## **ITAS 233 LAB 05**

# Chapter 5

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Submitted to

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### **Introduction**

The lab is basically about setting up the **server pool** and **SCSI** server .We will also learn how to use the server pool using the server manager and also create a virtual disk in the server pool in the server manager in the server SA1. This also helped me to know about different types of the disk that can be created using the server manager in the server pool.

## Part 2: GUI Storage Spaces

Make sure you have added a three 30 GB thin provision hard disk into the server.

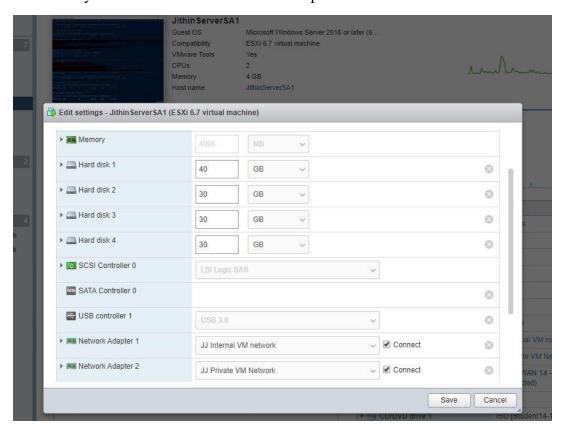


Figure 1: Adding new 30 GB thin provision drive into the serverSA1

- In that server, Under the Server Manager File and Storage Service Create a Storage Pool named pool1 under the **Storage pool Name** option.
- Under the Physical Disk tab, select first 2 Virtual hard drive with size 30 GB.
- Click Next, till the confirmation tab and click Create.

#### Creating a virtual disk named virt1 under the pool1

• Right-Click on **Pool1**, Create a **New-Virtual Disk** 

- Select the pool1 and click OK.
- On Virtual Disk Name, Type Virt1
- Under the Storage Layout Tab, select the **simple** and click **next**.
- Under the provisioning Tab, Select Fixed.
- Type 5GB under the Size tab.
- Confirm and Create

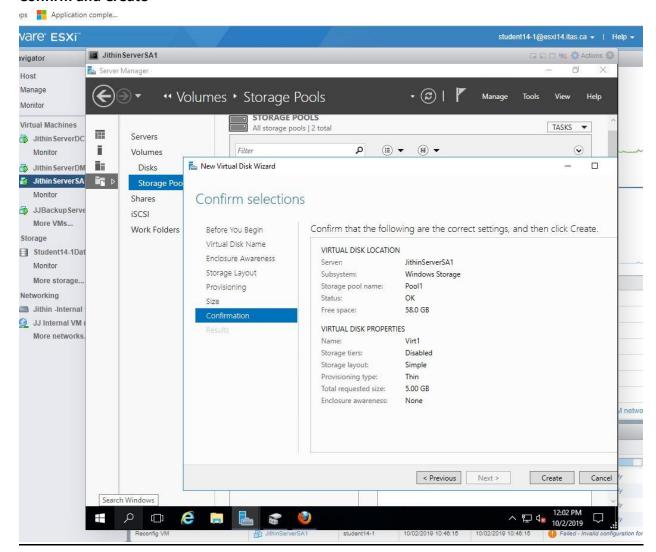


Figure 2: Confirmation tab of the simple virtual disk

**Note:** Confirm the virtual disk in the disk management before you go the next step.

#### Creating a Mirror virtual disk named virt2 under the pool1

- Right-Click on **Pool1**, Create a **New-Virtual Disk**
- Select the **pool1** and click **OK**.

- On Virtual Disk Name, Type Virt2
- Under the Storage Layout Tab, select the mirror and click next.
- Under the provisioning Tab, Select **Fixed**.
- Type 5GB under the Size tab.
- Confirm and Create

