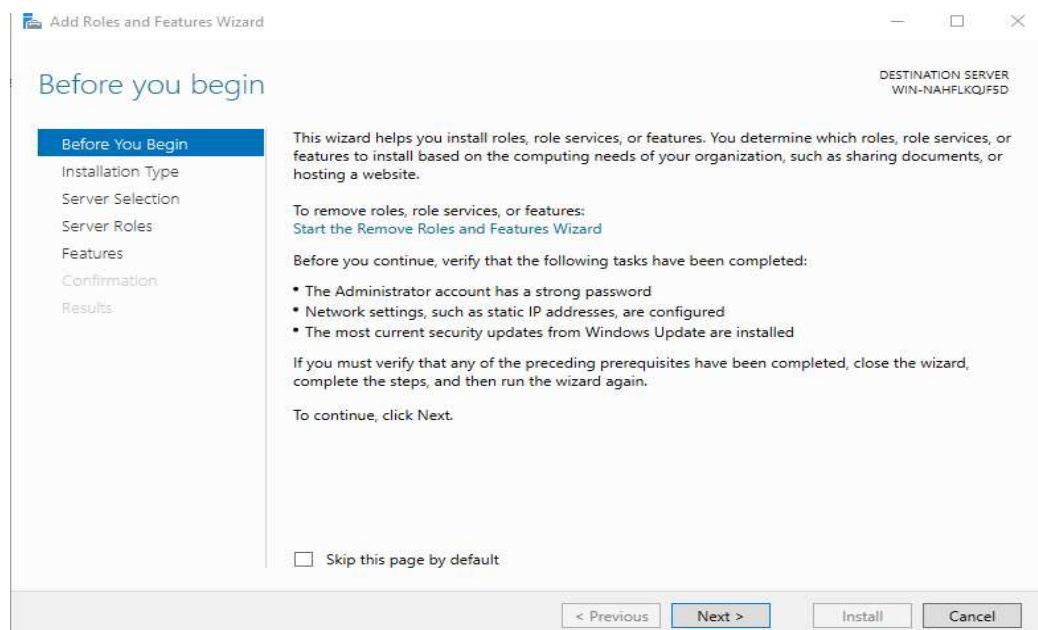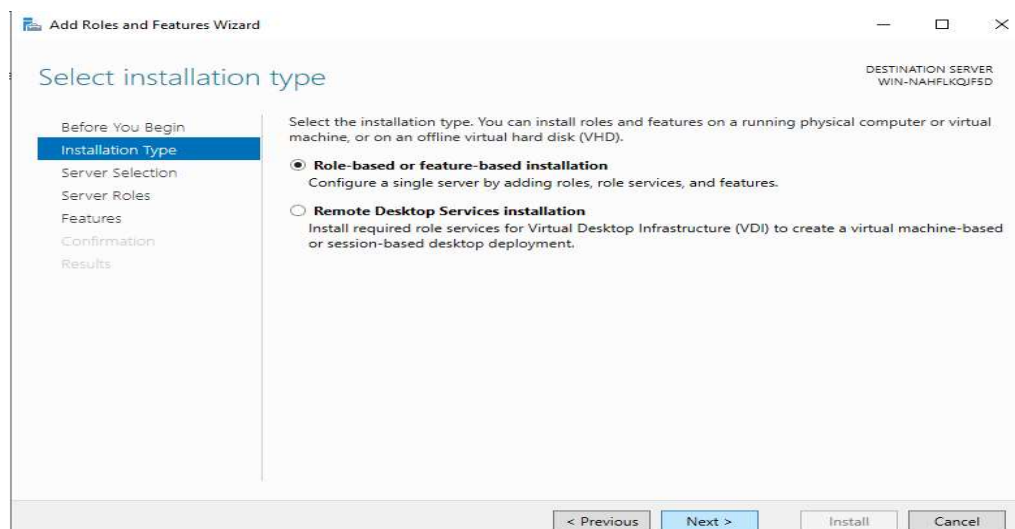# 7a) Configuration of HyperV on Windows of VMs

Aim:

