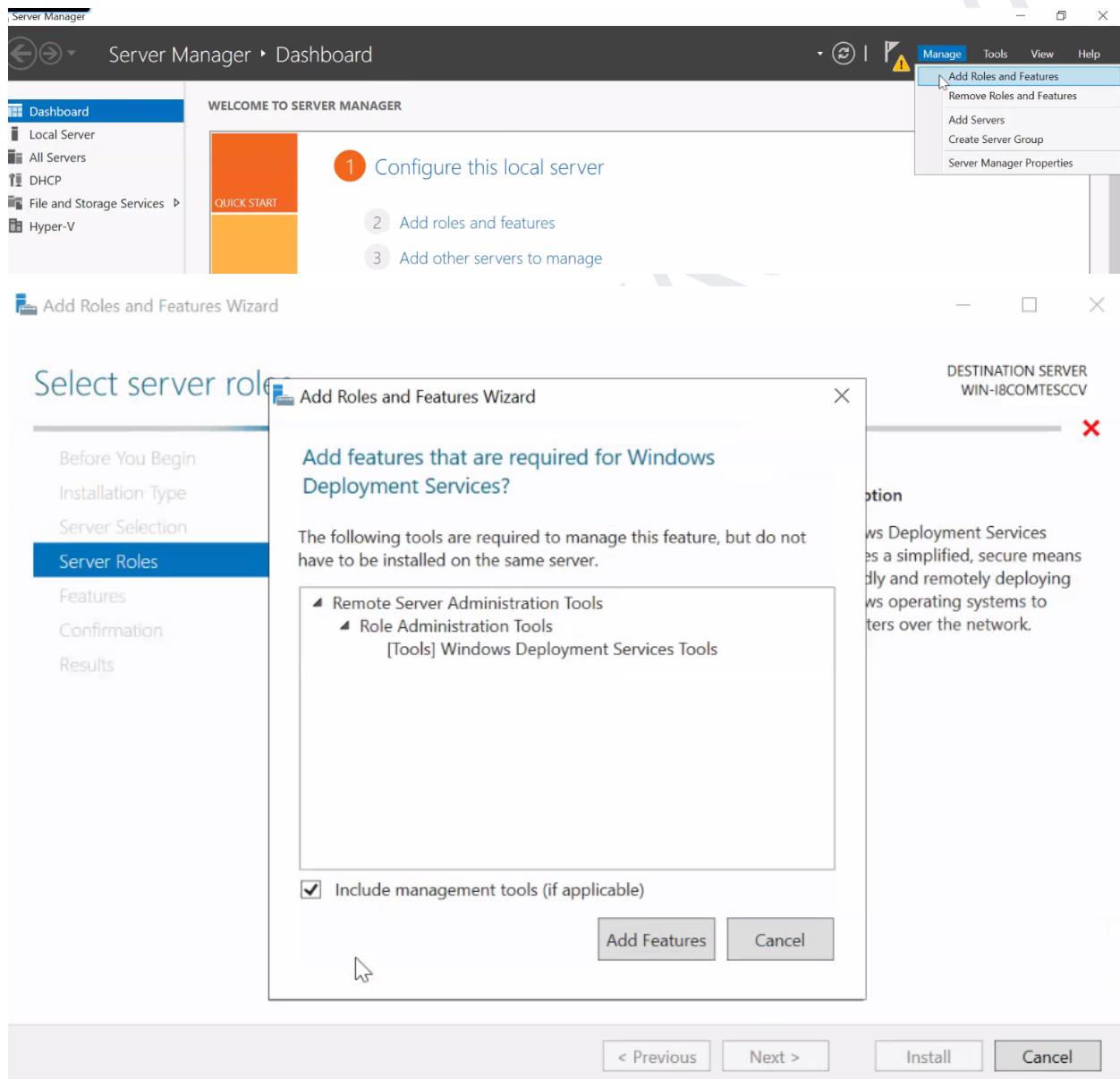


# Assignments:WDS

## Installation and Configuration of WDS on your system for Windows server 2019.



## Select server roles

Before You Begin

Installation Type

Server Selection

**Server Roles**

Features

WDS

Role Services

Confirmation

Results

Select one or more roles to install on the selected server.

**Roles**

- Active Directory Domain Services
- Active Directory Federation Services
- Active Directory Lightweight Directory Services
- Active Directory Rights Management Services
- Device Health Attestation
- DHCP Server (Installed)
- DNS Server
- Fax Server
- File and Storage Services (1 of 12 installed)
- Host Guardian Service
- Hyper-V (Installed)
- Network Controller
- Network Policy and Access Services
- Print and Document Services
- Remote Access
- Remote Desktop Services
- Volume Activation Services
- Web Server (IIS)
- Windows Deployment Services
- Windows Server Update Services

## Select server roles

DESTINATION SERVER  
WIN-I8COMTESCCV

Before You Begin

Installation Type

Server Selection

**Server Roles**

Features

WDS

Role Services

Confirmation

Select one or more roles to install on the selected server.

**Roles**

- Active Directory Domain Services
- Active Directory Federation Services
- Active Directory Lightweight Directory Services
- Active Directory Rights Management Services
- Device Health Attestation
- DHCP Server (Installed)
- DNS Server
- Fax Server

**Description**

Windows Deployment Services provides a simplified, secure means of rapidly and remotely deploying Windows operating systems to computers over the network.

[Before You Begin](#)[Installation Type](#)[Server Selection](#)[Server Roles](#)[Features](#)[WDS](#)[Role Services](#)[Confirmation](#)[Results](#)

You can use Windows Deployment Services to install and configure Microsoft Windows operating system remotely on computers that are PXE-enabled. Windows Deployment Services replaces Remote Installation Services (RIS) and assists with the rapid adoption and deployment of Windows. The Windows Deployment Services MMC snap-in allows you to manage all aspects of Windows Deployment Services. Windows Deployment Services also provides end-users with an experience that is consistent with Windows Setup.

Things to note:

- Deployment Server requires that DHCP and DNS services are available on your network. Transport Server does not require any additional roles or services. Both of these services require an NTFS partition for the file store.
- Before you begin, you need to configure Windows Deployment Services by running either the Windows Deployment Services Configuration Wizard or WDSUtil.exe. You will also need to add at least one boot image and one install image to the image store.
- To install Windows operating systems from a Windows Deployment Services server, either the client computers must be PXE-enabled, or you must use the Windows Server 2008 R2 version of Windows Preinstallation Environment (Windows PE).

Things to note:

- Deployment Server requires that DHCP and DNS services are available on your network. Transport Server does not require any additional roles or services. Both of these services require an NTFS partition for the file store.
- Before you begin, you need to configure Windows Deployment Services by running either the Windows Deployment Services Configuration Wizard or WDSUtil.exe. You will also need to add at least one boot image and one install image to the image store.
- To install Windows operating systems from a Windows Deployment Services server, either the client computers must be PXE-enabled, or you must use the Windows Server 2008 R2 version of Windows Preinstallation Environment (Windows PE).

