

Create a Windows VM using Oracle VM VirtualBox

The purpose of this assignment is to create Windows 2019 VMs within Oracle VirtualBox VM Manager. You will create a Windows VM two different ways. Once performing the actual OS installation using the .iso file and another by using .vhd file. You can download the download the .iso and .vhd from <https://www.microsoft.com/en-us/evalcenter/evaluate-windows-server-2019>. You will need to provide your name and an email address to have access to the files. Reference the image below:

⊖ Windows Server 2019
Evaluations | 180 days

In addition to your trial experience of Windows Server 2019, you can download a new feature on demand for Server Core, the App Compatibility FOD. This FOD contains additional features from the Desktop Experience to improve the compatibility of Server Core for apps and tools used for troubleshooting and debugging. Windows features on demand can be added to images prior to deployment or to actively running computers, using the DISM command. Learn more about the Server Core App Compatibility FOD. Download this FOD. To learn more about FODs in general, and the DISM command, please visit [DISM Capabilities Package Servicing](#).

⊖ Start your evaluation

Please select your experience:

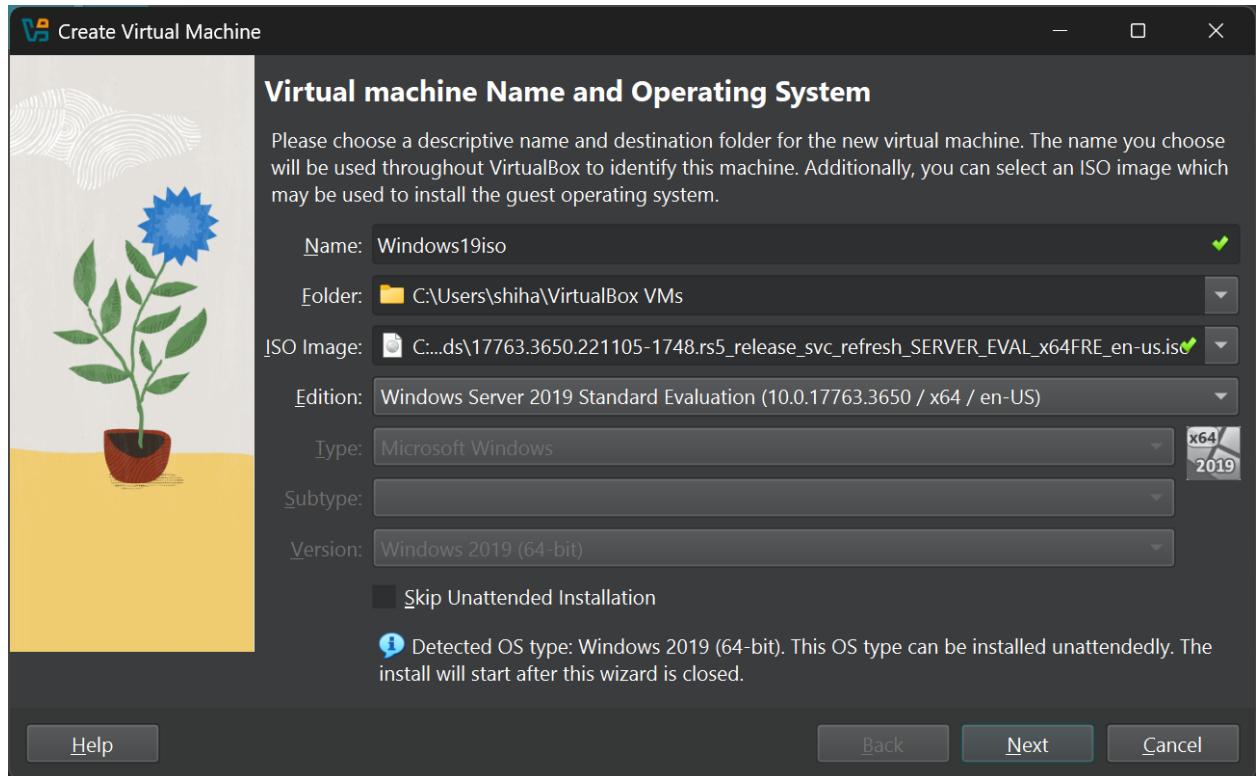
Azure
 ISO
 VHD

Continue

To receive full credit, you must answer the following questions as well as document and provide screenshots showing your steps:

1. (10 points) Create the first Windows 2019 VM using the .ISO file naming the VM "Windows19iso"

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2. (6 points) What are the default settings for CPU, memory, and hard disk size?

Default memory is 2048MB, default CPU is 1, and default HD is 50GB.

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The screenshot shows two consecutive steps of the Oracle VM VirtualBox 'Create Virtual Machine' wizard.

