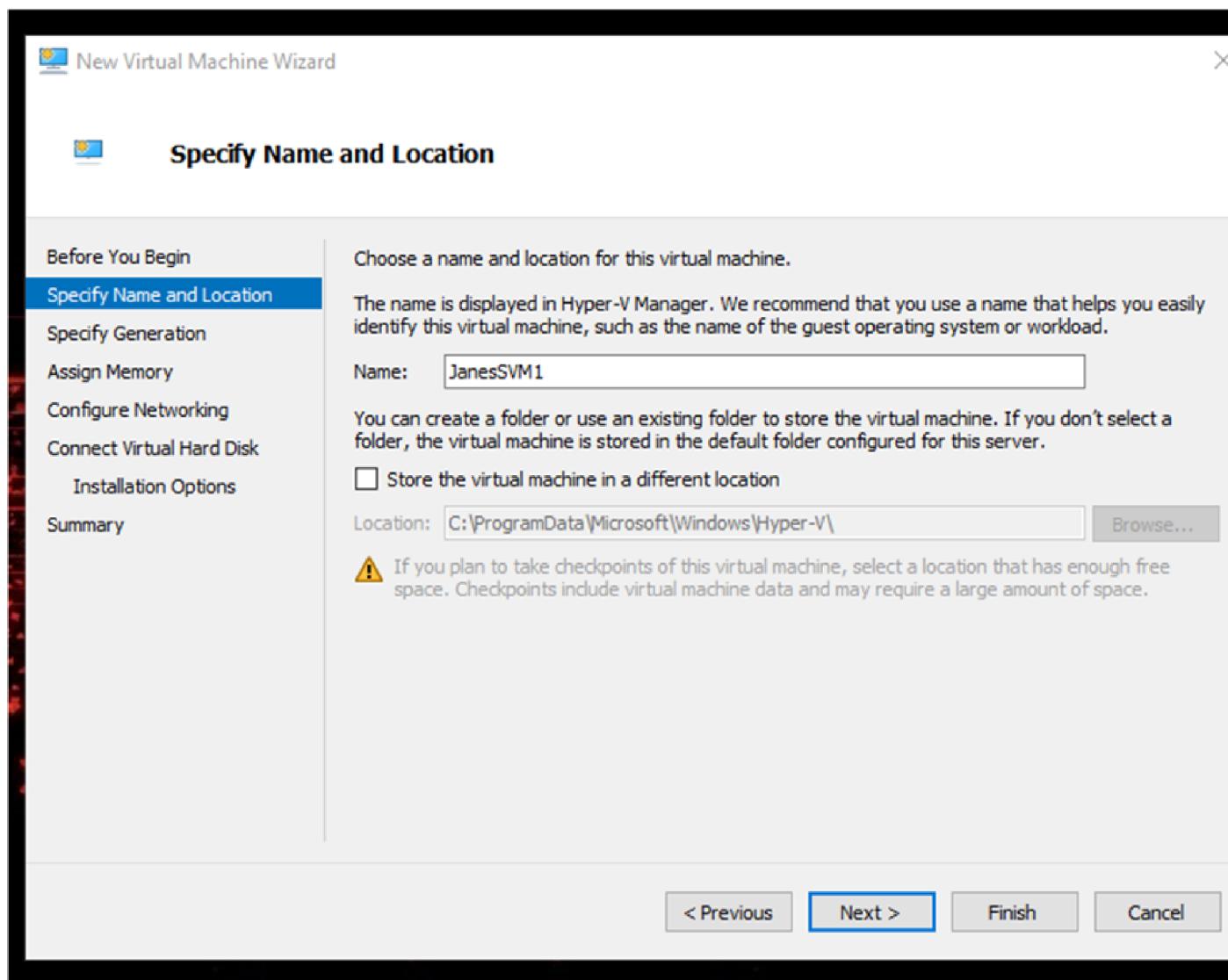


1) Creating a Virtual Machine in HyperV

- Start HyperV Manager
- Choose New Virtual Machine from the left-hand pane
- A New Virtual Machine Wizard will start
- Click Next at the **Before you Begin** page

Specify Name and Location – Specify a Name for your virtual machine (if it is the same as your machine name it is easy to identify machines)

You can choose to save the virtual machine files in the default location or you can browse to a different location where you would like to save the files



Click Next

Specify Generation – We will be using Generation 1 machines so Choose Generation 1



Specify Generation

Before You Begin

Specify Name and Location

Specify Generation

Assign Memory

Configure Networking

Connect Virtual Hard Disk

Installation Options

Summary

Choose the generation of this virtual machine.

 Generation 1

This virtual machine generation supports 32-bit and 64-bit guest operating systems and provides virtual hardware which has been available in all previous versions of Hyper-V.

 Generation 2

This virtual machine generation provides support for newer virtualization features, has UEFI-based firmware, and requires a supported 64-bit guest operating system.

 Once a virtual machine has been created, you cannot change its generation.

[More about virtual machine generation support](#)

< Previous

Next >

Finish

Cancel

Click Next

Assign Memory – You can set the memory to a **4096** or leave it at the default (this can be modified later). Leave the Use Dynamic Memory option checked

New Virtual Machine Wizard

Assign Memory

Before You Begin
Specify Name and Location
Specify Generation
Assign Memory
Configure Networking
Connect Virtual Hard Disk
Installation Options
Summary

Specify the amount of memory to allocate to this virtual machine. You can specify an amount from 32 MB through 251658240 MB. To improve performance, specify more than the minimum amount recommended for the operating system.

Startup memory: MB

Use Dynamic Memory for this virtual machine.

i When you decide how much memory to assign to a virtual machine, consider how you intend to use the virtual machine and the operating system that it will run.

< Previous Next > Finish Cancel

Click Next

Configure Networking – Connect your virtual machine to the Default Connection



Configure Networking

[Before You Begin](#)[Specify Name and Location](#)[Specify Generation](#)[Assign Memory](#)[Configure Networking](#)[Connect Virtual Hard Disk](#)[Installation Options](#)[Summary](#)

Each new virtual machine includes a network adapter. You can configure the network adapter to use a virtual switch, or it can remain disconnected.

Connection: ▼[< Previous](#)[Next >](#)[Finish](#)[Cancel](#)

Click Next

Connect Virtual Hard Disk – We will choose to create a Virtual Disk. You can name it anything you like (easier to identify if it is the same as the machine name), modify the location or accept the default and change the Size to **30 GB**. **Note, on Azure ensure that the disk is on the D:/ drive.**



Connect Virtual Hard Disk

Before You Begin

Specify Name and Location

Specify Generation

Assign Memory

Configure Networking

Connect Virtual Hard Disk

Installation Options

Summary

A virtual machine requires storage so that you can install an operating system. You can specify the storage now or configure it later by modifying the virtual machine's properties.

 Create a virtual hard disk

Use this option to create a VHDX dynamically expanding virtual hard disk.

Name: Location: Size: GB (Maximum: 64 TB) Use an existing virtual hard disk

Use this option to attach an existing VHDX virtual hard disk.

Location: Attach a virtual hard disk later

Use this option to skip this step now and attach an existing virtual hard disk later.

