Quest™

Setting Up the Quest™ as an OST Backup Target for Veritas™ NetBackup™

Technical White Paper

Quest Engineering

February 2023

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Legend

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

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

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

Setting Up QoreStor as a Veritas NetBackup

Updated – February 17, 2023

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Executive Summary

This white paper provides information about how to set up QoreStor as a backup target for Veritas NetBackup. This document is a quick reference guide and does not include all QoreStor deployment best practices.

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

http://support.quest.com/qorestor

For more information about Veritas NetBackup, refer to the NetBackup Exec documentation at:

https://www.veritas.com/support/en_US/NetBackup

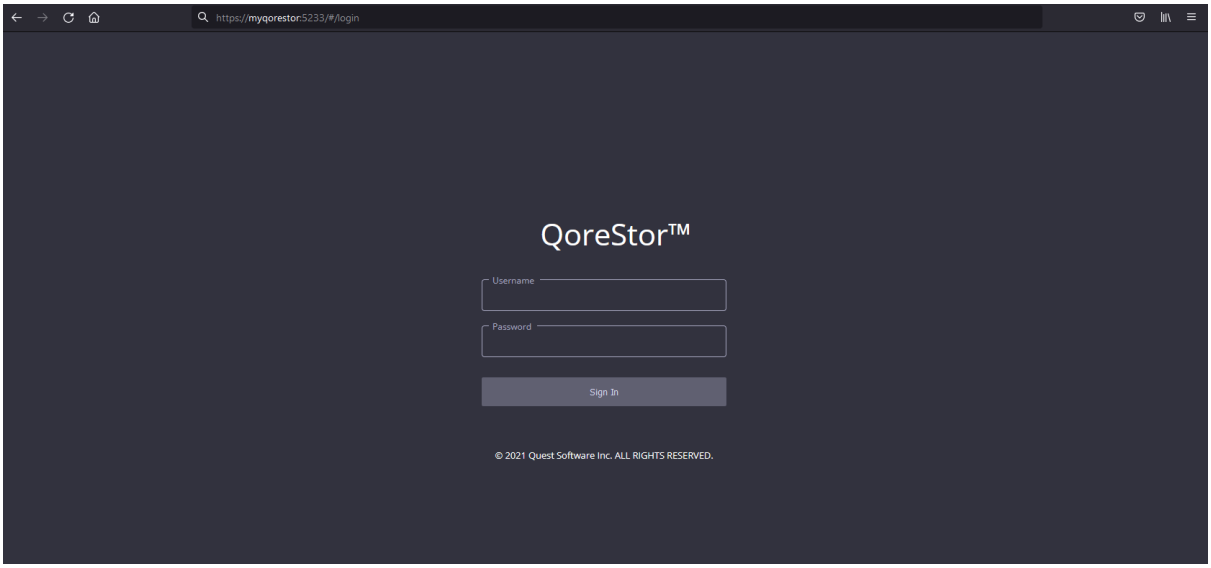
NOTE: The QoreStor and Veritas NetBackup screenshots used in this document might vary slightly depending on the QoreStor version and NetBackup version you are using.

Installing and configuring QoreStor

1 Before installing QoreStor, refer to the *QoreStor Interoperability Guide* to ensure your system(s) meet the installation requirements.

2 To install QoreStor on your system(s), follow the procedures documented in the *QoreStor Installation Guide*.

Using a supported web browser (refer to *QoreStor Interoperability Guide* for a list of supported browsers), connect to the QoreStor administrative console via https, using the host IP address/FQDN and port 5233 (https://<hostname:5233>).

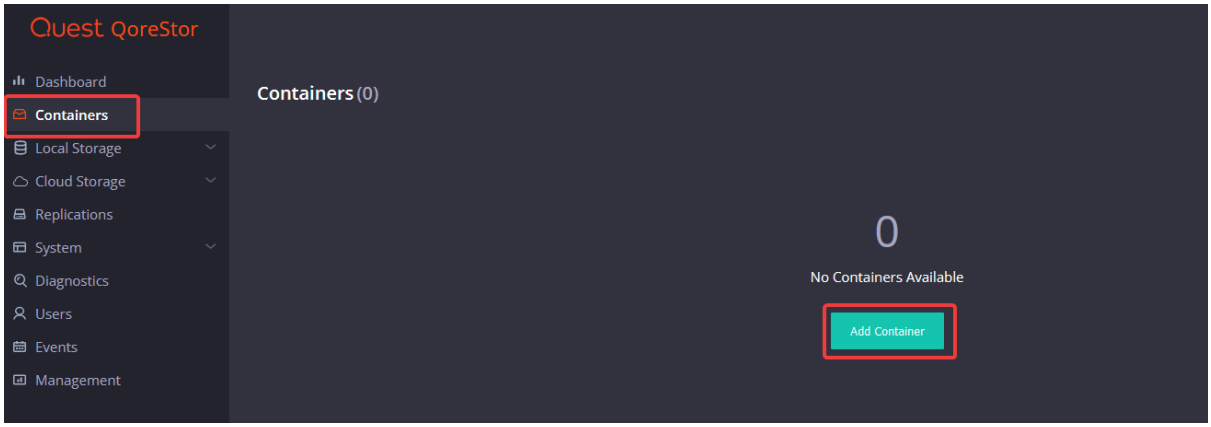


3 By default, QoreStor has a user with OST Role named backup_user and password “St0r@ge!”. Refer to the *QoreStor User Guide* for information on changing user accounts.

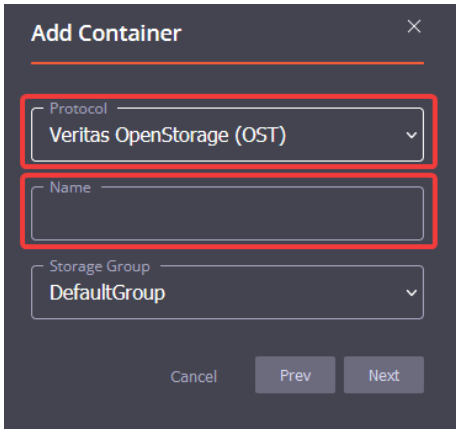
Creating an OST container for NetBackup

In this chapter, we will show how to create an OST container for Backup Exec using the QoreStor administrative console. If you wish to use QoreStor CLI please refer to the *QoreStor CLI Reference Guide*.

1. Open the QoreStor administrative Console and log in.
2. Select **Containers** in the left navigation pane.
3. Click **Add container.**

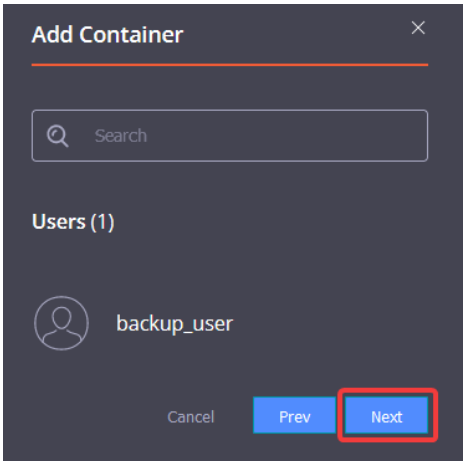


4. Select **Veritas OpenStorage (OST)** from the **Protocol** dropdown.
5. Type a container **Name.**
6. Click the **Next** button.

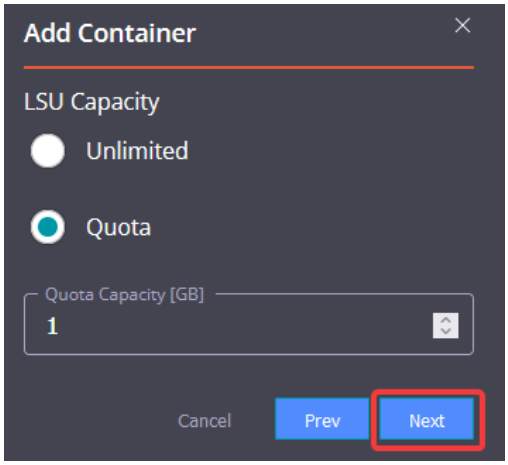


NOTE: Refer to the QoreStor User Guide for information on creating a new Storage Group.