## Select role services

DESTINATION SERVER  
WIN-I8COMTESCCV

Before You Begin

Installation Type

Server Selection

Server Roles

Features

WDS

Role Services

Confirmation

Results

Select the role services to install for Windows Deployment Services

### Role services

- Deployment Server
- Transport Server

### Description

Deployment Server provides the full functionality of Windows Deployment Services, which you can use to configure and remotely install Windows operating systems. With Windows Deployment Services, you can create and customize images and then use them to reimagine computers. Deployment Server is dependent on the core parts of Transport Server.

## Confirm installation selections

DESTINATION SERVER  
WIN-I8COMTESCCV

Before You Begin

Installation Type

Server Selection

Server Roles

Features

WDS

Role Services

Confirmation

Results

To install the following roles, role services, or features on selected server, click Install.

Restart the destination server automatically if required

Optional features (such as administration tools) might be displayed on this page because they have been selected automatically. If you do not want to install these optional features, click Previous to clear their check boxes.

- Remote Server Administration Tools
- Role Administration Tools
- Windows Deployment Services Tools
- Windows Deployment Services
  - Deployment Server
  - Transport Server

Export configuration settings

Specify an alternate source path

< Previous

Next >

Install

Cancel

## Installation progress

DESTINATION SERVER  
WIN-I8COMTESCCV

Before You Begin  
Installation Type  
Server Selection  
Server Roles  
Features  
WDS  
Role Services  
Confirmation  
**Results**

### View installation progress

**i** Feature installation



Installation started on WIN-I8COMTESCCV

**Remote Server Administration Tools**  
**Role Administration Tools**  
**Windows Deployment Services Tools**  
**Windows Deployment Services**  
**Deployment Server**  
**Transport Server**

 You can close this wizard without interrupting running tasks. View task progress or open this page again by clicking Notifications in the command bar, and then Task Details.

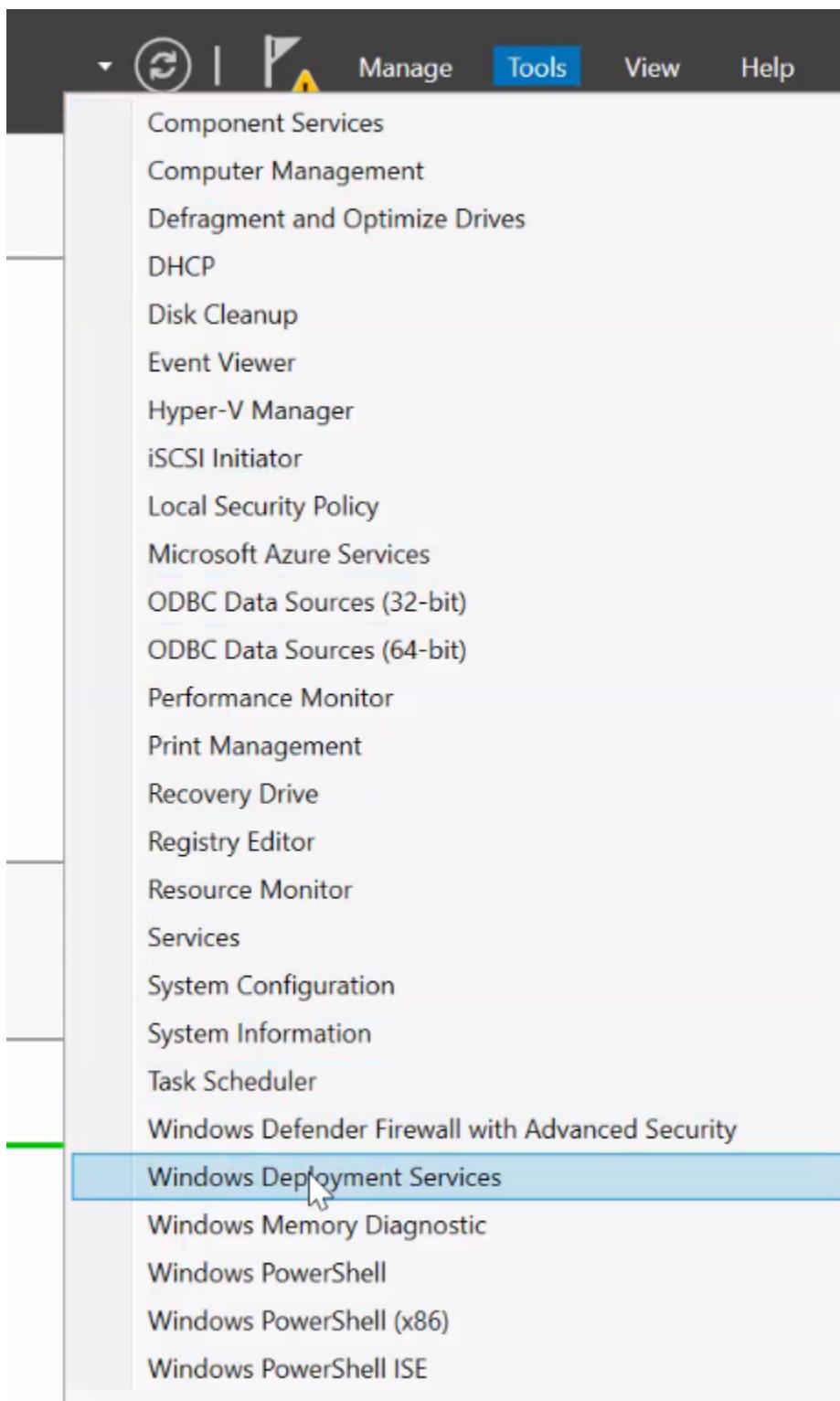
[Export configuration settings](#)

