



# Setting Up a Quest™ QoreStor System with Veritas™ **Backup Exec™**

## Technical White Paper

Quest Engineering

August 2018



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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.

Veritas Backup Exec for QoreStor 5.0

Updated – August 31, 2018

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# Executive Summary

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This document provides information about how to set up the Quest QoreStor Software with Veritas Backup Exec, including:

- Configuring a QoreStor system as a backup to disk target for Veritas Backup Exec 2015, 16, and 20
- Configuring an OST container on the QoreStor system for use with Veritas Backup Exec Server 2015, 16, and 20

For additional information, see the QoreStor system documentation and other data management application best practices whitepapers for your specific QoreStor version at:

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

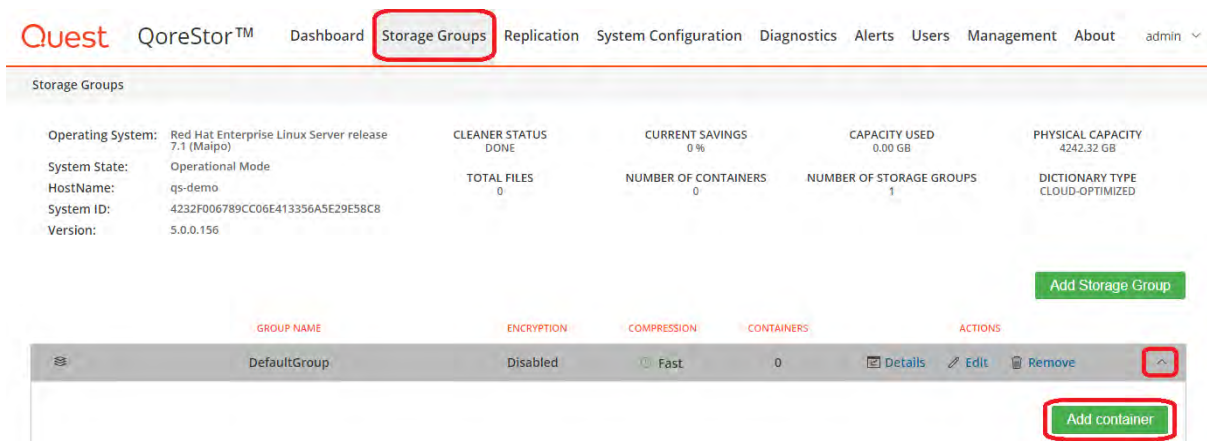


**NOTE:** The QoreStor system/Veritas Backup Exec build version and screenshots used for this paper may vary slightly, depending on the version of the QoreStor system/Veritas Backup Exec software version you are using.

# Configuring the QoreStor System as a backup to disk target in Veritas Backup Exec Exec

## Creating a CIFS container for use with Veritas Backup Exec

- 1 Select the Storage Groups tab, then expand the drop down you would like to add the container into. Click the Add container button



- 2 Enter a Container Name, and select NAS from the Access Protocol drop down menu. Then Click Next.

**Add container** X

Name  
sample

Protocol  
NAS

Cancel Prev **Next**

- 3 Click the drop down on the Access Protocols field then select the check mark for CIFS. Leave Marker Type on Auto, then click Next

**Add container** X

Marker Type  
Auto

Access Protocols

CIFS \* ^

☐ Select All

☐ NFS

☒ CIFS

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

**Add container** X

**CIFS Options**

CIFS Client Access:

☒ Open (allow all clients)

☐ Create Client Access List

IP List

Add

Cancel Prev **Next**



**NOTE:** For improved security, Quest recommends adding IP addresses for only Backup Exec Media Servers

- 5 Confirm the settings and Click Finish. Confirm that the container is added.

Add container X

---

Container summary

Name: sample  
Protocol: NAS  
Marker: Auto

---

Connection summary

Protocol CIFS:  
Access: \*

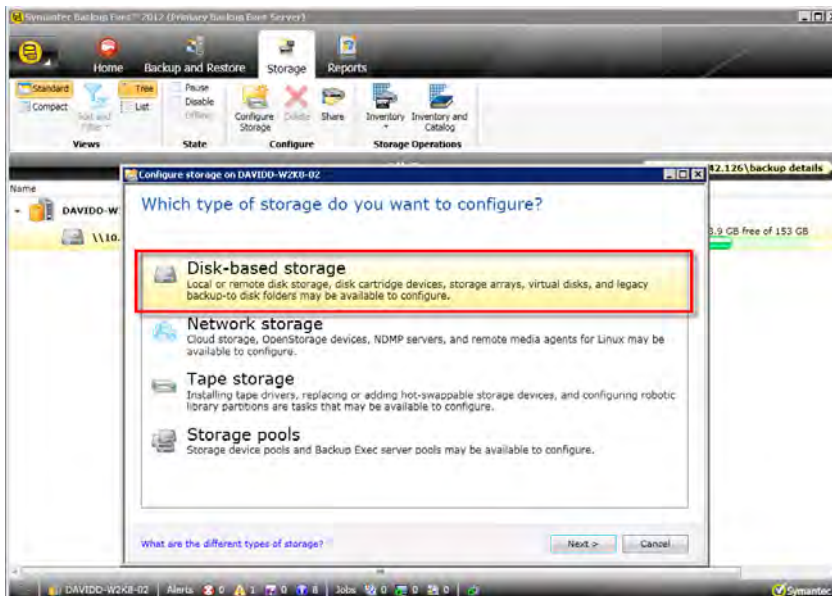
Cancel Prev **Finish**

## Adding the QoreStor container as a disk storage device on Backup Exec

- 1 Open the Backup Exec console. In the Storage pane, click Configure Storage.

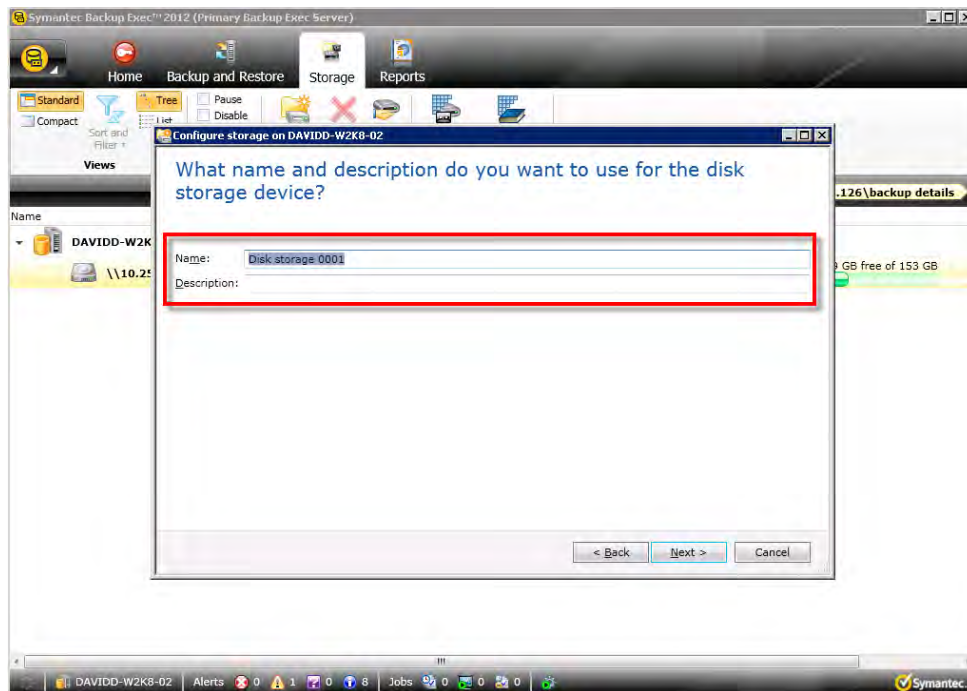


- 2 Select Disk-based storage, and click Next.

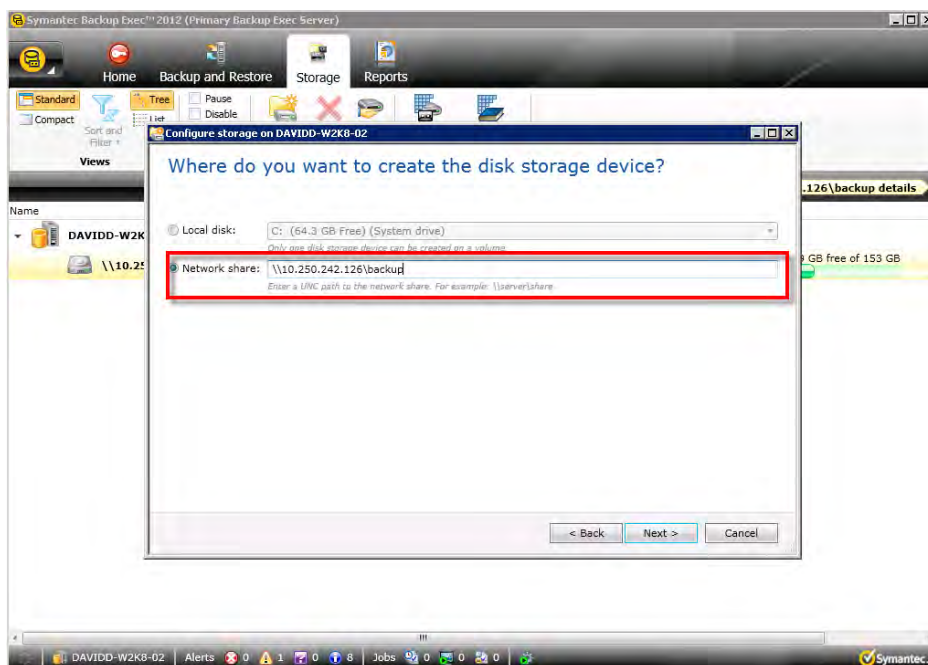


- 3 Enter a name for the QoreStor system disk device, add a description, and click Next.

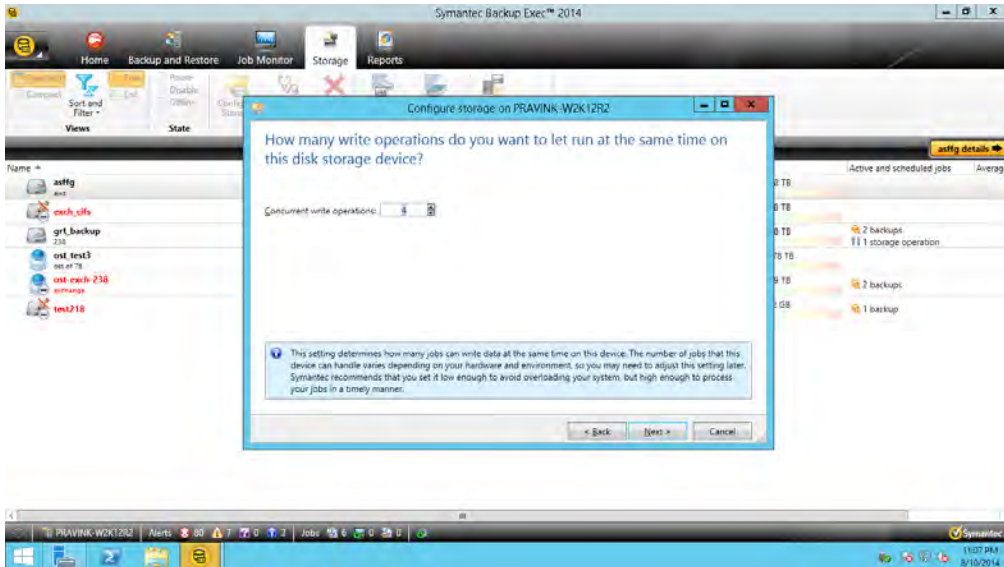




4 Enter the QoreStor container CIFS share path, and click Next.



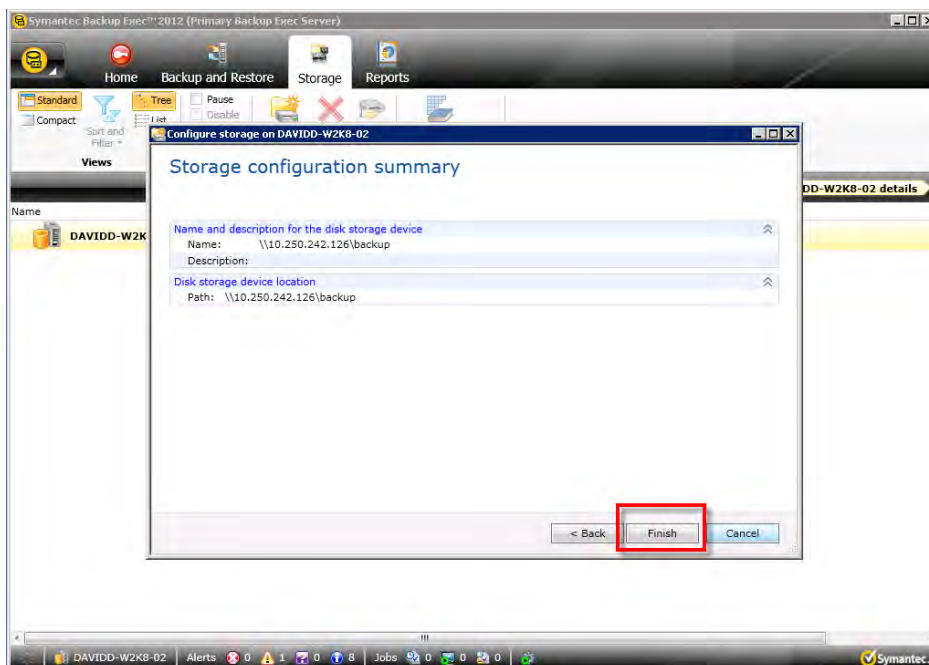
- 5 Set the number of concurrent write operations allowed. Click Next.



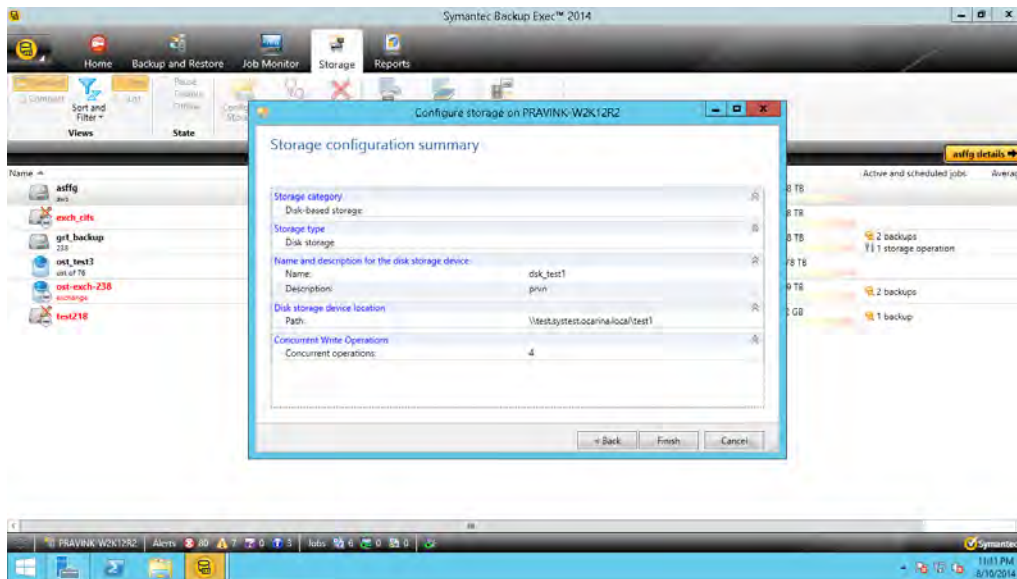
**NOTE:** Please review the QoreStor interoperability guide for the supported maximum number of connections.

To change this number later at any time, go to the **Storage** tab, select the required Storage device and see the details. In the **Properties** page, there is an option to update concurrent operations.

- 6 In the Storage Configuration Summary window, click Finish.



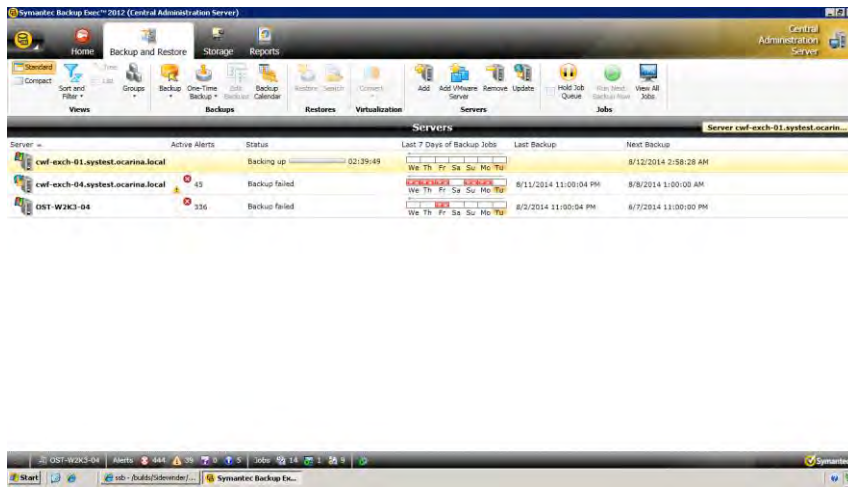
- a For Backup Exec 2014/2015, the summary page will include additional details.



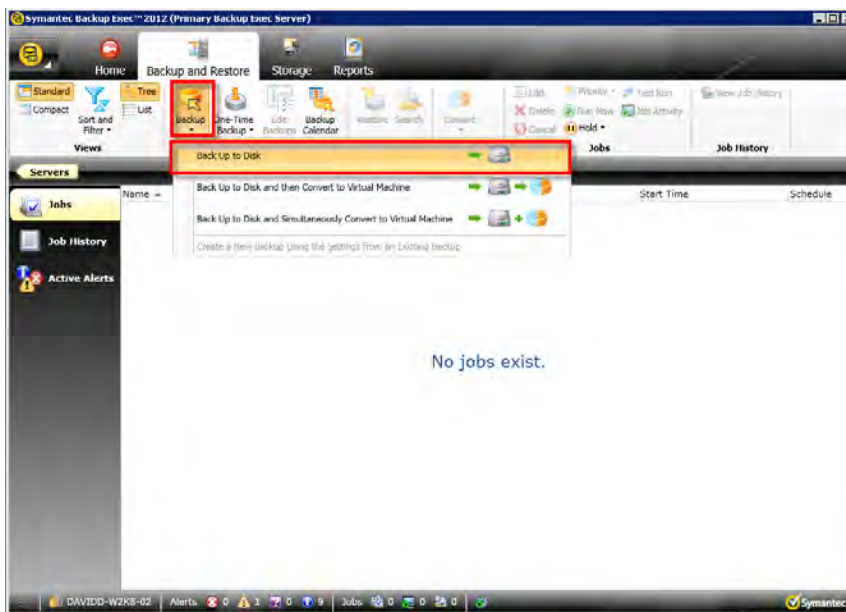
- 7 Verify that the Disk Storage Device is attached to the server.