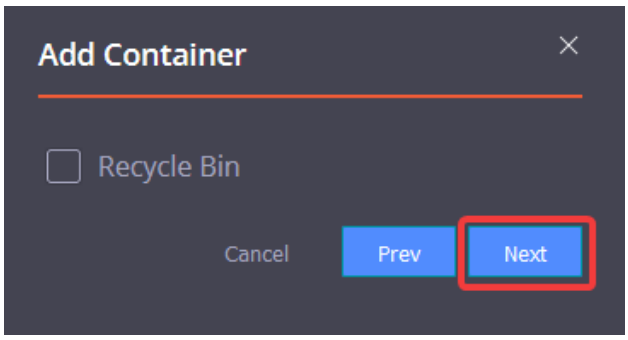
7. Select the **User(s)** that will have access to the container and click the **Next** button.



8. Select the **LSU Capacity** and click the **Next** button.

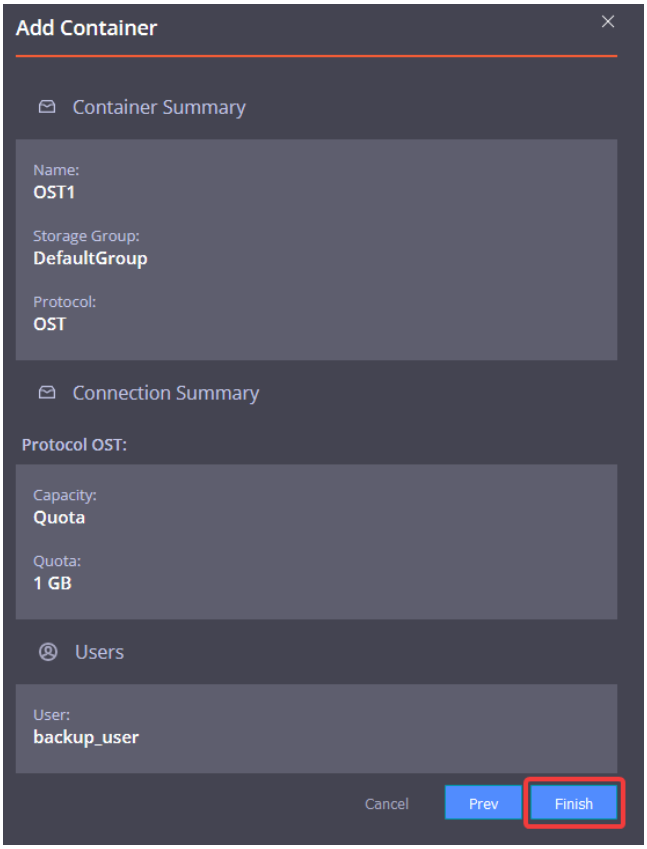


9. Select if you want to enable **Recycle Bin** and click the **Next** button.



NOTE: Refer to the QoreStor User Guide for information on Recycle Bin feature.

10. Review the Container settings and click the **Finish** button.



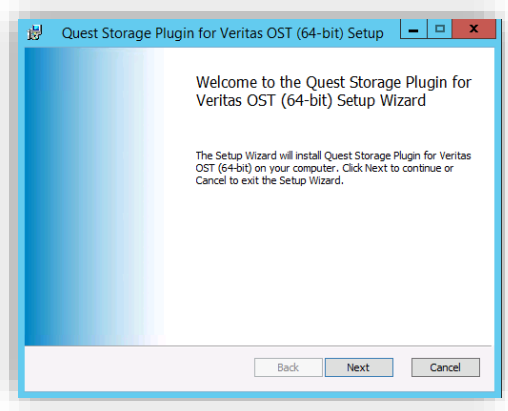
Installing the Quest OST Plugin

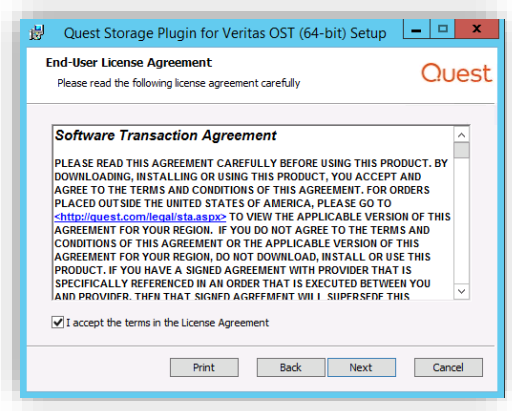
To enable NetBackup to use QoreStor, the Quest OST Plugin must be installed in the NetBackup Media Server(s).

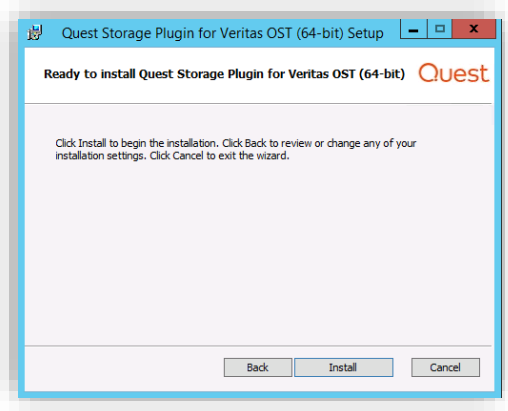
Before proceeding, refer to the *QoreStor Interoperability Guide* for a list of supported Operating Systems, NetBackup, and OST Plugin versions. Once identified, download the OST Plugin at https://support.quest.com/qorestor/.

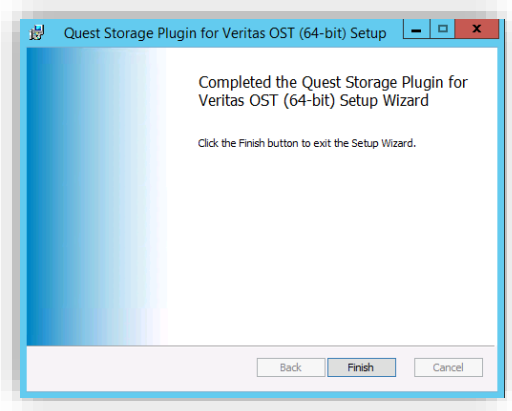
Installing the OST Plugin on Windows

1. Download the Quest OST Plugin onto the server you wish to install.
2. Execute the OST Plugin .msi installer and follow the screen prompts.