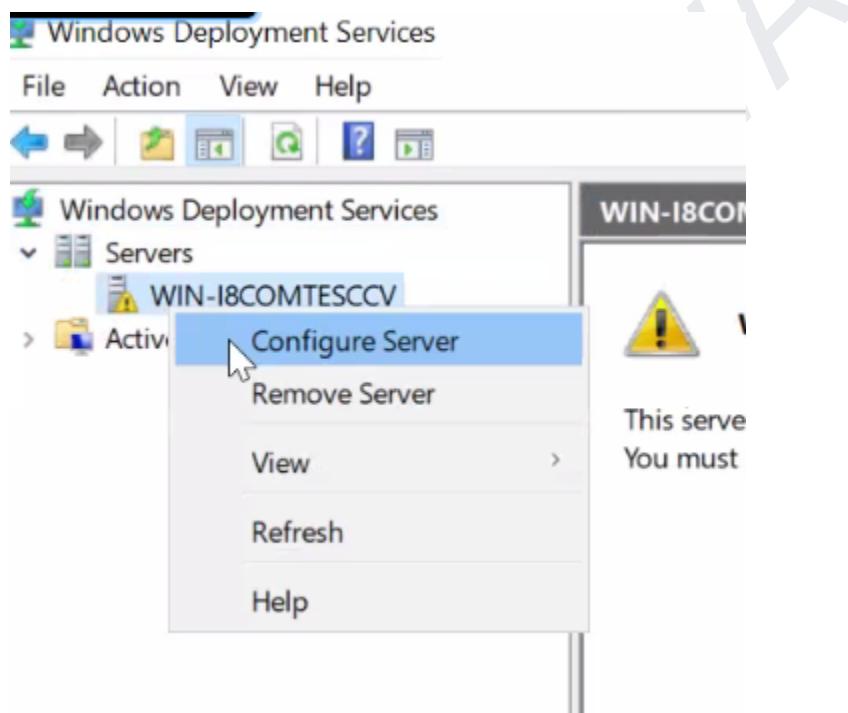
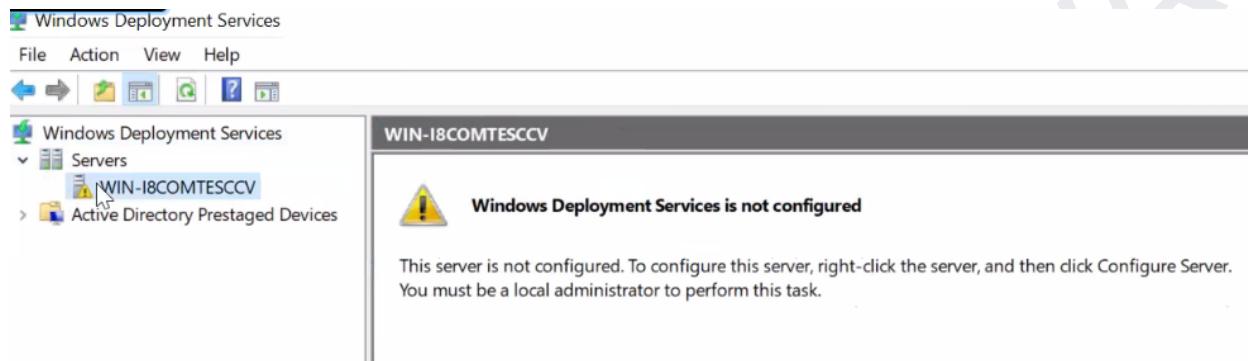
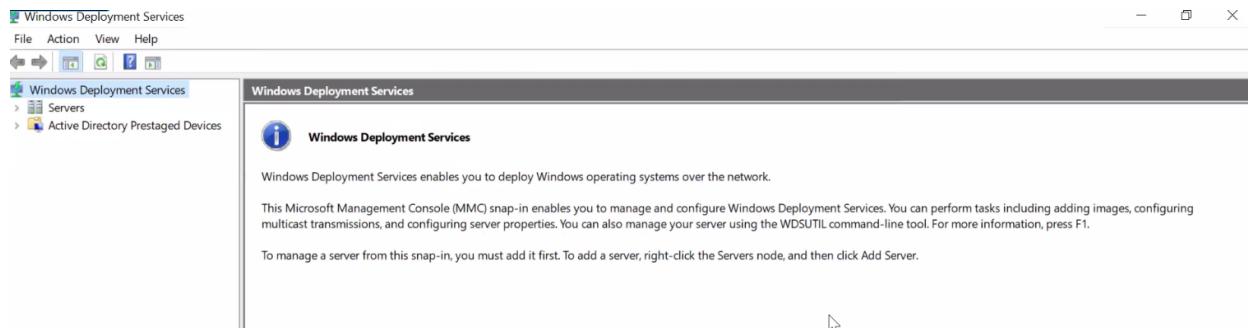
< Previous

Next >

**Close**

Cancel





**Before You Begin**

You can use this wizard to configure Windows Deployment Services. Once the server is configured, you will need to add at least one boot image and one install image to the server before you will be able to install an operating system.

**Before you begin, ensure that the following requirements are met:**

- The server is a member of an Active Directory Domain Services (AD DS) domain, or a domain controller for an AD DS domain. If the server supports Standalone mode, it can be configured without having a dependency on Active Directory.
- There is an active DHCP server on the network. This is because Windows Deployment Services uses Pre-Boot Execution Environment (PXE), which relies on DHCP for IP addressing.
- There is an active DNS server on your network.
- This server has an NTFS file system partition on which to store images.

To continue, click Next.

&lt; Back

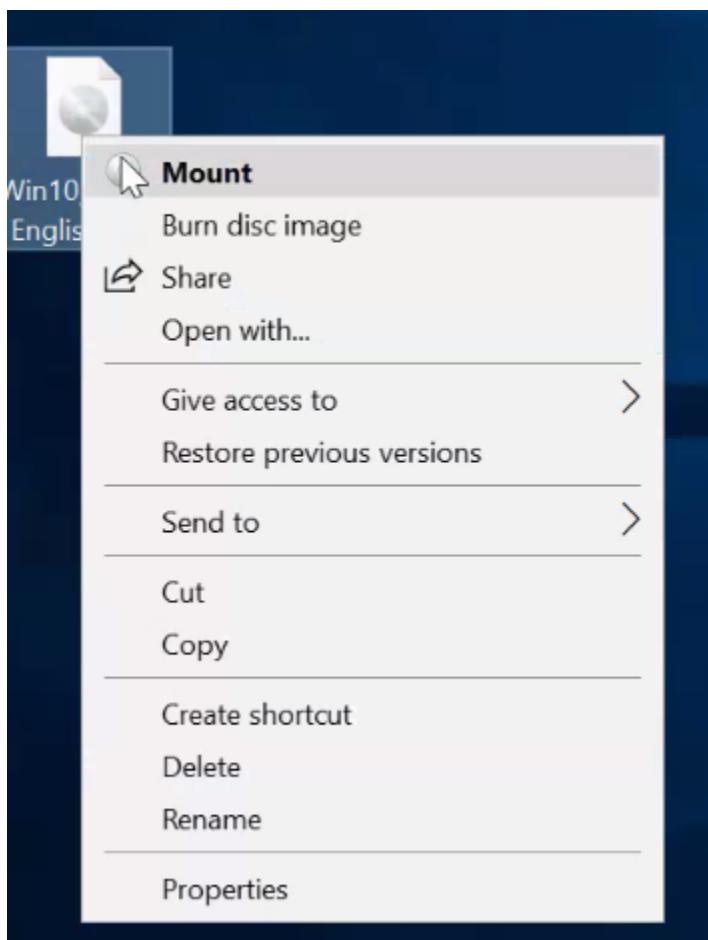
Next &gt;

Cancel

**Before you begin, ensure that the following requirements are met:**

- The server is a member of an Active Directory Domain Services (AD DS) domain, or a domain controller for an AD DS domain. If the server supports Standalone mode, it can be configured without having a dependency on Active Directory.
- There is an active DHCP server on the network. This is because Windows Deployment Services uses Pre-Boot Execution Environment (PXE), which relies on DHCP for IP addressing.
- There is an active DNS server on your network.
- This server has an NTFS file system partition on which to store images.

To continue, click Next.



