



XCubeSAN Series Application Note

VSS Application with QVSS Client and Symantec Backup Exec 2014



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Notices

This XCubeSAN series white paper is applicable to the following XCubeSAN models:

XCubeSAN Storage System 4U 19" Rack Mount Models

Model Name	Controller Type	Form Factor, Bay Count, and Rack Unit
XS5224D	Dual Controller	LFF 24-disk 4U Chassis
XS3224D	Dual Controller	LFF 24-disk 4U Chassis
XS3224S	Single Controller	LFF 24-disk 4U Chassis
XS1224D	Dual Controller	LFF 24-disk 4U Chassis
XS1224S	Single Controller	LFF 24-disk 4U Chassis

XCubeSAN Storage System 3U 19" Rack Mount Models

Model Name	Controller Type	Form Factor, Bay Count, and Rack Unit
XS5216D	Dual Controller	LFF 16-disk 3U Chassis
XS3216D	Dual Controller	LFF 16-disk 3U Chassis
XS3216S	Single Controller	LFF 16-disk 3U Chassis
XS1216D	Dual Controller	LFF 16-disk 3U Chassis
XS1216S	Single Controller	LFF 16-disk 3U Chassis

XCubeSAN Storage System 2U 19" Rack Mount Models

Model Name	Controller Type	Form Factor, Bay Count, and Rack Unit
XS5212D	Dual Controller	LFF 12-disk 2U Chassis
XS5212S	Single Controller	LFF 12-disk 2U Chassis
XS3212D	Dual Controller	LFF 12-disk 2U Chassis
XS3212S	Single Controller	LFF 12-disk 2U Chassis
XS1212D	Dual Controller	LFF 12-disk 2U Chassis
XS1212S	Single Controller	LFF 12-disk 2U Chassis
XS5226D	Dual Controller	SFF 26-disk 2U Chassis
XS5226S	Single Controller	SFF 26-disk 2U Chassis
XS3226D	Dual Controller	SFF 26-disk 2U Chassis
XS3226S	Single Controller	SFF 26-disk 2U Chassis
XS1226D	Dual Controller	SFF 26-disk 2U Chassis

XS1226S	Single Controller	SFF 26-disk 2U Chassis
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VSS Application

Executive Summary

This application note provides technical guidance for setting up VSS (Volume Shadow Copy Service) solution in Windows environment and making sure that the Symantec Backup Exec 2014 will be communicated with our snapshot mechanism in Windows server, and it leads XCubeSAN products being able to achieve real DR (Disaster Recovery) with snapshot consistency.

Audience

This document is applicable for QSAN customers and partners who are interested in purchasing Symantec Backup Exec 2014 as the backup solution of XCubeSAN series. It assumes the reader is familiar with QSAN products and has general IT experience, including knowledge as a system or network administrator. If there is any question, please refer to the user manuals of products, or contact QSAN support for further assistance.

Overview

This document introduces how to perform VSS (Volume Shadow copy Service) function on QSAN subsystem. The content in this document includes the QSAN VSS installation, how to use QSAN VSS client, and using Symantec Backup Exec to perform the VSS backup.

Environments

- Server / Host
Model: ASUS RS700
OS: Windows Server 2008 Enterprise edition
- Storage
Model: XCubeSAN X5224S
Memory: 8GB
Firmware: V1.4.1

- Software on Server / Host
QSAN_Storage_Service_Setup-2.0.7-x64-en.msi
Symantec Backup Exec 2014

Configurations

Install VSS Software

1. Run "QSAN_Storage_Service_Setup-2.0.7-x64-en.msi" file and start the setup.
2. Click the **Next** button.



Figure 1 Install VSS Software Step 1

3. Check the **License Agreement**, and then click the **Next** button.

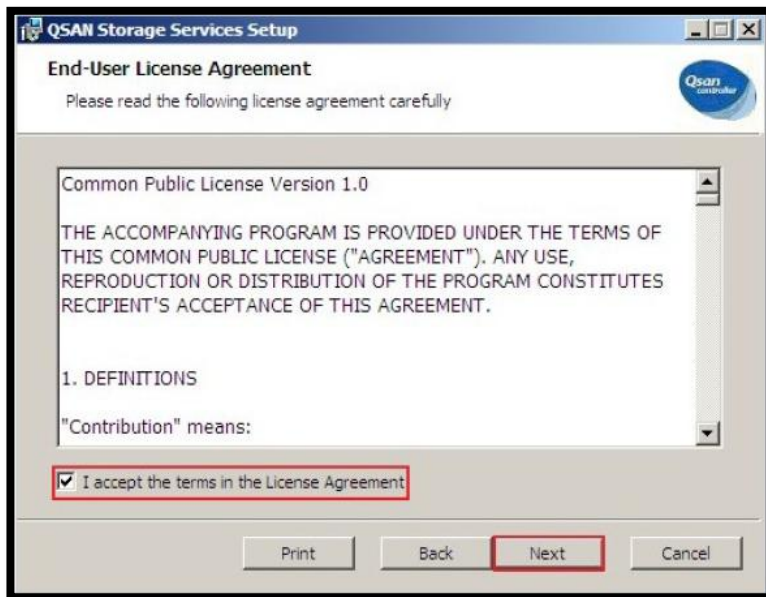


Figure 2 Install VSS Software Step 2

4. Click the **Browse...** button to change the installation directory. Default is "C:\Program Files\QSAN\". Then click the **Next** button.

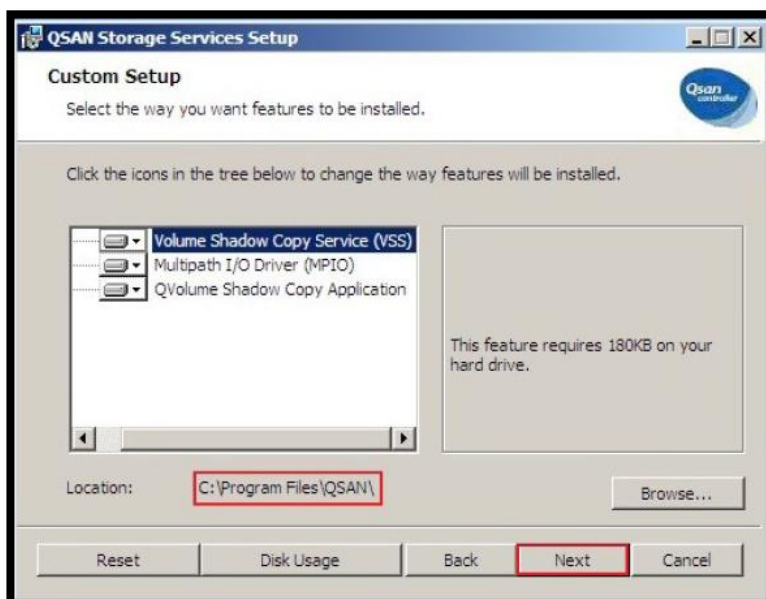


Figure 3 Install VSS Software Step 3

5. When completing all settings, click the **Install** button.



Figure 4 Install VSS Software Step 4

6. There is a Windows Security warning to make sure that this device software is trusted, and then click the **Install** button.

