Lab Number: 8. WDS

Student name: Raine
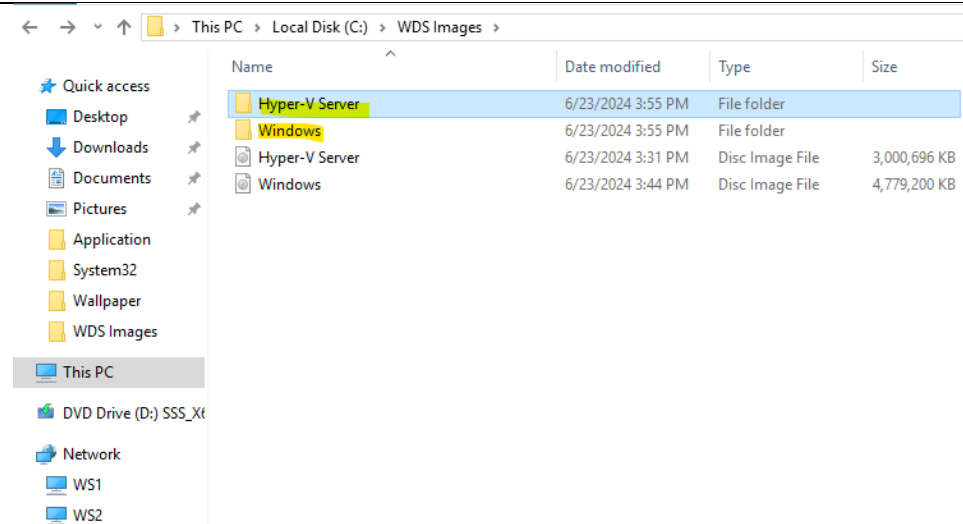
| Section Summary	Section 8: Windows Deployment Services (WDS)
	Goals
	- Deploy an Operating system image to blank VM client using WDS - Create a customised image using sysprep and WDS capture images
	Implementation steps
	1. Ensure the Active Directory Domain Services (Domain controller), DHCP and DNS server roles from section 2 are working properly on WS1
	2. Extract the 'boot.wim' file and all 'install.wim' files from from a Windows 10 ISO file
	3. Extract install.wim file from a Hyper-V server core ISO file
	4. Add the WDS role to WS1
	5. Use the WDS manager tool to install one boot image and multiple install images into one install group
	6. Create a new client VM on the network with no OS or iso file connected - Ensure it is bridged correctly to the receive information from