CSG2132 Workshop 8

In this workshop, you will:

1. Configure Windows Server as an iSCSI target server
2. Create a virtual disk from a storage pool and share it with the network

Before you commence this workshop make sure you have logged into your assigned CSG2132_ED_TR3_2023 virtual machine via RDP (see Workshop 6) and have Hyper-V started.

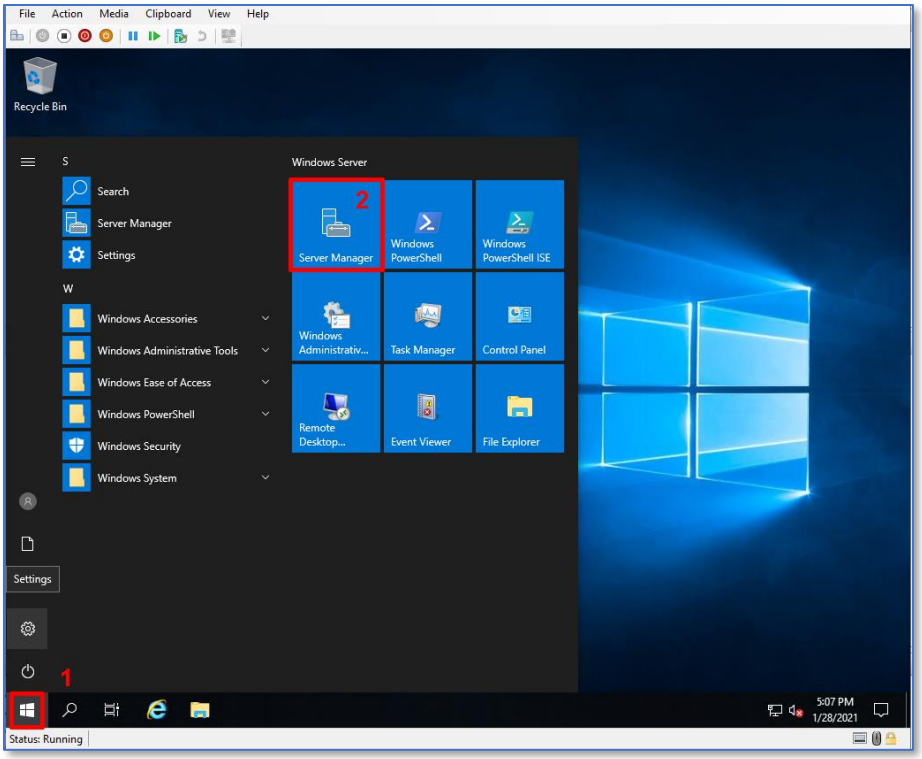
IMPORTANT:

- As you implement the instructions that follow, be aware that specific device names and paths may vary in your particular VM instance; be sure to adjust as necessary
- If you encounter any technical issues, feel free to consult Microsoft's official documentation to find solutions
- To implement the instructions that follow, it is essential that both of the Windows Server 2022 instances you have created have full network connectivity, as discussed in Workshop 6
- As you complete the instructions that follow, take a screenshot of every step of the setup and configuration process you complete using the Windows Snipping Tool, which you can find on the task bar of your Azure Windows Server VM. You will require all of the screenshots to complete Assignment 3.

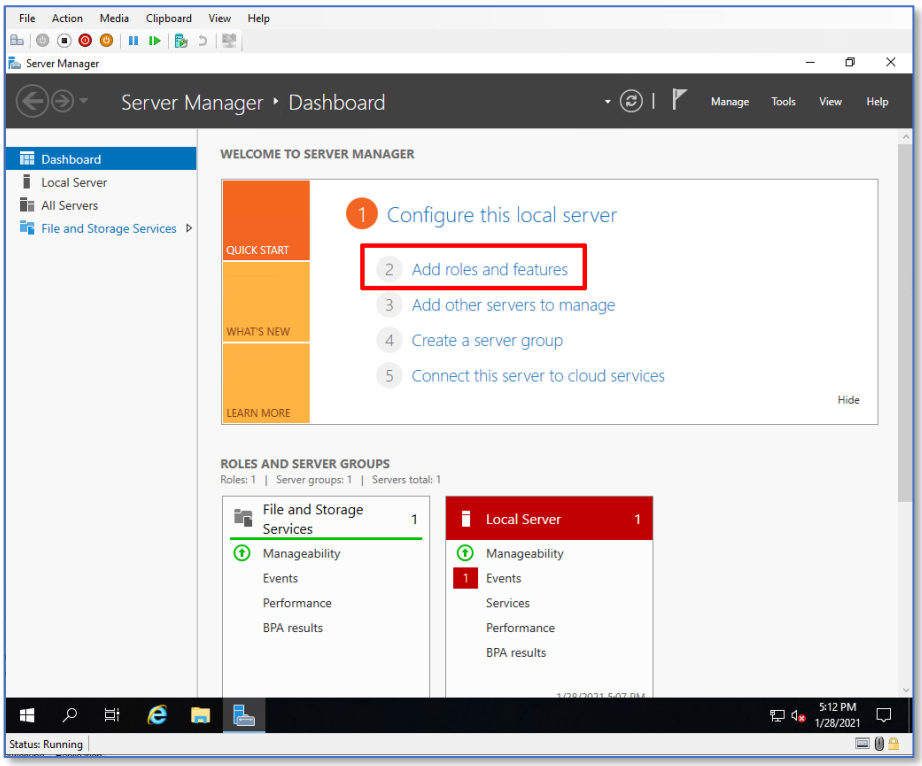
Configure iscsi_trgt to act as an iSCSI Target Server

You will now configure the the **iscsi_trgt** VM to act as an iSCSI target server that will make the storage volumes it hosts accessible to other VMs on the network at a later stage.

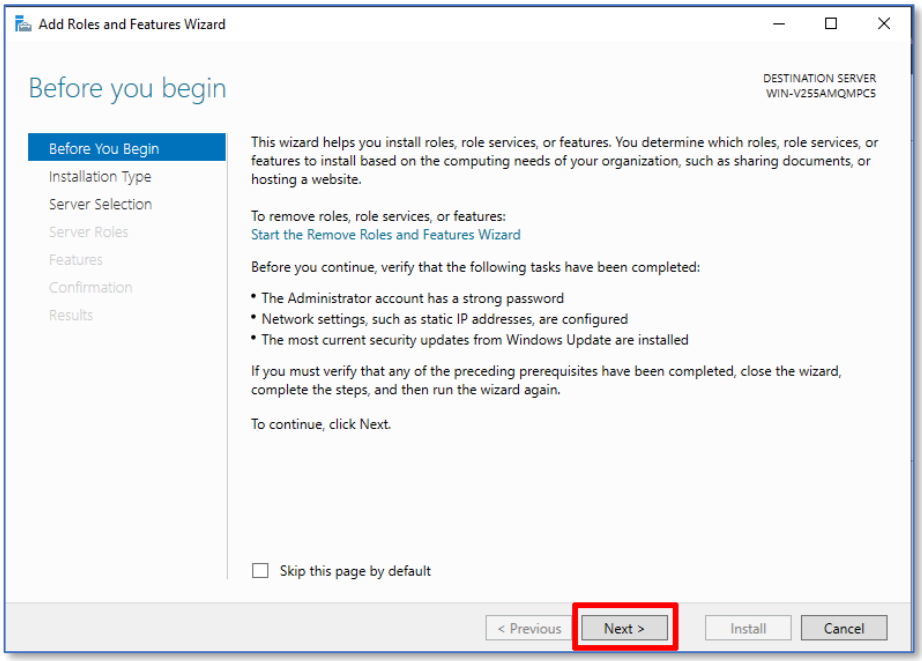
1. If the *Server Manager* is not already open, click the *Windows Start button* and then click **Server Manager** from the menu that appears



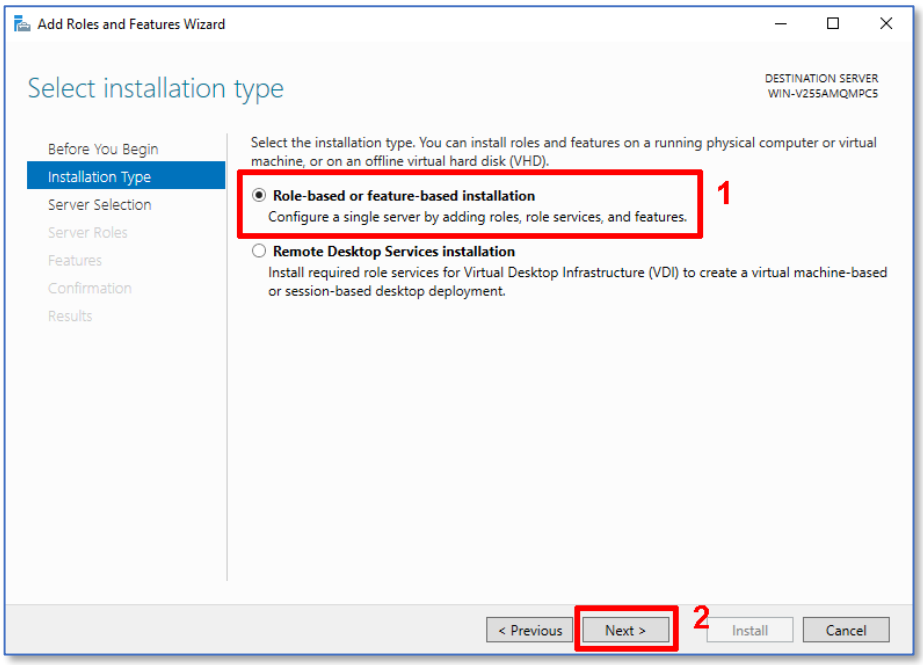
2. In the *Windows Server Manager*, click on **Add roles and features**



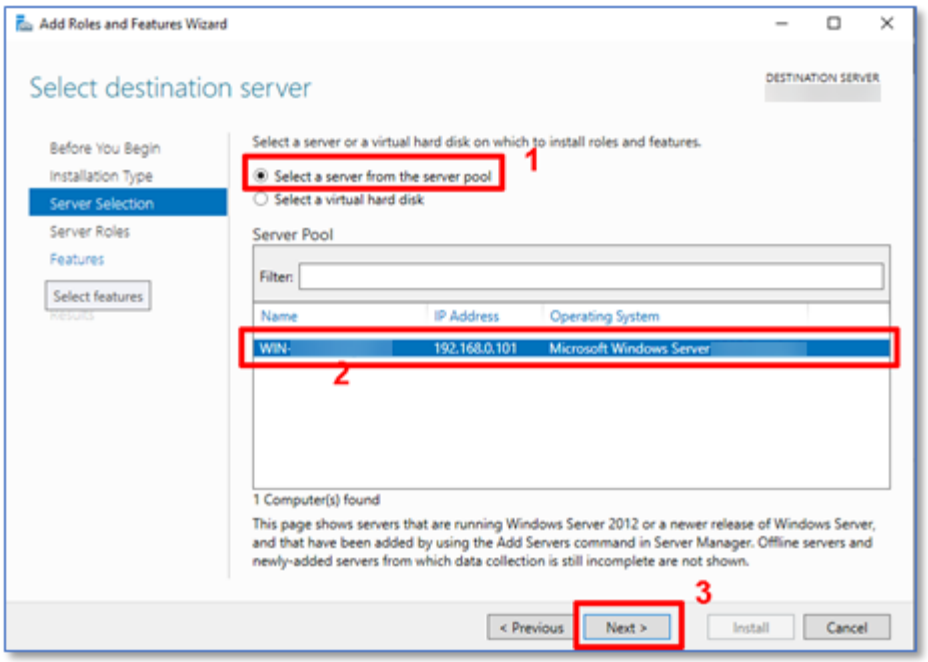
3. Click **Next >**



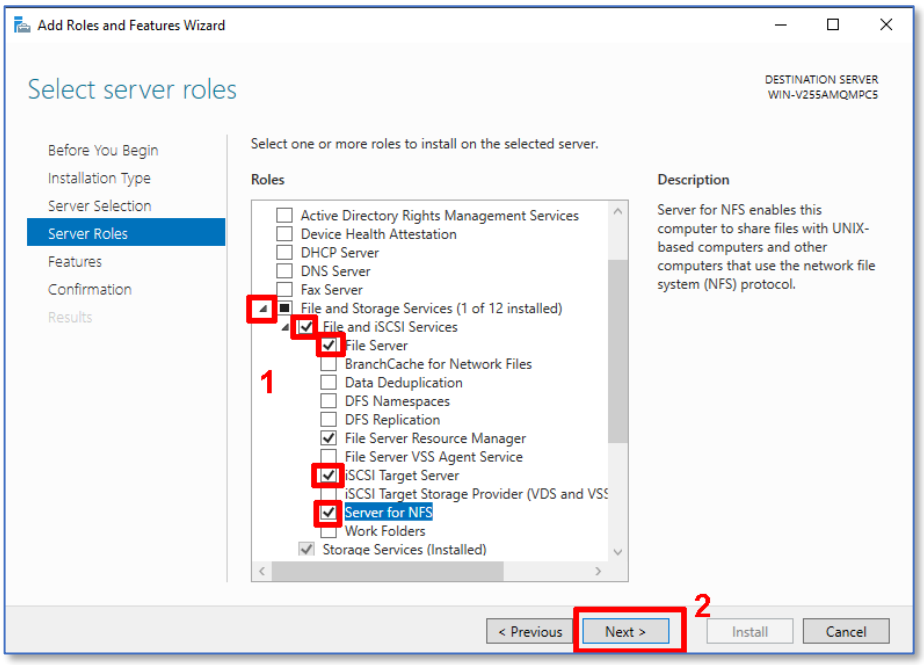
4. Ensure **Role-based or feature-based installation** is selected and then click **Next >**



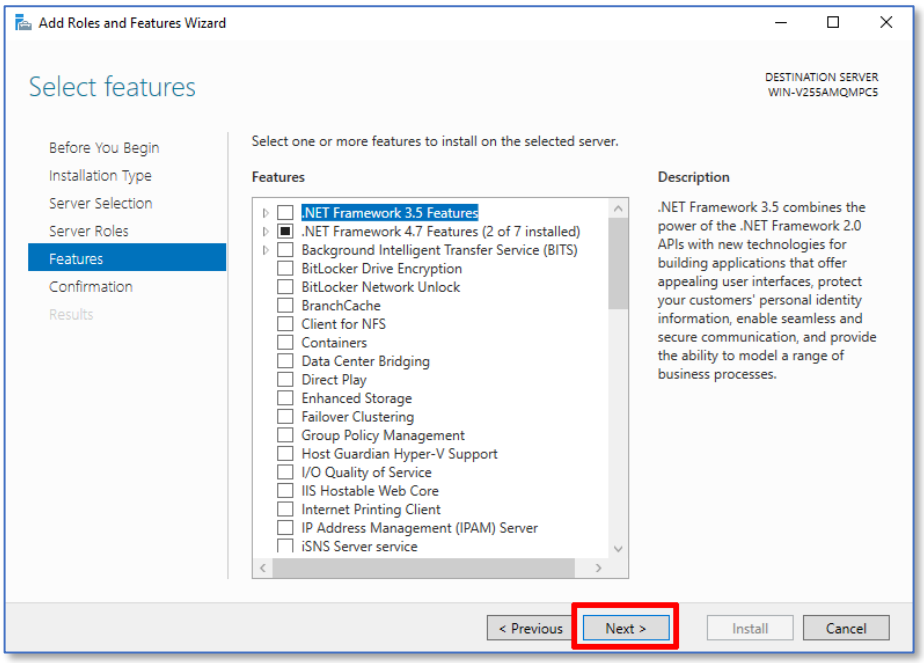
5. Ensure **Select a server from the server pool** is selected; select the desired server (there should be only one in the list) and then click **Next >**