< Previous

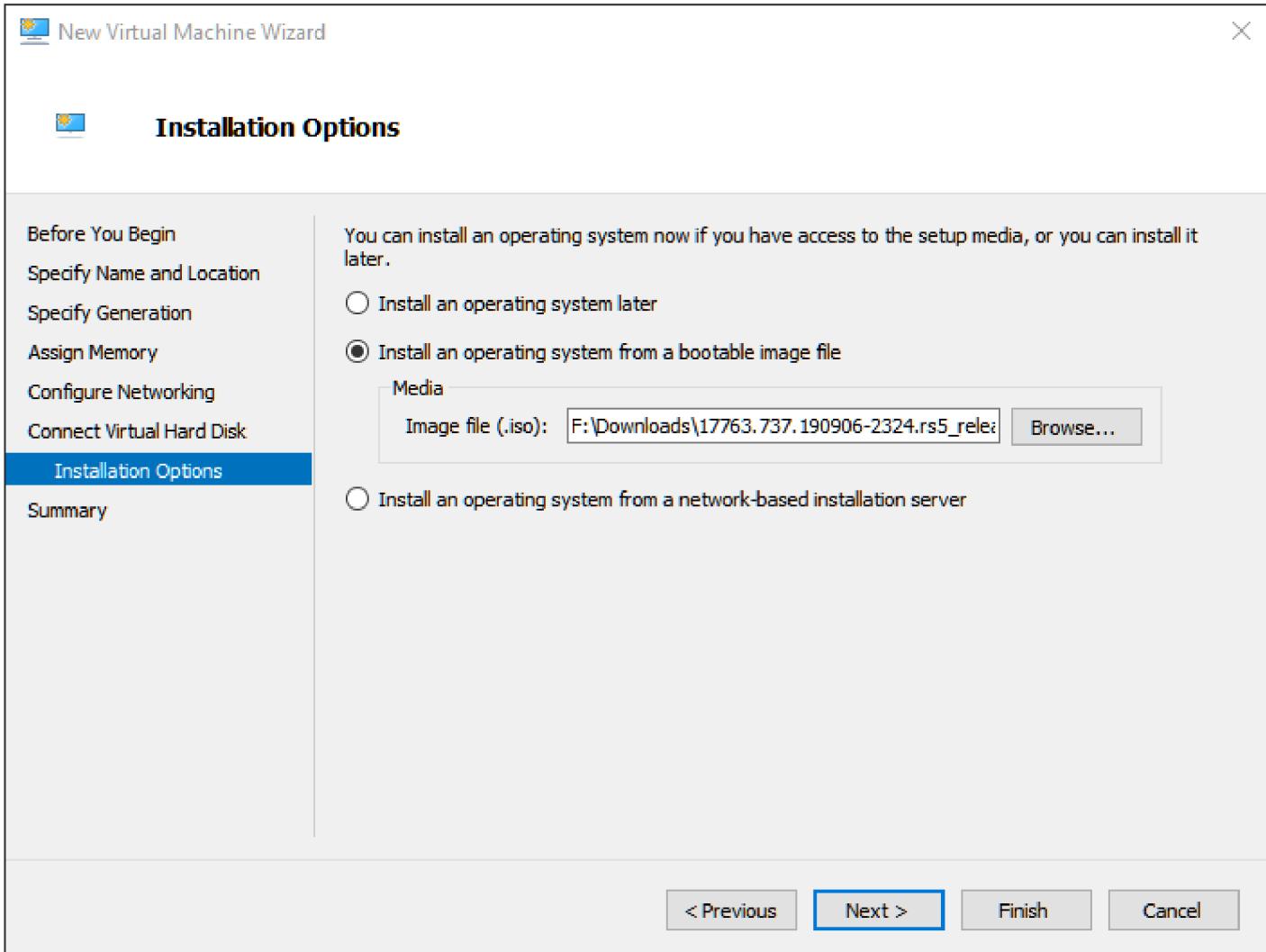
Next >

Finish

Cancel

Click Next

This is where you will choose Installation Options for an Operating System, if you are using an .iso file you can add it here.



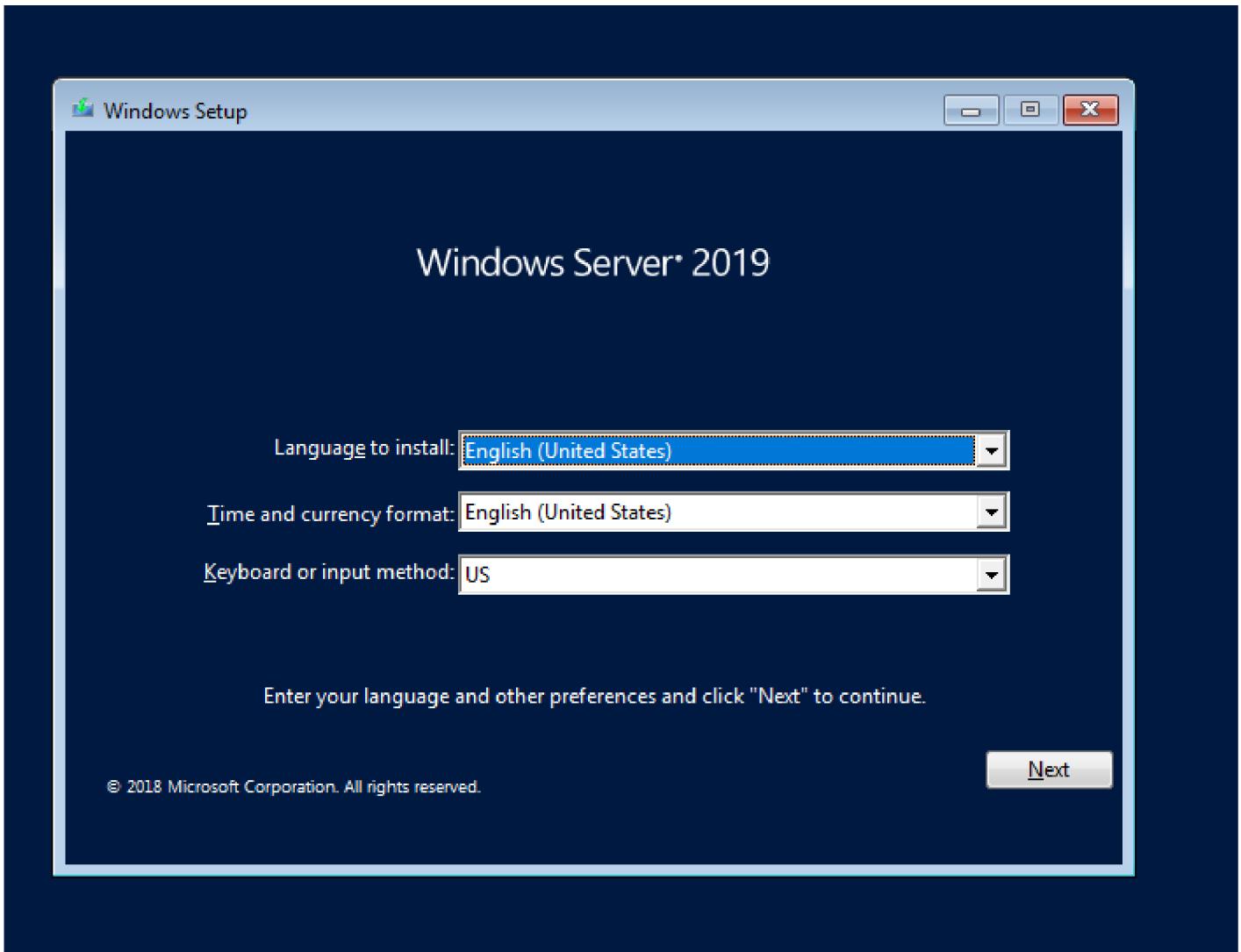
You will be shown the Installation Options you have chosen on the **Summary** Page. Choose Finish to create the virtual machine.

Now Power on the virtual machine and go to the next section.

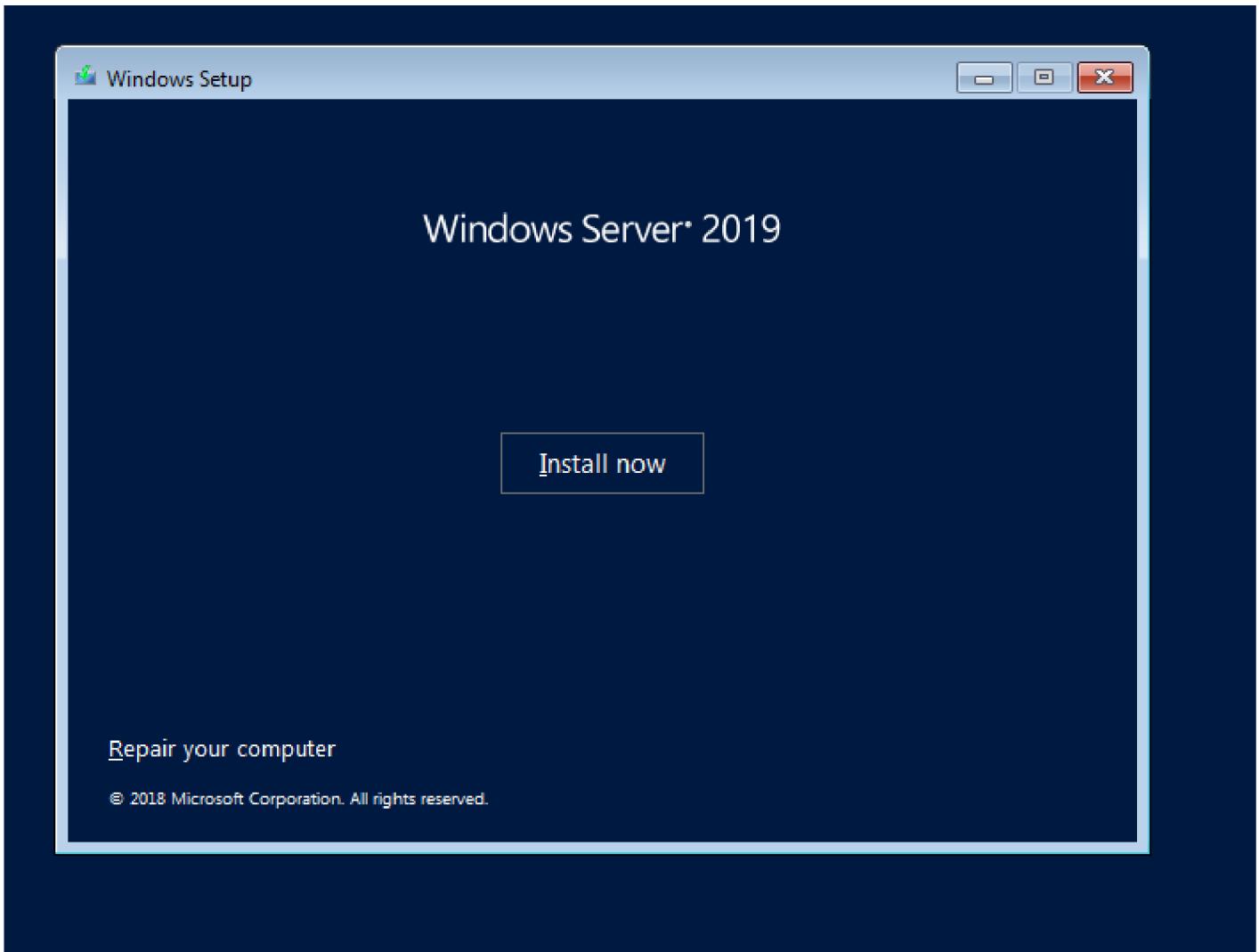
2) Installation and configuration Server 2019