Step 1: Hardware

This step allows you to configure the virtual machine's hardware. It includes sliders for memory and processors, and a checkbox for enabling EFI.

- Base Memory:** Sliders from 4 MB to 16384 MB, currently set to 2048 MB.
- Processors:** Sliders from 1 CPU to 8 CPUs, currently set to 1 CPU.
- Enable EFI (special OSes only)

Buttons: Help, Back, Next, Cancel.

Step 2: Virtual Hard Disk

This step allows you to add a virtual hard disk to the machine. It offers three options: Create a Virtual Hard Disk Now, Use an Existing Virtual Hard Disk File, or Do Not Add a Virtual Hard Disk.

- Create a Virtual Hard Disk Now
 - Disk Size: Sliders from 4.00 MB to 2.00 TB, currently set to 50.00 GB.
 - Pre-allocate Full Size
- Use an Existing Virtual Hard Disk File
 - Ubuntu.vdi (Normal, 25.00 GB) - dropdown menu
- Do Not Add a Virtual Hard Disk

Buttons: Help, Back, Next, Cancel.

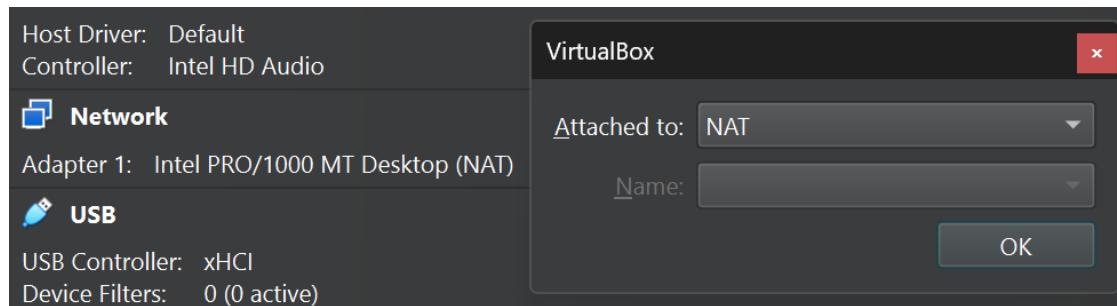
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3. (4 points) Ensure the hard disk is thinly provisioned. What is the benefit of thin provisioning?

The benefit of thin provisioning is that it allocates space as needed, which is a more efficient way of storage.

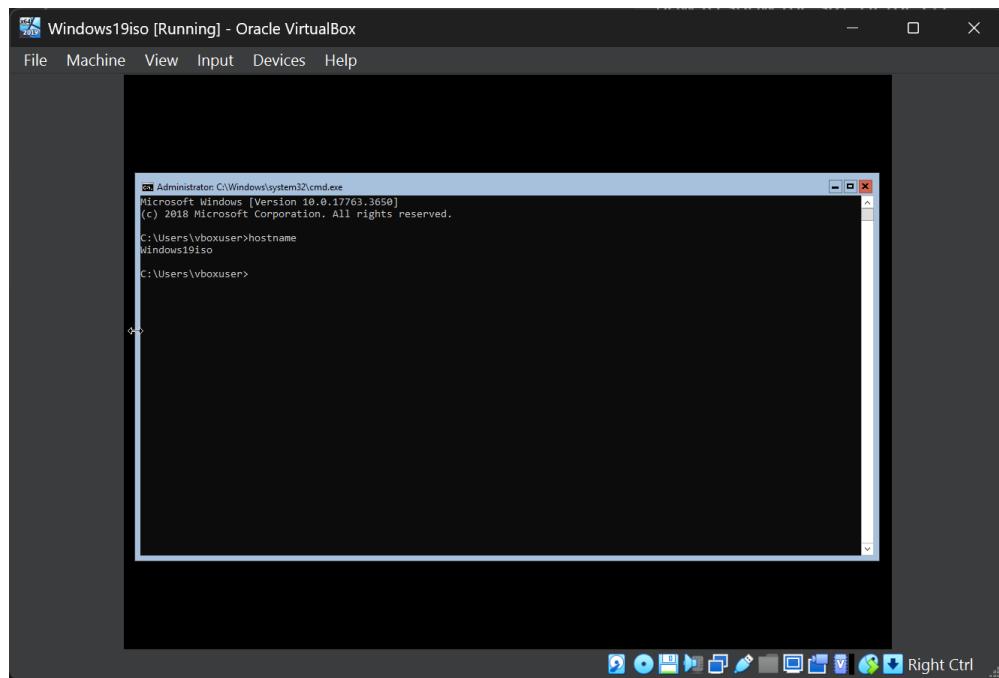
4. (4 points) What is the default network setting (ie. internal network, bridge, etc...)?

