

Lab Number: 1. Installation and Configuration

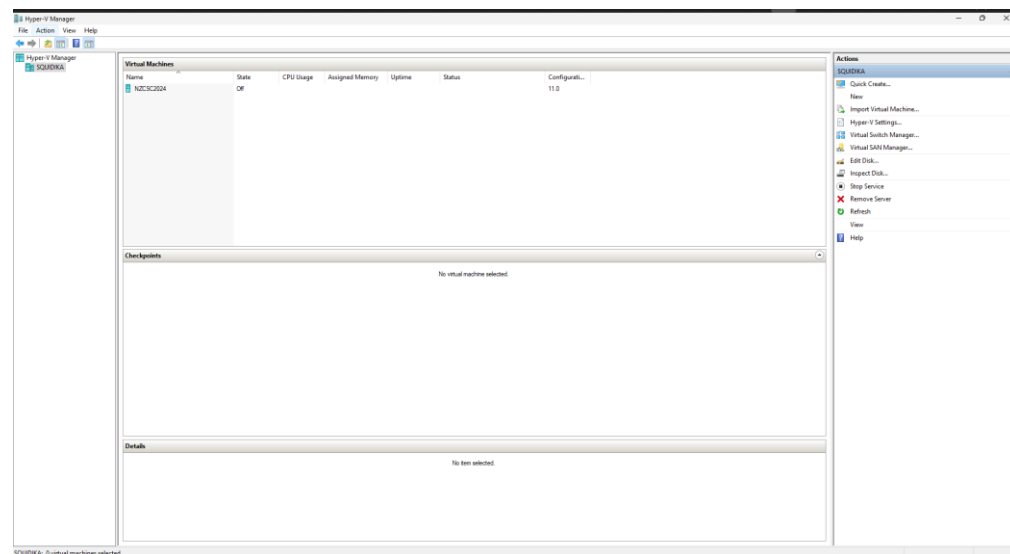
Student: Raine Roberts

Section Summary	<p data-bbox="394 384 1029 415">Section 1: installation and initial configuration</p> <p data-bbox="394 432 467 464">Goals</p> <p data-bbox="394 472 1219 504">Complete the following implementation tasks for both WS1 and WS2:</p> <ul data-bbox="443 512 1414 894" style="list-style-type: none">• Create 2 server virtual machines and install Windows Server 2019 Datacenter.• Create 1 client machine and install Windows 10• Set the default administrator user password, time-zone, date-time format and power settings.• Design a Class B IP addressing scheme for your network and configure the manual IPv4 address configurations.• Use the control panel to discover and configure settings• Set a Windows Registry variable• Turn windows firewall/defender off• Cable the network and test ping connectivity between devices. <p data-bbox="394 945 675 976">Implementation steps</p> <ol data-bbox="443 984 1382 1774" style="list-style-type: none">1. Install VMware Workstation Professional (VMware) on your laptop/device using the supplementary instructions.2. Install Windows Server 2019 Data Centre (Desktop experience) virtual machine using VMware and the ISO files provided by your tutor.<ol data-bbox="537 1176 1243 1318" style="list-style-type: none">a. Minimum Hard disk size: 40GBb. Bridged network adapter – to physical network adapterc. Minimum RAM: 4GBd. Multi-file3. Set the following on each server using the control panel:<ol data-bbox="537 1402 1382 1774" style="list-style-type: none">a. Your user and the default Administrator user password: Router01 (blank by default)b. Give each server a computer name: WS1 or WS2 respectivelyc. Timezone: Auckland, NZd. Calendar: Gregoriane. First day of week: Sundayf. Short date format: e.g. 5/4/2021g. Long date format: e.g. Wednesday, 5 April 2021h. Time format: e.g. 9:40:07 AMi. Power: High performance plan
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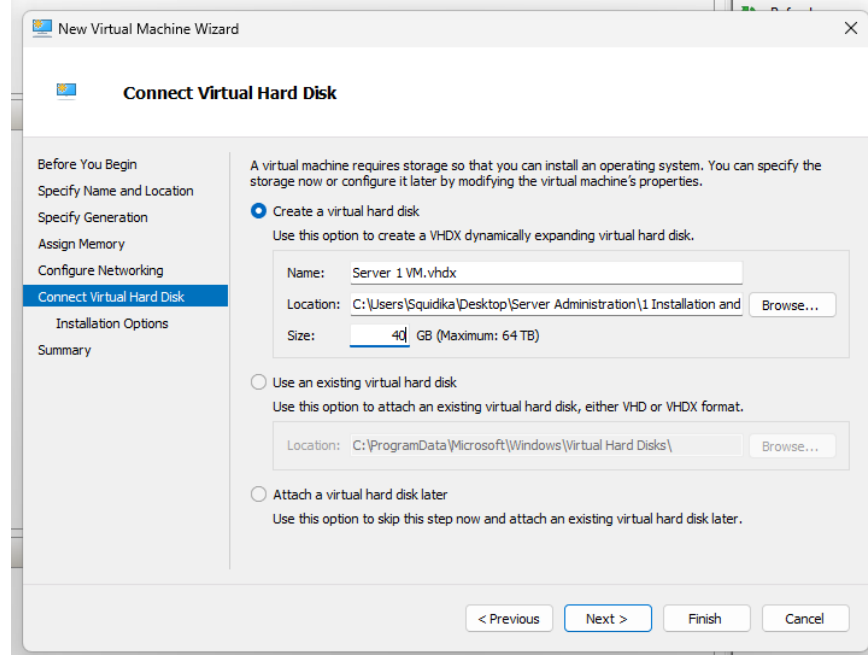
4. Design the IP addressing scheme for your network and manually configure:
 - a. IPv4 address
 - b. Subnet mask
 - c. Leave default gateway blank
 - d. DNS server: WS1 IP address
 - e. Alternate DNS server: WS2 IP address
5. Turn on Network discovery and file sharing through the control panel
6. Find the default settings for '**processor scheduling**' and '**Data prevention and execution**' in Control Panel.
7. Update any required drivers for any hardware components highlighted in Device Manager.
8. Set the HKEY_CLASSES_ROOT->.ac3 windows registry settings to: **audio**.
9. Cable the network as indicated in the project diagram.
10. Turn Windows firewall/defender off
11. Use command prompt to ensure WS1, WS2 and the client VMs are connected.