Note, this will show you where and how to configure Server 2019, but does not provide specific values (such as for Lab 1)

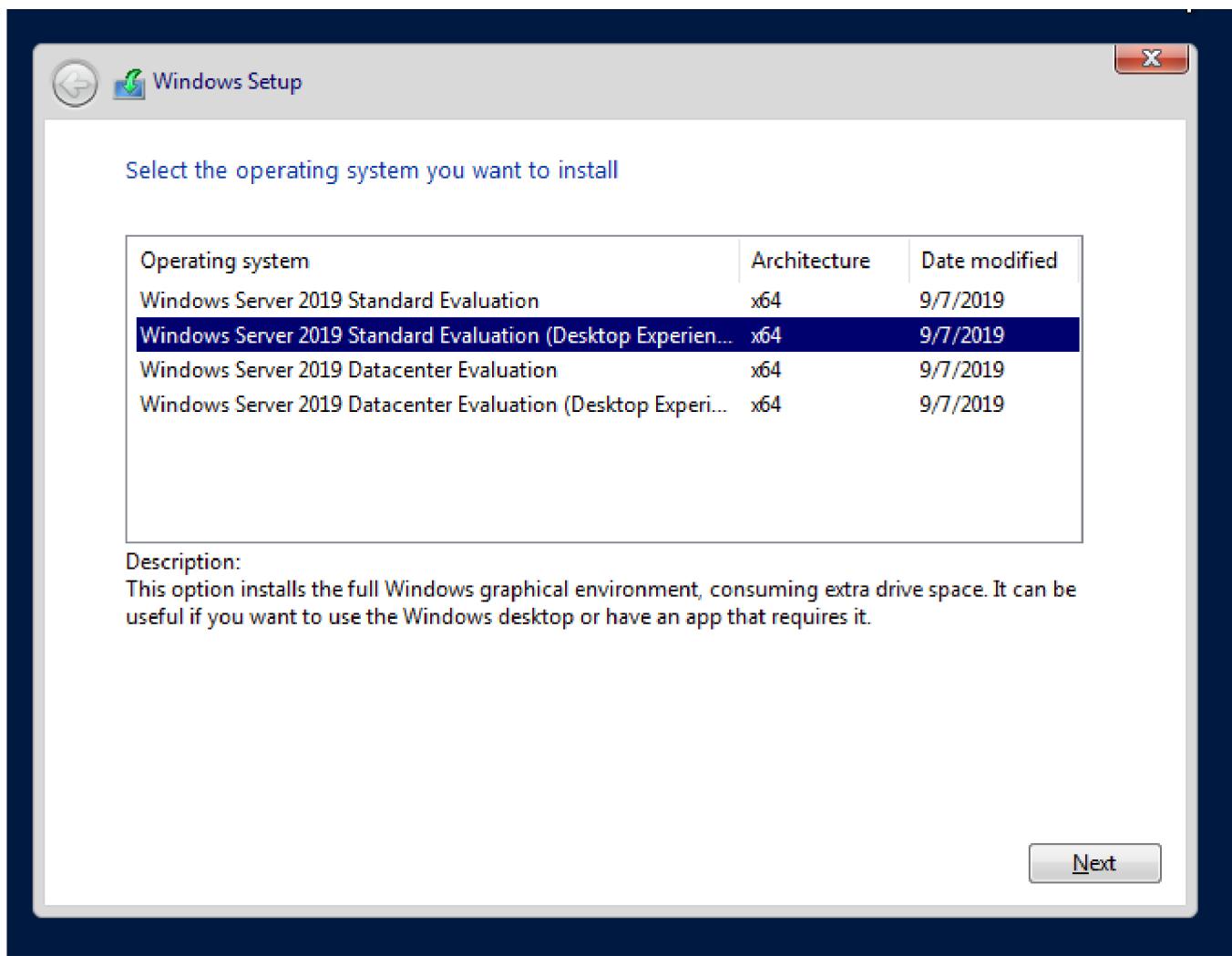
Once the virtual machine powers on and the files have been loaded, you will be prompted for the language and other preferences settings. Accept the defaults. Choose Next



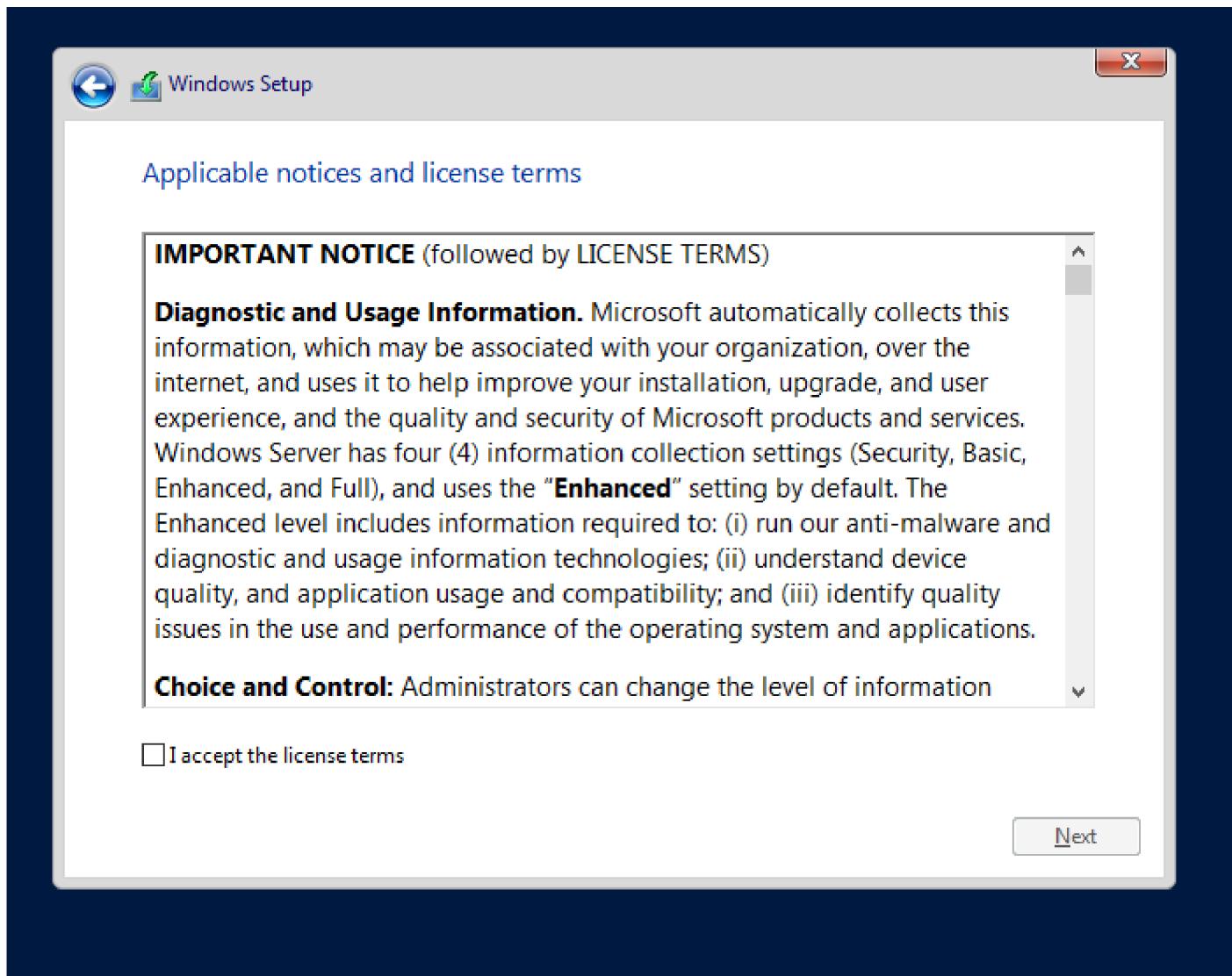
Now you will be prompted to confirm that you wish to Install Now