## Creating a new backup job with the QoreStor System as a target

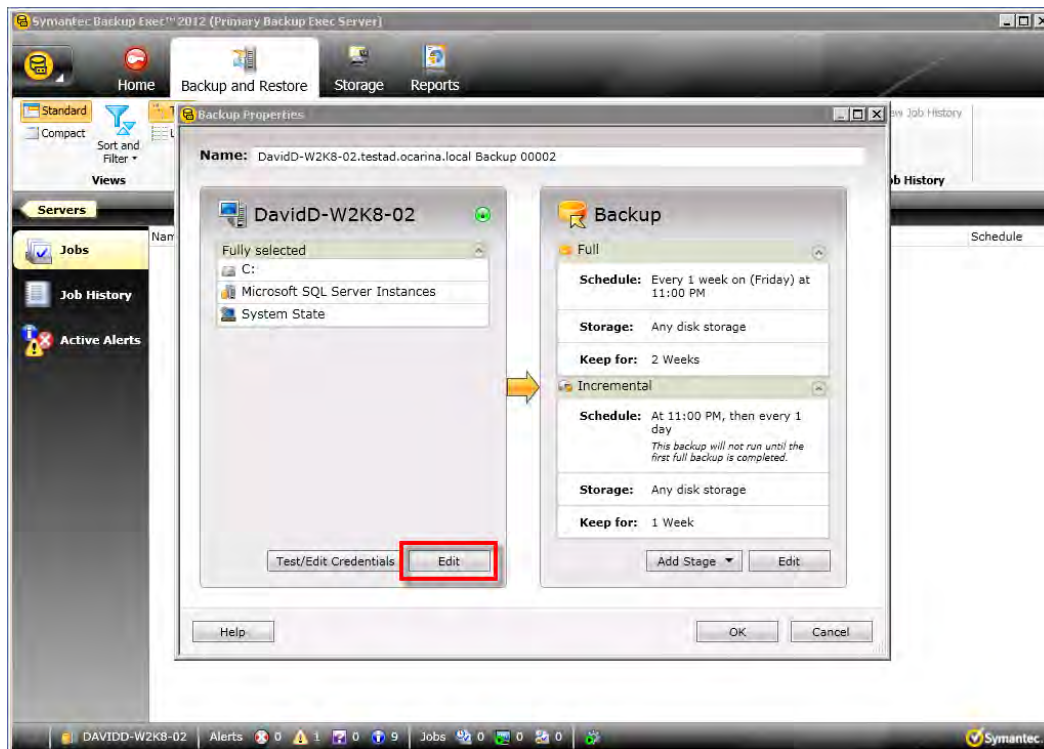
- 1 If the required source client server is not added in Backup Exec, it can be added by selecting the Backup and Restore pane and then clicking the Add button.



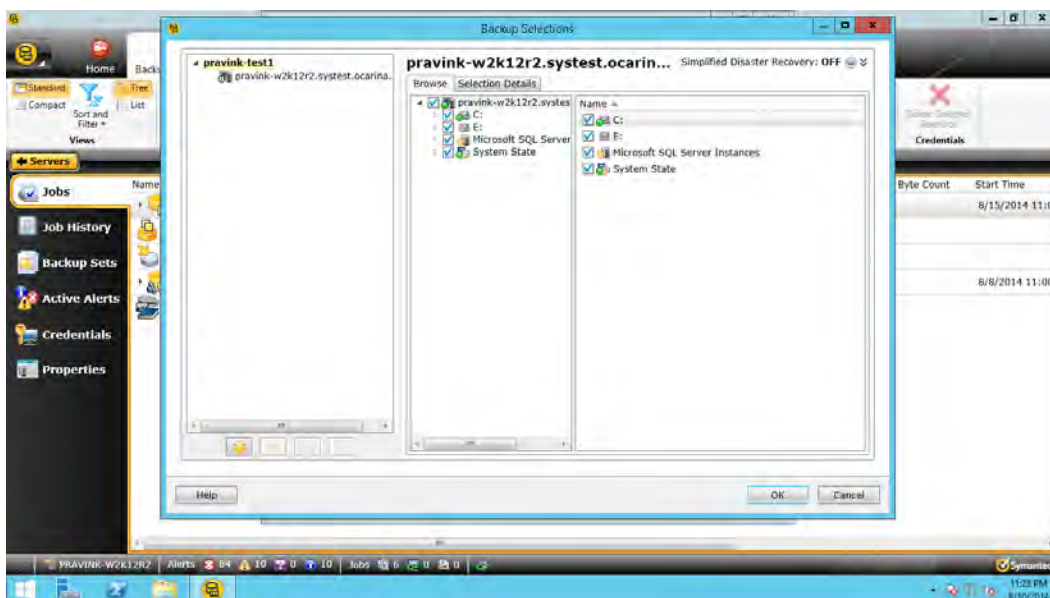
- 2 Follow the wizard by selecting the required type of server and continue.
- 3 In the Backup and Restore pane, click Backup > Back Up to Disk.



- 4 In the backup source selection pane, click Edit. Select the backup data set.

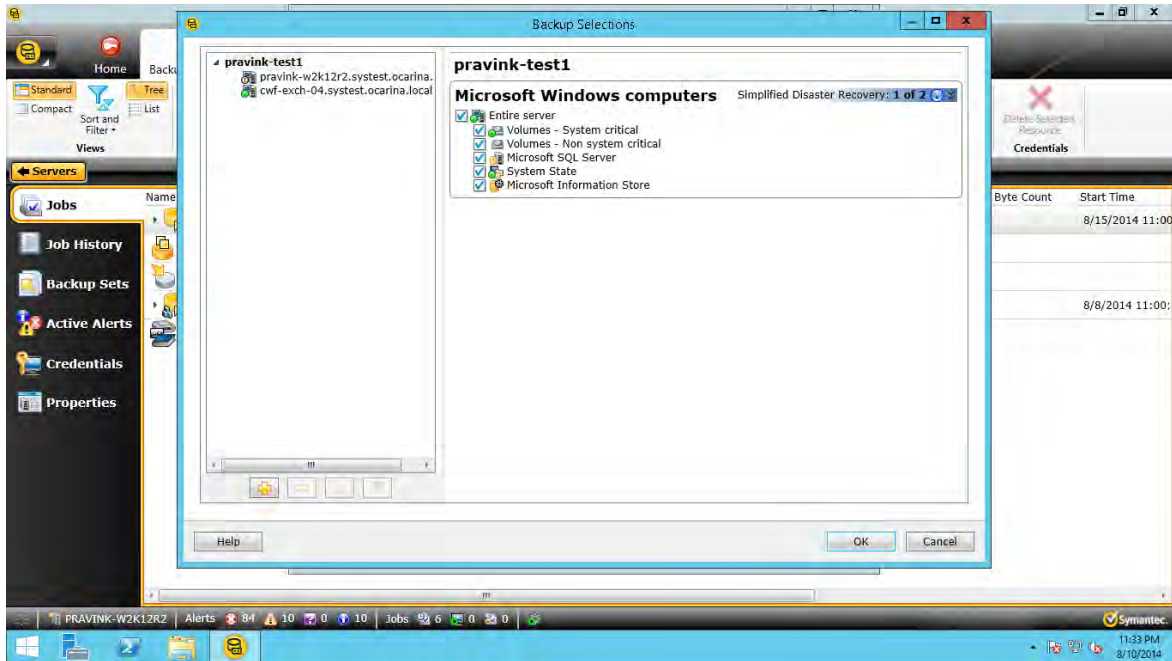


- a For Backup Exec 2014/2015, backup data sets can be selected from multiple servers within the same job. To add an additional server, click the “+” button.

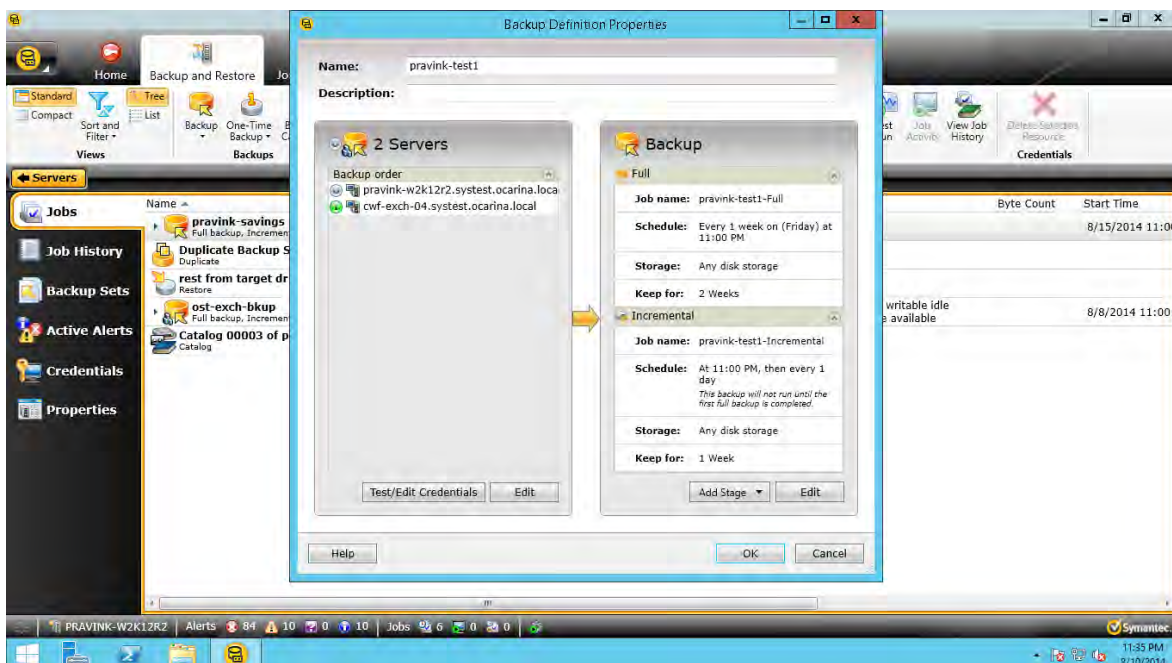




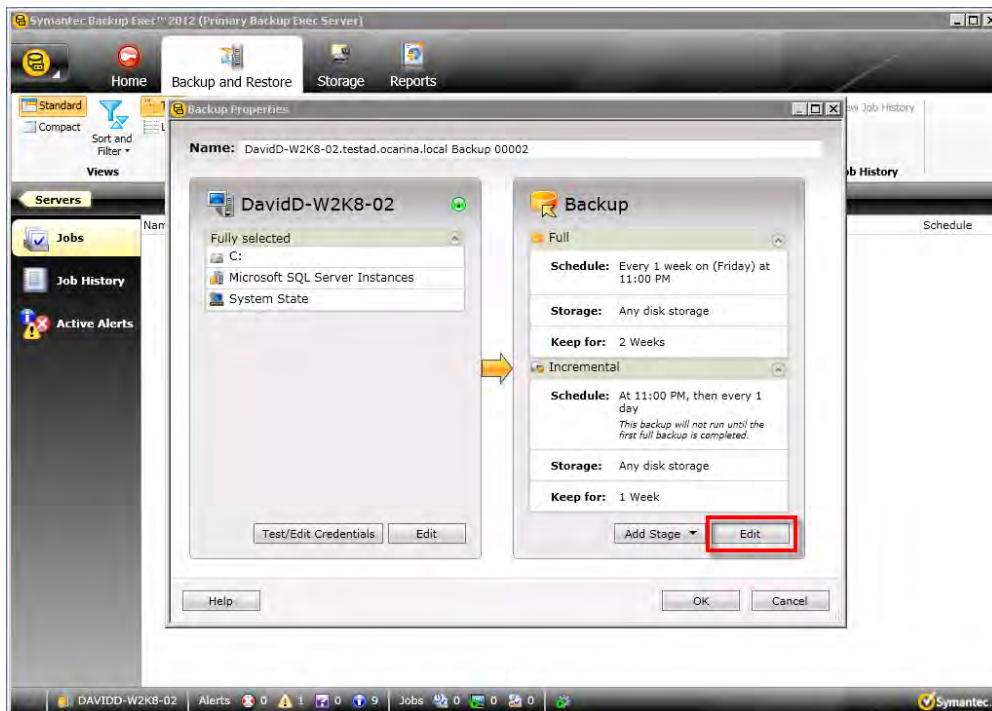
- b For Backup Exec 2014/2015, follow the wizard and add the Server with the selected backup data. The Source Dataset will appear. Click OK to continue.



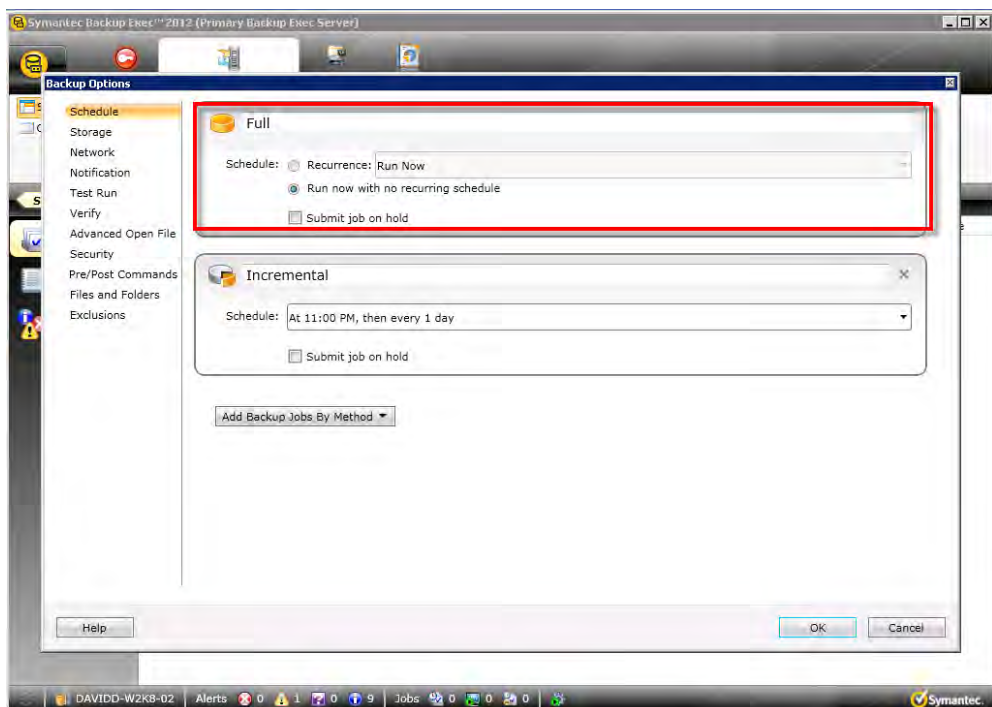
- c For Backup Exec 2014/2015. The final backup selection with two servers is displayed.



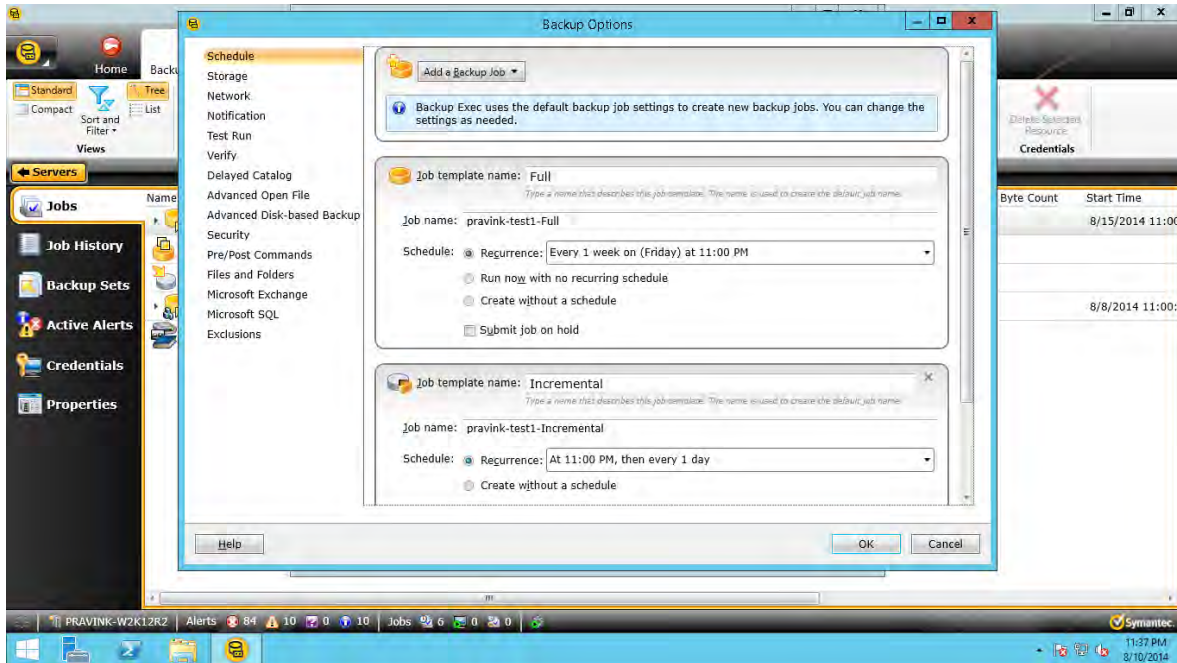
- 5 In the backup target selection pane, click Edit to define the backup strategy.



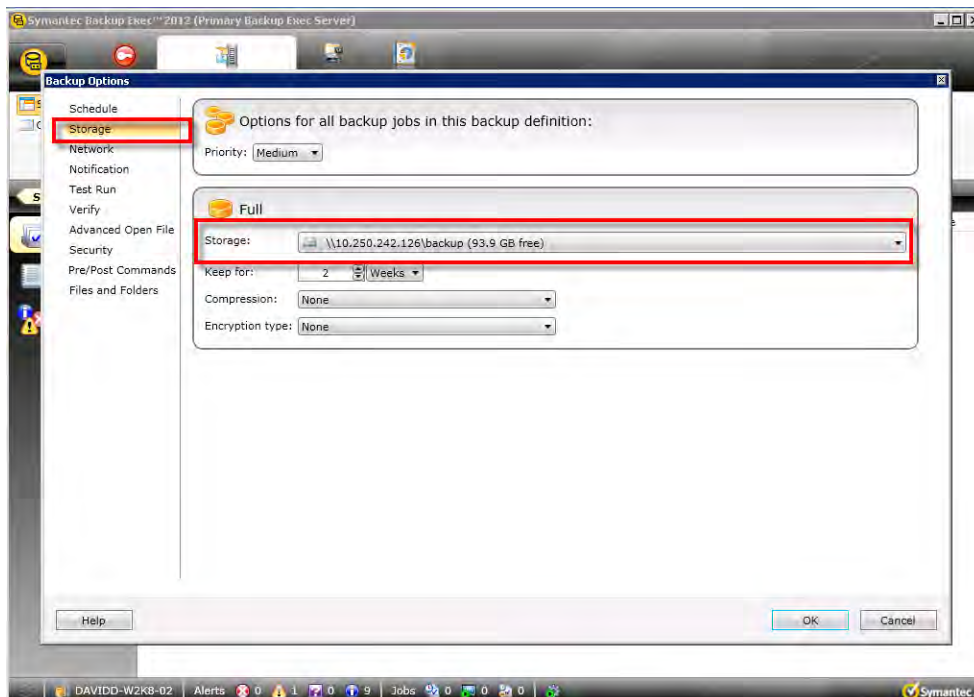
- 6 Click Schedule. Define the backup mode and select schedule options.



- a For Backup Exec 2014/2015 the screen includes additional information.

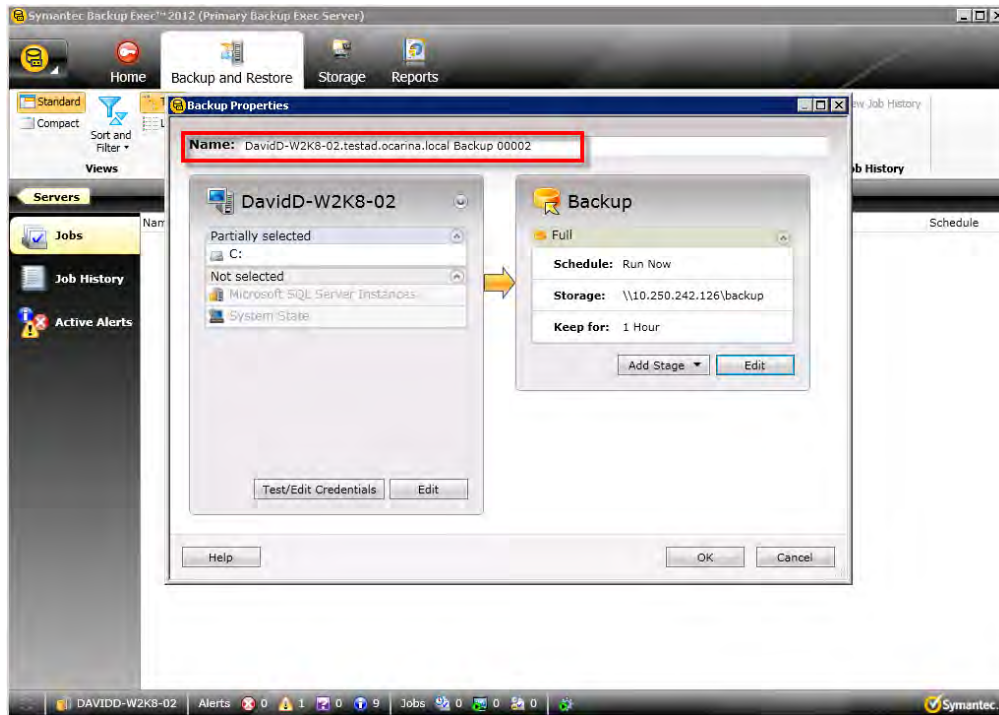


- 7 Click Storage and then select the Disk Storage Device pointing to the QoreStor container share. Define other backup options as needed, and then click OK.

