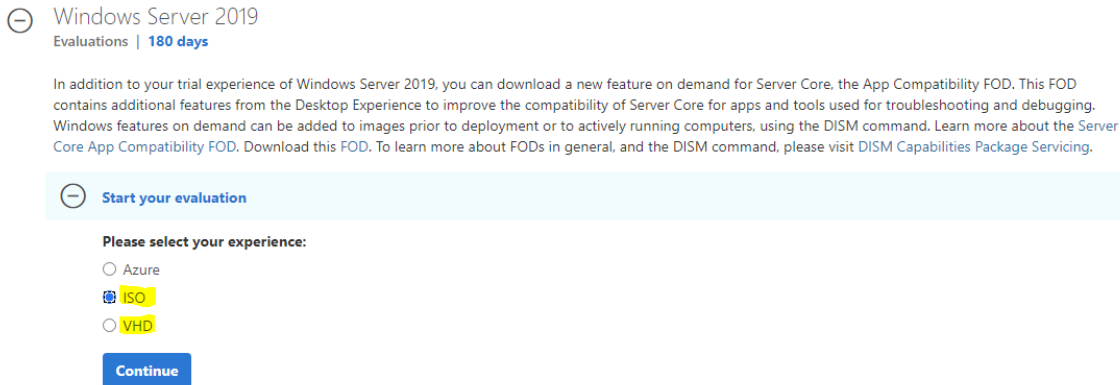


Create a Windows VM using Oracle VM VirtualBox

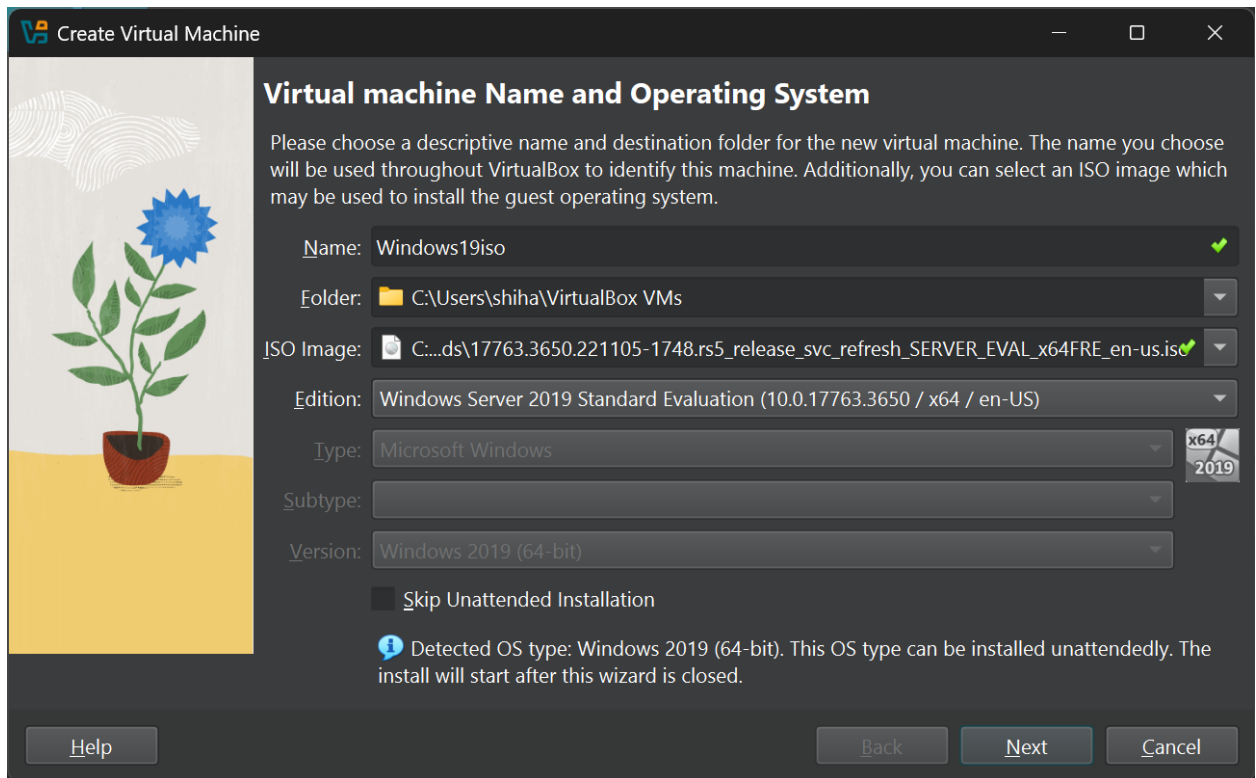
The purpose of this assignment is to create Windows 2019 VMs within Oracle VirtualBox VM Manager. You will create a Windows VM two different ways. Once performing the actual OS installation using the .iso file and another by using .vhd file. You can download the download the .iso and .vhd from <https://www.microsoft.com/en-us/evalcenter/evaluate-windows-server-2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



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"


Create a Windows VM using Oracle VM VirtualBox



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.