To configure Hyper-V on Windows for creating and managing virtual machines (VMs), enabling efficient virtualization and resource utilization.
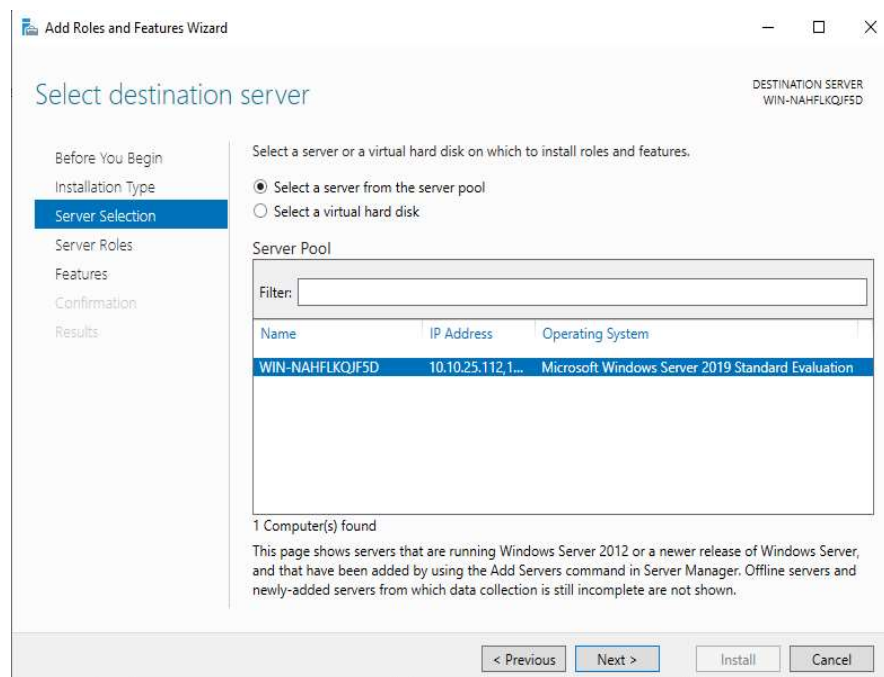
Steps:

1)Open the windows server and open the server manager Click add roles and features . Read before you begin and click next.
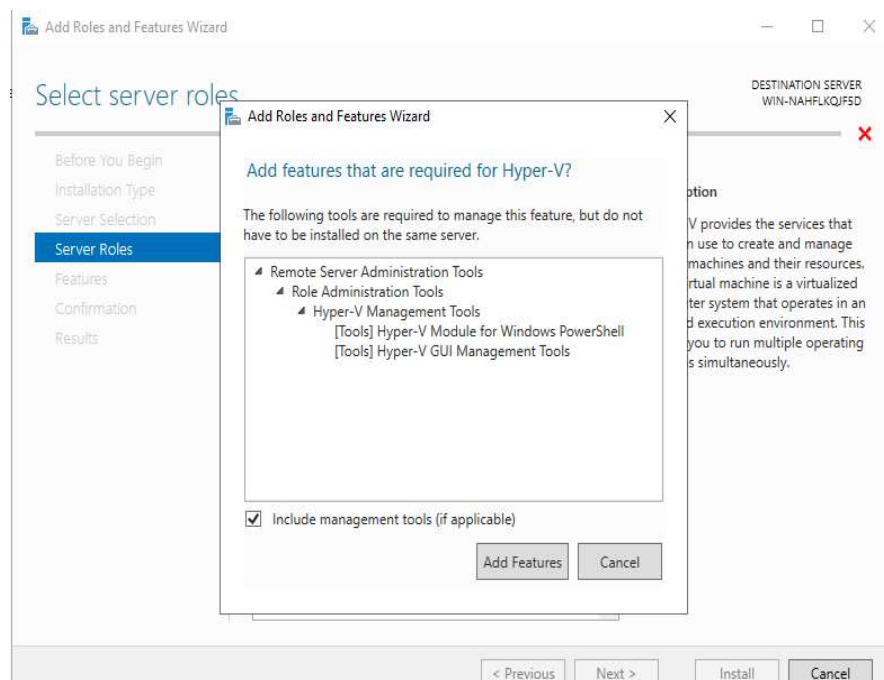