The default networking setting is Network Address Translation (NAT).



5. Once the OS installation has completed provide the following information from the guest VM you created:

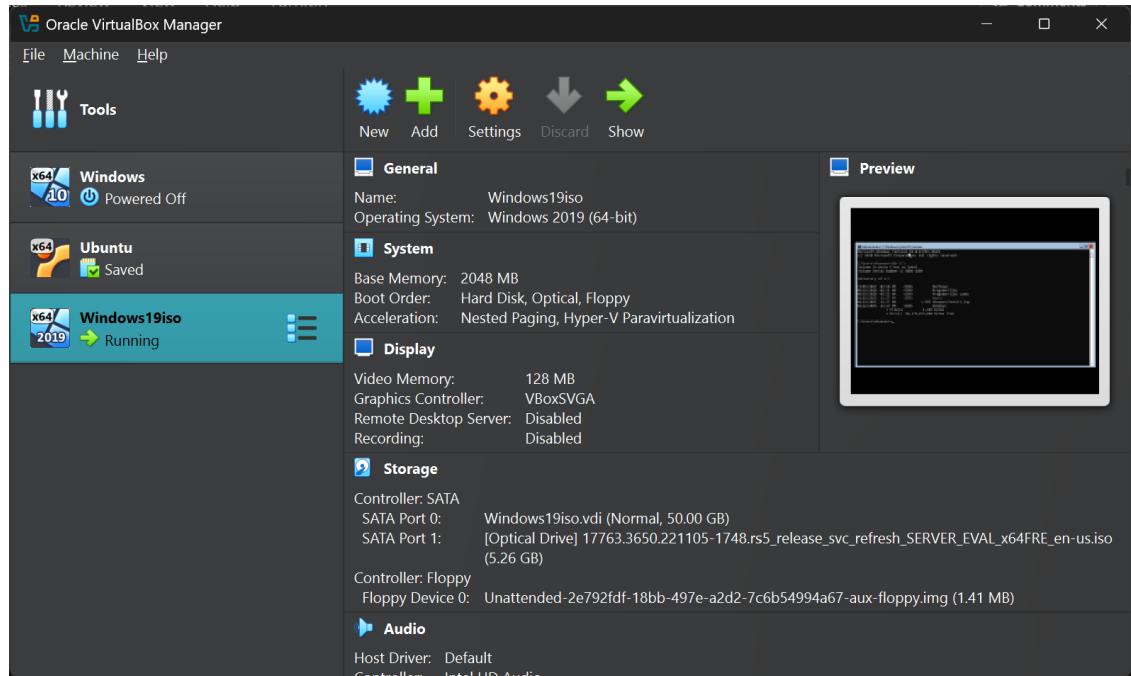
- a. (4 points) Hostname: Windows19iso



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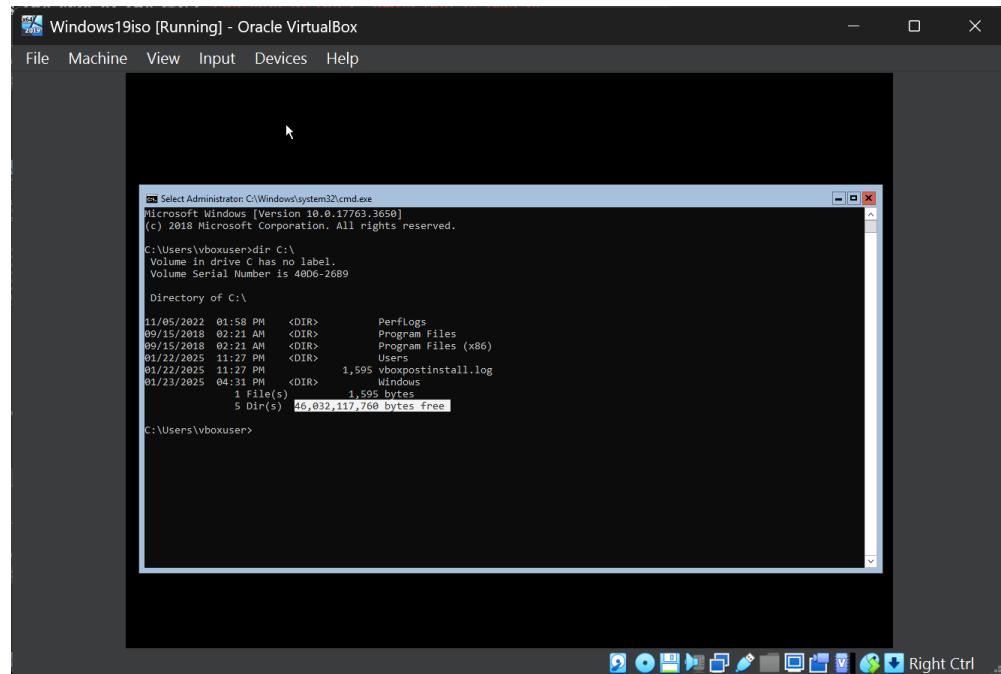
- b. (4 points) Is the hostname different than the name of your VM? If so, why?