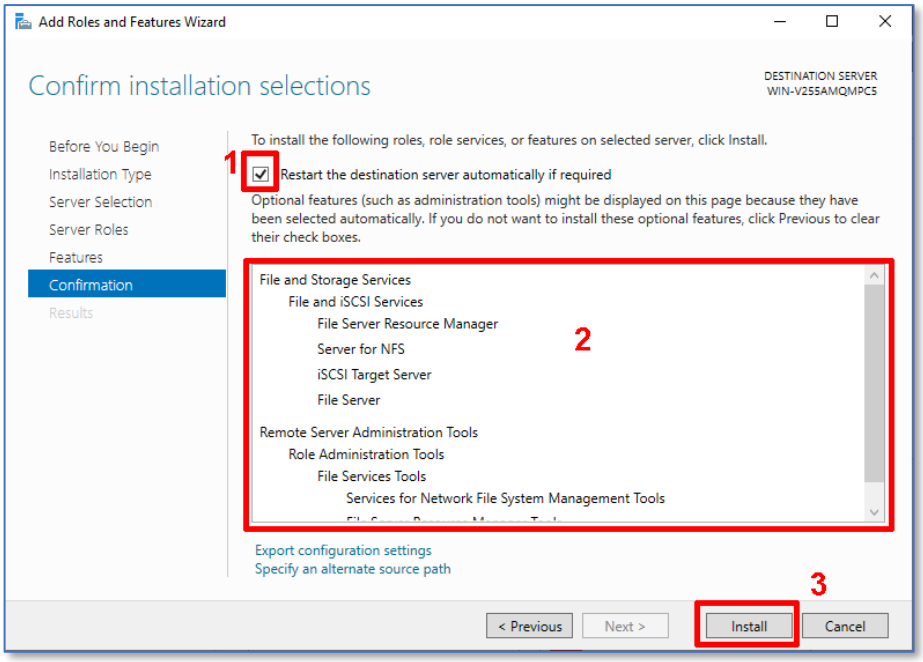
6. Check the option boxes as shown and then click **Next >**



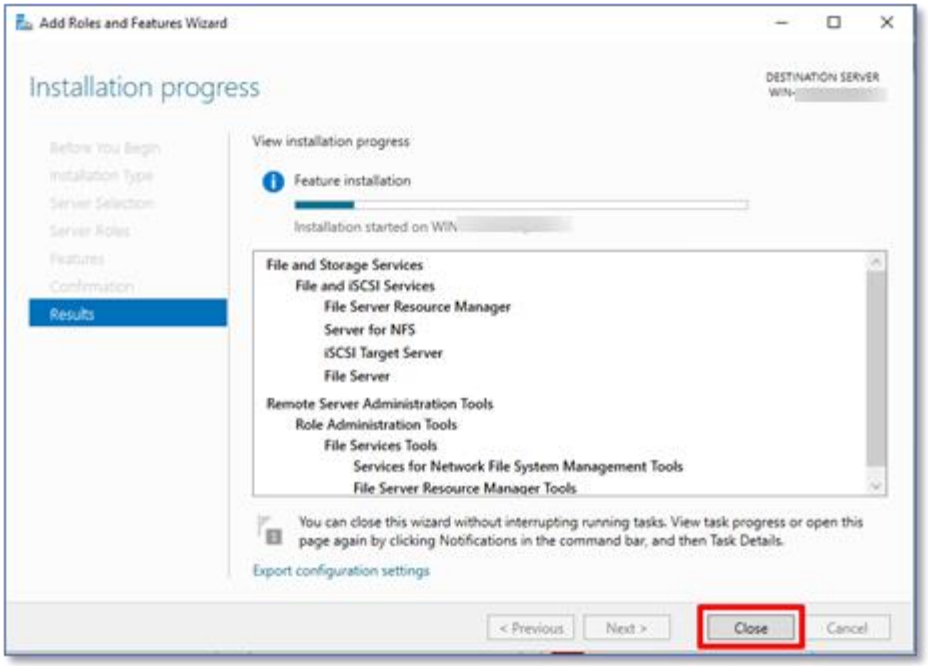
7. Click **Next >**



8. Ensure **Restart the destination server automatically if required** is checked; peruse the selections summary to make sure it's correct and then click **Install**

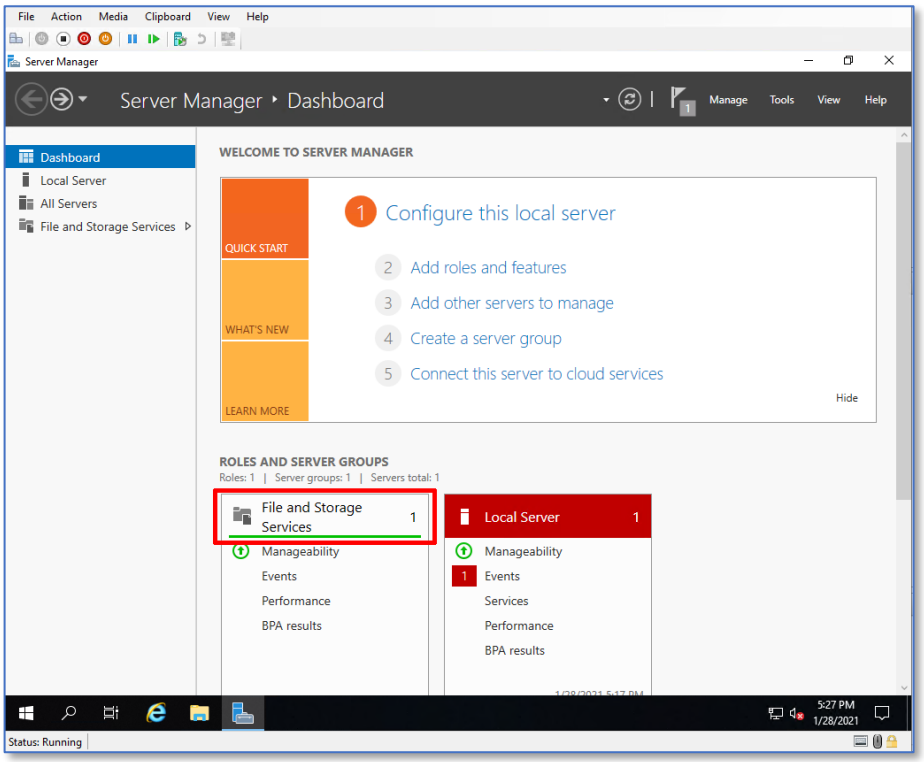


9. Once the installation process completes, click **Close**

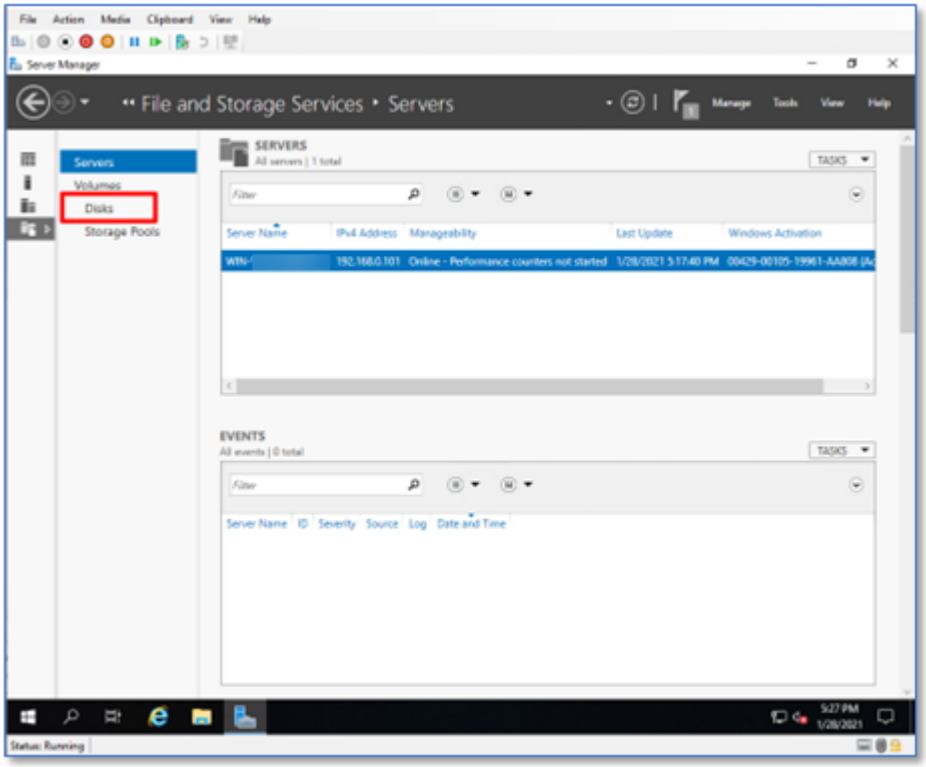


Note: Windows Server may restart at this stage which will take and minute or two. If so, wait until the restart is complete and then return to the Windows Server Manager.

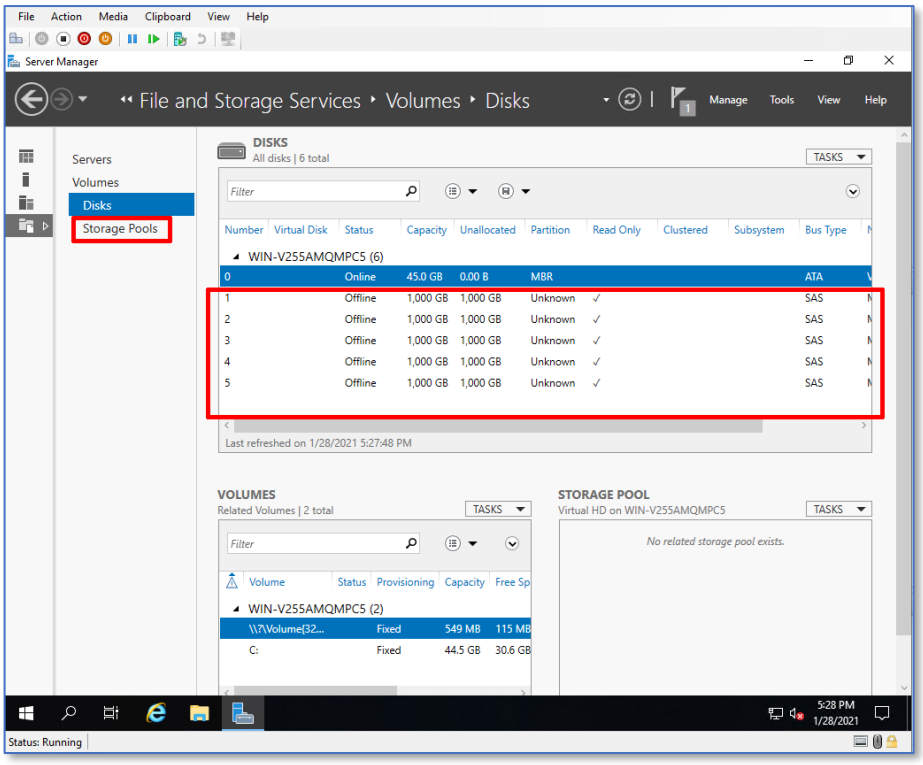
10. Click on **File and Storage Services**



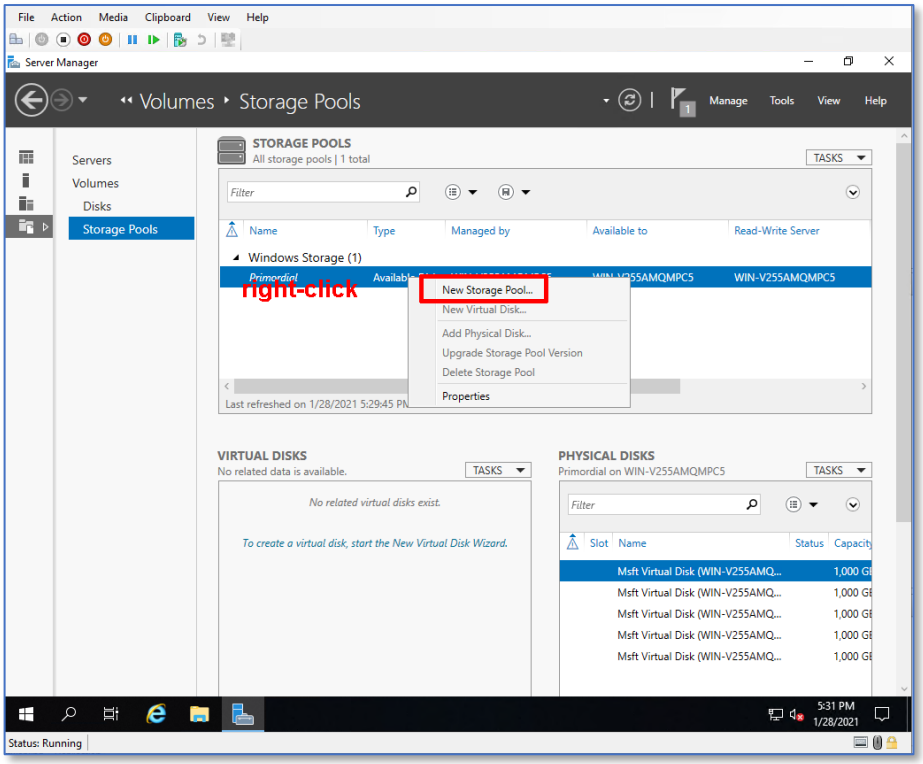
11. Click **Disks**



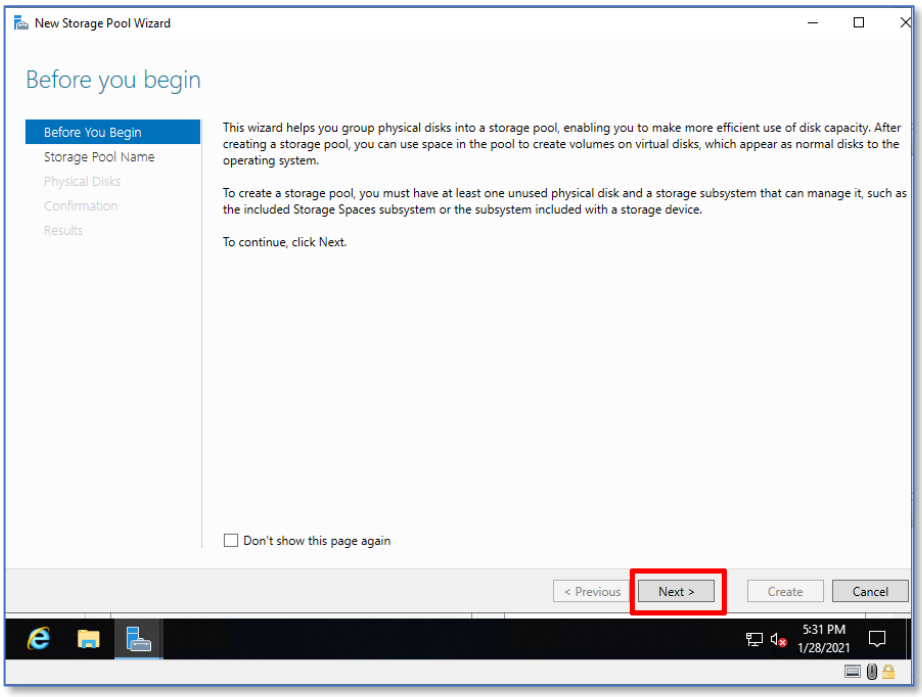
12. Ensure the five (5) virtual SCSI disks you created earlier are present in the disks panel and then click **Storage Pools**



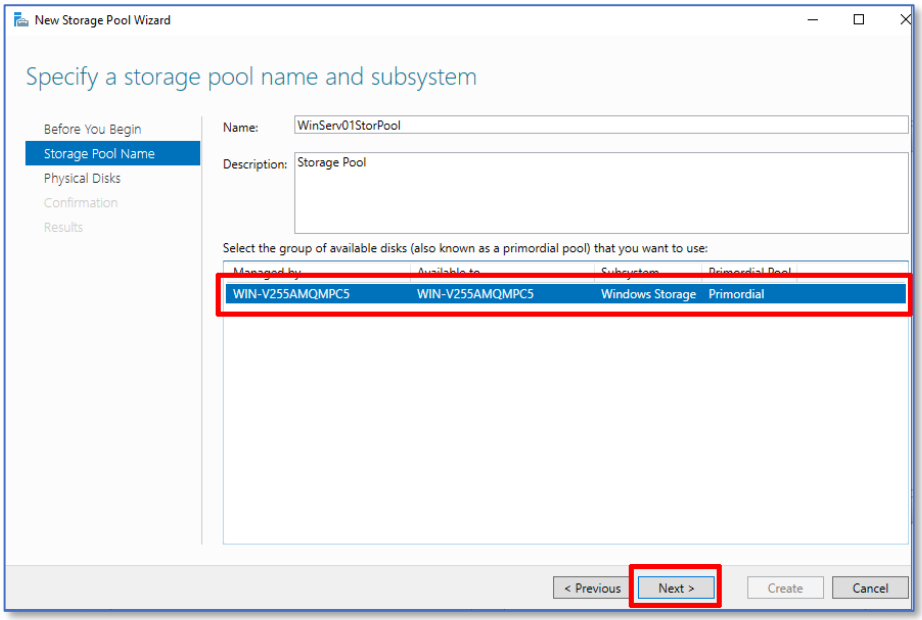
13. **Right-click** on the only Windows Storage option available in the list and select **New Storage Pool**



