

# Project Task 1:

## Objective:

Create a domain controller using the domain name as <your name>.training and create a shared NFS folder (c:\sharables) on the domain controller machine with read-only permissions and access this folder on the member machine.

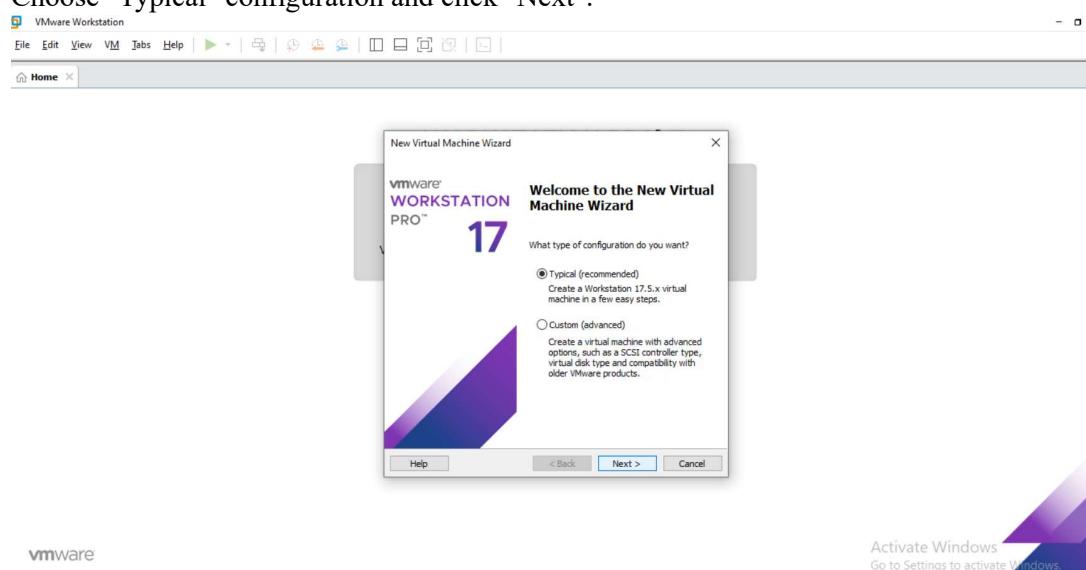
## Setup:

- Use VMWare workstation 17 or above to create a Windows Server 2016 as a domain controller with a custom LAN Segment named "Wipro-network".
- Provide static IP as 192.168.10.10/24 with loopback DNS address & perform post-installation configuration.
- Install the required role and promote the server to the domain controller.
- On DC, create a group using the name "dcadmins" and add 2 users in it with the 'domain admins' permissions.
- Install another Windows server 2016 (as GUI) with the name "Member01" and domain join this member to domain controller & verify.
- Create a new directory as "c:\sharable" on the domain controller with read-only & list permission to a group called "dcadmins" and verify the access from the "Member01" machine.
- Create few files under "c:\sharable" and try accessing and modifying them on the member machine using the users created under "dcadmin" group.

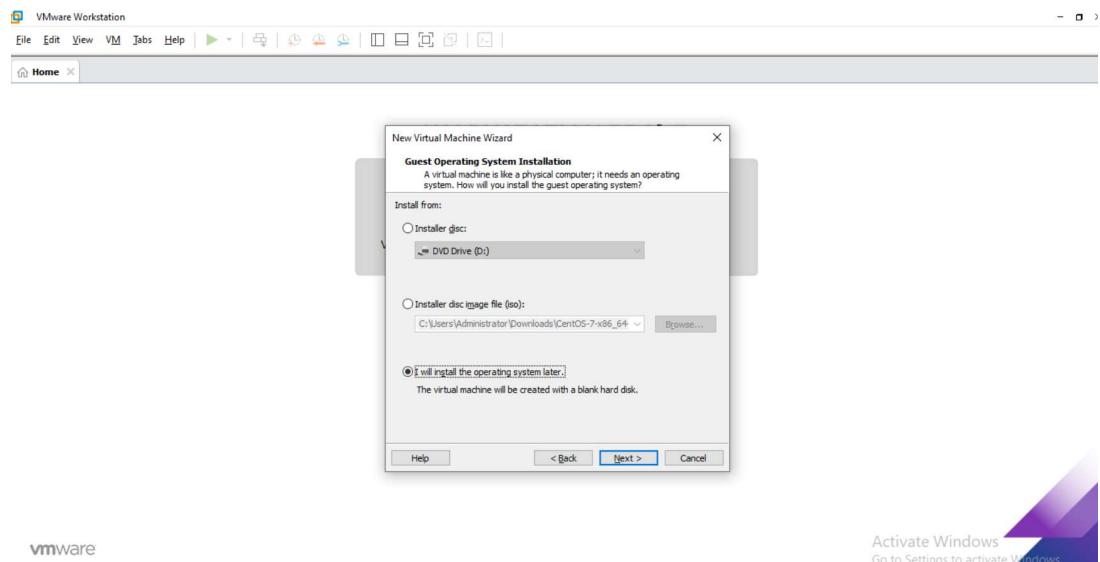
## Project deliverables:

- Document (take snapshots) installation of both domain controller and member01 machine.
- Document (take snapshots) the post-installation setup & domain controller promotion.
- Document (take snapshots) NFS sharing and accessing the data.