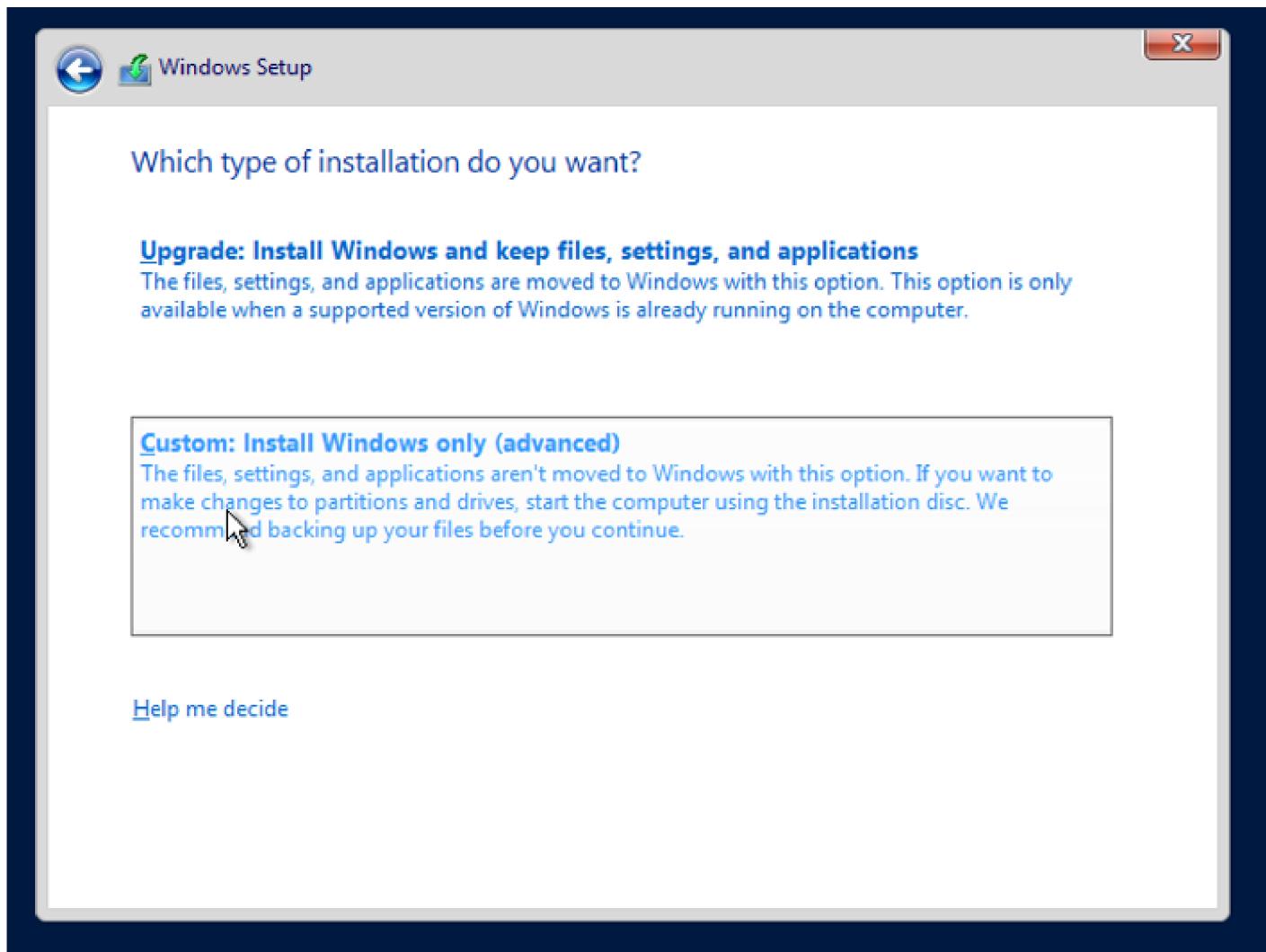
You will be prompted for the type of Windows Server you wish to install. Choose Windows Server 2019 Standard Evaluation (Desktop Experience) if you wish to install a server with a GUI interface.