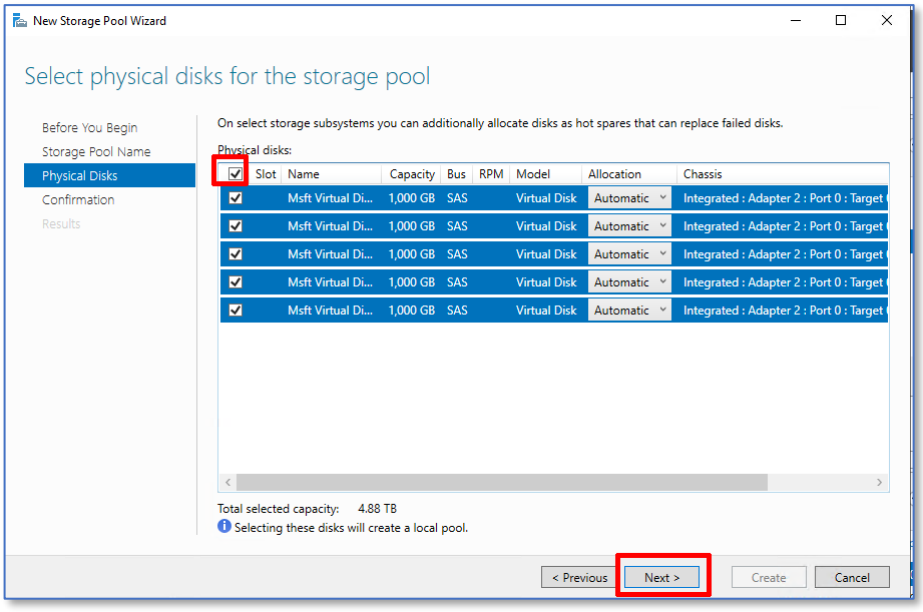
14. Click **Next >**



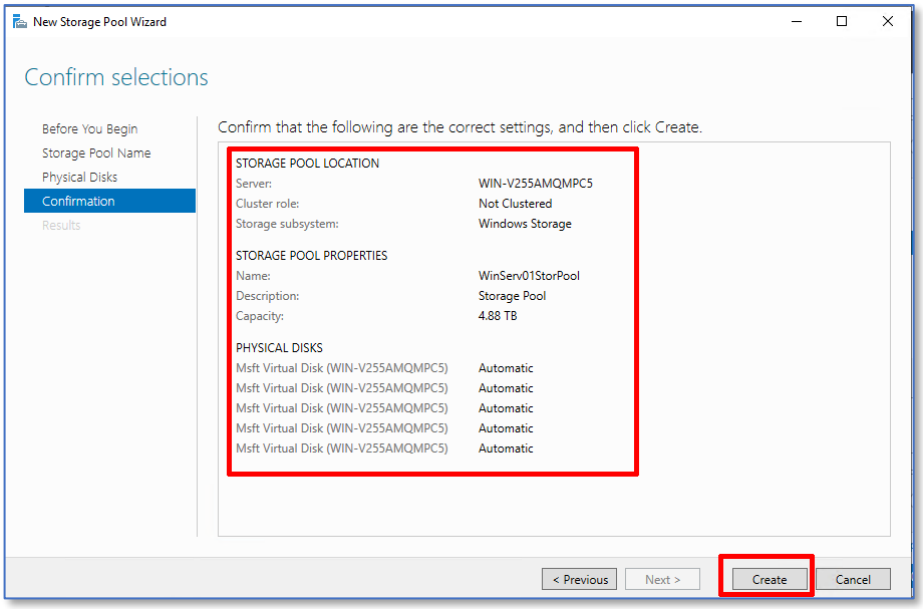
15. Select the only group of available disks available and then click **Next >**



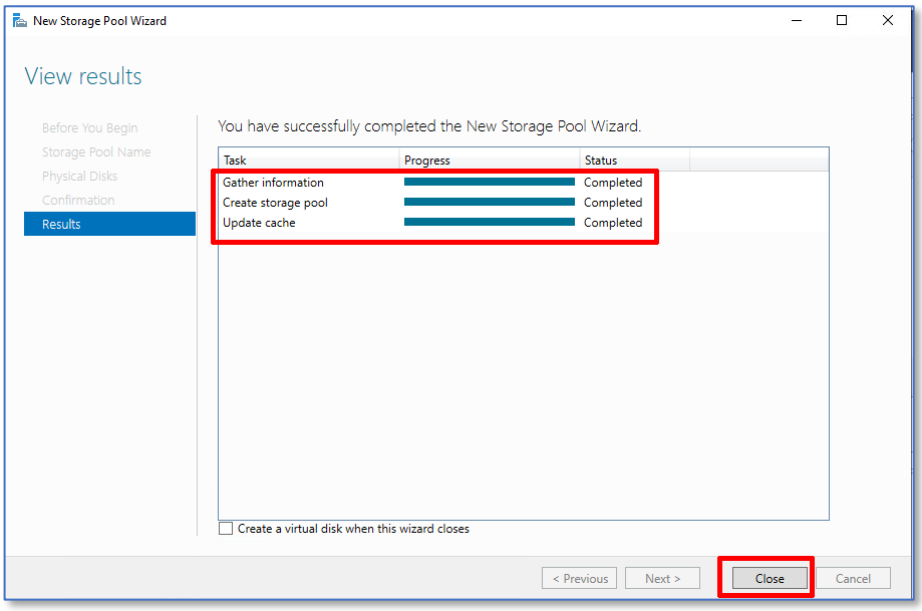
16. Click the *Select All* checkbox to select all virtual disks available in the disks list and then click **Next >**



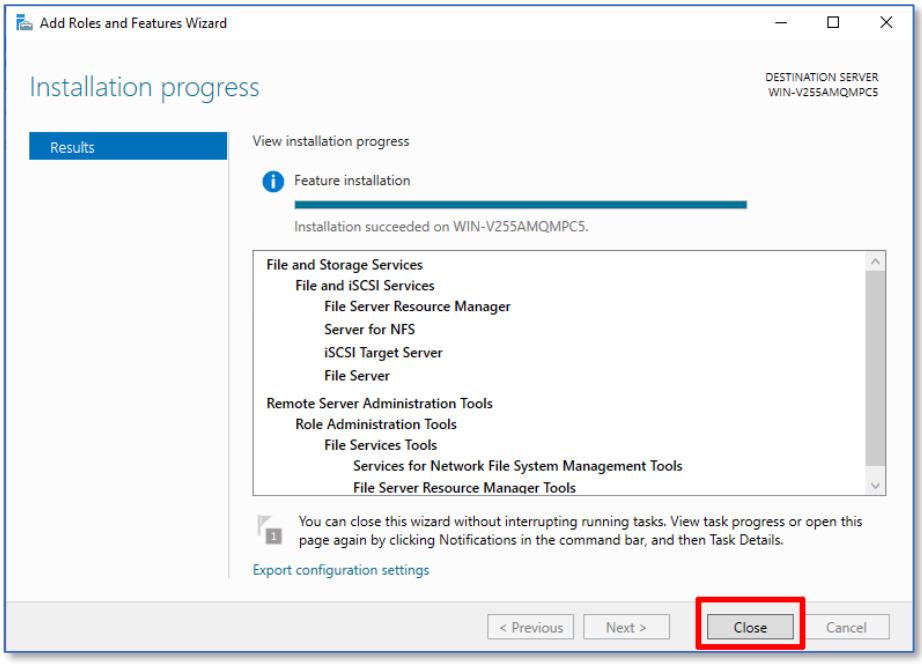
17. Confirm settings match the image below and then click **Create**



18. Once all tasks are complete, click **Close**



19. Click **Close**

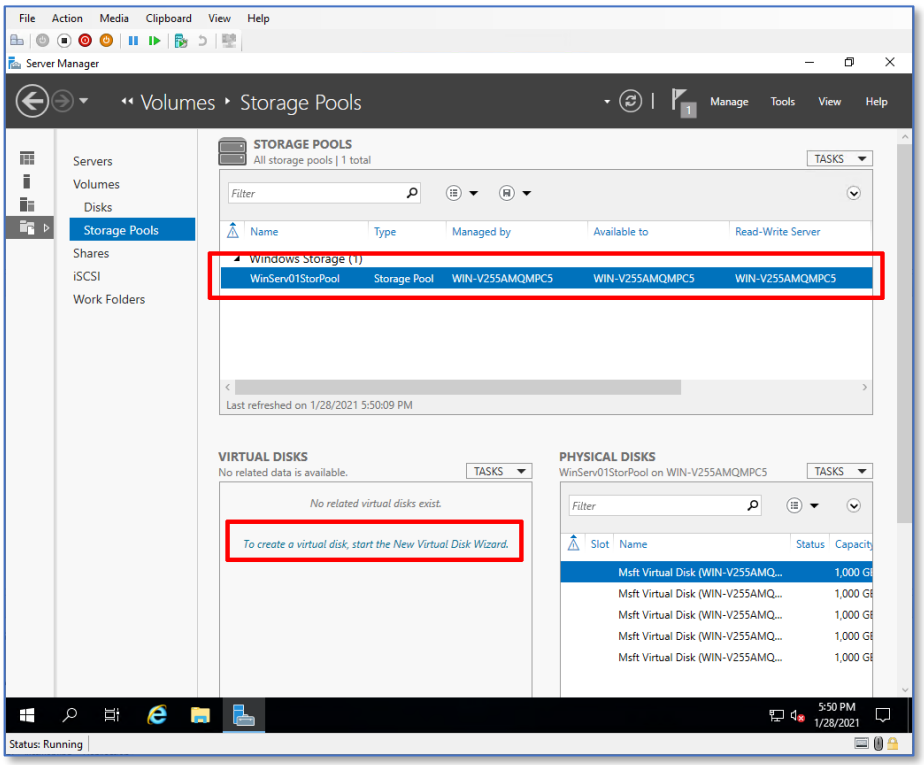


Congratulations – you have now successfully created a Storage Pool in Windows Server.

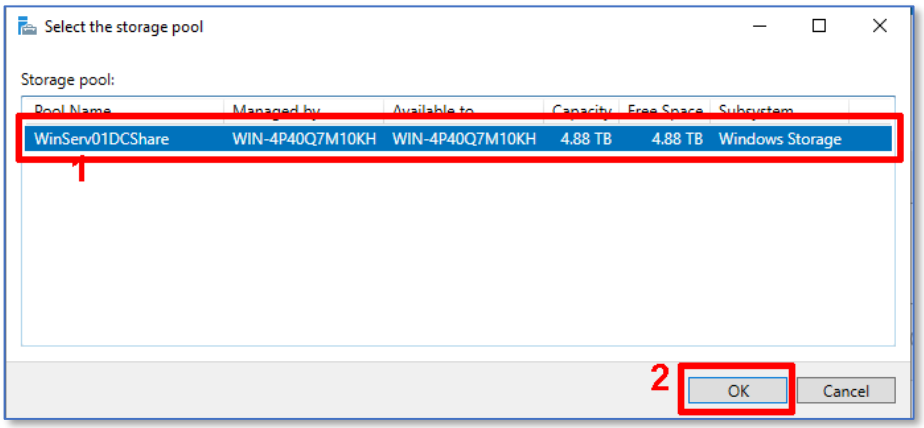
Create a Virtual Disk from a Storage Pool

Now let's go ahead and create a Virtual Disk that use the Storage Pool you just created.

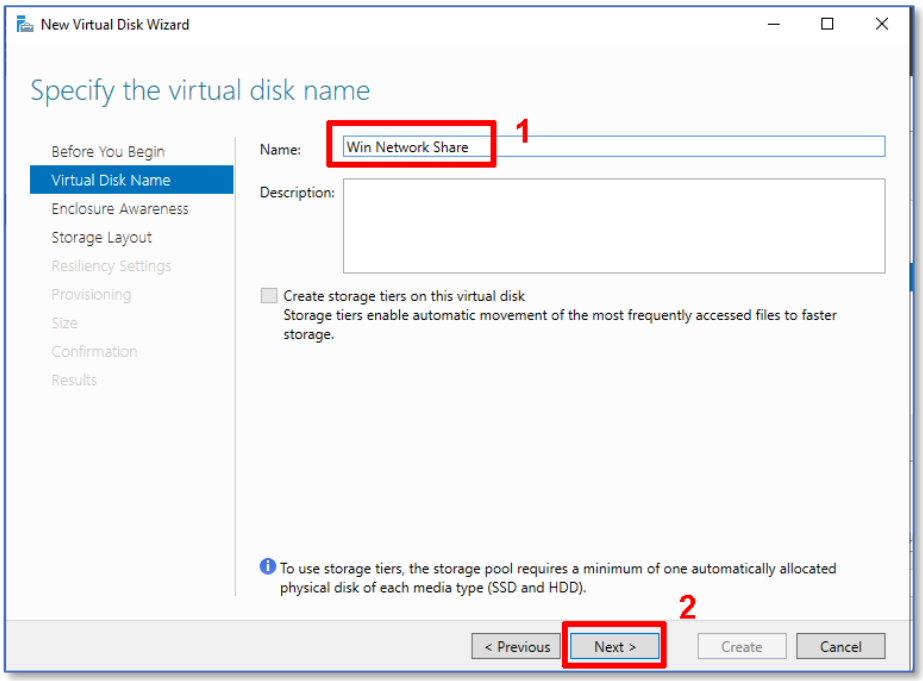
1. Still in the *Storage Pools* panel, click *To create a virtual disk, start the New Virtual Disk Wizard*



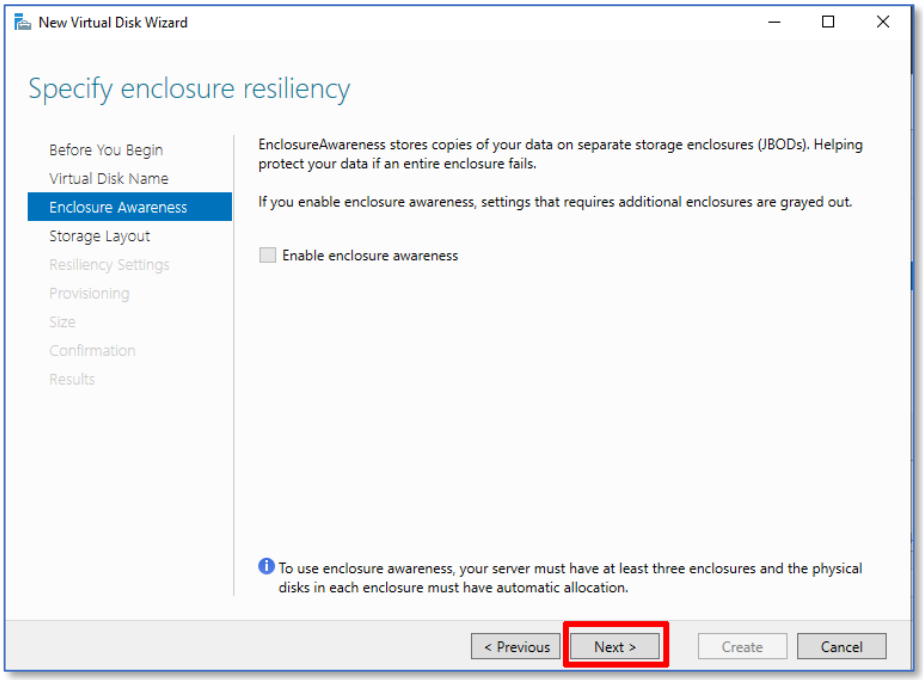
2. Ensure the *Storage Pool* you just created is selected and then click **OK**