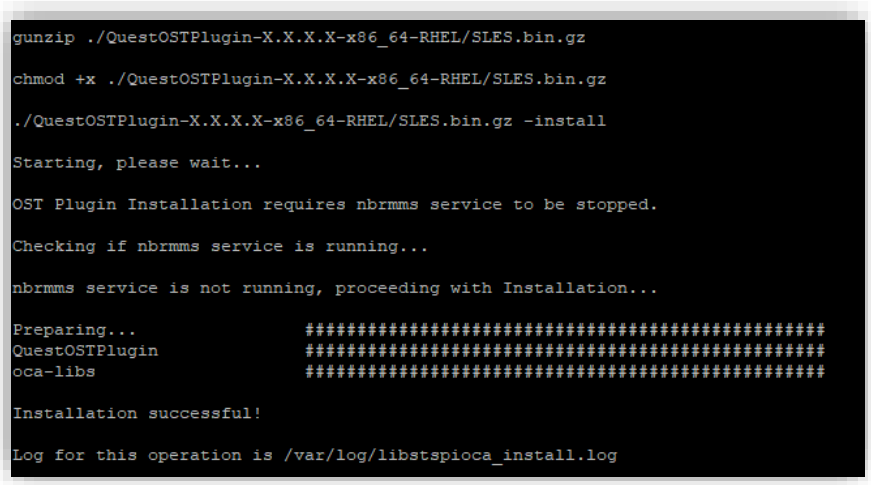






Installing the OST Plugin on Linux

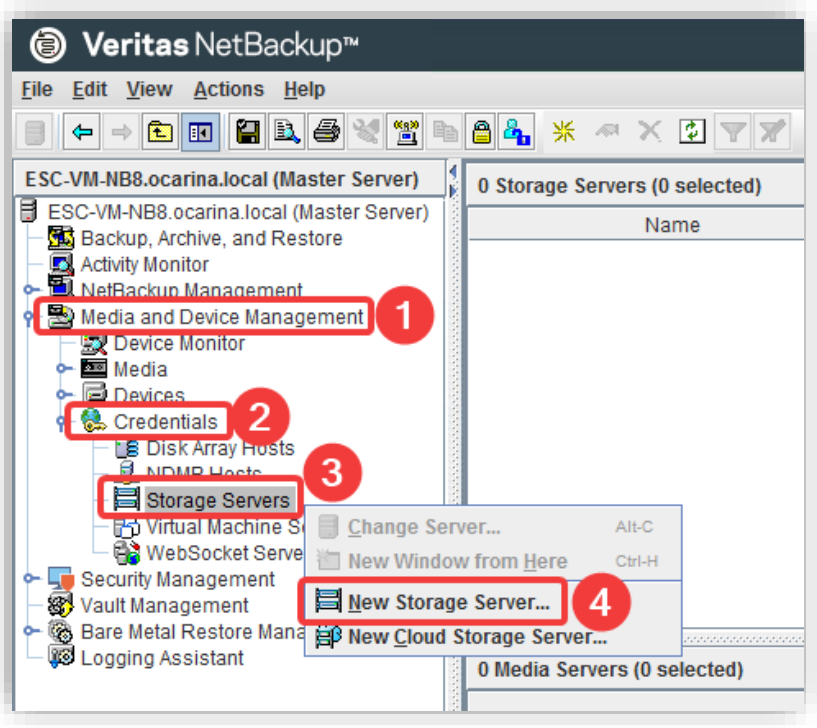
1. Download the Quest OST Plugin onto the server you wish to install.
2. Extract the .bin file from the .gz package and give it executable permission.
3. Execute the .bin file adding –**install** switch.



Adding an OST container to Veritas NetBackup

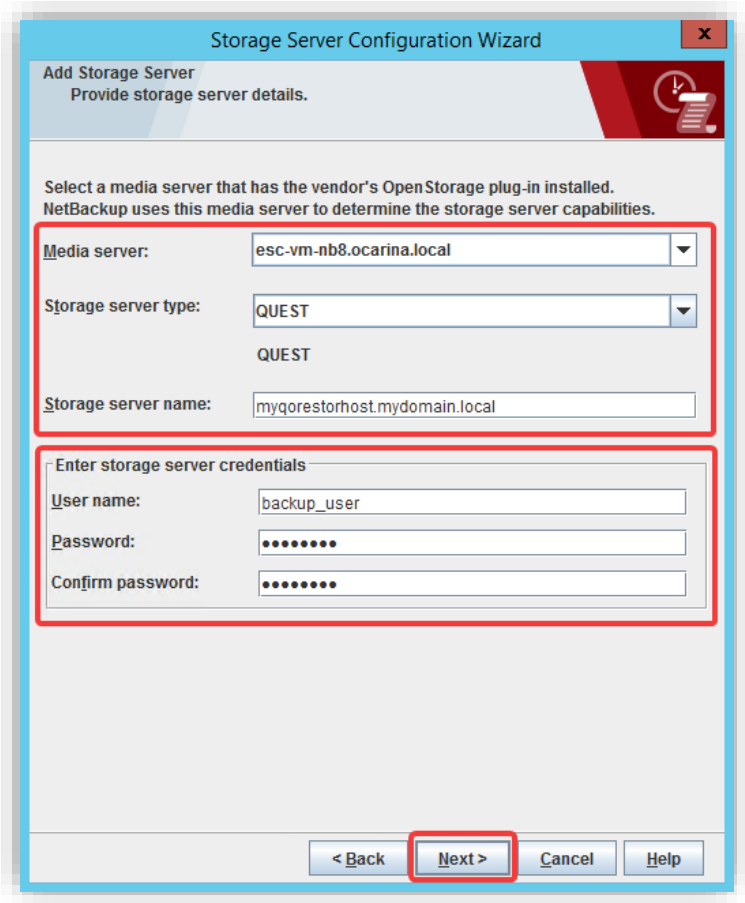
This section provides information needed to add an existing or newly created OST container to NetBackup.

1. Open the NetBackup administration console.
2. Expand **Media and Device Management** ❶, then **Credentials** ❷. Right-click **Storage Servers** ❸, and click **New Storage Server…** ❹.



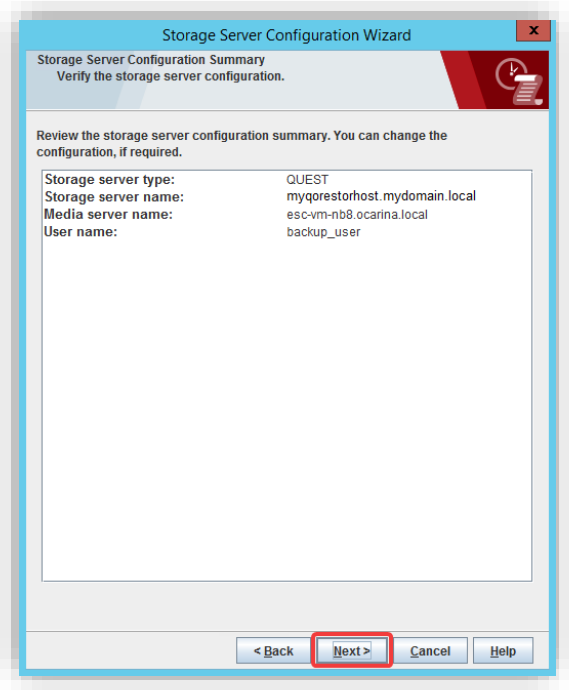
3. In the **Storage Server Configuration Wizard** select **OpenStorage** and click **Next.**

4 Select the desired **Media server** from the dropdown, write **QUEST** on the **Storage server type** and specify the QoreStor host IP/hostname or FQDN for the **Storage server name**;
enter the OST **User name**, **Password,** and **Confirm password** (the default OST username is backup_user and the default password is St0r@ge!) and click **Next.**

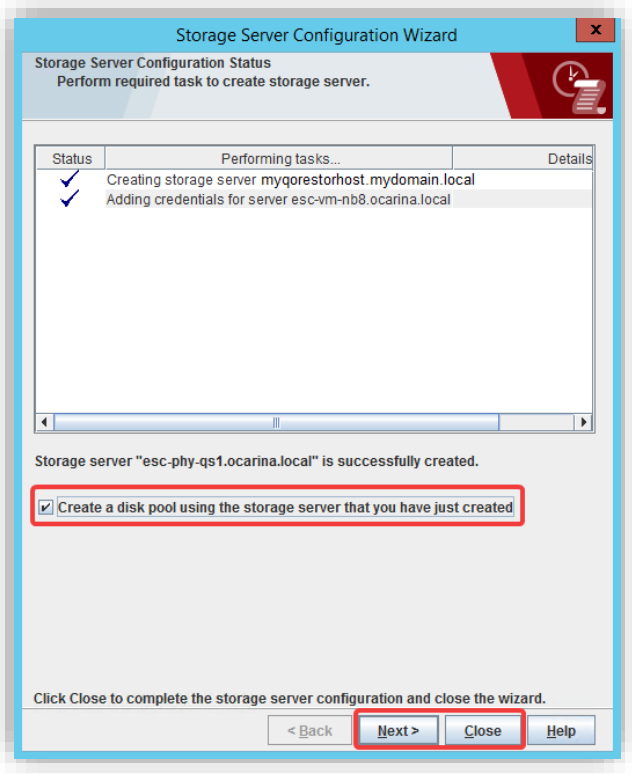


NOTE: If additional media servers are available, you will see an additional step where you can choose which media servers to add.