your physical network - It should receive a DHCP address - Press f12 to PXE boot from the network - Log into to your domain - Select the Windows 10 install image i.e. the operating system you wish to install on this new VM node
	7. Make some changes on the new VM and save changes to Sysprep (this creates a customised image) - Create a capture image in WDS Manager boot images folder and save to specific folder - Reboot your client -> pxe boot->select capture image to create a customised image - Specify to upload to WDS server to shared folder (WDS images created in section 4) - Reboot-> PXE boot and select the original boot image to see the customised image

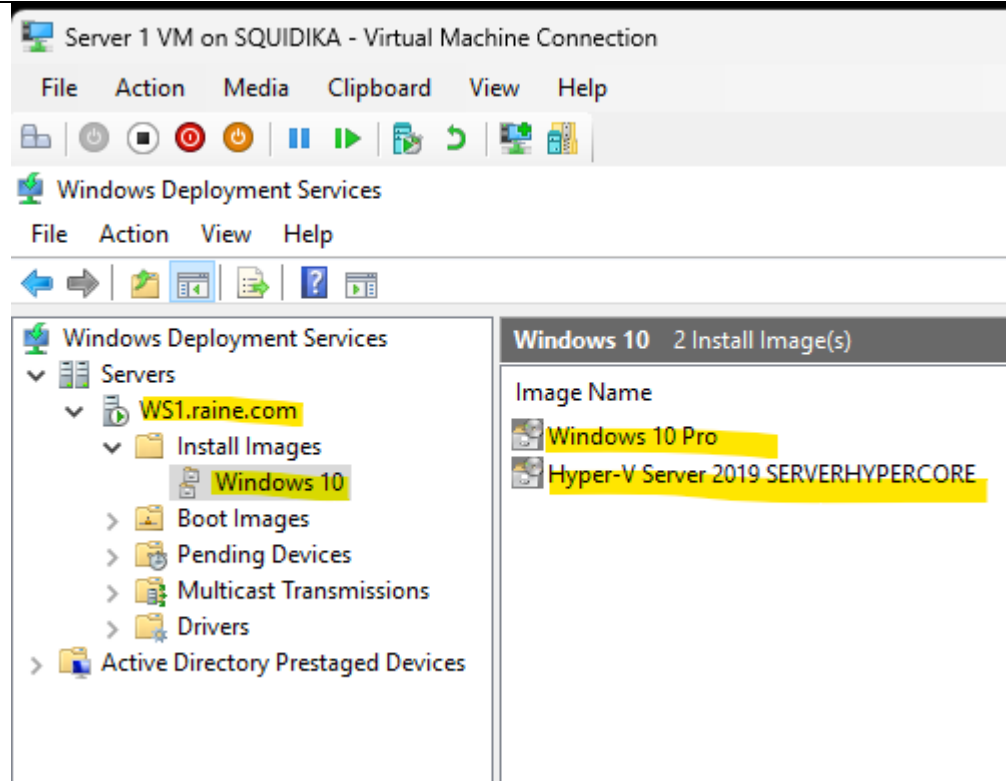| 1 |

Verify AD DS, DNS and DHCP are working from LAB 2 |
|---|---|
| 2 + 3 |

Extract from from a Hyper-V Server iso and a Windows 10 iso |