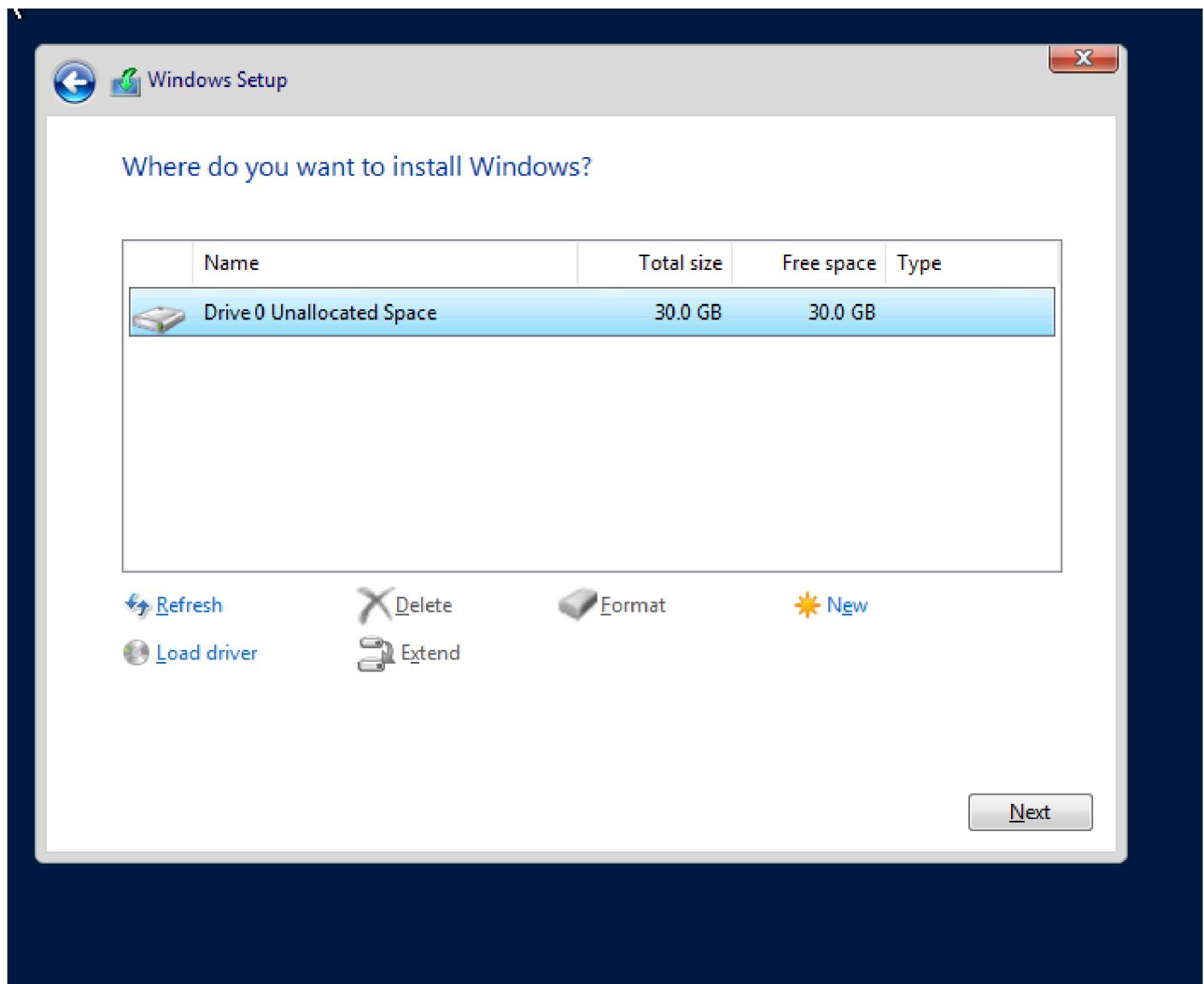
Accept the License Agreement



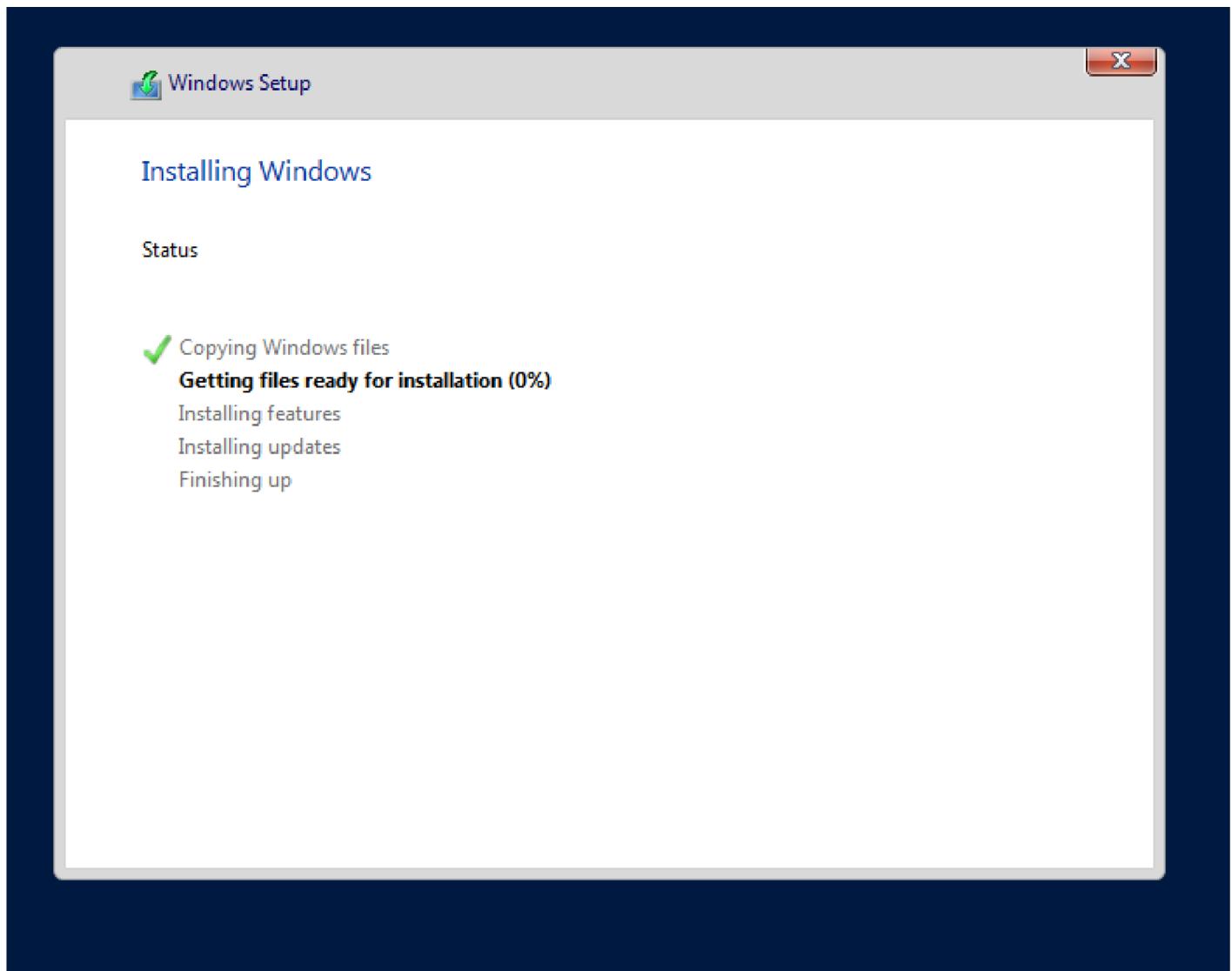
Choose Custom: Install Windows only (advanced)



Now, choose the disk where the operating system should be installed. You have only one disk which should be highlighted. Choose Next



Once this choice is made, the server operating system will be installed.



Your virtual machine will reboot during the installation process.

After the operating system is installed, you will be prompted to enter and confirm the Administrator password. Enter **Secret555** as the password and Choose Finish

Customize settings

Type a password for the built-in administrator account that you can use to sign in to this computer.

User name

Administrator

Password

Reenter password

Press Ctrl+Alt+Delete to unlock.

6:42

Tuesday, May 31



You can now log on to the operating system. Log on using the Administrator username and password. You will be logged on and the Server Manager will start

PROPERTIES
For WIN-B2QA2CSJUAO

Computer name	WIN-B2QA2CSJUAO	Last installed updates	Never
Workgroup	WORKGROUP	Windows Update	Install updates automatically using Windows Update
		Last checked for updates	Never
Windows Defender Firewall	Private: On	Windows Defender Antivirus	Real-Time Protection: On
Remote management	Enabled	Feedback & Diagnostics	Settings
Remote Desktop	Disabled	IE Enhanced Security Configuration	On
NIC Teaming	Disabled	Time zone	(UTC-08:00) Pacific Time (US & Canada)
Ethernet0	IPv4 address assigned by DHCP, IPv6 enabled	Product ID	00431-10000-00000-AA763 (activated)
Operating system version	Microsoft Windows Server 2019 Standard Evaluation	Processors	Intel(R) Core(TM) i7-5600U CPU @ 2.60GHz, Intel(R) Core(TM)
Hardware information	VMware, Inc. VMware7,1	Installed memory (RAM)	2 GB
		Total disk space	29.4 GB

EVENTS
All events | 14 total

Post-installation configuration:

Time Zone:

Choose Local Server from Server Manager
Set the time zone to Central Time (US & Canada)

Date and Time
WIN-B2QA2CSJUAO

Time Zone Settings

Set the time zone:

Time zone: (UTC-06:00) Central Time (US & Canada)

Automatically adjust clock for Daylight Saving Time

Current date and time: Tuesday, May 31, 2022, 6:51 AM

New date and time: Tuesday, May 31, 2022, 8:51 AM

OK **Cancel** **Change time zone...**

Daylight Saving Time ends on Sunday, November 6, 2022 at 2:00 AM. The clock is set to go back 1 hour at that time.

Notify me when the clock changes

OK **Cancel** **Apply**

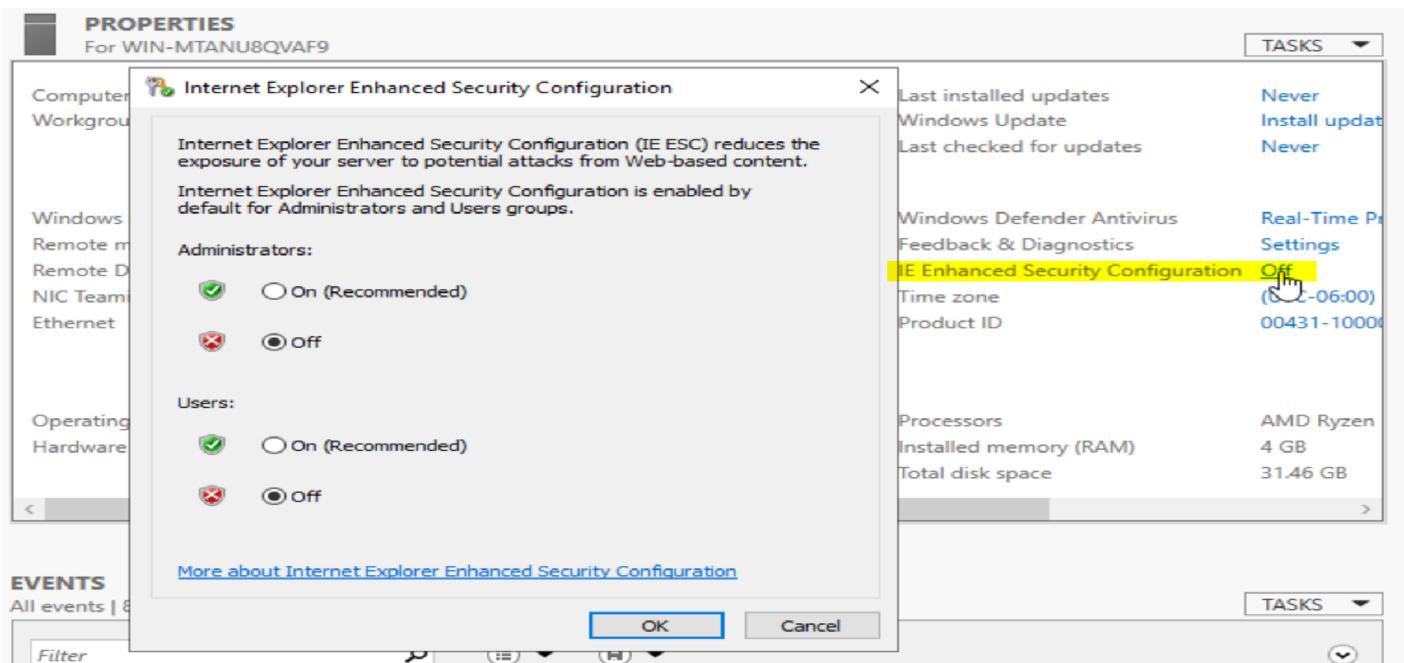
PROPERTIES
For WIN-B2QA2CSJUAO

Last installed updates	Never
Windows Update	Install updates automatically using Windows Update
Last checked for updates	Never
Windows Defender Antivirus	Real-Time Protection: On
Feedback & Diagnostics	Settings
IE Enhanced Security Configuration	On
Time zone	(UTC-08:00) Pacific Time (US & Canada)
Product ID	00431-10000-00000-AA763 (activated)
Processor	Intel(R) Core(TM) i7-5600U CPU @ 2.60GHz, Intel(R) Core(TM)
Installed memory (RAM)	2 GB
Total disk space	29.4 GB

EVENTS
Log Date and Time

WIN-B2QA2CSJUAO 10149 Warning Microsoft-Windows-Windows Remote Management System 5/31/2022 8:15:33 AM
WIN-B2QA2CSJUAO 134 Warning Microsoft-Windows-Time-Service System 5/31/2022 8:14:44 AM
WIN-B2QA2CSJUAO 134 Warning Microsoft-Windows-Time-Service Custom 5/31/2022 8:14:44 AM

IE Enhanced Security Configuration



Click on the On option beside the IE Enhanced Security Configuration entry in Server Manager. Change the settings for Administrators and Users to Off and choose OK

Firewall settings

If the server already resides within a DMZ network:

Click on the Public: On option beside the Windows Defender Firewall in Server Manager

PROPERTIES

For WIN-MTANU8QVAF9

Computer name **WIN-MTANU8QVAF9**
Workgroup **WORKGROUP**

Windows Defender Firewall **Private: On**
Remote management **Enabled**
Remote Desktop **Disabled**
NIC Teaming **Disabled**
Ethernet **IPv4 address assigned by DHCP, IPv6 enabled**

Operating system version **Microsoft Windows Server 2019 Standard Evaluation**
Hardware information **innotek GmbH VirtualBox**

Windows Security

Firewall & network protection

Who and what can access your networks.