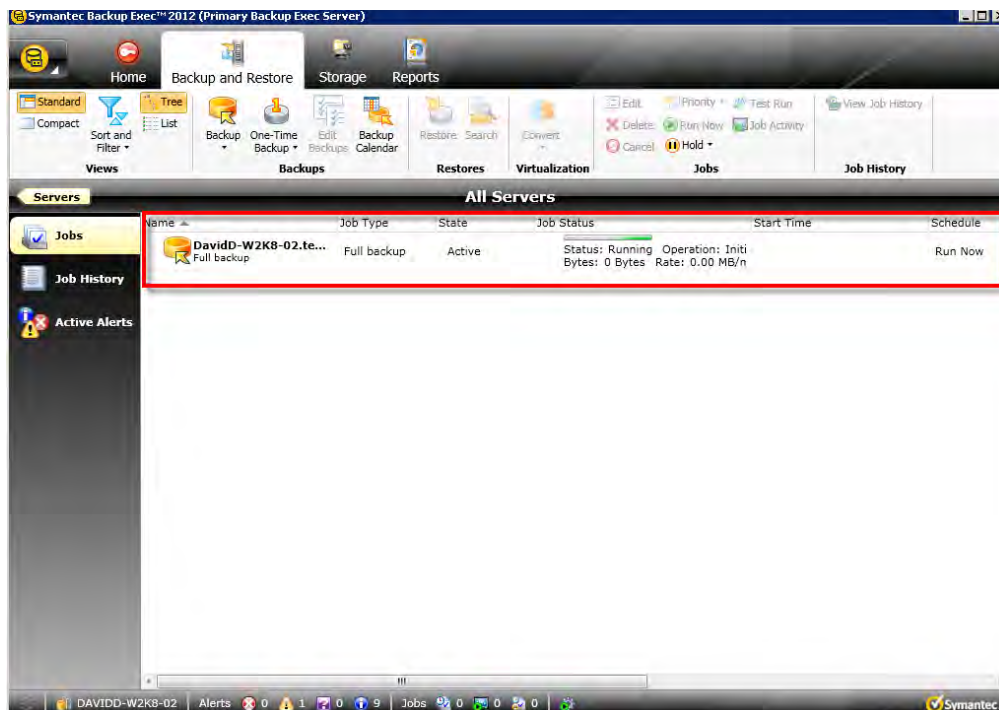




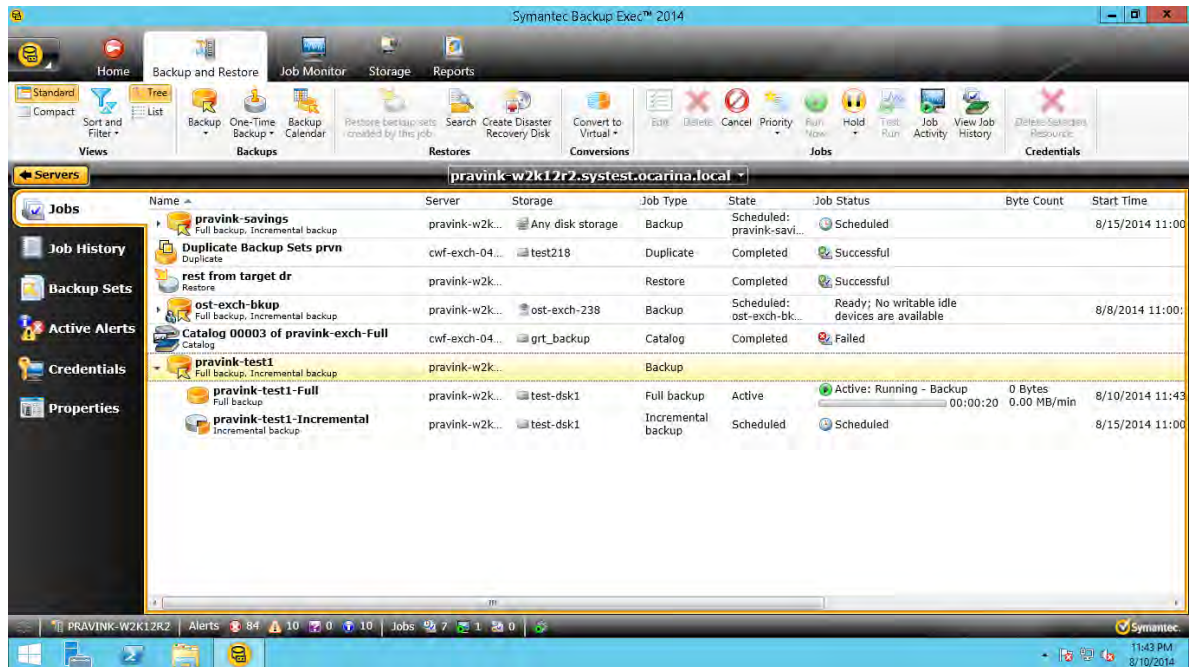
8 Enter a job Name, and click OK.



9 To run the job, select an Agent, and click OK. The Jobs window shows the job queue status.



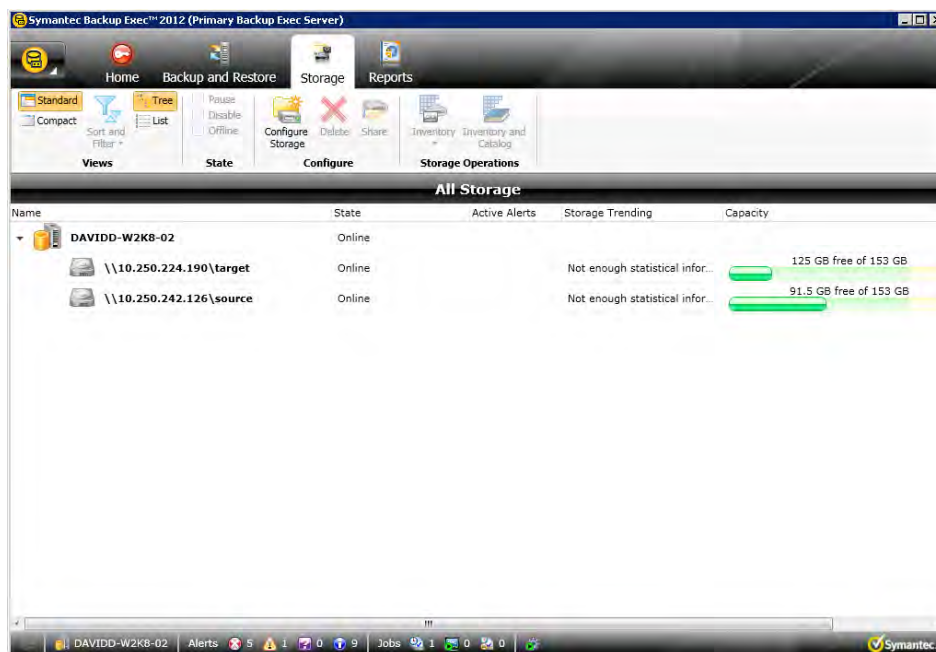
- a For Backup Exec 2014, select the required server from the drop down, select the job recently created, and click Run Now.



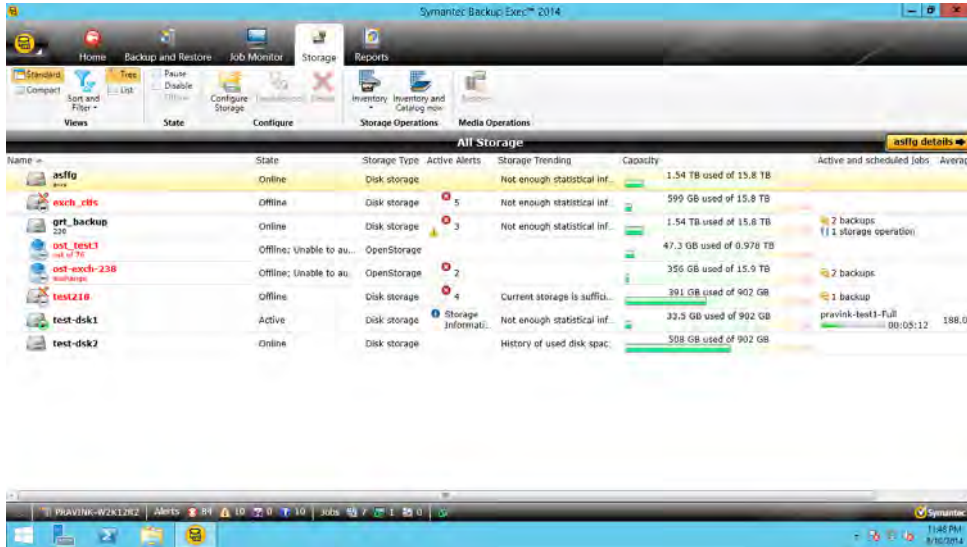
# Setting up a QoreStor system replication and restore from the replication target

## Creating the replication session

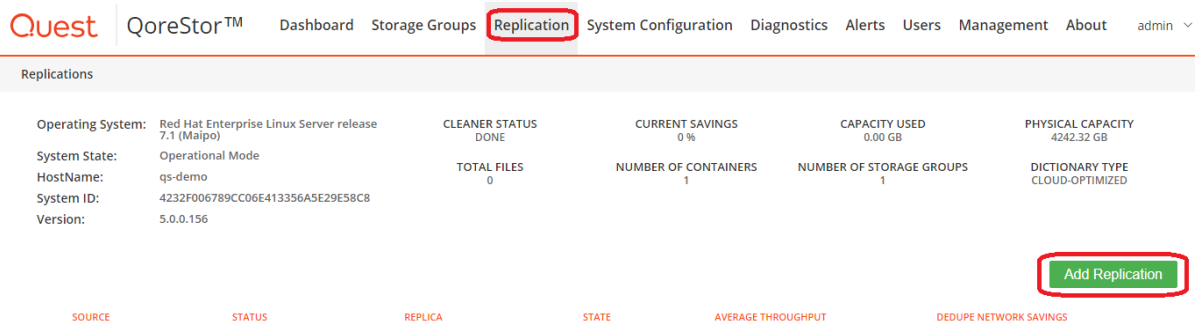
- 1 Create a CIFS container 'source' on QS1; create a second CIFS container 'target' on QS2. For each of the containers, on the Backup Exec media server, configure a corresponding Disk Storage Device.



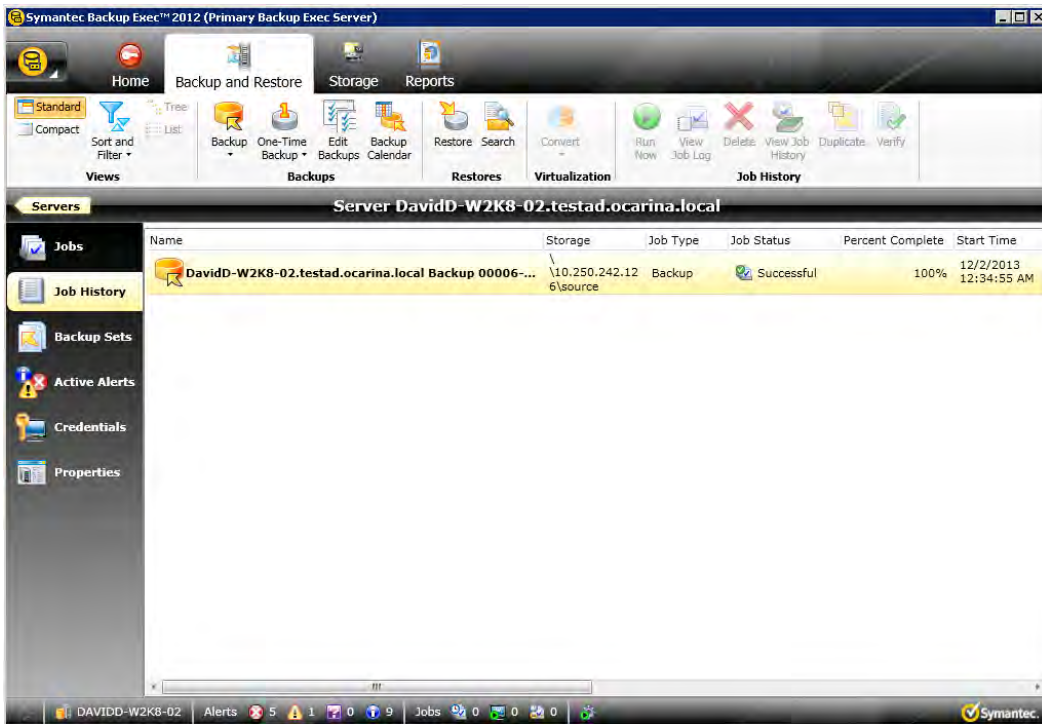
- a For Backup Exec 2014/2015, after adding the target QoreStor CIFS container, check that the device was added.



- 2 From the QS1 GUI, on the Replications page, select the Replication Tab. Then click Add Replication. Set the 'source' container as the replication source, set the QS2 'target' container as the replication target. Start the replication session.

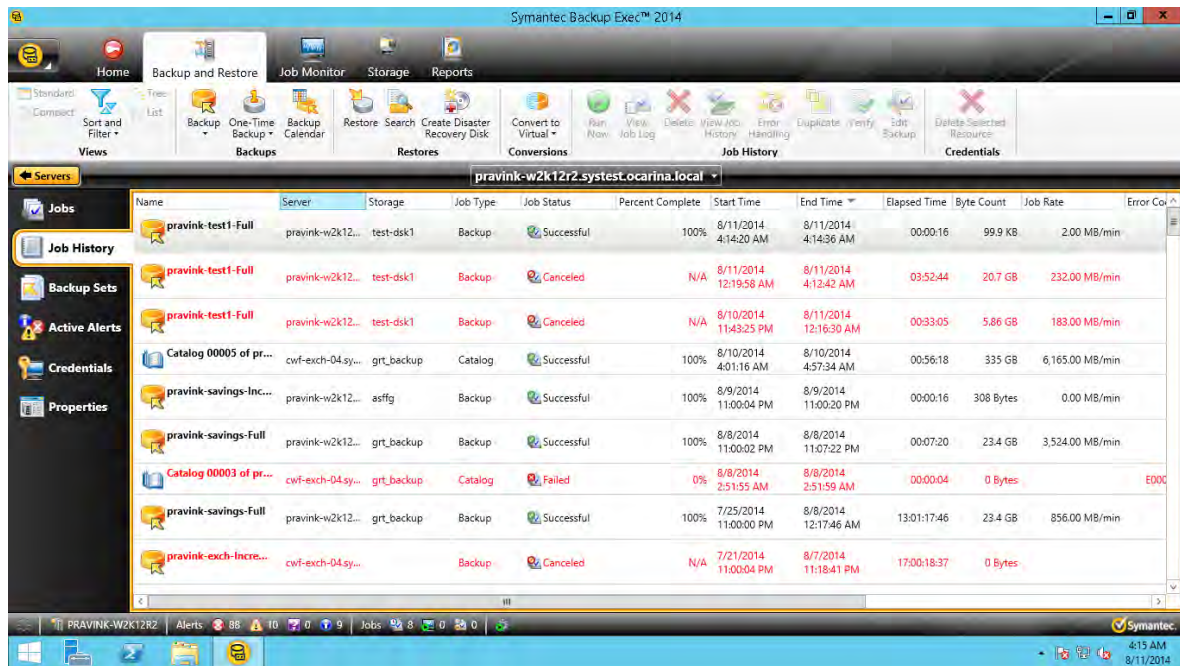


- 3 Schedule and run backup jobs to the source Disk Storage Device.



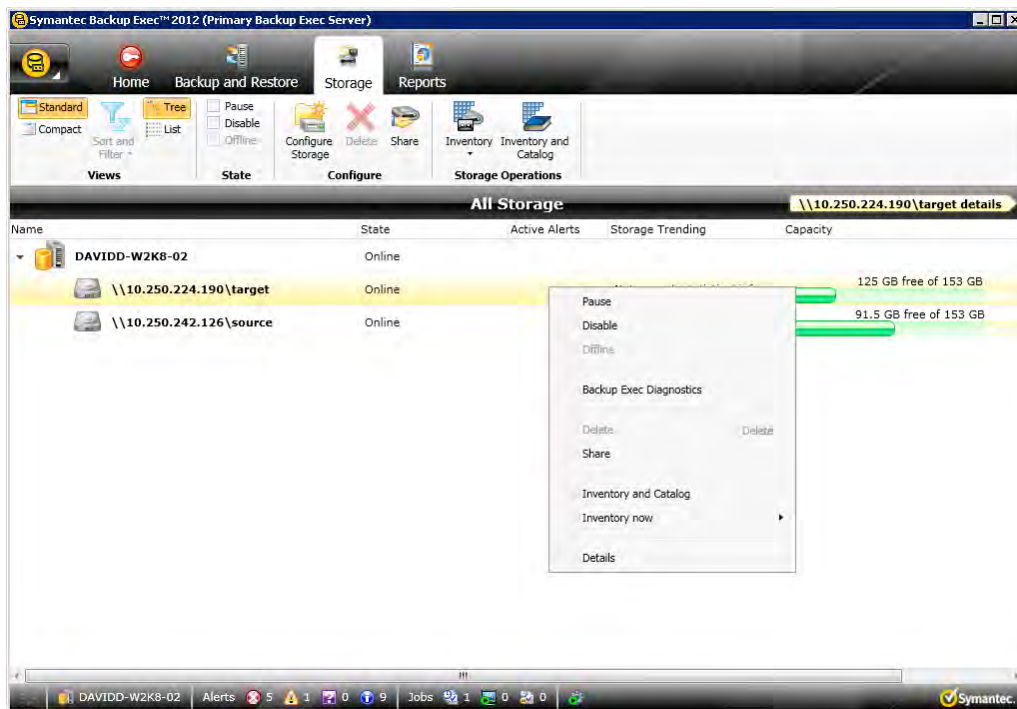
- a For Backup Exec 2014/2015, view the Job History screen.