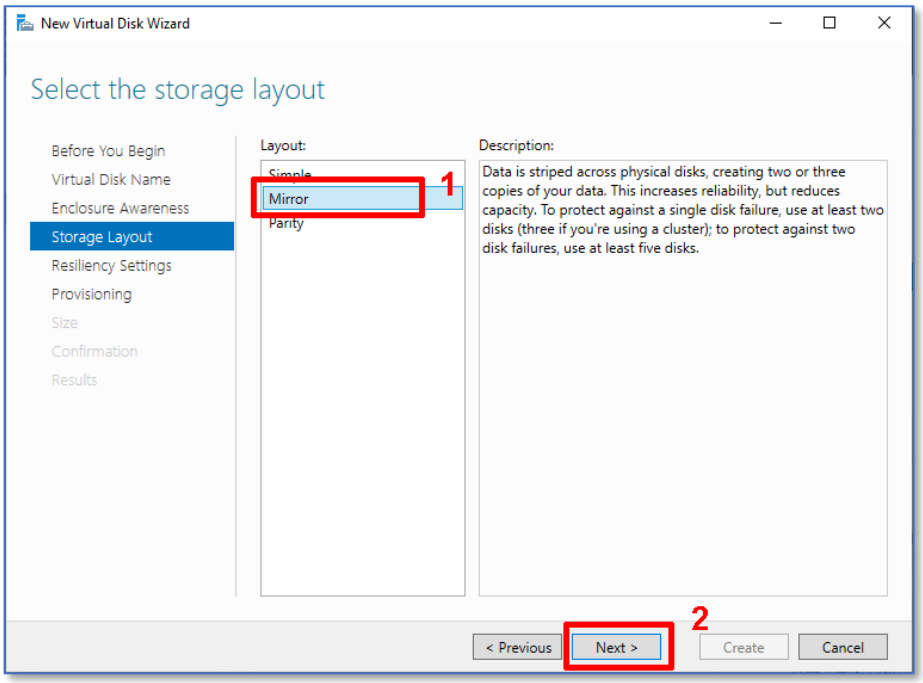
3. Give the new virtual disk a name and then click **Next >**



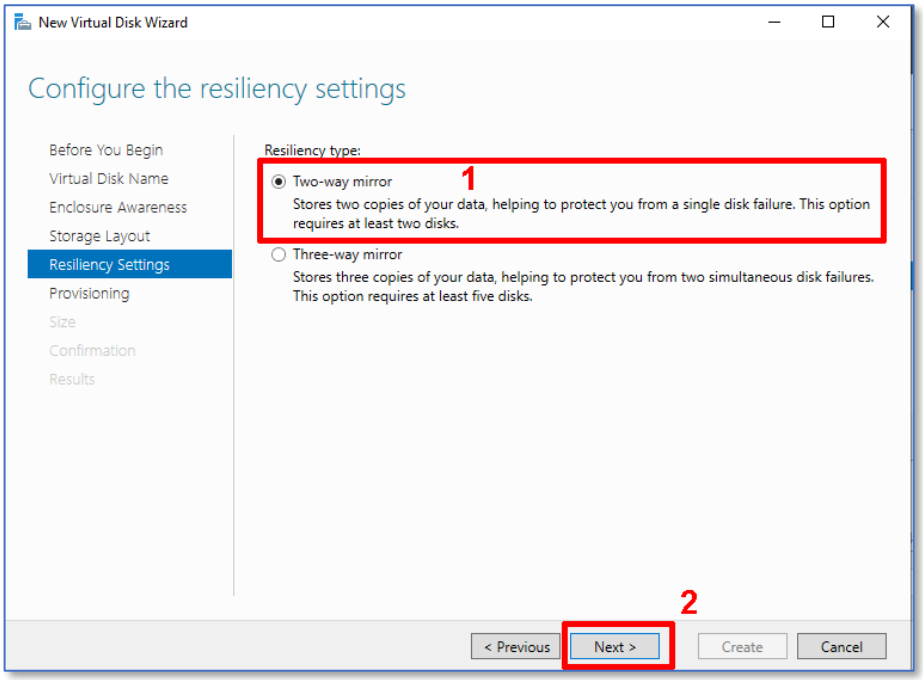
4. Click **Next >**



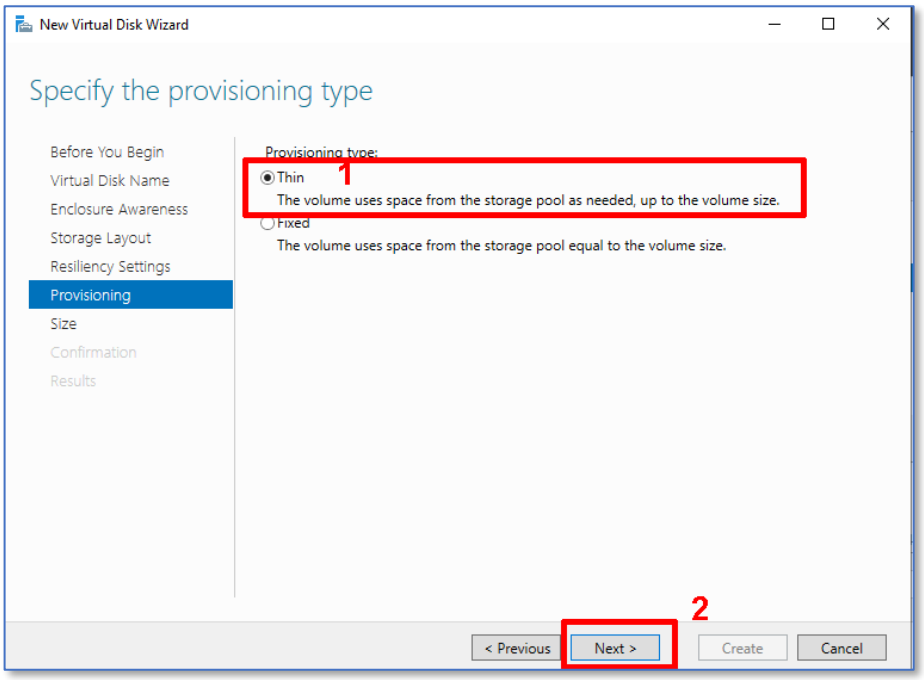
5. In the *Layout* panel select **Mirror** and then click **Next >**



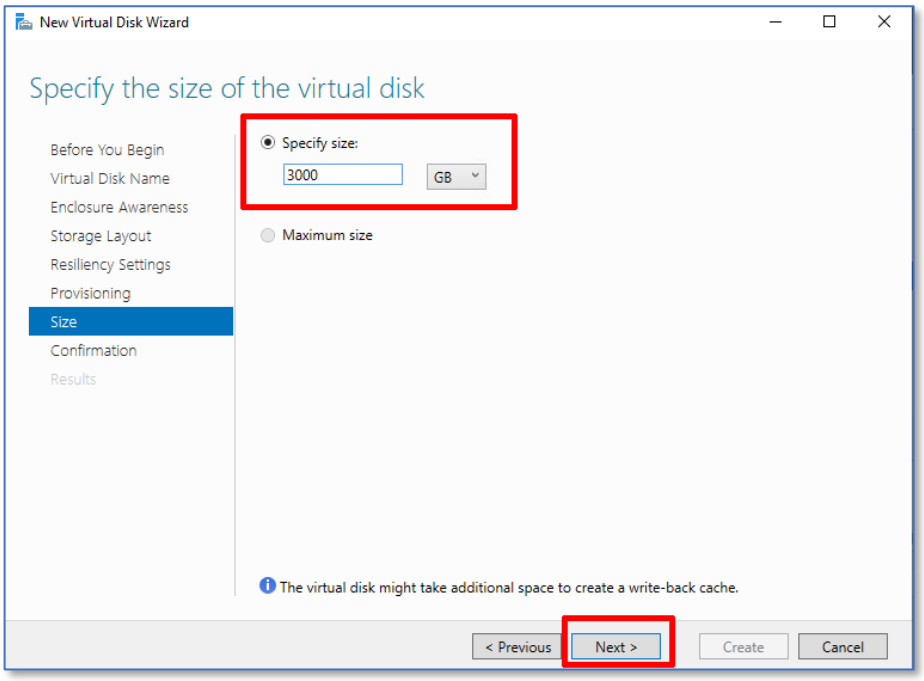
6. Select *Two-way mirror* and then click **Next >**



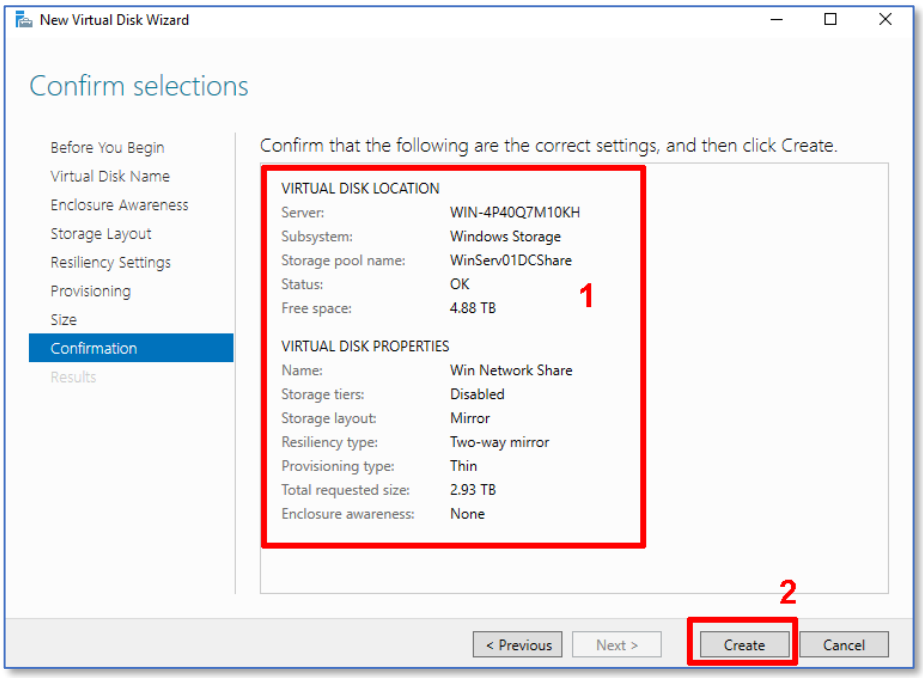
7. Set **Thin** as the *Provisioning type* and then click **Next >**



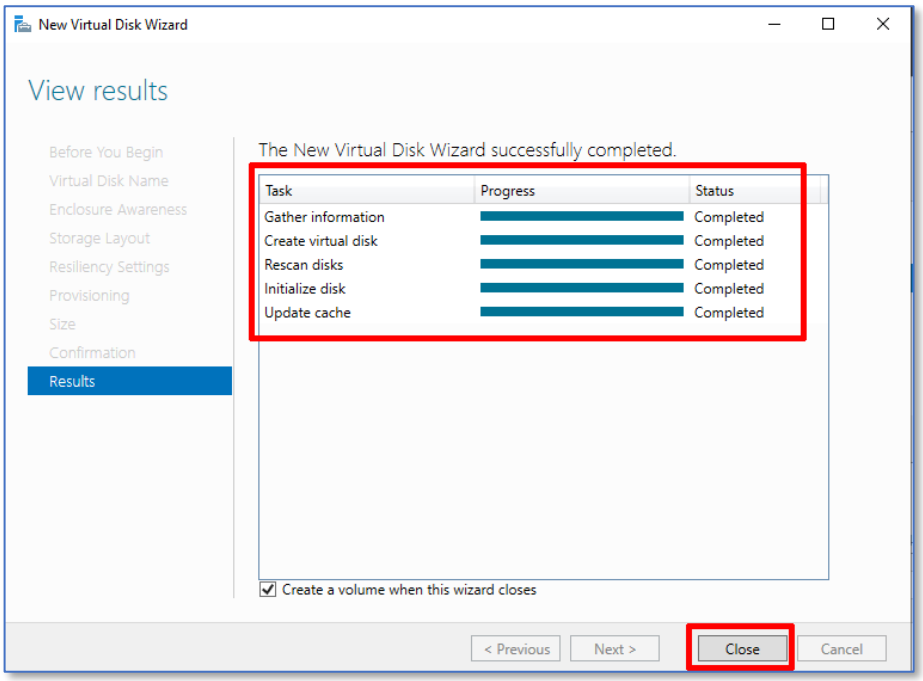
8. Set the virtual disk size as **3000**GB and then click **Next >**



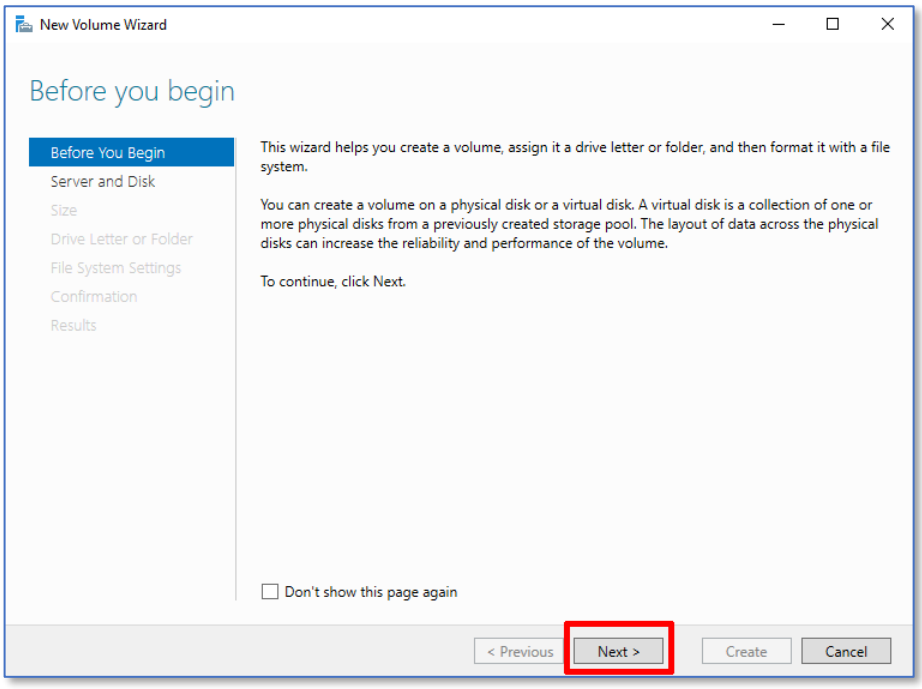
9. Confirm the settings match the image below and then click **Create**



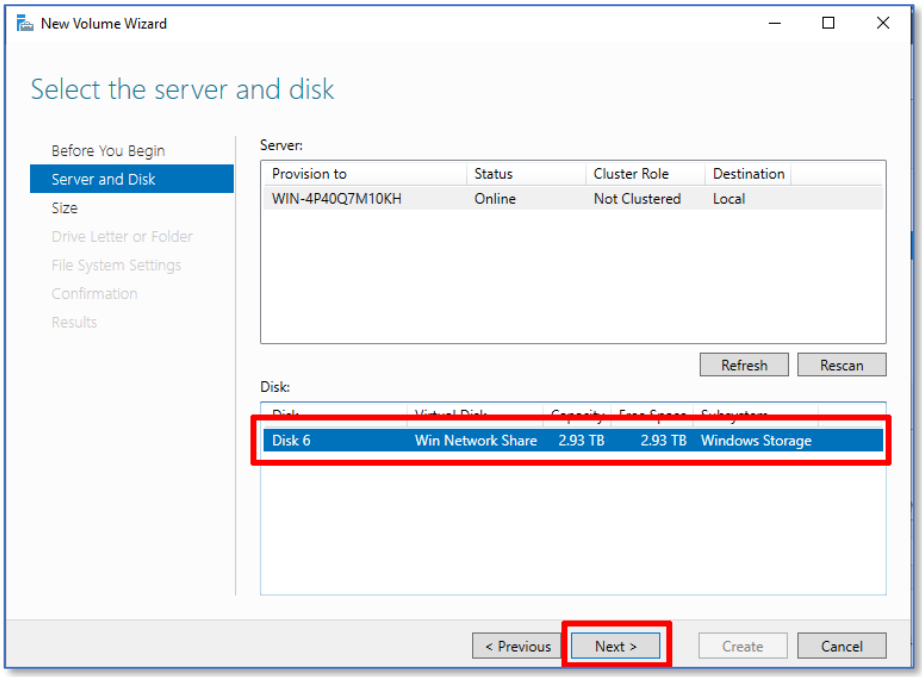
10. Once all tasks are complete click **Close**