5 Confirm all the information is accurate and click **Next.**

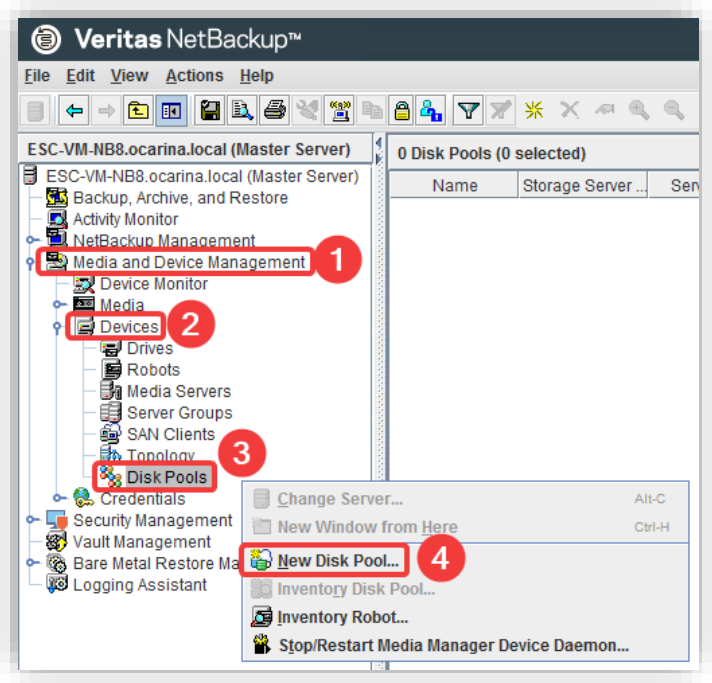


6 If you wish to **Create a disk pool using the storage server that you have just created**, check the **checkbox** and click **Next**, otherwise uncheck the **checkbox** and click **Close**. The steps to create a disk pool will be demonstrated in the next section.

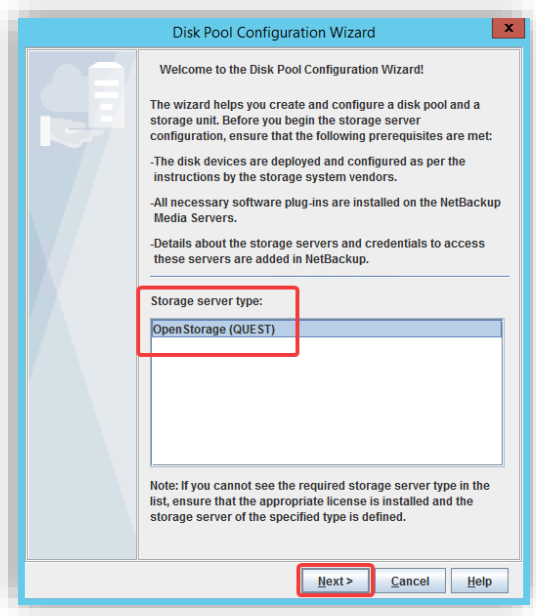


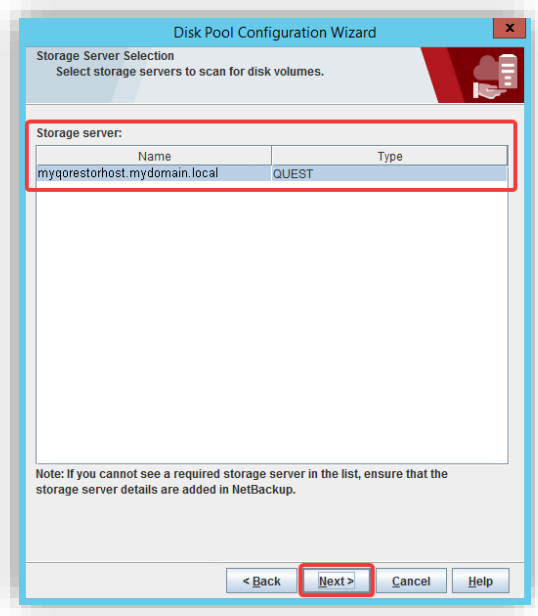
After adding the QoreStor host as a Storage Sever, the next stage will be to create a Disk Pool. The following steps will demonstrate how to do this.

1 If not continuing from the previous section, where **Create a disk pool using the storage server that you have just created** checkbox would have been checked, expand **Media and Device Management** ❶, then **Devices** ❷, right-click **Disk Pools** ❸, and select **New Disk Pool…** ❹

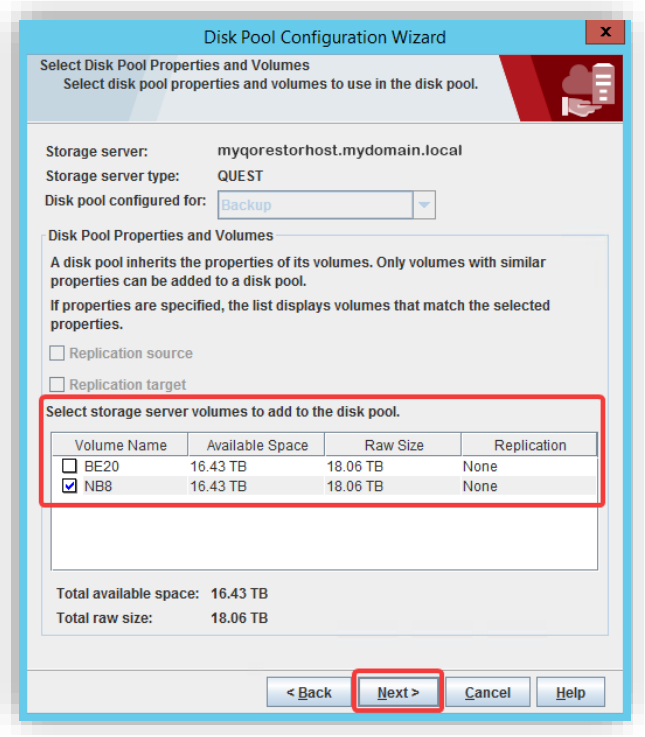


2 Select **Open Storage (QUEST)** for the **Storage server type** and click **Next**. Select the QoreStor **Storage server** and click **Next.**