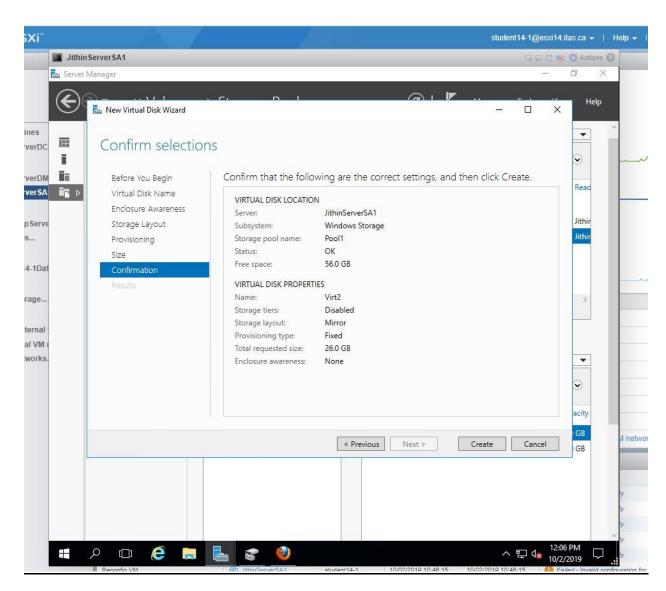


Figure 3: Confirmation tab of the mirror virtual disk 2

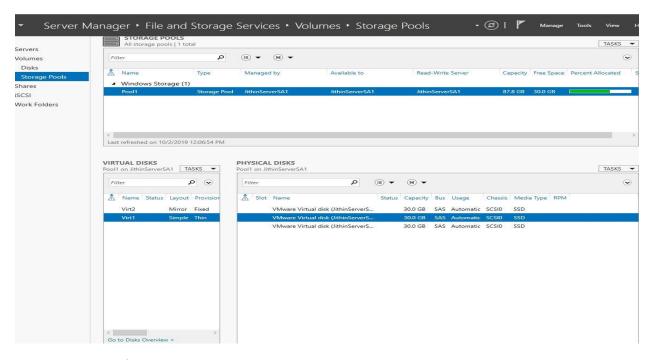


Figure 4: Server Pool after adding the two new virtual disk.

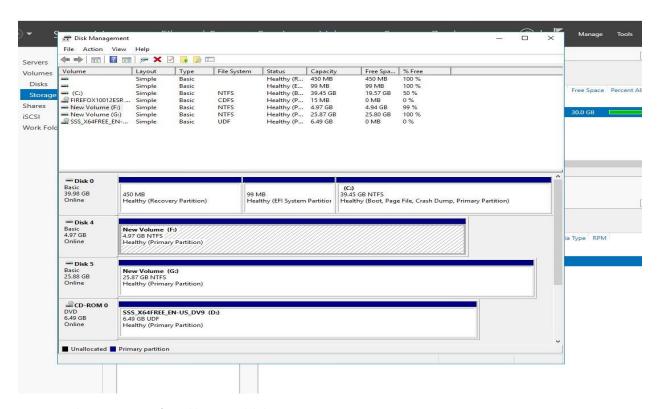


Figure 5:Disk managament after adding virtual disk

#### Playing with the created virtual disk

#### Before adding the new pool to the drive

I was not able to extend the virtual disk named virt1 to 7GB because there were no enough free space on the pool. I also noticed that after creating a mirror virtual disk, I got a notification from the server saying that some disk is out of the storage spaces.

#### Adding a new pool to the drive

- Right-Click on Pool1, add a New-Physical Disk.
- Select the third pool, Click Confirm and create.

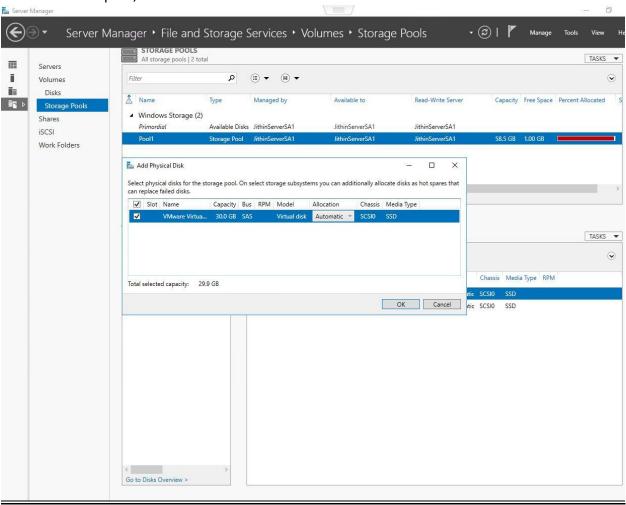


Figure 6:Adding a new physical disk to the pool1

#### After adding a new pool

I was able to extend the virtual disk with simple partition up to 8GB. But , I was not able to extend the virt2 which is formatted with the mirror partition. I could extend the volume now because I have space in the pool after adding a new physical disk into the pool. Virt1 was not unable to use because the new 3 gb were unallocated in the disk management. So , I have to extend the drive the disk management in order to make it usable.