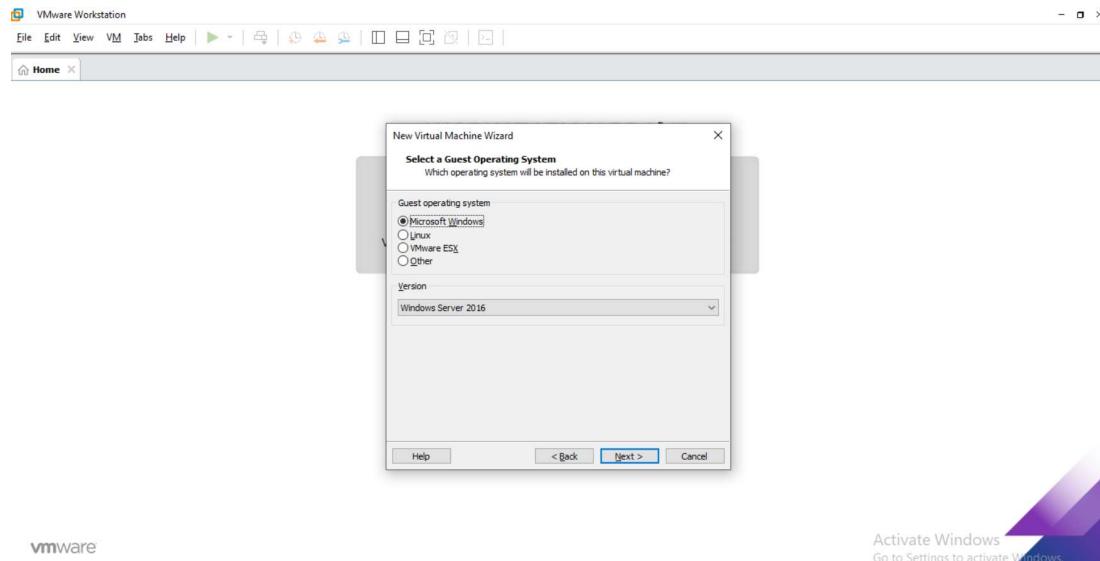
Click on "File" > "New Virtual Machine" to start the New Virtual Machine Wizard.  
Choose "Typical" configuration and click "Next".



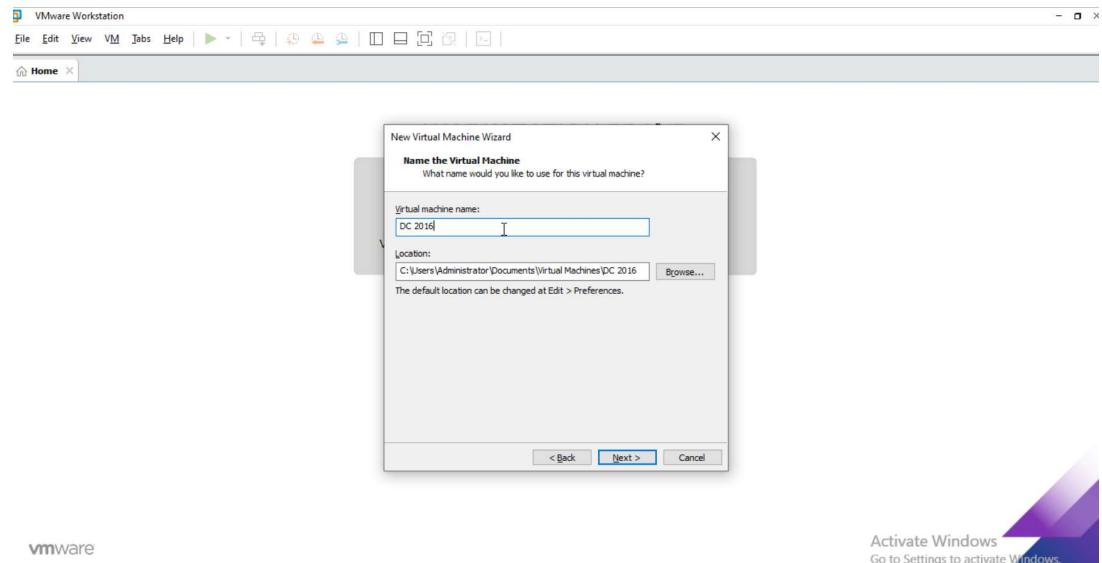
Select to **install operating system later** option and Click **Next**