Create a Windows VM using Oracle VM VirtualBox



Hardware


You can modify virtual machine's hardware by changing amount of RAM and virtual CPU count. Enabling EFI is also possible.

Base Memory: 2048 MB
4 MB 16384 MB

Processors: 1
1 CPU 8 CPUs

☐ Enable EFI (special OSes only)

[Help](#) [Back](#) [Next](#) [Cancel](#)



Virtual Hard disk

If you wish you can add a virtual hard disk to the new machine. You can either create a new hard disk file or select an existing one. Alternatively you can create a virtual machine without a virtual hard disk.

☒ Create a Virtual Hard Disk Now

Disk Size: 50.00 GB
4.00 MB 2.00 TB

☐ Pre-allocate Full Size

☐ Use an Existing Virtual Hard Disk File

Ubuntu.vdi (Normal, 25.00 GB)

☐ Do Not Add a Virtual Hard Disk

[Help](#) [Back](#) [Next](#) [Cancel](#)

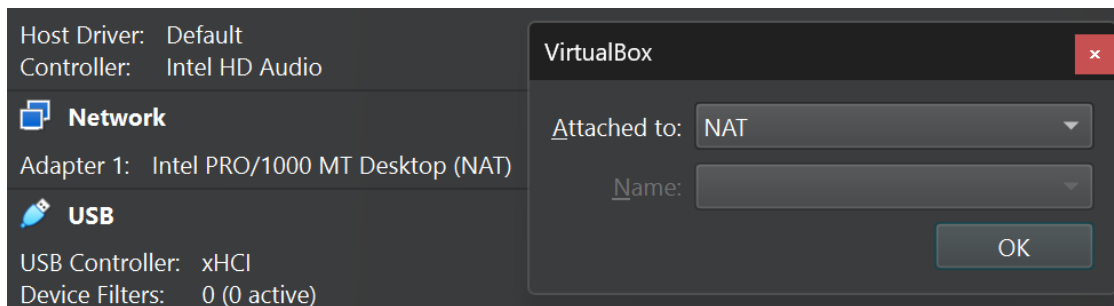
Create a Windows VM using Oracle VM VirtualBox

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

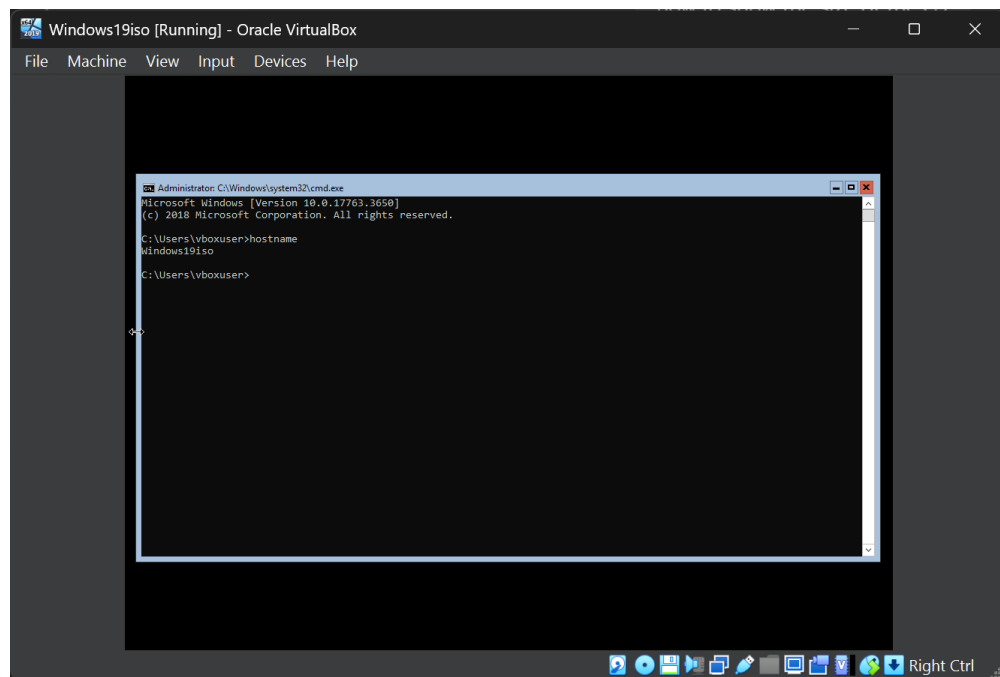
The benefit of thin provisioning is that it allocates space as needed, which is a more efficient way of storage.