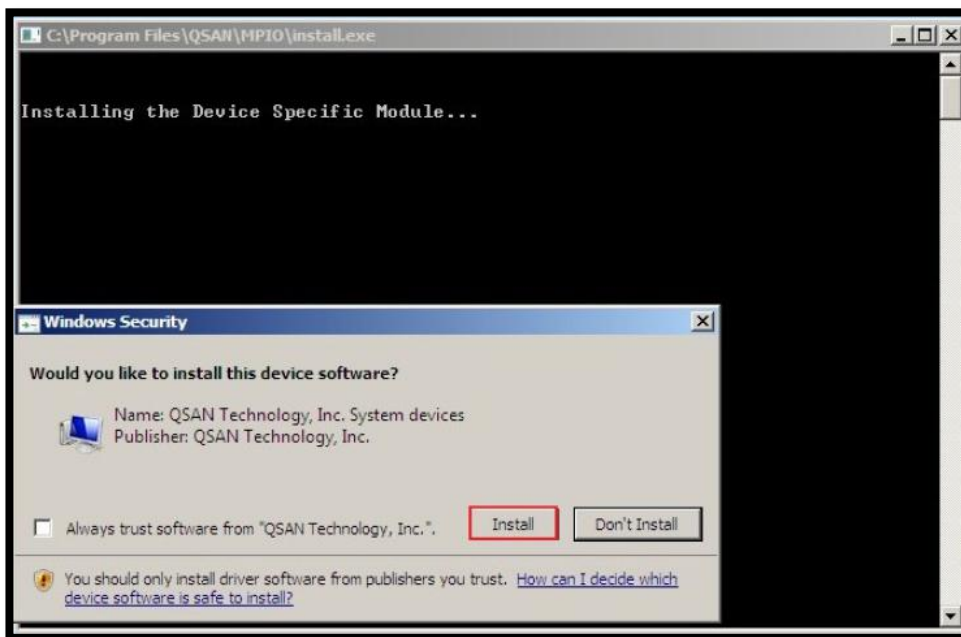


Figure 5 Install VSS Software Step 5

7. Click the **Finish** button to complete.



Figure 6 Install VSS Software Step 6

8. Please reboot the system to ensure the device software take effect.
9. After reboot, use the following Windows CLI command to check whether the QSAN VSS hardware provider is installed successfully.

```
C:> vssadmin list providers
```

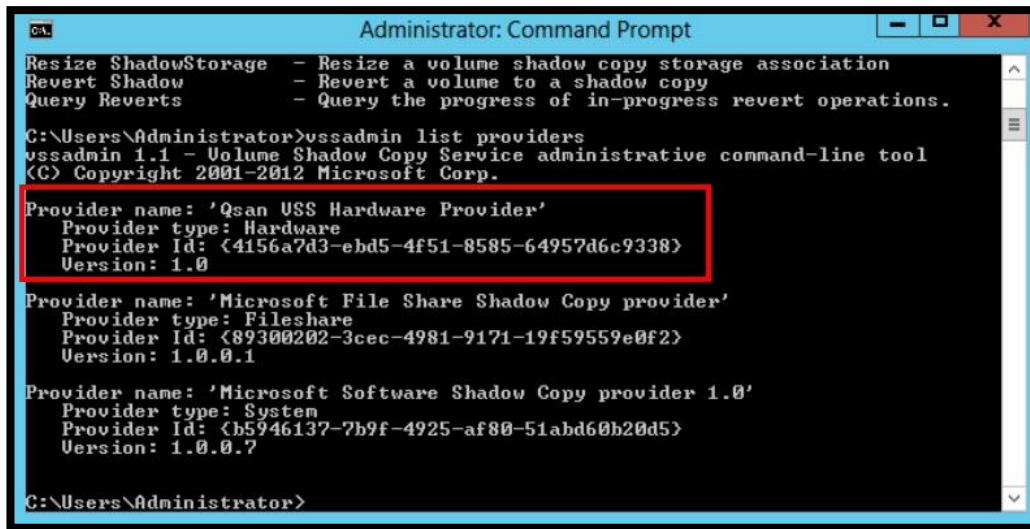


Figure 7 Check the VSS status

Example of Using QVSSClient

1. Format the disk and assign a drive letter, for example "S:\". This volume is a virtual disk which comes from XS5224S.
2. Click the **QVSSClient** icon to run the application.



Figure 8 Run QVSSClient

3. Click the **Create** button. It will take a snapshot via VSS.

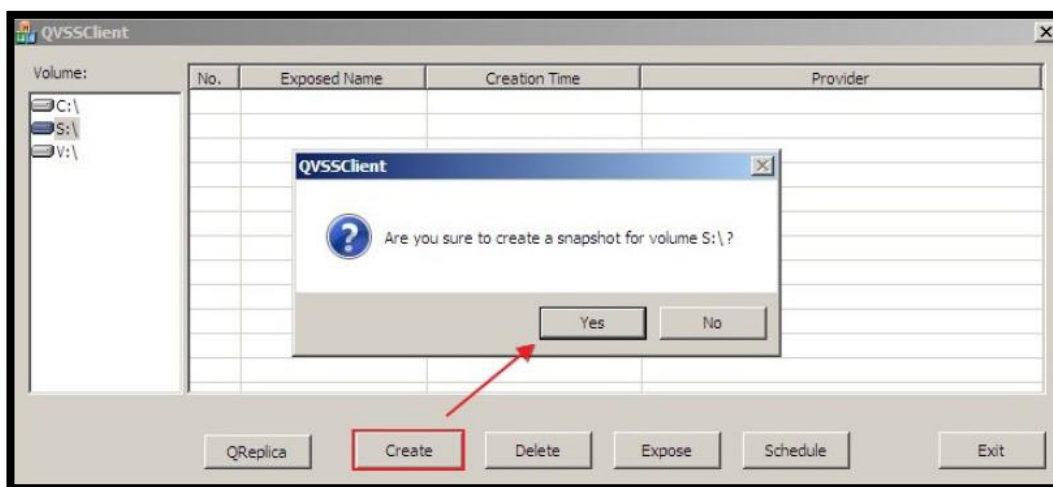


Figure 9 Create a Snapshot

4. The volume icon will be displayed in yellow while the QSAN VSS hardware provider is running.

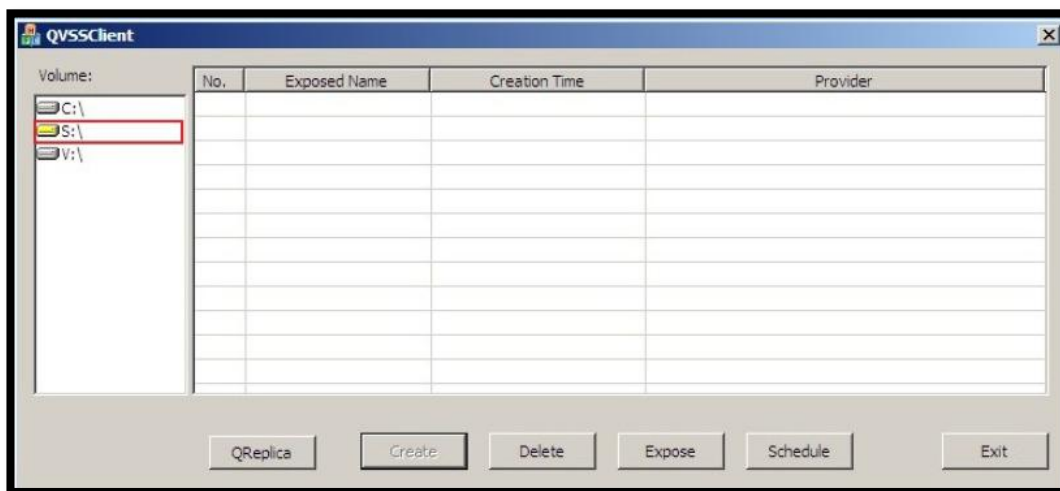


Figure 10 VSS Hardware Provider is Running

- Observe the event log on the XS5224S, there is an associated snapshot via the VSS.