No, the hostname is the same as the name of this VM; Windows19iso.

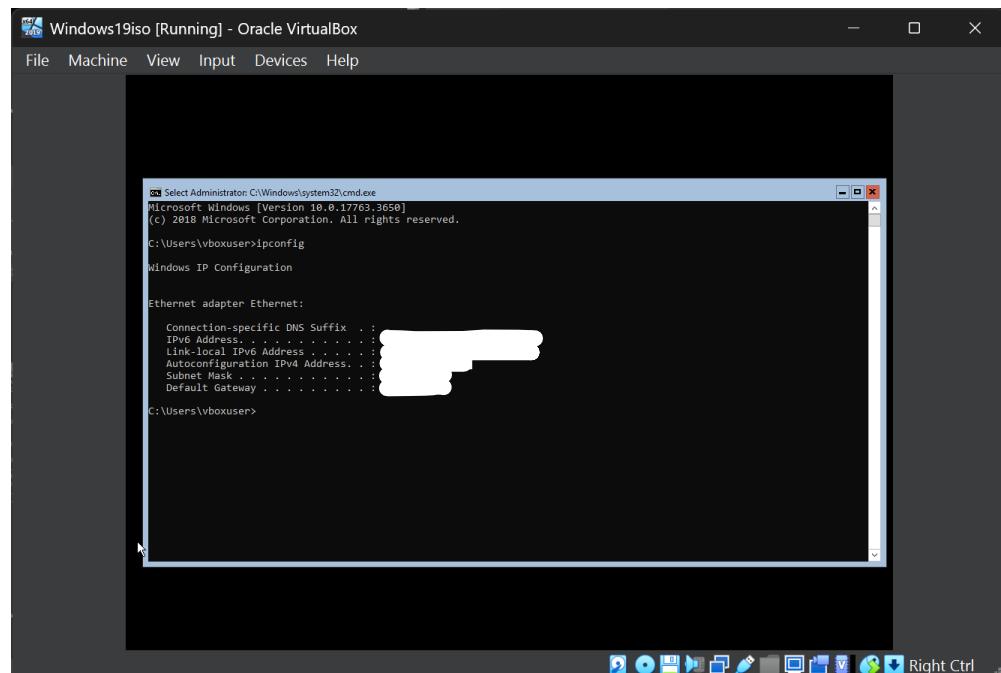


- c. (4 points) What is the size of the C:\? The size of the C drive that is free is 46.18GB

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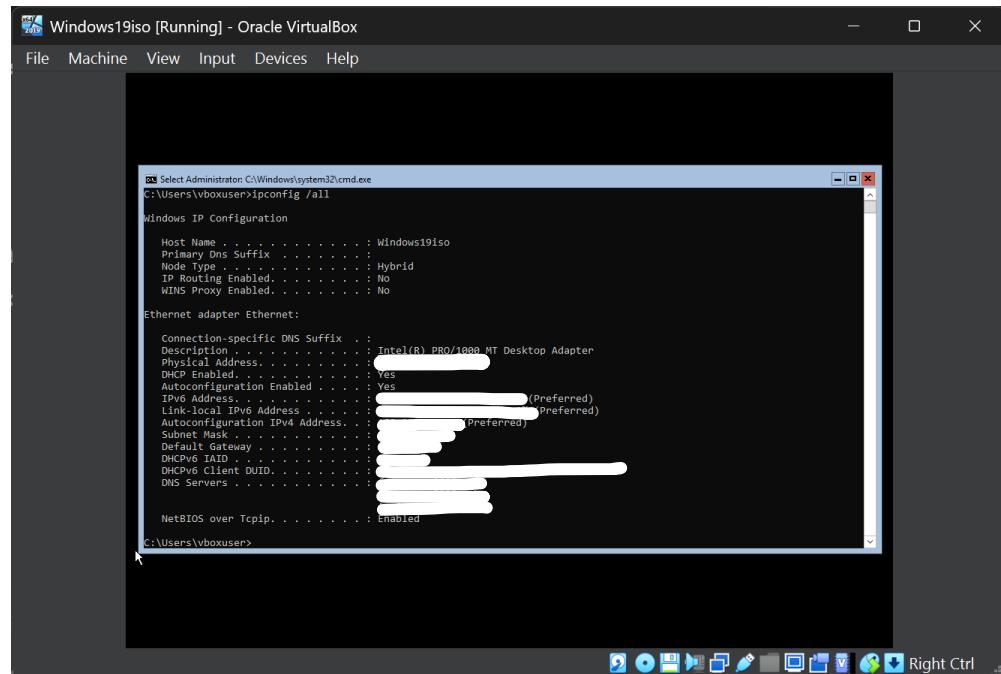


d. (4 points) What is the IP address of your VM? [REDACTED]