2) Select role based installation type and click next.
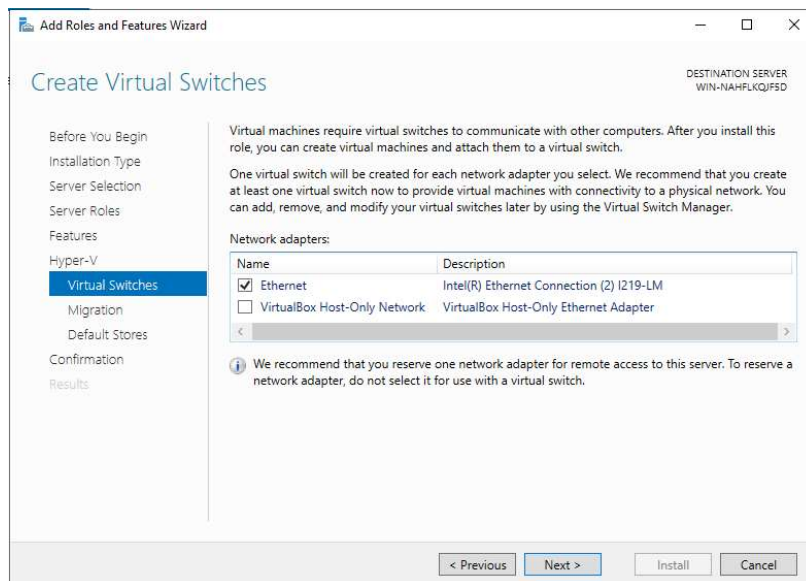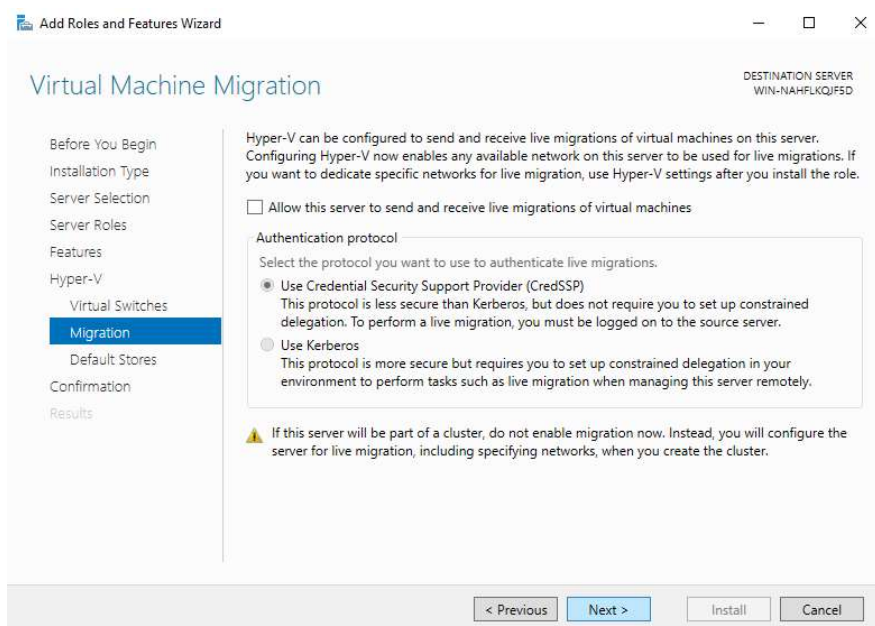
3)Select the server and click next

4) In server roles .check on hyper v and click the add features .

5) Enable virtual switches both ethernet and virtual box host only adapter
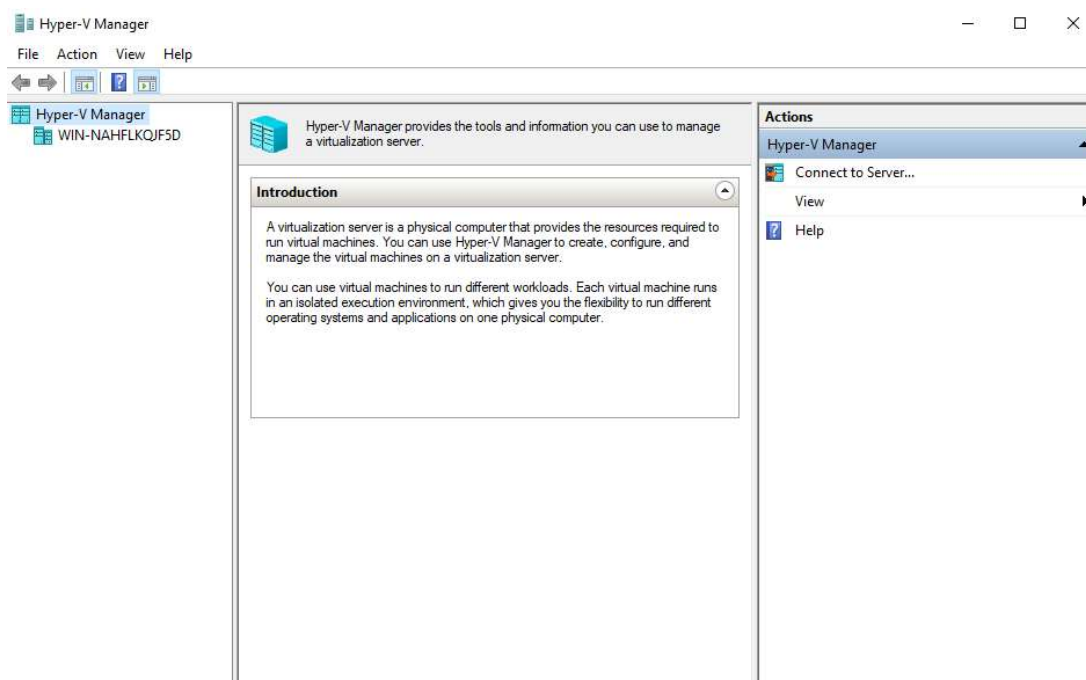