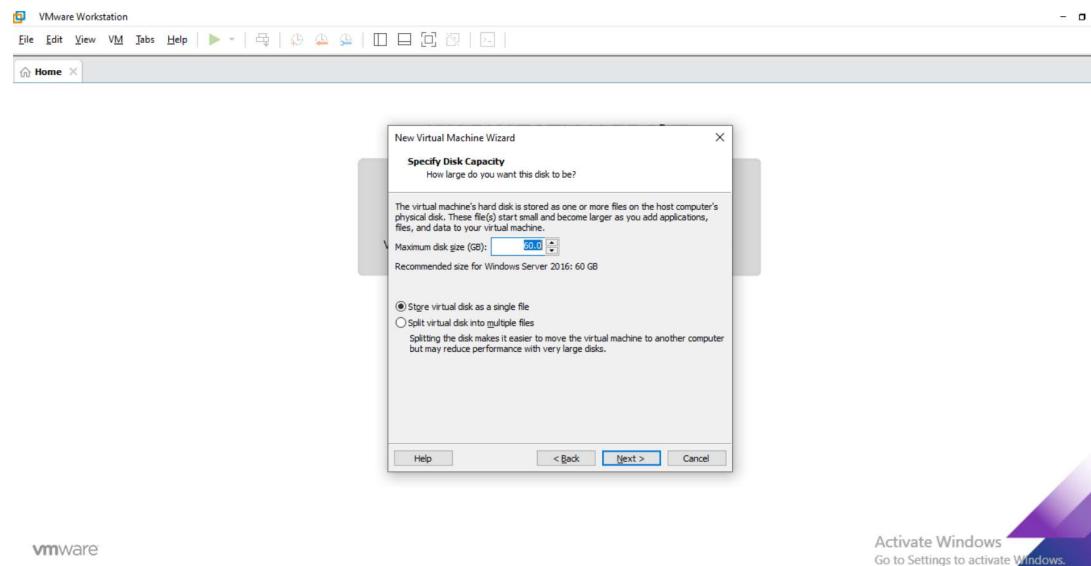
select the Guest OS and version



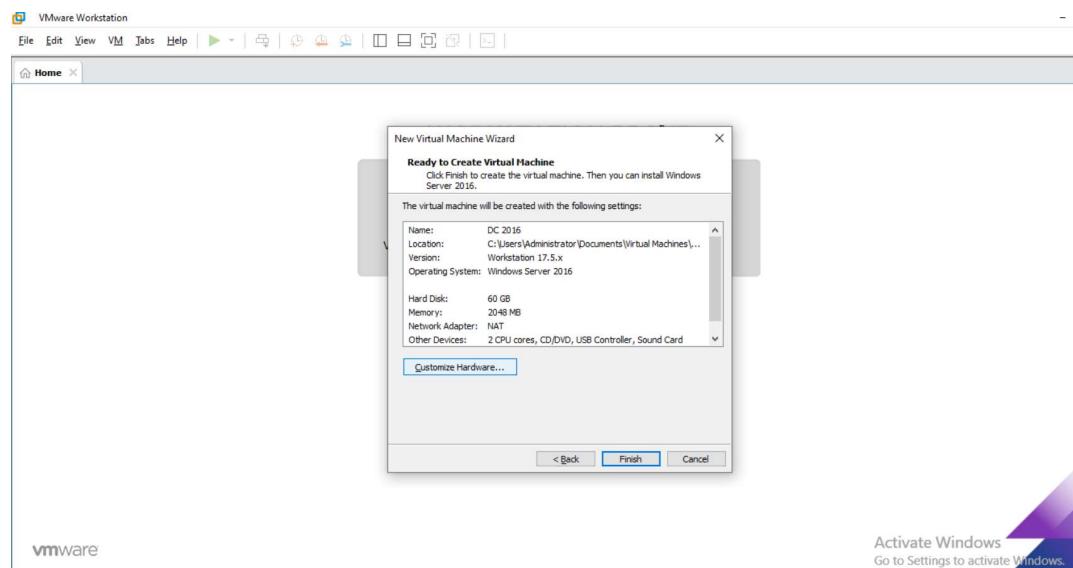
Name the virtual machine as "DC 2016".



Specify the disk capacity, setting it to a maximum of 60 GB.  
Select the option to store virtual disks as a single file.



