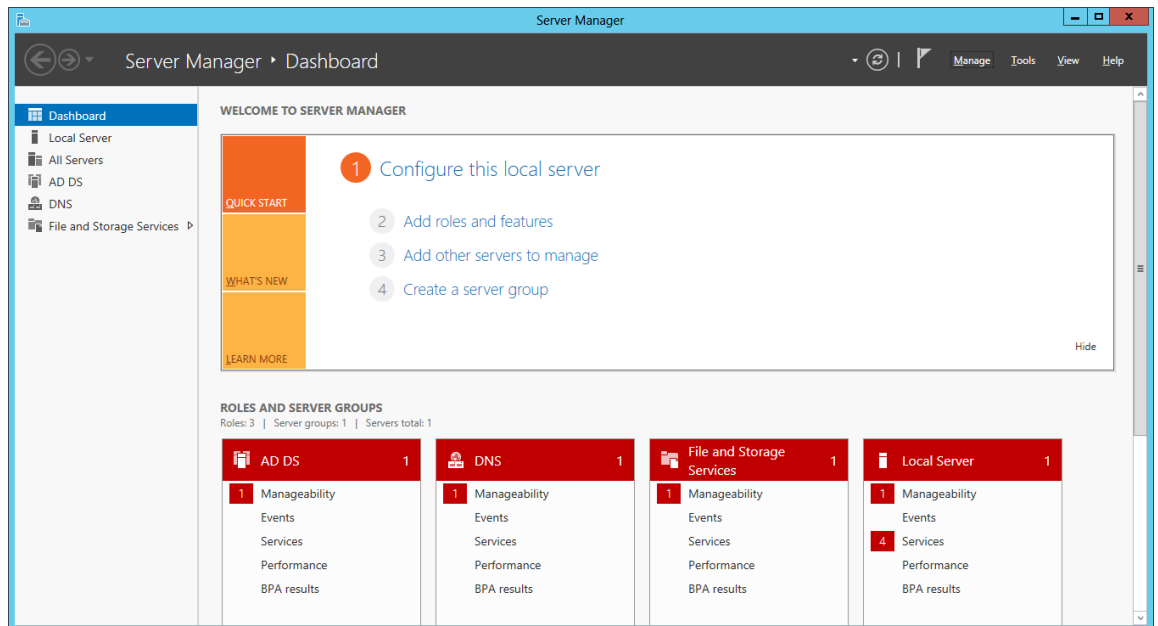
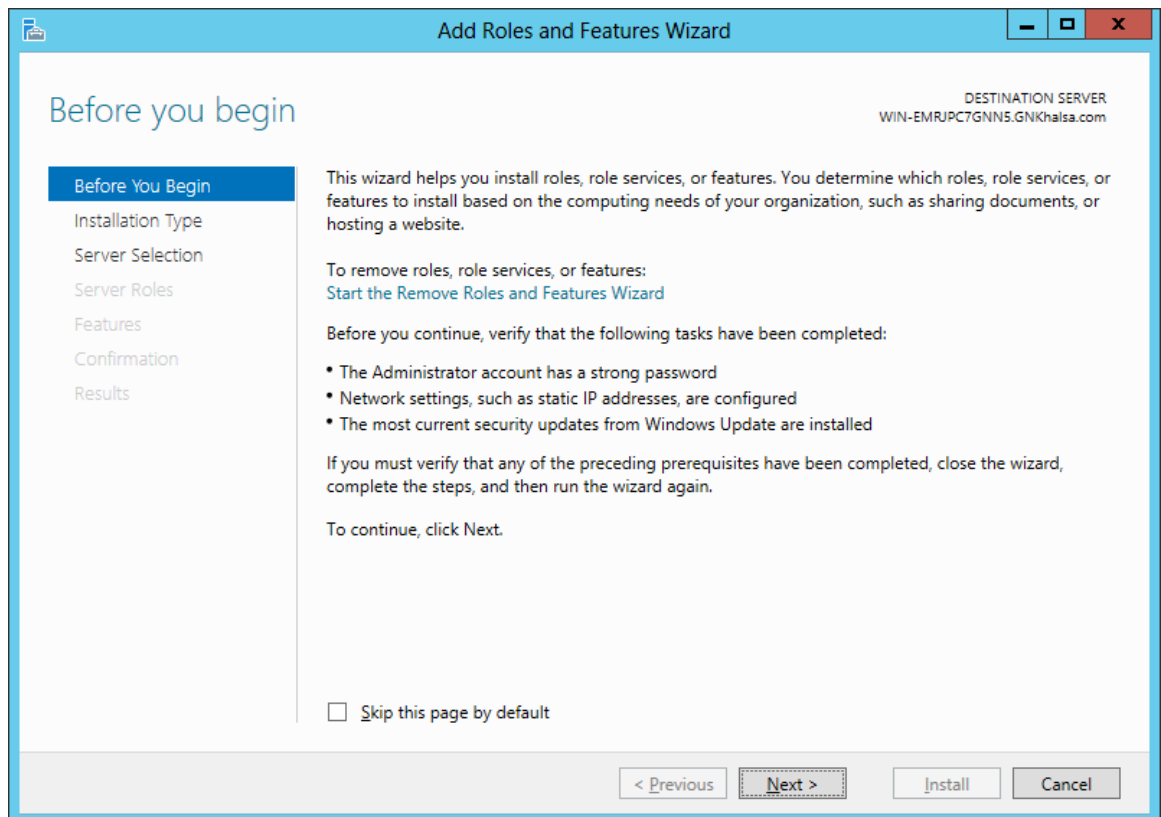


This is the **Dashboard** view of **Server Manager**

Now click on **Add roles and features**



Add Roles and Features wizard opens, Click Next



Select **Role-based or feature based installation** and click **Next**

The screenshot shows the 'Add Roles and Features Wizard' window. The title bar says 'Add Roles and Features Wizard'. The main heading is 'Select installation type'. On the right, it says 'DESTINATION SERVER WIN-EMRUPC7GNN5.GNKhalsa.com'. On the left, there is a navigation pane with the following items: 'Before You Begin', 'Installation Type' (which is selected and highlighted in blue), 'Server Selection', 'Server Roles', 'Features', 'Confirmation', and 'Results'. The main content area has the text: 'Select the installation type. You can install roles and features on a running physical computer or virtual machine, or on an offline virtual hard disk (VHD)'. There are two radio button options:
1. **Role-based or feature-based installation** (selected): 'Configure a single server by adding roles, role services, and features.'
2. **Remote Desktop Services installation**: 'Install required role services for Virtual Desktop Infrastructure (VDI) to create a virtual machine-based or session-based desktop deployment.'
At the bottom, there are four buttons: '< Previous', 'Next >', 'Install', and 'Cancel'.

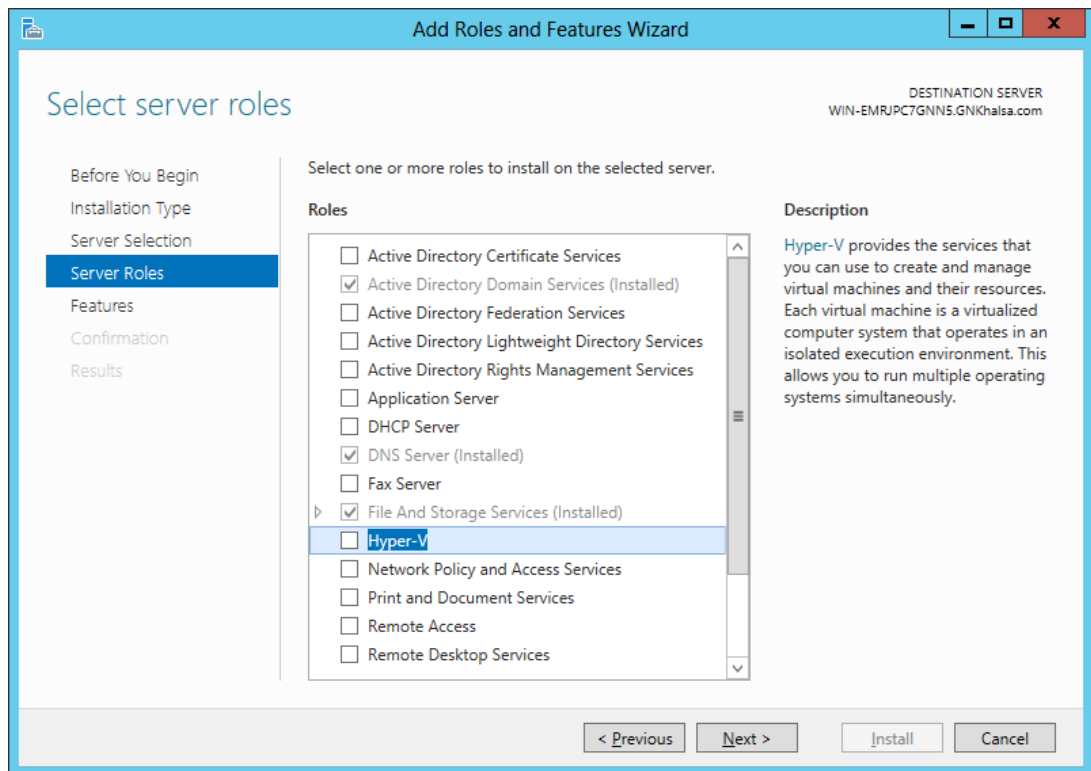
Check the **Select a server from the pool** and select your **server** and click **Next**