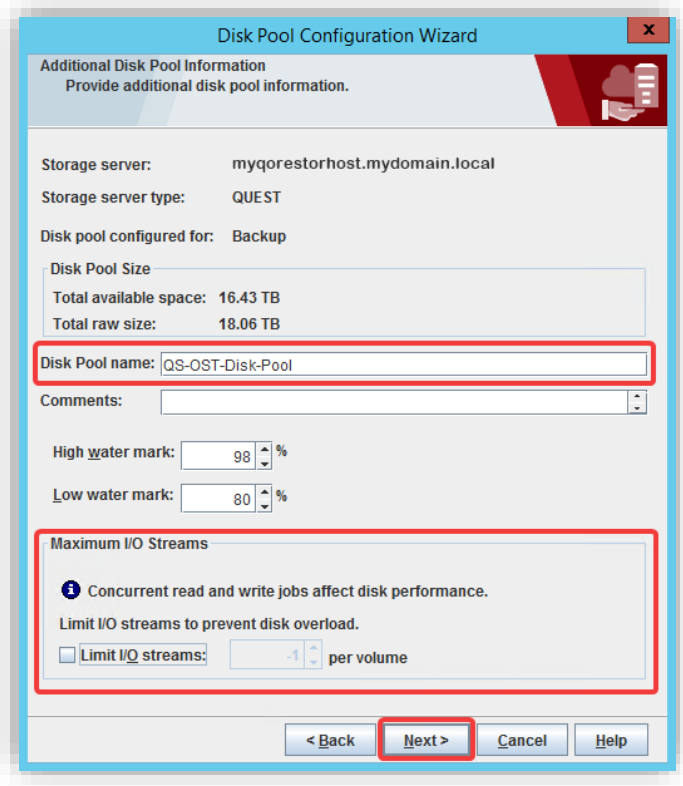




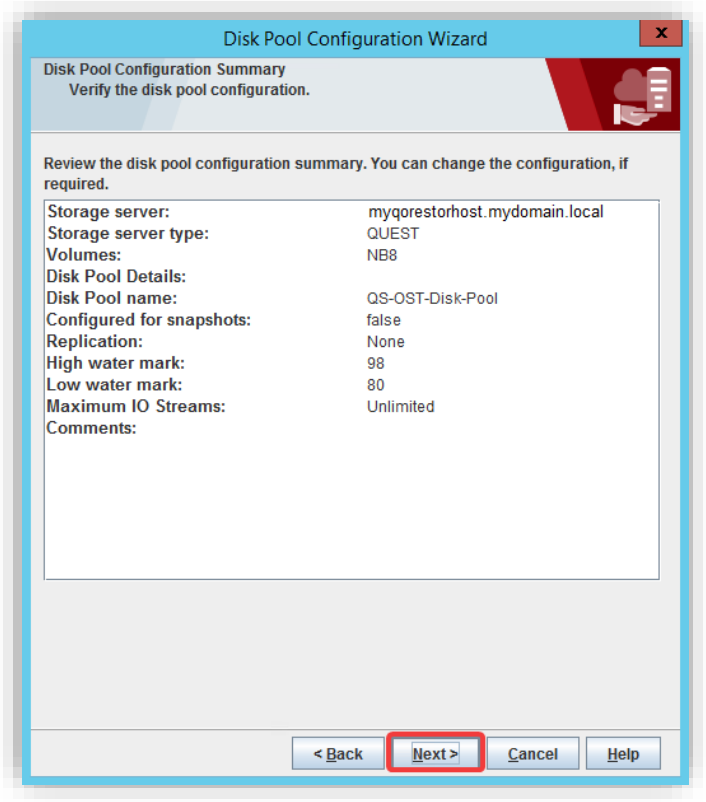
3 Select the OST container(s) you wish to add by ticking the corresponding **checkbox** and click **Next.**



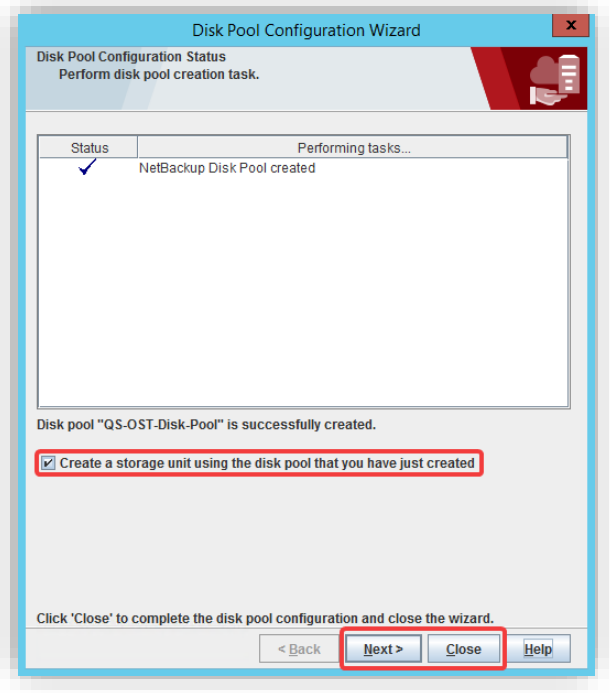
4 Select a **Disk Pool name** and if desired, set the **Limit I/O streams** number **per volume** and click **Next.**



4 **Verify the disk pool configuration** and click **Next.**

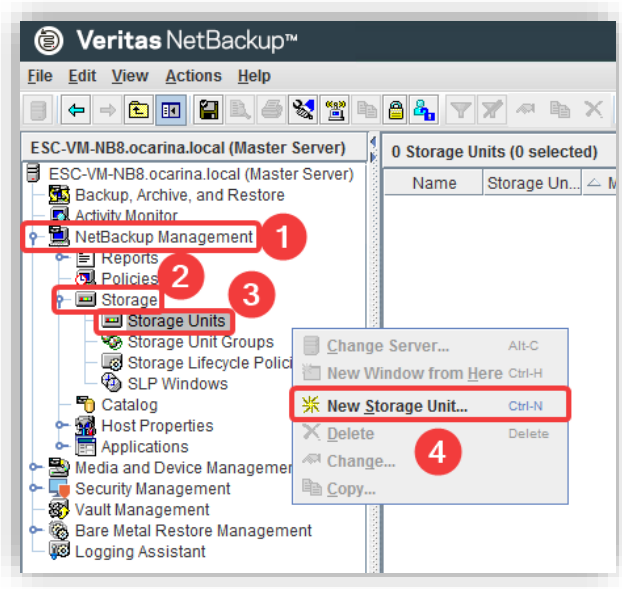


5 If you wish to **Create a storage unit using the disk pool that you have just created**, check the **checkbox** and click **Next**, otherwise uncheck the **checkbox** and click **Close**. The steps to create a storage unit will be demonstrated in the next section.

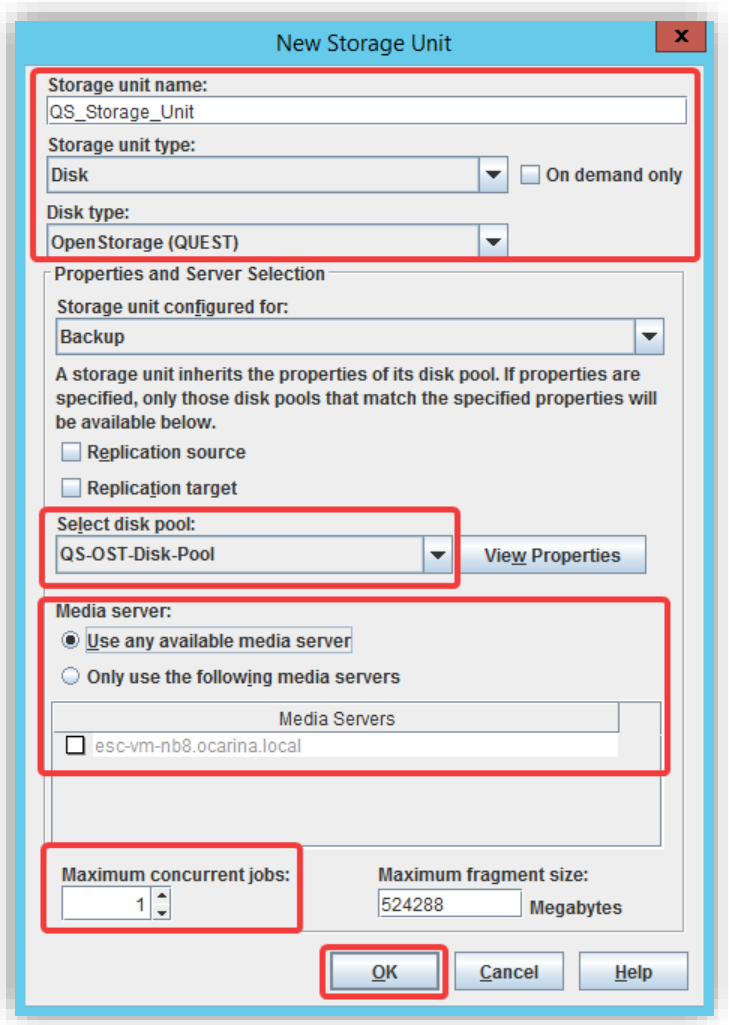


After adding the QoreStor host as a Storage Server and creating a Disk Pool, the final stage before enabling the OST container to be used will be to create a Storage Unit. The following steps will demonstrate how to do this.

