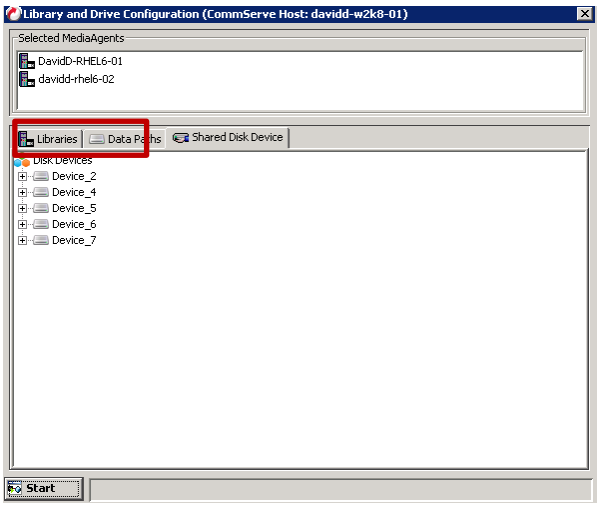
2 Select all the Media Agent(s) that will participate in replication, click **Add** to add to Selected MediaAgents, and then click **OK**.



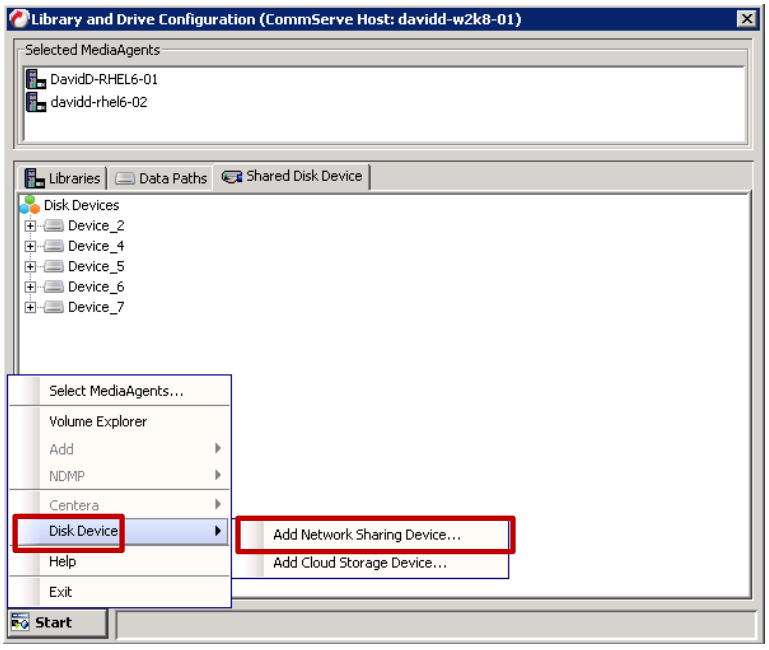
MediaAgents that share that library.To configure a shared library, make sure you select all the MediaAgents that share that library.