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

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



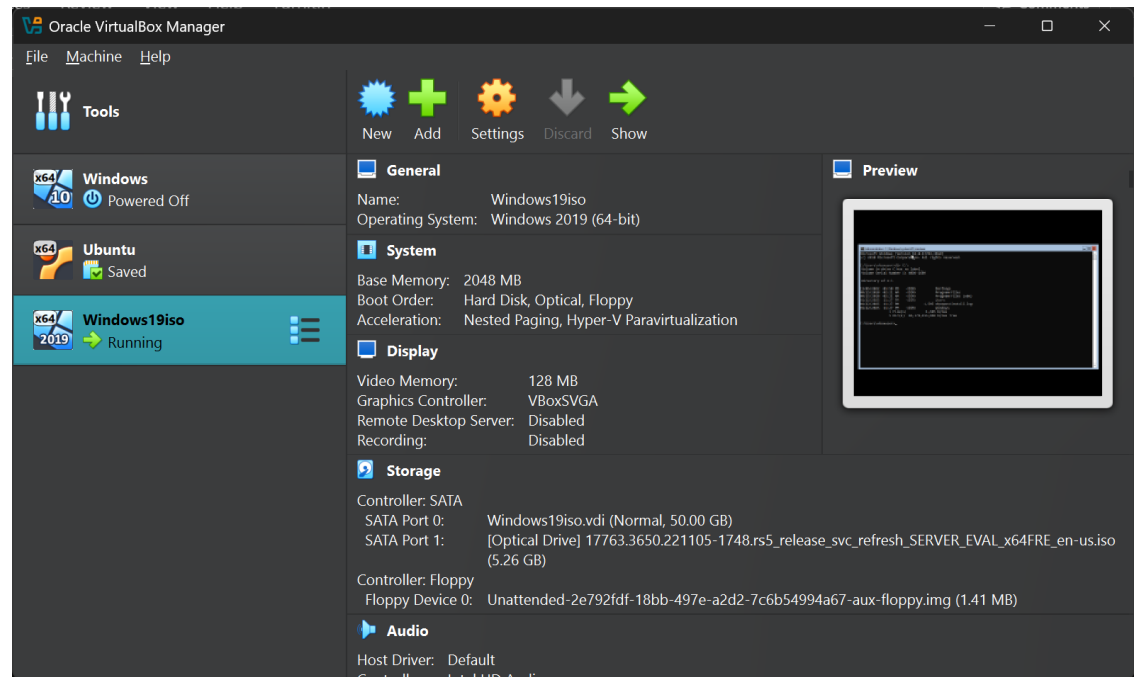
5. Once the OS installation has completed provide the following information from the guest VM you created:
- a. (4 points) Hostname: **Windows19iso**