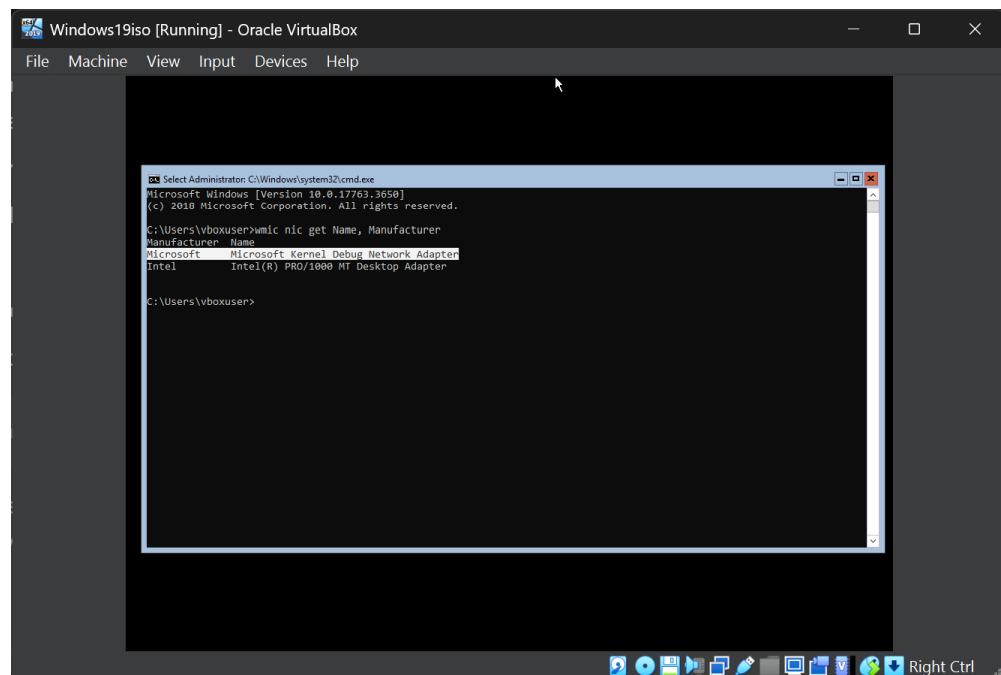


e. (4 points) What is the mac address for the NIC? [REDACTED]

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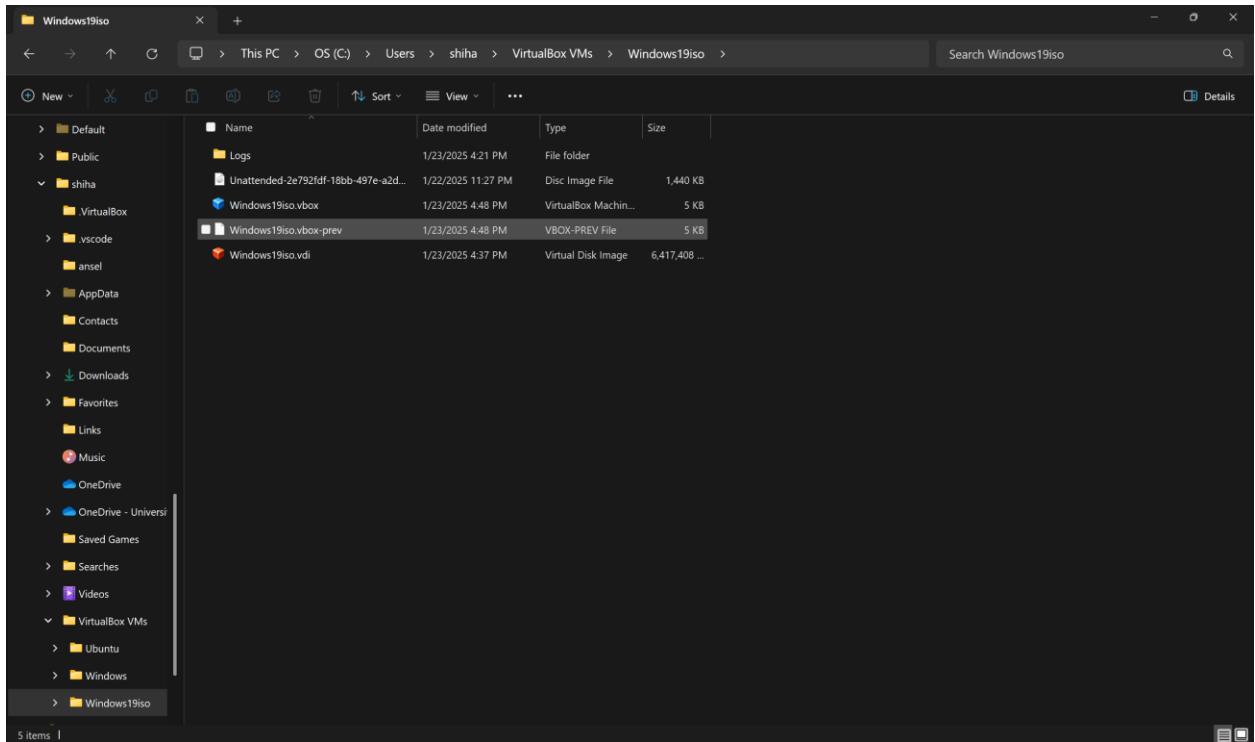