3 In the **Information** dialog, click **OK** to continue.

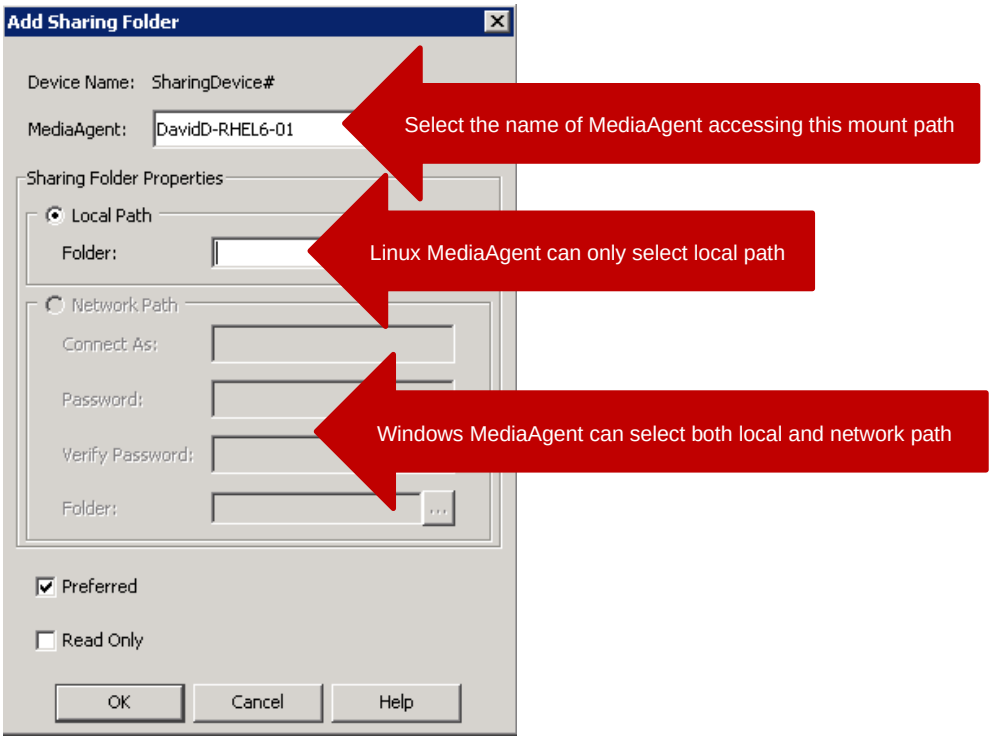
4 Click the **Shared Disk Device** tab.