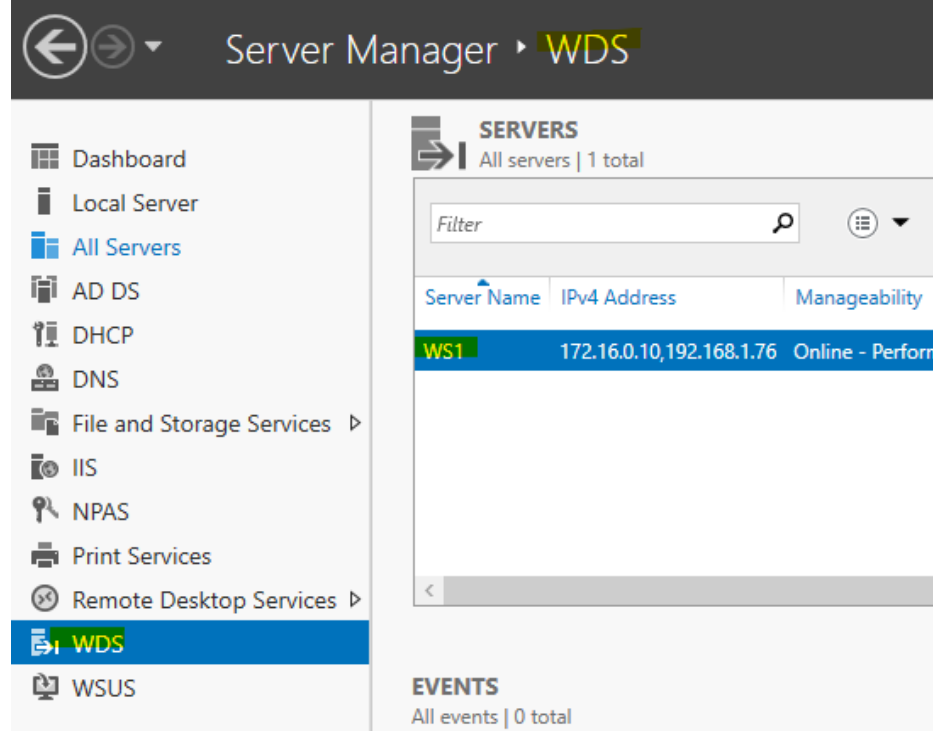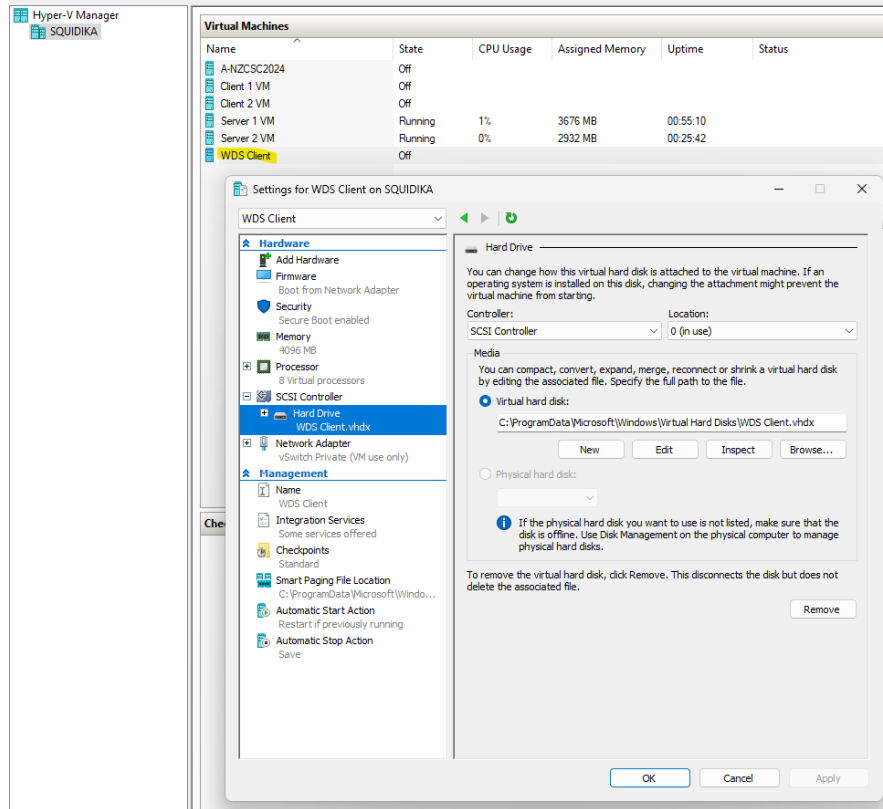
4	Ensure WDS role is installed on WS1
5	Create Boot Images and Install Groups in Windows Deployment Services, make sure that the WDS server can start properly. If not it may need to be reinstalled.

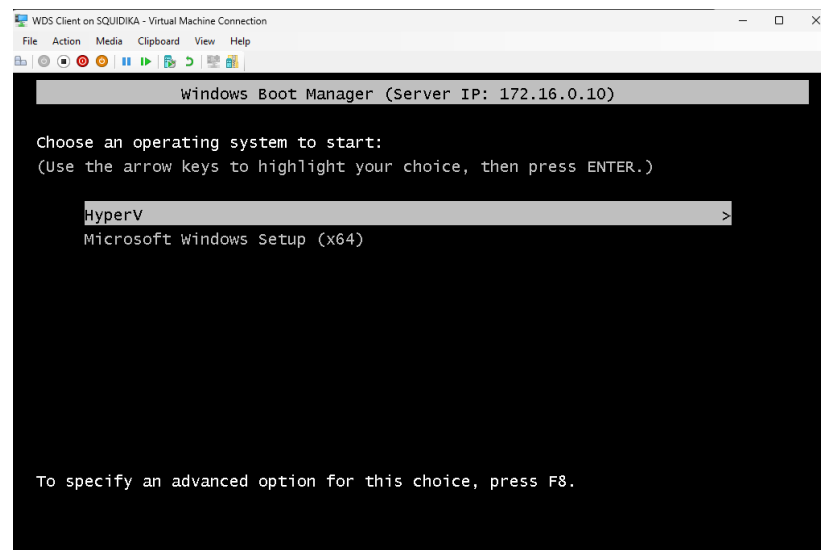| 6	
	Create a VM without an OS in Hyper-V with connection to the same Virtual Switch as the domain.
	Received this issue, after various retries. It receives addresses from the DHCP but runs into the error PXE-E16 and cannot deploy the image.
	To resolve this, I had to uninstall/remove the role WSD from the WS1 server and reinstall it as a standalone server instead of an AD DS connected one.

```
WDS Boot Manager version 0800
Client IP: 172.16.0.21
Server IP: 172.16.0.10
Server Name: WS1.raine.com

Press ENTER for network boot service.




>>Start PXE over IPv4.