The screenshot shows the 'Add Roles and Features Wizard' window at the 'Select destination server' step. The title bar says 'Add Roles and Features Wizard'. The main heading is 'Select destination server'. On the right, it says 'DESTINATION SERVER WIN-EMRUPC7GNN5.GNKhalsa.com'. On the left, the navigation pane has 'Server Selection' selected and highlighted in blue. The main content area has the text: 'Select a server or a virtual hard disk on which to install roles and features.' There are two radio button options:
1. **Select a server from the server pool** (selected)
2. **Select a virtual hard disk**
Below these is a section titled 'Server Pool'. It contains a 'Filter:' text box. Below that is a table with the following data:

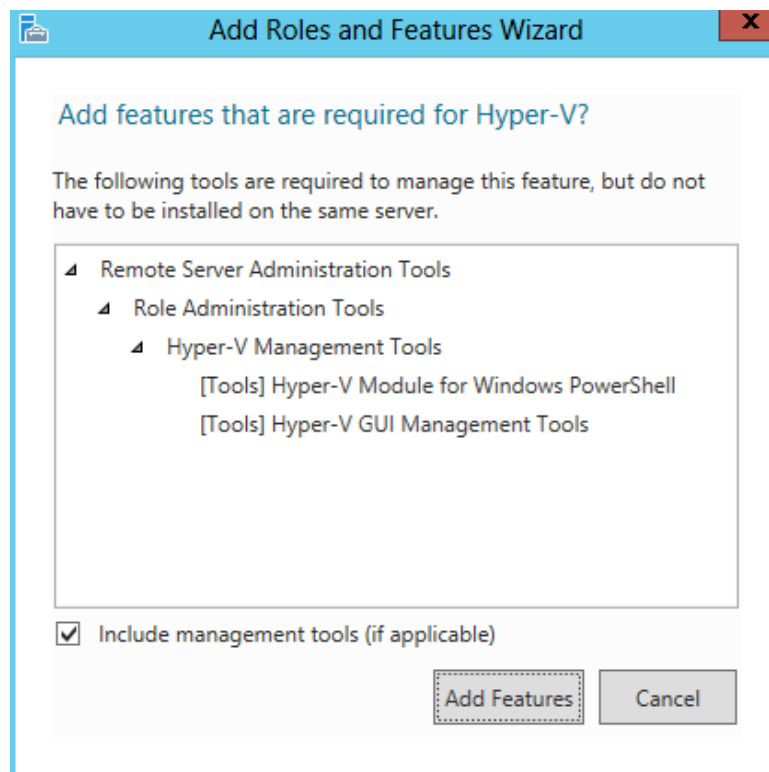
Name	IP Address	Operating System
WIN-EMRUPC7GNN5.GN...		Microsoft Windows Server 2012 Release Candidate Data

Below the table is a scrollbar and the text '1 Computer(s) found'. At the bottom, there is a note: 'This page shows servers that are running Windows Server 2012, and that have been added by using the Add Servers command in Server Manager. Offline servers and newly-added servers from which data collection is still incomplete are not shown.'
At the bottom of the window, there are four buttons: '< Previous', 'Next >', 'Install', and 'Cancel'.

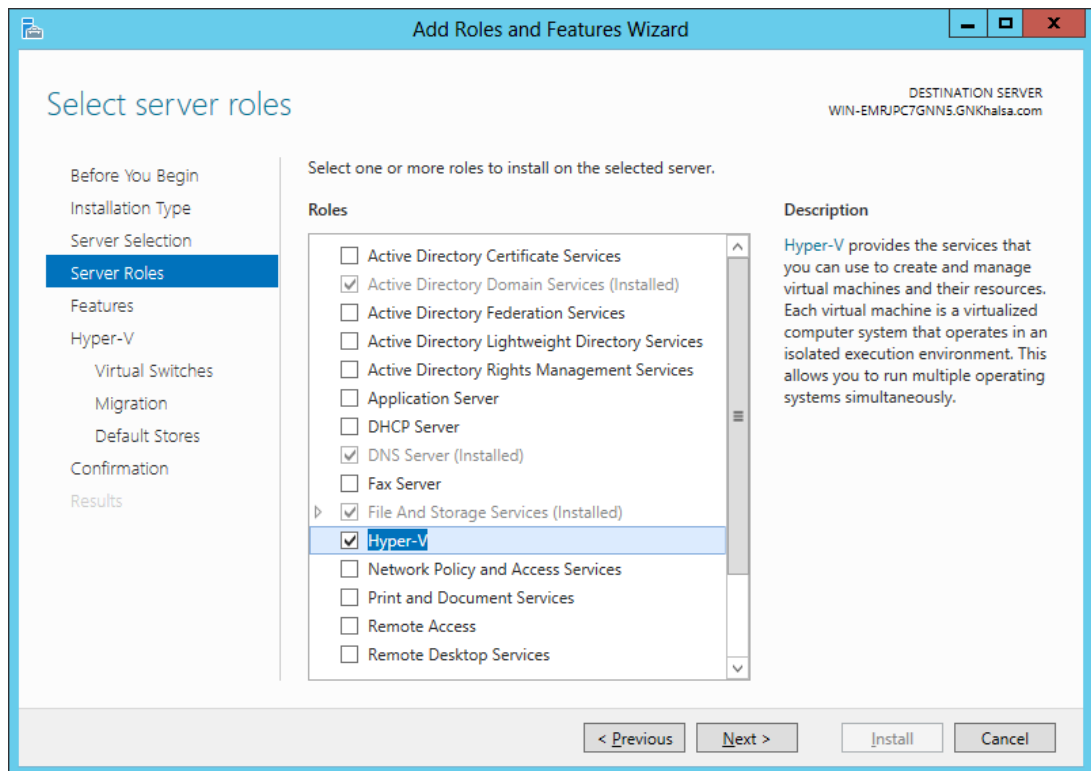
Check the **Hyper V** under the **Server Roles**