Domain network

Firewall is on.

Private network (active)

Firewall is on.

Public network

Firewall is on.

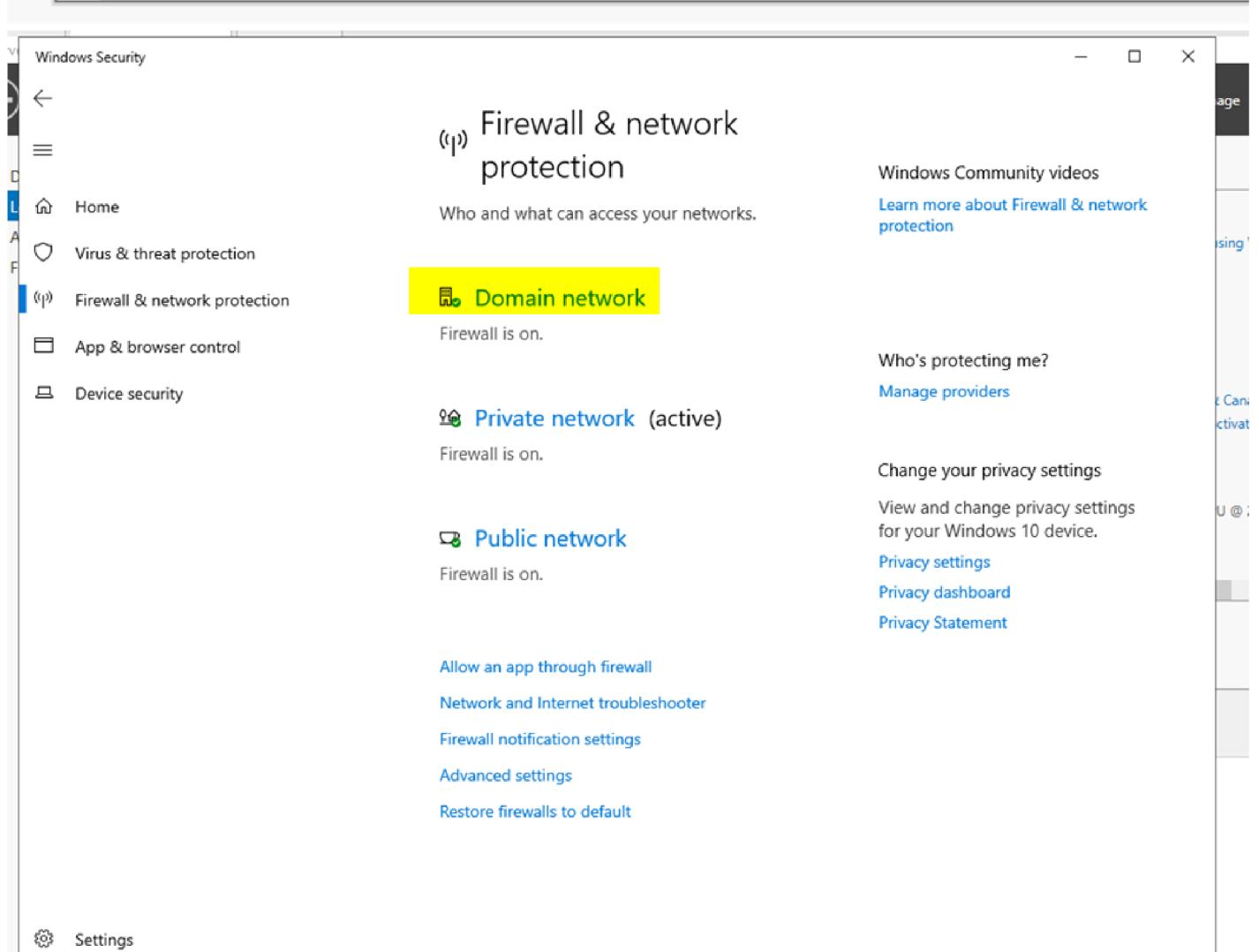
Allow an app through firewall
Network and Internet troubleshooter
Firewall notification settings
Advanced settings
Restore firewalls to default

Windows Community videos
[Learn more about Firewall & network protection](#)

Who's protecting me?
[Manage providers](#)

Change your privacy settings
View and change privacy settings for your Windows 10 device.
[Privacy settings](#)
[Privacy dashboard](#)
[Privacy Statement](#)

Settings



Click on Domain network and move the slider under Windows Defender Firewall to turn off the firewall.

Windows Security

Domain network

Networks at a workplace that are joined to a domain.

Active domain networks

Not connected

Change your privacy settings

View and change privacy settings for your Windows 10 device.

Privacy settings

Privacy dashboard

Privacy Statement

Windows Defender Firewall

Helps protect your device while on a domain network.

On

Incoming connections

Prevents incoming connections when on a domain network.

Blocks all incoming connections, including those in the list of allowed apps.

Settings

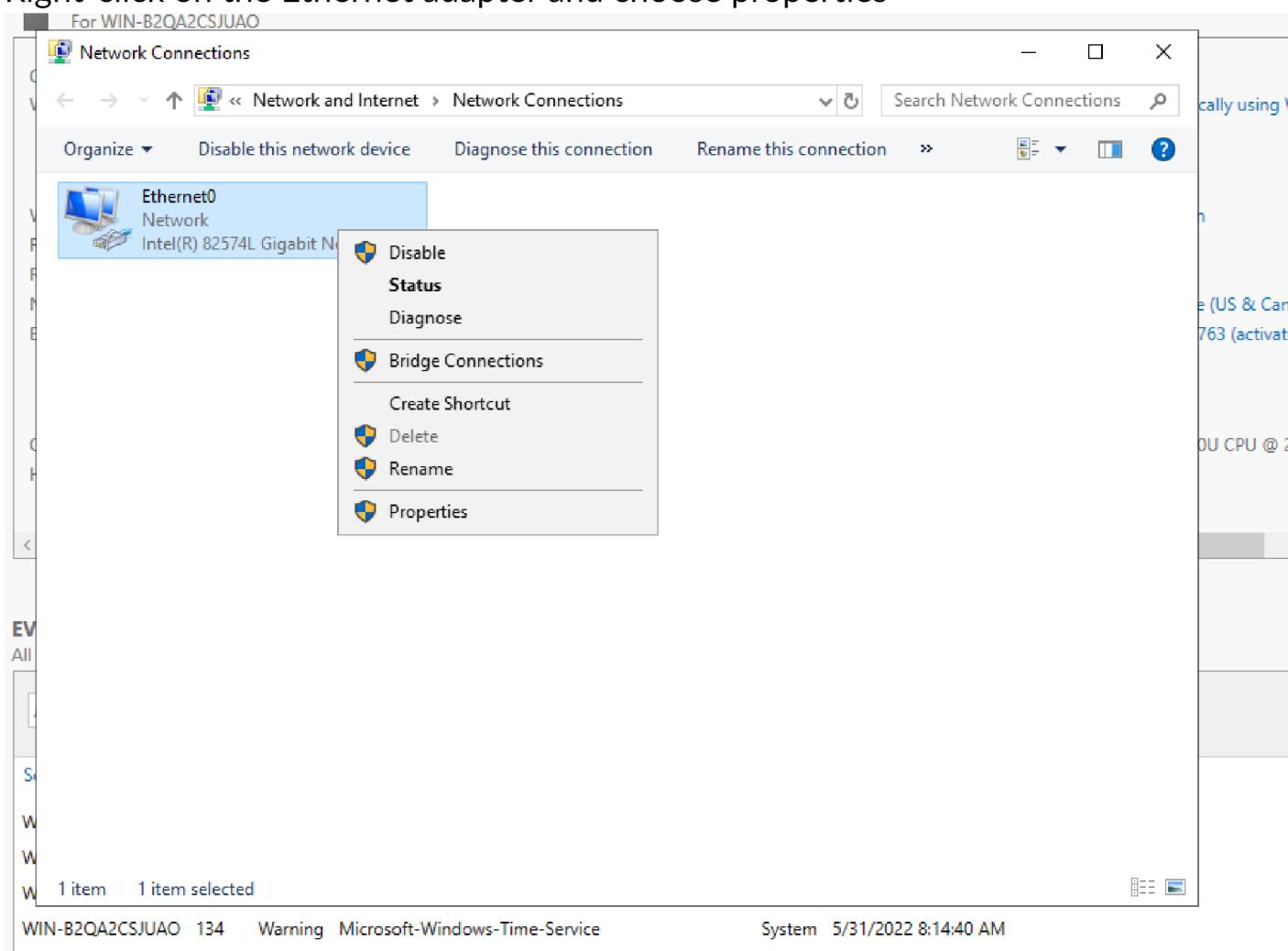
Repeat the same step for Private & Public network