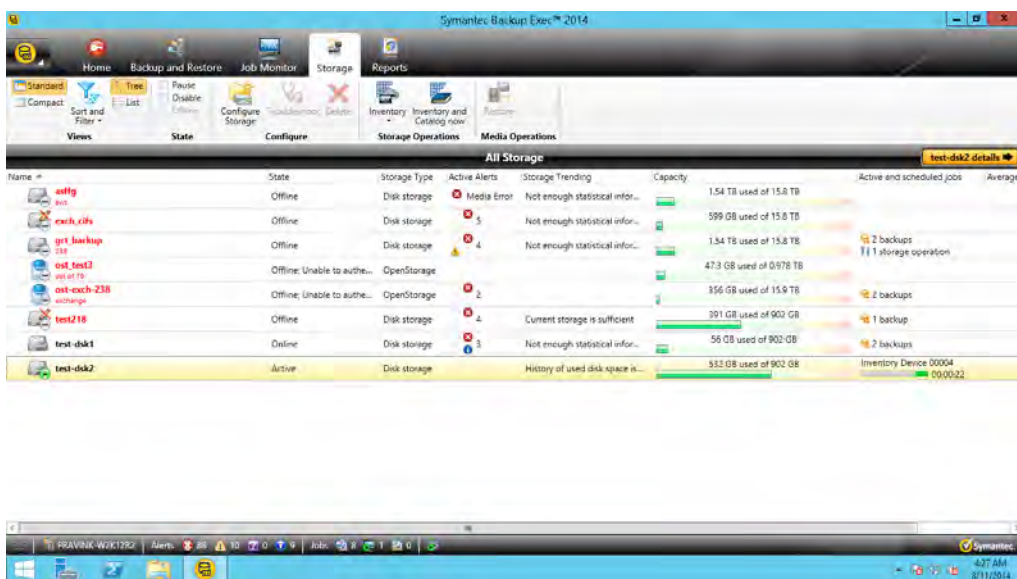


## Restoring from the replication target

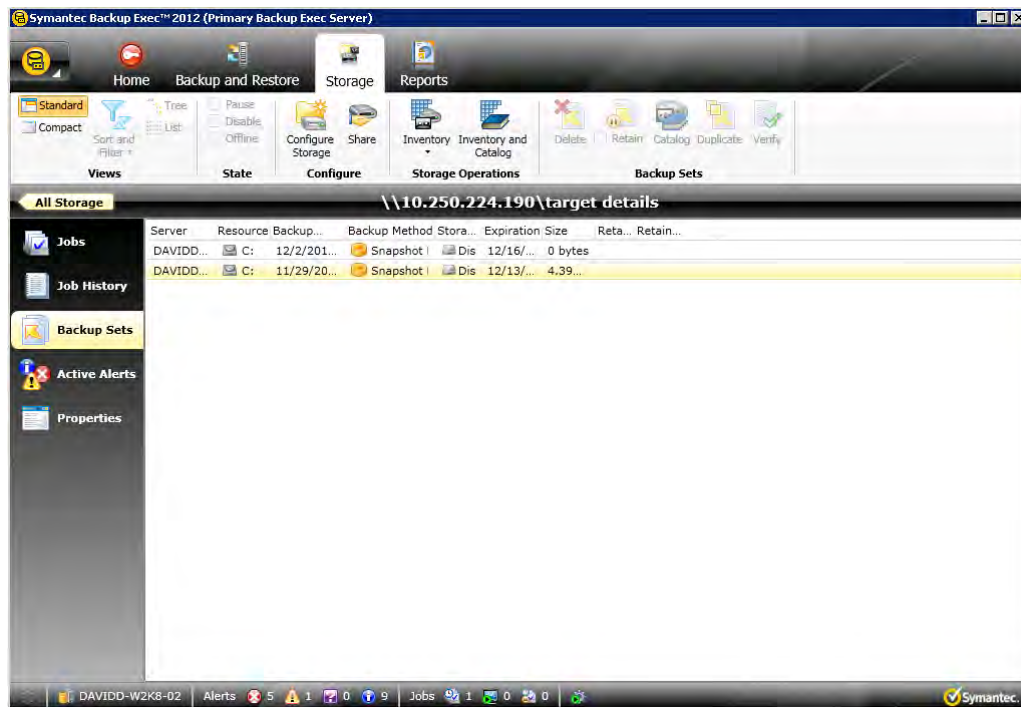
- 1 Under Storage > Storage Operations, right-click the replication target device, and select Inventory and Catalog.



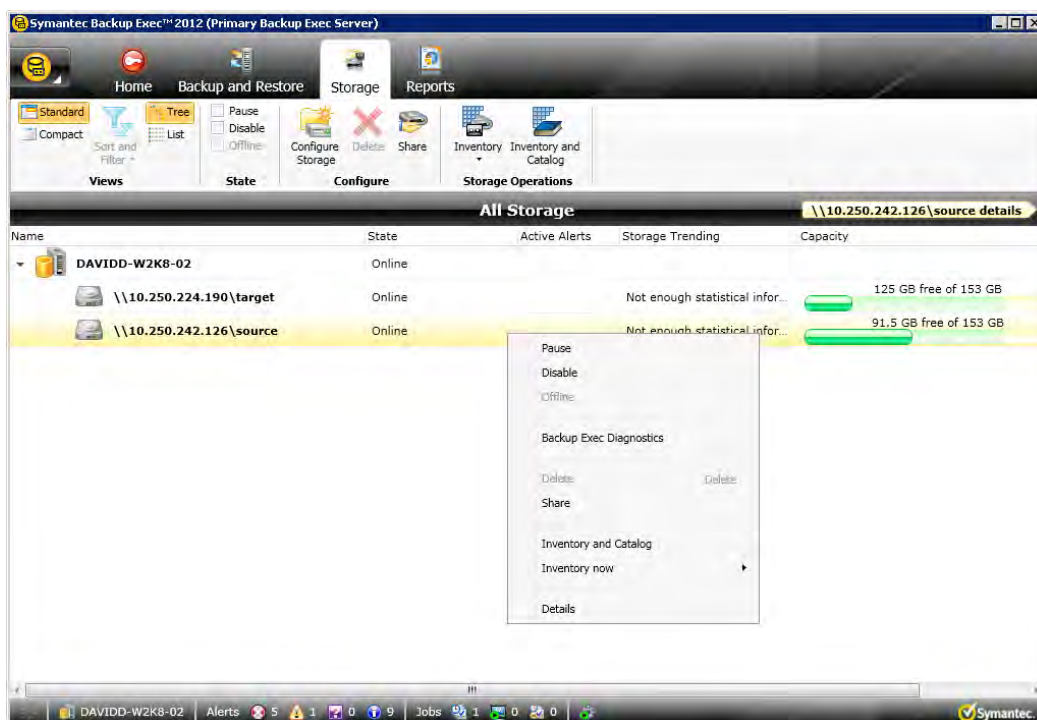
a For Backup Exec 2014/2015, the following screen appears.



2 After the Inventory and Catalog job is done, check the Backup Sets shown in target storage device.

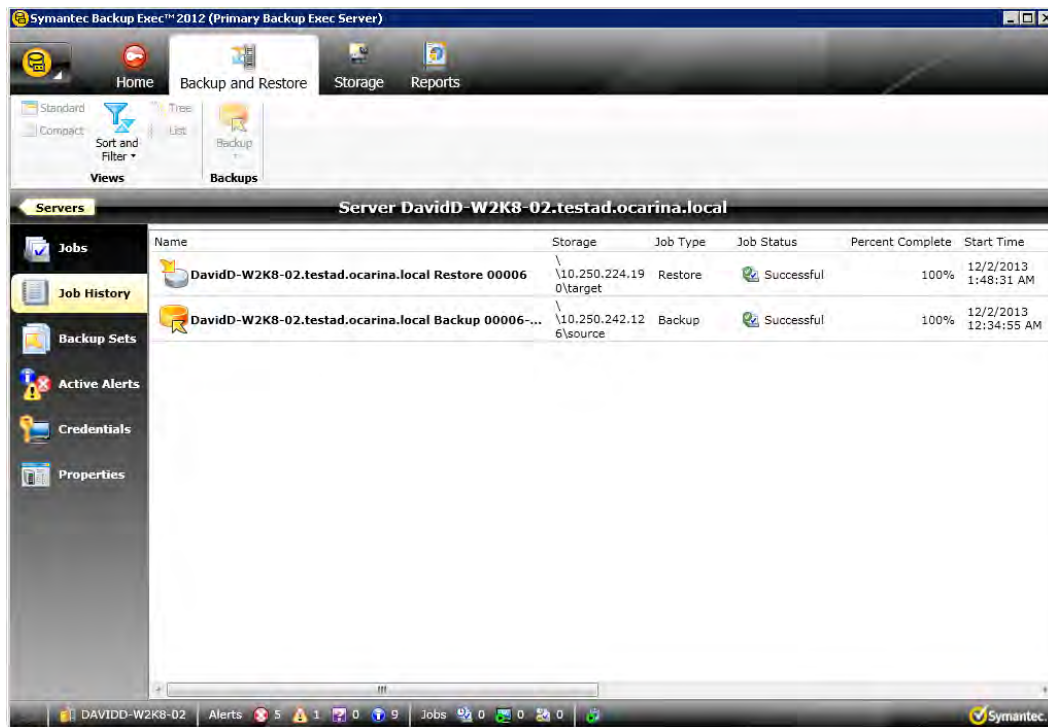


3 Disable source storage under Storage > State, right-click the source storage device, and select Disable.



4 Schedule and run a restore job from the target device.





# Configuring an OST container on QoreStor for use with Backup Exec

## Creating an OST container


- 1 Select the Storage Groups tab, then expand the drop down you would like to add the container into. Click the Add container button

Quest QoreStor™ Dashboard **Storage Groups** Replication System Configuration Diagnostics Alerts Users Management About admin ▾

Storage Groups

Operating System: Red Hat Enterprise Linux Server release 7.1 (Maipo) CLEANER STATUS: DONE CURRENT SAVINGS: 0 % CAPACITY USED: 0.00 GB PHYSICAL CAPACITY: 4242.32 GB  
System State: Operational Mode  
HostName: qs-demo TOTAL FILES: 0 NUMBER OF CONTAINERS: 0 NUMBER OF STORAGE GROUPS: 1 DICTIONARY TYPE: CLOUD-OPTIMIZED  
System ID: 4232F006789CC06E413356A5E29E58C8  
Version: 5.0.0.156

Add Storage Group

GROUP NAME	ENCRYPTION	COMPRESSION	CONTAINERS	ACTIONS
DefaultGroup	Disabled	Fast	0	Details Edit Remove 

Add container

- 2 Under the Protocol drop down Select OST. Enter a Container Name and then click Next.

Add container ✕

---

Name  
sample

Protocol  
OST

Cancel Prev **Next**

- 3 Set the capacity of the OST LSU as needed, and click Next.

Add container ✕

---

LSU Capacity:

☒ Unlimited

☐ Quota

Cancel Prev **Next**

- 4 Review the configuration Summary page, and then click Finish.

Add container ✕

---

Container summary

Name: sample

Protocol: OST

Marker: Auto

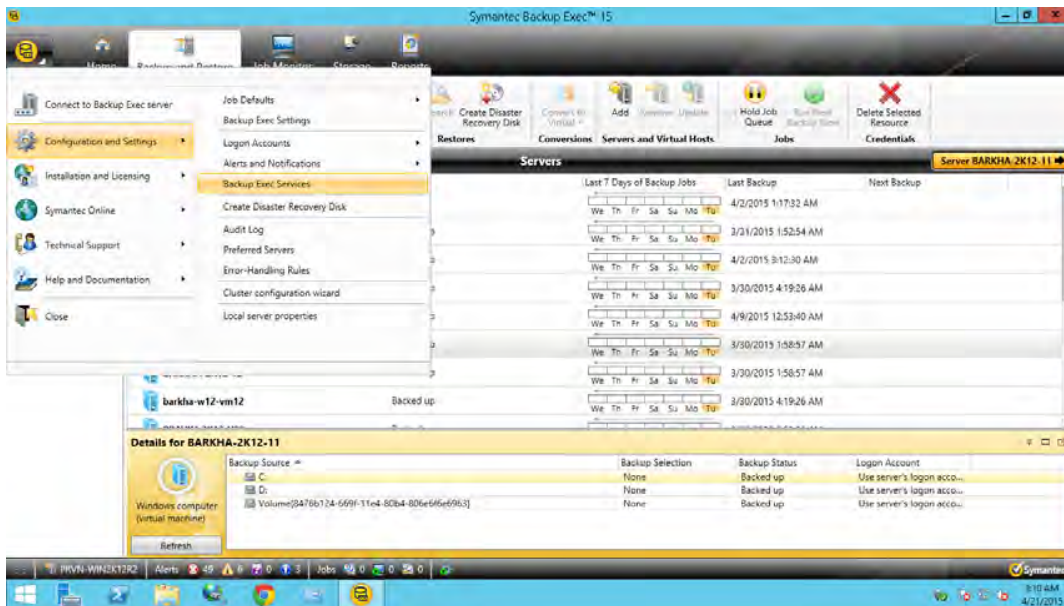
Connection summary

Capacity: Unlimited

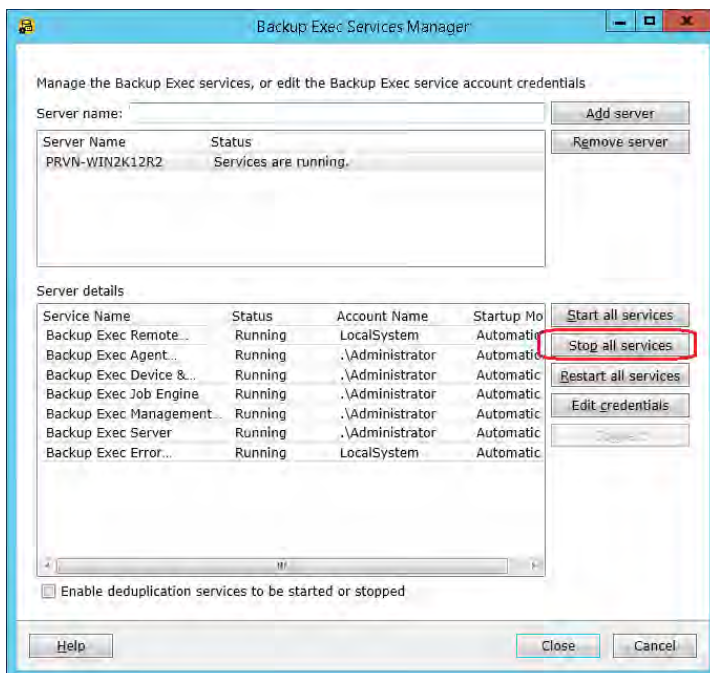
Cancel Prev **Finish**

## Installing the OST plugin

- 1 Launch the Backup Exec Admin Console. Click Home, and then select Configuration and Settings > Backup Exec Services.

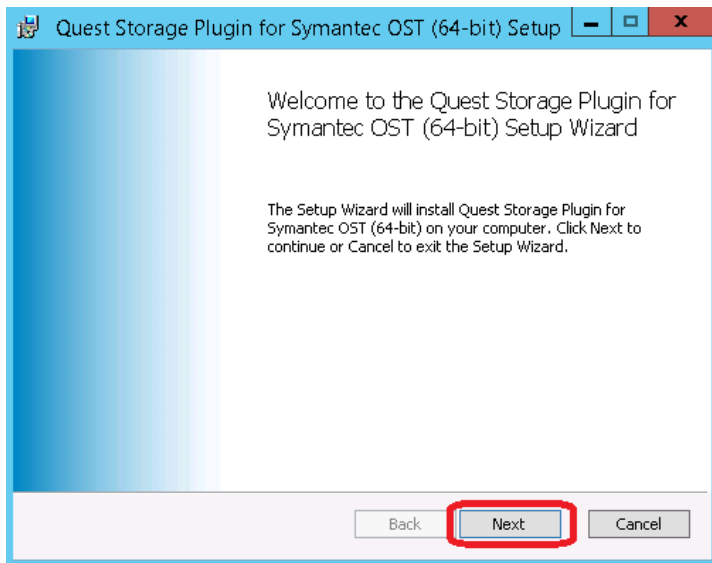


2 On the Services Manager page, click Stop all Services.

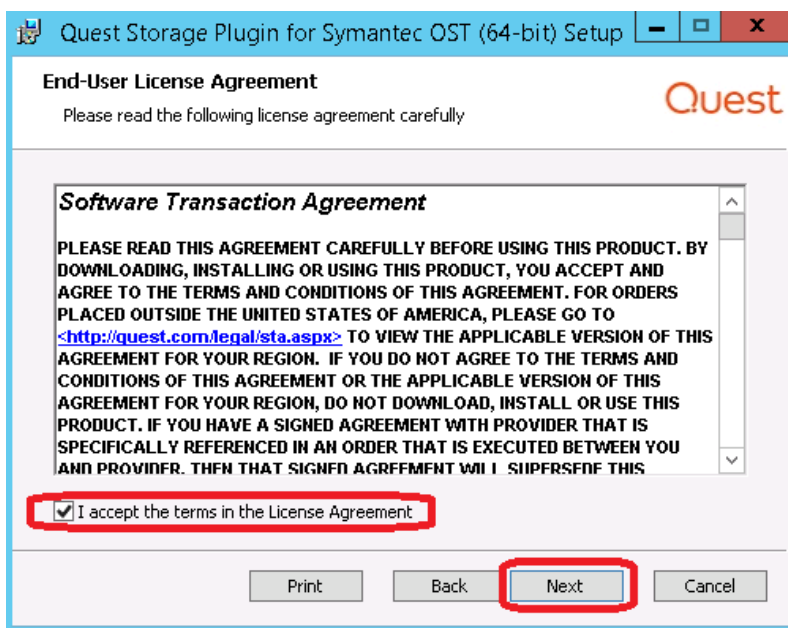


You now can install the OST Plugin (after all Backup Exec services have been stopped). You can get the installation packages from the list of binaries provided by Quest, Inc.

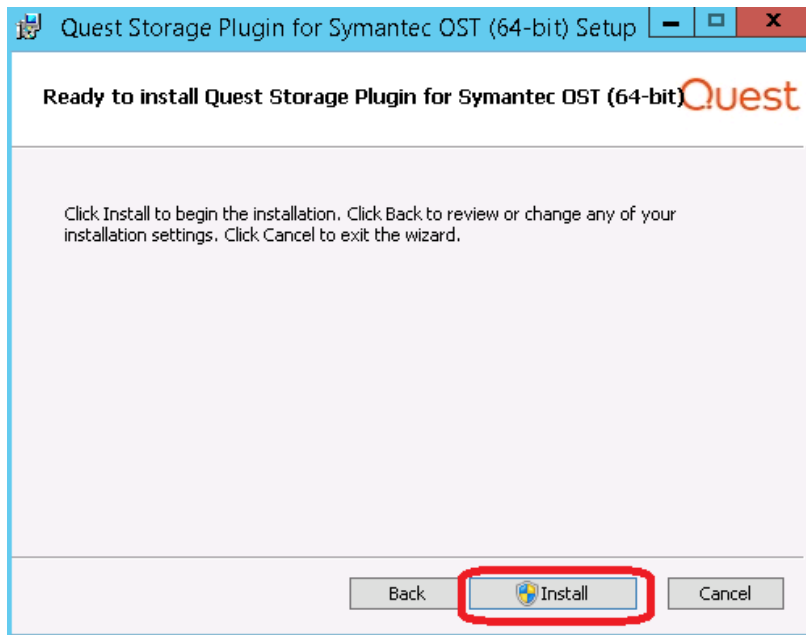
3 In the Quest Storage Plugin Installation dialog box, click Next.



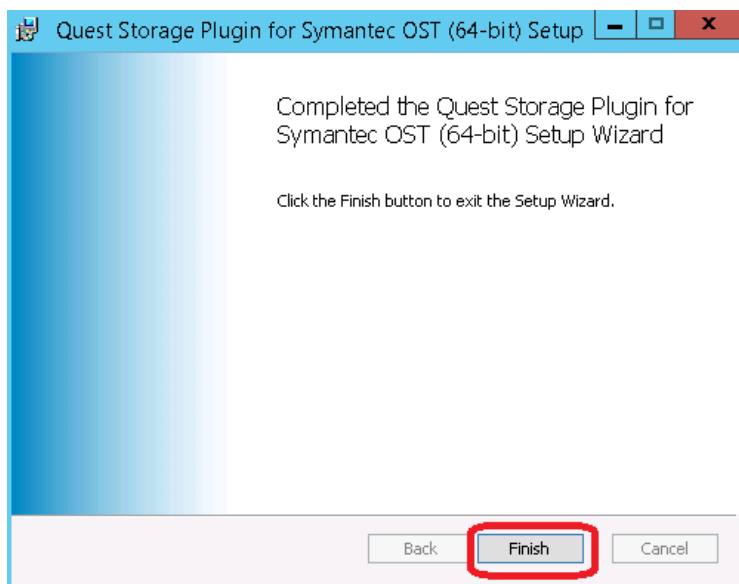
- 4 If you agree, accept the License agreement and click Next.