```
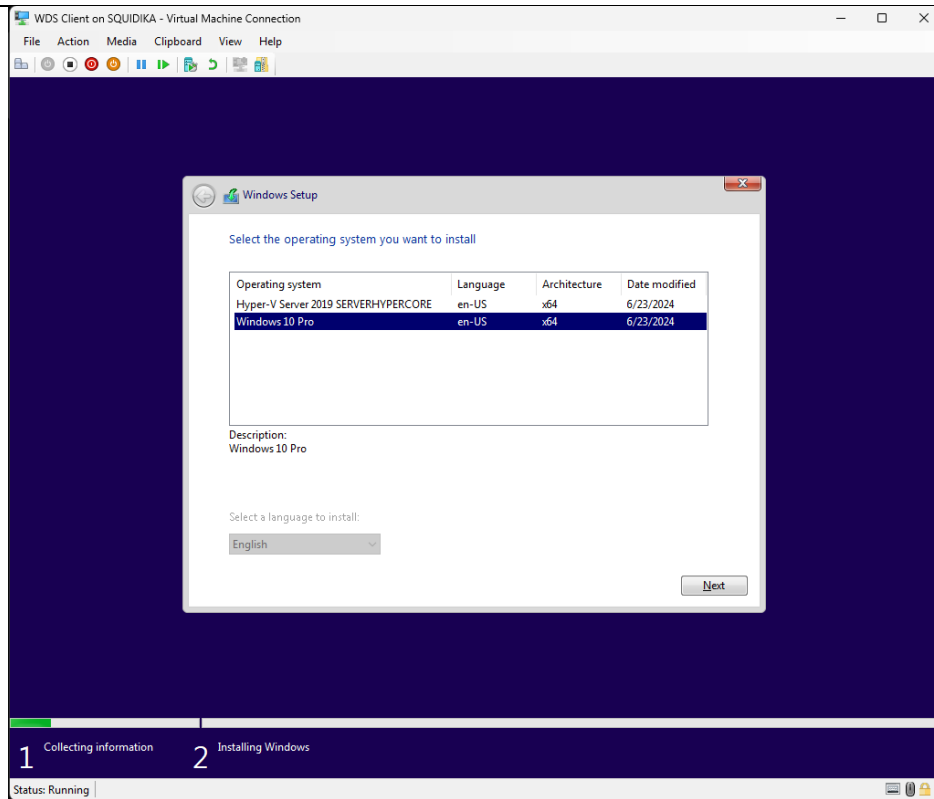
Now client, server and server name are resolving and PXE Boot can continue.
I will be booting windows 10.

```
WDS Client on SQUIDIKA - Virtual Machine Connection          —  □  ✕
File  Action  Media  Clipboard  View  Help

         Windows Boot Manager (Server IP: 172.16.0.10)

Choose an operating system to start:
(Use the arrow keys to highlight your choice, then press ENTER.)

        HyperV                                            >
        Microsoft Windows Setup (x64)






To specify an advanced option for this choice, press F8.