Create a Windows VM using Oracle VM VirtualBox

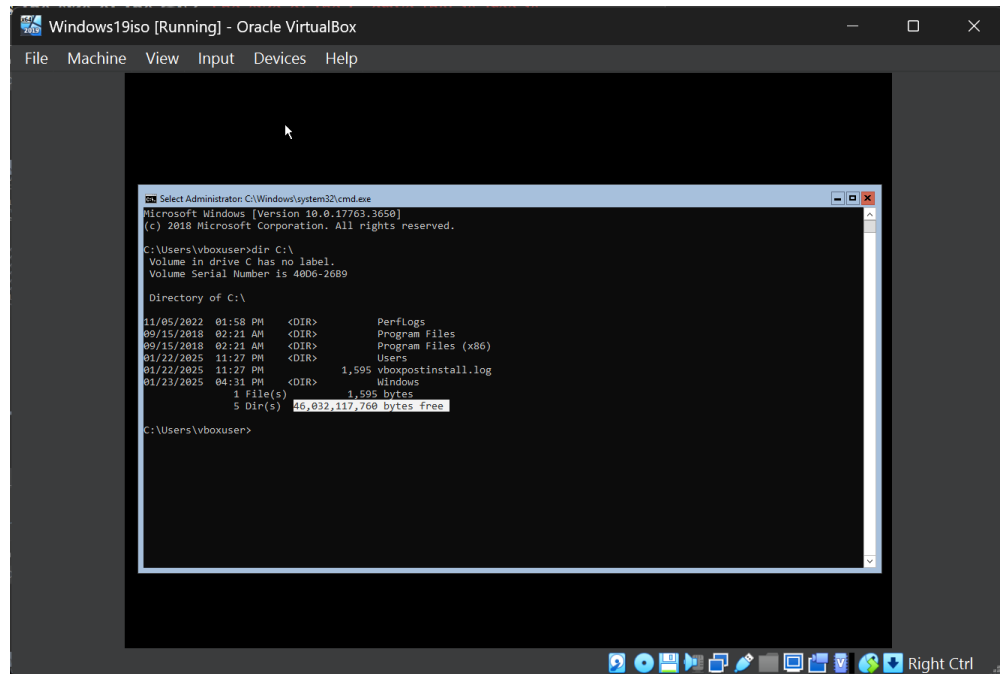
b. (4 points) Is the hostname different than the name of your VM? If so, why?

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

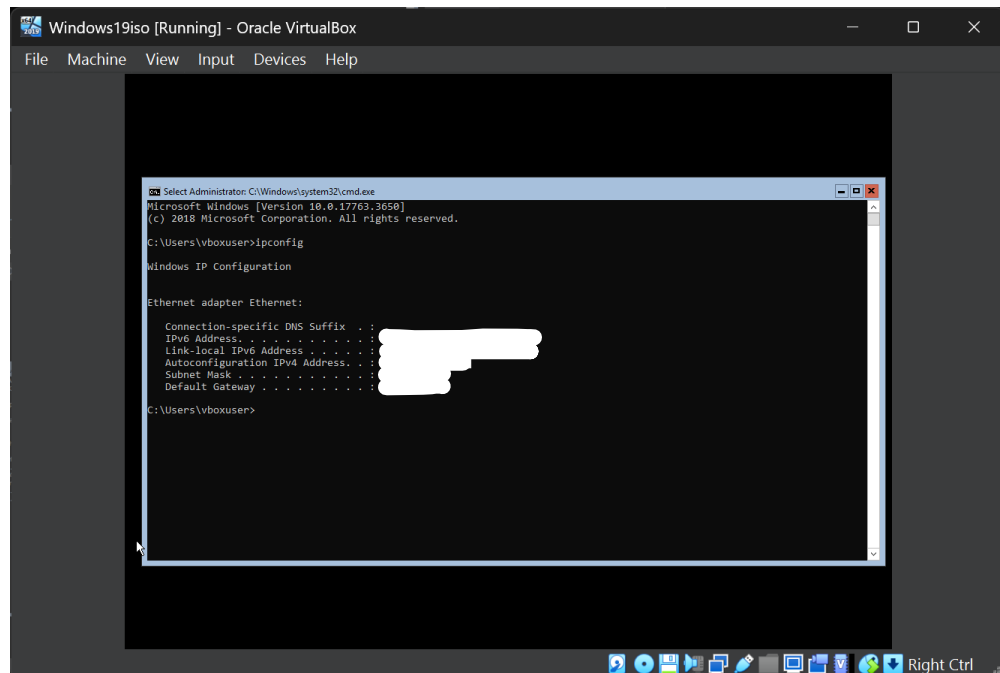


c. (4 points) What is the size of the C:\? The size of the C drive that is free is 46.18GB