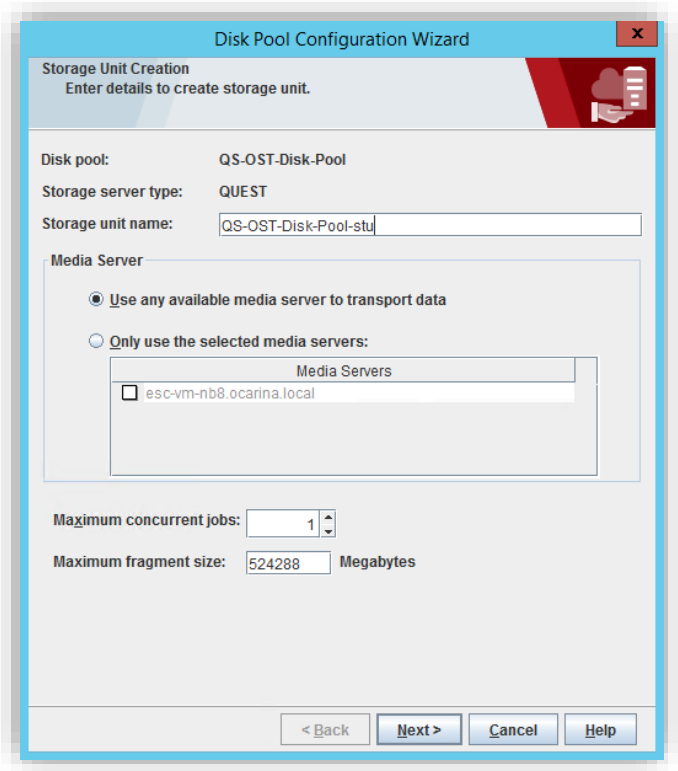
1 If not continuing from the previous section, where **Create a storage unit using the disk pool that you have just created** checkbox would have been checked, expand **NetBackup Management** ❶, then **Storage** ❷, right-click **Storage Units** ❸, and select **New Storage Unit…** ❹



2 Specify a **Storage unit name**, select **Disk** and **Open Storage (QUEST)** from the Storage unit type and Disk type respectively, and **Select disk pool disk** using the dropdown button.
Chose if you want to **Use any available media server** or **Only use the following media servers** (and **check** the ones you wish to use). Adjust the **Maximum concurrent jobs** field if needed. Click **OK**.


New Storage Unit
Storage unit name:
QS_Storage_Unit
Storage unit type:
Disk
On demand only
Disk type:
OpenStorage (QUEST)
Properties and Server Selection
Storage unit configured for:
Backup
A storage unit inherits the properties of its disk pool. If properties are specified, only those disk pools that match the specified properties will be available below.
Replication source
Replication target
Select disk pool:
QS-OST-Disk-Pool
View Properties
Media server:
Use any available media server
Only use the following media servers
Media Servers
esc-vm-nb8.ocarina.local
Maximum concurrent jobs:
1
Maximum fragment size:
524288
Megabytes
OK
Cancel
Help

NOTE: If you are continuing from the Disk Pool Configuration Wizard, the pop-up window is slightly different, since it assumes the values from the previously created disk pool:

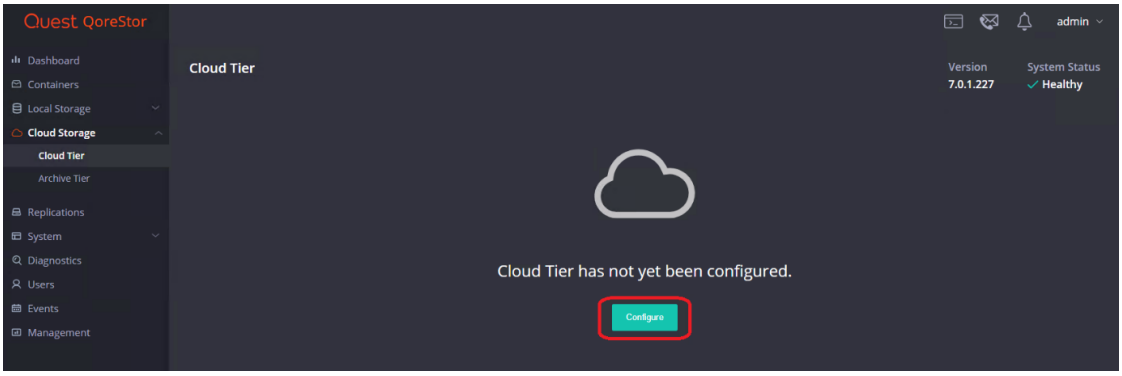


NOTE: When choosing the number of maximum concurrent jobs, both the QoreStor and the hosting Hardware limits need to be taken into consideration to prevent job failures should those limits be exceeded. Refer to the QoreStor Interoperability Guide for more information.

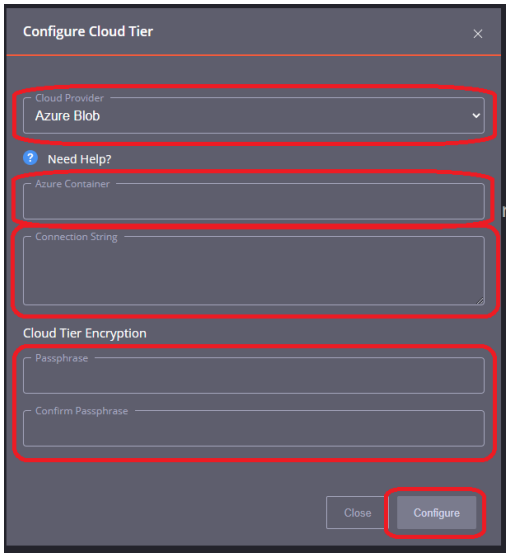
Creating a policy-driven Cloud Tier

Cloud Tier is a feature that allows a QoreStor system to tier deduplicated blocks of files to a cloud provider via S3 protocol. There are several cloud and on-prem solution providers supported including Azure, AWS, Wasabi, IBM, Google, and many other S3-compatible solutions. Once added one or more containers can be added to a policy. How that policy is configured can determine how long the data is available on-prem in QoreStor, how long it's available both on-prem and in the cloud simultaneously, and finally at what point is it only available in the cloud.

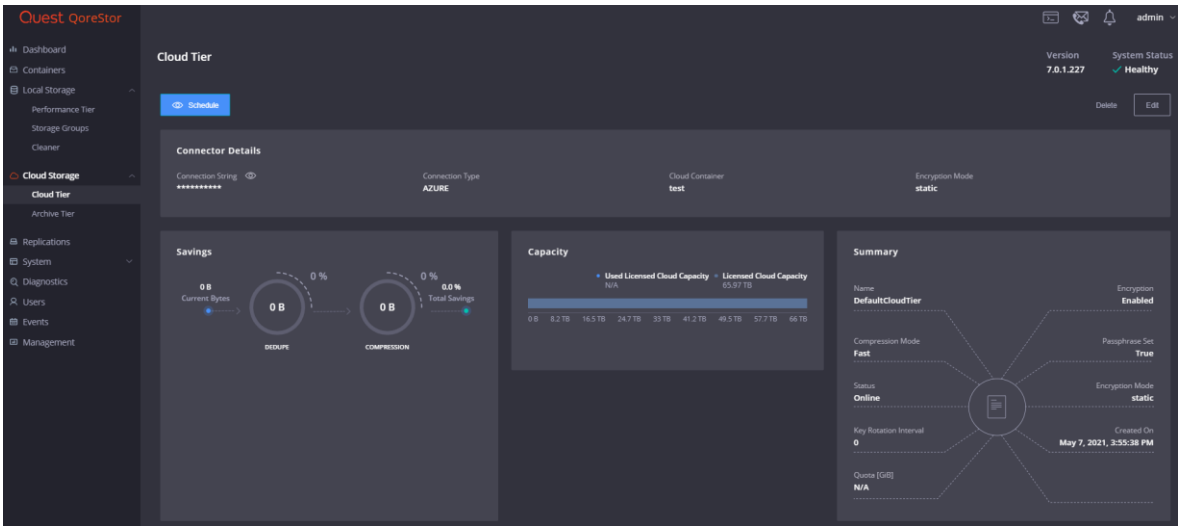
1. Open the QoreStor UI, expand the **Cloud Storage** section, and select the **Cloud Tier** page. Click the **Configure** button.