- 5 Click the Install button to proceed with installation.

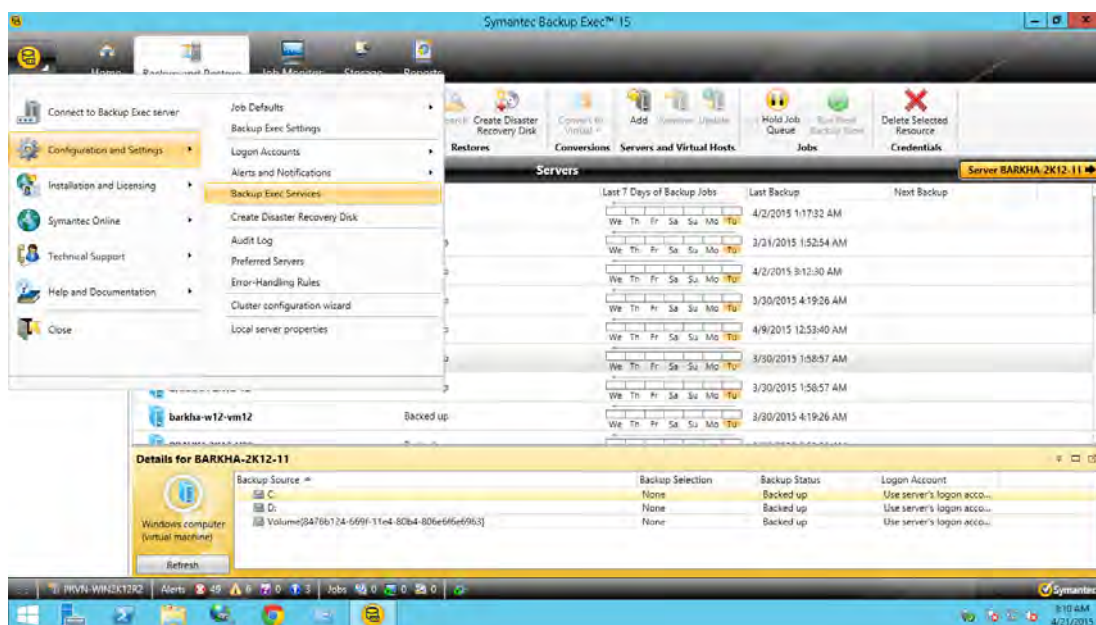


- 6 Click Finish to complete the installation of the OST plugin.

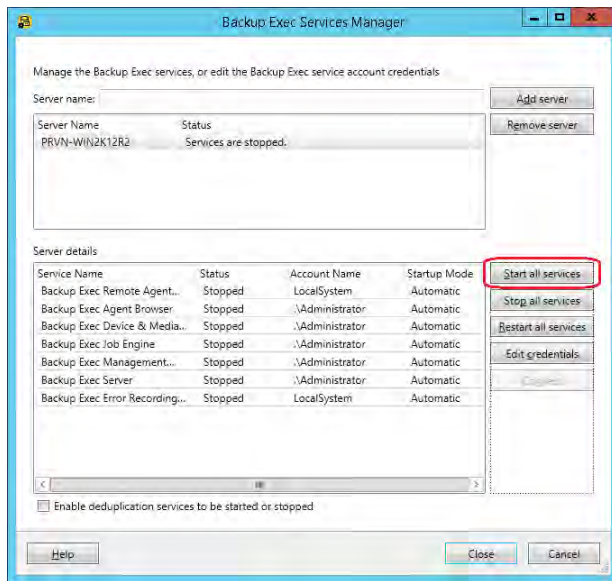


# Configuring the OST device in Backup Exec

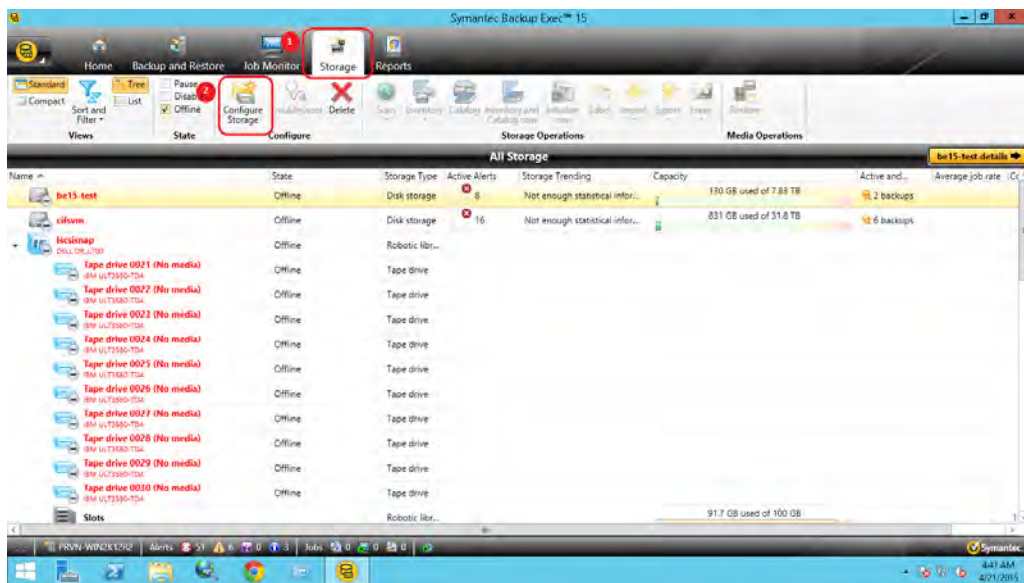
- 1 Launch the Backup Exec Admin Console. Click Home, and then select Configuration and Settings > Backup Exec Services.



- 2 On the Services Manager page, click Start all Services.

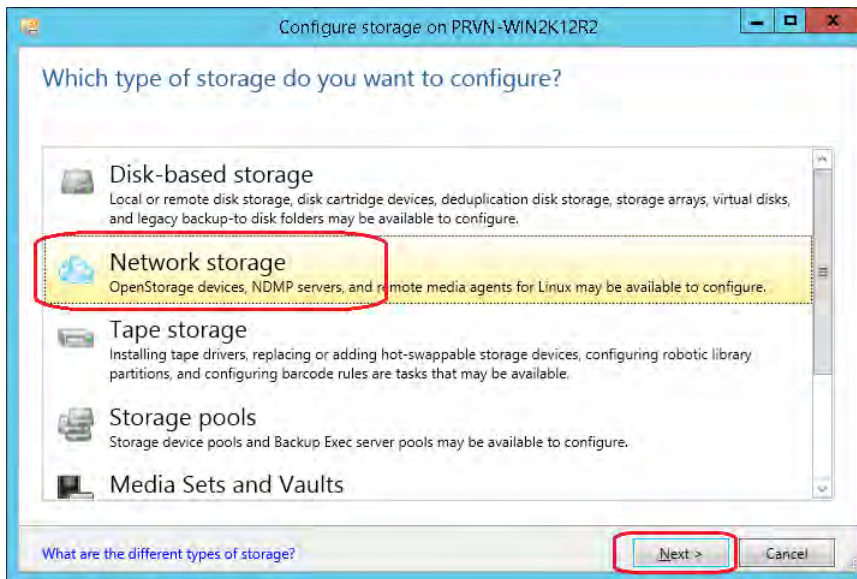


3 On the Storage tab, select Configure Storage.

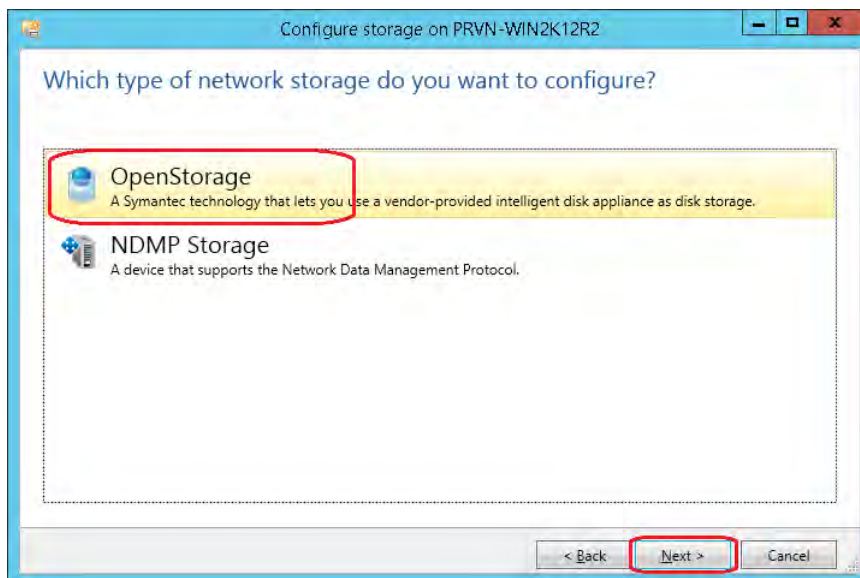




- 4 Select Network Storage, and click Next.



- 5 Select OpenStorage, and click Next.



- 6 Enter the name and description for the configured OST device, and click Next.

Configure storage on PRVN-WIN2K12R2

What name and description do you want to use for the OpenStorage device?

Name: BE\_OST

Description:

< Back Next > Cancel

- 7 Select Quest as the provider and click Next.

Configure storage on R630-29

Which provider for the OpenStorage device do you want to use?

- DELL
- PureDisk
- QUEST
- My provider is not listed here

< Back Next > Cancel

- 8 Enter the Server name (IP or FQDN) and select the backup\_user as the logon account.

Configure storage on PRVN-WIN2K12R2

What is the connection information for the OpenStorage device?

Server name: e-shelf1  
Use the host name or fully qualified domain name of the server.

Logon account: backup\_user Add/Edit

Symantec recommends that you select or create a logon account that is used exclusively for the OpenStorage device. The account should not be used for any other purpose and should not contain credentials that are subject to password update policies.

< Back Next > Cancel

- 9 Select the created OST container from the list and click Next.

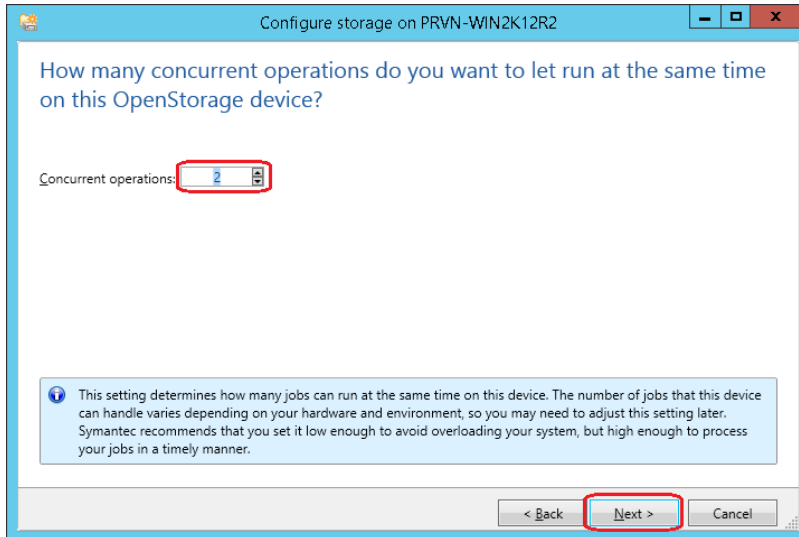
Configure storage on PRVN-WIN2K12R2

Which logical storage unit do you want to use?

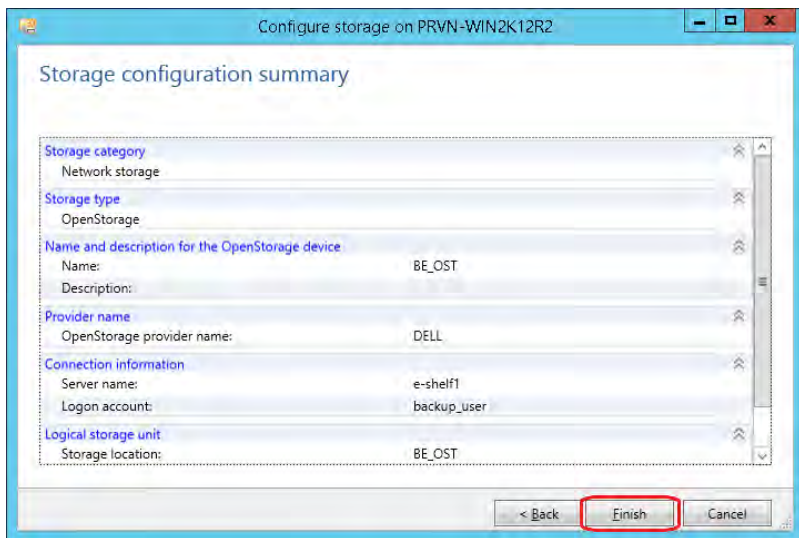
BE\_OST  
vol\_be\_ost1

< Back Next > Cancel

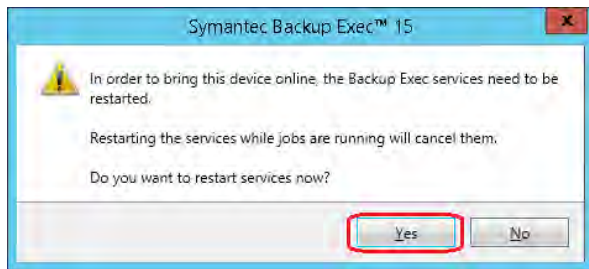
10 Enter the number of concurrent operations to run on the OST device and click Next.



11 Click Finish on the configuration summary page.



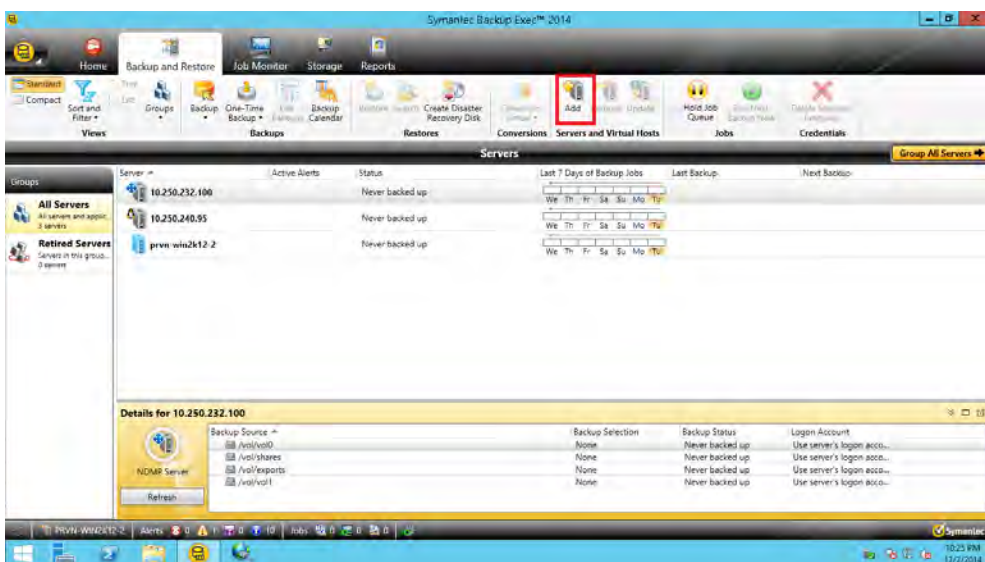
12 When prompted, click Yes to restart the Backup Exec Services.



## Performing backup using OST Container

This procedure describes how to perform file-based backup and restore. You need to install/push the Backup Exec agent on the client on which files need to be protected.

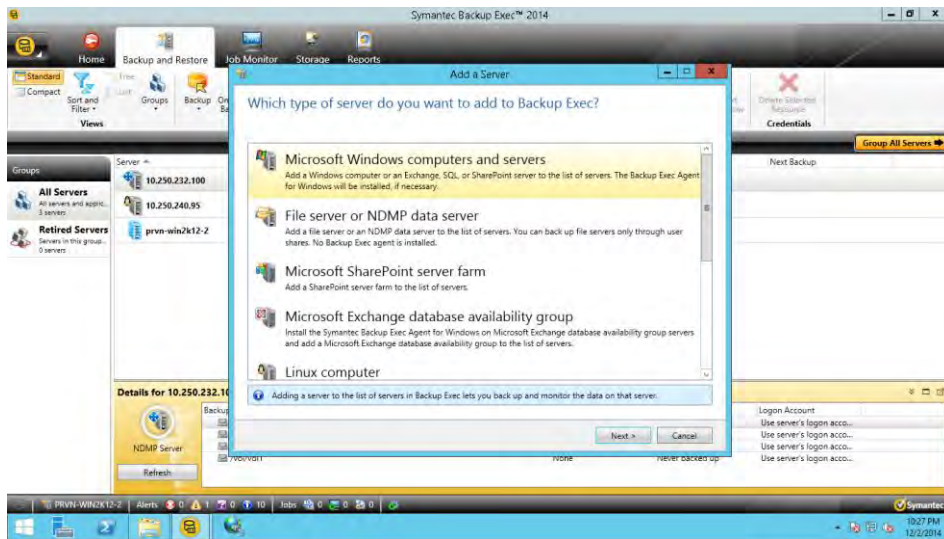
- 1 On the Backup and Restore tab, click Add to add the client machine.



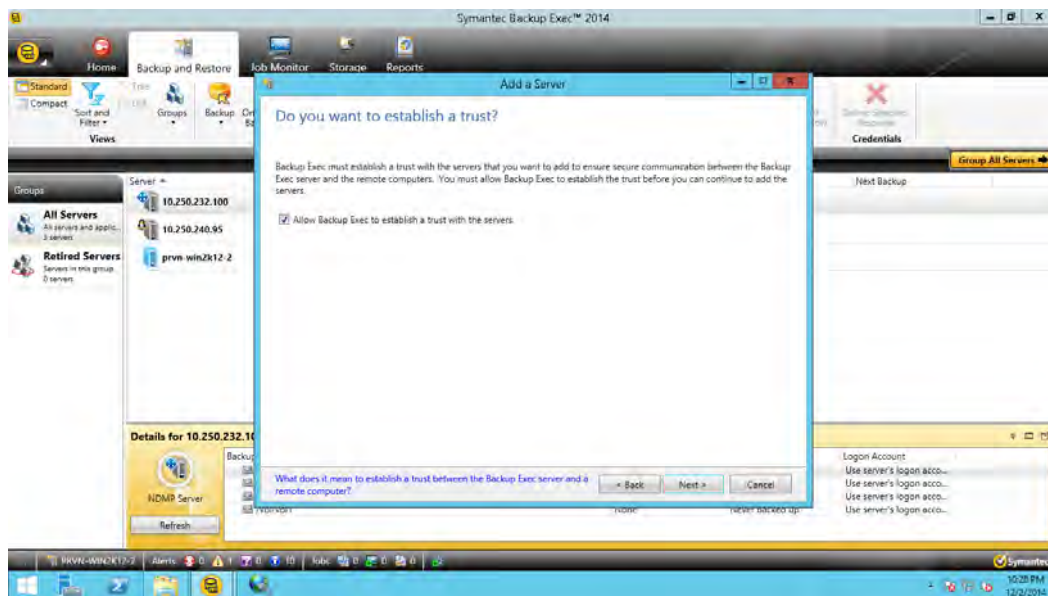
- 2 In the Add a Server dialog box, select the type of client to add as Windows/Linux/NDMP.