a Click **Start**, and select **Disk Device > Add Network Sharing Device…**

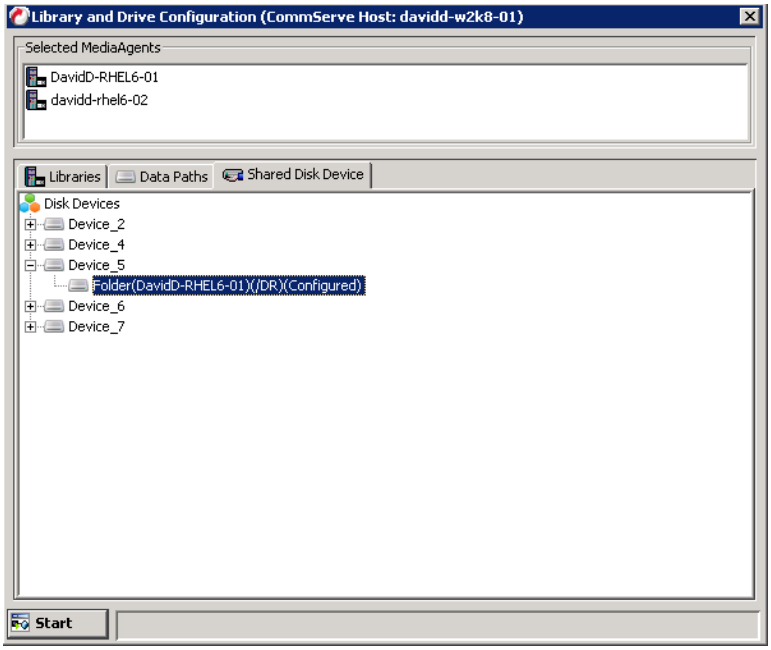


5 In the **Add Sharing Folder** dialog, enter the source QoreStor container information and then click **OK**.

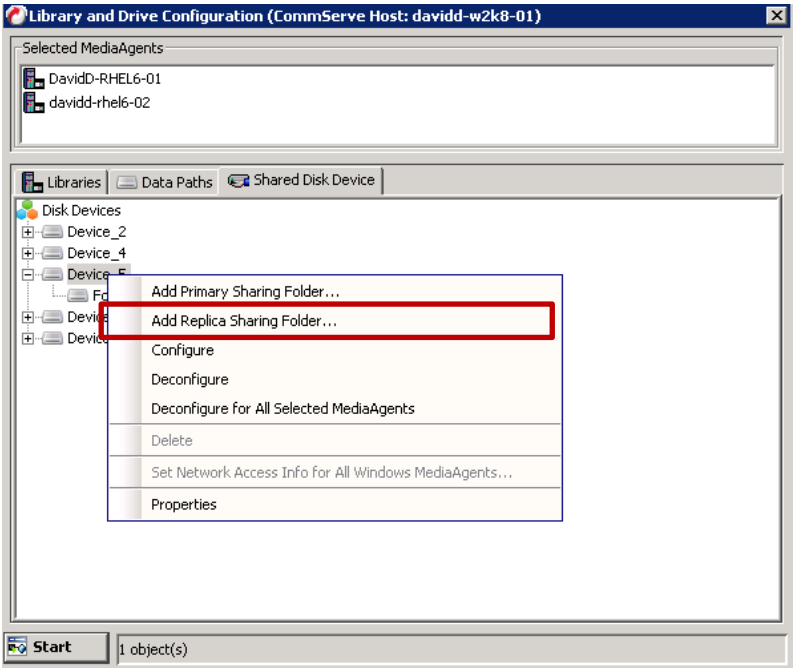


Agents. Agents.

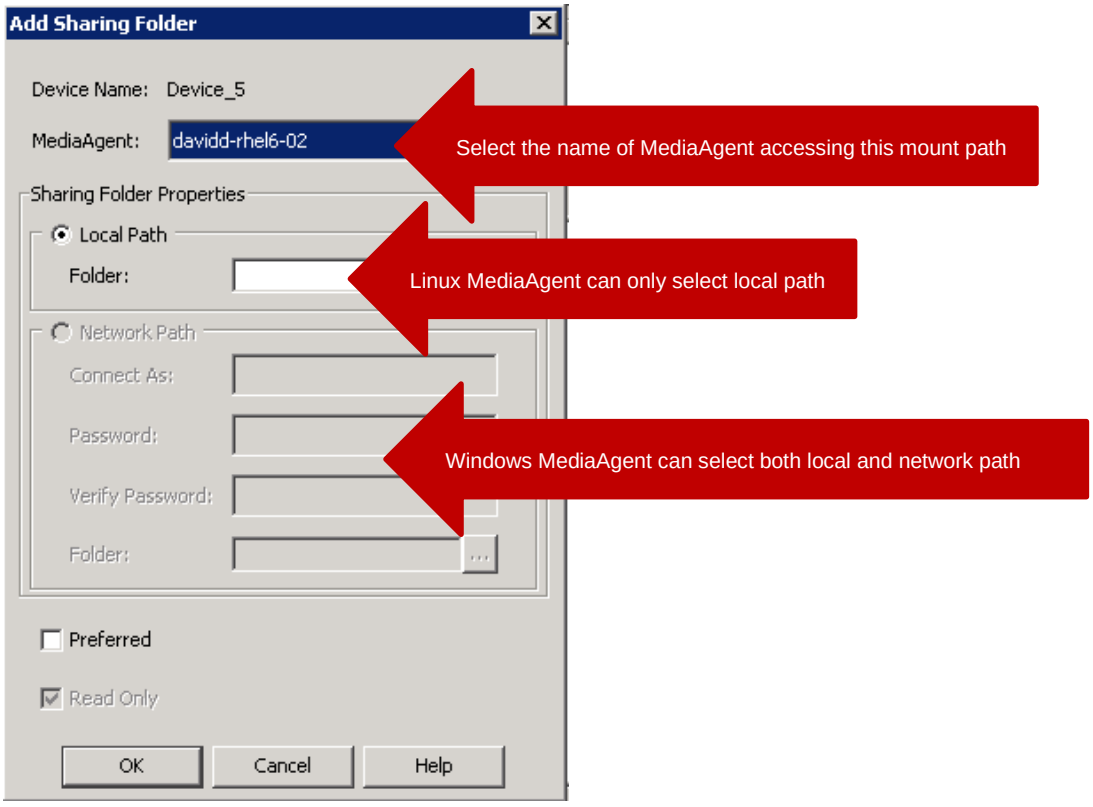
6 The system displays the device information with the Media Agent that can access the device **in Library and Drive Configuration** window.