6) For migration use credential security support provider

7) Click install and hyperv has been installed and enabled on the windows server
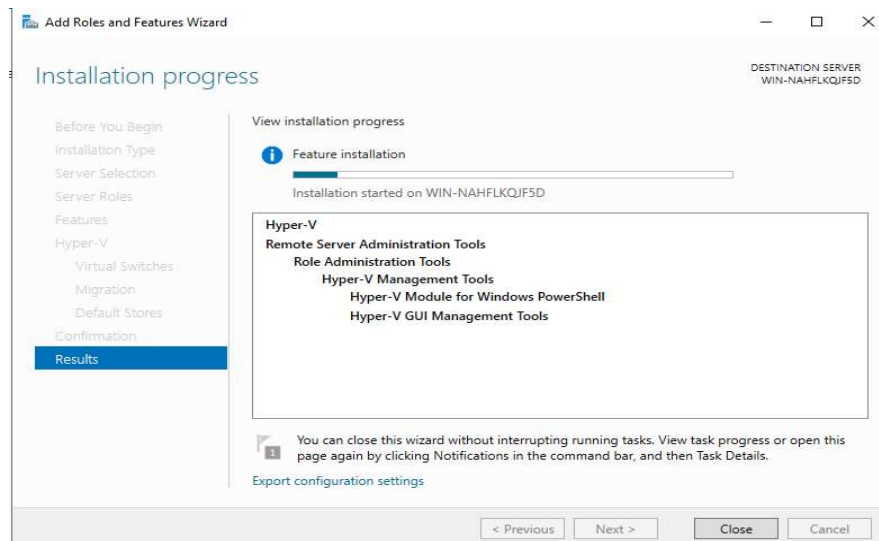
8)Open hyperv manager in tools

RESULT:

Thus the configuration Hyper-V on Windows for creating and managing virtual machines (VMs), enabling efficient virtualization and resource utilization has been executed successfully.

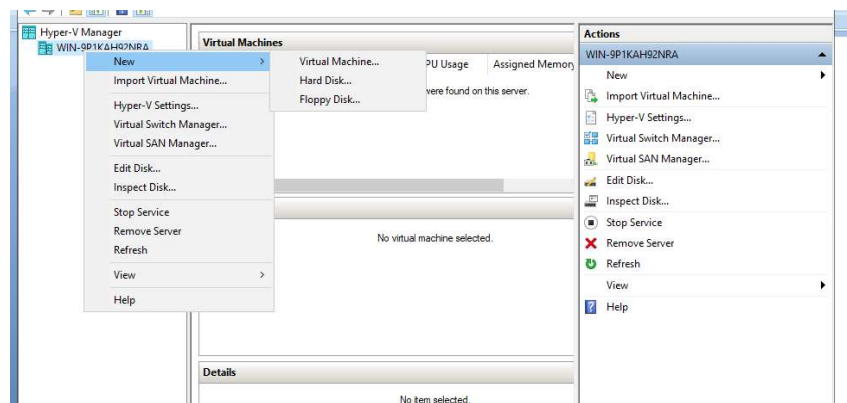# 7b) Creation of VM, Powershell commands, Management

Aim:

To create and manage Virtual Machines (VMs) using Hyper-V, including PowerShell commands for automation and efficient administration.
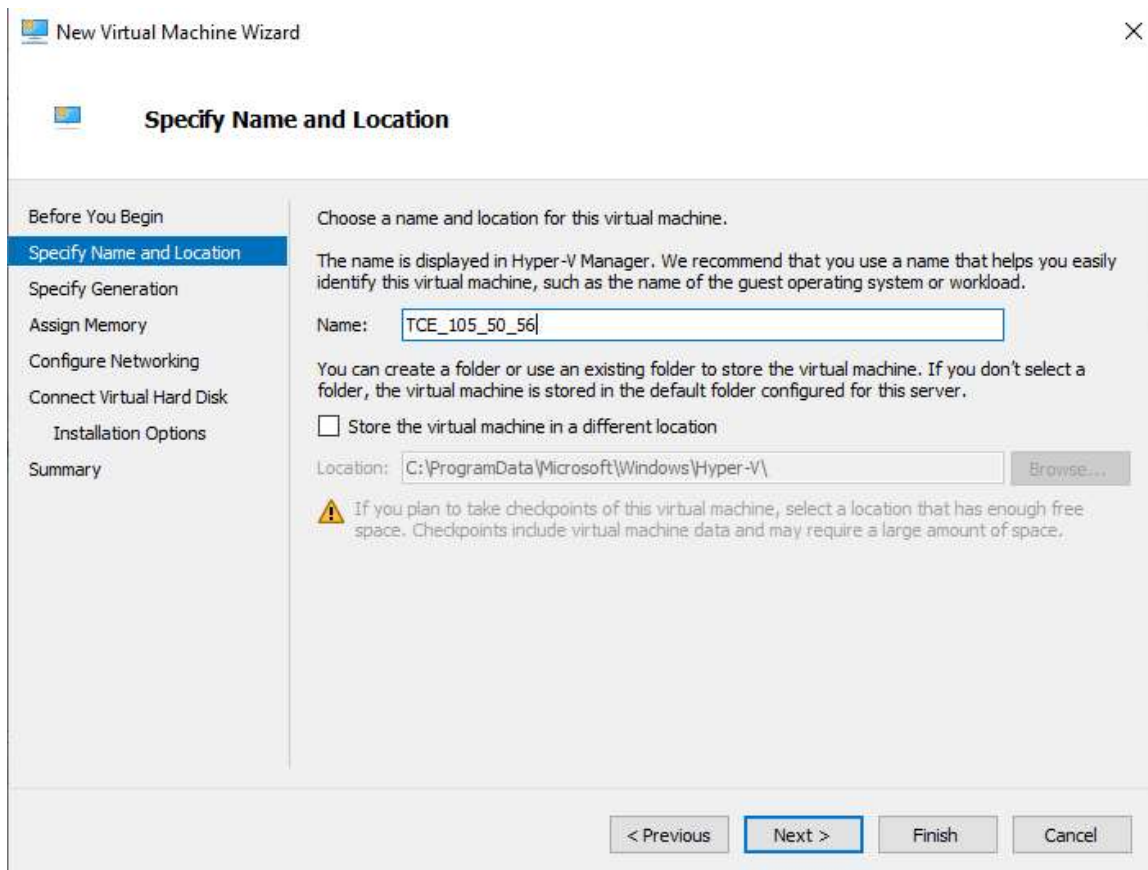
Procedure:

(Vm installation without powershell)

1)open Tools-> hyper v manager-> right click on server and click create new vm

2)Specify name and location click next.

New Virtual Machine Wizard   ✕

Specify Name and Location

Before You Begin

Specify Name and Location

Specify Generation

Assign Memory

Configure Networking

Connect Virtual Hard Disk

    Installation Options

Summary

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: | TCE_105_50_56 |

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.
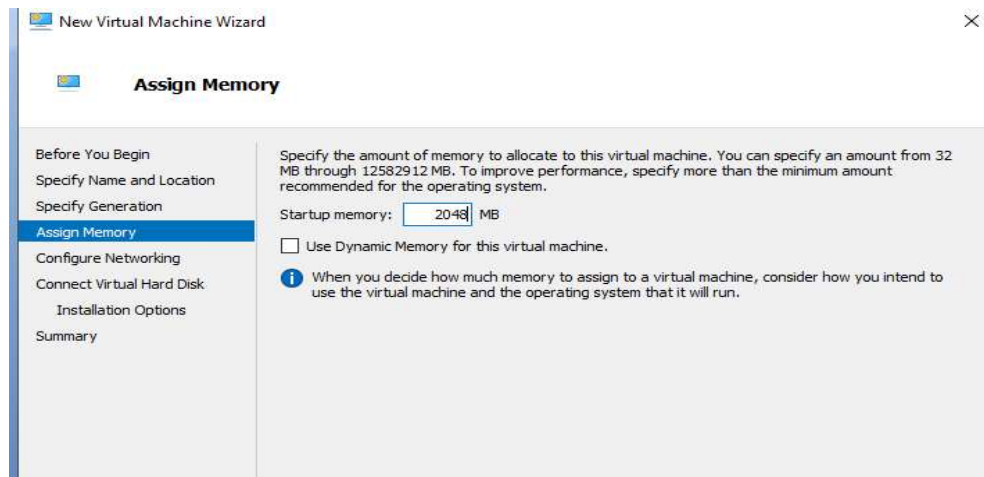
☐ Store the virtual machine in a different location

Location: C:\ProgramData\Microsoft\Windows\Hyper-V\   Browse...