1.

For the duration of my labs, I will be using Hyper-V.

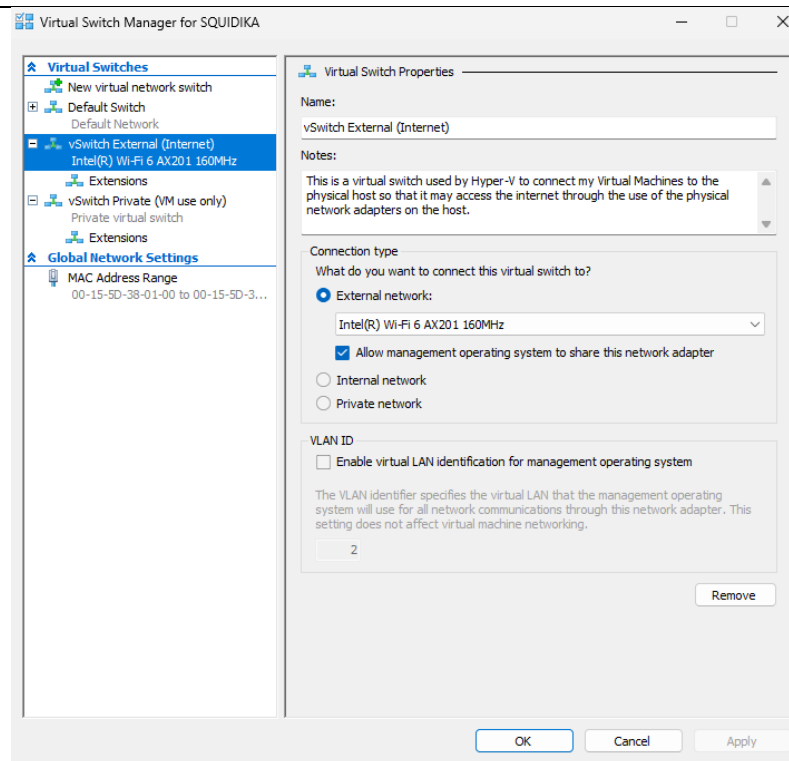


2.a

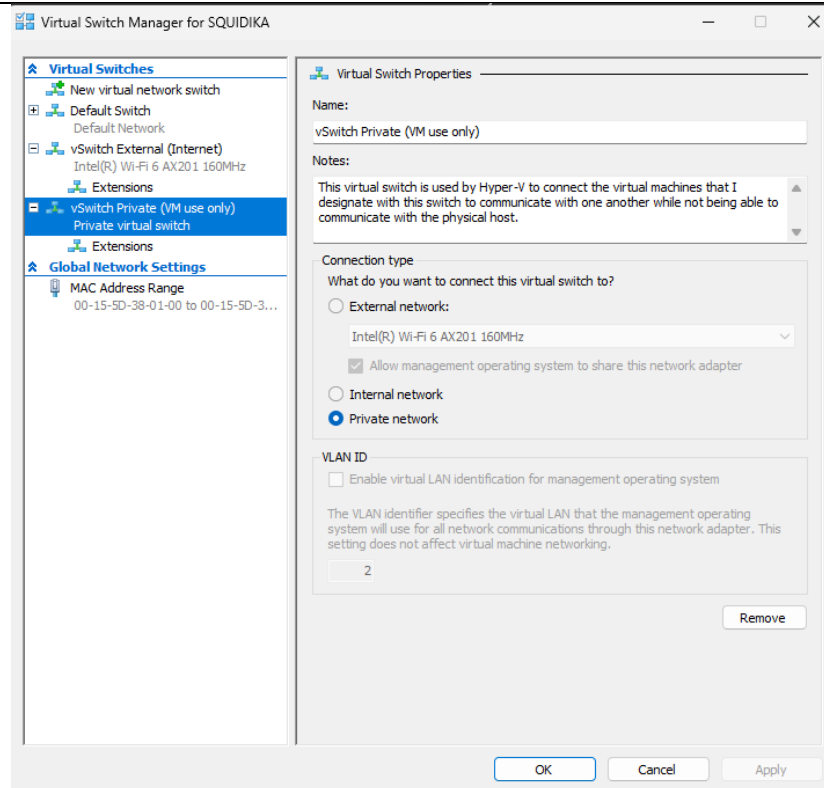


40GB Virtual Disk

2.b



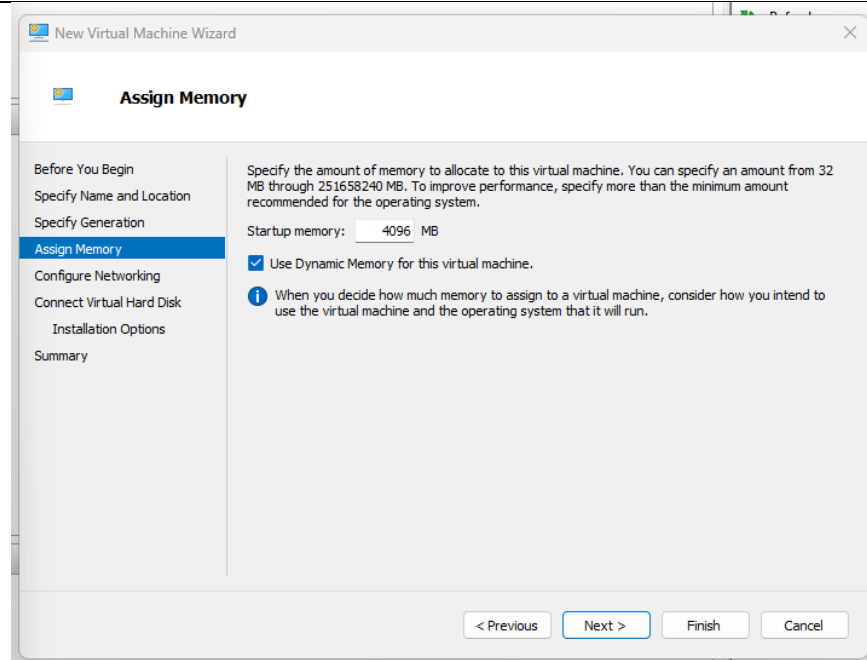