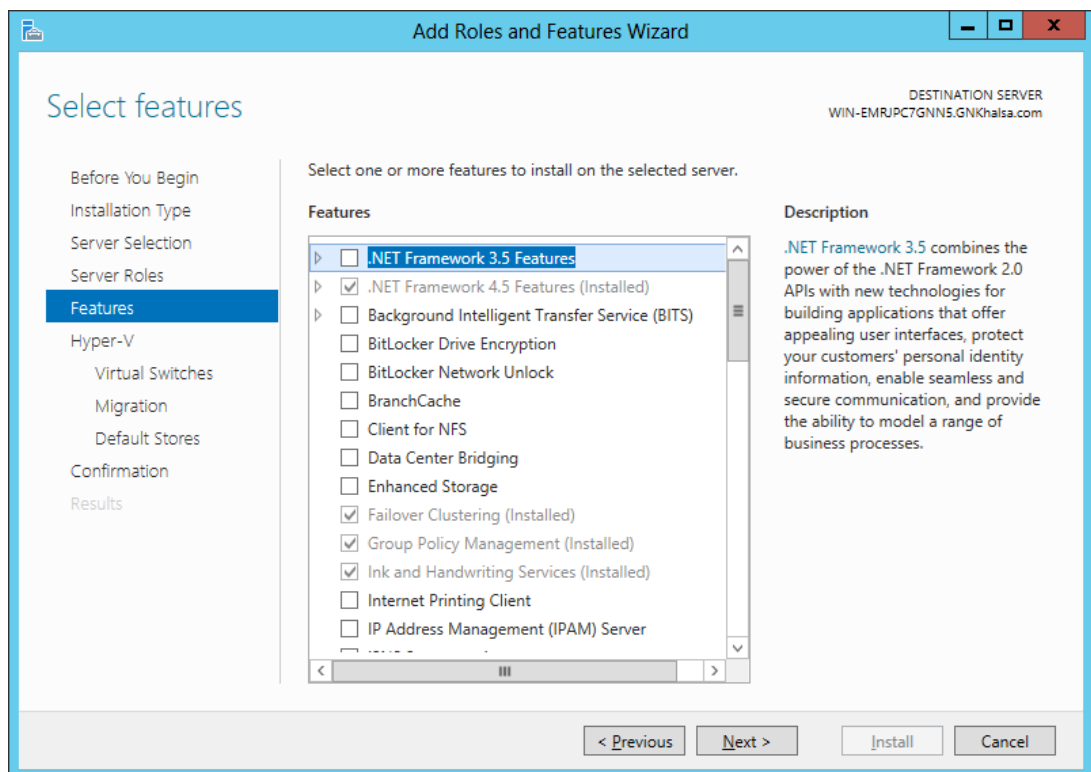
Click on **Add Features**



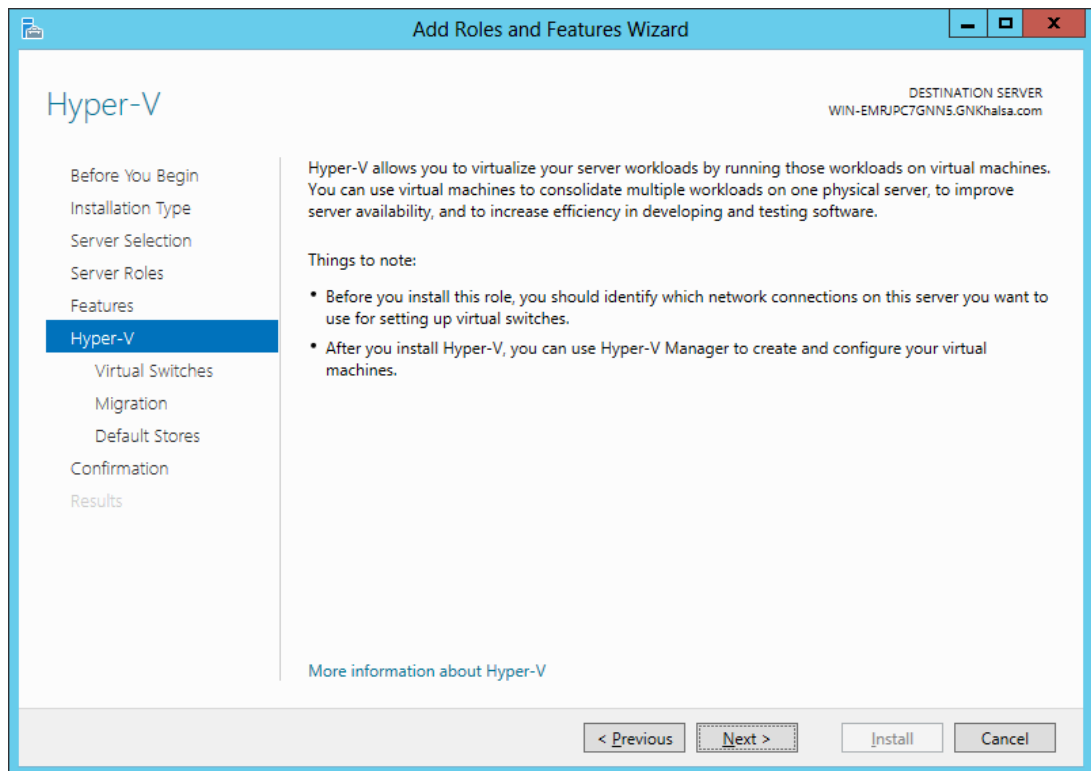
Click **Next** to continue



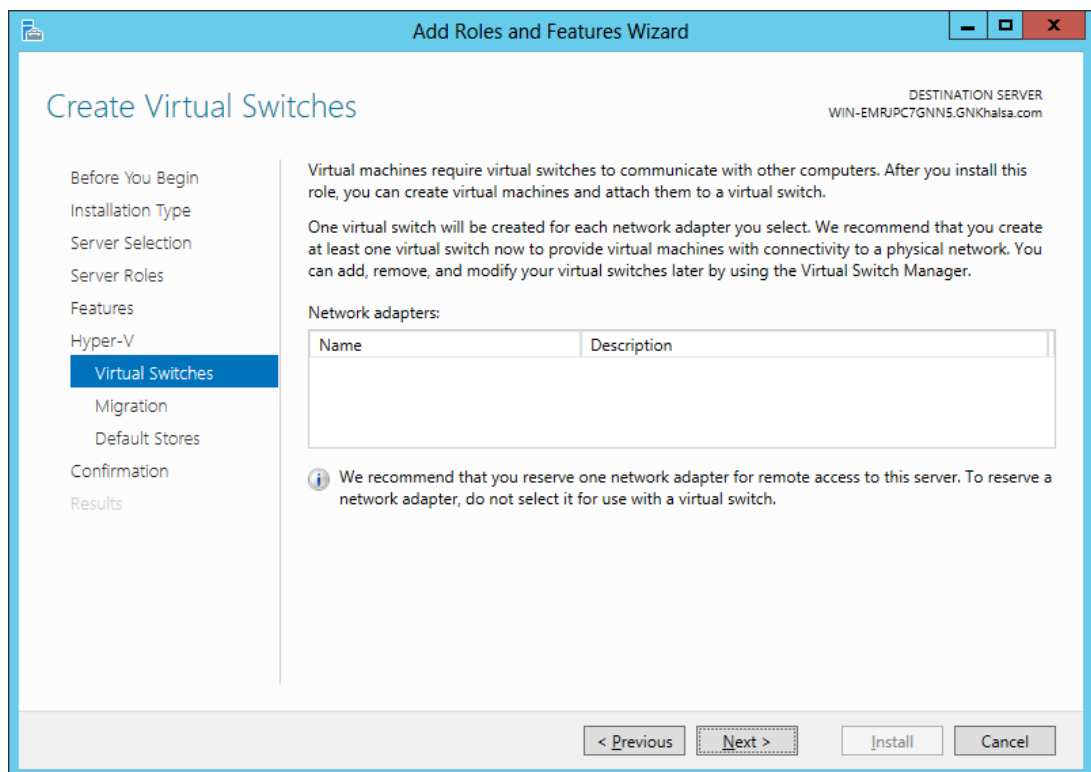
Leave the default setting under the **Features** list and click **Next**



Have a look on the **Hyper V** and click **Next** to continue



Leave the default settings and click **Next**



Leave the default settings and click **Next**

The screenshot shows the 'Virtual Machine Migration' step of the 'Add Roles and Features Wizard'. The left sidebar lists the steps: Before You Begin, Installation Type, Server Selection, Server Roles, Features, Hyper-V, Virtual Switches, Migration (highlighted), Default Stores, Confirmation, and Results. The main content area has a title 'Virtual Machine Migration' and a 'DESTINATION SERVER' label with the value 'WIN-EMRUPC7GNN5.GNKhalsa.com'. Below the title, there is a paragraph explaining Hyper-V migration capabilities. A checkbox 'Allow this server to send and receive live migrations of virtual machines' is checked. Under the 'Authentication protocol' section, 'Use Credential Security Support Provider (CredSSP)' is selected. A warning icon and text at the bottom state: 'If this server will be part of a cluster, do not enable migration now. Instead, you will configure the server for live migration, including specifying networks, when you create the cluster.' The bottom navigation bar contains buttons for '< Previous', 'Next >', 'Install', and 'Cancel'.

Virtual Machine Migration

DESTINATION SERVER
WIN-EMRUPC7GNN5.GNKhalsa.com

Before You Begin
Installation Type
Server Selection
Server Roles
Features
Hyper-V
Virtual Switches
Migration
Default Stores
Confirmation
Results

Hyper-V can be configured to send and receive live migrations of virtual machines on this server. Configuring Hyper-V now enables any available network on this server to be used for live migrations. If you want to dedicate specific networks for live migration, use Hyper-V settings after you install the role.

☒ Allow this server to send and receive live migrations of virtual machines

Authentication protocol
Select the protocol you want to use to authenticate live migrations.

☒ Use Credential Security Support Provider (CredSSP)
This protocol is less secure than Kerberos, but does not require you to set up constrained delegation. To perform a live migration, you must be logged on to the source server.

☐ Use Kerberos
This protocol is more secure but requires you to set up constrained delegation in your environment to perform tasks such as live migration when managing this server remotely.

Warning: If this server will be part of a cluster, do not enable migration now. Instead, you will configure the server for live migration, including specifying networks, when you create the cluster.

< Previous **Next >** Install Cancel

Leave the default settings and click **Next**

The screenshot shows the 'Default Stores' step of the 'Add Roles and Features Wizard'. The left sidebar lists the steps: Before You Begin, Installation Type, Server Selection, Server Roles, Features, Hyper-V, Virtual Switches, Migration, Default Stores (highlighted), Confirmation, and Results. The main content area has a title 'Default Stores' and a 'DESTINATION SERVER' label with the value 'WIN-EMRUPC7GNN5.GNKhalsa.com'. Below the title, there is a paragraph explaining Hyper-V default locations. Two text boxes with 'Browse...' buttons are provided: 'Default location for virtual hard disk files' with the value 'C:\Users\Public\Documents\Hyper-V\Virtual Hard Disks' and 'Default location for virtual machine configuration files' with the value 'C:\ProgramData\Microsoft\Windows\Hyper-V'. The bottom navigation bar contains buttons for '< Previous', 'Next >', 'Install', and 'Cancel'.

Default Stores

DESTINATION SERVER
WIN-EMRUPC7GNN5.GNKhalsa.com

Before You Begin
Installation Type
Server Selection
Server Roles
Features
Hyper-V
Virtual Switches
Migration
Default Stores
Confirmation
Results