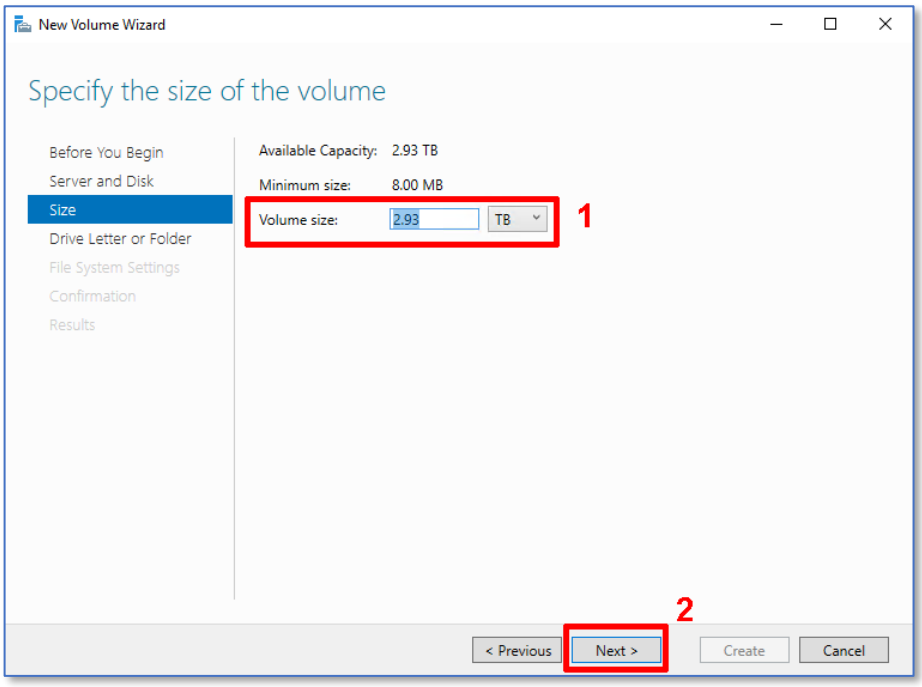
11. Click **Next >**



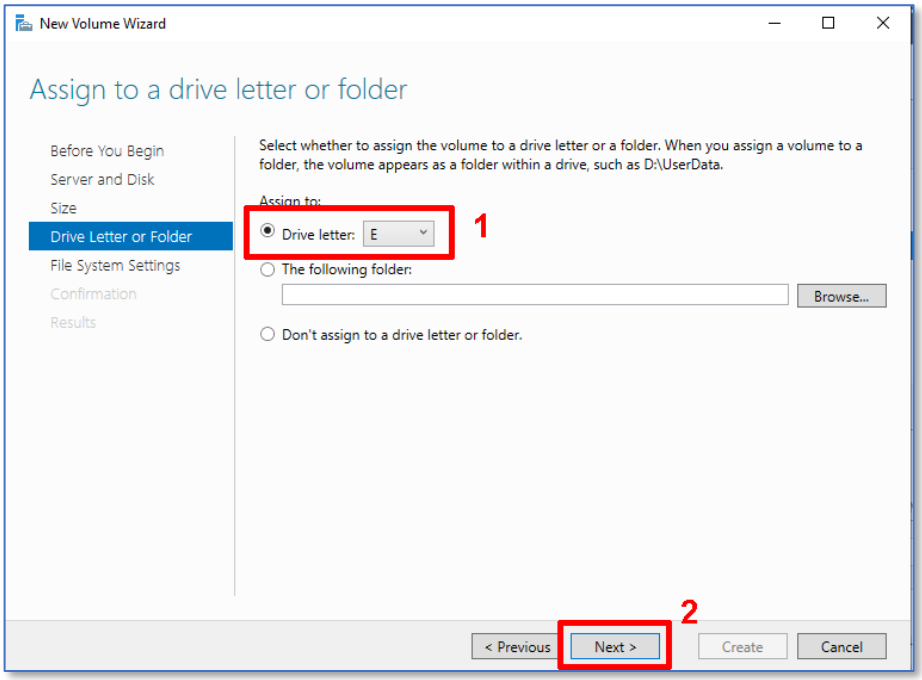
12. In the *Disk* panel select the virtual disk you just created and then click **Next >**



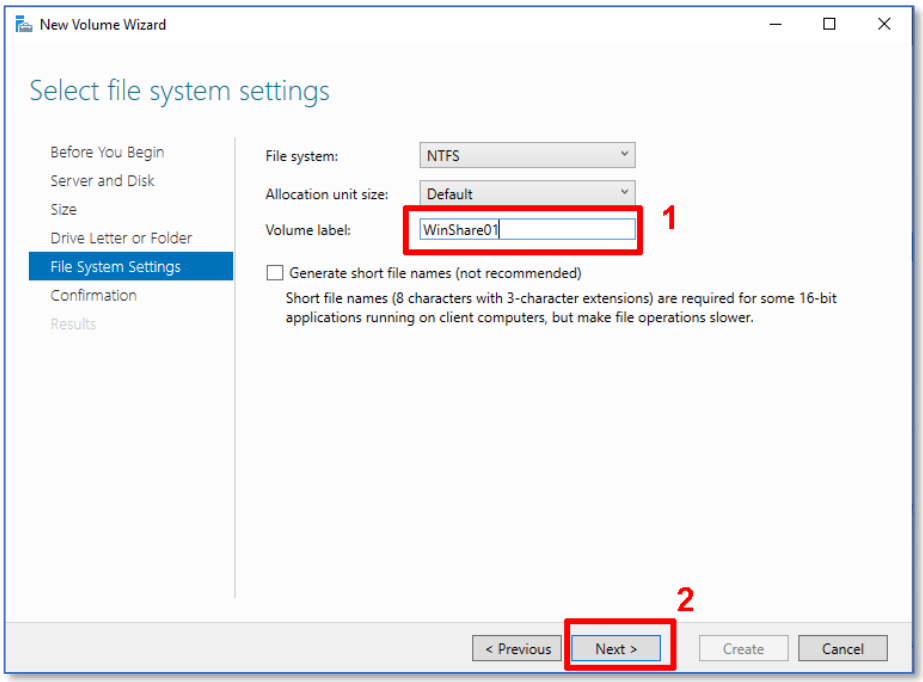
13. Keep the 2.93TB *Volume size* shown and then click **Next >**



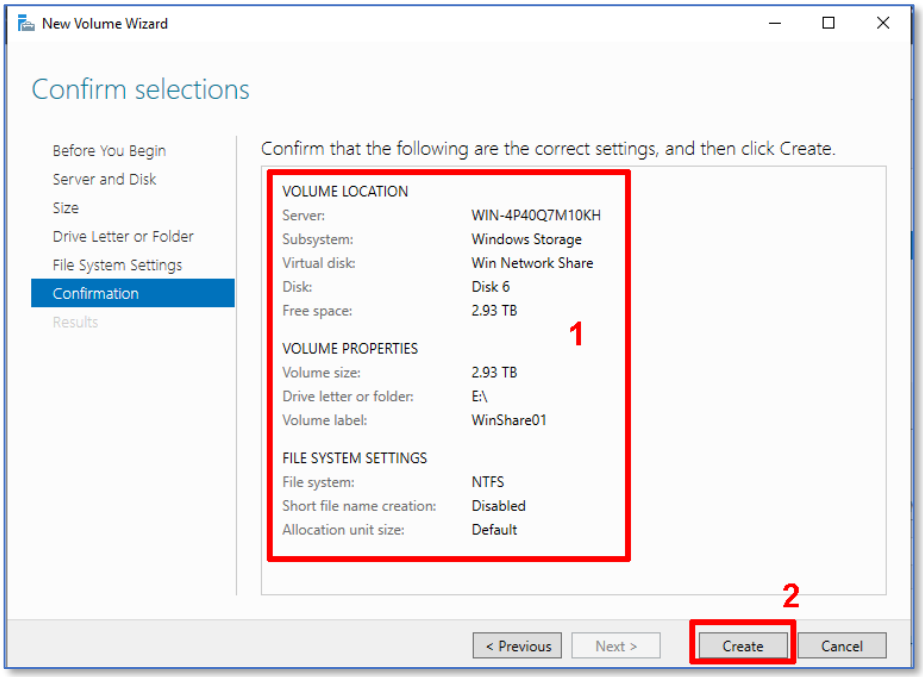
14. Ensure *Drive letter* is set to **E** and then click **Next >**



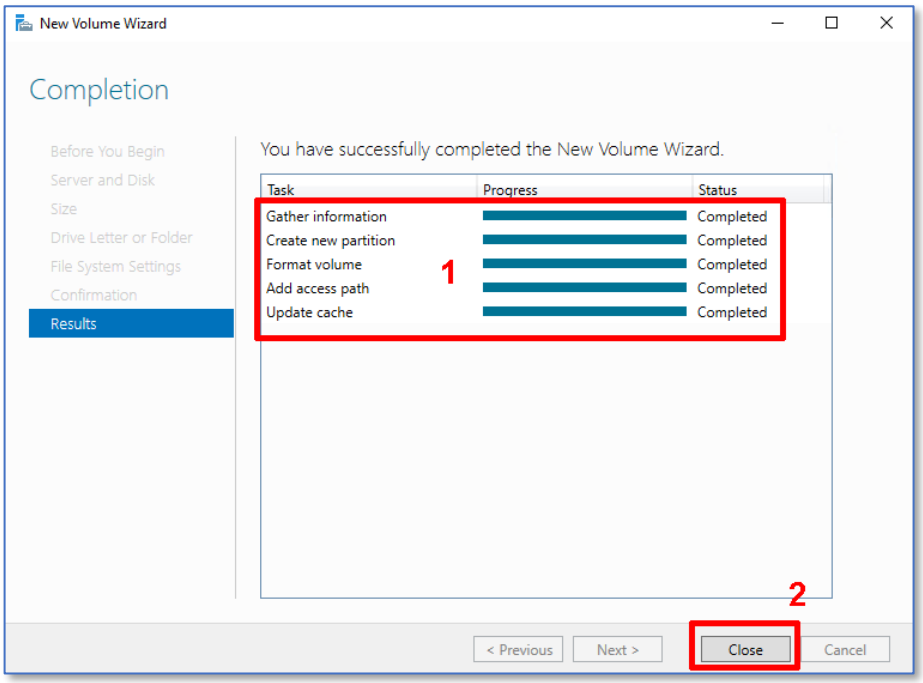
15. Give the *Volume* a label and then click **Next >**



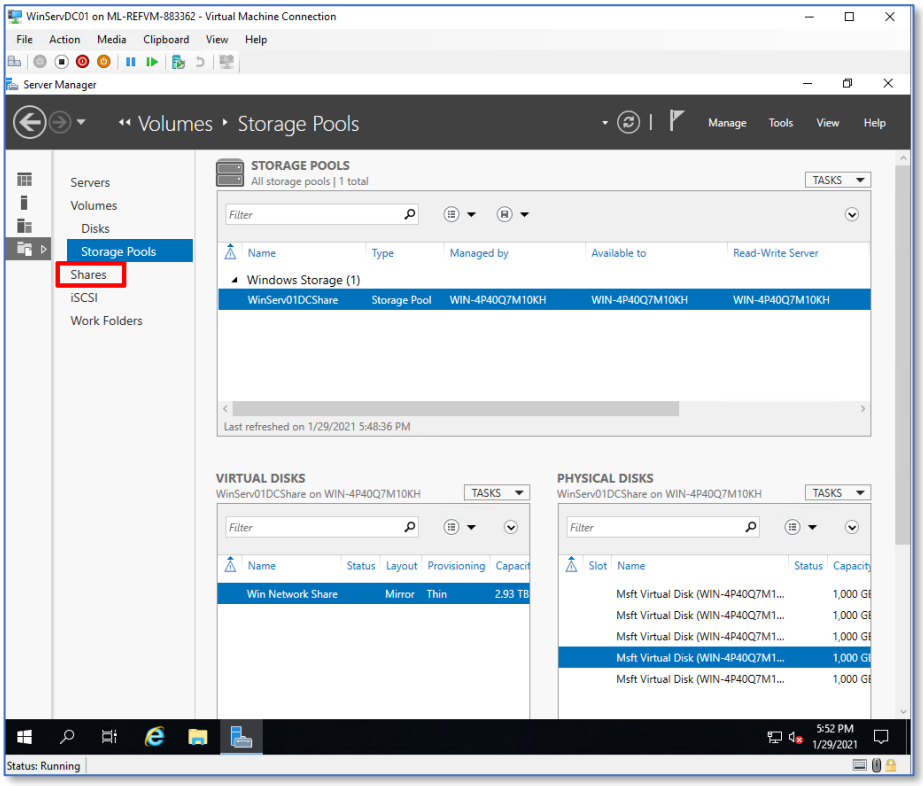
16. Confirm settings match the image below and then click **Create**



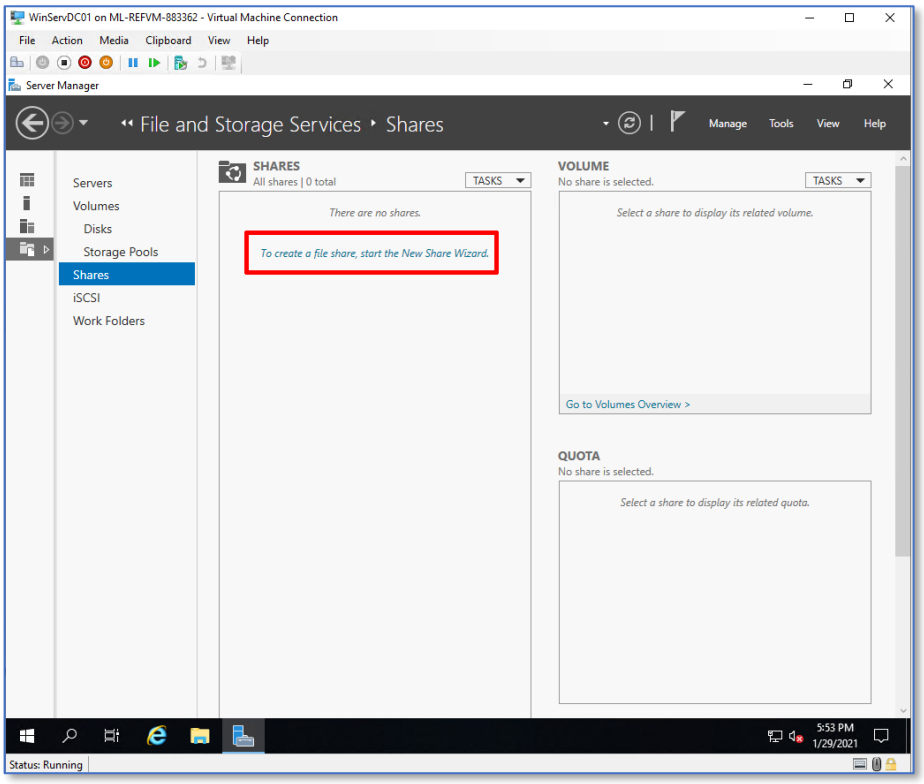
17. Once all tasks complete click **Close**