External Switch




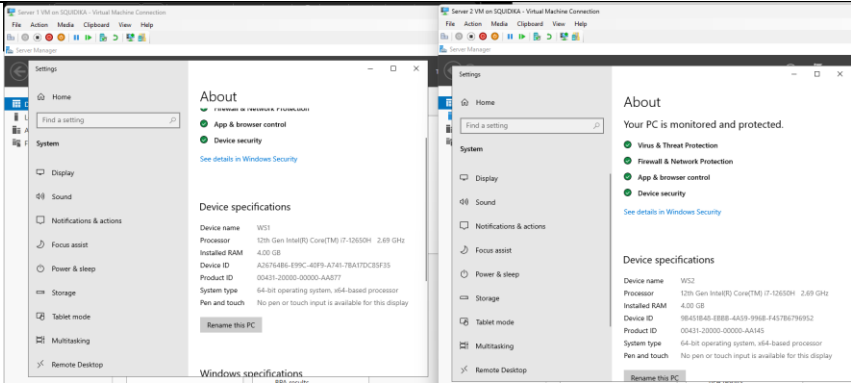
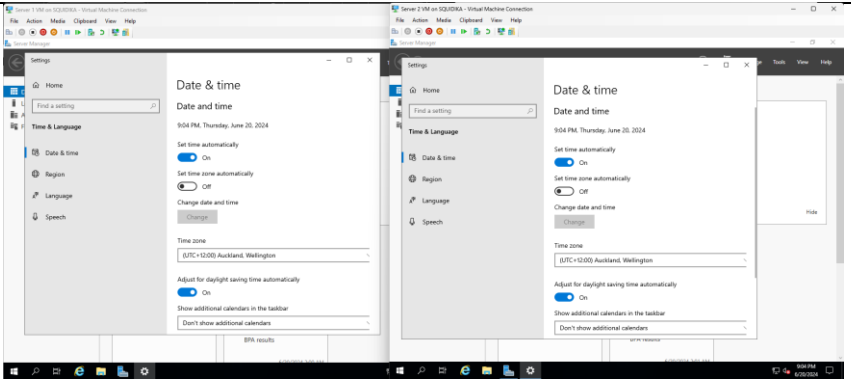
Private Switch

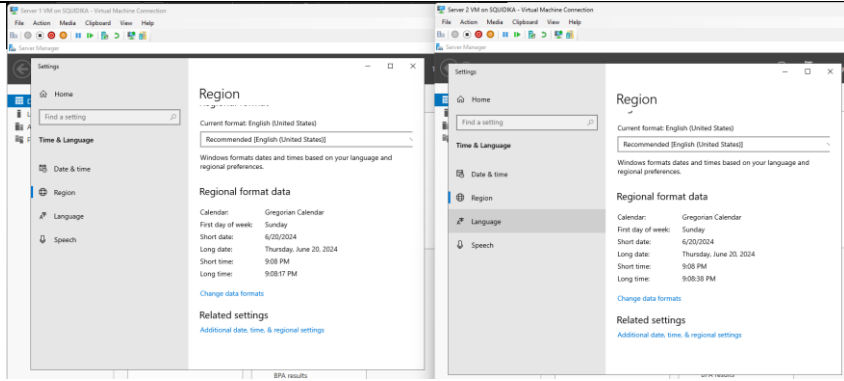
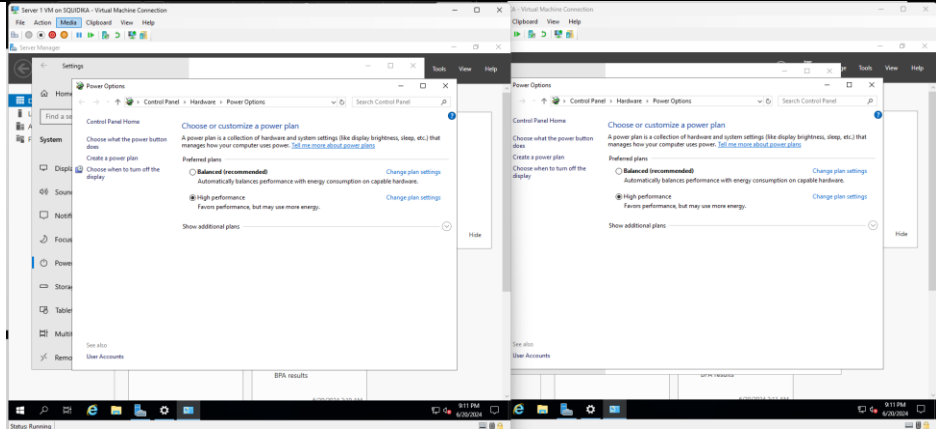