- f. (4 points) Who is the manufacturer of this NIC? Microsoft is the manufacturer of network adapters.



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6. (4 points) Remember a VM is just a collection of files. Provide a screenshot showing the location of these files on your computer's file system.

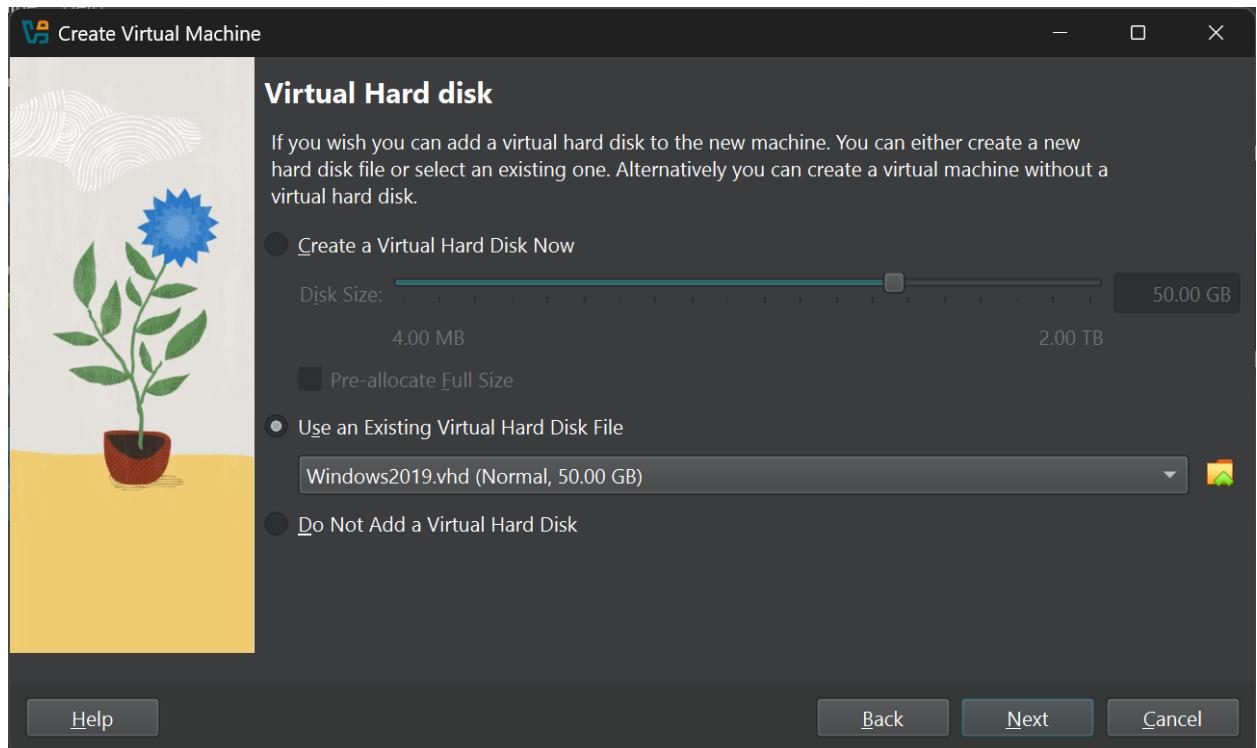


7. (4 points) Why is the virtual hard disk file smaller than the size of the C:\ listed above?

This is because as I install programs and create files within the VM, the VHD file will gradually increase in size to accommodate the data. This significantly reduces the initial file size and disk space usage.