Information	Tue, Aug 13, 2019 18:48:45	[CTR1] The LUN 2 is mapped to the volume ".
Information	Tue, Aug 13, 2019 18:48:45	[CTR1] The volume " has been created.
Information	Tue, Aug 13, 2019 18:48:45	[CTR1] A snapshot on the volume 'arthur-VD1' has been taken.

Figure 11 Snapshot Event Log

- Select the No. 1 column and click the **Expose** button, then select a folder. The snapshot will expose to a directory as a disk image format.

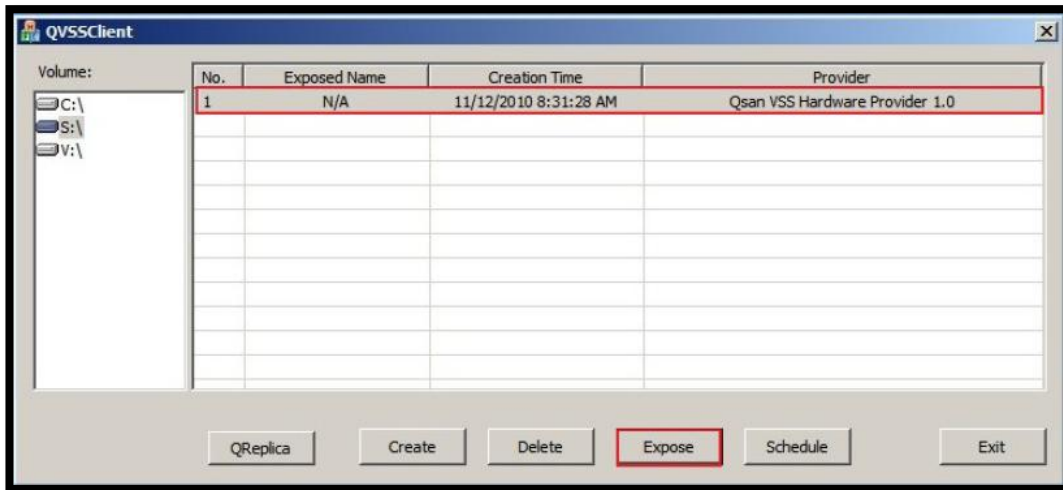


Figure 12 Expose the Snapshot

7. Click the **Schedule** button to enable taking snapshots by schedule.



Figure 13 Schedule the Snapshot

8. Click the **Delete** button to delete the snapshot.