A screenshot of File Explorer showing the contents of a mounted ISO image at `DVD Drive (F:) SSS_X64FREE_EN-US_DV9\sources`. The table lists the files:

Name	Date modified	Type	Size
iasmigplugin.dll	07-09-2019 06:44	Application extension	680 KB
idwinfo	07-09-2019 06:44	Text Document	1 KB
iiscomp.dll	07-09-2019 06:44	Application extension	32 KB
imagingprovider.dll	07-09-2019 06:44	Application extension	210 KB
input.dll	07-09-2019 06:44	Application extension	355 KB
install.wim	07-09-2019 06:46	WIM File	43,56,671 KB
itgtupg.dll	07-09-2019 06:44	Application extension	93 KB



The image shows two separate file explorers side-by-side.

The top window displays the contents of the 'sources' folder located on the 'DVD Drive (D:) CCCOMA\_X64FRE\_EN-US\_DV9'. The folder path is shown as: This PC > DVD Drive (D:) CCCOMA\_X64FRE\_EN-US\_DV9 > sources. The table below lists the files:

Name	Date modified	Type	Size
background_cli	08-09-2022 09:56	BMP File	2,305 KB
boot.wim	08-09-2022 09:57	WIM File	6,58,102 KB
cdplib.mof	08-09-2022 09:56	MOF File	2 KB
cdplibuninstall.mof	08-09-2022 09:56	MOF File	1 KB

The bottom window displays the contents of the 'Windows-10-images' folder. The folder path is shown as: This PC > Windows-10-images. The table below lists the files:

Name	Date modified	Type	Size
boot.wim	08-09-2022 09:57	WIM File	6,58,
install.wim	08-09-2022 09:57	WIM File	50,38,



## Windows Deployment Services Configuration Wizard



### Install Options



Select one of the following options:

Integrated with Active Directory

This server is a member of an Active Directory Domain Services (AD DS) domain, or a domain controller for an AD DS domain.

Standalone server

Configure the server so that it is standalone, operating independently of Active Directory.

< Back

Next >

Cancel

AMAN



## Windows Deployment Services Configuration Wizard



### Remote Installation Folder Location



The remote installation folder will contain boot images, install images, PXE boot files, and the Windows Deployment Services management tools. Choose a partition that is large enough to hold all of the images that you will have. This partition must be an NTFS partition and should not be the system partition.

Enter the path to the remote installation folder.

Path:

[Browse...](#)

[< Back](#)

[Next >](#)

[Cancel](#)

AMAN

The remote installation folder will contain boot images, install images, PXE boot files, and the Windows Deployment Services management tools. Choose a partition that is large enough to hold all of the images that you will have. This partition must be an NTFS partition and should not be the system partition.

Enter the path to the remote installation folder.

Path:

C:\RemoteInstall

[Browse...](#)

#### Remote Installation Folder Location



The remote installation folder will contain boot images, install images, PXE boot files, and the Windows Deployment Services management tools. Choose a partition that is large enough to hold all of the images that you will have. This partition must be an NTFS partition.



The volume selected is also the Windows system volume. For best performance and data reliability, the remote installation folder should be stored on a separate volume, and, where possible, on a separate disk from the system volume.

Do you want to continue?

[Yes](#)

[No](#)



## Windows Deployment Services Configuration Wizard



### Proxy DHCP Server



If Dynamic Host Configuration Protocol (DHCP) is running on this server, check both of the following check boxes and use DHCP tools to add appropriate PXE options to all DHCP and DHCPv6 scopes.

If a non-Microsoft DHCP server is running on this server, then check the first box and manually configure DHCP option 60 and DHCPv6 Vendor Class for Proxy DHCP.

The Windows Deployment Services Configuration Wizard detected Microsoft DHCP service running on the server. Please select from the following options:

- Do not listen on DHCP and DHCPv6 ports
- Configure DHCP options for Proxy DHCP



< Back

Next >

Cancel

AMAN

If Dynamic Host Configuration Protocol (DHCP) is running on this server, check both of the following check boxes and use DHCP tools to add appropriate PXE options to all DHCP and DHCPv6 scopes.

If a non-Microsoft DHCP server is running on this server, then check the first box and manually configure DHCP option 60 and DHCPv6 Vendor Class for Proxy DHCP.

The Windows Deployment Services Configuration Wizard detected Microsoft DHCP service running on the server. Please select from the following options:

- Do not listen on DHCP and DHCPv6 ports
- Configure DHCP options for Proxy DHCP

### PXE Server Initial Settings



You can use these settings to define which client computers this server will respond to. Known clients are the clients that have been prestaged. When the physical computer performs a PXE boot, the operating system will be installed based on the settings that you have defined.

Select one of the following options:

- Do not respond to any client computers
- Respond only to known client computers
- Respond to all client computers (known and unknown)

Require administrator approval for unknown computers. When you select this option, you must approve the computers using the Pending Devices node in the snap-in. Approved computers will be added to the list of prestaged clients.

To configure this server, click Next.

< Back

Next >

Cancel

Select one of the following options:

- Do not respond to any client computers
- Respond only to known client computers
- Respond to all client computers (known and unknown)

 Require administrator approval for unknown computers. When you select this option, you must approve the computers using the Pending Devices node in the snap-in. Approved computers will be added to the list of prestaged clients.

To configure this server, click Next.



Windows Deployment Services Configuration Wizard



### Task Progress



Configuring Windows Deployment Services...

Copying files needed by Windows Deployment Services



< Back

Finish

Cancel



## Windows Deployment Services Configuration Wizard



### Task Progress



Configuring Windows Deployment Services...

Starting Windows Deployment Services



**The service did not respond to the start or control request in a timely fashion.**



< Back

Finish

Cancel

AMAN

# Windows Deployment Services

File Action View Help



Windows Deployment Services

Servers

WIN-I8COMTESCCV

Install Images

Boot Image

Pending D

Prestaged

Multicast T

Drivers

Active Directory Pr

Install Images

Image Group

Add Install Image...

Add Image Group...

View

Export List...

Help



## Add Image Wizard



### Image Group



This wizard adds an install image to your server. You must have at least one install image and one boot image on your server in order to boot a client using Pre-Boot Execution Environment (PXE) and install an operating system.

An image group is a collection of images that share common file resources and security. Enter the image group for the install image that you want to add.

Select an existing image group

Create an image group named

< Back

Next >

Cancel

AMAI



## Add Image Wizard



### Image File



Enter the location of the Windows image file that contains the images to add.

File location:

[Browse...](#)

Note: The default boot and install images (Boot.wim and Install.wim) are located on the installation DVD in the \Sources folder.

[More information about images and image types](#)



[< Back](#)

[Next >](#)

[Cancel](#)



## Add Image Wizard



### Available Images



The file that you specified contains the following images. Select the images that you want to add to the server.