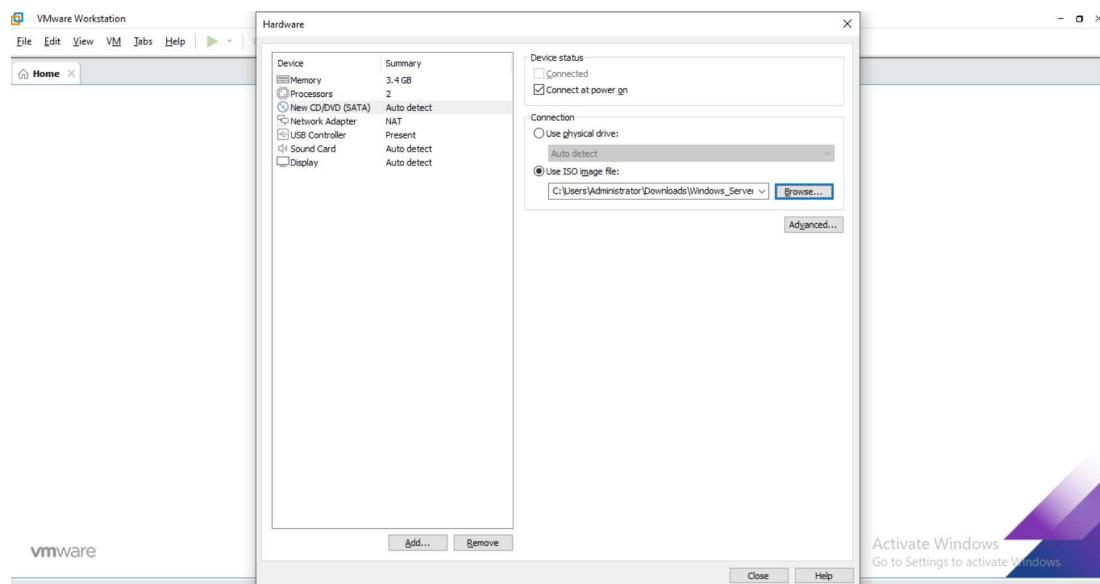
Click on the option to customize hardware settings before finishing.



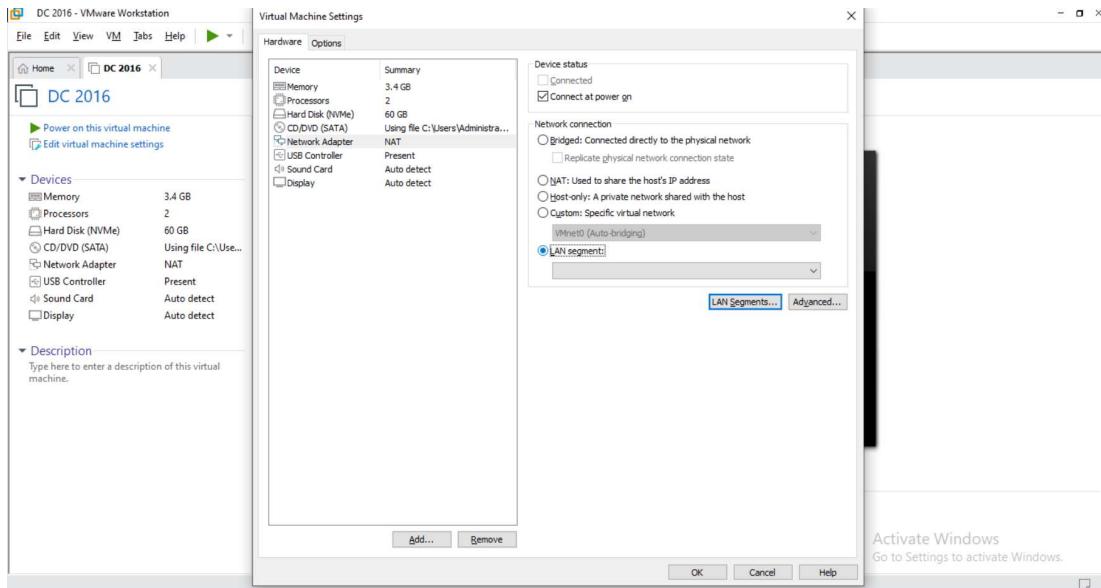
Adjust memory (RAM) to 3.4 GB.

Set the number of processors to 2.

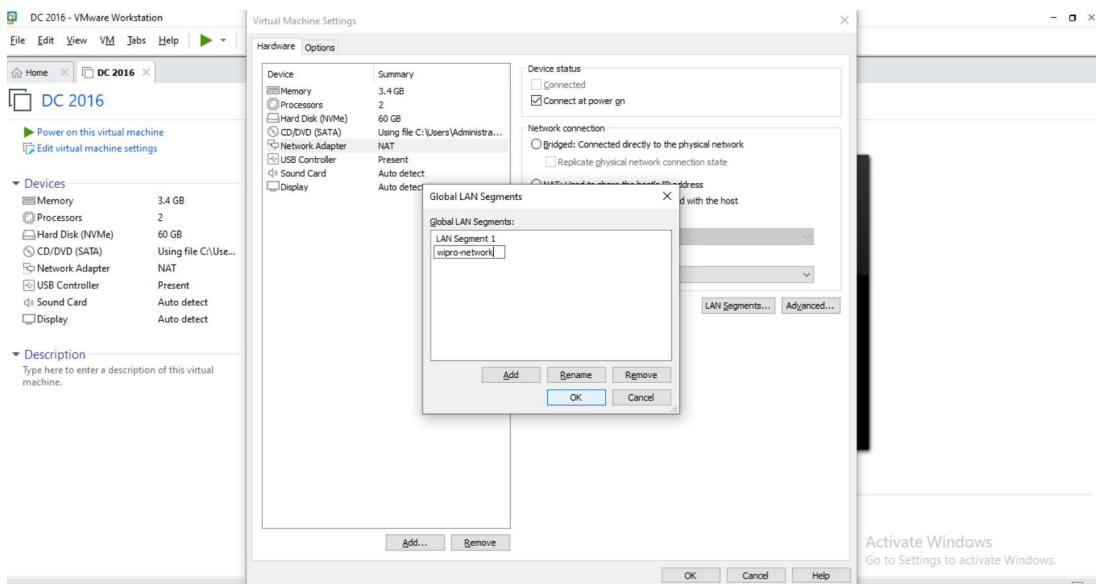
Select CD/DVD ISO Image and attach the Windows Server 2016 ISO image file to the virtual CD/DVD drive.