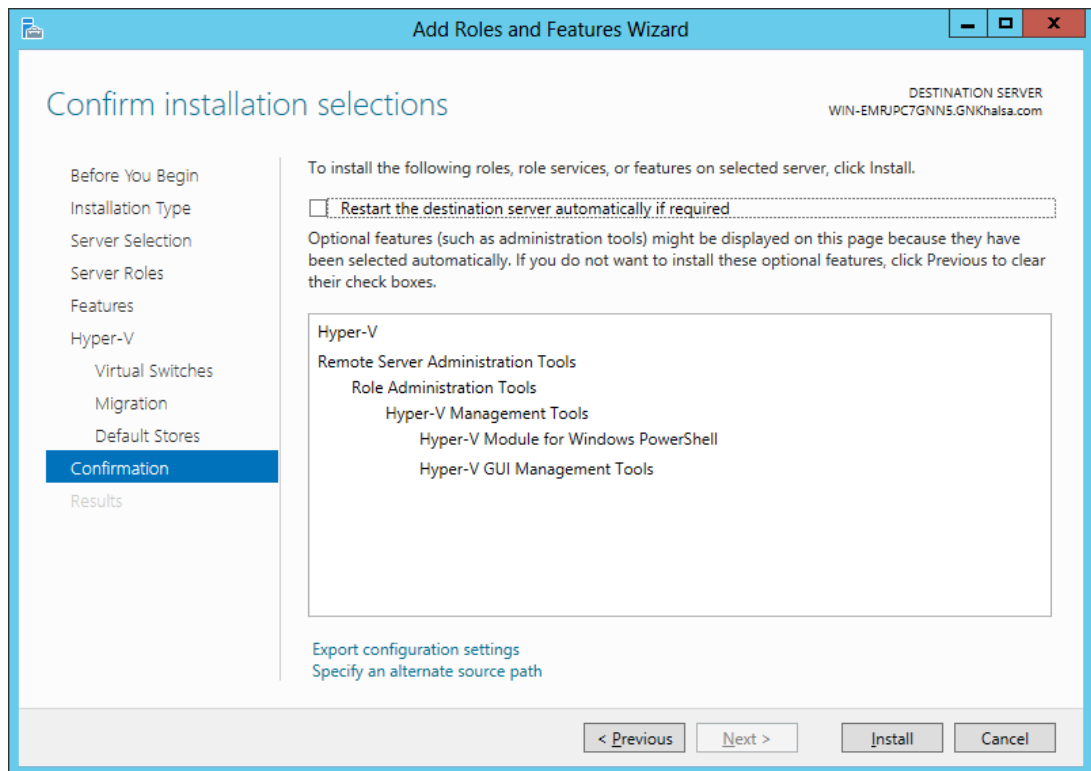
Hyper-V uses default locations to store virtual hard disk files and virtual machine configuration files, unless you specify different locations when you create the files. You can change these default locations now, or you can change them later by modifying Hyper-V settings.

Default location for virtual hard disk files:
C:\Users\Public\Documents\Hyper-V\Virtual Hard Disks Browse...

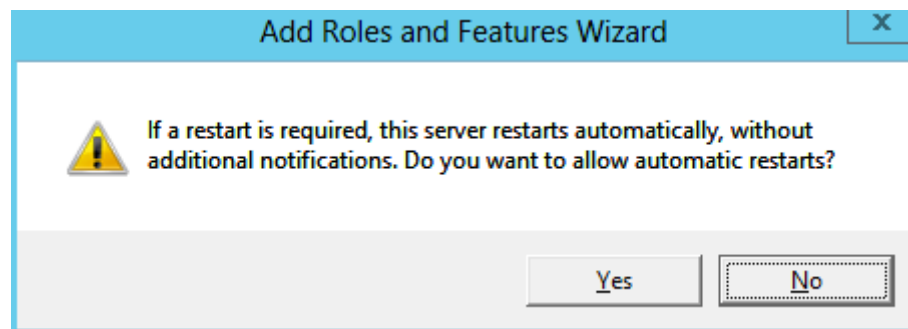
Default location for virtual machine configuration files:
C:\ProgramData\Microsoft\Windows\Hyper-V Browse...

< Previous **Next >** Install Cancel

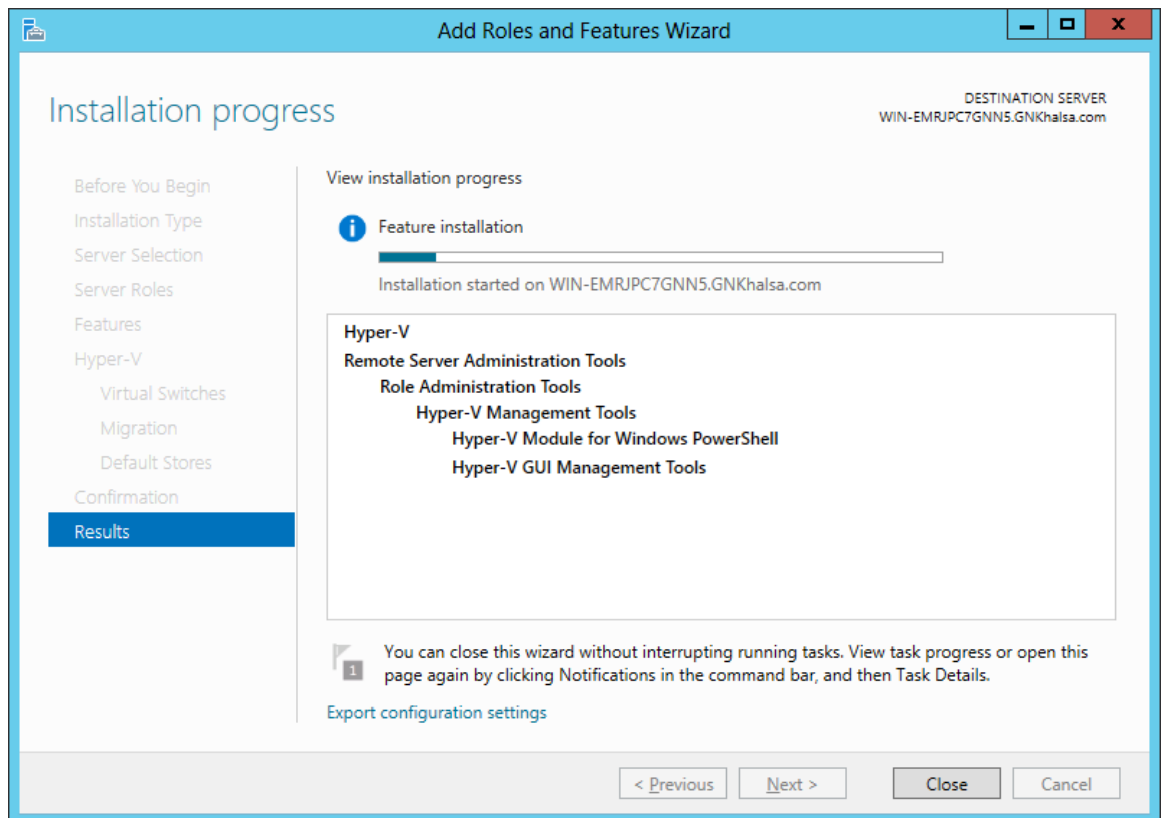
Check the **Restart the destination server automatically**