Example of Using Symantec Backup Exec 2014

Part 1: Configure storage devices

1. Create volumes in drives letters "E:" and "F:" for backup.

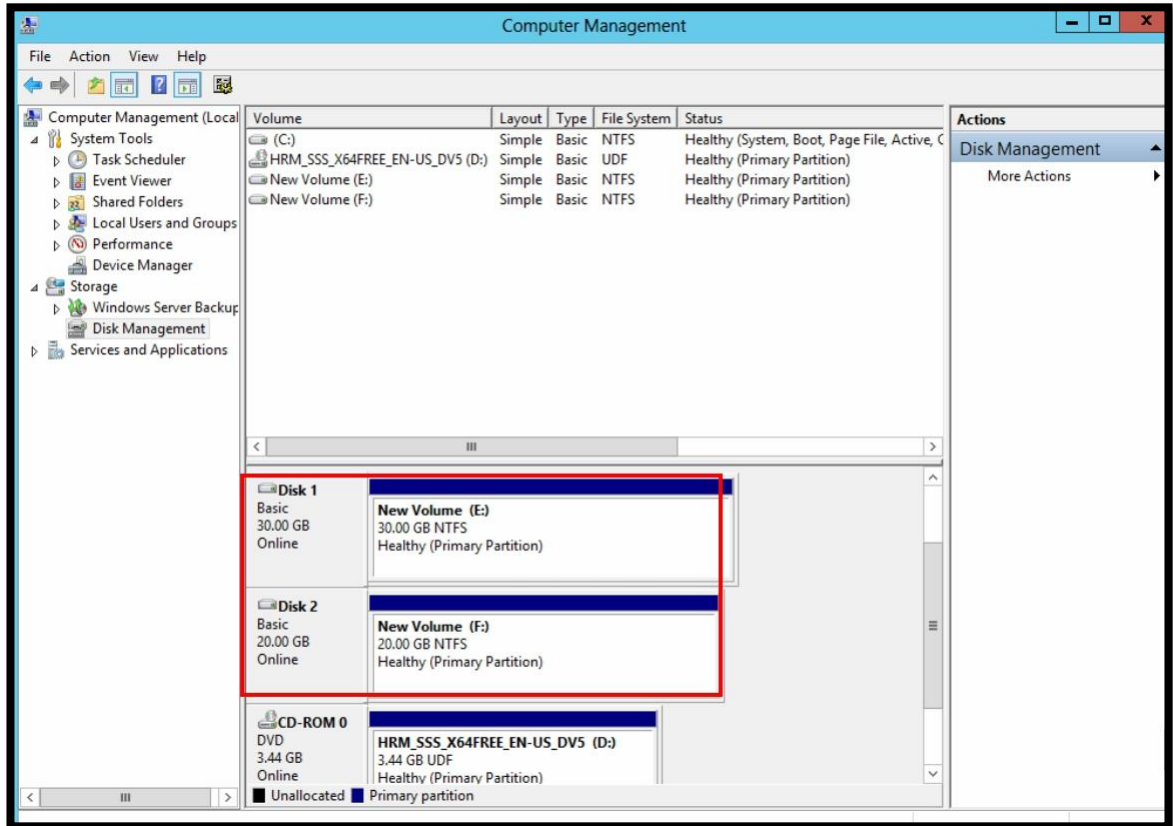


Figure 14 Create Volumes

2. First, click the **Storage** icon in Symantec Backup Exec 2014.

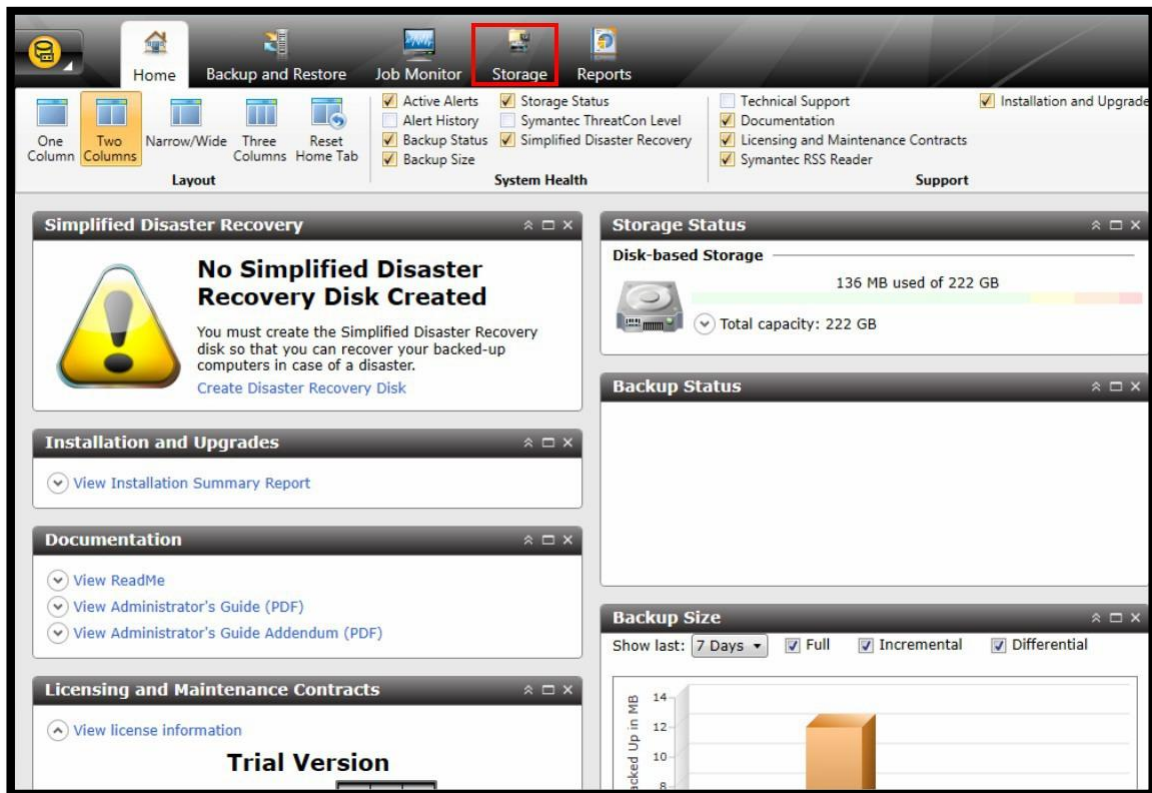


Figure 15 Storage in Symantec Backup Exec 2014

3. Select the **Configure Storage** icon in **Storage** page.

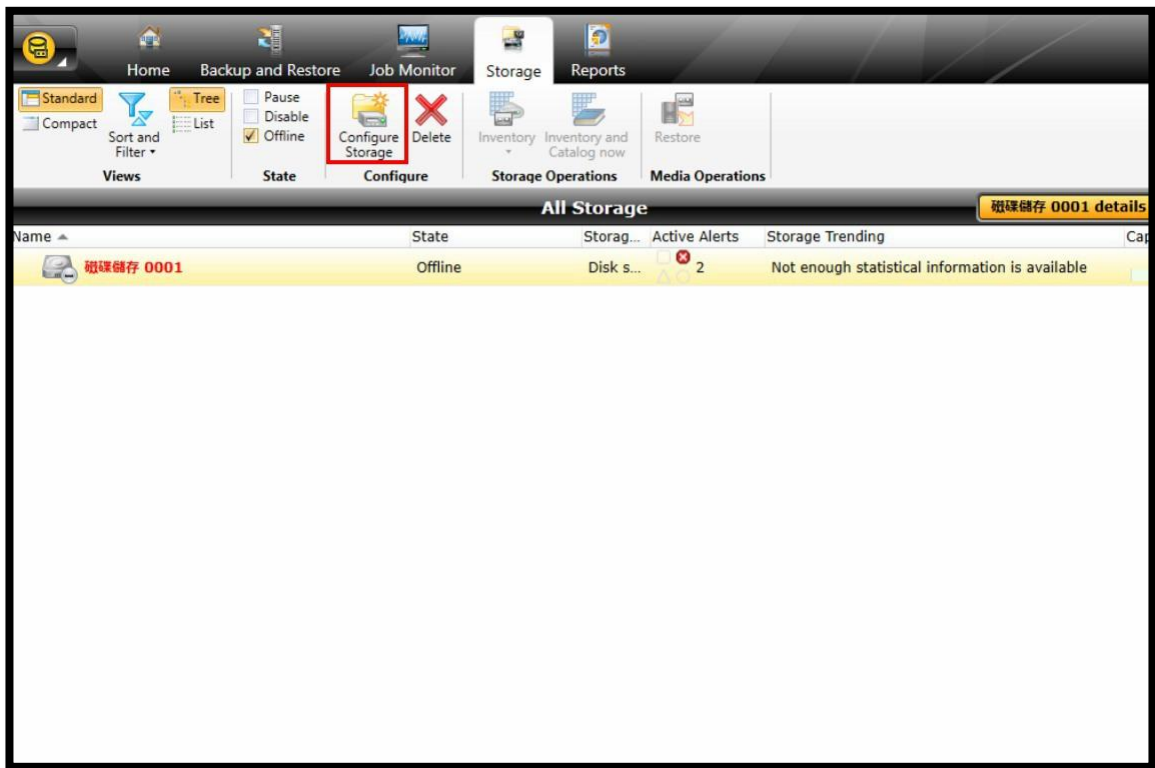


Figure 16 Configure Storage in Storage

4. Select the **Disk-based storage** item, and the click the **Next** button.

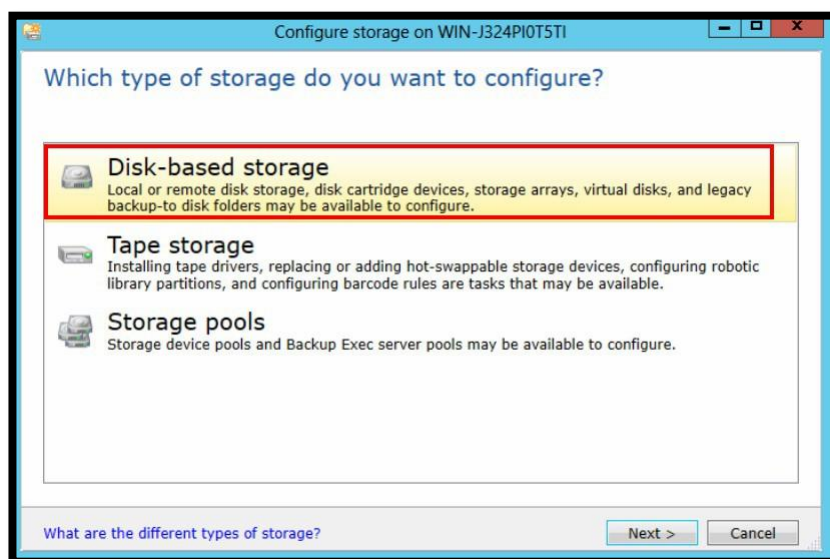