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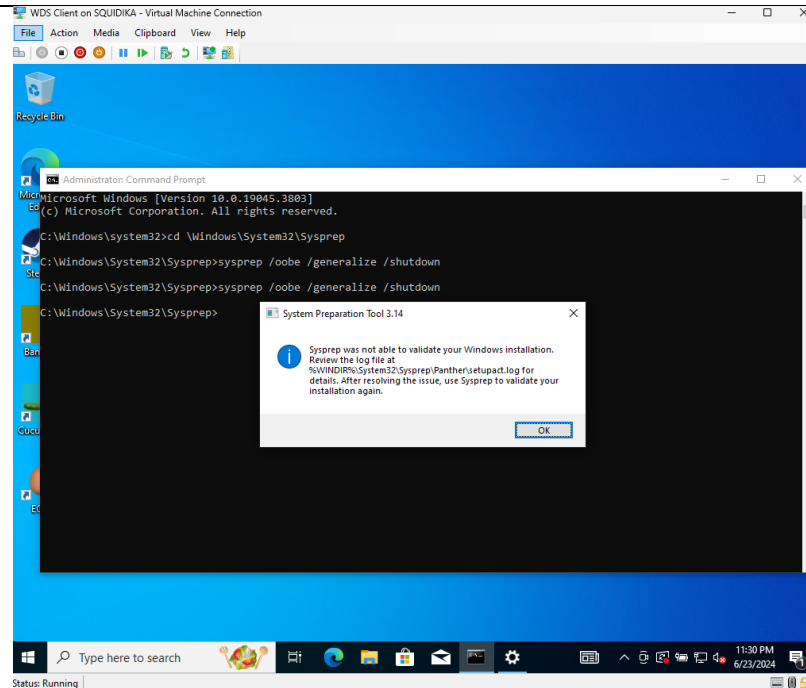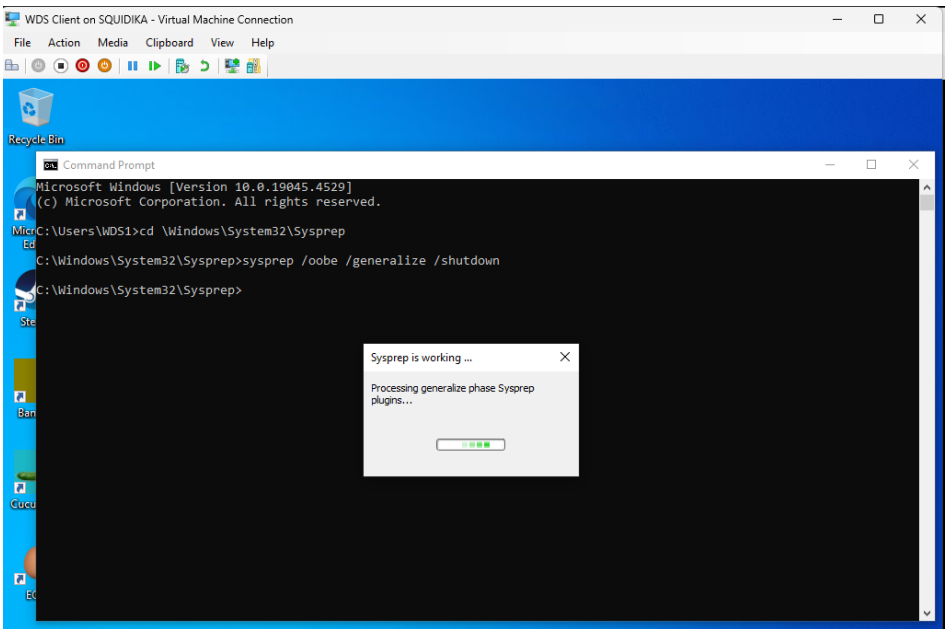
Select Windows Setup

Login using the Domain\Admin account and select windows 10 pro.

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Installed some games on Steam to use as customization.

Attempting to make changes on the new VM and using Sysprep causes an issue that the image cannot be validated. Attempting to clear this by running through all windows updates before restarting and trying again.
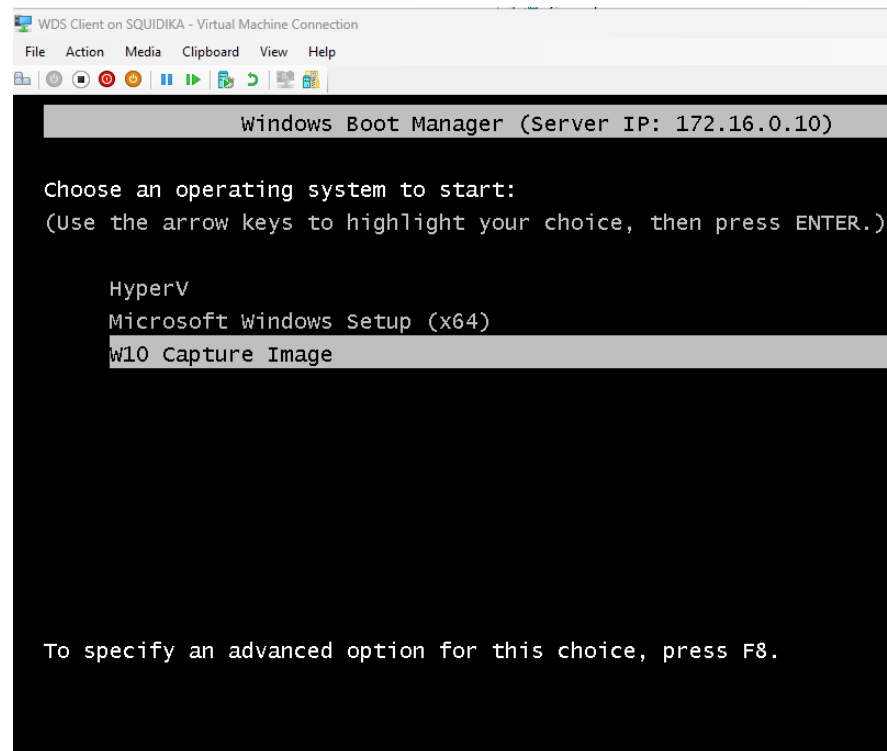

After updates are complete and the system restarts, Sysprep begins with no new issue.