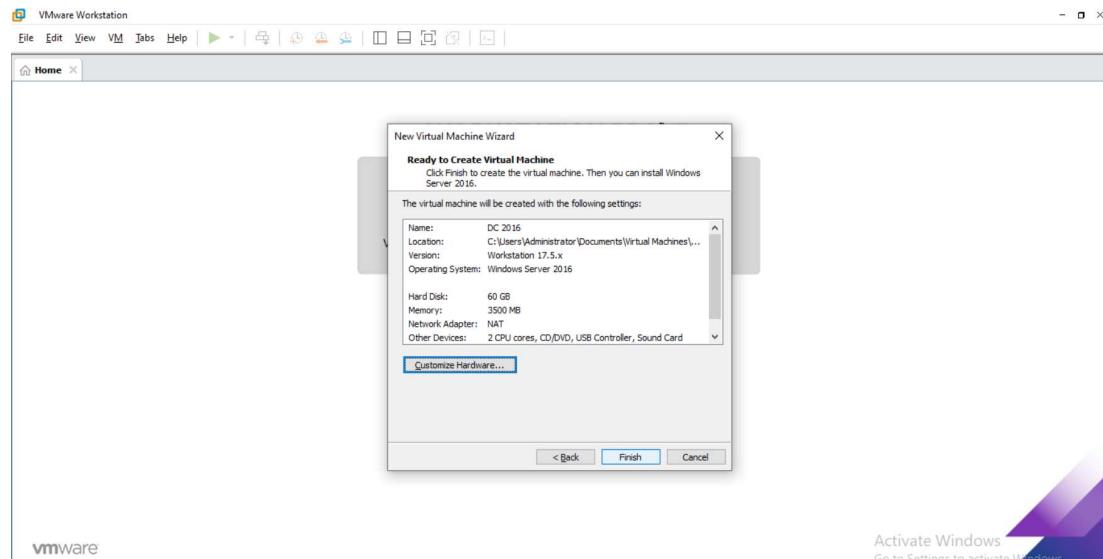
In the Virtual Machine Settings window, go to the "Network Adapter" section.



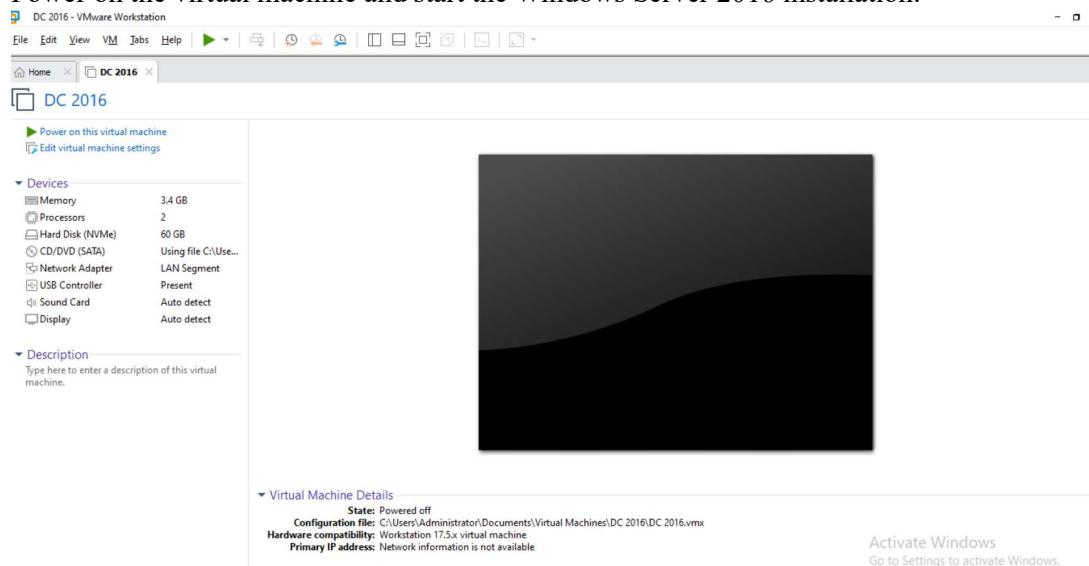
Choose "LAN Segment" from the network connection dropdown menu.  
Set the LAN Segment name as "Wipro-network".