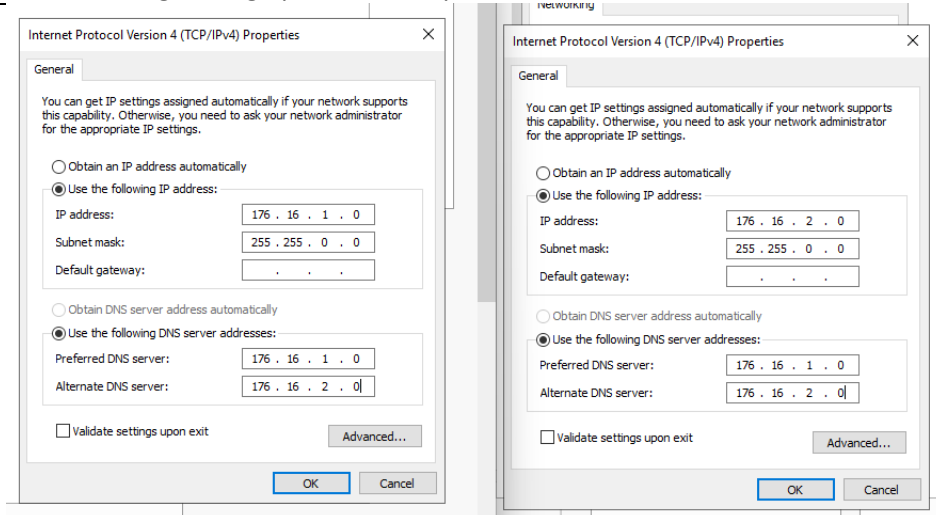
Creation of External and Private vSwitches to create an internal network between VM's and external network to interact with the internet.