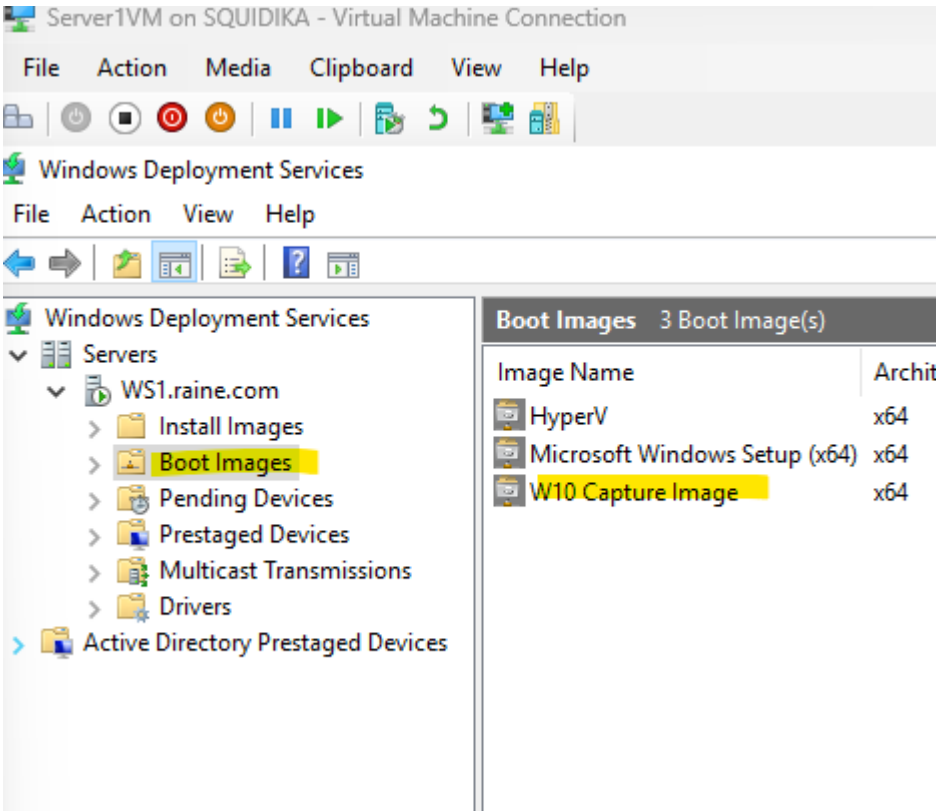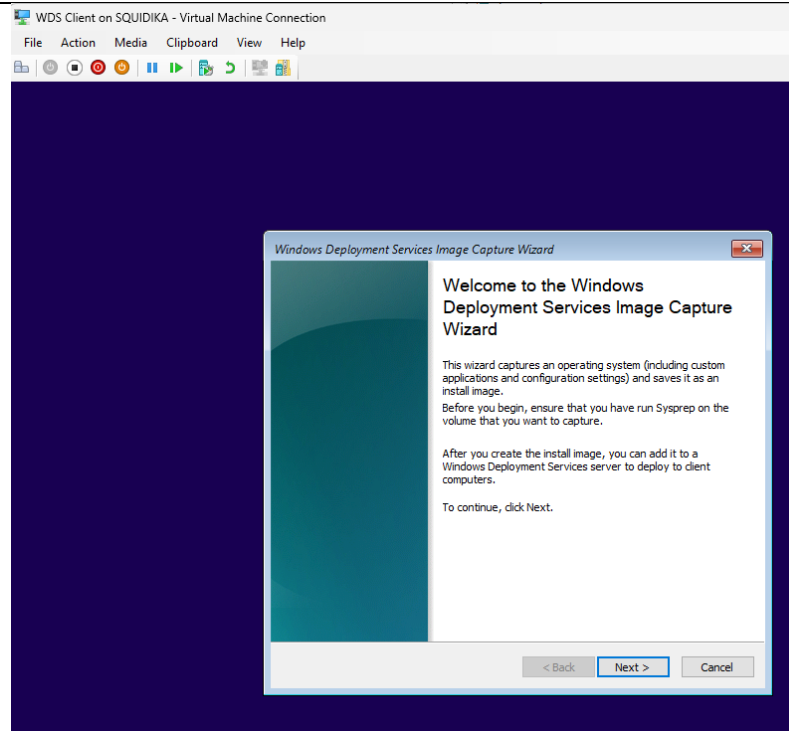
Use WDS to create a new image capture boot.