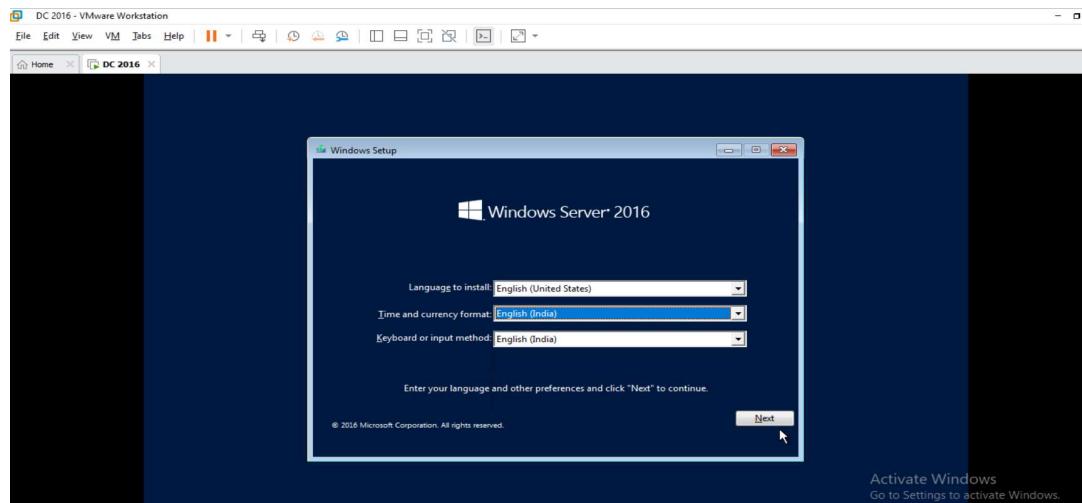
Click on finish and create



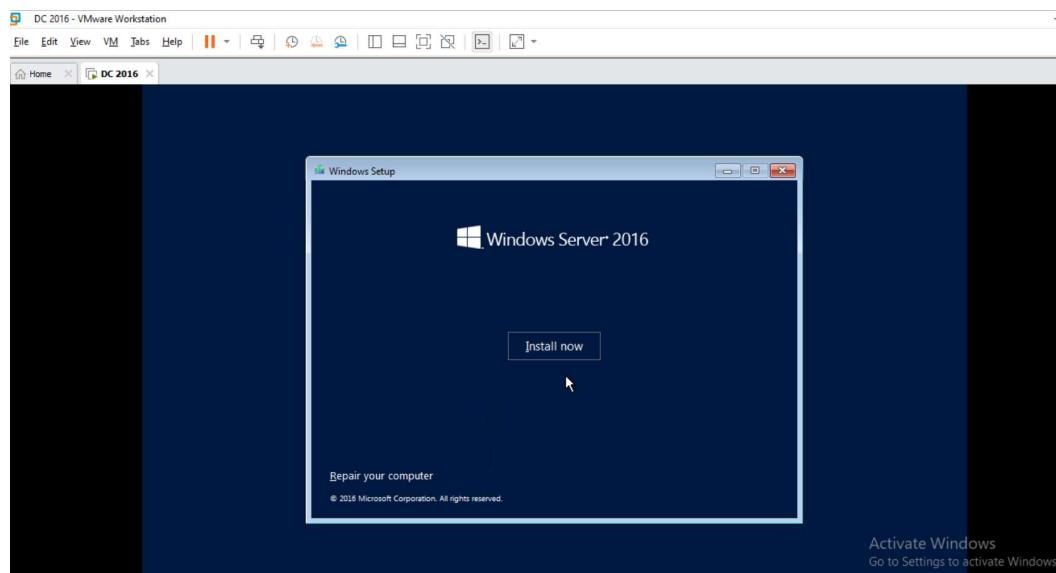
Power on the virtual machine and start the Windows Server 2016 installation.