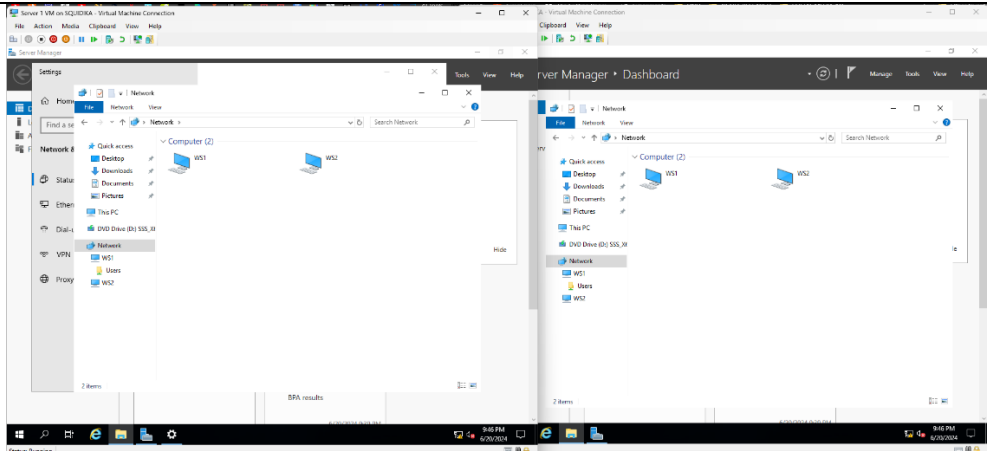
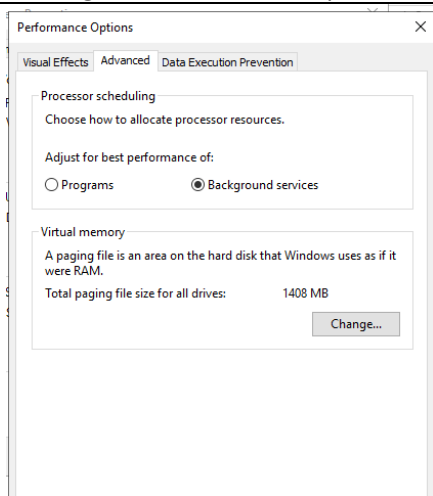
2.c