Create a Windows VM using Oracle VM VirtualBox

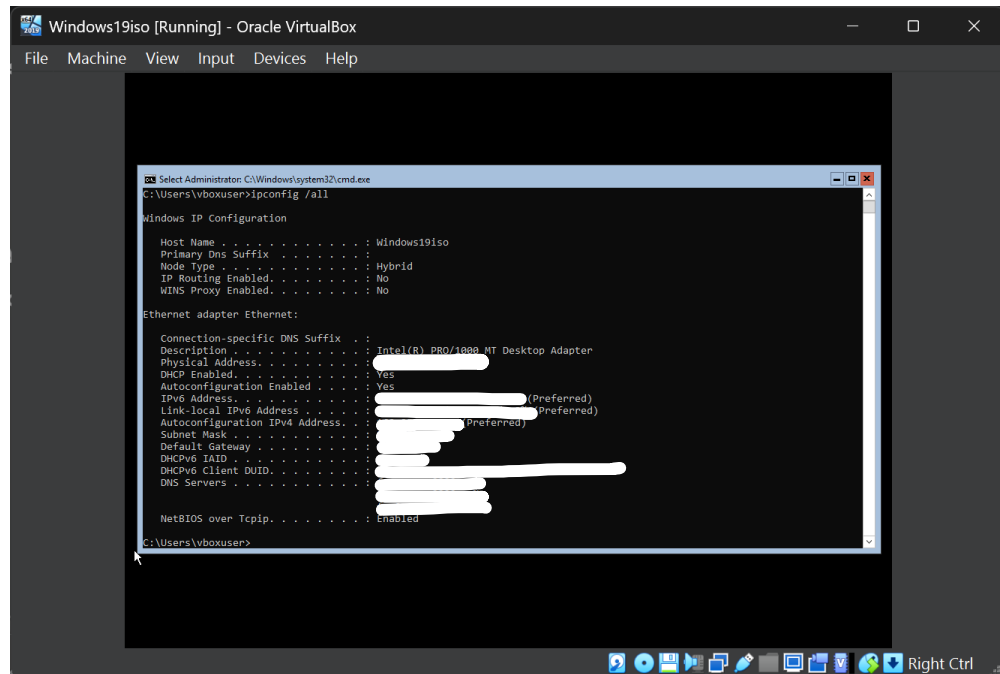


d. (4 points) What is the IP address of your VM? [REDACTED]

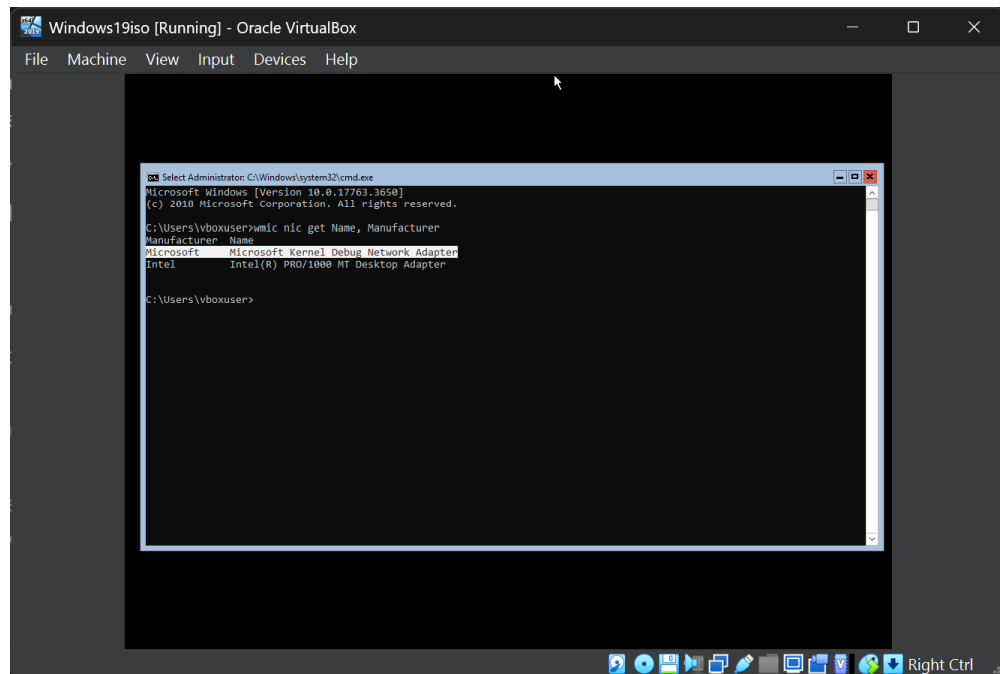


e. (4 points) What is the mac address for the NIC? [REDACTED]