Figure 17 Select the Disk-based storage Item

5. Select the **Disk Storage** item, and then click the **Next** button.

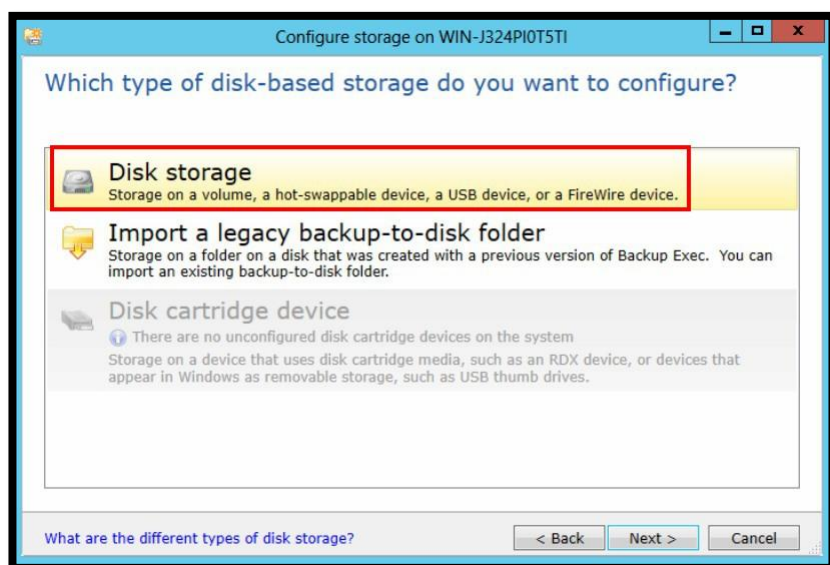


Figure 18 Select the Disk storage Item

6. Enter a name, and then click the **Next** button.

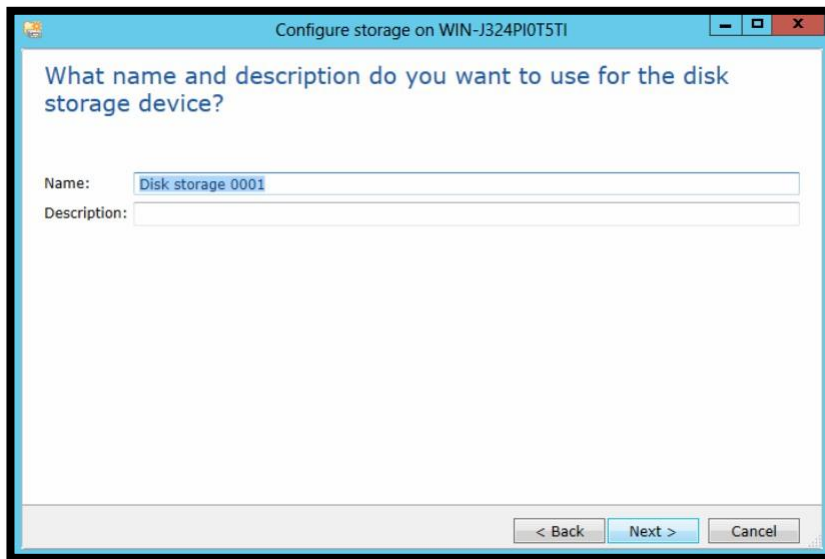


Figure 19 Enter a Name

7. Select the storage device, let's take "F:" for testing.

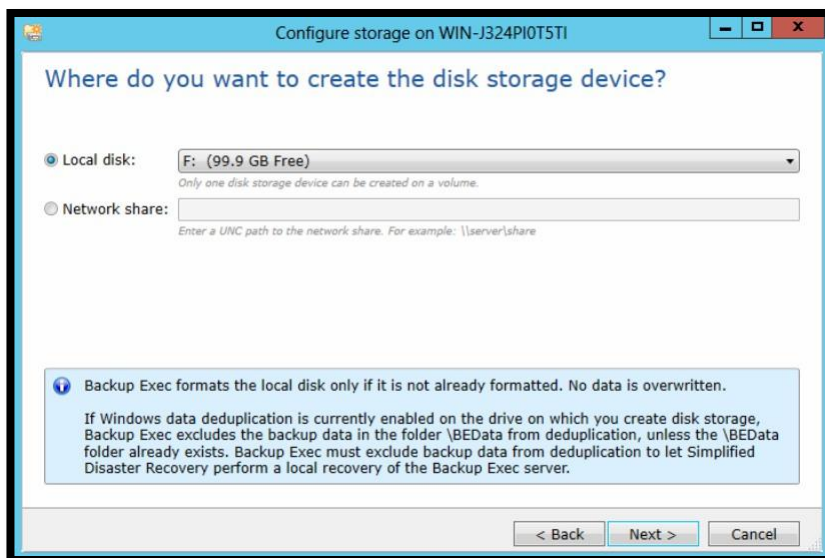


Figure 20 Select a Storage Device

8. Set the Concurrent write operations to 2 for write process.



Figure 21 Set it to 2

9. Check the storage configuration summary.

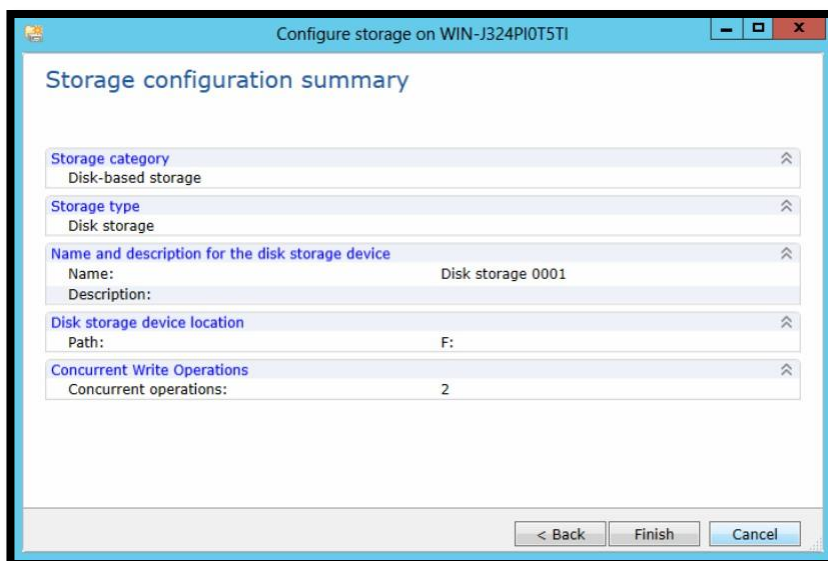