7 Right-click the device and then click **Add Replica Sharing Folder**.

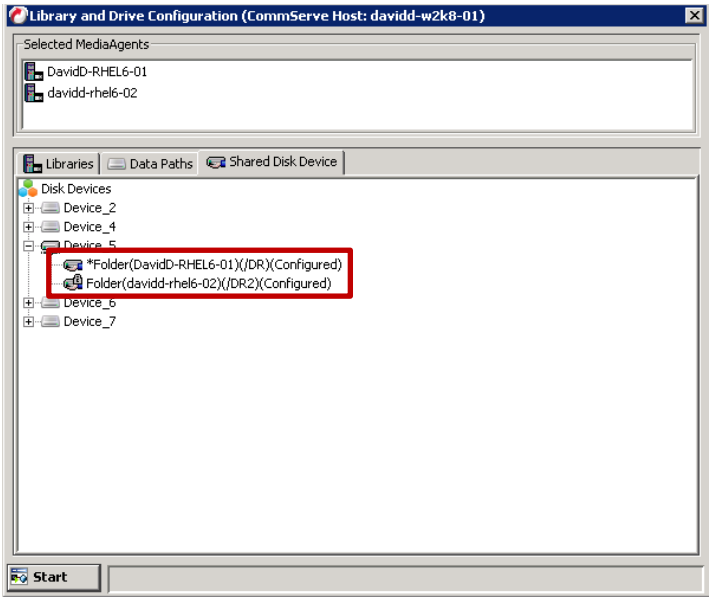


8 In the **Add Sharing Folder** dialog, enter the target QoreStor container information and then click **OK**.

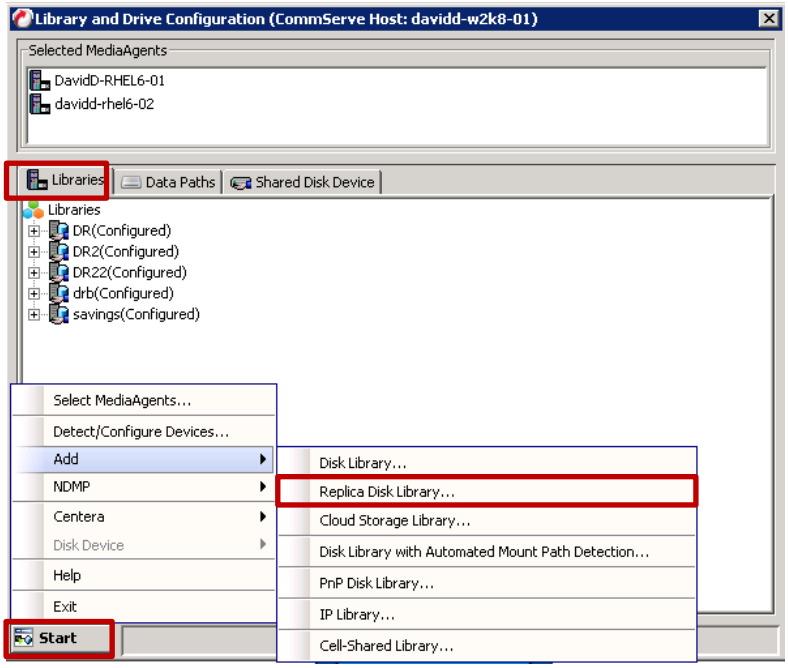


MediaAgents.This Device is the target destination of the replication. Device information is based on which protocol the container is exposed to the MediaAgents.