8. (10 points) Create the second Windows 2019 VM using the .VHD file naming the VM "Windows19vhd" (Note: If you need to delete the first Windows VM to make room for the second feel free to do so, just ensure you completed all the steps above)

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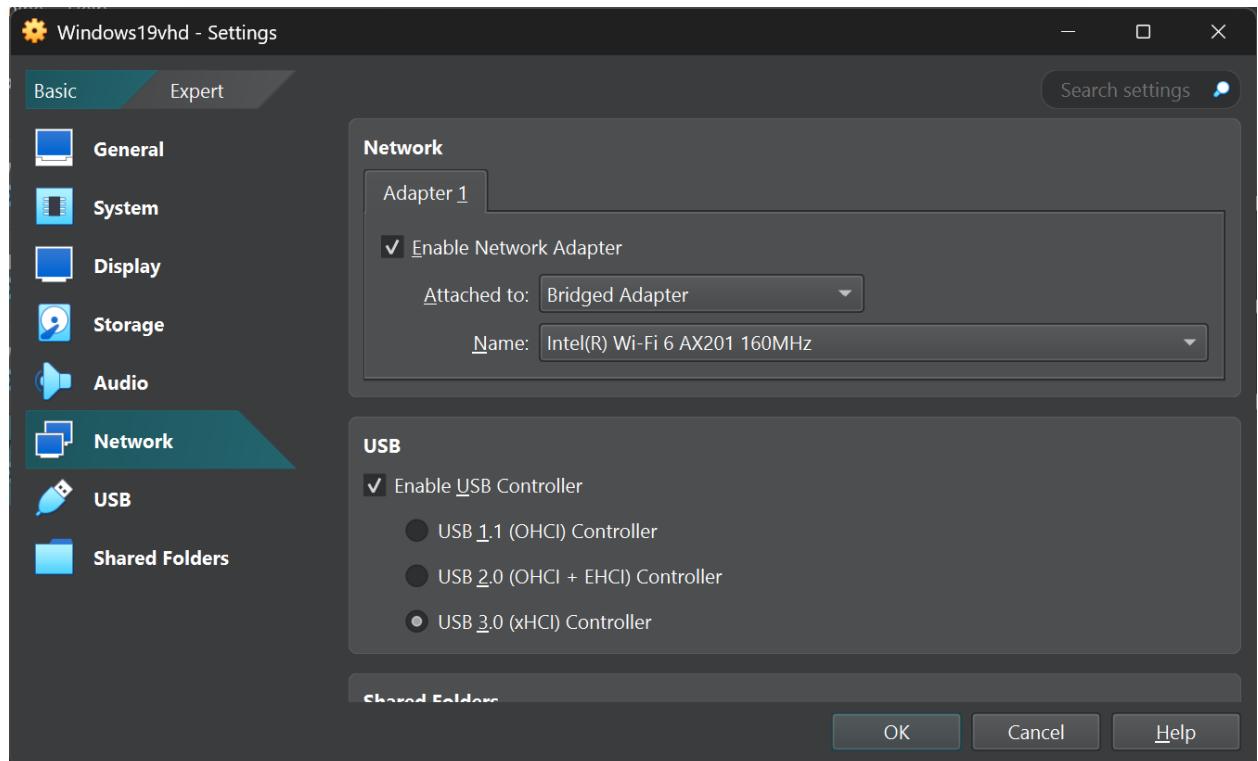


9. (6 points) Explain the difference between creating the Windows VM using the .iso vs .vhd file? Which is faster?

The difference between creating the .iso and the .vhd file is that with the .iso file, I don't need to setup startup procedures (i.e. country/region, language, password), while the .vhd file does. Therefore, the .vhd file is faster than the .iso file.

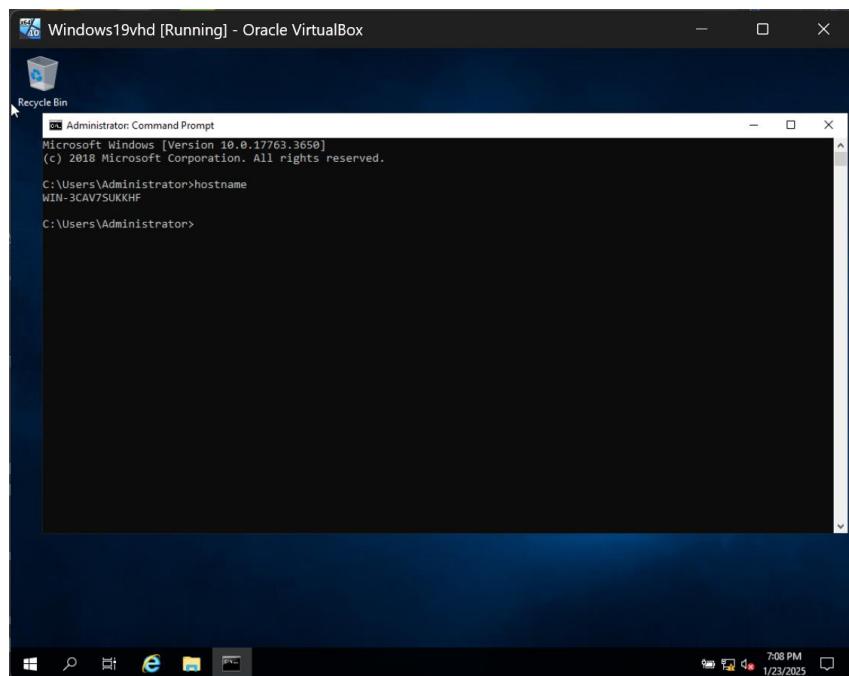
10. (4 points) Change the network setting for this VM to be bridged.