Click **Yes** to restart automatically

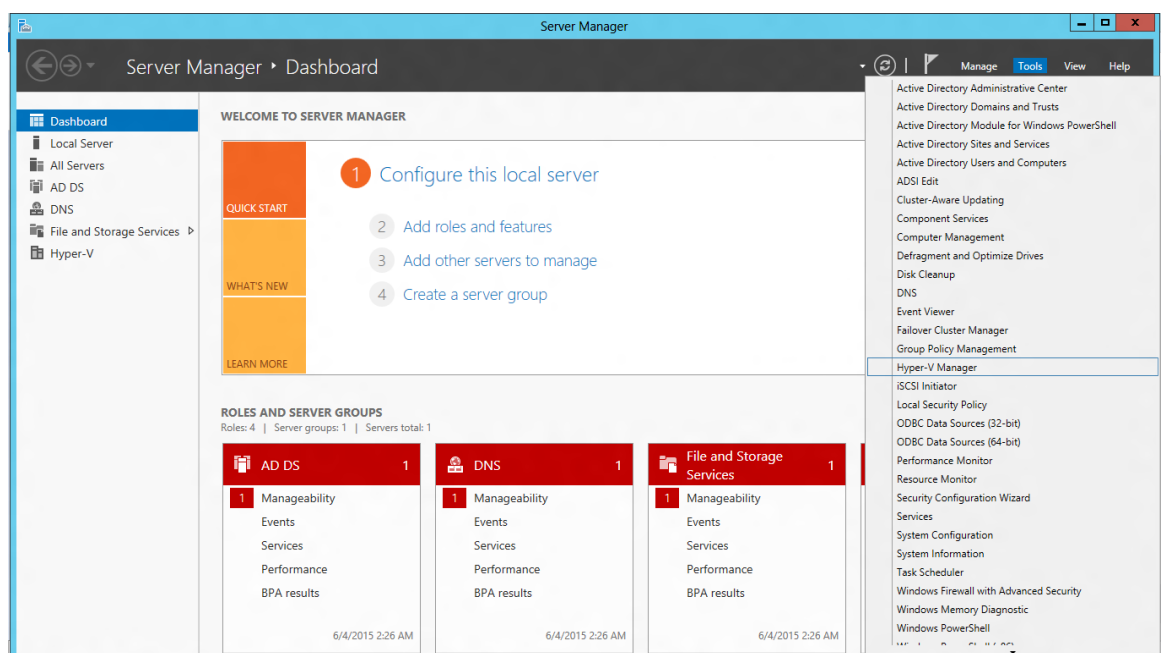


Click **Install** to start the installation

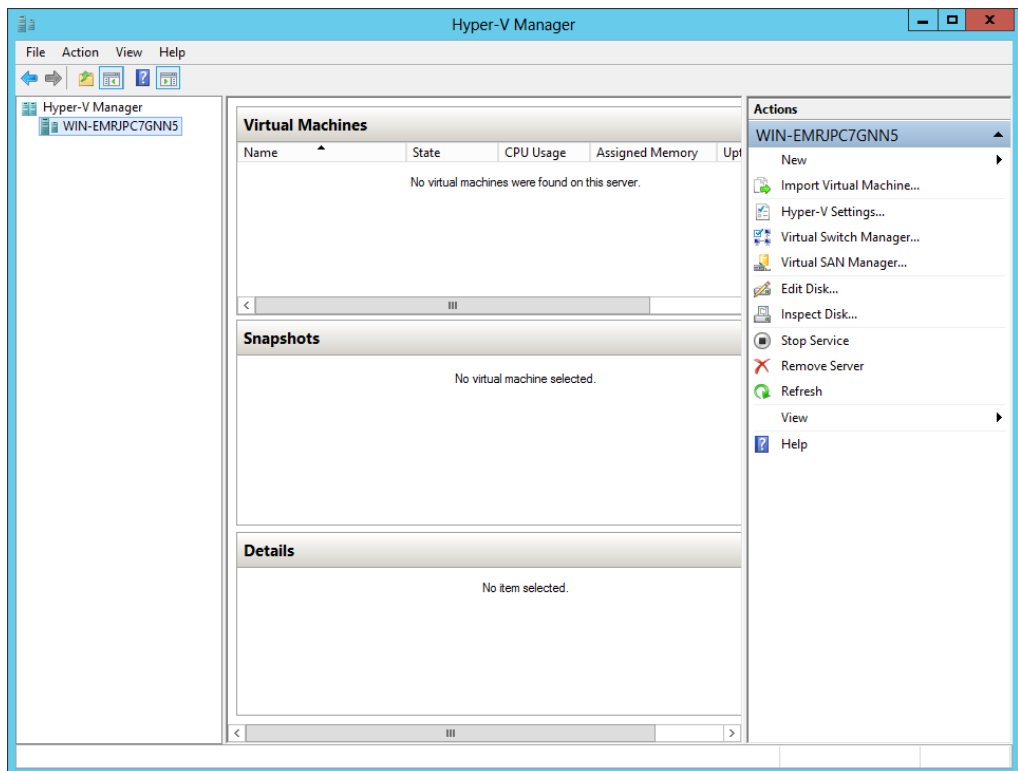


Now PC will Auto Restart, Then Windows will Auto Configure the Updated Roles and Features

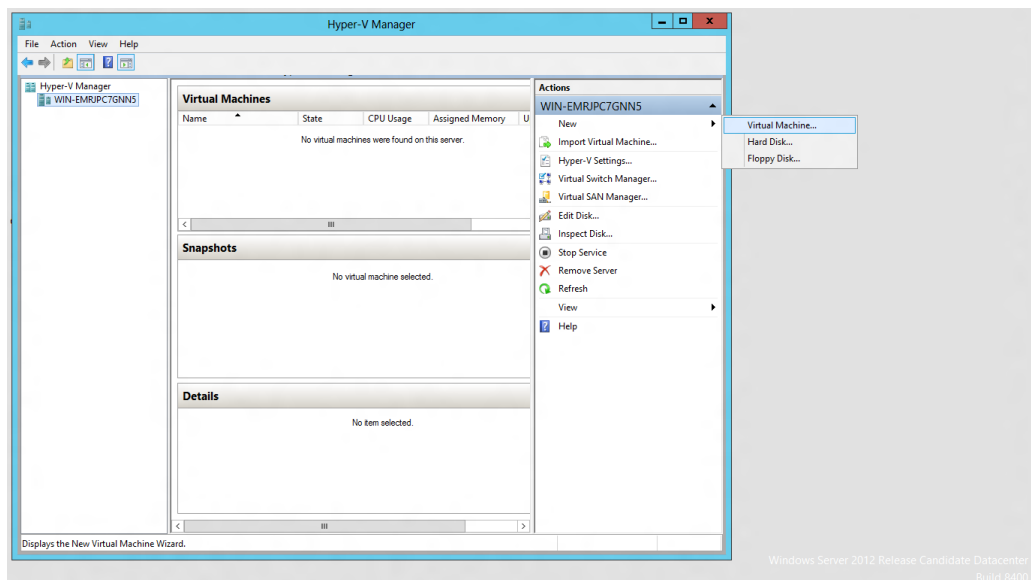
Go to **Tools** Menu and select **Hyper-V Manager**



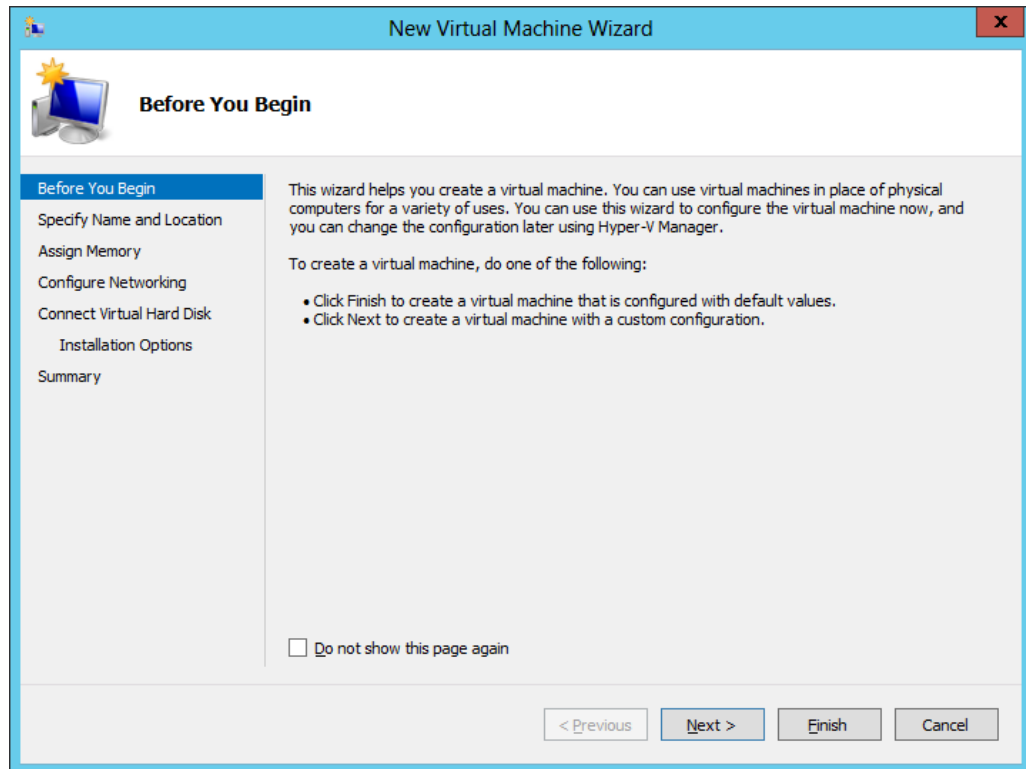
Hyper-V Manager wizard opens, select the server



Go to New Virtual Machine



New Virtual Machine Wizard opens, click Next



The screenshot shows the 'New Virtual Machine Wizard' window with the 'Before You Begin' step selected in the left-hand navigation pane. The main area contains introductory text about the wizard's purpose and a list of instructions for creating a virtual machine. At the bottom, there are navigation buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'. A checkbox labeled 'Do not show this page again' is also present.

New Virtual Machine Wizard

Before You Begin

This wizard helps you create a virtual machine. You can use virtual machines in place of physical computers for a variety of uses. You can use this wizard to configure the virtual machine now, and you can change the configuration later using Hyper-V Manager.

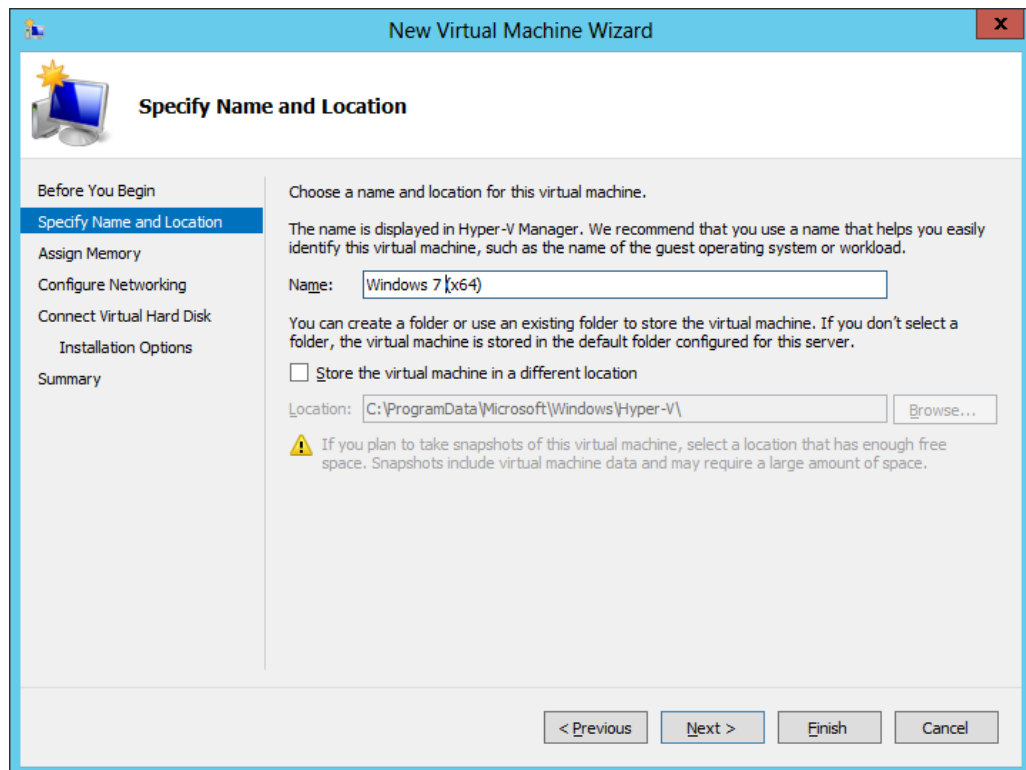
To create a virtual machine, do one of the following:

- Click Finish to create a virtual machine that is configured with default values.
- Click Next to create a virtual machine with a custom configuration.