Name	Architecture	Description
<input checked="" type="checkbox"/> Windows 10 ...	x64	Windows 10 Home Single Language
<input checked="" type="checkbox"/> Windows 10 ...	x64	Windows 10 Education
<input checked="" type="checkbox"/> Windows 10 ...	x64	Windows 10 Education N
<input checked="" type="checkbox"/> Windows 10 ...	x64	Windows 10 Pro
<input checked="" type="checkbox"/> Windows 10 ...	x64	Windows 10 Pro N
<input checked="" type="checkbox"/> Windows 10 ...	x64	Windows 10 Pro Education
<input checked="" type="checkbox"/> Windows 10 ...	x64	Windows 10 Pro Education N
<input checked="" type="checkbox"/> Windows 10 ...	x64	Windows 10 Pro for Workstations
<input checked="" type="checkbox"/> Windows 10 ...	x64	Windows 10 Pro N for Workstations

Use the default name and description for each of the selected images

< Back

Next >

Cancel



Add Image Wizard

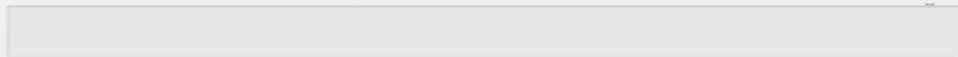


### Task Progress



Adding Windows image(s)...

Adding Image 1 of 11 (Windows 10 Home)



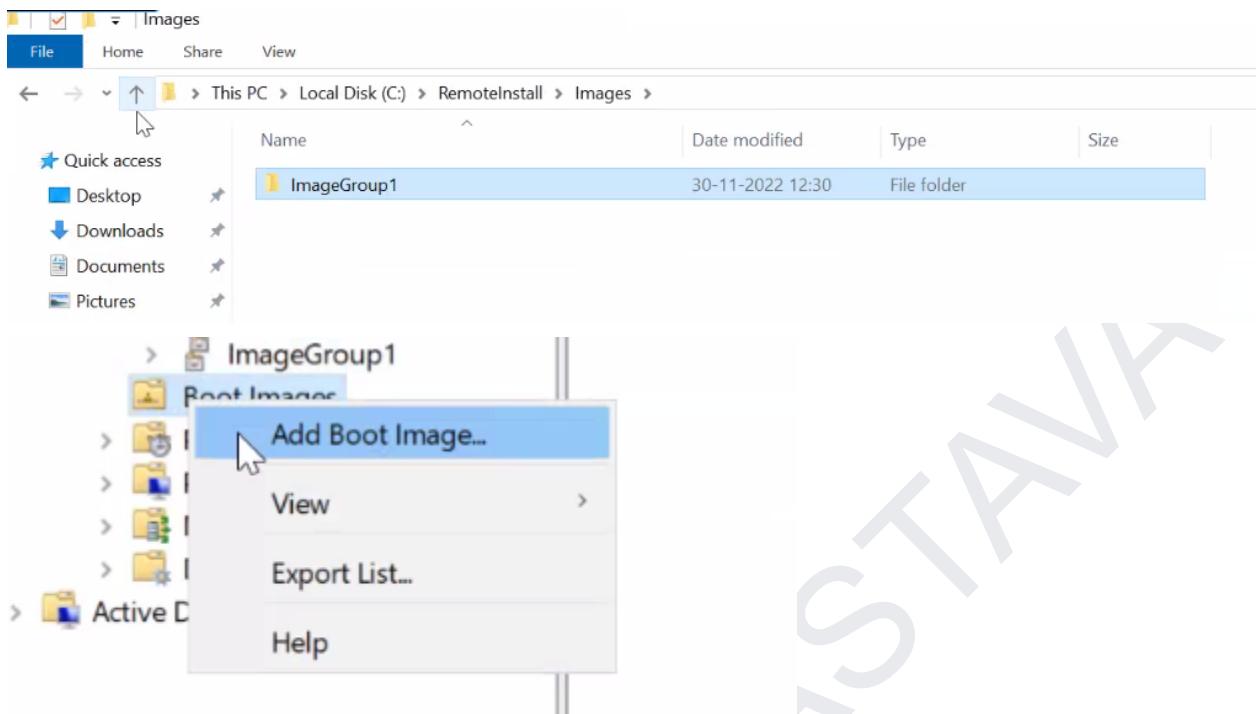
< Back

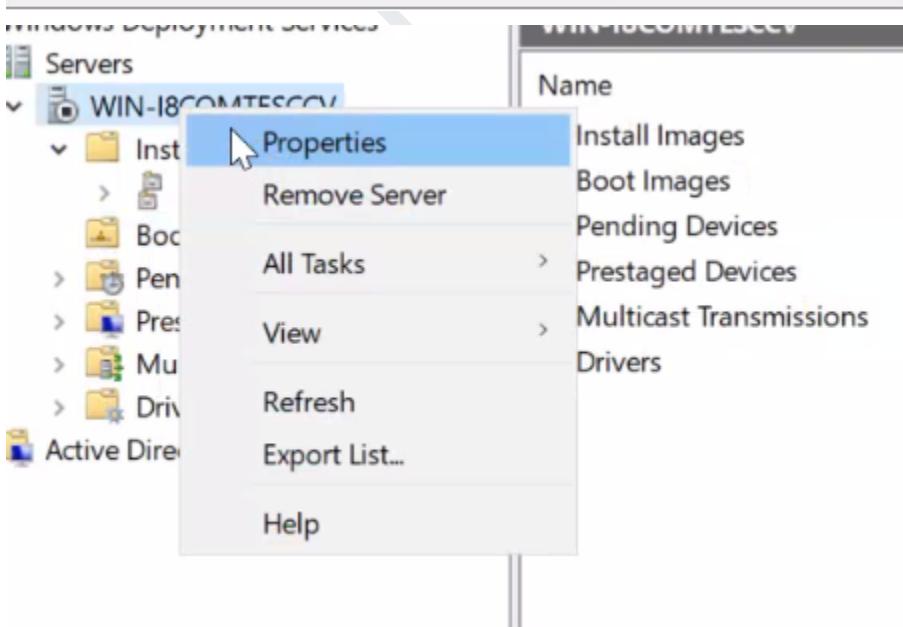
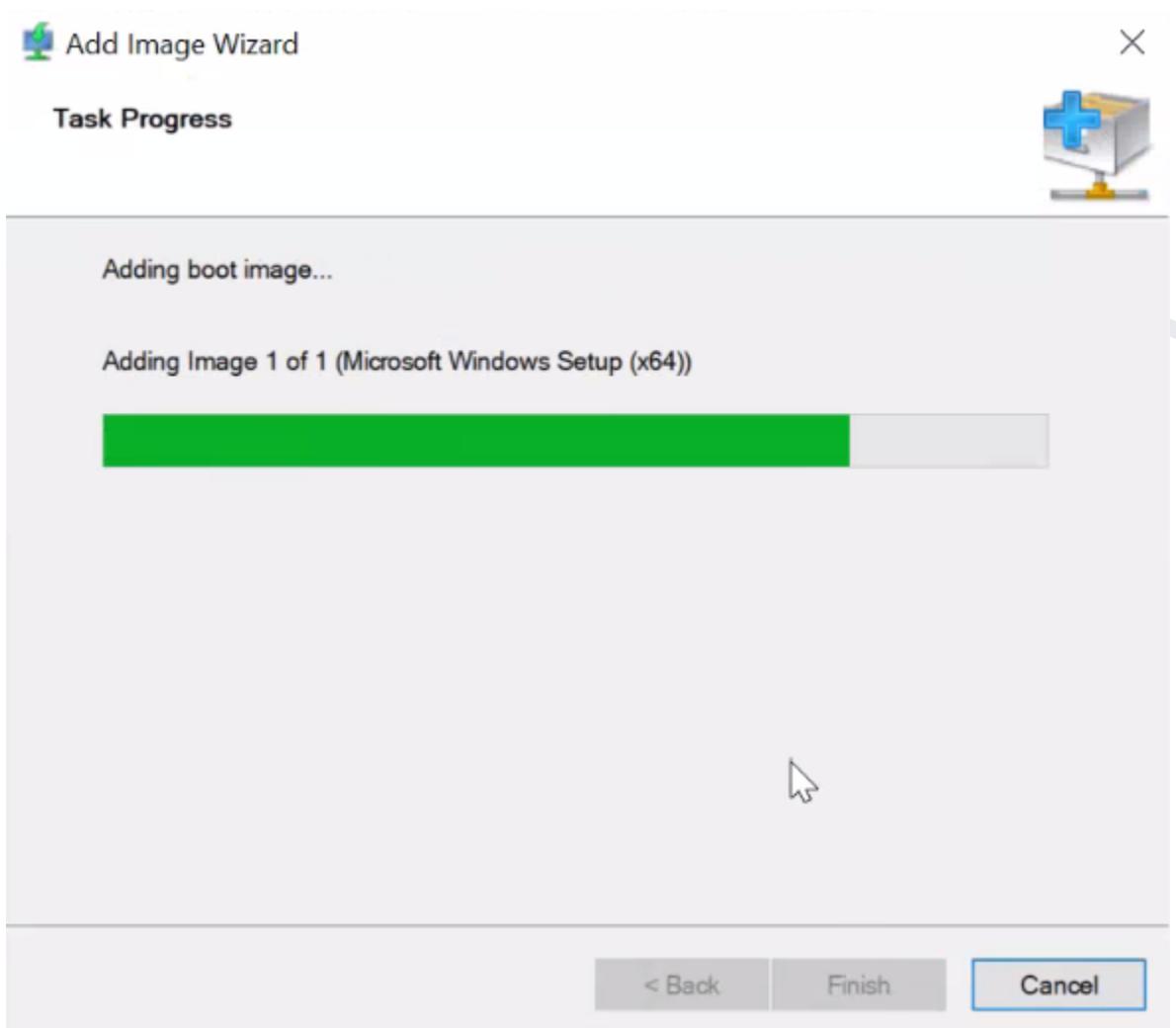
Finish