Figure 22 Storage Configuration Summary

Part 2: Perform the Symantec backup with VSS snapshot

1. Click the **Backup** icon in the **Backup and Restore** page, and then select the **Back Up to Disk** item.

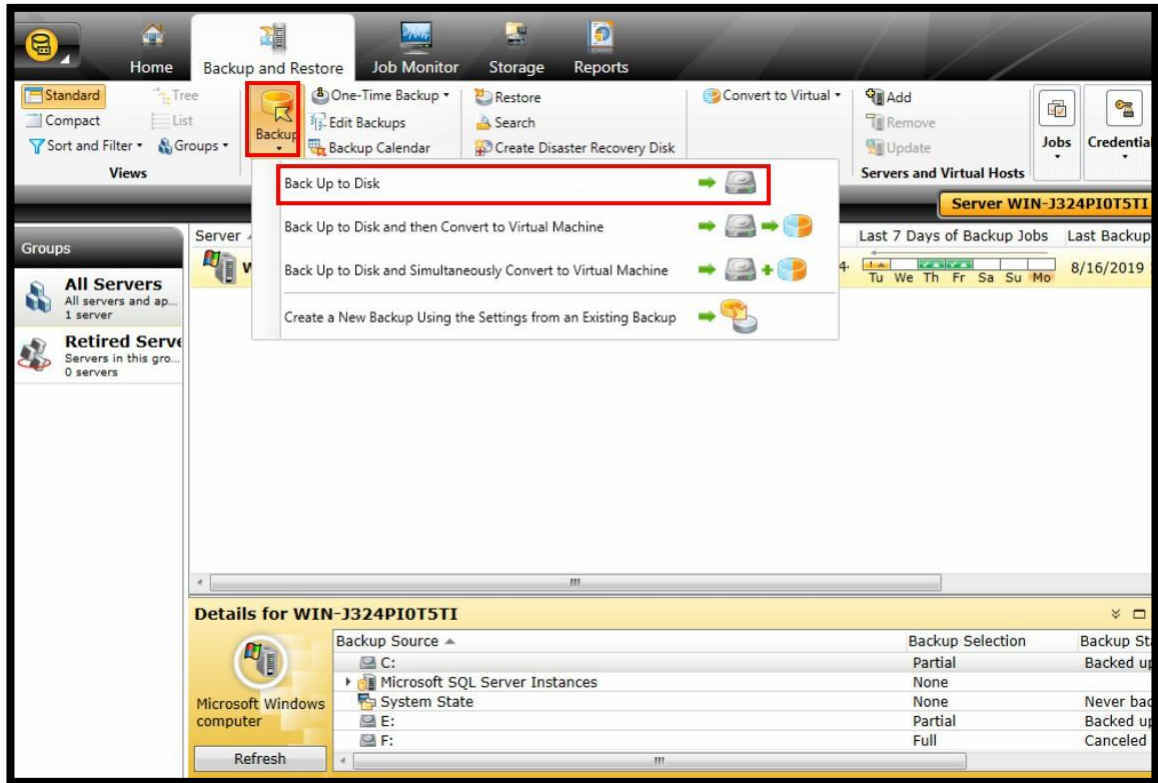


Figure 23 Backup in the Backup and Restore page

2. Select the **Edit** button to choose the files you want to backup.

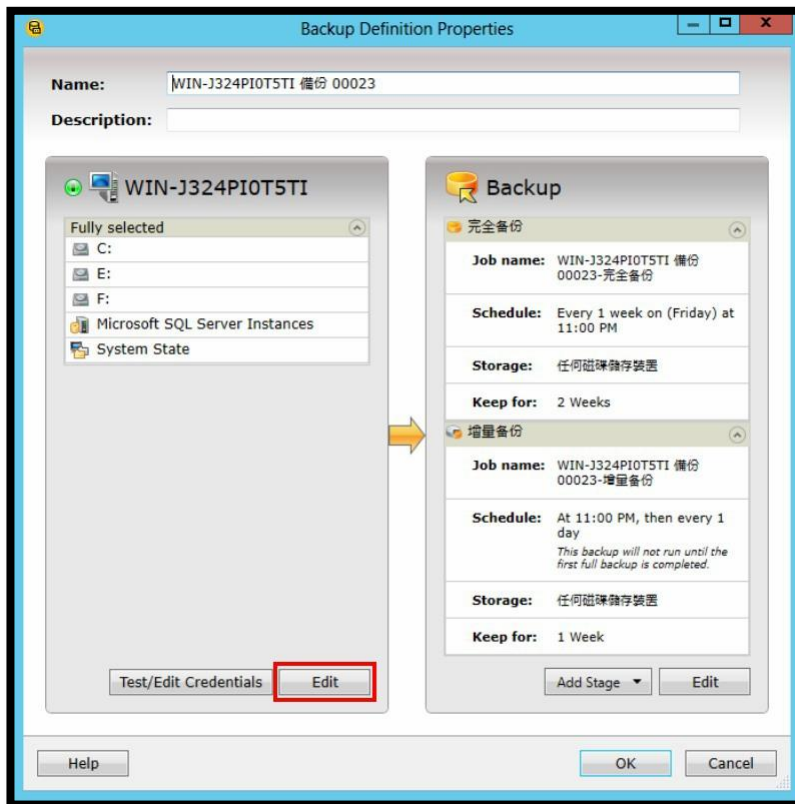


Figure 24 Select Files to Backup

3. Select the drive letter "E:" for backup and then click the **OK** button.

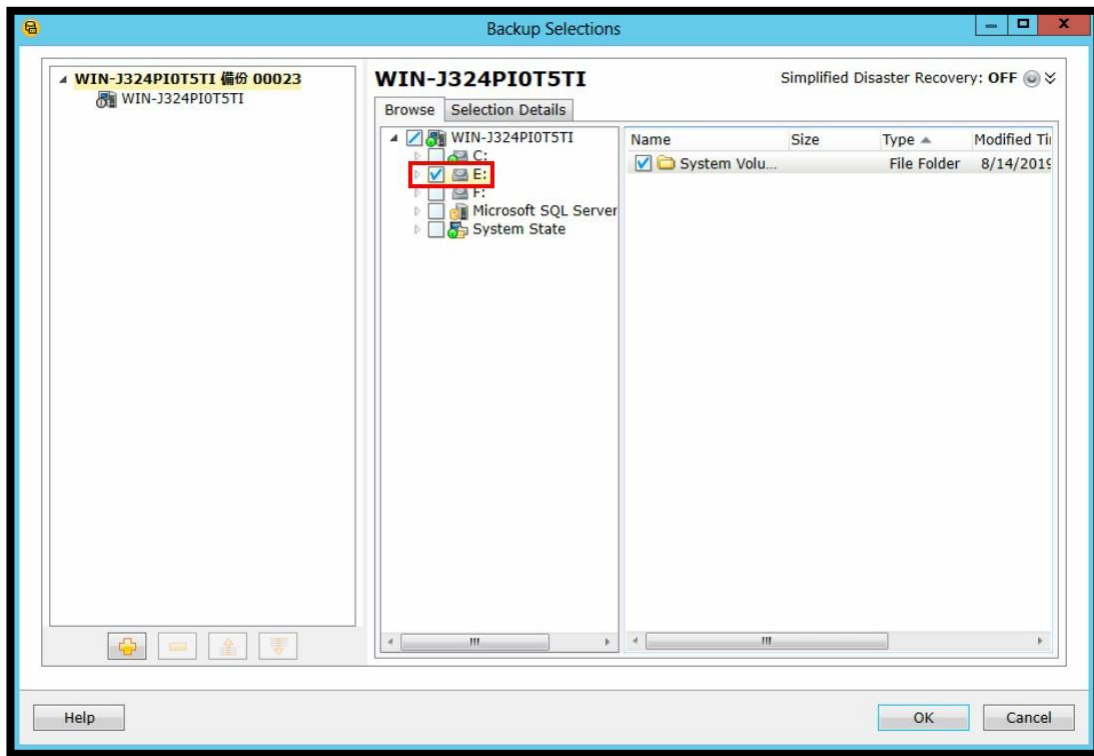


Figure 25 Select the Target

- Click the **Edit** button at the right side to modify the backup setting.