☐ Do not show this page again

< Previous Next > Finish Cancel

Specify VM Name and click Next



The screenshot shows the 'New Virtual Machine Wizard' window with the 'Specify Name and Location' step selected in the left-hand navigation pane. The main area contains instructions for naming the VM and choosing a location. There are input fields for 'Name' (containing 'Windows 7 (x64)') and 'Location' (containing 'C:\ProgramData\Microsoft\Windows\Hyper-V\'). A 'Browse...' button is next to the location field. A warning icon and text are at the bottom of the main area. Navigation buttons at the bottom are '< Previous', 'Next >', 'Finish', and 'Cancel'.

New Virtual Machine Wizard

Specify Name and Location

Choose a name and location for this virtual machine.


The name is displayed in Hyper-V Manager. We recommend that you use a name that helps you easily identify this virtual machine, such as the name of the guest operating system or workload.

Name:

You can create a folder or use an existing folder to store the virtual machine. If you don't select a folder, the virtual machine is stored in the default folder configured for this server.

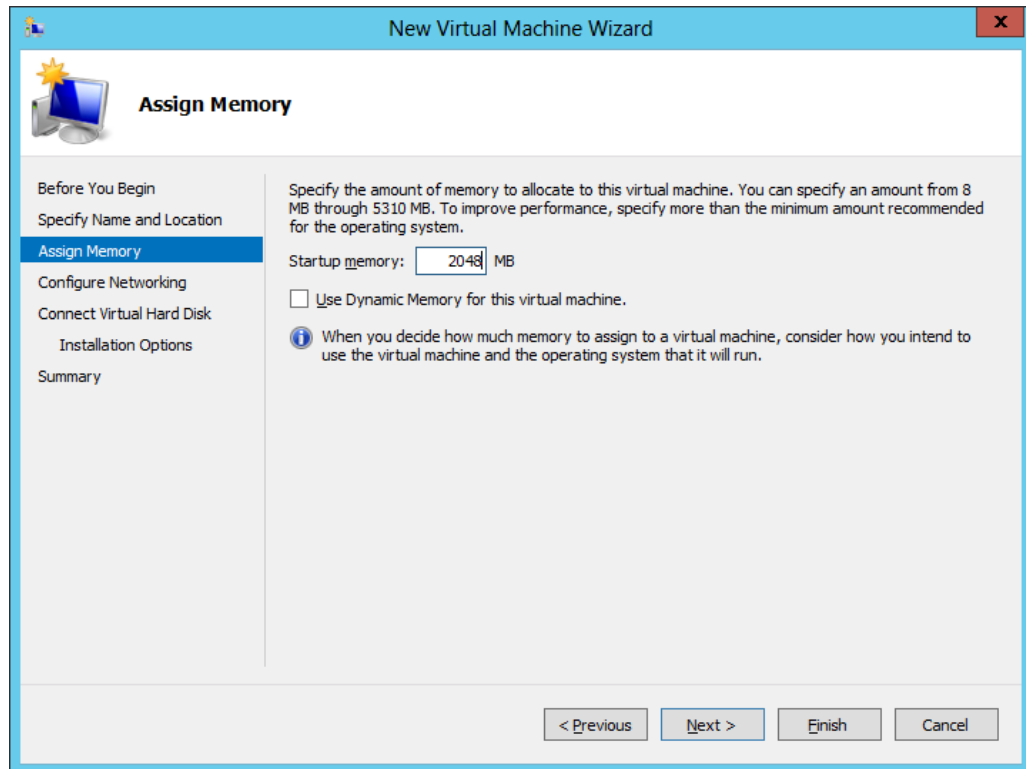
☐ Store the virtual machine in a different location

Location:

 If you plan to take snapshots of this virtual machine, select a location that has enough free space. Snapshots include virtual machine data and may require a large amount of space.

< Previous Next > Finish Cancel

Assign Memory (RAM) in MB and click **Next**



The screenshot shows the 'Assign Memory' step of the 'New Virtual Machine Wizard'. The window title is 'New Virtual Machine Wizard'. On the left, a navigation pane lists the steps: 'Before You Begin', 'Specify Name and Location', 'Assign Memory' (highlighted), 'Configure Networking', 'Connect Virtual Hard Disk', 'Installation Options', and 'Summary'. The main area has a heading 'Assign Memory' with a computer icon. Below it, text explains that memory can be specified from 8 MB to 5310 MB. The 'Startup memory' is set to '2048 MB'. There is an unchecked checkbox for 'Use Dynamic Memory for this virtual machine.' and an information icon with a note: '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.' At the bottom are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'.

Assign Memory

Before You Begin
Specify Name and Location
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 8 MB through 5310 MB. To improve performance, specify more than the minimum amount recommended for the operating system.

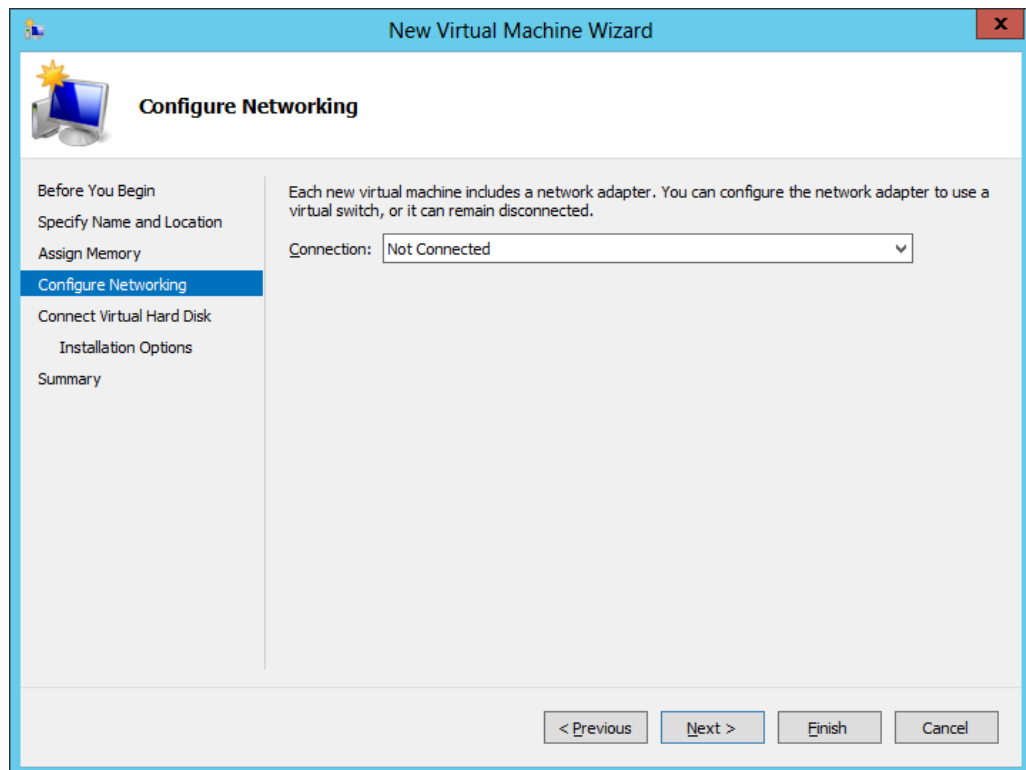
Startup memory: MB

☐ 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

Leave the default settings and click **Next**



The screenshot shows the 'Configure Networking' step of the 'New Virtual Machine Wizard'. The window title is 'New Virtual Machine Wizard'. On the left, a navigation pane lists the steps: 'Before You Begin', 'Specify Name and Location', 'Assign Memory', 'Configure Networking' (highlighted), 'Connect Virtual Hard Disk', 'Installation Options', and 'Summary'. The main area has a heading 'Configure Networking' with a computer icon. Below it, text explains that each new virtual machine includes a network adapter. The 'Connection' is set to 'Not Connected' in a dropdown menu. At the bottom are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'.

Configure Networking

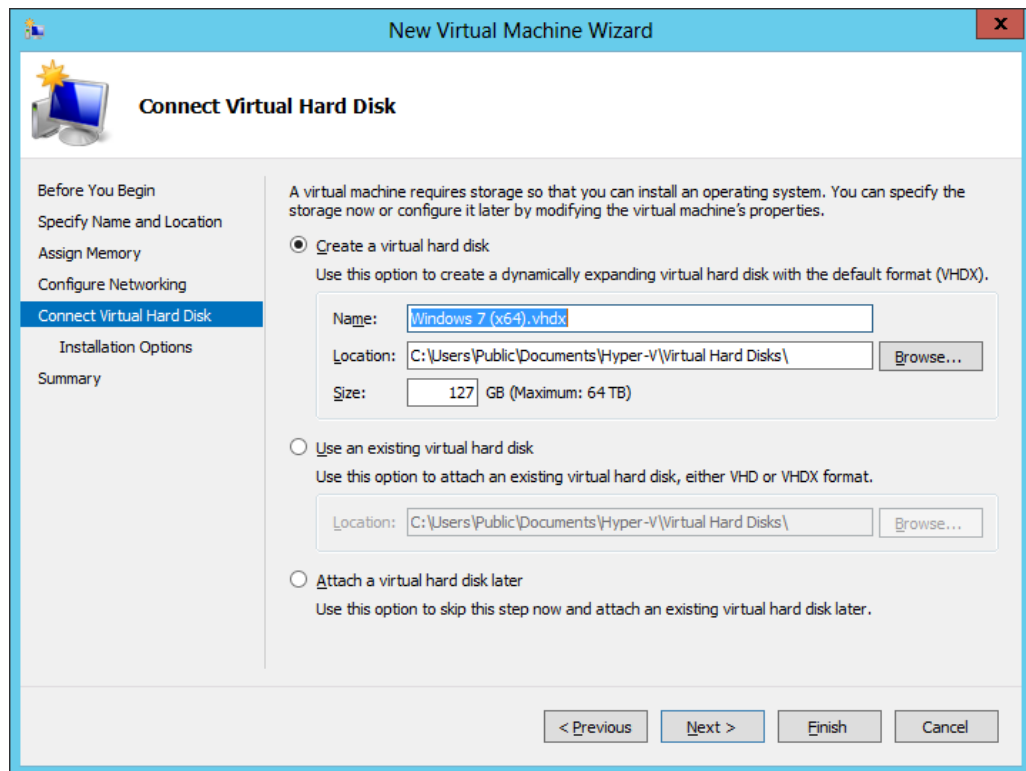
Before You Begin
Specify Name and Location
Assign Memory
Configure Networking
Connect Virtual Hard Disk
Installation Options
Summary