Cancel

Boot Image

AMAN





## WIN-I8COMTESCCV Properties

X

Multicast      Advanced      Network      TFTP  
General      PXE Response      AD DS      Boot      Client      DHCP



WIN-I8COMTESCCV

Computer name: WIN-I8COMTESCCV  
Remote installation folder: C:\RemoteInstall  
Server mode: Native (Windows Deployment Services)

OK

Cancel

Apply

[General](#)[PXE Response](#)[AD DS](#)[Boot](#)[Client](#)[DHCP](#)

#### PXE Response Policy

Define which client computers this server will respond to. Known clients are clients that appear in the list of prestaged devices.

- Do not respond to any client computers
- Respond only to known client computers
- Respond to all client computers (known and unknown)

Require administrator approval for unknown computers. When you select this option, you must approve the computers using the Pending Devices node in the snap-in. Approved computers will be added to the list of prestaged clients.

#### PXE Response Delay

Adjust how quickly this server responds to clients.

Delay in seconds:

## WIN-I8COMTESCCV Properties

X

Multicast	Advanced	Network	TFTP
General	PXE Response	AD DS	Boot
Client	DHCP		

**PXE Response Policy**

Define which client computers this server will respond to. Known clients are clients that appear in the list of prestaged devices.

Do not respond to any client computers

Respond only to known client computers

Respond to all client computers (known and unknown)

Require administrator approval for unknown computers. When you select this option, you must approve the computers using the Pending Devices node in the snap-in. Approved computers will be added to the list of prestaged clients.

**PXE Response Delay**

Adjust how quickly this server responds to clients.

Delay in seconds:

WIN-I8COMTESCCV Properties

X

Multicast	Advanced	Network	TFTP
General	PXE Response	AD DS	Boot
Client	DHCP		

**PXE Boot Policy**  
After a network boot is initiated, define when a PXE boot will continue.

Known clients:

Require the user to press the F12 key to continue the PXE boot  
 Always continue the PXE boot  
 Continue the PXE boot unless the user presses the ESC key  
 Never continue the PXE boot

Unknown clients:

Require the user to press the F12 key to continue the PXE boot  
 Always continue the PXE boot  
 Continue the PXE boot unless the user presses the ESC key  
 Never continue the PXE boot

**Default boot image (optional)**

x86 architecture:	<input type="text"/>	<input type="button" value="Select..."/>
x64 architecture:	<input type="text"/>	<input type="button" value="Select..."/>
arm architecture:	<input type="text"/>	<input type="button" value="Select..."/>
arm64 architecture:	<input type="text"/>	<input type="button" value="Select..."/>
x86 (UEFI) architecture:	<input type="text"/>	<input type="button" value="Select..."/>
x64 (UEFI) architecture:	<input type="text"/>	<input type="button" value="Select..."/>

#### PXE Boot Policy

---

After a network boot is initiated, define when a PXE boot will continue.