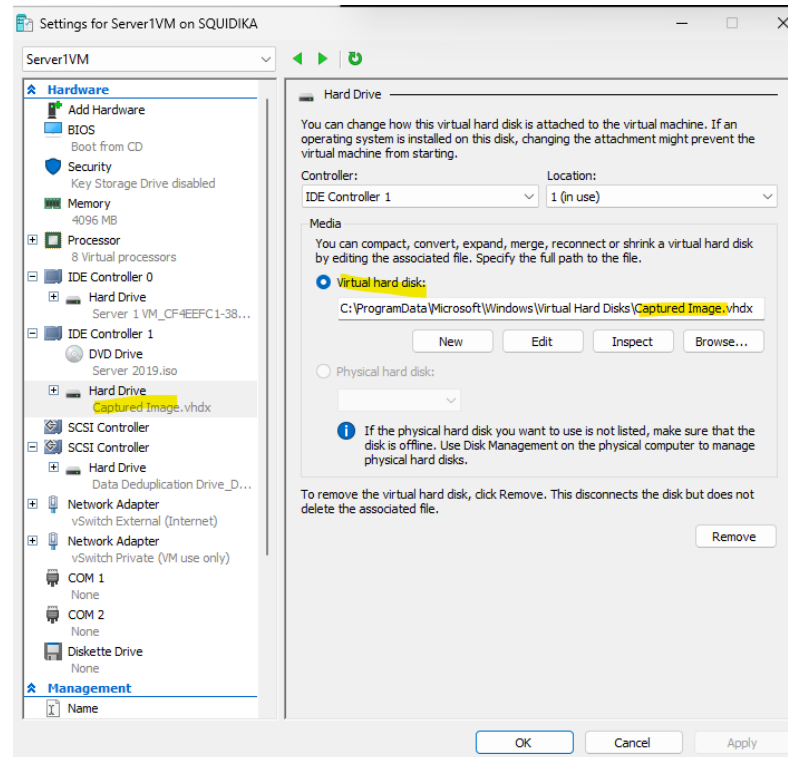
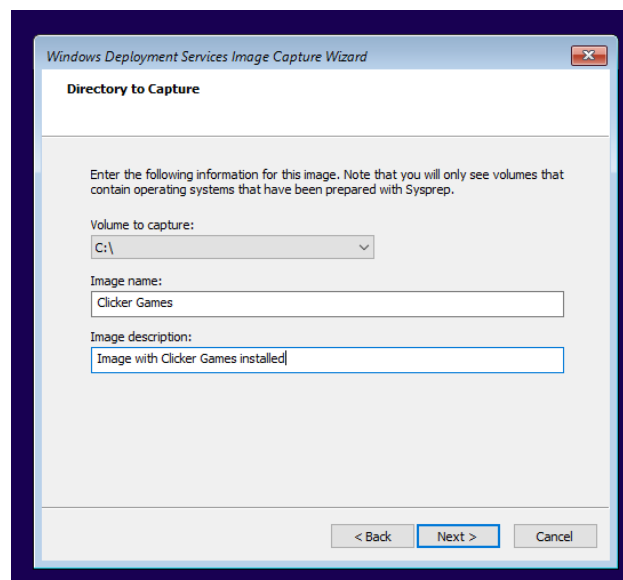Create a new hard drive to contain captured images

Boot back into PXE boot and selesct the create capture image boot.