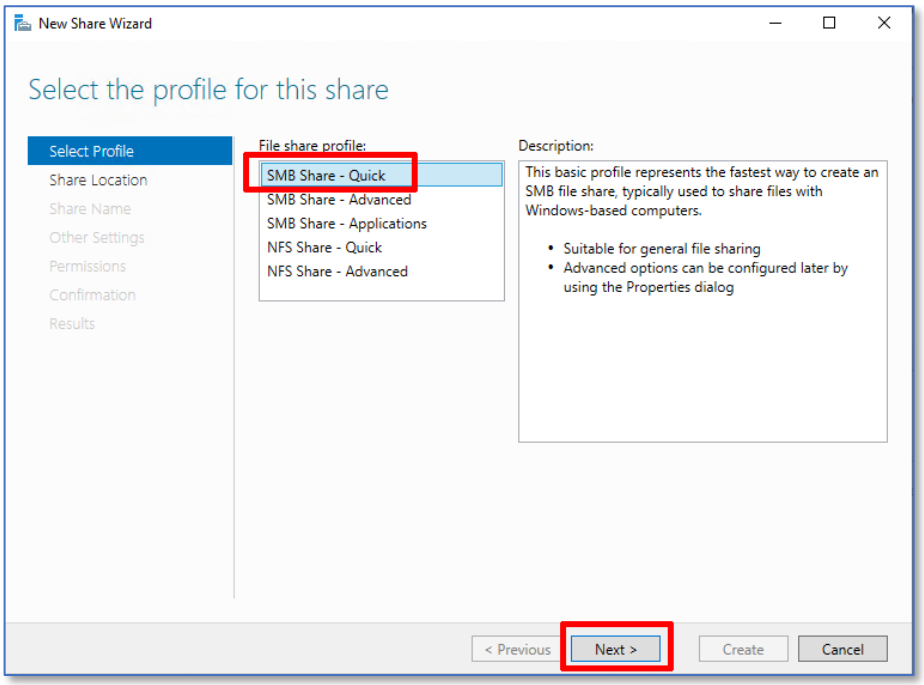
18. In the *Volumes* panel click **Shares**



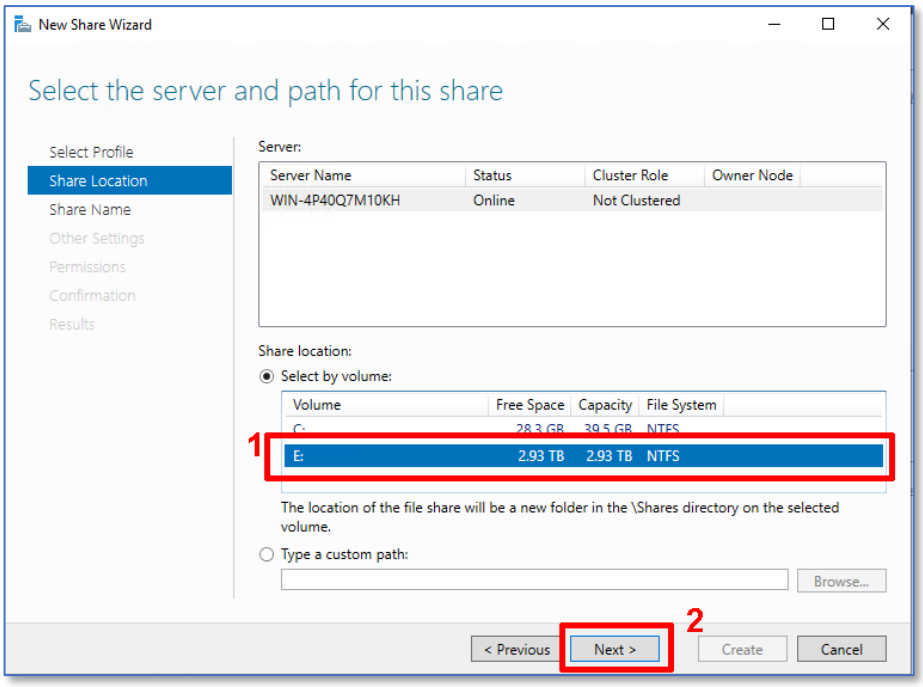
19. Click *To create a file share, start the New Share Wizard*



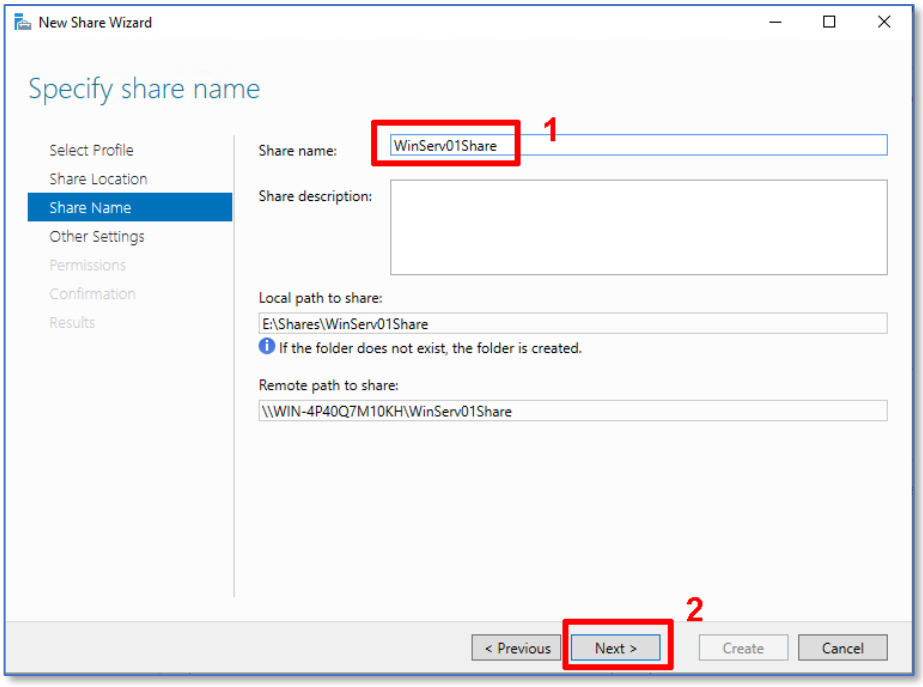
20. Select **SMB Share – Quick** and then click **Next >**



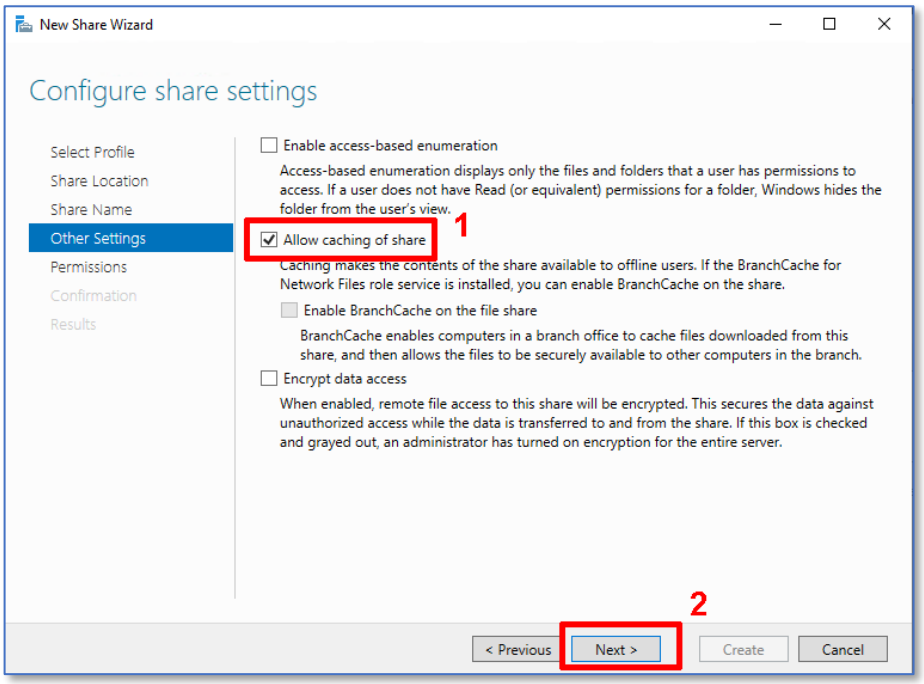
21. Under *Share location* ensure *Select by volume* is selected and that volume **E** is also selected, then click **Next >**



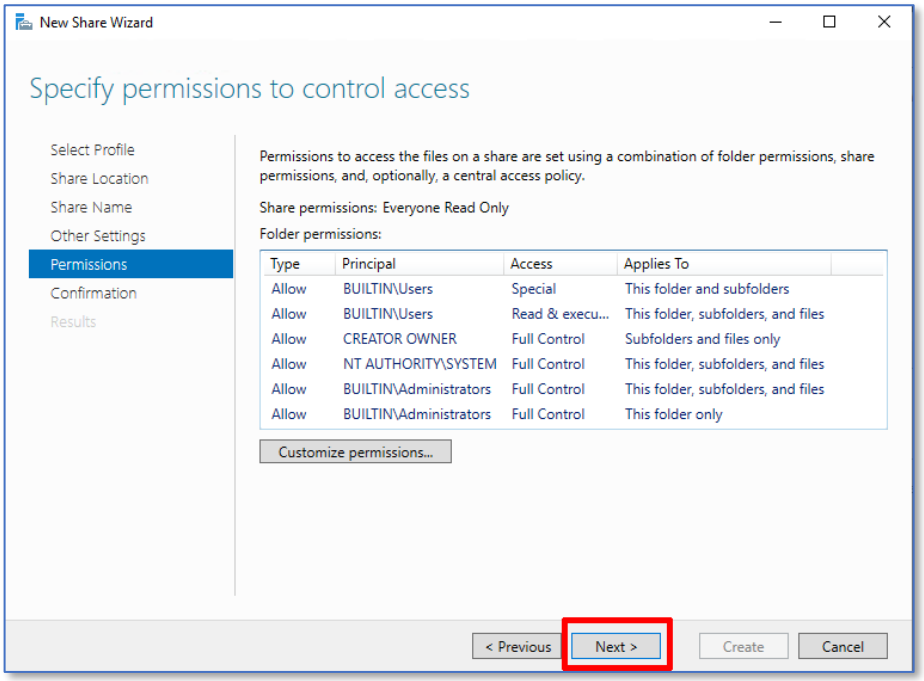
22. Specify a name for the share and then click **Next >**



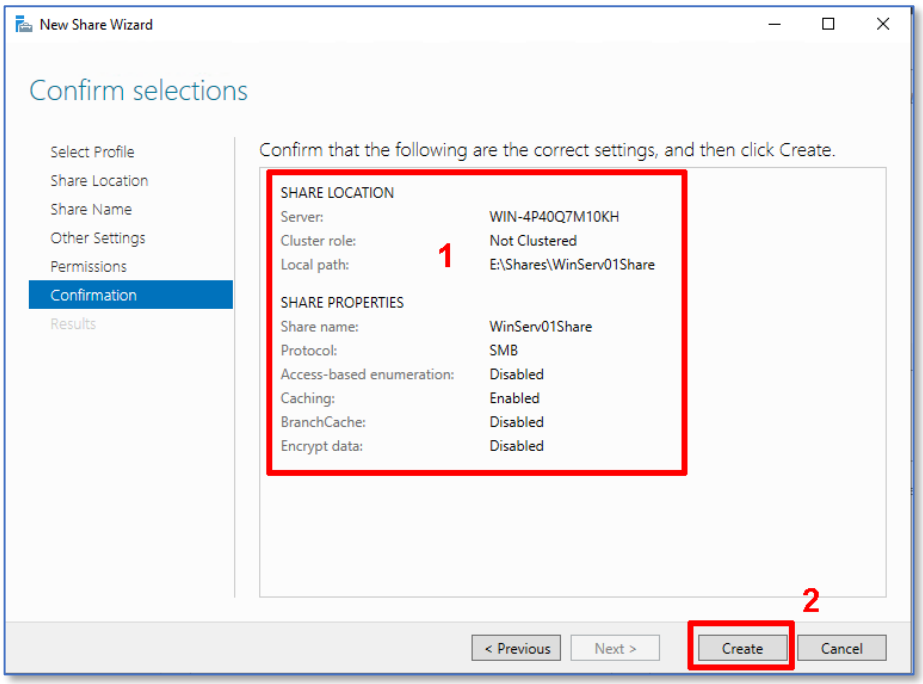
23. Ensure *Allow caching of share* is checked and then click **Next >**



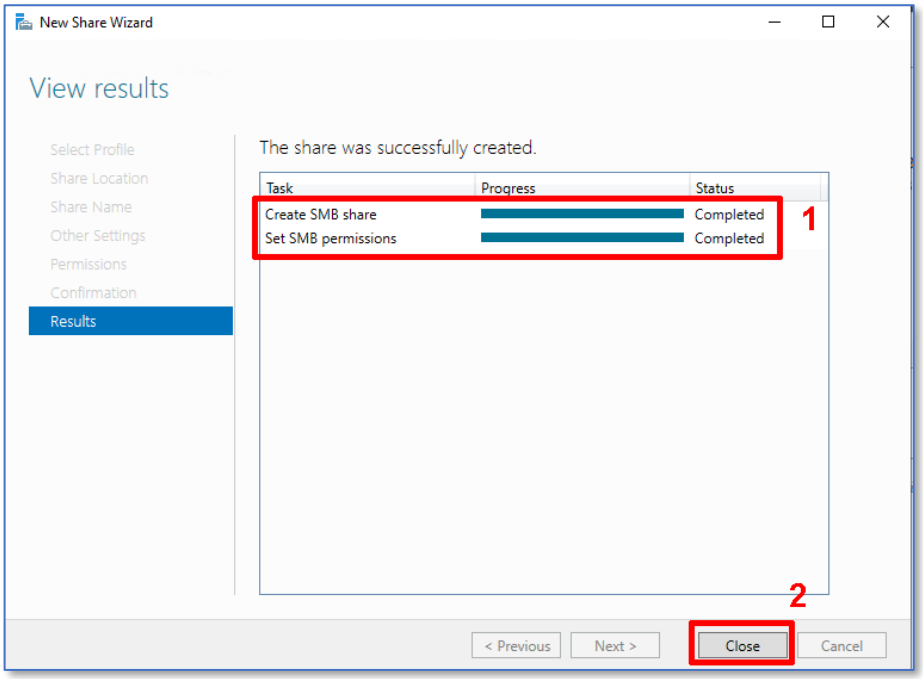
24. Leave the folder permissions as they are and click **Next >**



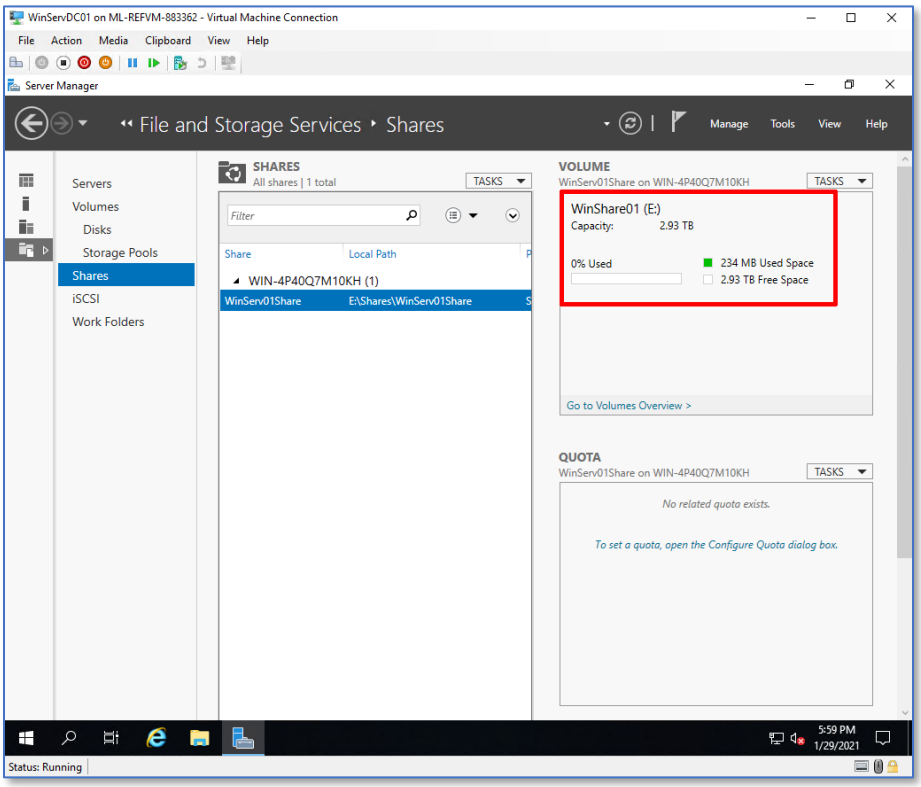
25. Confirm settings are as in the image below and then click **Create**



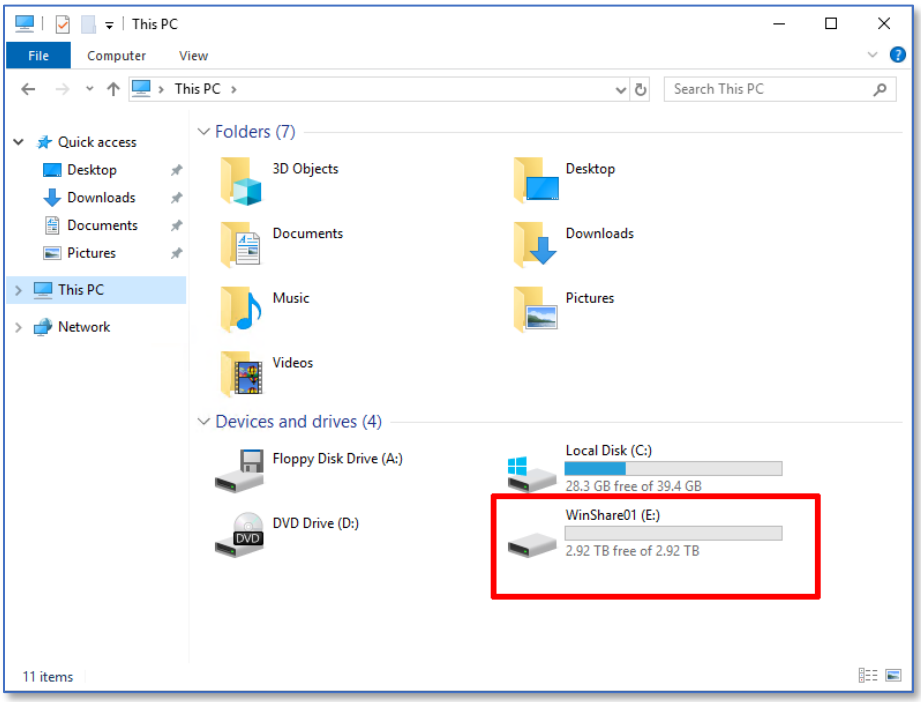
26. Once all tasks are complete click **Close**



Congratulations – you have created a virtual disk and made it available to the network.