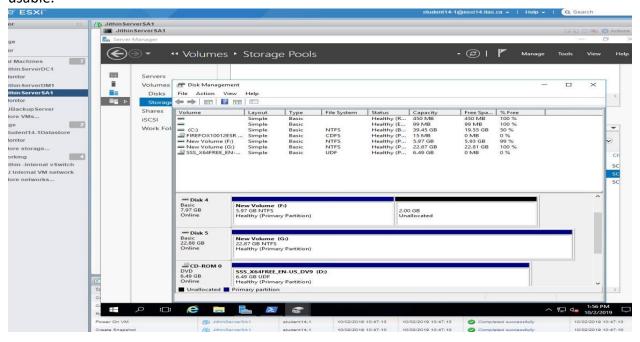


Figure 7: Extending the disk using the server manager

### Part 3:PowerShell Storage Spaces

#### Creating a Parity Virtual Disk with 8GB Fixed

#### **Cmmands Used:**

- \$PoolDsiks= Get-PhysicalDisk -CAnPool \$True
- New-StoragePool -FriendlyName -Pool1 -PhysicalDisk \$PoolDisk
   StorageSubSystemFriendlyName "windows\*"
- New-Volume -StoragePoolFriendlyName -Pool1 -FriendlyName ParityVirtual DriveLetter V -ProvisioningType Fixed -ResiliencySettingName Parity -Size 8GB
- Remove-VirtualDisk ParityVirtuall
- Remove-StoragePool Pool1

**n**ware Esxi student14-1@esxi14.itas.ca → | Help → | Q Search Jithin Server SA1 Navigator - Host indows PowerShell opyright (C) 2016 Microsoft Corporation. All rights reserved. Manage MHz Virtual Machines riendlyName OperationalStatus HealthStatus IsPrimordial IsReadOnly ▼ 

Jithin ServerDC Healthy Monitor JithinServerDMPS C:\Users\Administrator> New-Volume -StoragePoolFriendlyName Pool1 -FriendlyName ParityVirtual -DriveLetter V -ProvisioningType Fixed -ResiliencySettingName Parity -Size 8GB 4 GB DriveLetter FileSystemLabel FileSystem DriveType HealthStatus OperationalStatus SizeRemaining Size V ParityVirtual NTFS Fixed Healthy OK 7.93 GB 7.92 GB JJBackup Serv More VMs... 4 GB 📅 Disk Management File Action View Help ▼ ■ Student14-1Dat More storage.. Status Capacity
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Get-Physicaldisk -CanPool \$True

Figure 8: Adding a PArity drive using the powershell commands

#### Creating a Fixed Mirror and Thin Simple Virtual Disk

#### **Cmmands Used:**

- \$PoolDsiks= Get-PhysicalDisk -CAnPool \$True
- New-StoragePool -FriendlyName -PhysicalDisk \$PoolDisk -Pool1 StorageSubSystemFriendlyName "windows\*"
- New-Volume -StoragePoolFriendlyName -Pool1 -FriendlyName DriveLetter V - ProvisioningType Fixed - ResiliencySettingName Mirror - Size 8GB
- New-Volume -StoragePoolFriendlyName -Pool1 -FriendlyName ParityVirtual DriveLetter S - ProvisioningType Thin - ResiliencySettingName Simple - Size 8GB

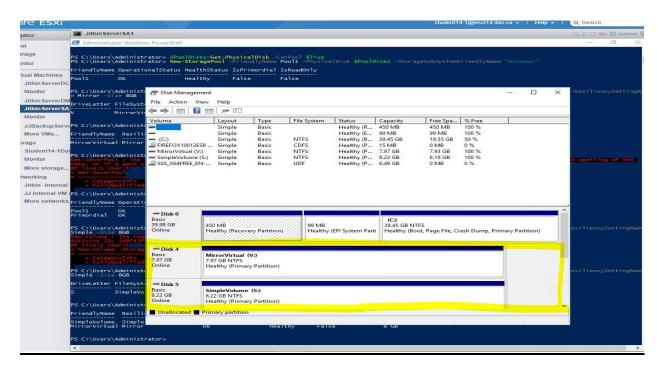


Figure 9: Disk shown in the disk management

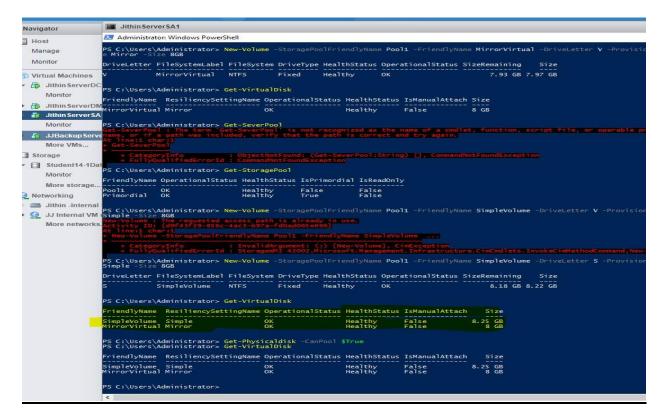


Figure 10: Virtual disks viewed in the power shell

## **Conclusion**

This lab helped me to know more about the server pool and SCSI server. This lab also teach us how to make a server pool using the server manager. Creation of server pool and virtual disk using the power shell was much easier than the creation of the server pool using the GUI . It helped ne different type of provisioning and storage layout that can be created using the power shell. This also taught me a lot of commands that can be used in the power shell which can be used in the creation of the server pool .