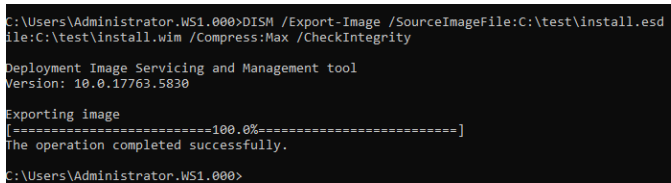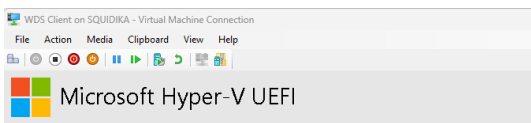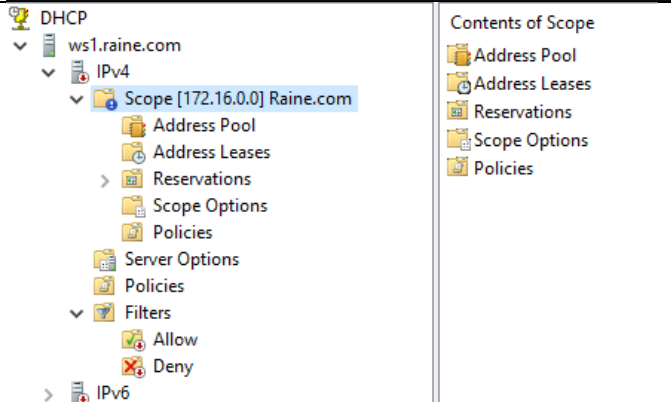
Windows capture wizard begins.

Clone the C:\ drive and customise the name, now a new clicker.wim has been created and we are able to see the customised boot image in the PXE Boot options after installing it through WDS.

List At the three most useful Internet resources that you used (provided by the tutor)

https://www.youtube.com/watch?v=-TsqAHUWdQU
• http://www.technig.com/how-to-install-and-configure-wds-in-Windows-server-2012-r2/
• https://www.youtube.com/watch?v=8Dyt14tFk0M

List all (at least three) Internet resources that you found and used that were not provided by the tutor)

deployment - How to get install.wim from windows 10 pro installation file - Stack Overflow
How Do I Install Windows 10 From A WIM File? - FAQS Clear
How to create an unattended installation of Windows 10	Windows Central

Problem	Solution
No Windows 10 install.wim file in extracted Win10 iso.	Convert the install.esd that replaces it into a wim using cmd: dism /Export-Image /SourceImageFile:C:pathtofoldersourcesinstall.esd /SourceIndex:6 /DestinationImageFile:C:pathtofoldersourcesinstall.wim /Compress:Max /CheckIntegrity C:\Users\Administrator.WS1.000>DISM /Export-Image /SourceImageFile:C:\test\install.esd ile:C:\test\install.wim /Compress:Max /CheckIntegrity Deployment Image Servicing and Management tool Version: 10.0.17763.5830 Exporting image [==========================100.0%========================] The operation completed successfully. C:\Users\Administrator.WS1.000>

WDS Client on SQUIDIKA - Virtual Machine Connection
File Action Media Clipboard View Help
Microsoft Hyper-V UEFI
Virtual Machine Boot Summary
1. Network Adapter (00155D38010D)
   A boot image was not found.
2. SCSI Disk   (0,0)
   The boot loader did not load an operating system.
 	
VM was able to start a network boot but did not find a bootable image on the network.
	DHCP
	∨ ws1.raine.com
	  ∨ IPv4
	    ∨ Scope [172.16.0.0] Raine.com
	        Address Pool
	        Address Leases
	      > Reservations
	        Scope Options
	        Policies
	      Server Options
	      Policies
	  ∨ Filters
	      Allow
	      Deny
	  > IPv6
	
	Contents of Scope
	  Address Pool
	  Address Leases
	  Reservations
	  Scope Options
	  Policies

	Forgot to reconfigure scope for DHCP server, which was deleted after resetting the VM during LAB 3