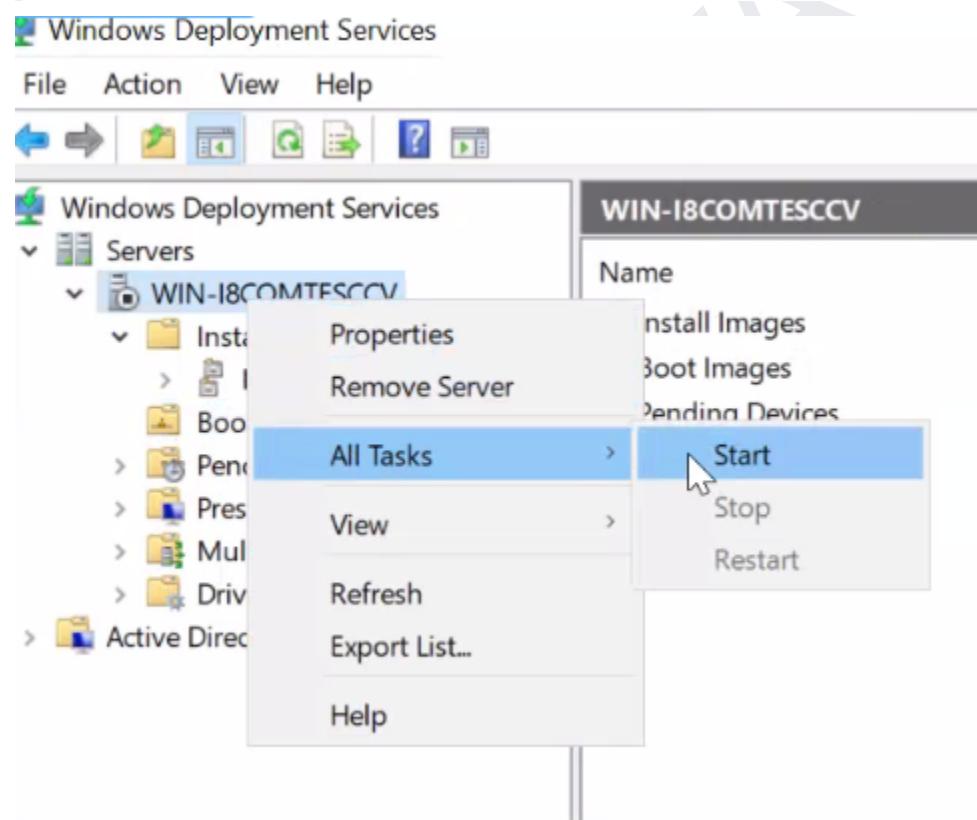
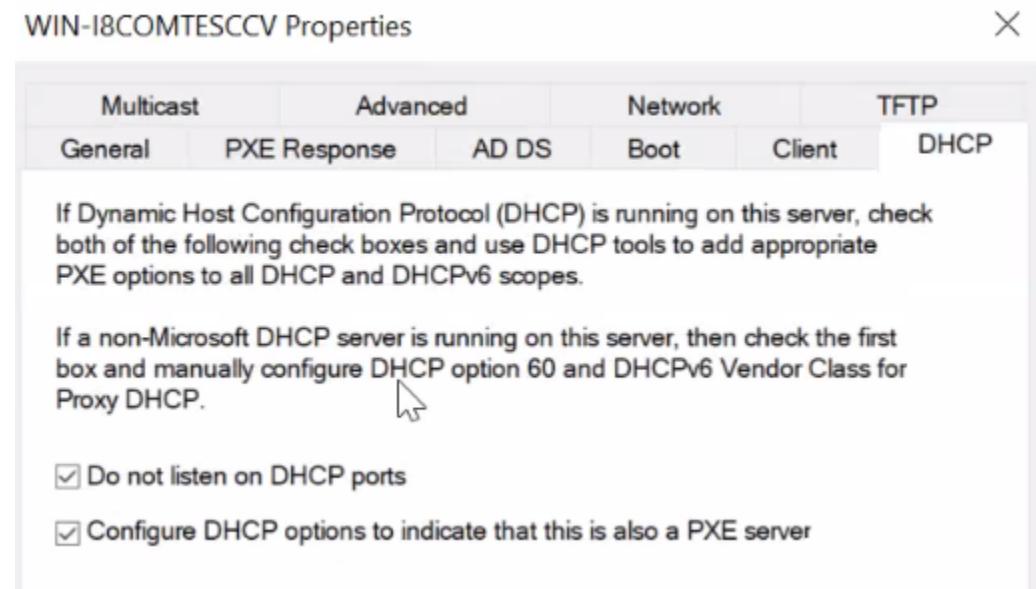
Known clients:

- Require the user to press the F12 key to continue the PXE boot
- Always continue the PXE boot
- Continue the PXE boot unless the user presses the ESC key
- Never continue the PXE boot

Unknown clients:

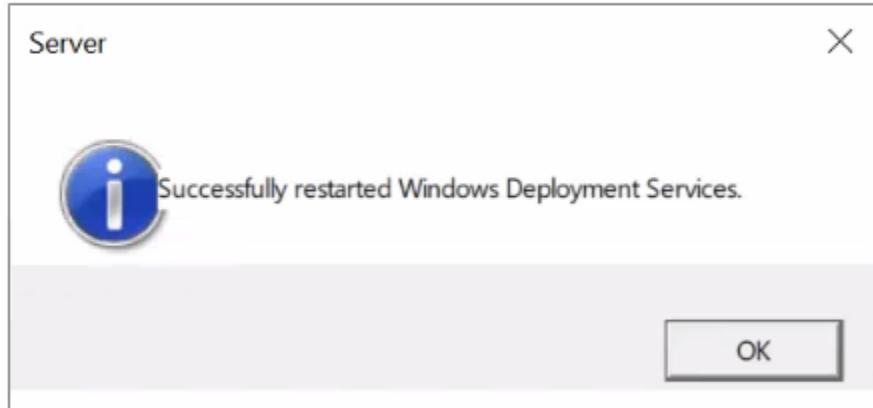
- Require the user to press the F12 key to continue the PXE boot
- Always continue the PXE boot
- Continue the PXE boot unless the user presses the ESC key
- Never continue the PXE boot