Create a Windows VM using Oracle VM VirtualBox

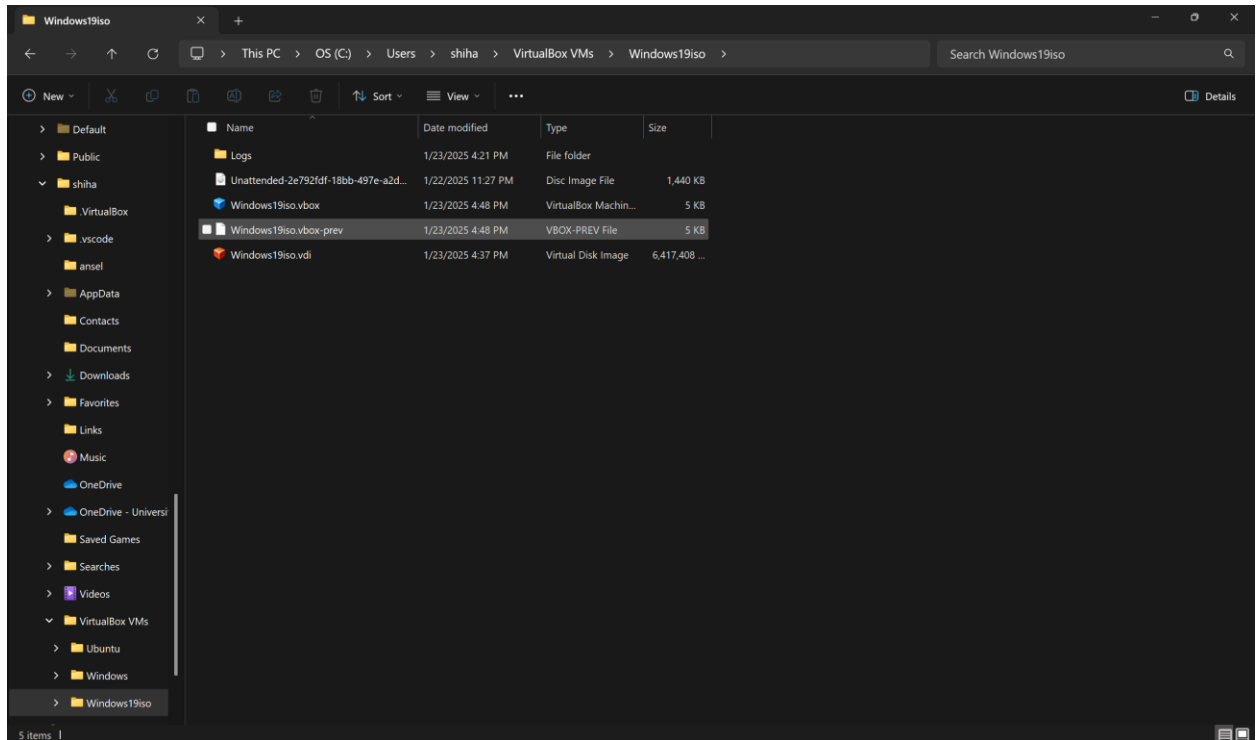


- f. (4 points) Who is the manufacturer of this NIC? **Microsoft is the manufacturer of network adapters.**



Create a Windows VM using Oracle VM VirtualBox

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.