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

Select the option **Create a virtual hard disk**



The screenshot shows the 'Connect Virtual Hard Disk' step of the 'New Virtual Machine Wizard'. The left sidebar contains a list of steps: 'Before You Begin', 'Specify Name and Location', 'Assign Memory', 'Configure Networking', 'Connect Virtual Hard Disk' (highlighted), 'Installation Options', and 'Summary'. The main area has a title bar with a computer icon and the text 'Connect Virtual Hard Disk'. Below the title bar, there is a section titled 'Before You Begin' with a sub-header 'Specify Name and Location'. The main content area explains that a virtual machine requires storage and offers three options: 'Create a virtual hard disk' (selected), 'Use an existing virtual hard disk', and 'Attach a virtual hard disk later'. The 'Create a virtual hard disk' option is further detailed with a 'Name' field (Windows 7 (x64).vhdx), a 'Location' field (C:\Users\Public\Documents\Hyper-V\Virtual Hard Disks\), and a 'Size' field (127 GB). The 'Use an existing virtual hard disk' option has a 'Location' field. The 'Attach a virtual hard disk later' option has a warning icon and text. At the bottom, there are four buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'.

Connect Virtual Hard Disk

Before You Begin
Specify Name and Location
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 dynamically expanding virtual hard disk with the default format (VHDX).

Name: Windows 7 (x64).vhdx
Location: C:\Users\Public\Documents\Hyper-V\Virtual Hard Disks\ Browse...
Size: 127 GB (Maximum: 64 TB)

☐ **Use an existing virtual hard disk**
Use this option to attach an existing virtual hard disk, either VHD or VHDX format.

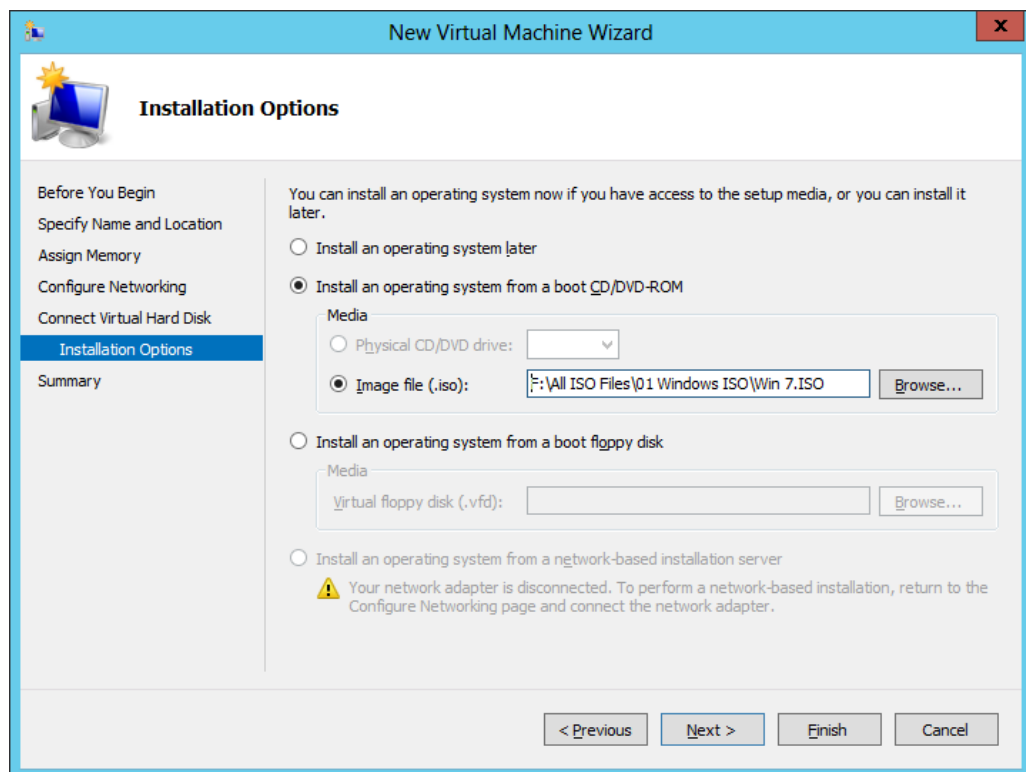
Location: C:\Users\Public\Documents\Hyper-V\Virtual Hard Disks\ Browse...

☐ **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

Select **Install an OS from CD/DVD ROM**

Then select **Image file** and browse the **Windows 7 .ISO** file



The screenshot shows the 'Installation Options' step of the 'New Virtual Machine Wizard'. The left sidebar contains a list of steps: 'Before You Begin', 'Specify Name and Location', 'Assign Memory', 'Configure Networking', 'Connect Virtual Hard Disk', 'Installation Options' (highlighted), and 'Summary'. The main area has a title bar with a computer icon and the text 'Installation Options'. Below the title bar, there is a section titled 'Before You Begin' with a sub-header 'Specify Name and Location'. The main content area explains that you can install an operating system now if you have access to the setup media, or you can install it later. There are three options: 'Install an operating system later', 'Install an operating system from a boot CD/DVD-ROM' (selected), and 'Install an operating system from a boot floppy disk'. The 'Install an operating system from a boot CD/DVD-ROM' option has a 'Media' section with 'Physical CD/DVD drive' and 'Image file (.iso)' (selected). The 'Image file (.iso)' option has a 'Location' field (F:\All ISO Files\01 Windows ISO\Win 7.ISO) and a 'Browse...' button. The 'Install an operating system from a boot floppy disk' option has a 'Media' section with 'Virtual floppy disk (.vfd)' and a 'Browse...' button. The 'Install an operating system from a network-based installation server' option has a warning icon and text. At the bottom, there are four buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'.

Installation Options

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

You can install an operating system now if you have access to the setup media, or you can install it later.

☐ Install an operating system later

☒ **Install an operating system from a boot CD/DVD-ROM**

Media
☐ Physical CD/DVD drive:
☒ **Image file (.iso):** F:\All ISO Files\01 Windows ISO\Win 7.ISO Browse...

☐ Install an operating system from a boot floppy disk

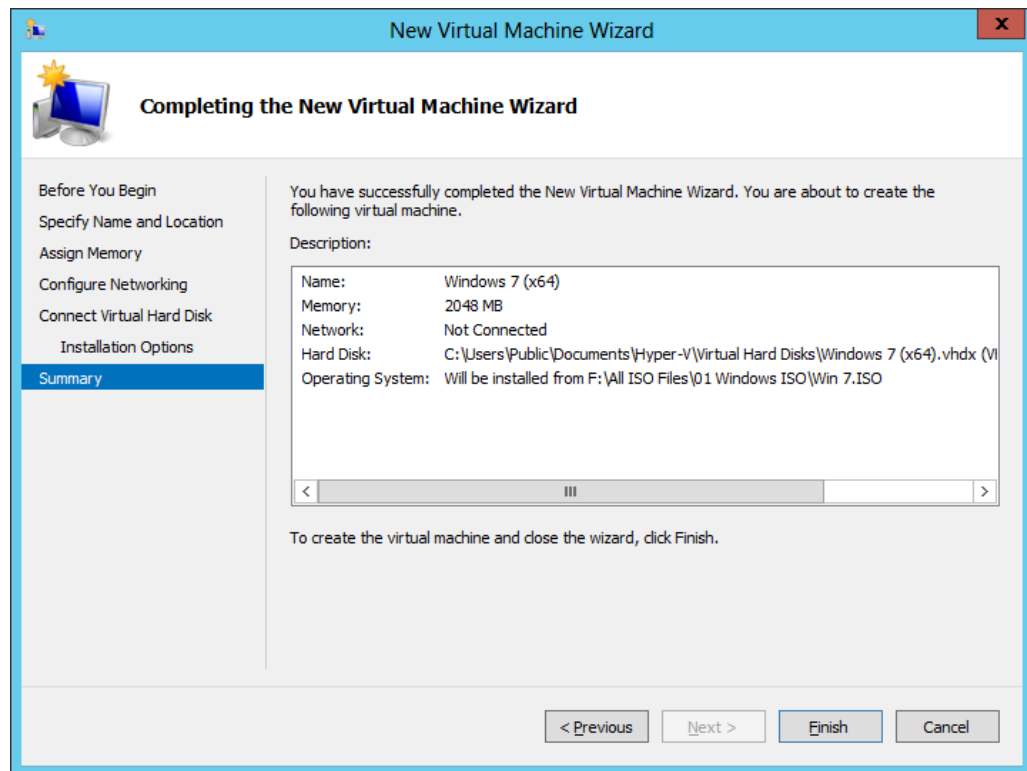
Media
Virtual floppy disk (.vfd): Browse...