IPv4 Address Configuration

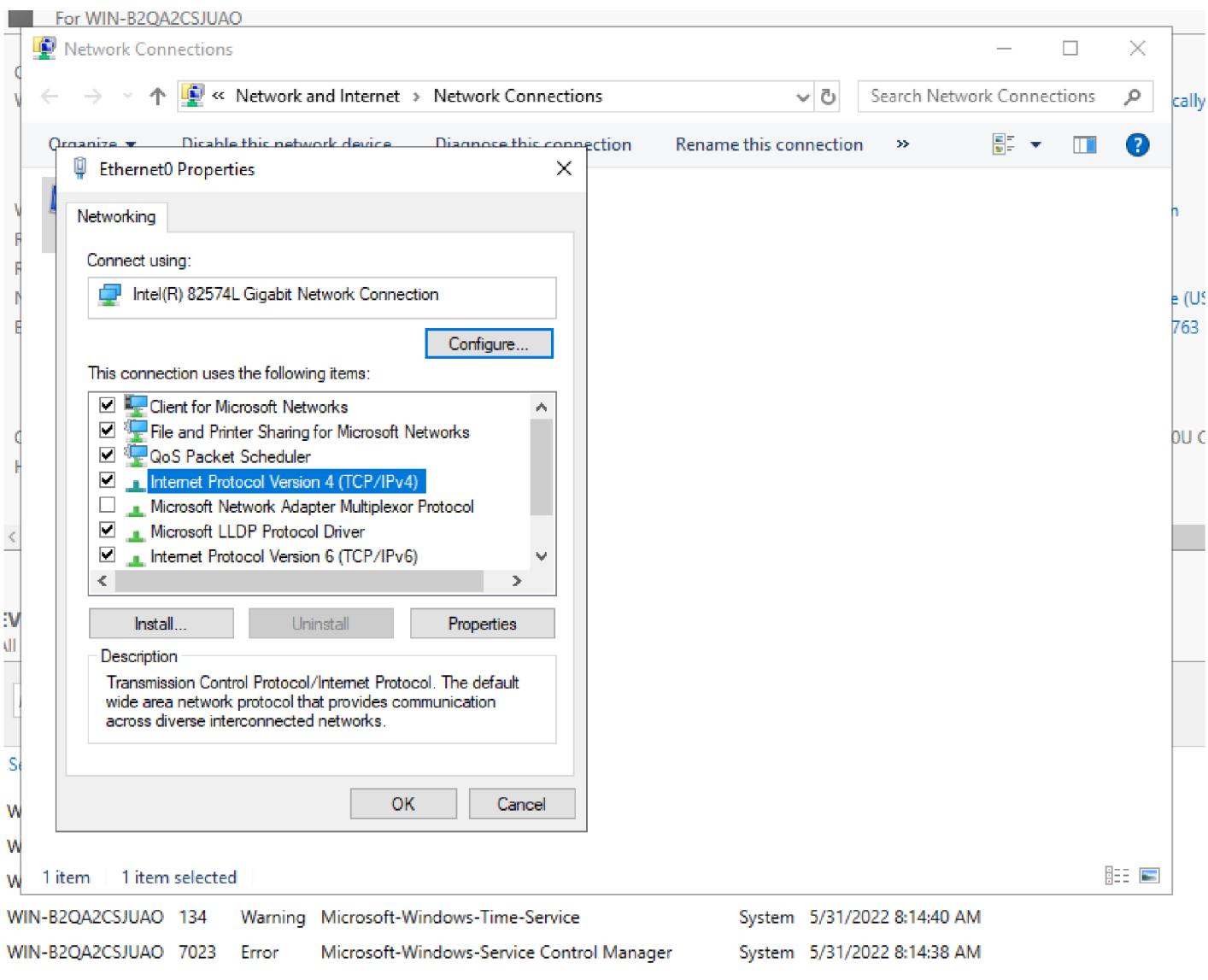
In Server Manager, access the network settings by clicking on the IPv4 address assigned by DHCP, IPv6 enabled besides Ethernet network adapter

PROPERTIES		
For WIN-MTANU8QVAF9		
Computer name	WIN-MTANU8QVAF9	L
Workgroup	WORKGROUP	V
Windows Defender Firewall	Private: On	V
Remote management	Enabled	F
Remote Desktop	Disabled	IE
NIC Teaming	Disabled	T
Ethernet	IPv4 address assigned by DHCP, IPv6 enabled	P
Operating system version	Microsoft Windows Server 2019 Standard Evaluation	P
Hardware information	innotek GmbH VirtualBox	Ir
		T

Right-click on the Ethernet adapter and choose properties



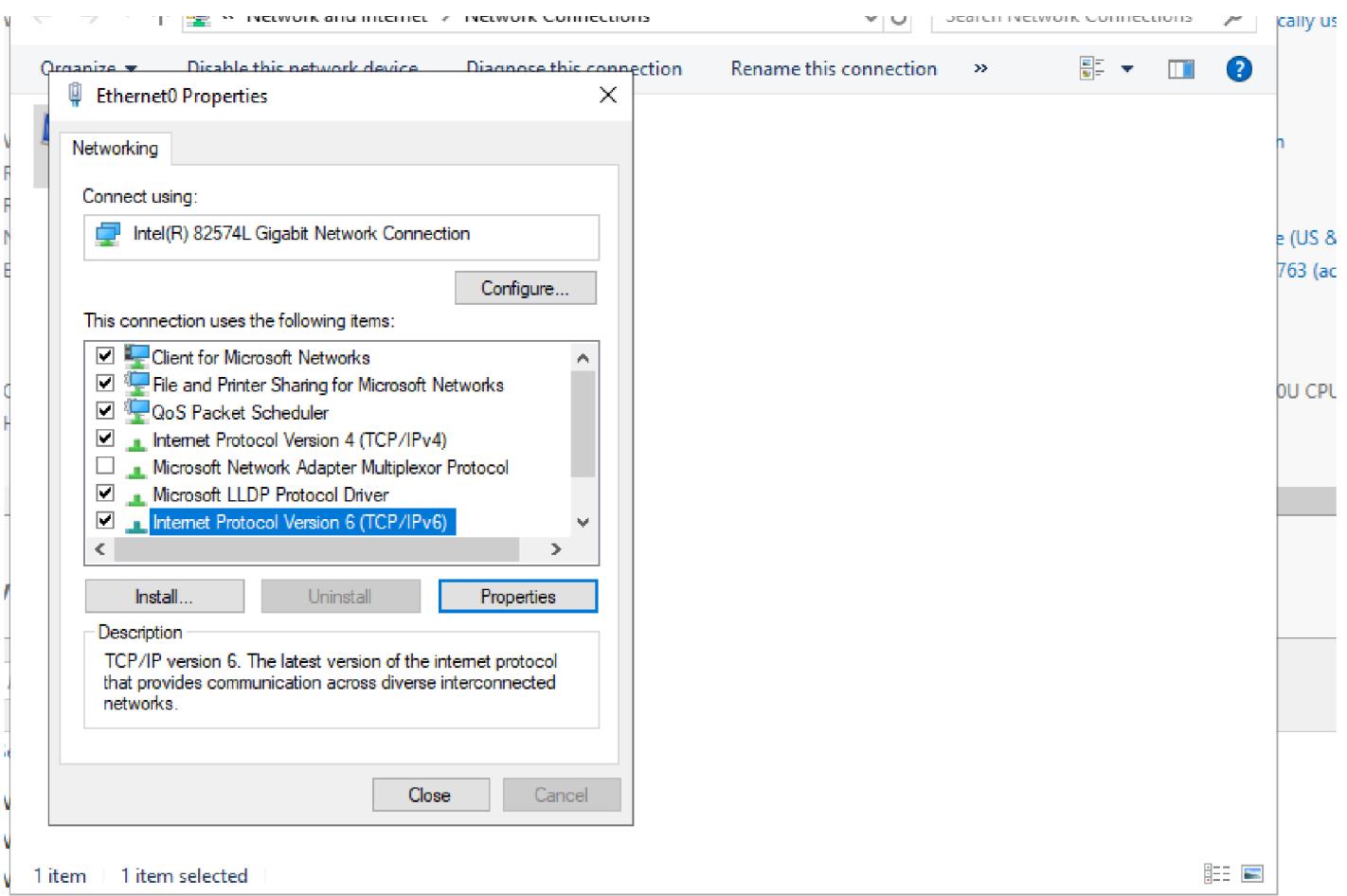
Change the IPV4 address by highlighting Internet Protocol Version 4 and clicking properties



Enter the Static address, subnet mask, default gateway, and preferred DNS server address information for your server for IPv4 based on the VMNetworkSetup document found in Learn. Click Ok

IPv6 address configuration

Under properties of Ethernet adapter select Internet Protocol Version 6 (TCP/IPv6) and click on Properties.