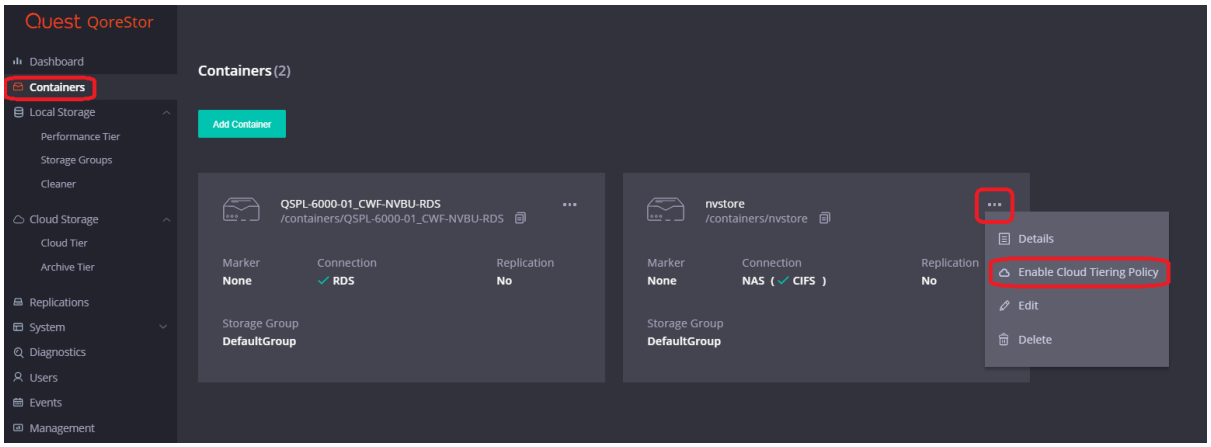
2. Select the **Cloud Provider** dropdown and pick your required provider, depending on the provider the fields below will change. The **Container** field will be a folder/bucket created in the cloud provider, there is no need to create a folder on your own. This folder name is usually limited in accepted characters by the provider. Also please make sure to keep your **passphrase**, without this the data is not recoverable in a Disaster Recovery scenario. Finally, click **Configure**.



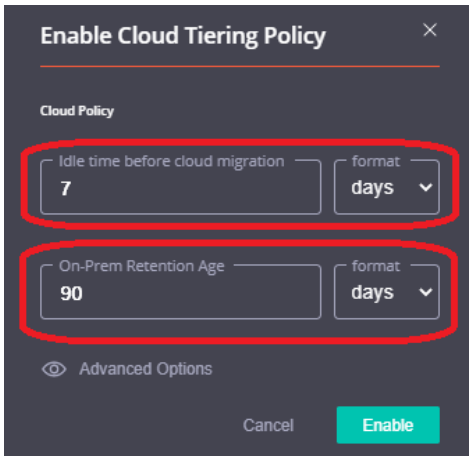
3. Once added this is how the cloud tier page should appear.



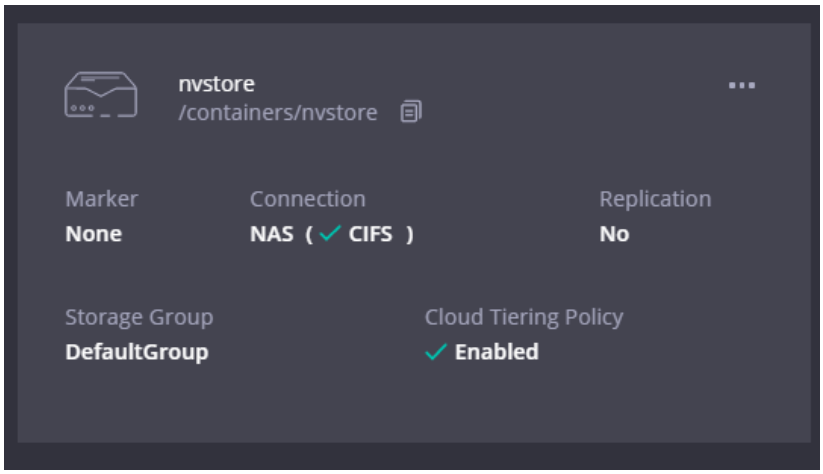
4. We need to add a cloud tiering policy to a specific container. Do this by navigating to the **Containers** page, selecting the **ellipsis** in the top right corner of the specific container, and clicking **Enabled Cloud Tiering Policy**.



5. In the next window, we need to define the policy. **Idle time before cloud migration** specifies the number of hours/days datablocks must be kept idle before being sent to the cloud. **On-Prem Retention age** specifies the number of hours/days files will be kept locally after they are sent to the cloud. Finally, click **Enable**.