☐ Install an operating system from a network-based installation server

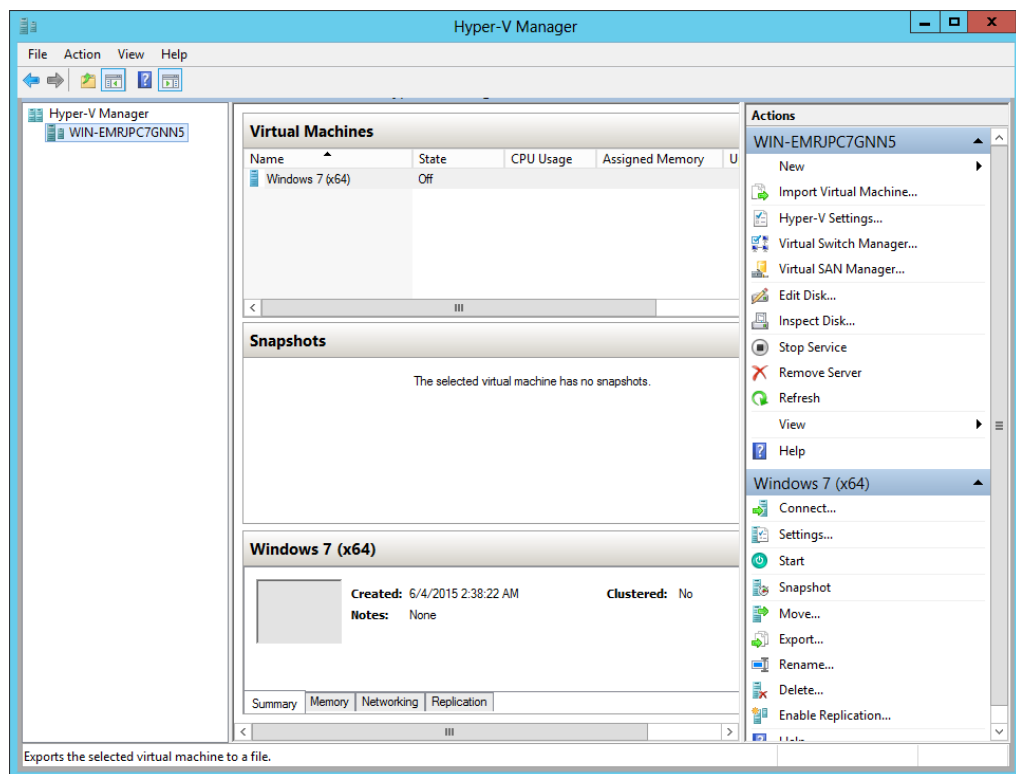
⚠ Your network adapter is disconnected. To perform a network-based installation, return to the Configure Networking page and connect the network adapter.

< Previous Next > Finish Cancel

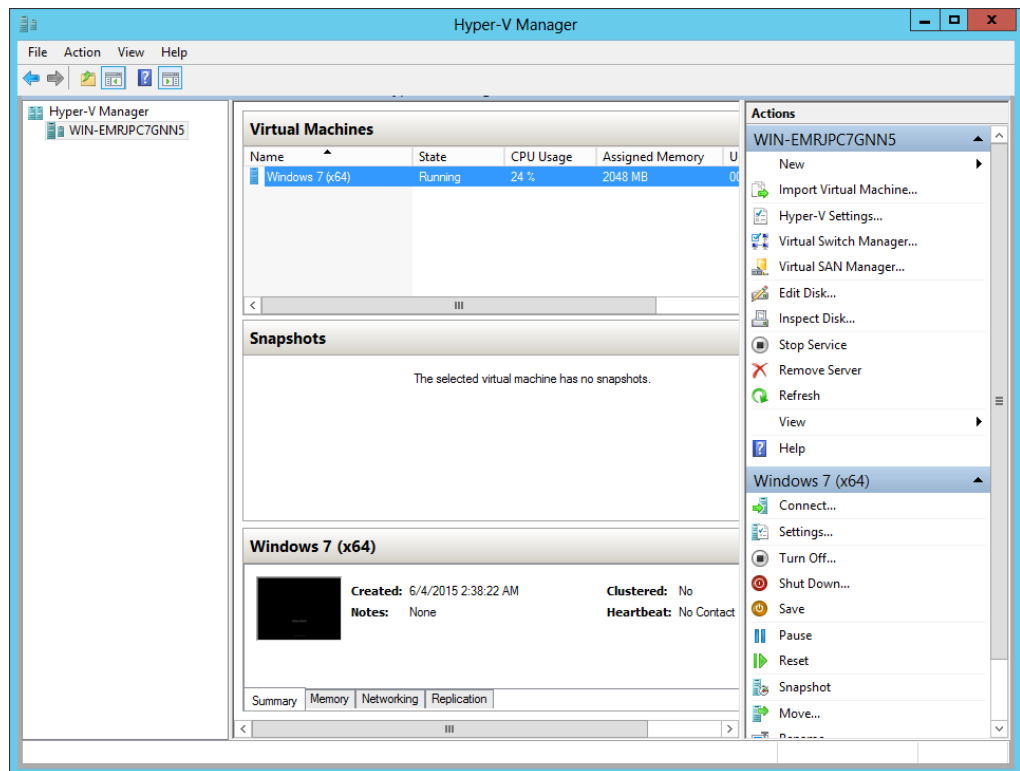
Click **Finish** to create a VM



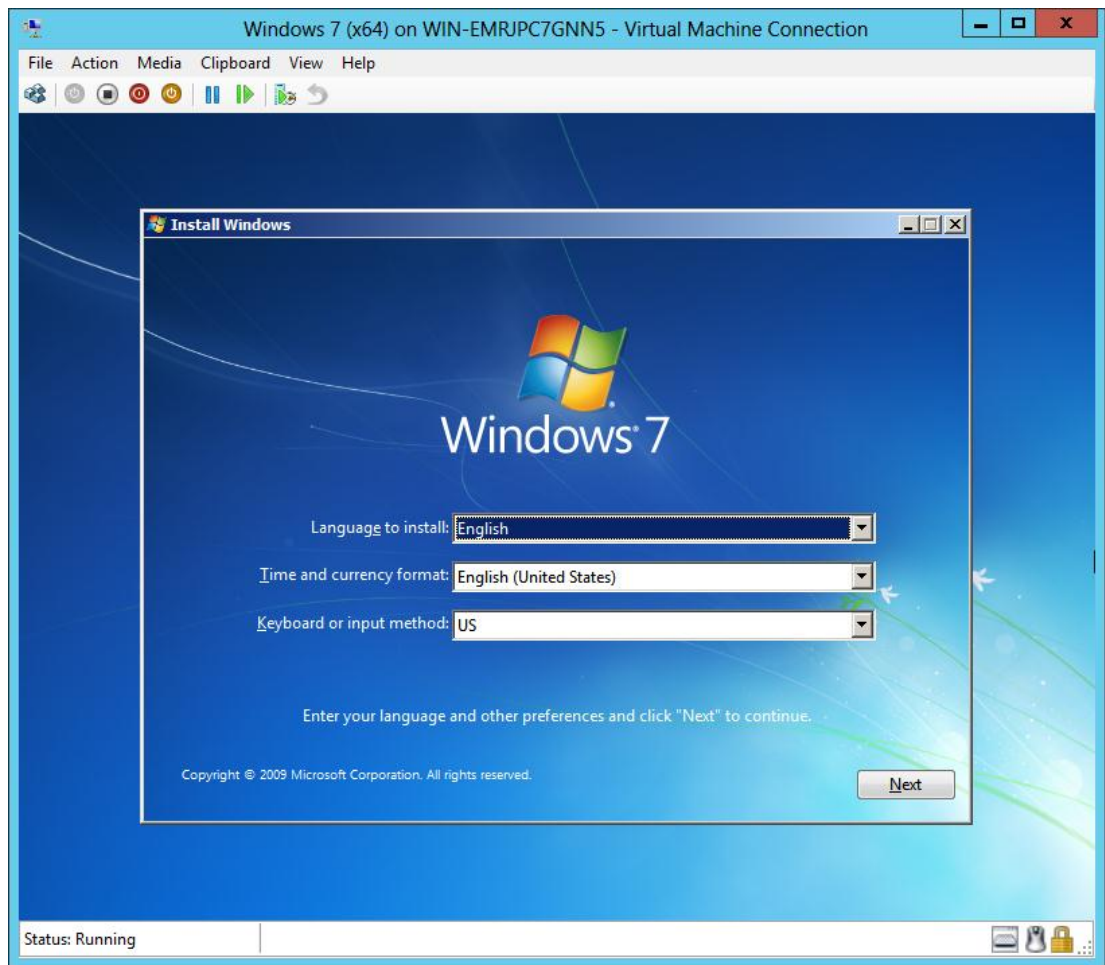
In the Hyper-V Manager, you can see the New VM is listed



Click on **Start** below the VM name and the VM state changes to **Running**



Double click on the VM name so you get the **Console view** of the VM running



Follow the steps to install Windows 7 as given in Practical No 2

And complete the installation