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

< Previous   Next >   Finish   Cancel

3)Assign the memory for the vm(for safety give as 2gb)

New Virtual Machine Wizard   ✕

Assign Memory

Before You Begin

Specify Name and Location

Specify Generation

Assign Memory

Configure Networking

Connect Virtual Hard Disk

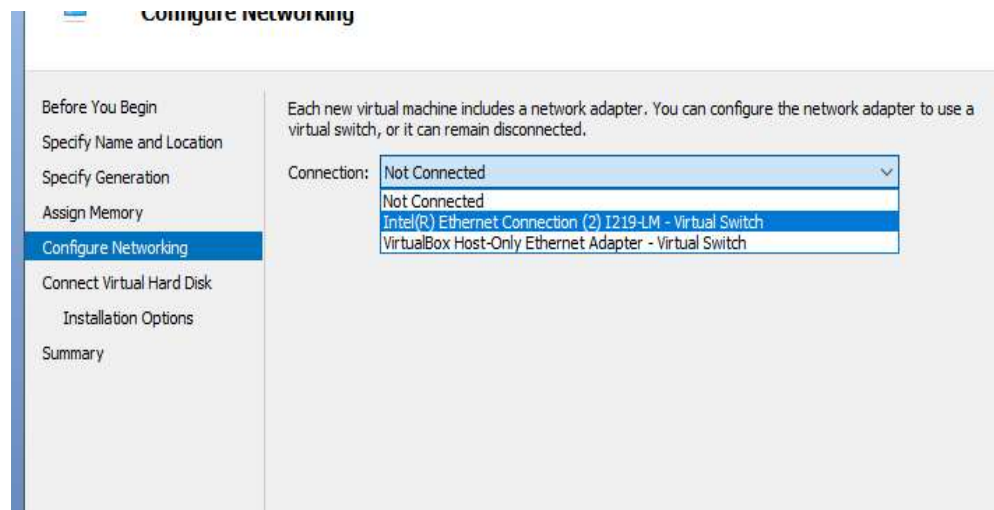   Installation Options

Summary

Specify the amount of memory to allocate to this virtual machine. You can specify an amount from 32 MB through 12582912 MB. To improve performance, specify more than the minimum amount recommended for the operating system.
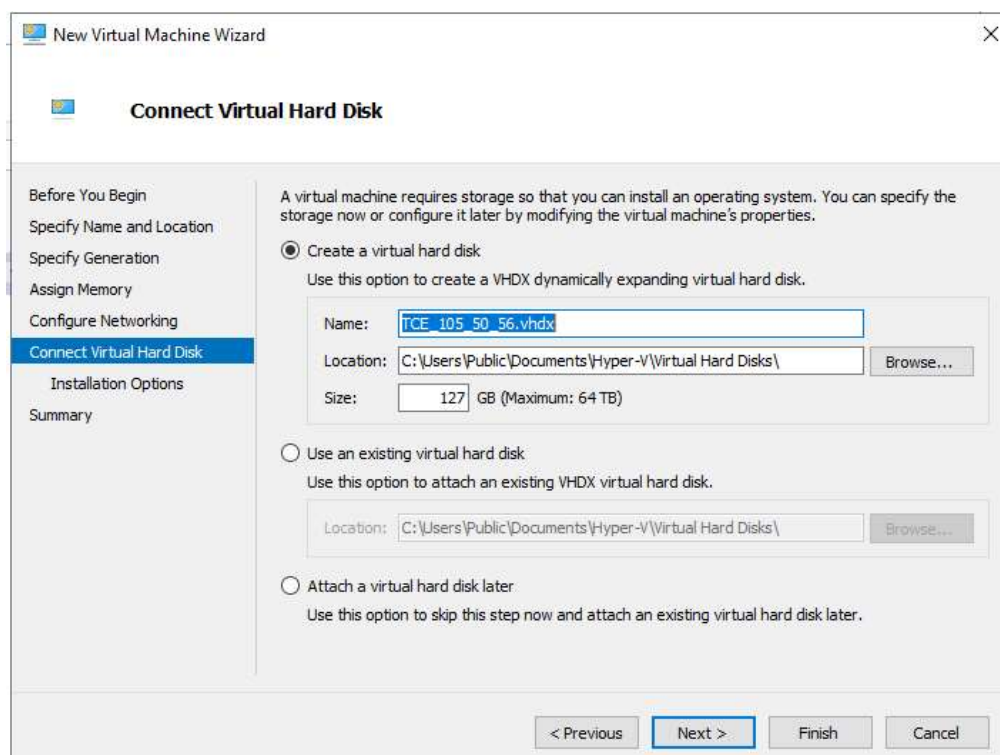
Startup memory: | 2048 | MB

☐ Use Dynamic Memory for this virtual machine.