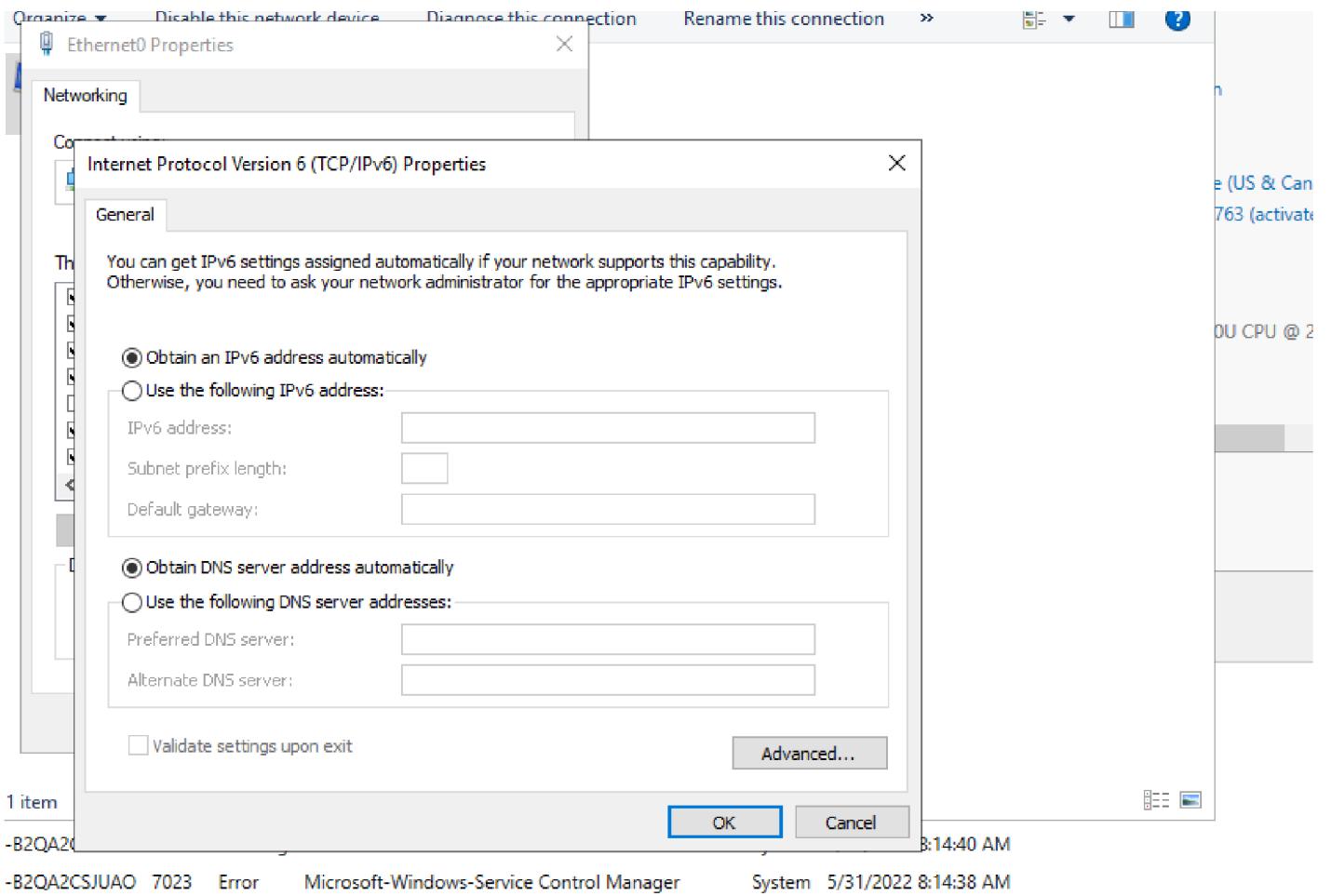


1 item | 1 item selected |

VIN-B2QA2CSJUAO 134 Warning Microsoft-Windows-Time-Service

System 5/31/2022 8:14:40 AM

Enter the static configuration information as required for the Server and choose OK
In our case, we will leave this information at the default for now.



Close connections properties dialog box and go back to Server Manager

Computer name configuration

Click on computer name in Server manager



PROPERTIES

For WIN-MTANU8QVAF9

Computer name	WIN-MTANU8QVAF9
Workgroup	WORKGROUP
Windows Defender Firewall	Private: On
Remote management	Enabled
Remote Desktop	Disabled
NIC Teaming	Disabled
Ethernet	IPv4 address assigned by DHCP, IPv6 enabled
Operating system version	Microsoft Windows Server 2019 Standard Evalu
Hardware information	innotek GmbH VirtualBox

<

System Properties

Computer Name Hardware Advanced Remote

Computer description: []

For example: "IIS Production Server" or "Accounting Server".

Full computer name: WIN-B2QA2CSJUAO

Workgroup: WORKGROUP

To rename this computer or change its domain or workgroup, click Change.

Change...

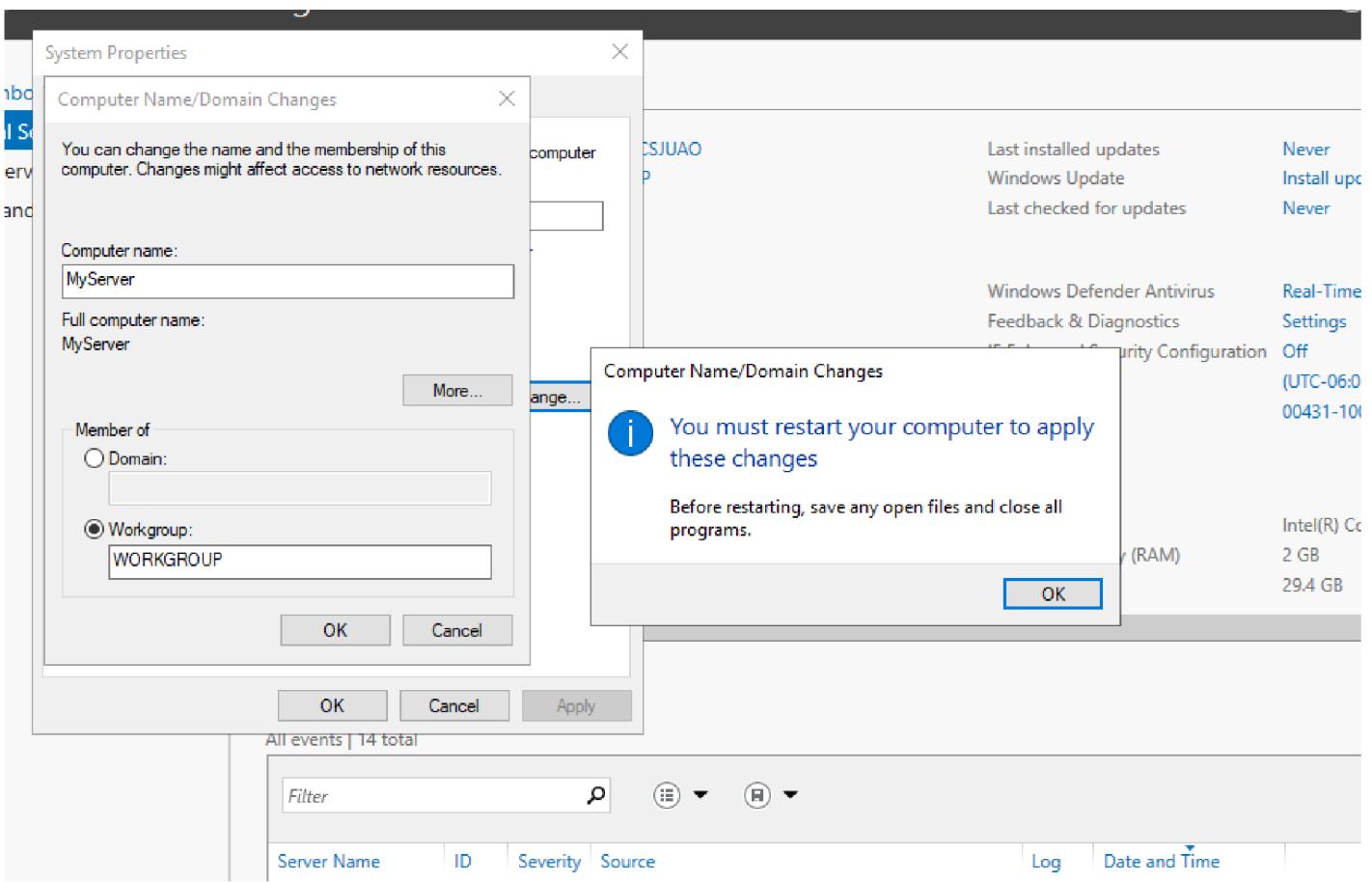
OK Cancel Apply

All events | 14 total

Filter

Server Name	ID	Severity	Source
WIN-B2QA2CSJUAO	10149	Warning	Microsoft-Windows-Windows Remote Manag

Choose Change and Enter a new name for the server based on the Server Configuration document.



Choose Ok. You will be prompted to restart the server