**NOTE:** If you are adding a Linux client, you need to install the RALUS package before adding.

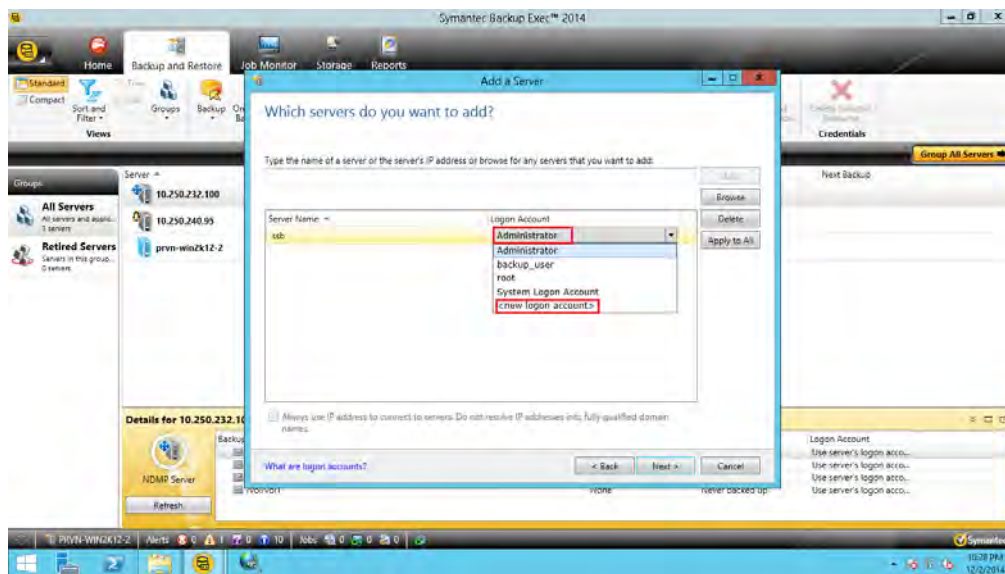


3 With the Default settings, click Next to proceed.

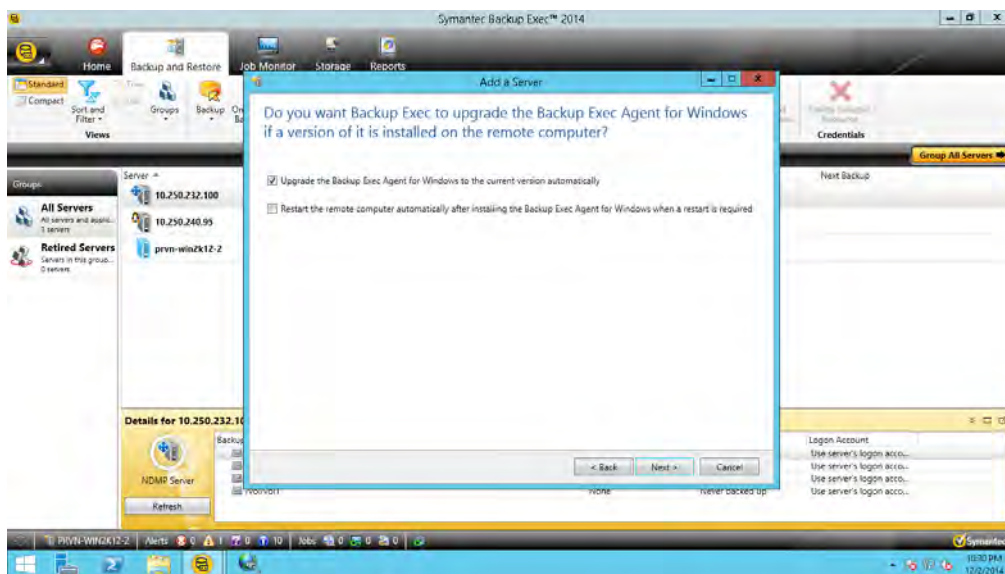


4 Provide the access credentials for the server you want to add. Select from the drop down or create new logon details if required.

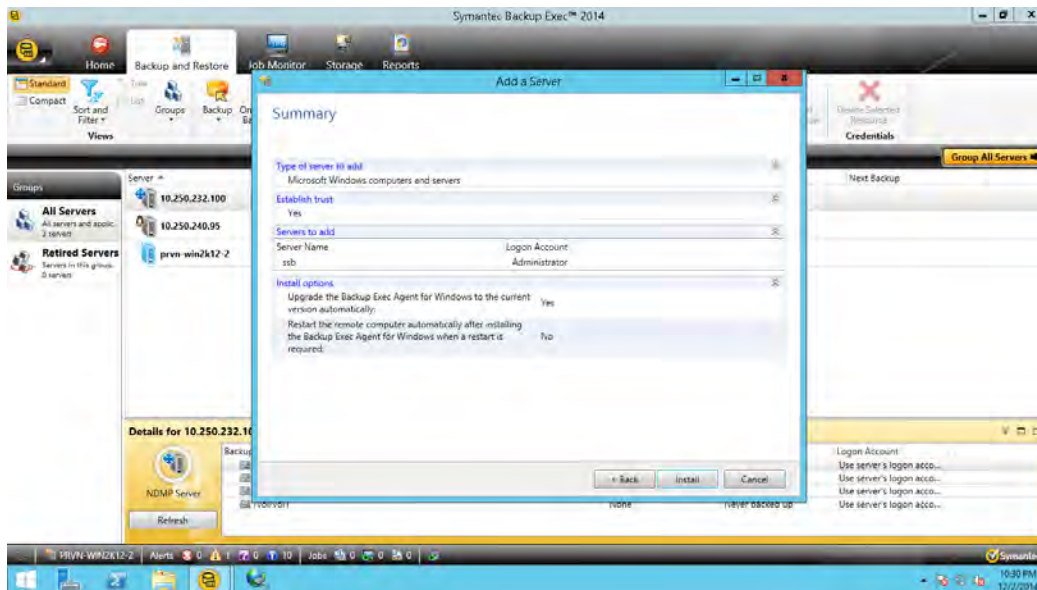




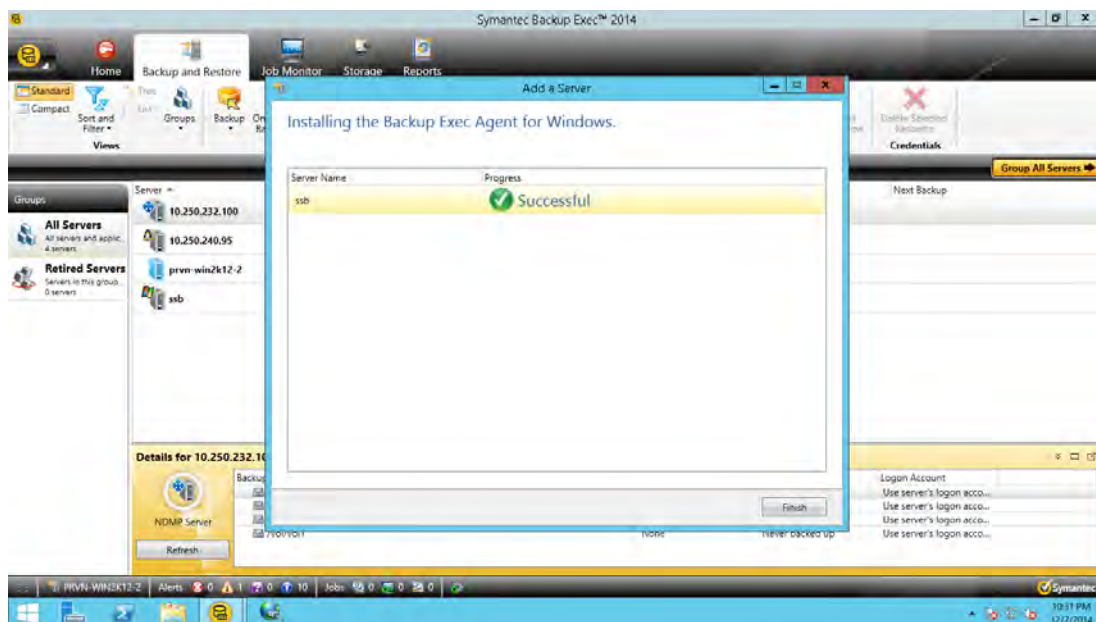
5 With Default settings, click Next to proceed.



6 Click Install on the final summary screen.

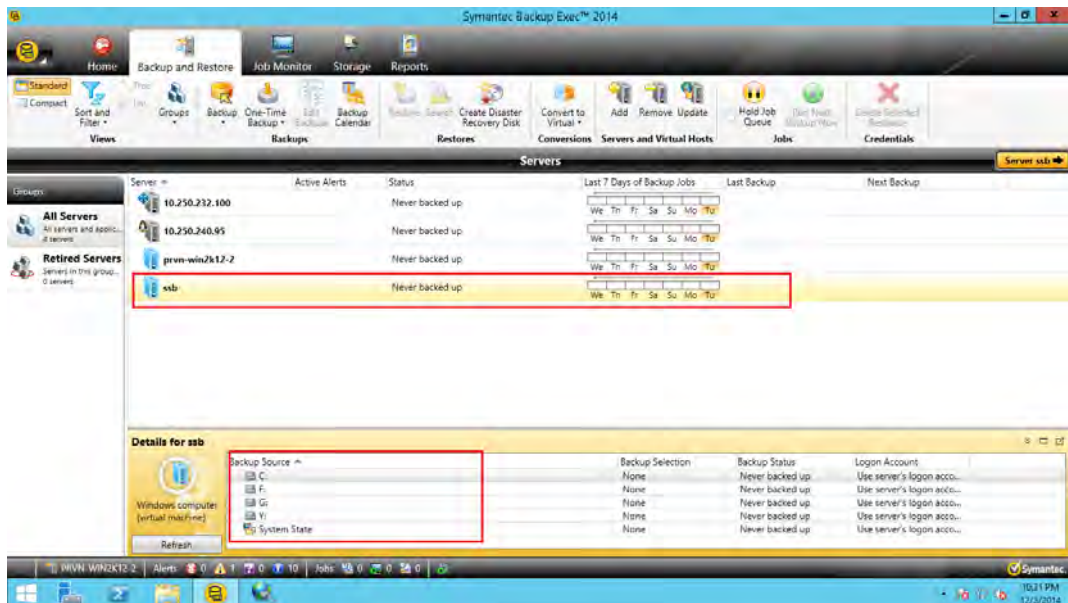


- a A notification appears of the successful installation of Remote Backup Exec Agent on the server.

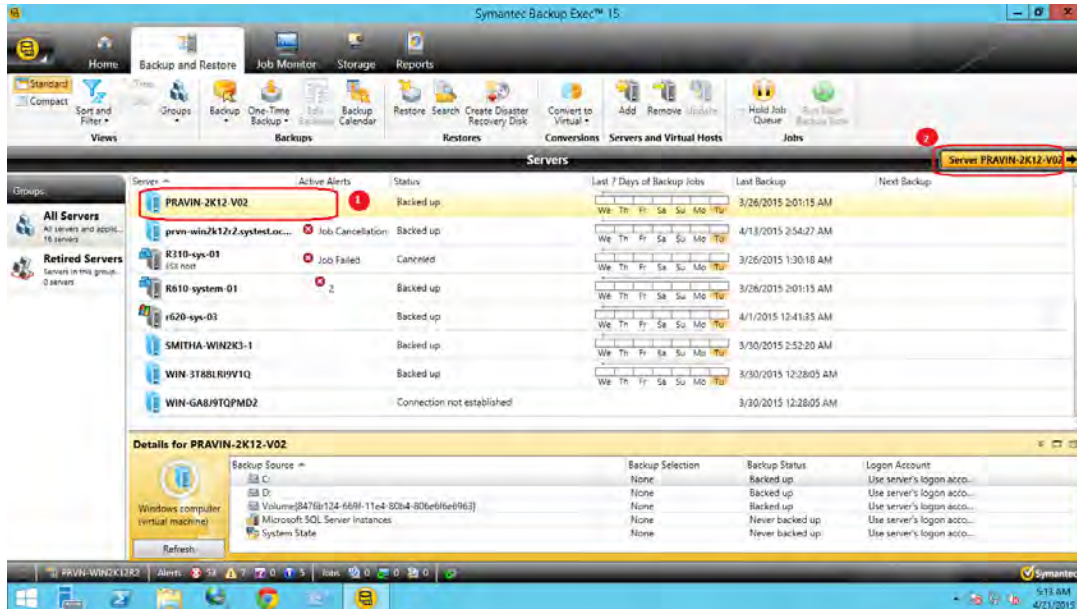


- b The Backup and Restore tab shows the newly added server and related details.

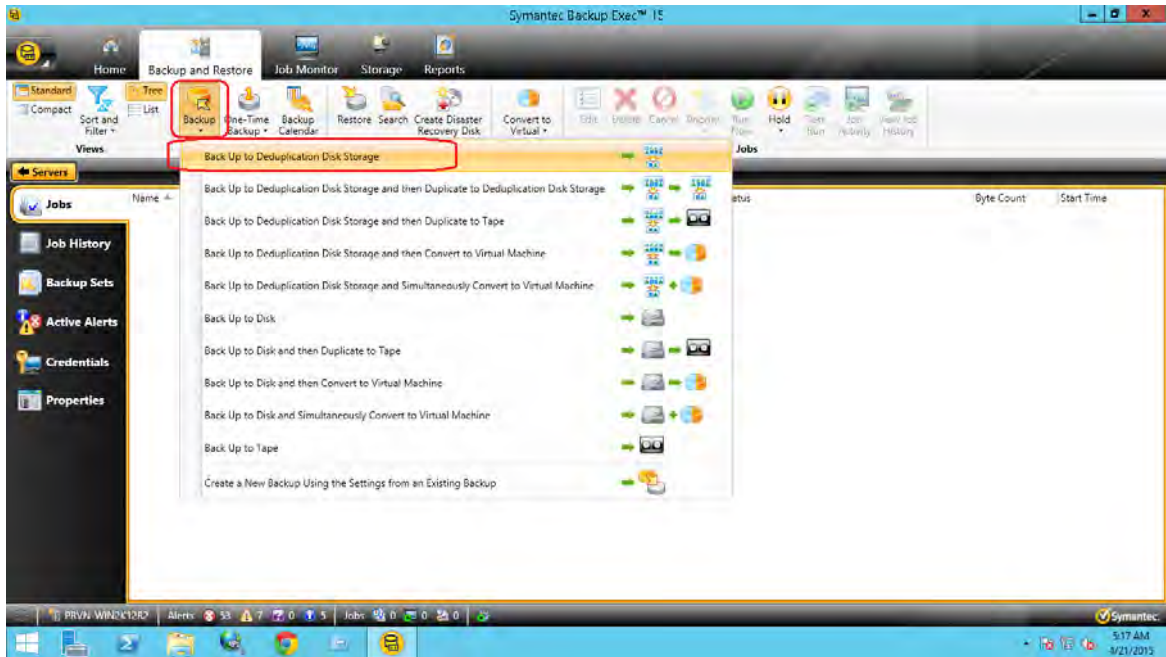




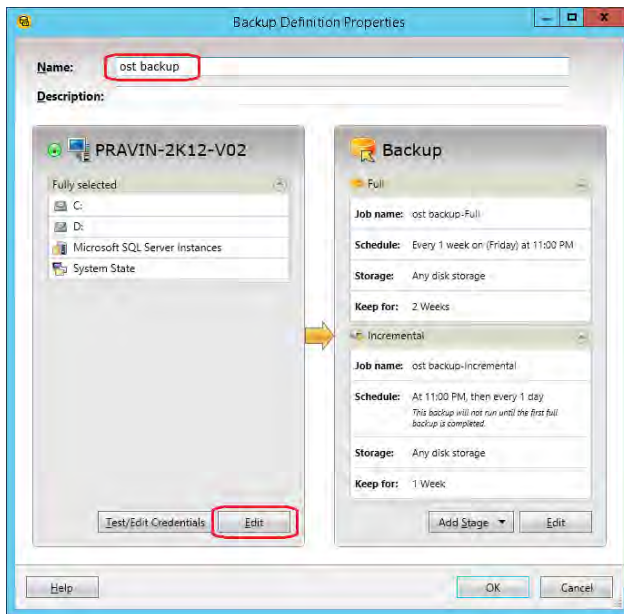
7 On the Backup and Restore tab, select the server with the data to back up and go to Details.



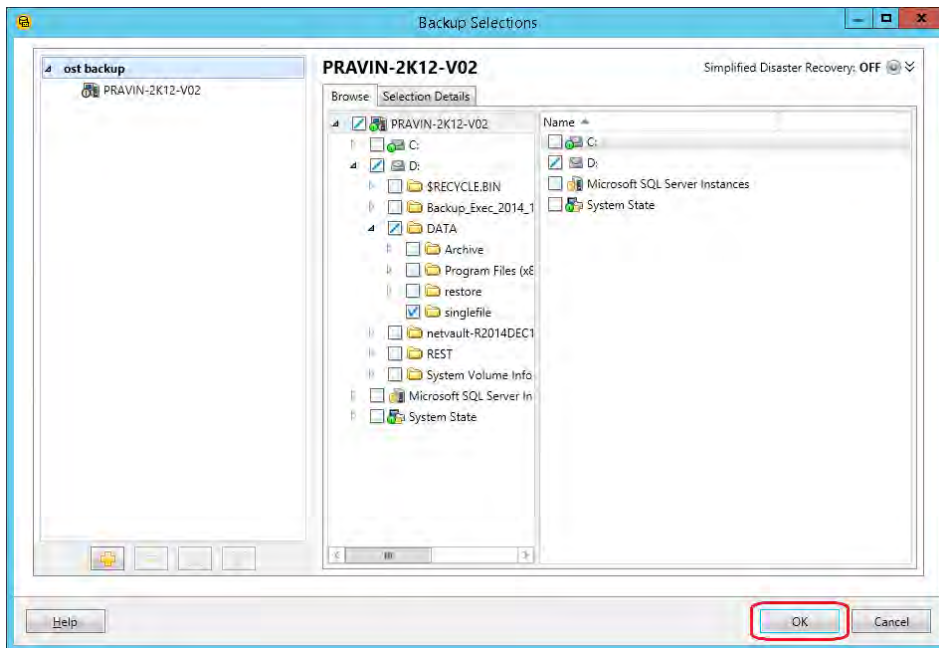
8 Select Backup > Back up to Deduplication Disk Storage.



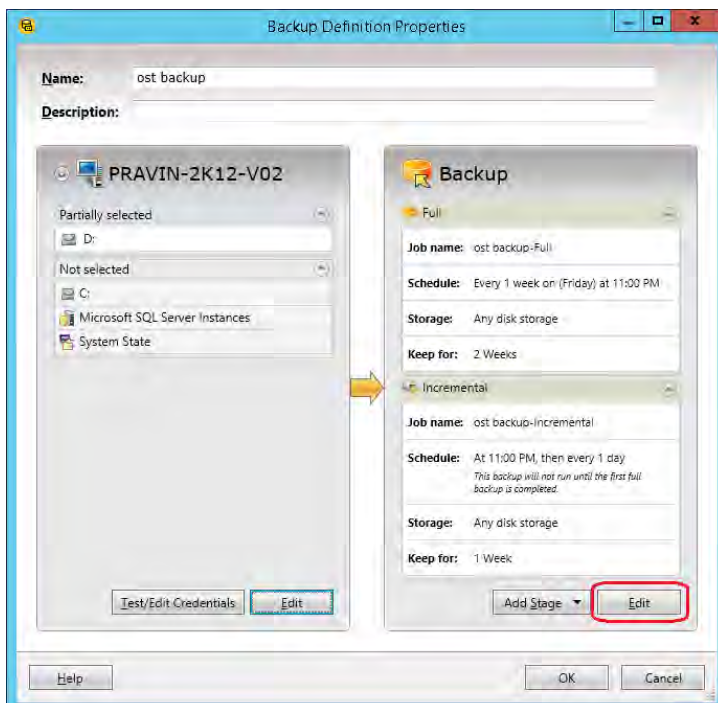
9 Enter a name for the policy and click Edit to select the server file systems.