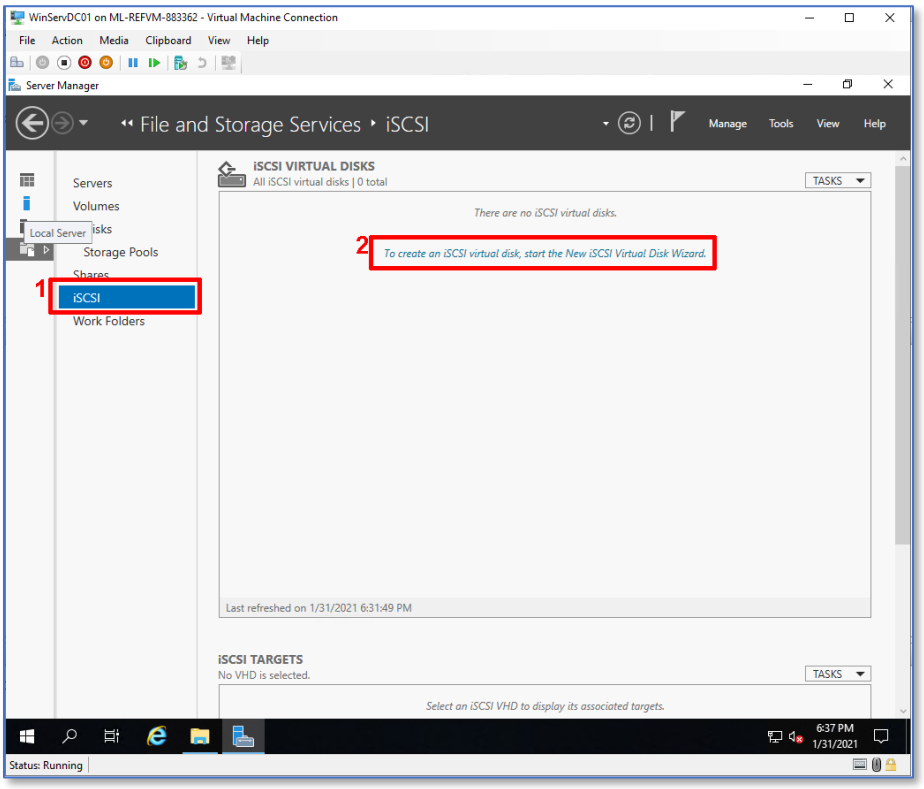


If you now go to *This PC* in *Windows Explorer* you will see that the new virtual disk now appears.

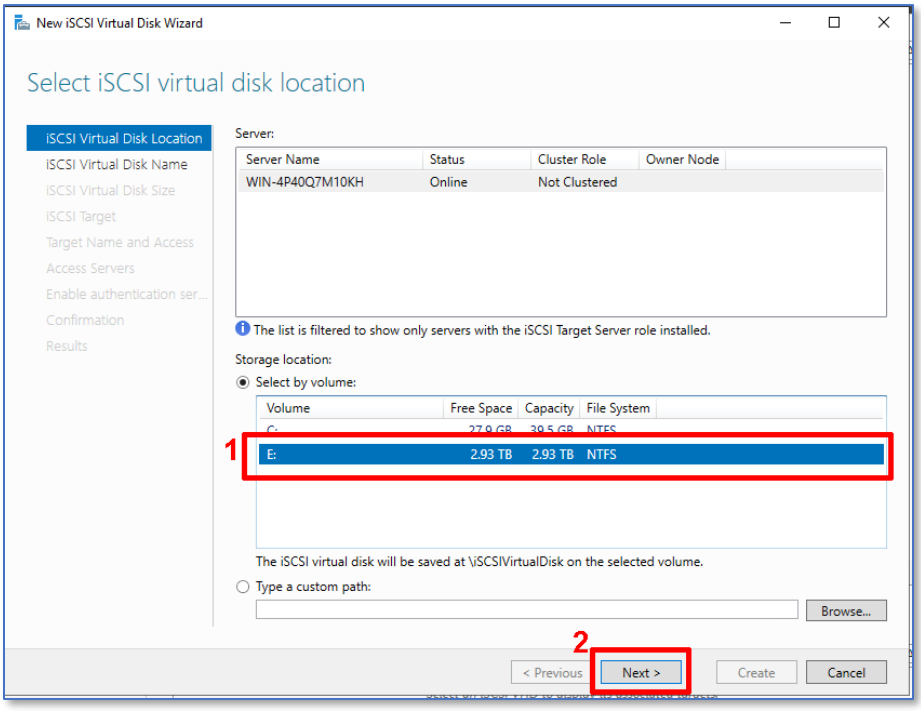


Make the New Virtual Disk an iSCSI Target

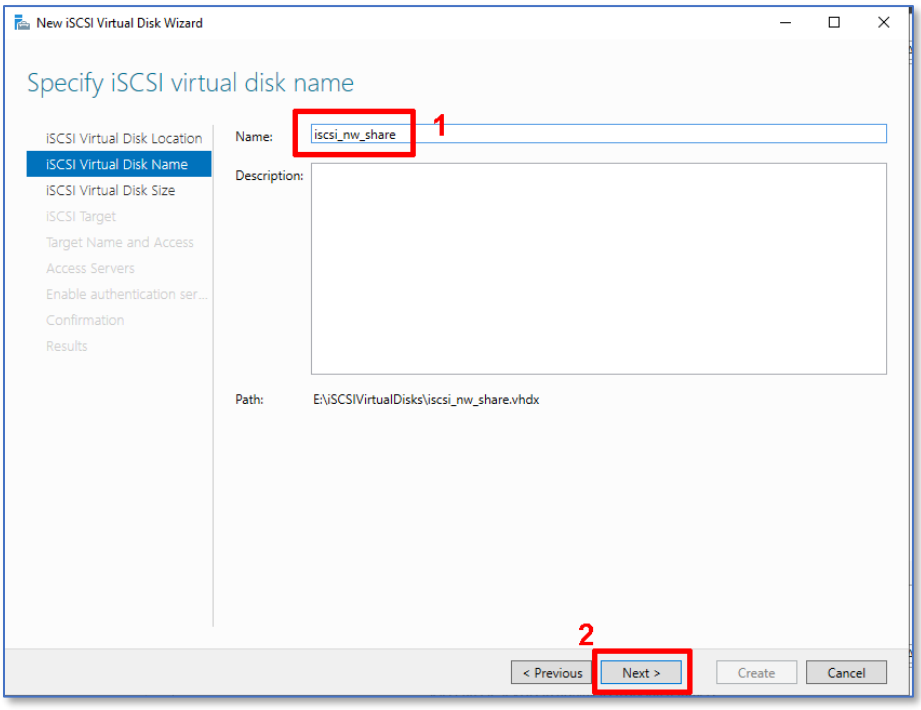
1. In the *File and Storage Services* panel, go to the *iSCSI* section and then click To create an iSCSI virtual disk, start the New iSCSI Virtual Disk Wizard



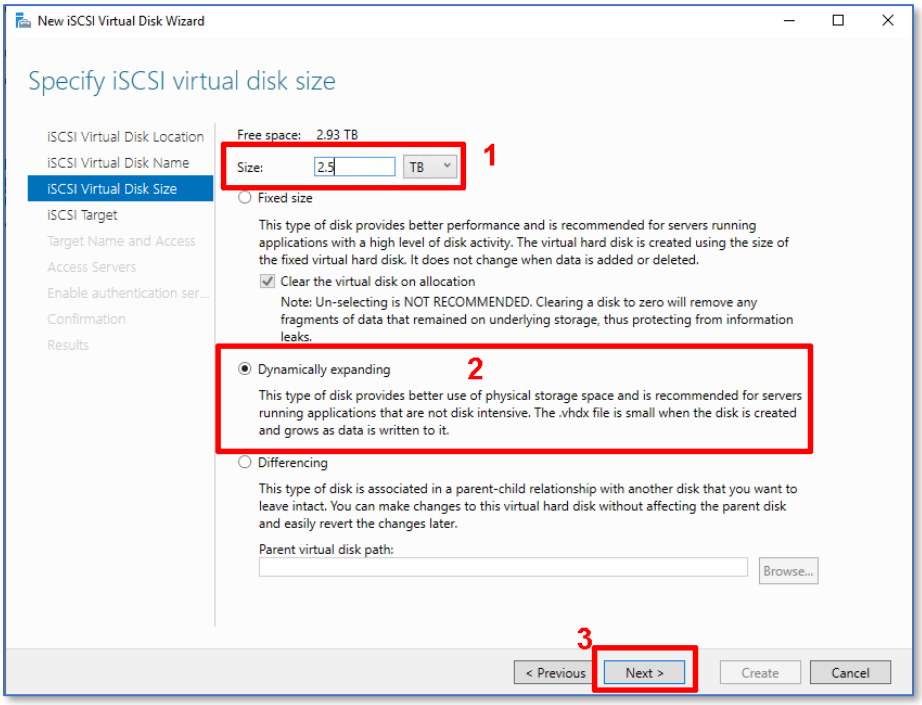
2. Ensure *Select by volume* is selected; ensure that the new volume just created **(E:)** is selected and then click **Next >**



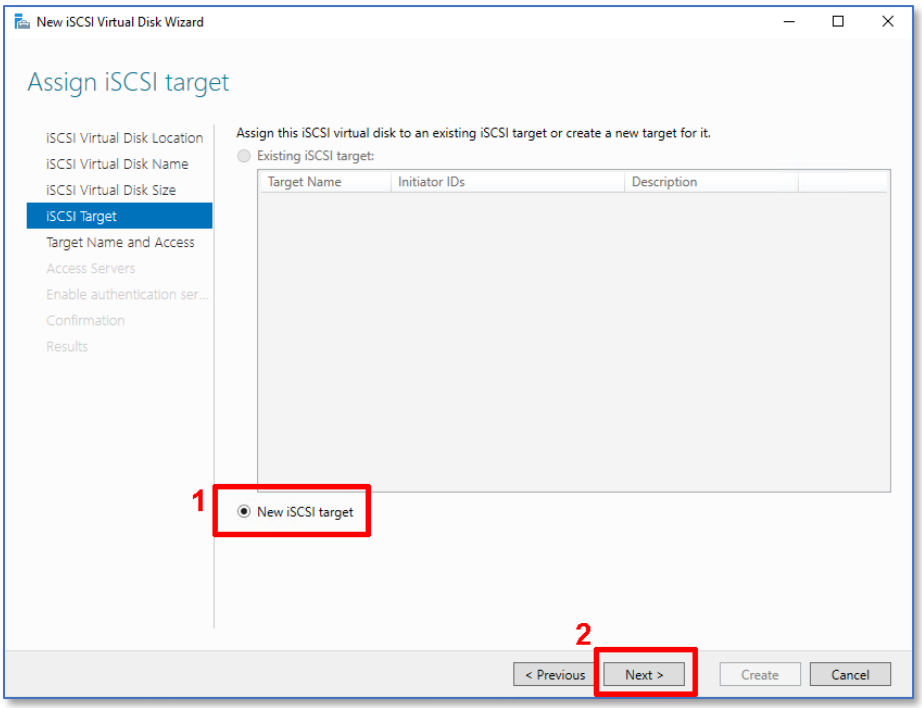
3. Give the new iSCSI virtual disk a name and then click **Next >**



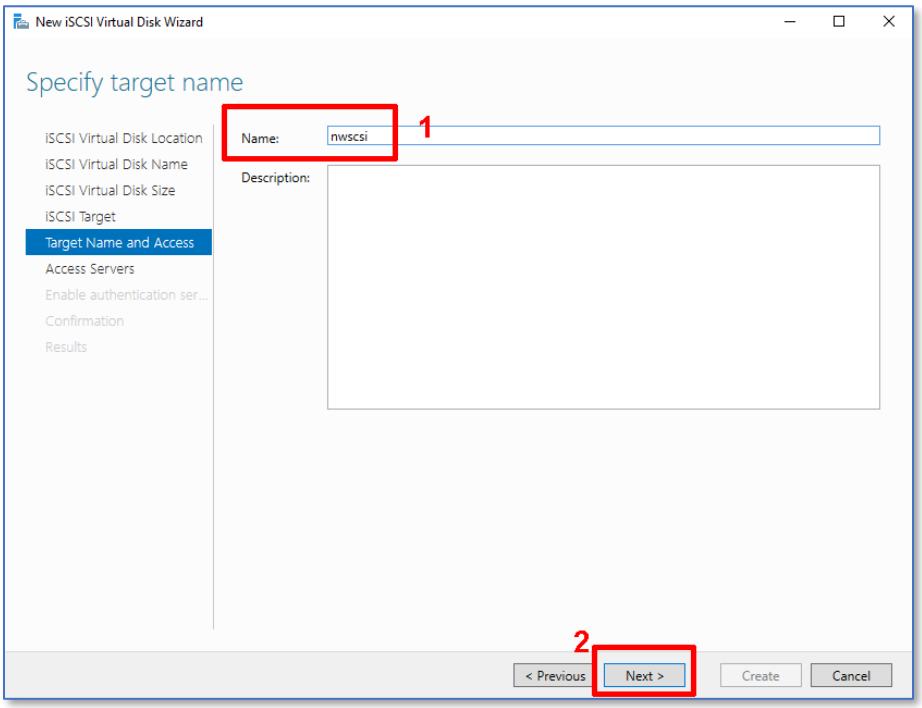
4. Set a size for the new iSCSI virtual disk; ensure *Dynamically expanding* is selected and then click **Next >**