ⓘ 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.
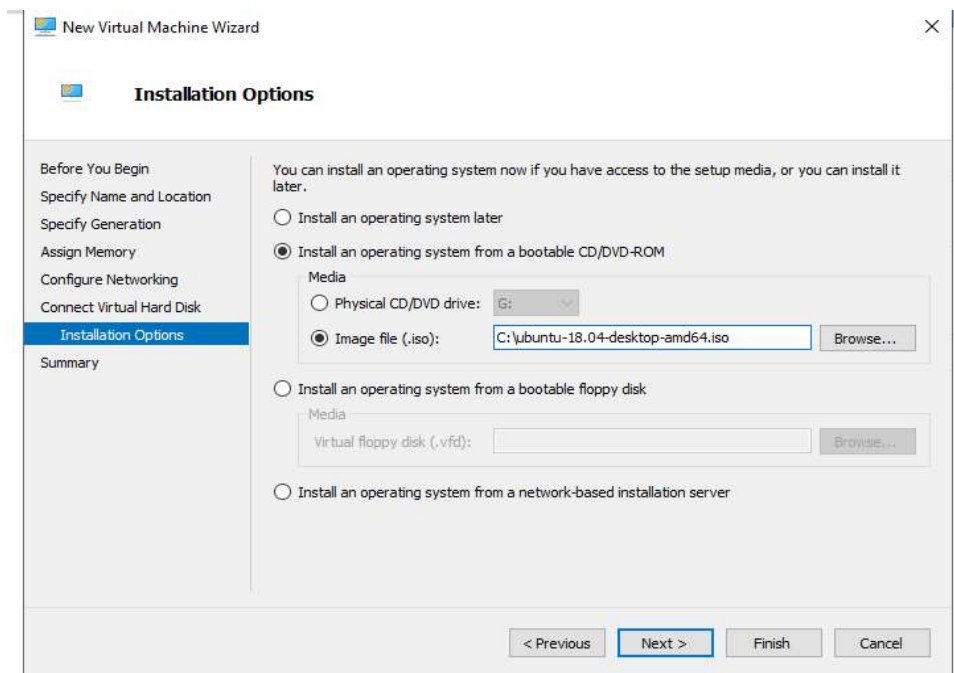
4)Conigure the network click on interR Ethernet connection virtual switch

5)Connect virtual harddisk (name,location,maximum gb) click next

6)Import the iso file which os need to install on the vm(here ubunttu)

7)Click finish .