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11. Once the guest VM has booted provide the following information:

- a. (4 points) Hostname: **WIN-3CAV7SUKHF**



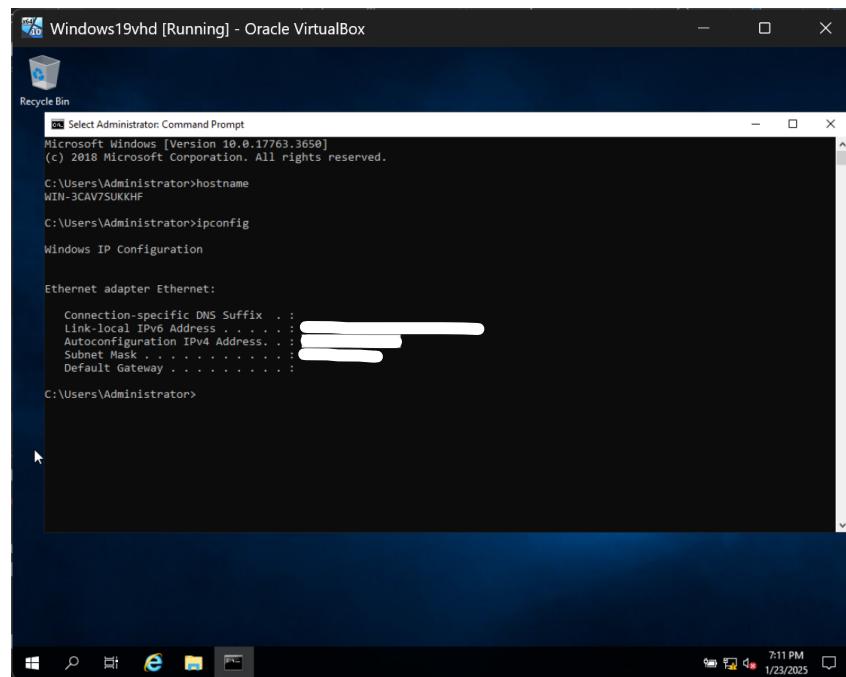
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- b. (4 points) Is this hostname different than the hostname of your previous VM created with the ISO?

Yes, the host on this VHD VM is different than the ISO VM.

- c. (6 points) What is the IP address of this VM? Why is it on a different subnet (Assuming you mean different IP address? They have the same subnet.) than the VM created with the ISO?

The IP address on this VM is [REDACTED], and it is on a different IP address than the ISO VM because the VHD VM has a pre-configured network setting. Including a static IP address or a configuration to obtain an IP address via DHCP from a specific server.



12. (10 points). What is the IP address of your computer you have VirtualBox installed on? Is your computer on the same subnet as the VM created with the VHD? If so, why?

The IP address of my computer is [REDACTED]. No, the VM has a subnet of [REDACTED] while I have [REDACTED].

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```
Command Prompt

Connection-specific DNS Suffix . . . . . : 
Description . . . . . : Intel(R) Wi-Fi 6 AX201 160MHz
Physical Address. . . . . : [REDACTED]
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
Link-local IPv6 Address . . . . . : [REDACTED] (Preferred)
IPv4 Address. . . . . : [REDACTED] (Preferred)
Subnet Mask . . . . . : [REDACTED]
Lease Obtained. . . . . : [REDACTED]
Lease Expires . . . . . : [REDACTED]
Default Gateway . . . . . : [REDACTED]
DHCP Server . . . . . : [REDACTED]
DHCPv6 IAID . . . . . : [REDACTED]
DHCPv6 Client DUID. . . . . : [REDACTED]
DNS Servers . . . . . : [REDACTED]
NetBIOS over Tcpip. . . . . : Enabled

Ethernet adapter Bluetooth Network Connection:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . . . . . : 
Description . . . . . . . . . : Bluetooth Device (Personal Area Network)
Physical Address. . . . . : [REDACTED]
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes

C:\Users\shihha>
C:\Users\shihha>
```