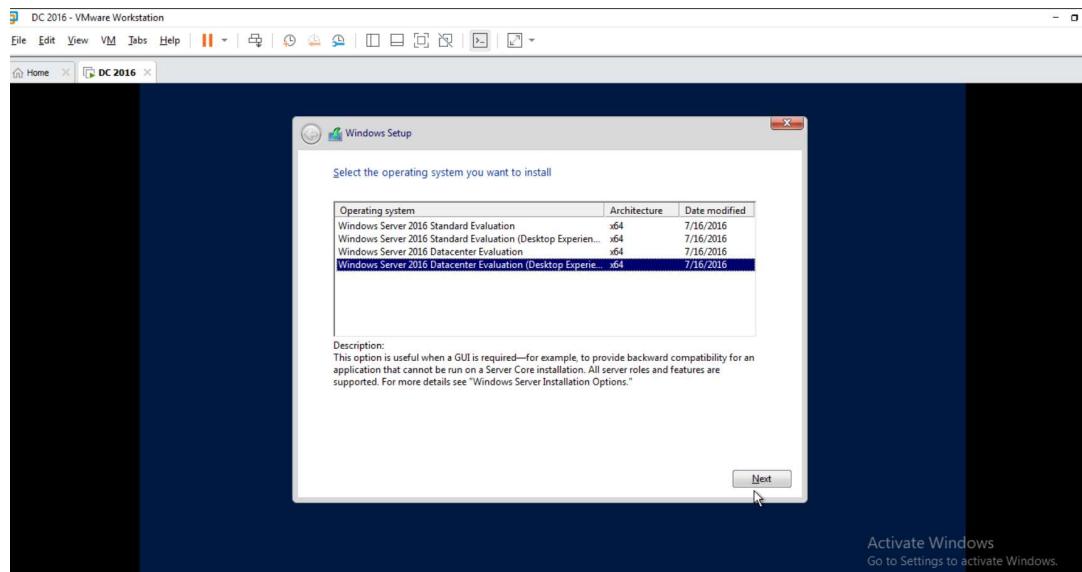
Select the required the language



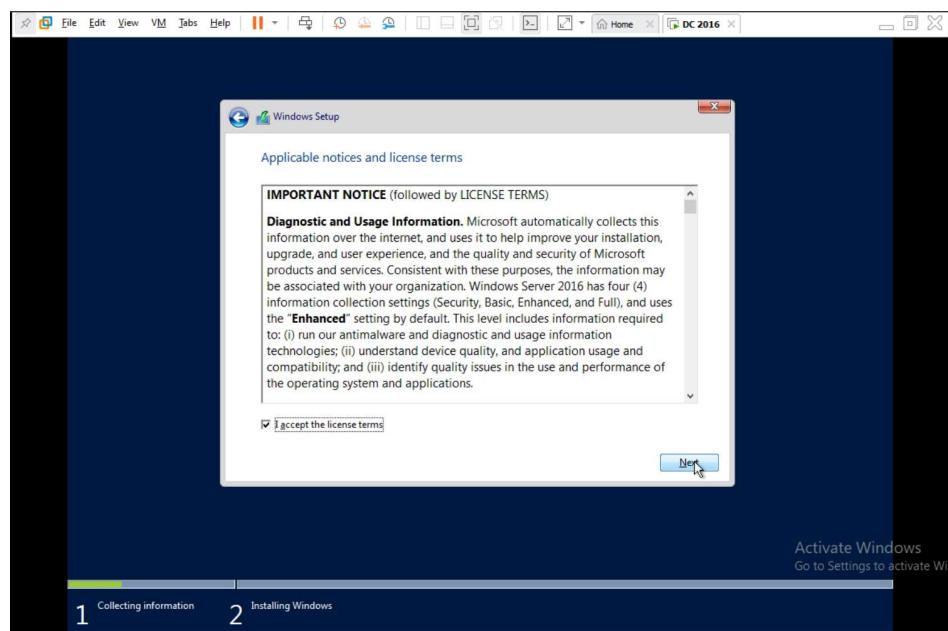
Click on "Install now" to begin the installation process.



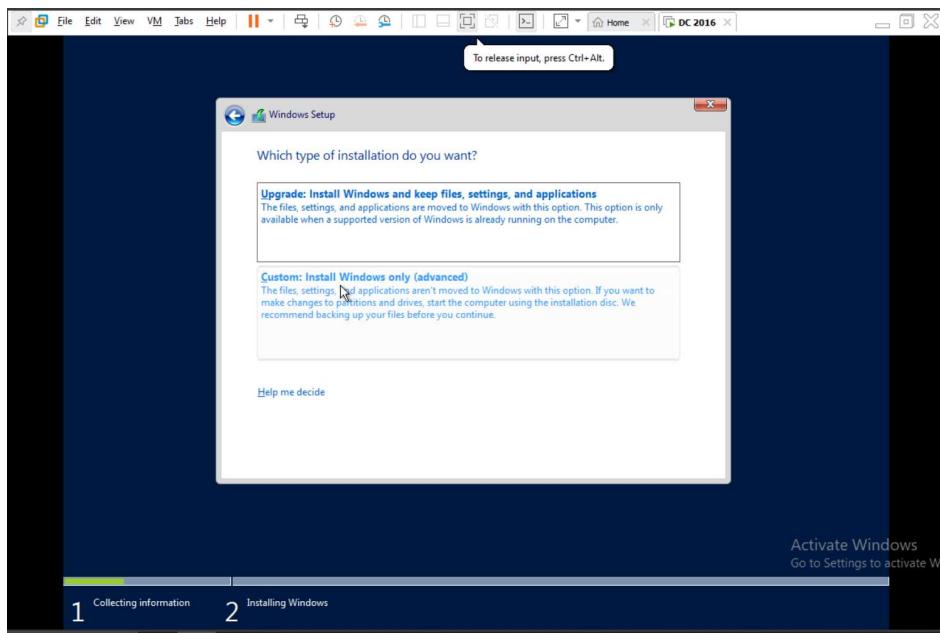
select the version of Windows Server 2016 you are about to install. What you need to keep in mind is selecting the Desktop Experience version, which means the version with the graphical interface will be installed.