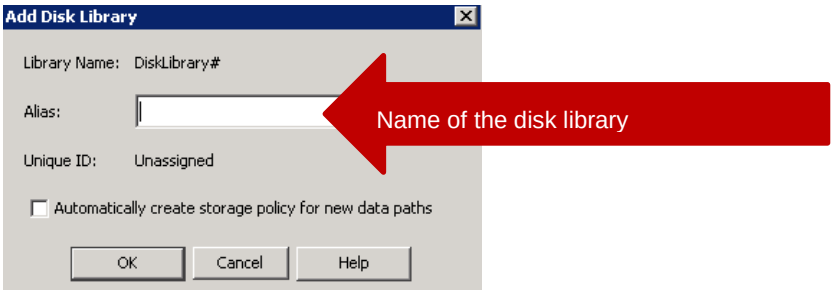
9 The system displays the device information with which the Media Agent can access the device in the Library and Drive Configuration window.



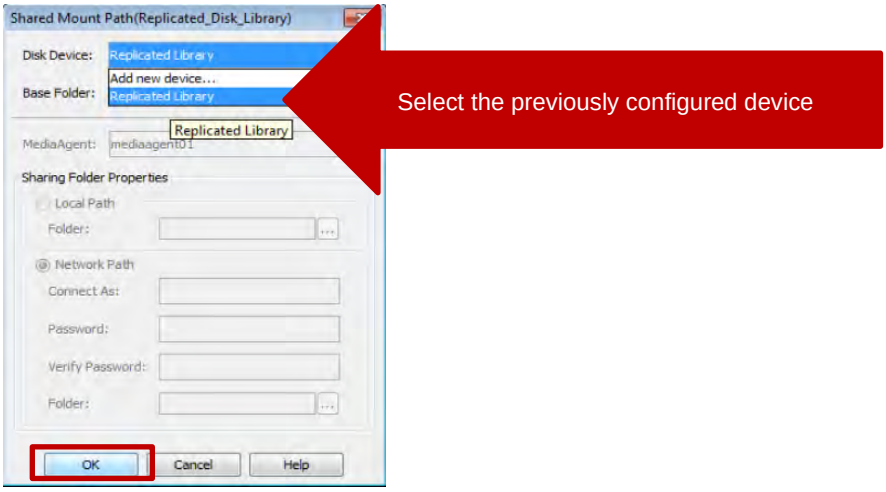
10 On the **Libraries** tab, click the **Start** menu, and select **Add > Replica Disk Library**.



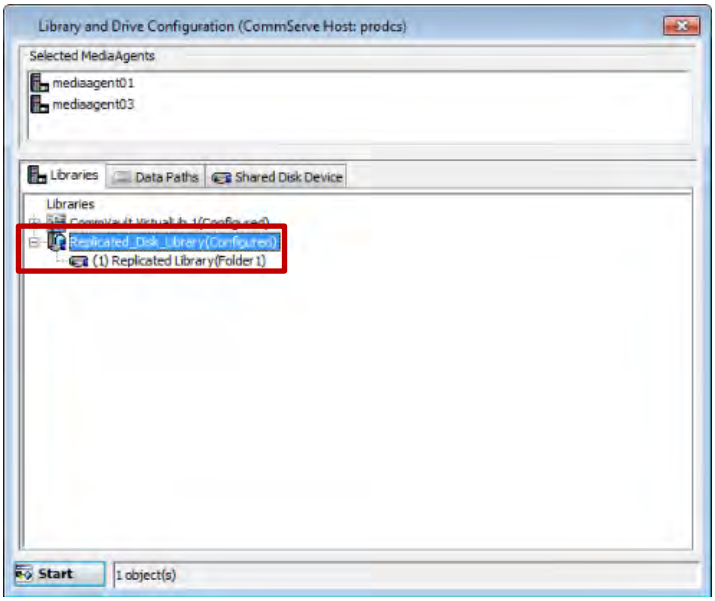
11 In the **Add Disk Library** dialog, enter the **Alias** and clear **the Enable replication** checkbox.