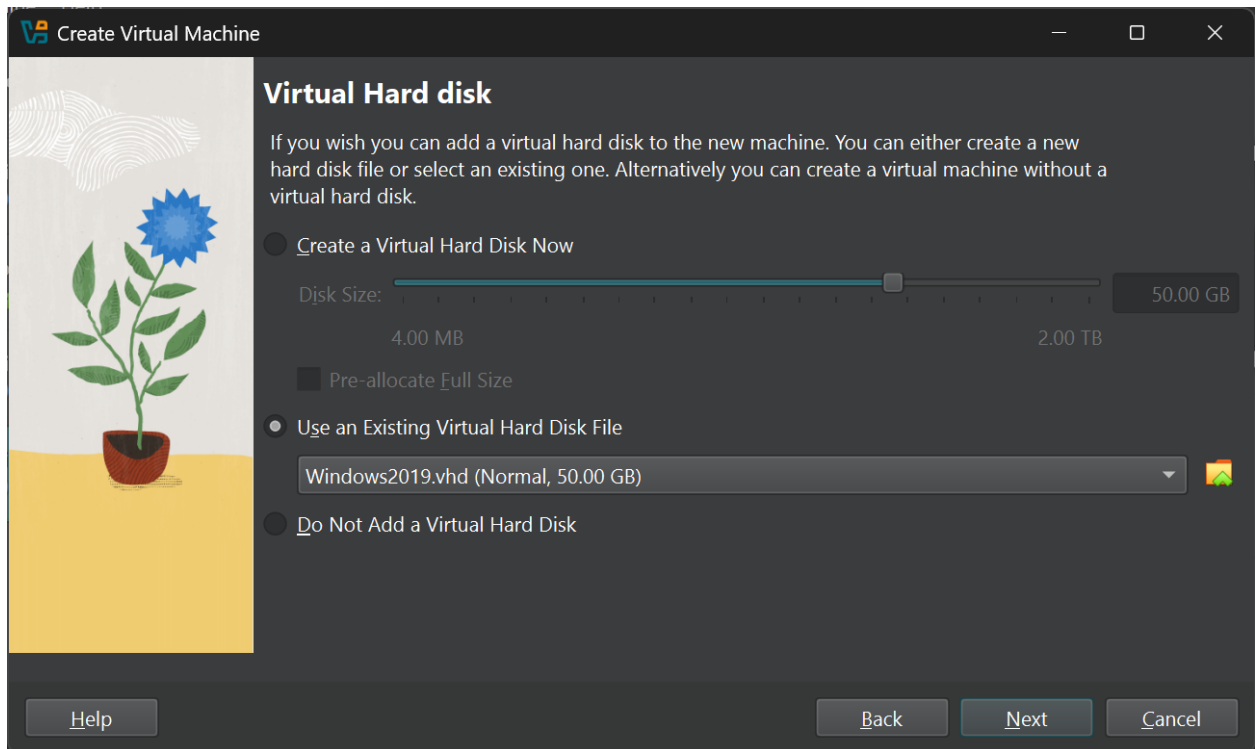


7. (4 points) Why is the virtual hard disk file smaller than the size of the C:\ listed above?

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)

Create a Windows VM using Oracle VM VirtualBox

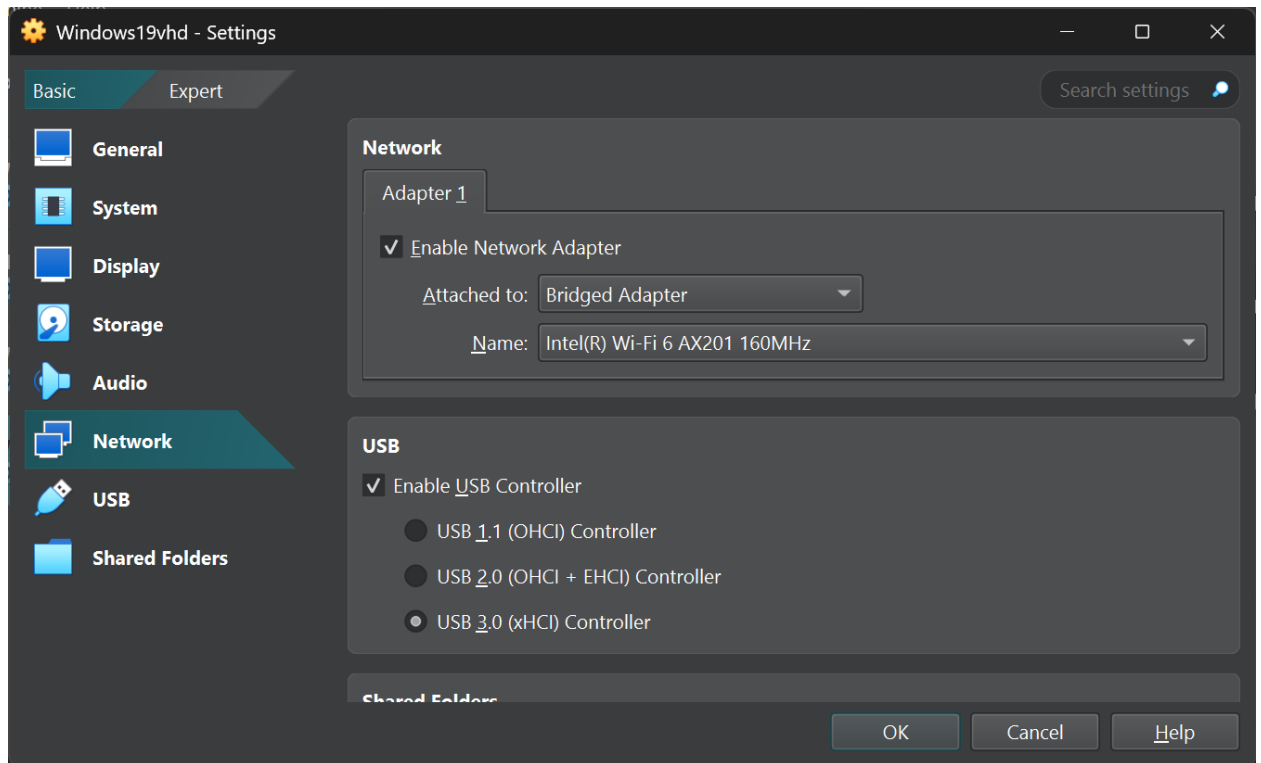


9. (6 points) Explain the difference between creating the Windows VM using the .iso vs .vhd file? Which is faster?