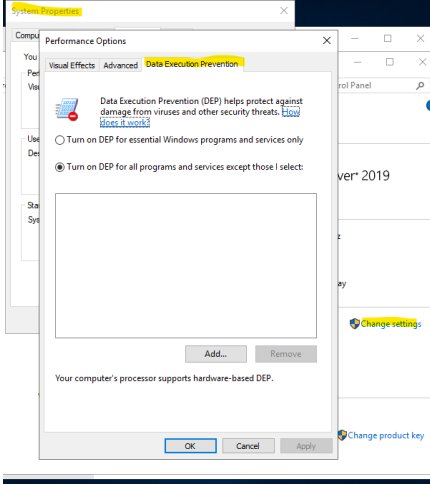
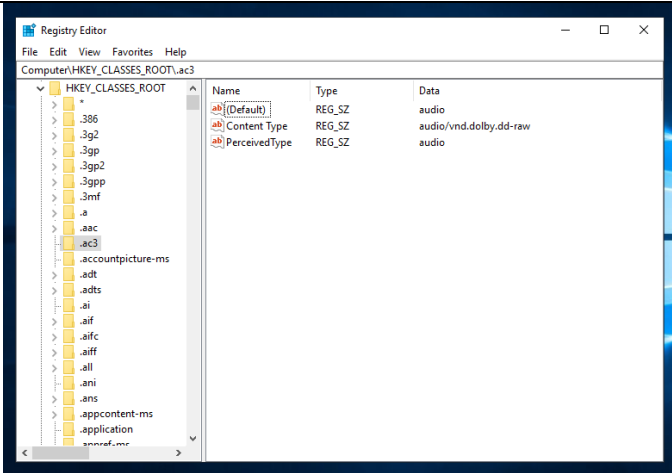
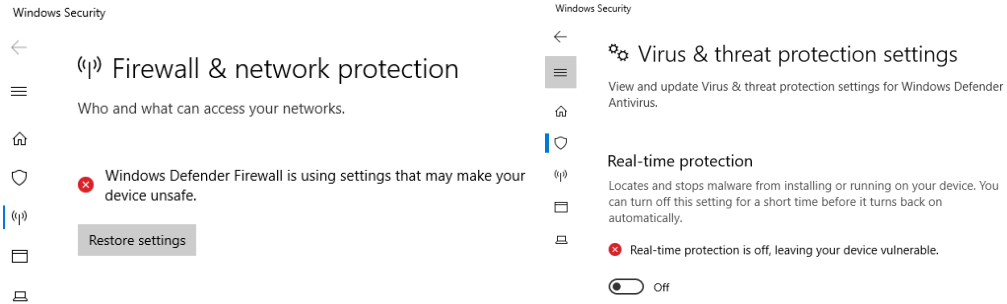


Assigned 4GB RAM

2.d	Not enabled on Hyper-V
3.a	 <p>The image shows a Windows login screen. At the top, there is a large circular icon representing a person. Below it, the word "Administrator" is displayed in a large, white, sans-serif font. At the bottom, there is a password input field containing the text "Router1". To the right of the input field is a blue button with a white eye icon and a right-pointing arrow.</p>
3.b	 <p>The image shows two side-by-side Windows Settings windows. Both windows are open to the "About" section, which displays system specifications. The left window shows the "About" section with the "Device specifications" tab selected. The right window shows the "About" section with the "Device specifications" tab selected. Both windows show the same system information, including the device name "WS1", processor "12th Gen Intel(R) Core(TM) i7-12650H", installed RAM "4.00 GB", device ID "A267486-E99C-409F-A746-78A7DCB3F35", product ID "00431-20000-00000-AA077", system type "64-bit operating system, x64-based processor", and pen and touch input availability.</p>
3.c	 <p>The image shows two side-by-side Windows Settings windows. Both windows are open to the "Date & time" section. The left window shows the "Date & time" section with the "Date and time" tab selected. The right window shows the "Date & time" section with the "Date and time" tab selected. Both windows show the same date and time settings, including the date "Thursday, June 20, 2024", time "9:04 PM", and time zone "UTC+12:00 Auckland, Wellington".</p>

	Computer times set to Auckland
3.d	
	Calendar set above
3.e	First day of the week set above
3.f	Short date set above
3.g	Long date set above
3.h	Time format set above
3.i	
	Power setting set High performance plan
4.a	
	Configure class B ip address scheme:

	Network address - 176.16.0.0/16
4.b	Subnet mask set 255.255.248.0
4.c	Default gateway blank
4.d	DNS set to WS1 IP address
4.e	Alternate DNS set to WS2 IP address
5	<div><p>The screenshot shows two overlapping windows. The left window is the Windows Settings app, specifically the 'Network' section, displaying a list of network adapters and their status. The right window is the Server Manager dashboard, showing a list of servers (WS1, WS2) and their network configuration details, including IP addresses and DNS settings.</p></div>
	Sharing enabled, both computers discoverable on the network.
6	<div><p>The screenshot shows the 'Performance Options' dialog box in Windows. The 'Advanced' tab is selected, and the 'Processor scheduling' section is expanded. The 'Adjust for best performance of:' radio button is selected, and the 'Background services' option is chosen. The 'Virtual memory' section is also visible, showing the total paging file size for all drives as 1408 MB.</p></div>
	Default processor scheduling

	 <p>Default Data prevention and execution</p>
7	Drivers updated
8	 <p>HKEY_CLASSES_ROOT->.ac3 windows registry default set to audio</p>
9	Lab set up locally on device, no connection to ethernet required
10	 <p>Fire wall and defender off</p>
11	Basic ping between both server on the private network.