12 In the **Share Mount Path** dialog, select the device configured previously, then click **OK**.



13 Verify the disk library is configured.



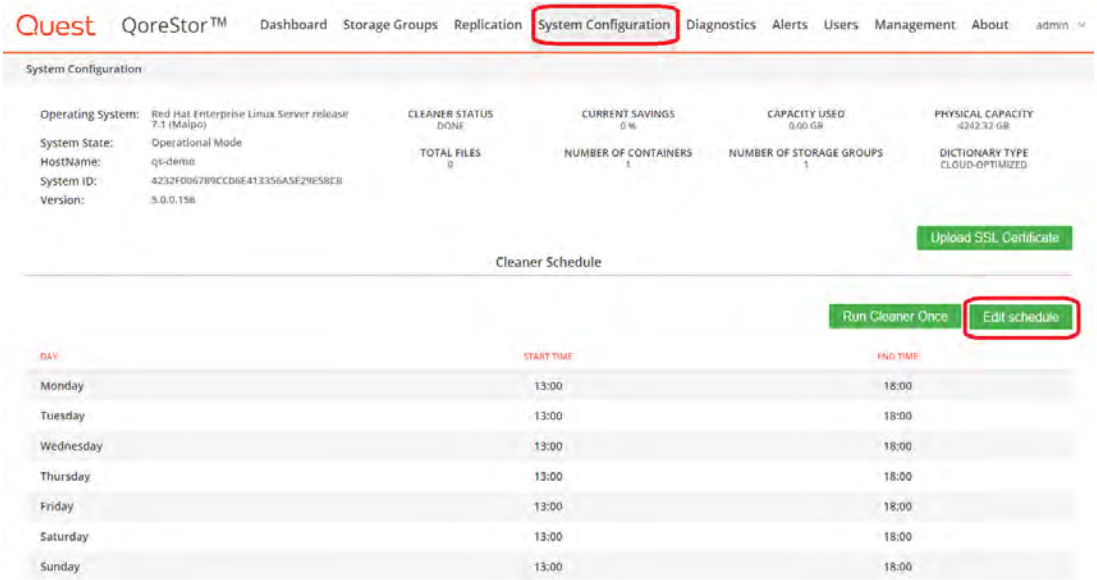
3

Setting up the QoreStor system cleaner

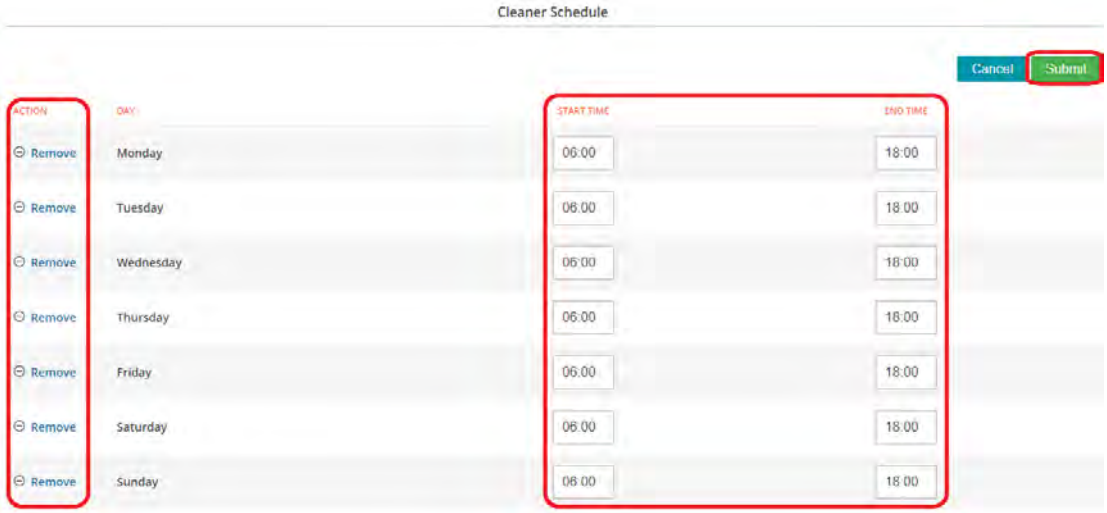
Performing scheduled disk space reclamation operations are recommended as a method for recovering disk space from system containers in which files were deleted as a result of deduplication.