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.

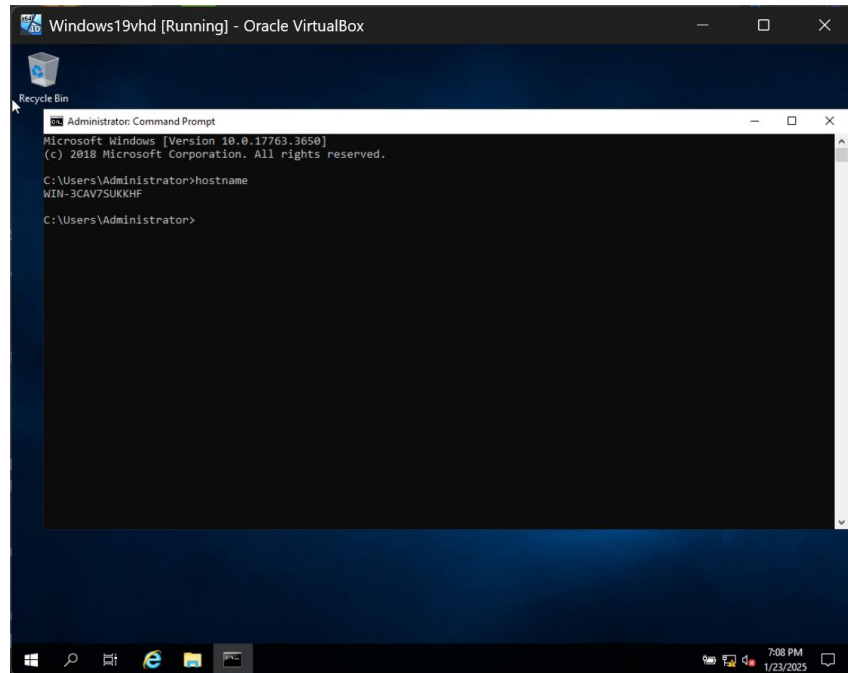
10. (4 points) Change the network setting for this VM to be bridged.

Create a Windows VM using Oracle VM VirtualBox



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

- a. (4 points) Hostname: **WIN-3CAV7SUKKH**



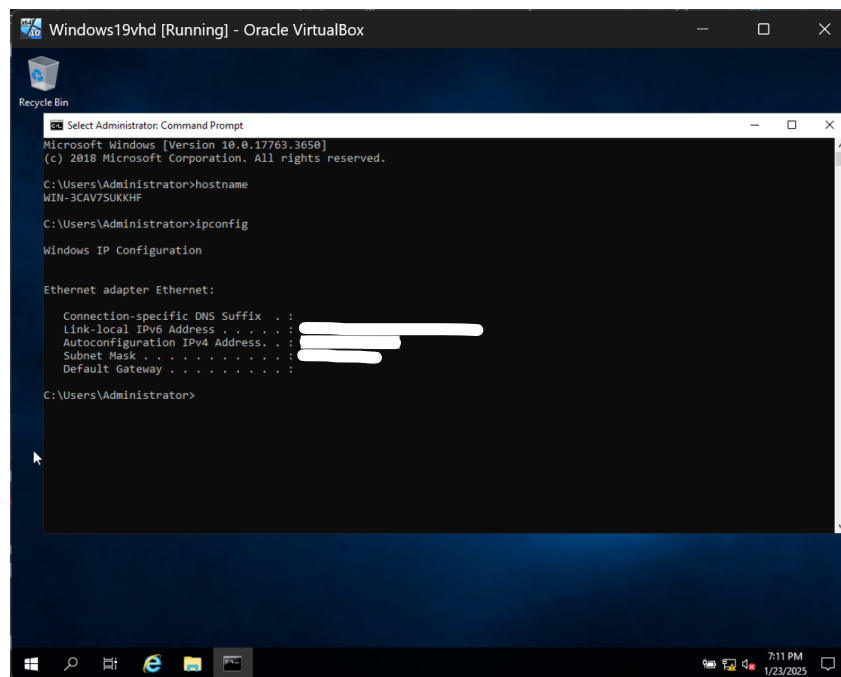
Create a Windows VM using Oracle VM VirtualBox

- 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].

Create a Windows VM using Oracle VM VirtualBox

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

C:\Users\shiha>
C:\Users\shiha>
```