	<pre> C:\Users\Administrator>ping 172.21.58.28 Pinging 172.21.58.28 with 32 bytes of data: Reply from 172.21.58.28: bytes=32 time<1ms TTL=128 Reply from 172.21.58.28: bytes=32 time=1ms TTL=128 Reply from 172.21.58.28: bytes=32 time=2ms TTL=128 Reply from 172.21.58.28: bytes=32 time=1ms TTL=128 Ping statistics for 172.21.58.28: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 2ms, Average = 1ms C:\Users\Administrator> </pre>	
WS2 > WS1		
	<pre> C:\Users\Administrator>ping 172.21.57.251 Pinging 172.21.57.251 with 32 bytes of data: Reply from 172.21.57.251: bytes=32 time<1ms TTL=128 Reply from 172.21.57.251: bytes=32 time=1ms TTL=128 Reply from 172.21.57.251: bytes=32 time<1ms TTL=128 Reply from 172.21.57.251: bytes=32 time<1ms TTL=128 Ping statistics for 172.21.57.251: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 1ms, Average = 0ms C:\Users\Administrator> </pre>	
WS1 > WS2		

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

<ul style="list-style-type: none"> • Install Window server on VM • https://www.youtube.com/watch?v=7LxauswRUoE
<ul style="list-style-type: none"> • Date and time format • https://www.youtube.com/watch?v=al0aBV6n9O0
<ul style="list-style-type: none"> • Windows Power settings • https://www.youtube.com/watch?v=y0R8eZ7enwY

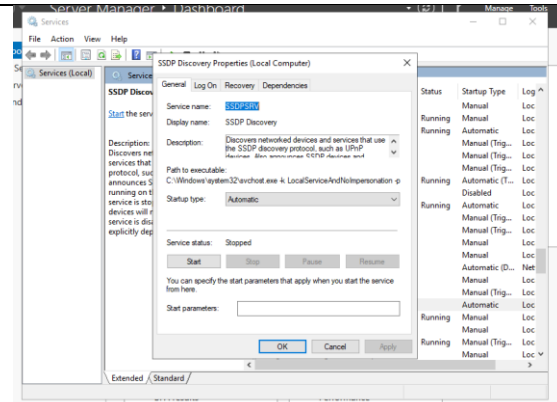
List all (at least three) Internet resources that you found and used that were not provided by the tutor)

<ul style="list-style-type: none"> • https://www.microsoftpressstore.com/articles/article.aspx?p=2201312&seqNum=5
<ul style="list-style-type: none"> • https://docs.microsoft.com/en-us/troubleshoot/windows-server/deployment/use-device-manager-configure-devices
<ul style="list-style-type: none"> • https://www.computerhope.com/issues/ch001348.htm

Problem

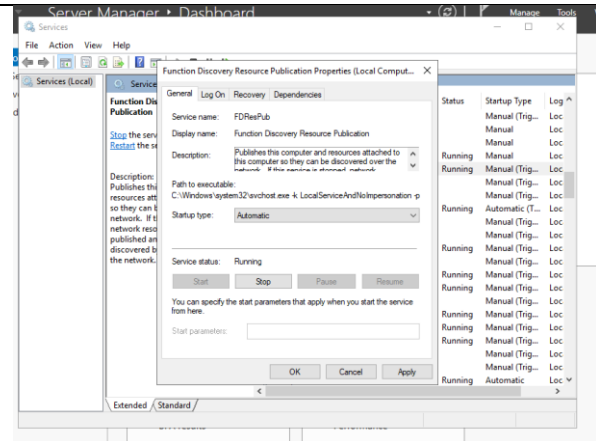
Network discovery disabled.

Solution



Set SSDP Discovery to Automatic and restart the service.

Sharing discovery disabled.



Set Function Discovery Resource Publication to Automatic and restart the service.