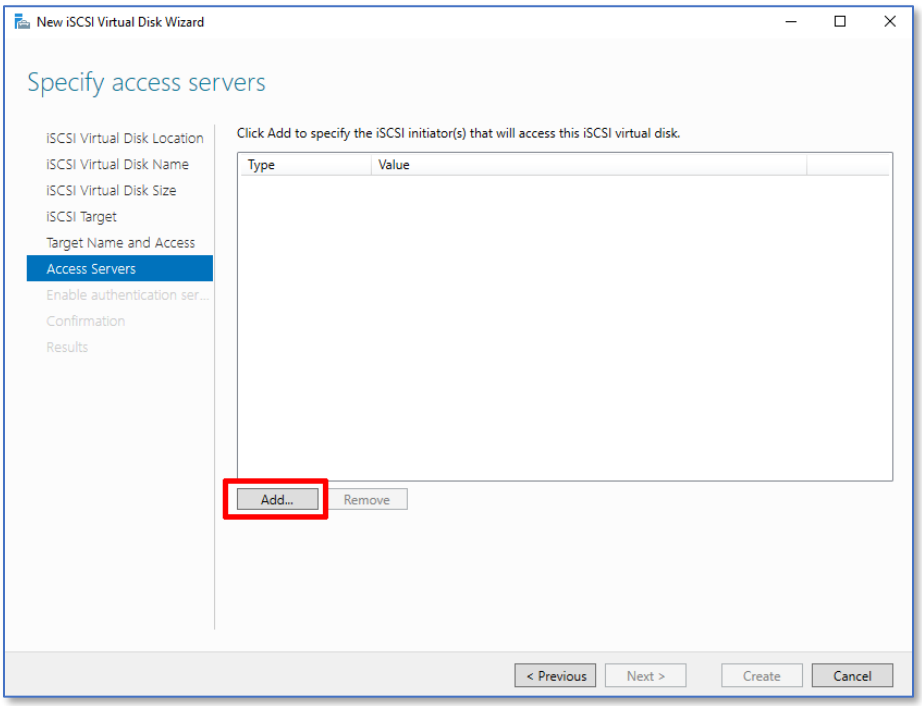
5. Ensure *New iSCSI target* is selected and then click **Next >**



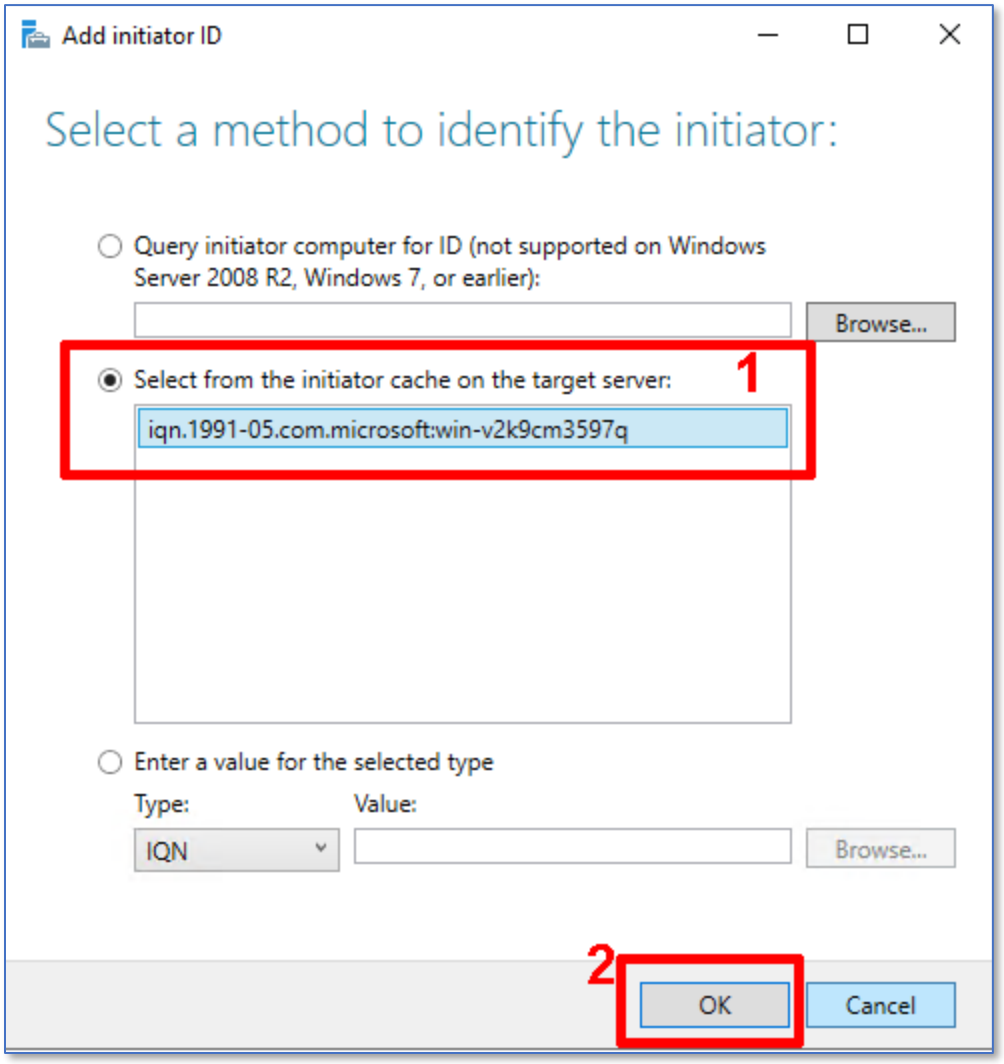
6. Give the iSCSi Target a name and then click **Next >**



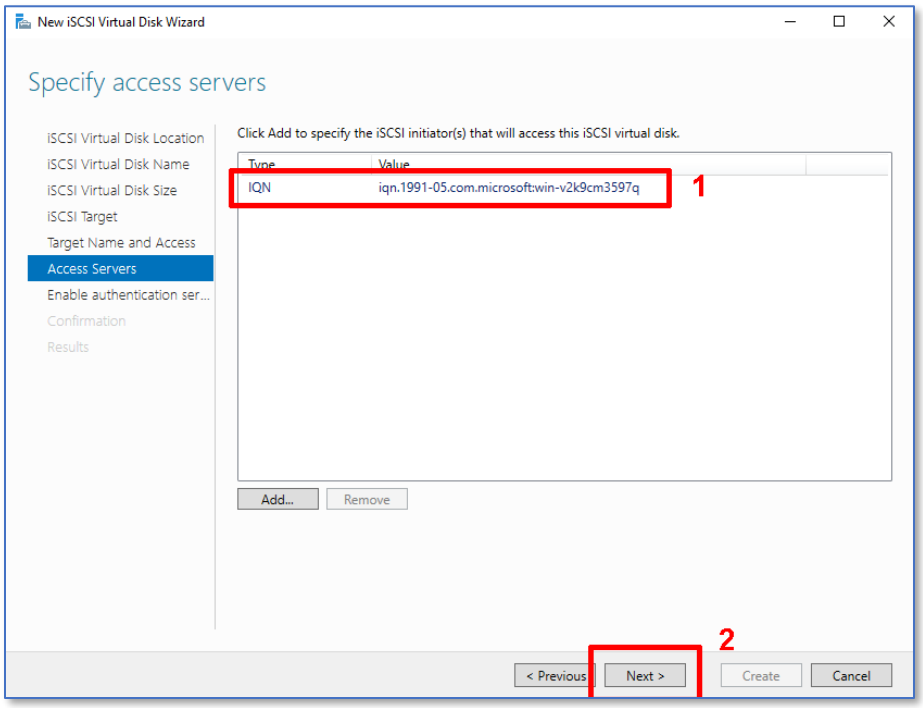
7. Click **Add...**



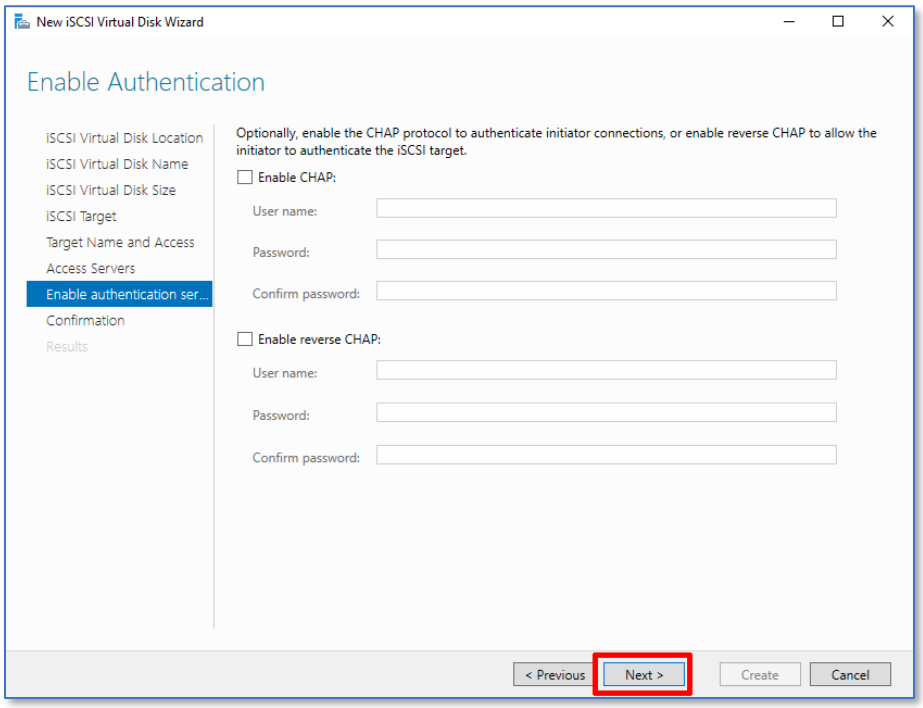
8. Ensure Select from the initiator cache on the target server is selected and choose the desired iSCSI Initiator (this will be another Windows Server VM you created for this purpose)



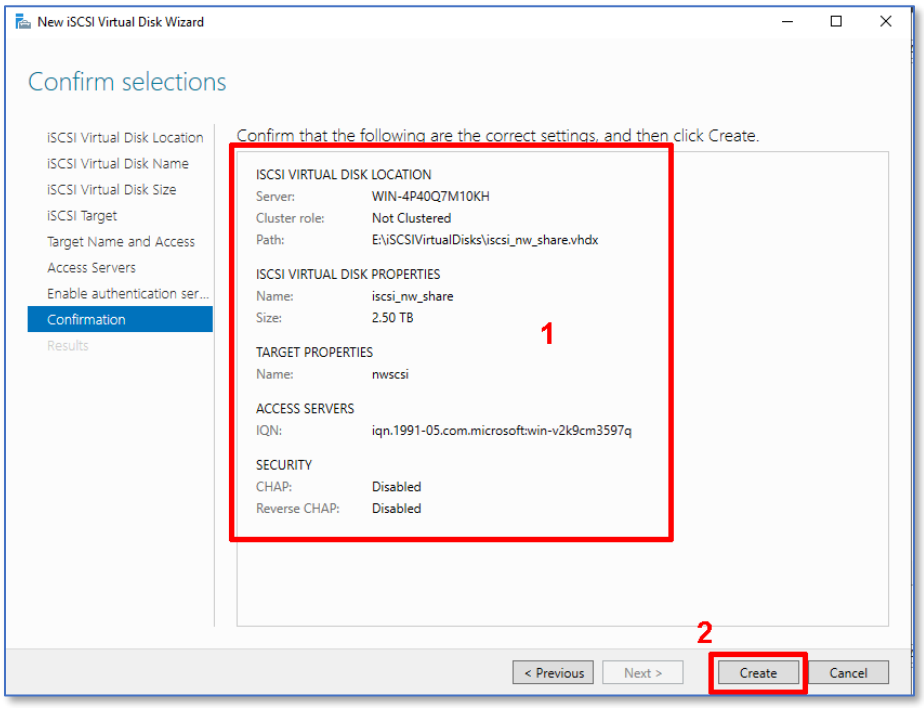
9. Ensure the *IQN* of the selected *Target Initiator* is visible and then click **Next >**



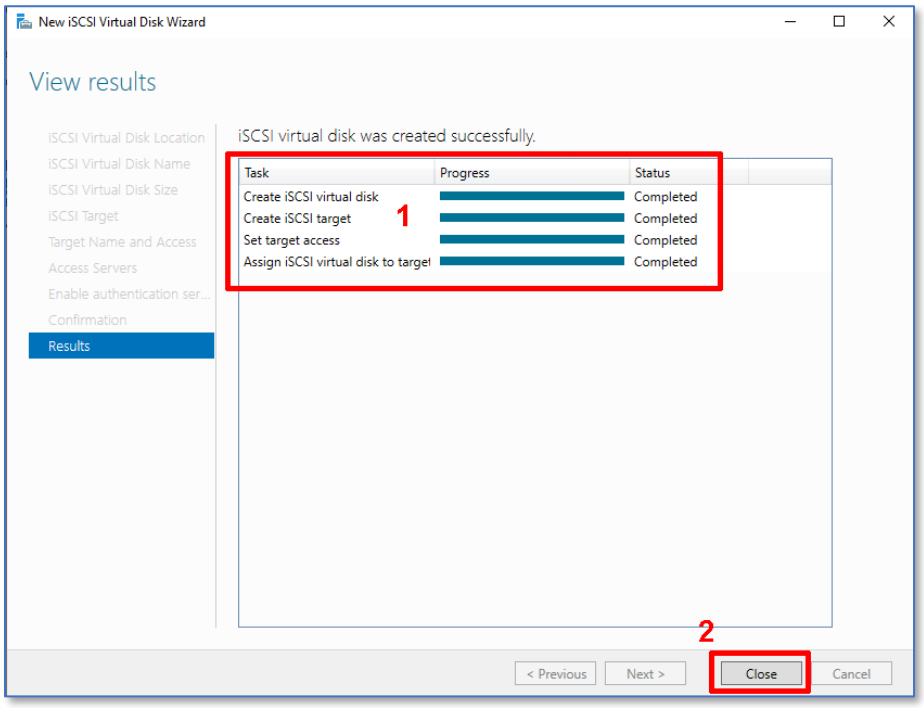
10. Click **Next >**



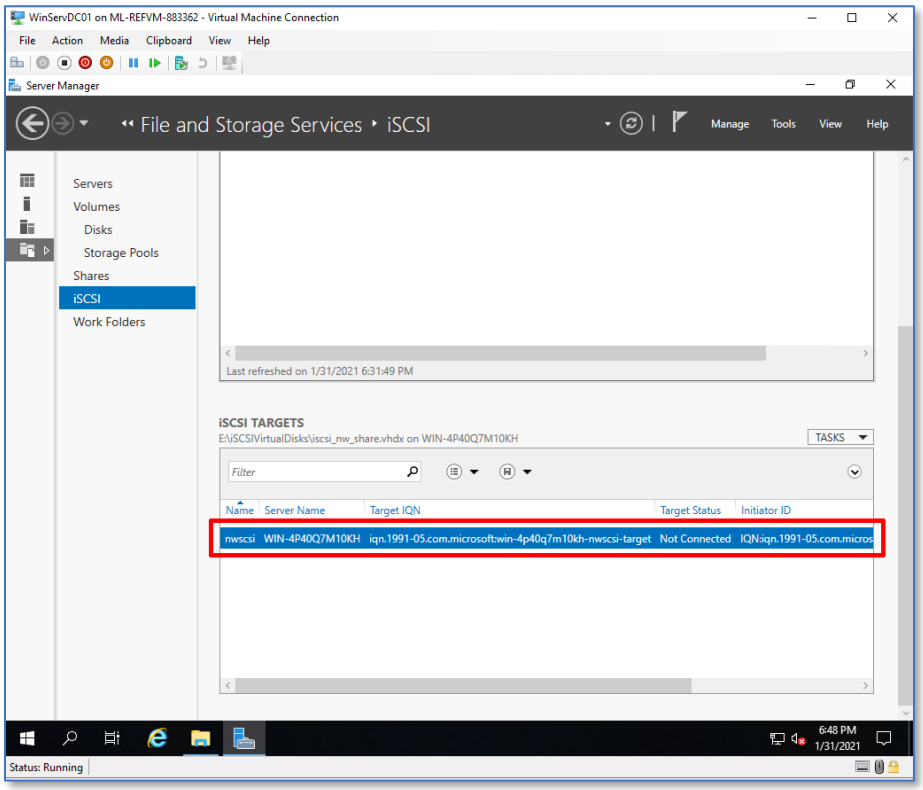
11. Confirm settings match the image below and then click **Create**



12. Once all tasks are complete, click **Close**



13. Ensure the newly create iSCSI virtual disk is present in the *iSCSI TARGETS* panel.



Congratulations, you have successfully set up an iSCSI target virtual disk for use by other nodes on the network.

Conclusion

At this point you should have:

- Configured Windows Server as an iSCSI target server
- Created a virtual disk from a storage pool and share it with the network

You can now close Hyper-V, close the RDP connection to your CSG2132_ED_TR3_2023 virtual machine, and shut it down in Azure.

END OF WORKSHOP