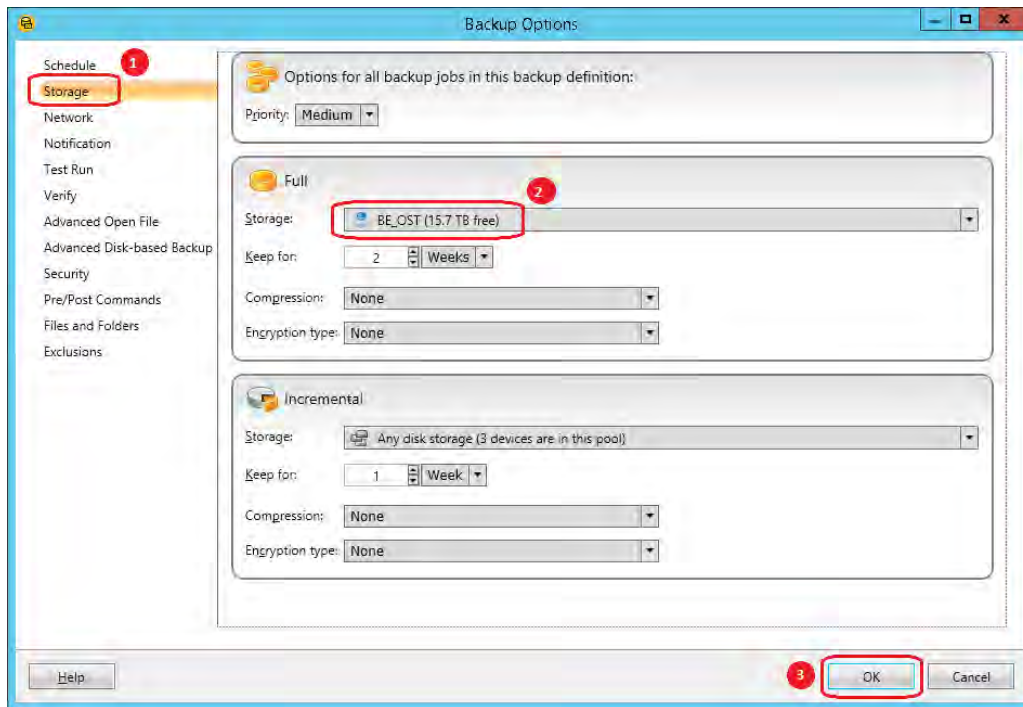
10 Browse and select the data to back up and click OK to continue.



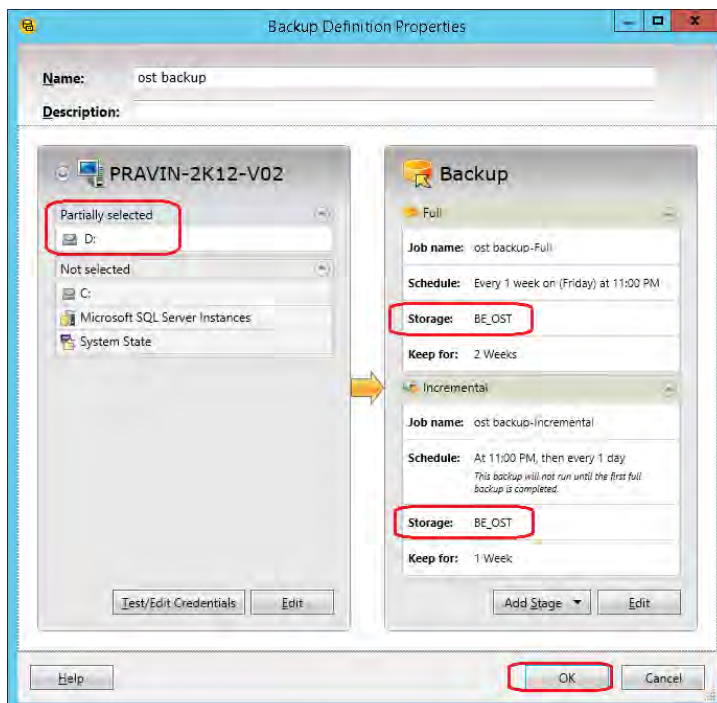
11 Click Edit to update backup settings and to provide the storage location.



12 Click Storage in the left pane and select the required tape library for the storage unit.

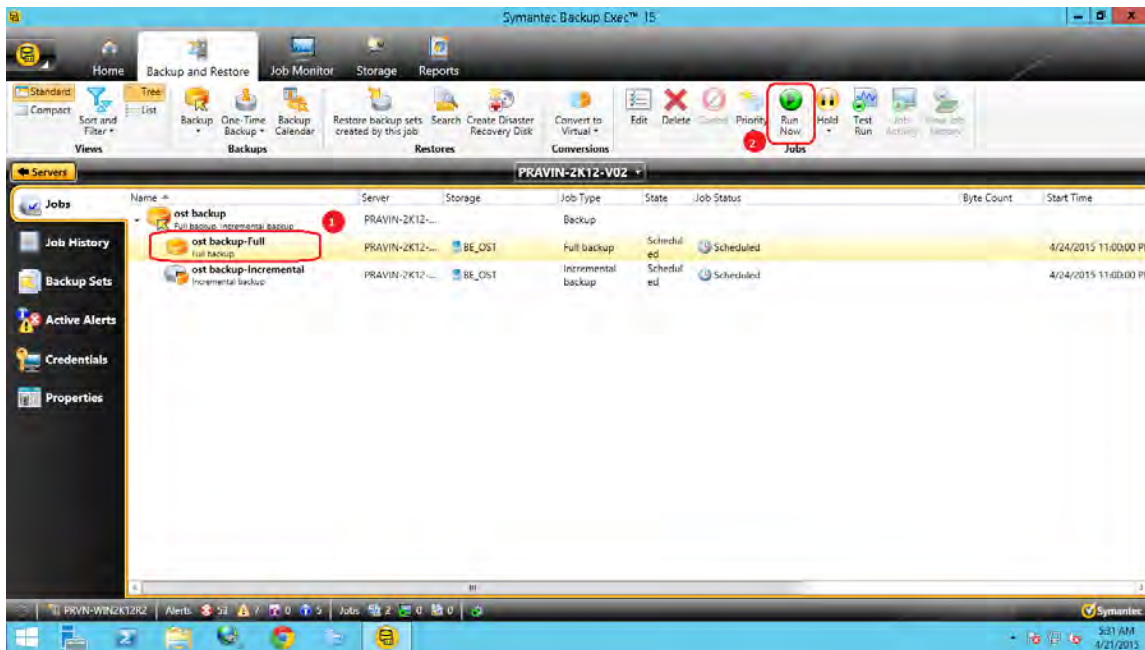


13 Review the final selections and click OK to proceed.

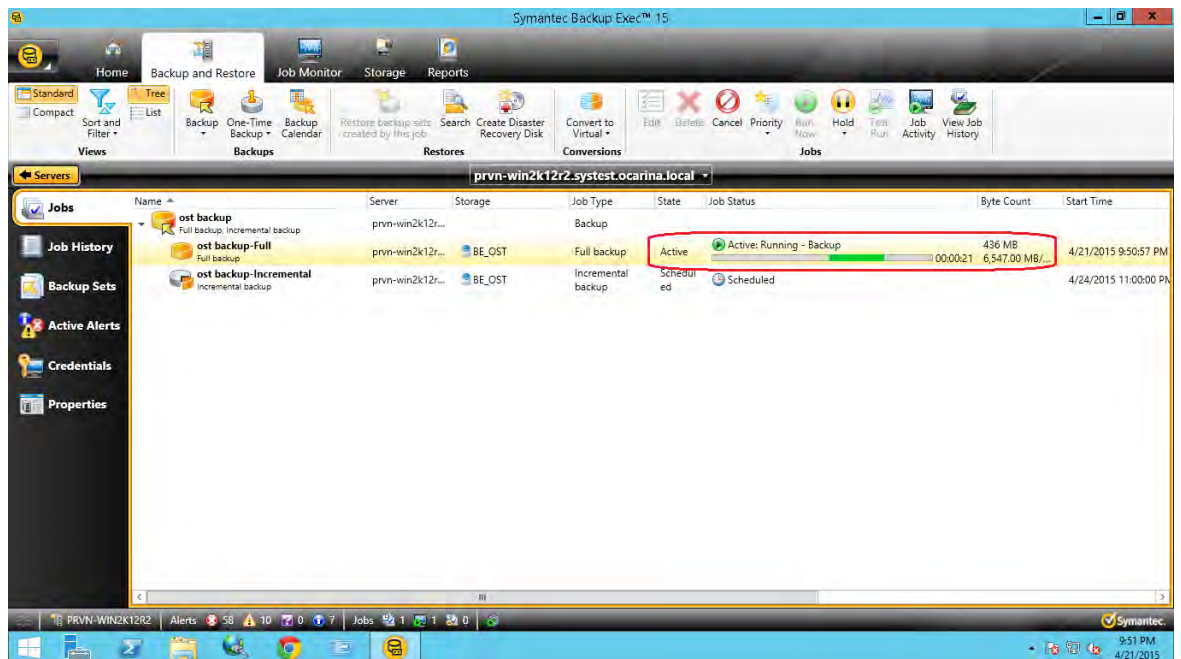




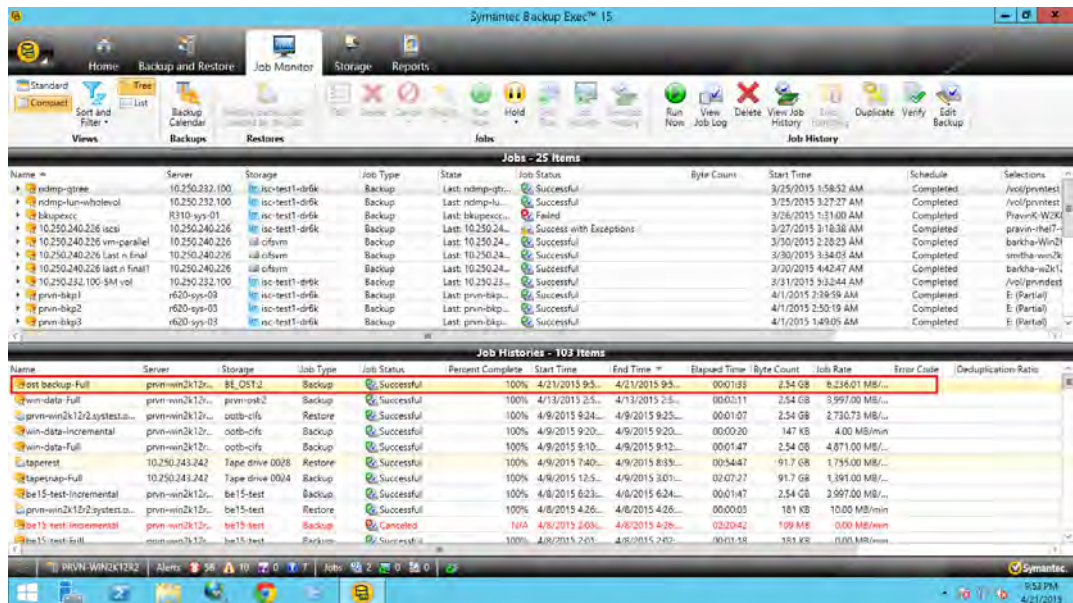
14 To run a backup job, select the backup policy (FULL schedule) and click Run Now.



a You can view the backup progress in the Backup and Restore tab.

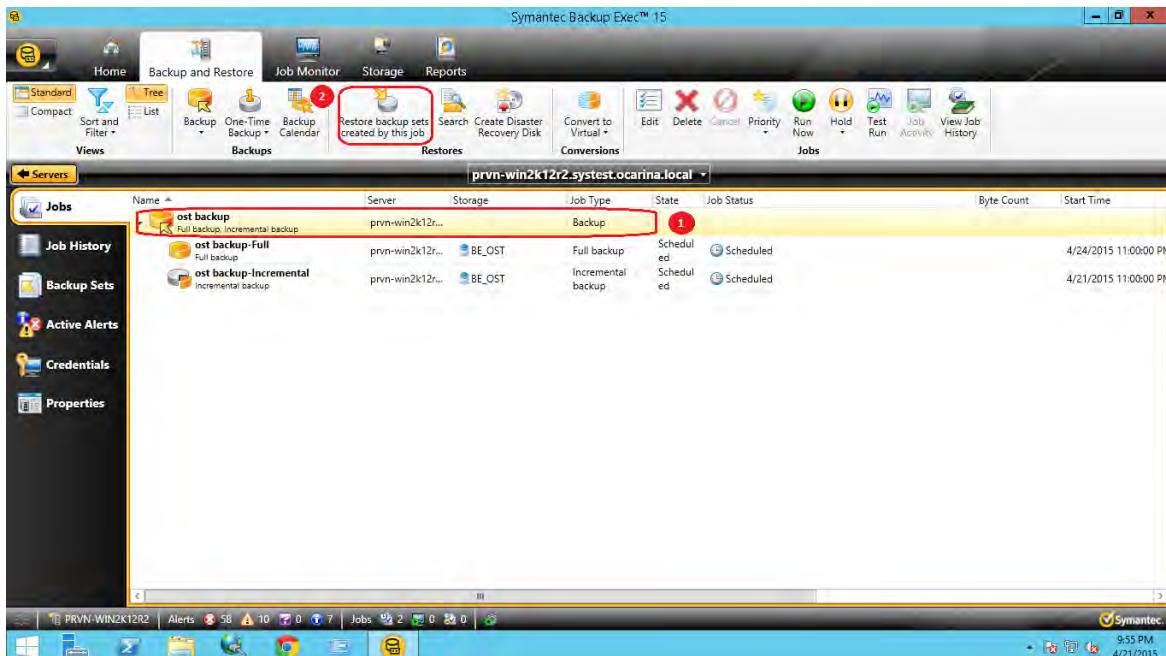


b You can see the job status on the Job Monitor tab.



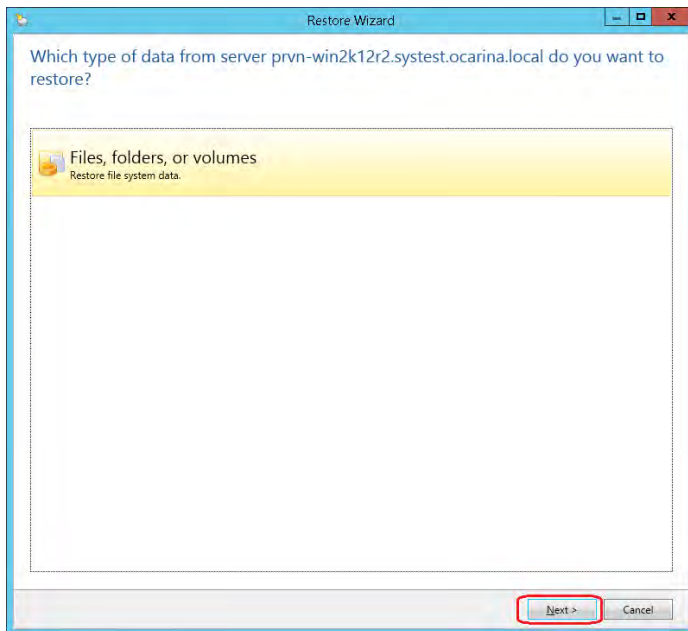
# Performing restore using QoreStor OST

- 1 On the Backup and Restore tab, click Restore backup sets created by this job.

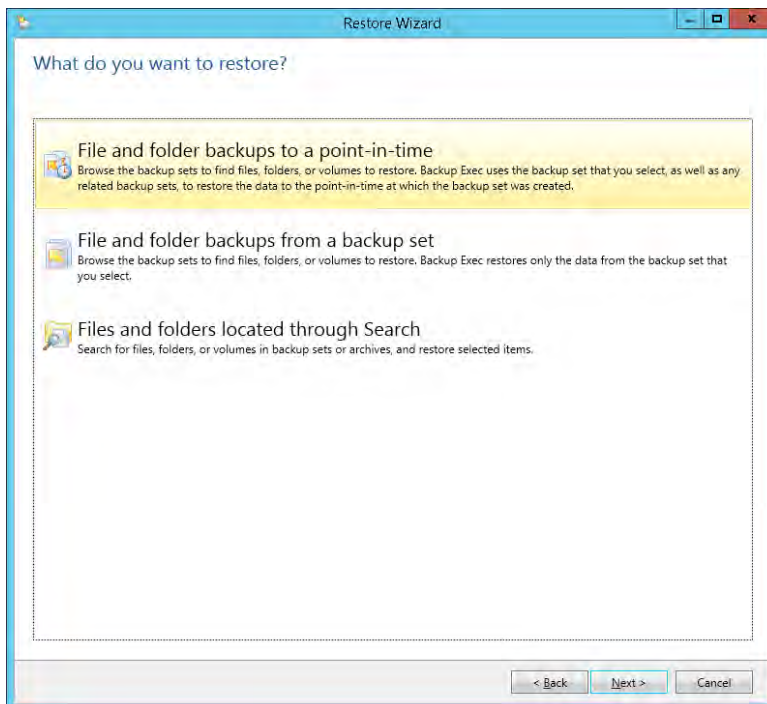




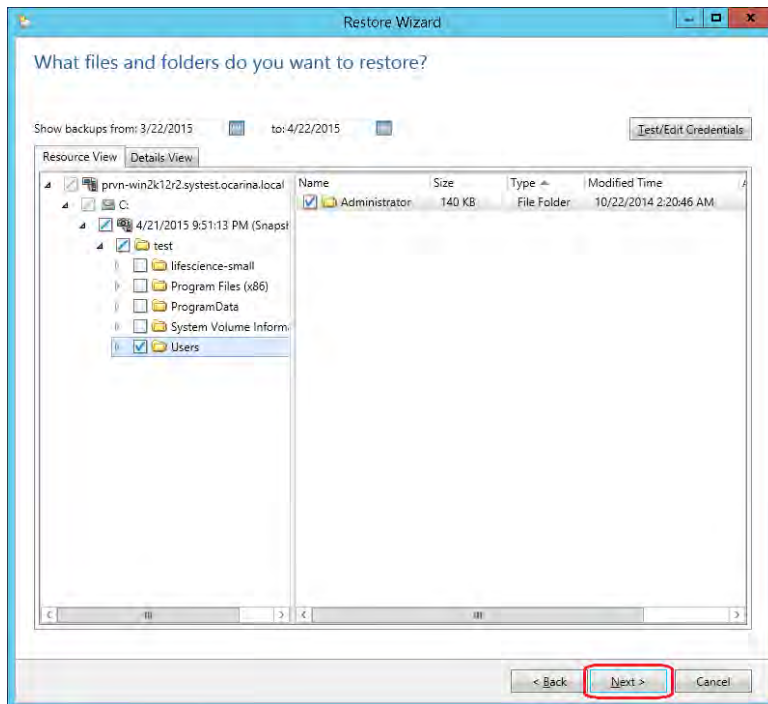
- 2 With the default options, click Next.



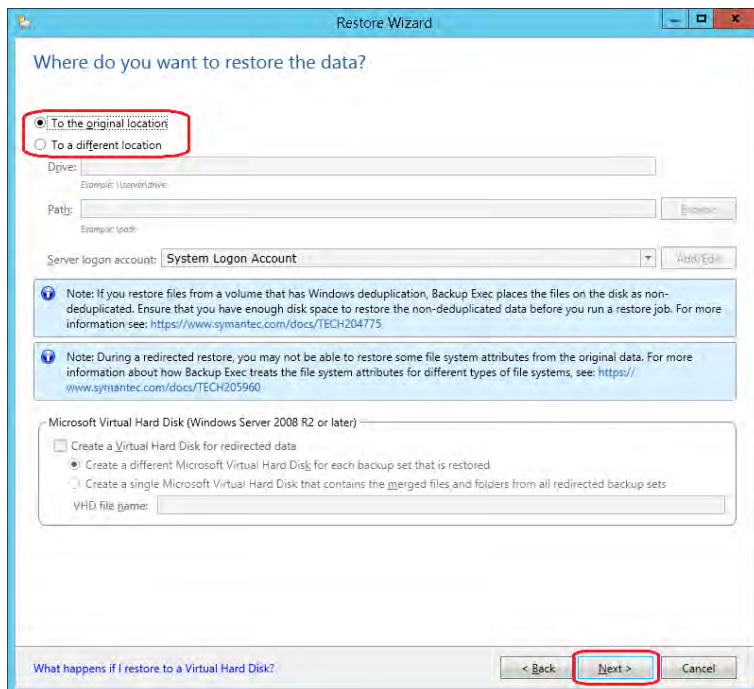
- 3 With the default options, click Next to proceed.