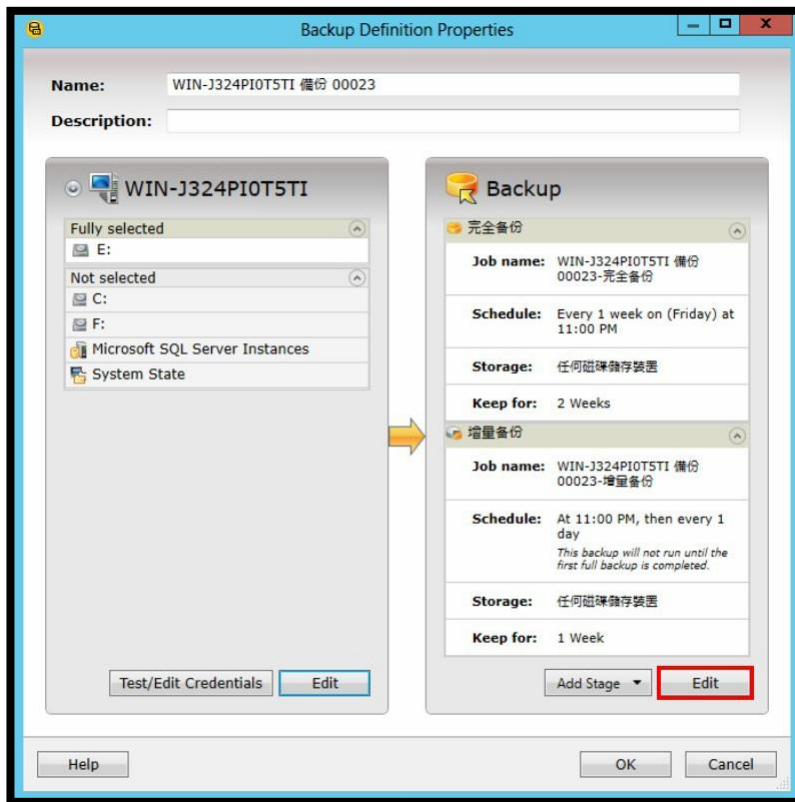


Figure 26 Modify the Backup Setting

5. In the **Advanced Open File** item, select the **Hardware – Use technology provided by hardware manufacturer** item. And then click the **OK** button.

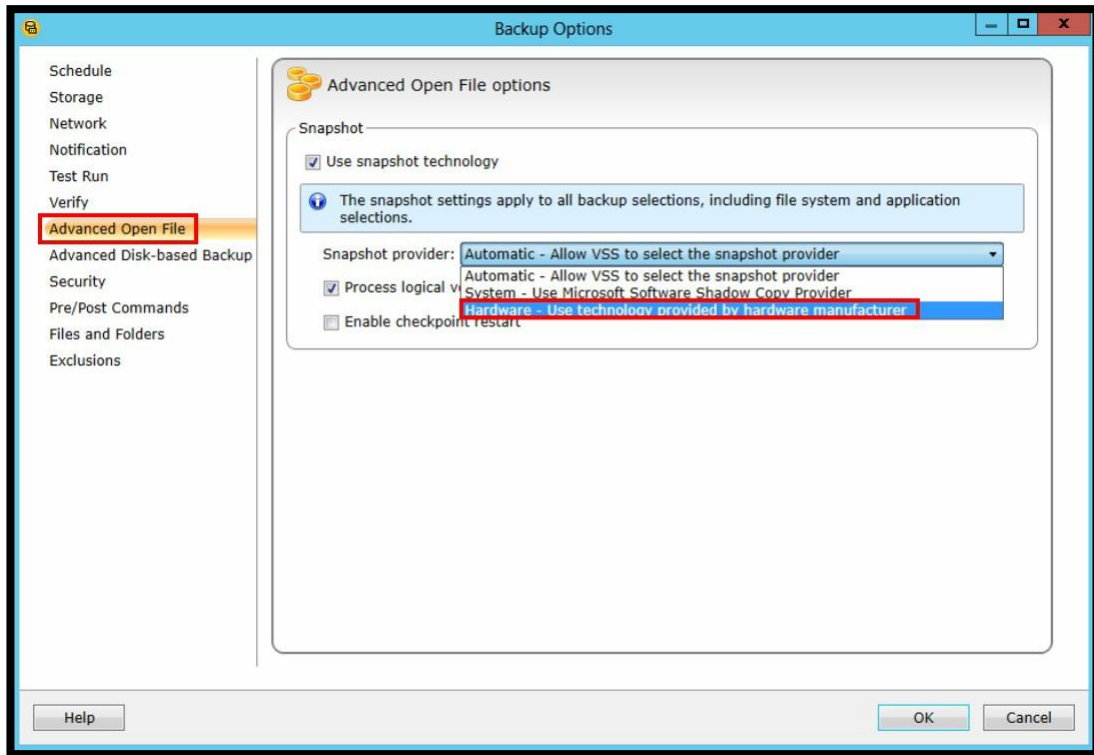


Figure 27 Settings in Advanced Open File

- Click the **OK** button to complete the backup configuration.