Uncheck



sions

>

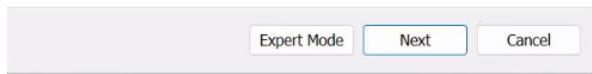


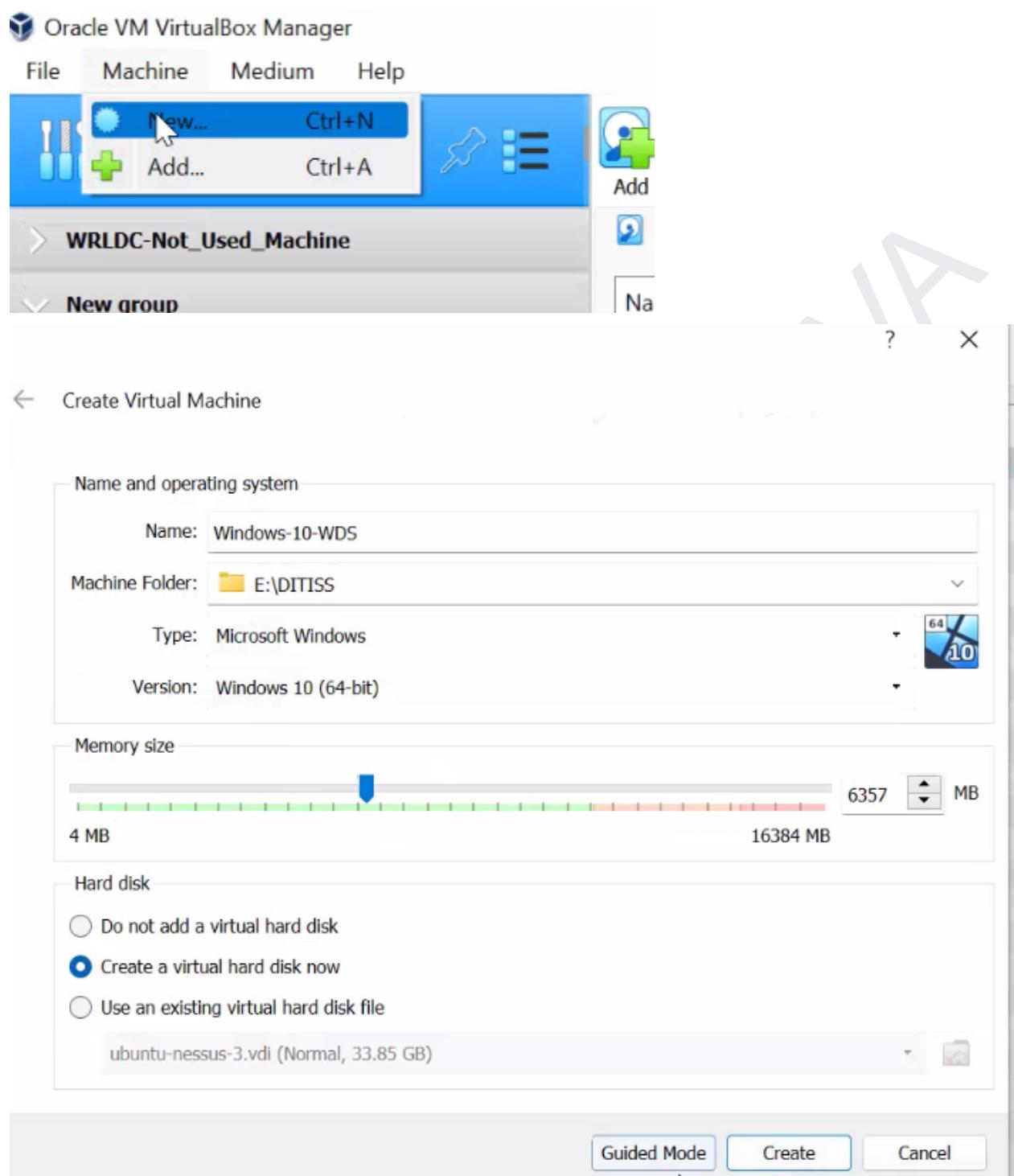
← Create Virtual Hard Disk

### Hard disk file type

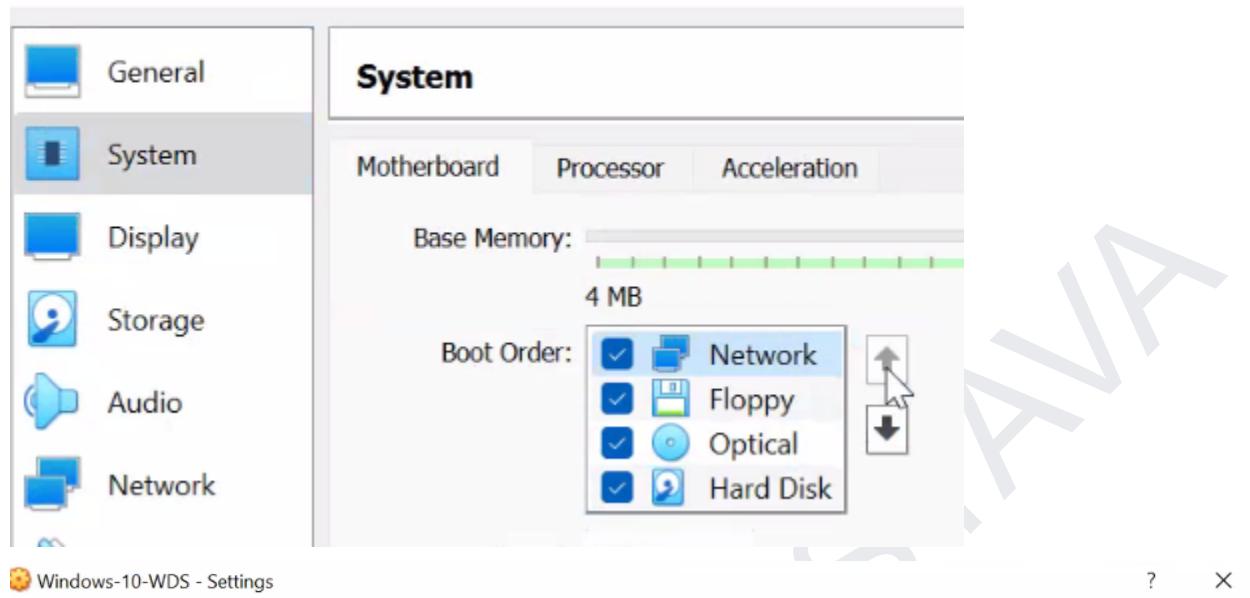
Please choose the type of file that you would like to use for the new virtual hard disk. If you do not need to use it with other virtualization software you can leave this setting unchanged.

- VDI (VirtualBox Disk Image)
- VHD (Virtual Hard Disk)
- VMDK (Virtual Machine Disk)

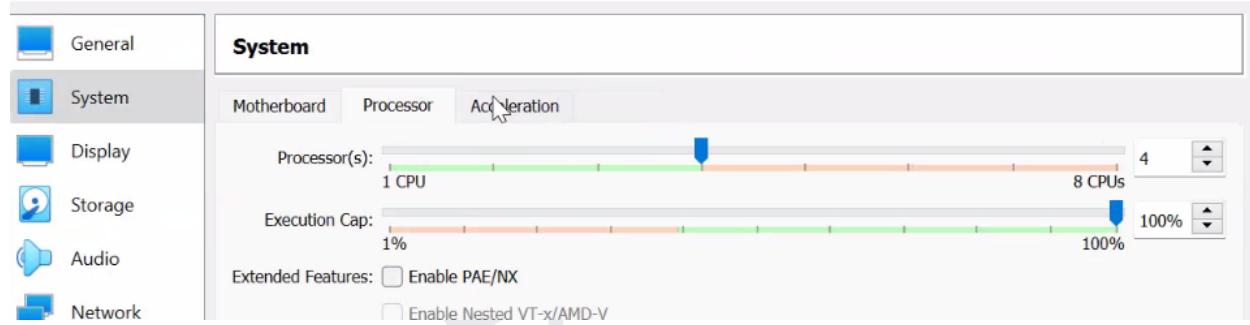




## Windows-10-WDS - Settings



## Windows-10-WDS - Settings



```
Intel UNDI, PXE-Z.1
PXE Software Copyright (C) 1997-2000 Intel Corporation
Copyright (C) 2010-2020 Oracle Corporation

CLIENT MAC ADDR: 08 00 27 B9 90 9F  GUID: 5E485C58-CFF7-5A41-9217-E1C9094C38B3
CLIENT IP: 10.0.2.15  MASK: 255.255.255.0  DHCP IP: 10.0.2.2
GATEWAY IP: 10.0.2.2
TFTP.
PXE-T02: Option negotiation failure (file not found or inaccessible?)
PXE-E3C: TFTP Error - Access Violation
PXE-M0F: Exiting Intel PXE ROM.
FATAL: No bootable medium found! System halted.
```

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Loading files...

IP: 192.168.3.7, File: \Boot\x64\Images\boot.wim