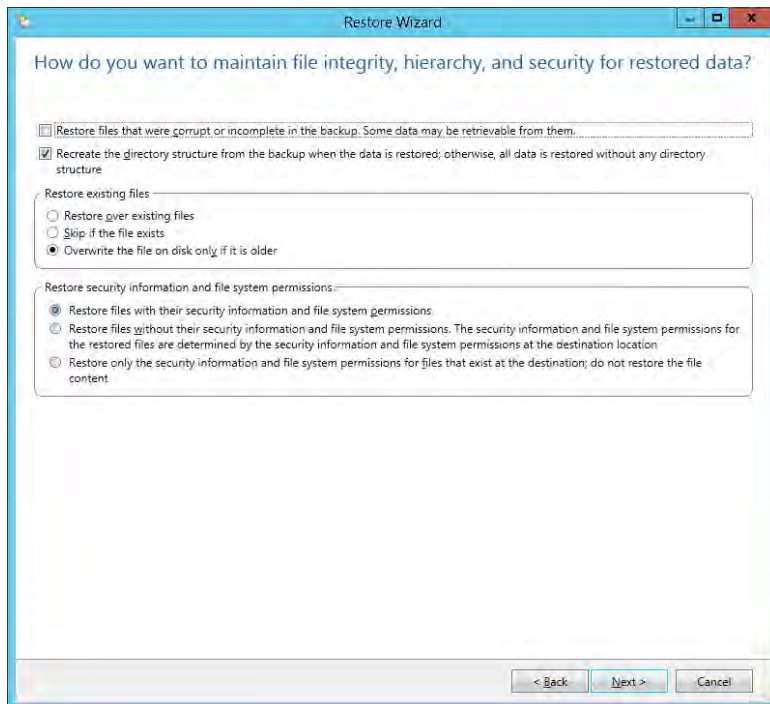
- 4 Select the data to restore from the appropriate snapshot and click Next to proceed.



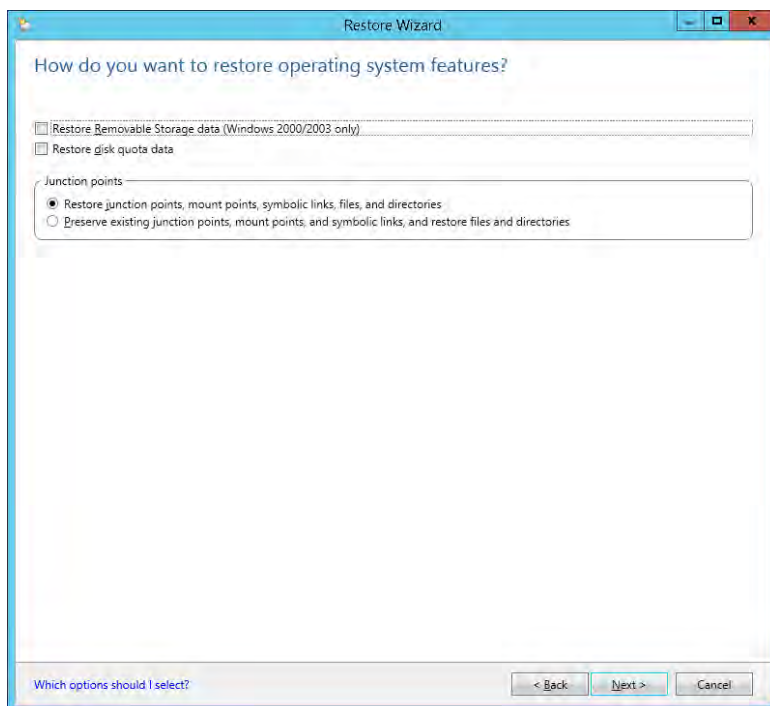
- 5 Select the default setting if restoring to the original location or specify a different location as needed, and click Next.



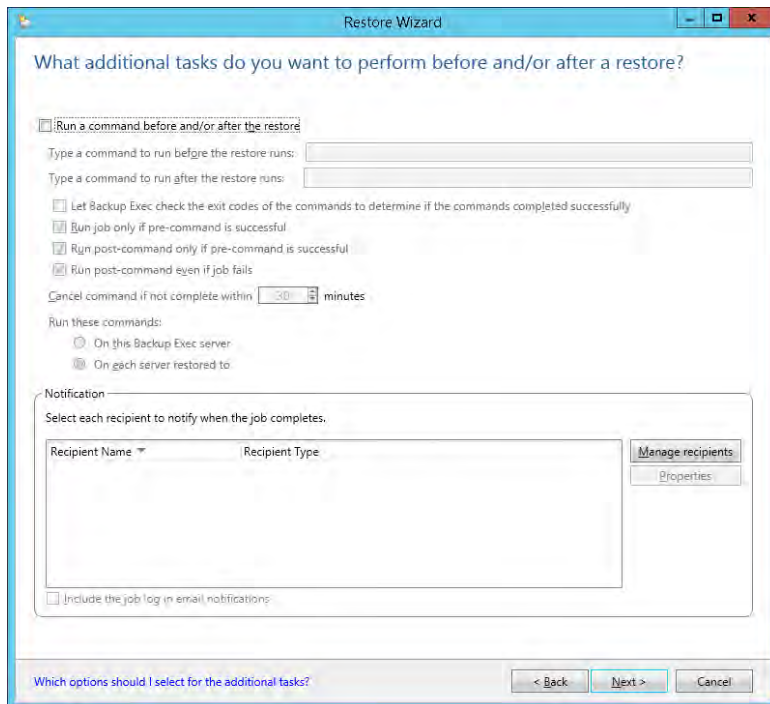
- 6 With the default settings, click Next to proceed.



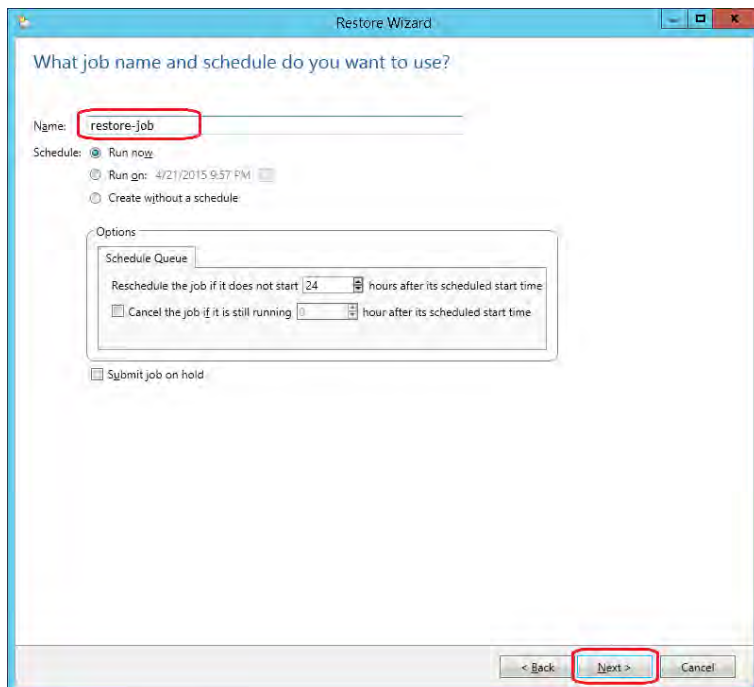
7 With the default settings, click Next to proceed.



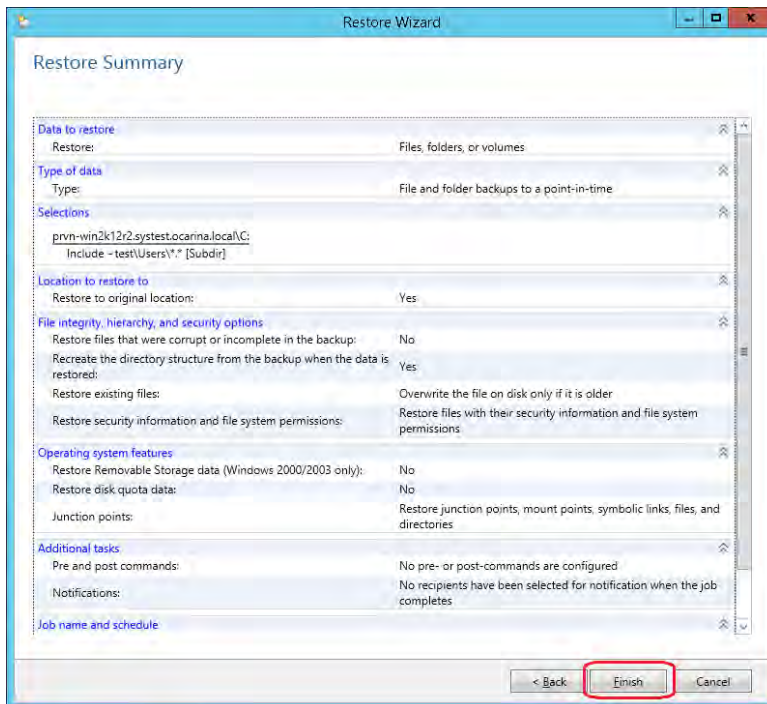
8 With the default settings, click Next to proceed.



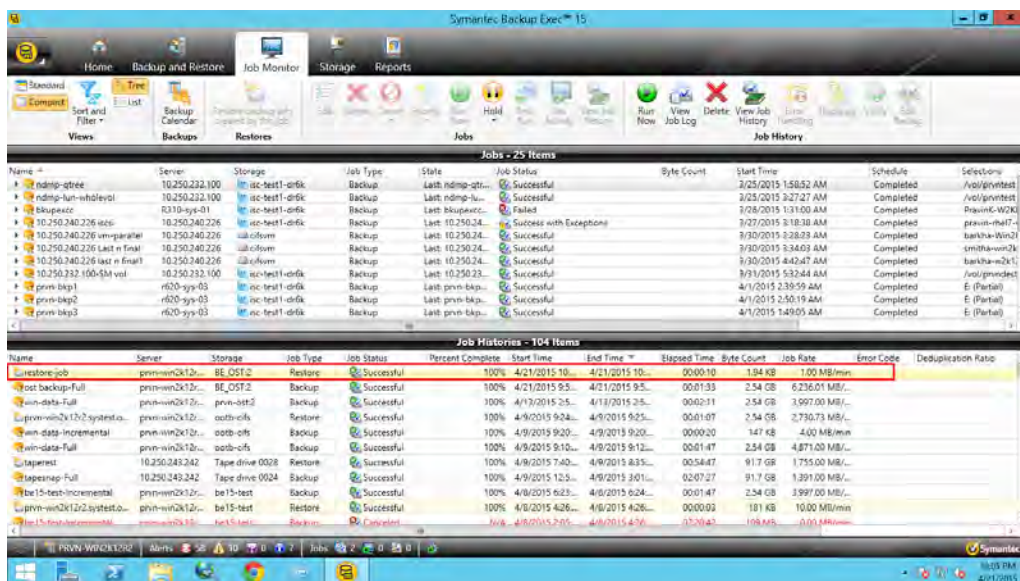
- 9 Enter a name for the restore job and schedule it if required; or select Run now to start the restore job immediately. Click Next to proceed.



- 10 Click Finish on the Restore Summary page.



a On the Job Monitor tab, you can view the restore status.



## 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



Quest QoreStor™ Dashboard Storage Groups Replication **System Configuration** Diagnostics Alerts Users Management About admin

System Configuration

Operating System:	Red Hat Enterprise Linux Server release 7.1 (Maipo)	CLEANER STATUS	DONE	CURRENT SAVINGS	0 %	CAPACITY USED	0.00 GB	PHYSICAL CAPACITY	4242.32 GB
System State:	Operational Mode	TOTAL FILES	0	NUMBER OF CONTAINERS	1	NUMBER OF STORAGE GROUPS	1	DICTIONARY TYPE	CLOUD-OPTIMIZED
HostName:	qs-demo								
System ID:	4232F006789CC06E413356A5E29E58C8								
Version:	5.0.0.156								

Upload SSL Certificate

Cleaner Schedule

Run Cleaner Once Edit schedule

DAY	START TIME	END TIME
Monday	13:00	18:00
Tuesday	13:00	18:00
Wednesday	13:00	18:00
Thursday	13:00	18:00
Friday	13:00	18:00
Saturday	13:00	18:00
Sunday	13:00	18:00

2 Define the schedule and click Submit.

Cleaner Schedule

Cancel Submit

ACTION	DAY	START TIME	END TIME
Remove	Monday	06:00	18:00
Remove	Tuesday	06:00	18:00
Remove	Wednesday	06:00	18:00
Remove	Thursday	06:00	18:00
Remove	Friday	06:00	18:00
Remove	Saturday	06:00	18:00
Remove	Sunday	06:00	18:00

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

System Configuration

Operating System:

Red Hat Enterprise Linux Server release 7.1 (Maipo)

CLEANER STATUS

DONE

CURRENT SAVINGS

0 %

CAPACITY USED

0.00 GB

PHYSICAL CAPACITY

4242.32 GB

System State:

Operational Mode

HostName:

qs-demo

System ID:

4232F006789CC06E413356A5E29E58C8

Version:

5.0.0.156

TOTAL FILES

0

NUMBER OF CONTAINERS

1

NUMBER OF STORAGE GROUPS

1

DICTIONARY TYPE

CLOUD-OPTIMIZED

Upload SSL Certificate

Cleaner Schedule

Run Cleaner Once

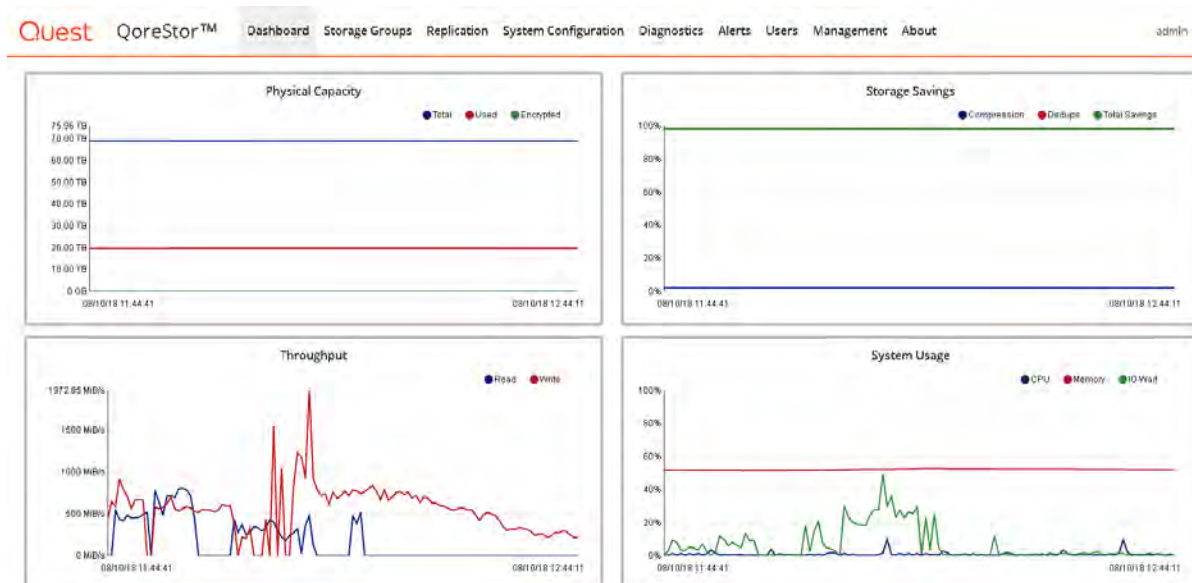
Edit schedule

DAY	START TIME	END TIME
Monday	06:00	18:00
Tuesday	06:00	18:00
Wednesday	06:00	18:00
Thursday	06:00	18:00
Friday	06:00	18:00
Saturday	06:00	18:00
Sunday	06:00	18:00

# 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.

**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.



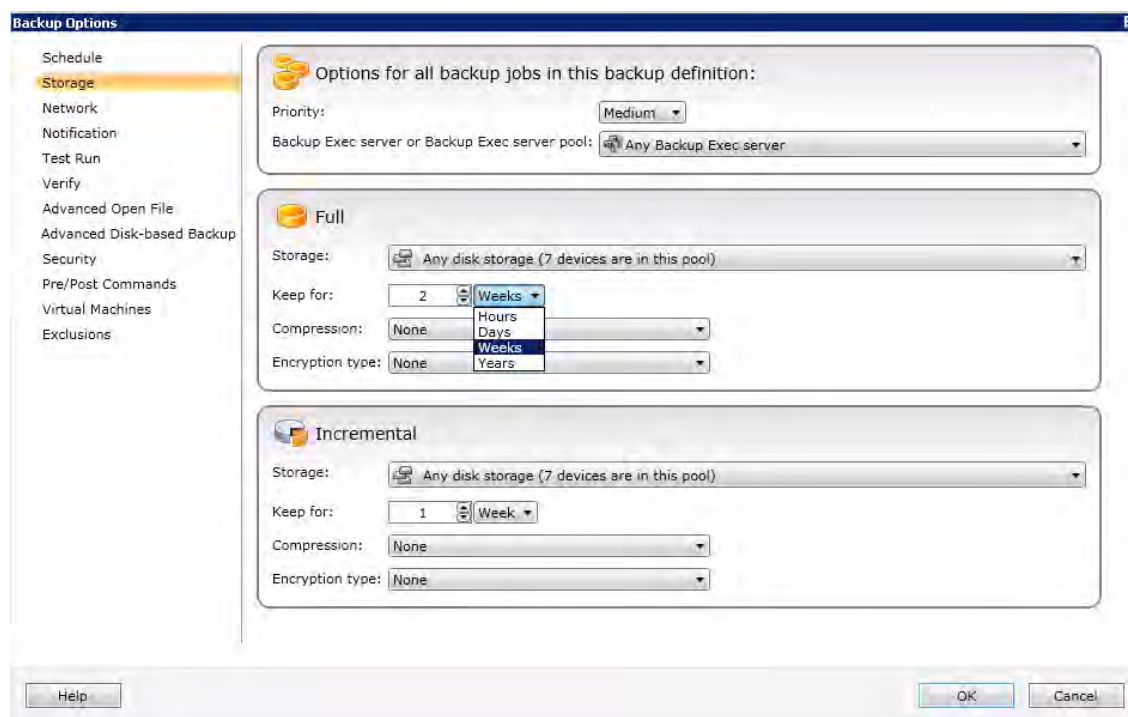
# Setting data expiration for Backup Exec 2014/2015/16

Backup images are deleted by Backup Exec after image expiration if more backups have run (At least two full backups of the same data set). Refer to the following article for more information:

[https://www.veritas.com/support/en\\_US/article.TECH187957](https://www.veritas.com/support/en_US/article.TECH187957)

For more information about image expiration, refer to the Backup Exec 2012 Administration Guide chapter, **“About Backup Job Settings.”** If you want to keep the backup set, refer to the topic, **“About Keeping Backup Sets.”**

You can change data expiration settings by editing the specific backup job, under Backups > About backup job settings > Storage > Keep for.



# Installing the Backup Exec agent on a Linux client (RALUS)

Refer to the following link on the Veritas web site for detailed information:

[https://www.veritas.com/support/en\\_US/article.TECH46461](https://www.veritas.com/support/en_US/article.TECH46461)