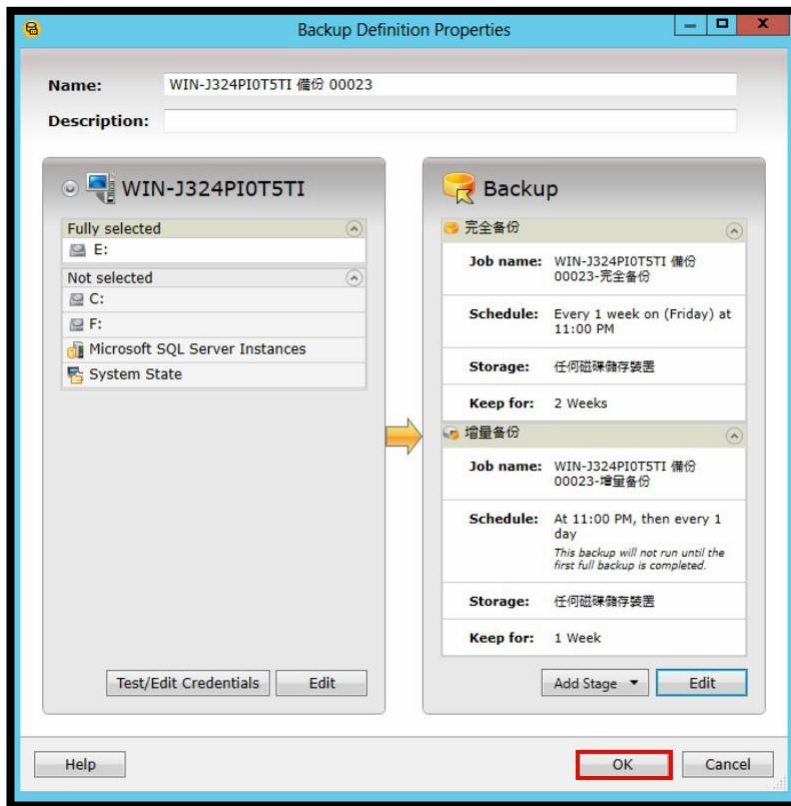


Figure 28 Finish Settings

7. Select the **Run Next Backup Now** submenu to start running the backup job.

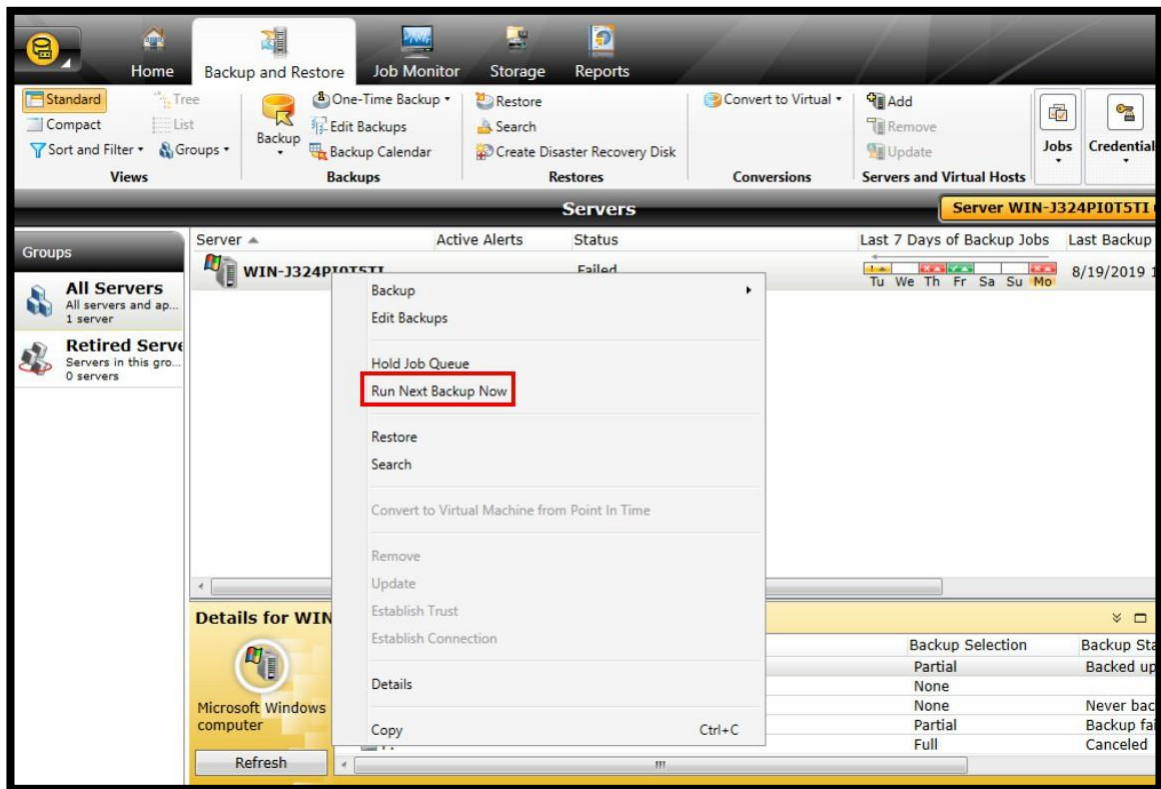


Figure 29 Start Running the Backup Job

8. You can observe the status of the backup job, it's **Active: Snapshot Processing**.

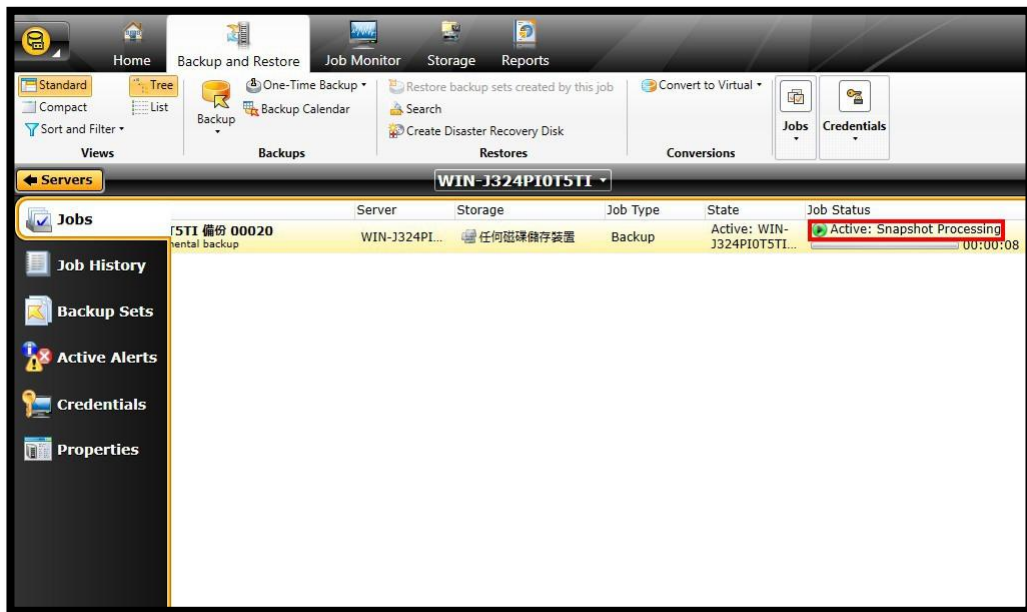


Figure 30 The Status of the Backup Job

9. You can also view the following snapshot event logs displayed in XCubeSAN.

Information	Sat, Jan 03, 2015 05:39:14	[CTR1] The volume " has been deleted.
Information	Sat, Jan 03, 2015 05:39:14	[CTR1] The snapshot volume " has been deleted.
Information	Sat, Jan 03, 2015 05:39:02	[CTR1] The LUN 2 is mapped to the volume ".
Information	Sat, Jan 03, 2015 05:39:02	[CTR1] The volume " has been created.
Information	Sat, Jan 03, 2015 05:39:02	[CTR1] A snapshot on the volume 'R0-1' has been taken.

Figure 31 Snapshot Event Logs

Apply To

- XCubeSAN XS5200 / XS3200 / XS1200 FW version: 1.3.0
- QSAN_Storage_Service_Setup-2.0.7-x64-en.msi

References

VSS (Volume Shadow Copy Service)

- https://en.wikipedia.org/wiki/Shadow_Copy
- <https://docs.microsoft.com/en-us/windows-server/storage/file-server/volume-shadow-copy-service>

Appendix

Related Documents

There are related documents which can be downloaded from the website.

- [All XCubeSAN Documents](#)
- [XCubeSAN QIG \(Quick Installation Guide\)](#)
- [XCubeSAN Hardware Manual](#)
- [XCubeSAN Configuration Worksheet](#)
- [XCubeSAN SANOS 4.0 Software Manual](#)
- [Compatibility Matrix](#)
- [White Papers](#)
- [Application Notes](#)

Technical Support

Do you have any questions or need help trouble-shooting a problem? Please contact QSAN Support, we will reply to you as soon as possible.

- Via the Web: https://www.qsan.com/technical_support
- Via Telephone: +886-2-77206355
(Service hours: 09:30 - 18:00, Monday - Friday, UTC+8)
- Via Skype Chat, Skype ID: qsan.support
(Service hours: 09:30 - 02:00, Monday - Friday, UTC+8, Summer time: 09:30 - 01:00)
- Via Email: support@qsan.com