The system cleaner runs during idle time. If your workflow does not have a sufficient amount of idle time on a daily basis, then you should consider scheduling the cleaner to force it to run during a scheduled time. If necessary, you can perform the procedure shown in the following example screenshot to force the cleaner to run. After all of the backup jobs are set up, the QoreStor system cleaner can be scheduled. The QoreStor system cleaner should run at least 40 hours per week when backups are not taking place, and generally after a backup job has completed. Refer to the *QoreStor Series Cleaner Best Practices* white paper for guidance on setting up the cleaner.

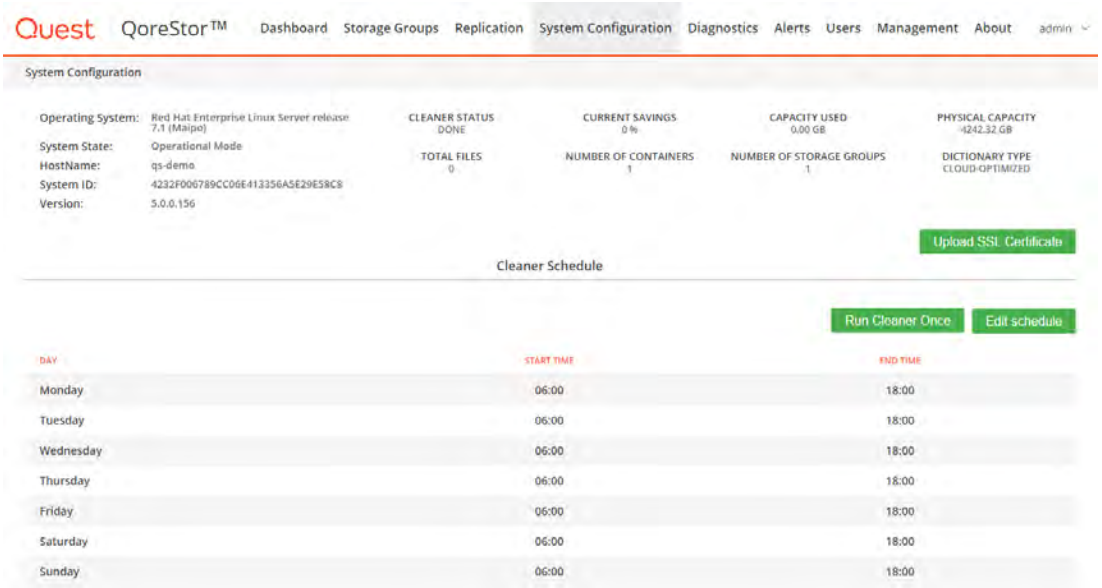
1 In the QoreStor system GUI, click the **System Configuration** tab then click **Edit Schedule.**



2 Define the schedule and click **Submit**.



The new cleaner event is displayed on the System Configuration tab.



Monitoring deduplication, compression and performance

After backup jobs have run, the QoreStor system tracks capacity, storage savings, and throughput in the QoreStor dashboard. This information is valuable in understanding the benefits of the QoreStor software.

Deduplication ratios increase over time. It is not uncommon to see a 2-4x reduction (25-50% total savings) on the initial backup. As additional full backup jobs are completed, the ratios will increase. Backup jobs with a 12-week retention will average a 15x ratio, in most cases.