6. The container should now be shown with the cloud tiering policy enabled.

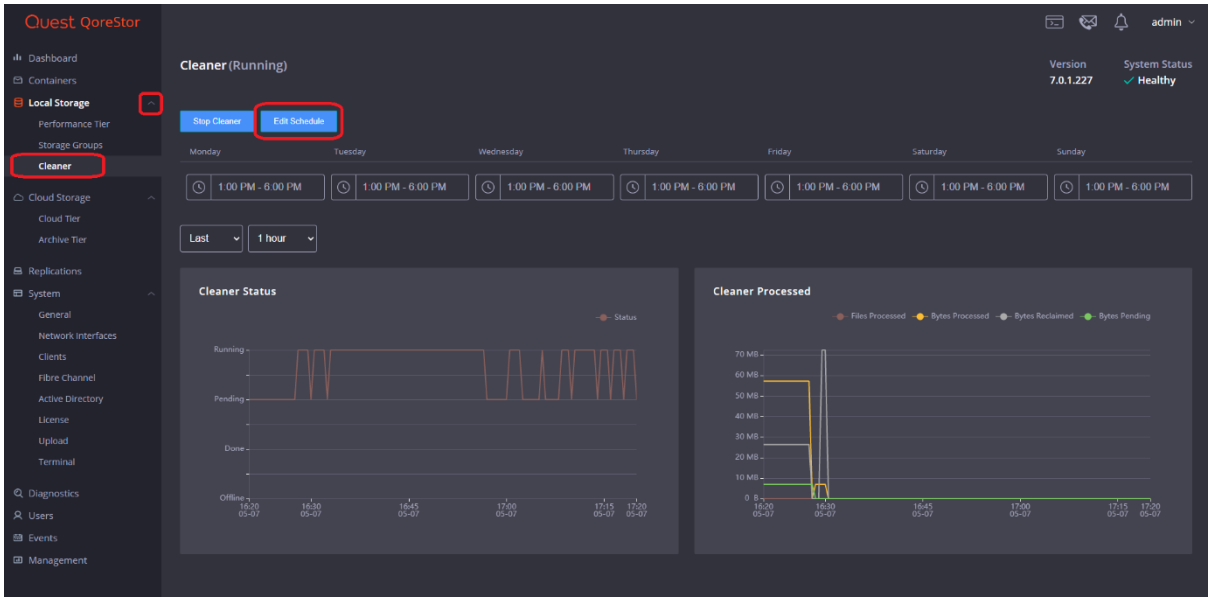


Setting up the QoreStor cleaner

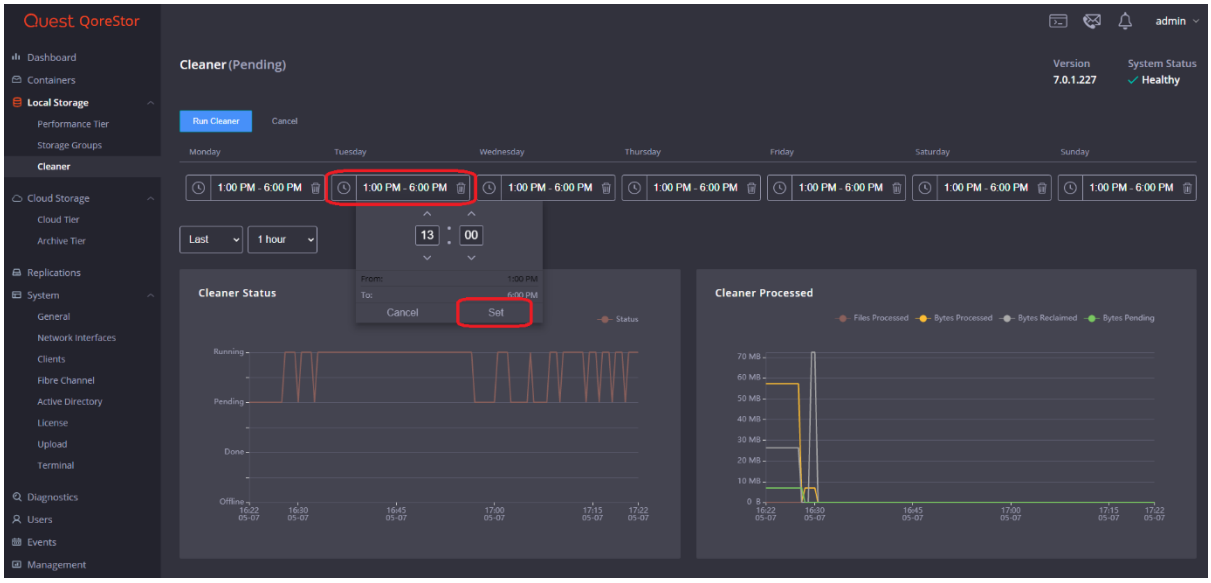
Performing scheduled disk space reclamation operations are needed as a method for recovering disk space from system containers in which files were deleted as a result of deduplication. Ideally, the QoreStor cleaner should complete a full cycle at least once a week. This will be accomplished in most cases by the predefined QoreStor cleaner schedule. The cleaner also runs during idle time.

To change the predefined cleaner schedule times, perform the following steps:

1. Open the QoreStor administrative console.
2. Expand **Local Storage** in the top navigation pane.
3. Select **Cleaner.**
4. Click **Edit Schedule.**



5. Define the schedule and click **Set**.



NOTE: If necessary, you can also perform a full cleaner cycle manually using either the QoreStor Administrative Console, QoreStor CLI, or the NetVault Backup UI:

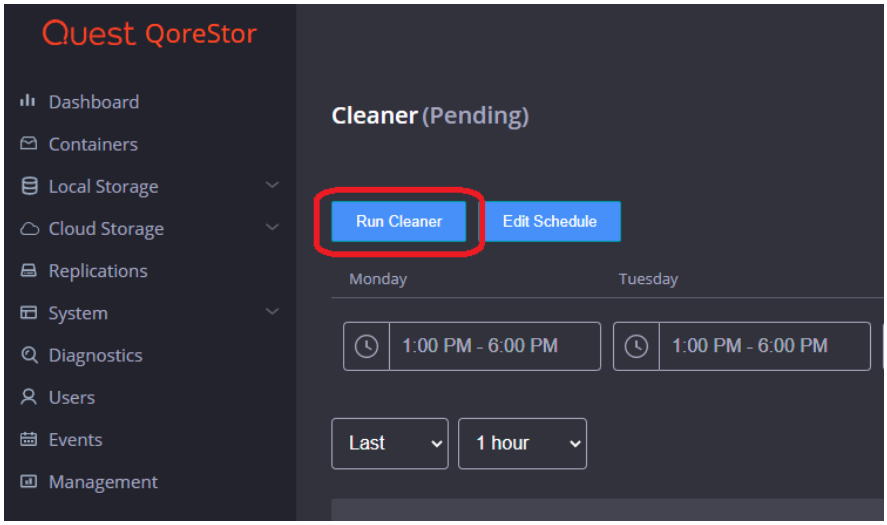


Figure 1: Using the QoreStor Administrative Console

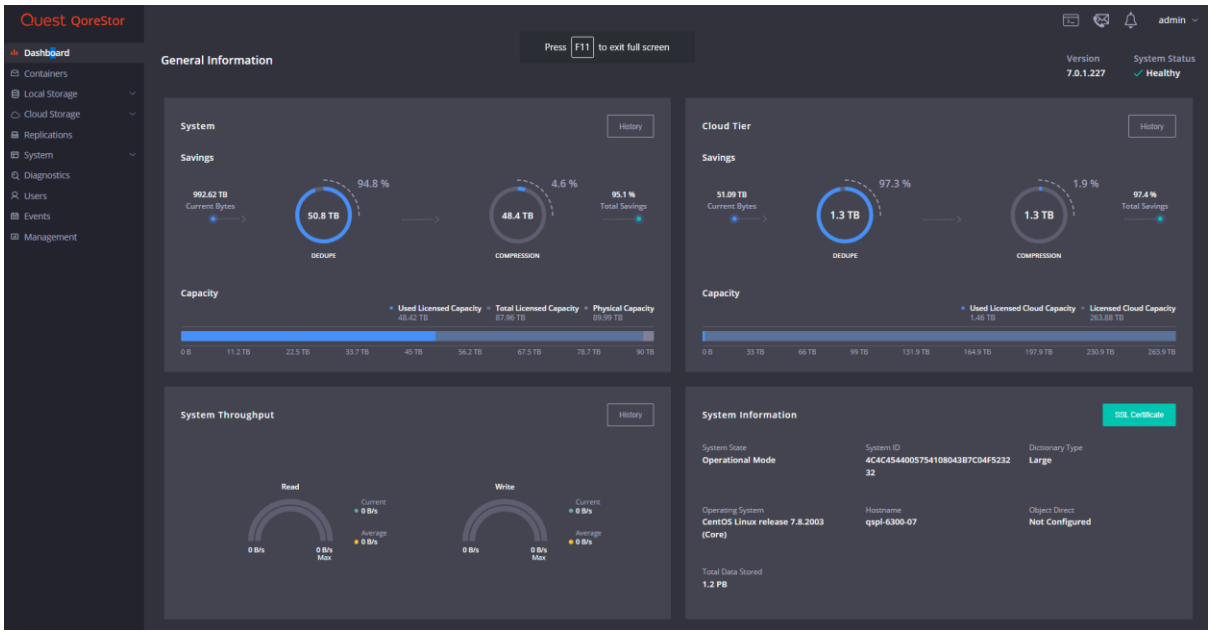
```
# maintenance --filesystem --reclaim_space
# Successfully started cleaner.
```

Figure 2: Using the QoreStor CLI

Appendix B

Monitoring deduplication, compression, and performance

After backup jobs have run, QoreStor tracks capacity, storage savings, and throughput. To view the historical representation of these values is shown in the dashboard of the QoreStor administrative console. This information is valuable in understanding the benefits of QoreStor.



NOTE: 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.