Vm installation using Powershell **Procedure :**

1) Create vm with name and space in gb with virtual hard disk creation
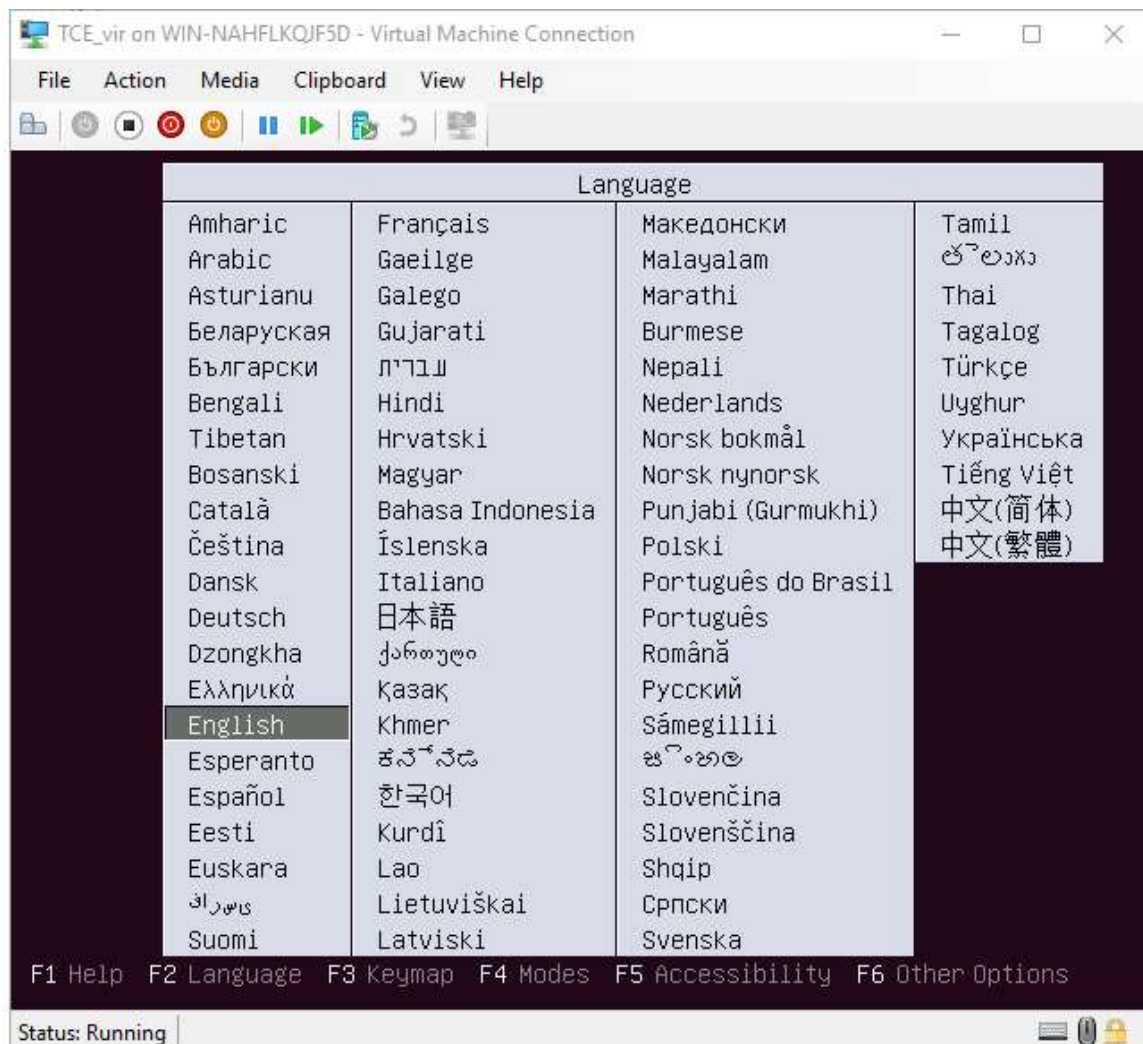

2)Asssign virtual switch to the vm

3)import the iso file which os need to install on vm

```
PS C:\Users\Administrator> Connect-VMNetworkAdapter -VMName "tcevm" -SwitchName "Intel(R) Ethernet Connection (2) I219-L
M - Virtual Switch"
PS C:\Users\Administrator> Set-VMDvdDrive -VMName "tcevm" -Path "C:\ubuntu-18.04-desktop-amd64.iso"
PS C:\Users\Administrator>
```

4)Start the vm

Powershell commands

1)Get vm and start vm

```
PS C:\Users\Administrator> Get-VM

Name            State CPUUsage(%) MemoryAssigned(M) Uptime    Status            Version
----            ----- ----------- ----------------- ------    ------            -------
22IT043_KESHO Off   0           0                 00:00:00 Operating normally 9.0
22it047        Off   0           0                 00:00:00 Operating normally 9.0
tcevm          Off   0           0                 00:00:00 Operating normally 9.0

PS C:\Users\Administrator> Start-VM -Name "22it047"
```

2)Stop vm

```
PS C:\Users\Administrator> Stop-VM -Name "tcevm"
PS C:\Users\Administrator> _
```

3)Creation Of VM by powershell:-

```
PS C:\Users\Administrator> New-VM -Name "MyVM" -MemoryStartupBytes 2GB -NewVHDPath "C:\MyVM.vhdx" -NewVHDSizeBytes 60GB -Path "C:\VMs"

Name State CPUUsage(%) MemoryAssigned(M) Uptime    Status            Version
---- ----- ----------- ----------------- ------    ------            -------
MyVM Off   0           0                 00:00:00 Operating normally 9.0
```

```
PS C:\Users\Administrator> Connect-VMNetworkAdapter -VMName "MyVM" -SwitchName "Intel(R) Ethernet Connection (2) I219-LM - Virtual Switch"
PS C:\Users\Administrator> Set-VMDvdDrive -VMName "MyVM" -Path "C:\ubuntu-18.04-desktop-amd64.iso"
PS C:\Users\Administrator> Start-VM -Name "MyVM"
```

Result:

Thus the creation and manage Virtual Machines (VMs) using Hyper-V, including
PowerShell commands for automation and efficient administration has been
executed successfully.