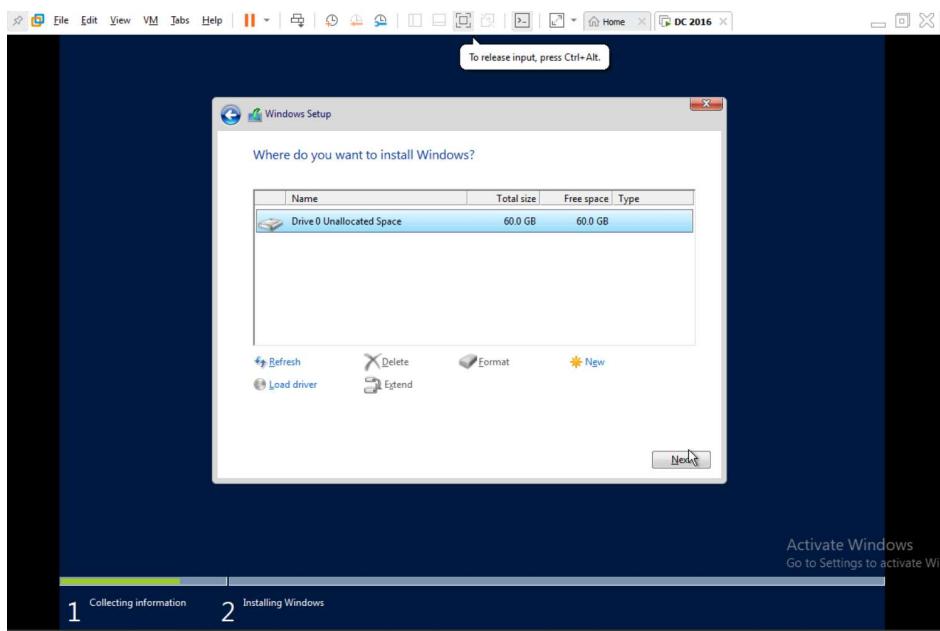
Accept the terms of use by selecting **I accept license terms** option and click **Next** to continue.



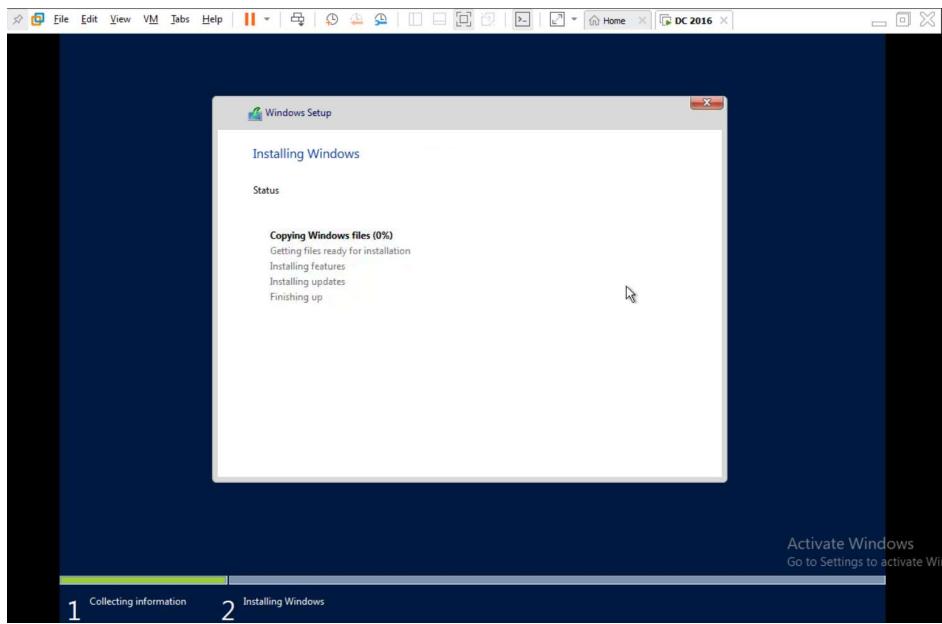
Since it is a clean installation rather than upgrading a previous version, click **Custom: Install Windows only (advanced)**.



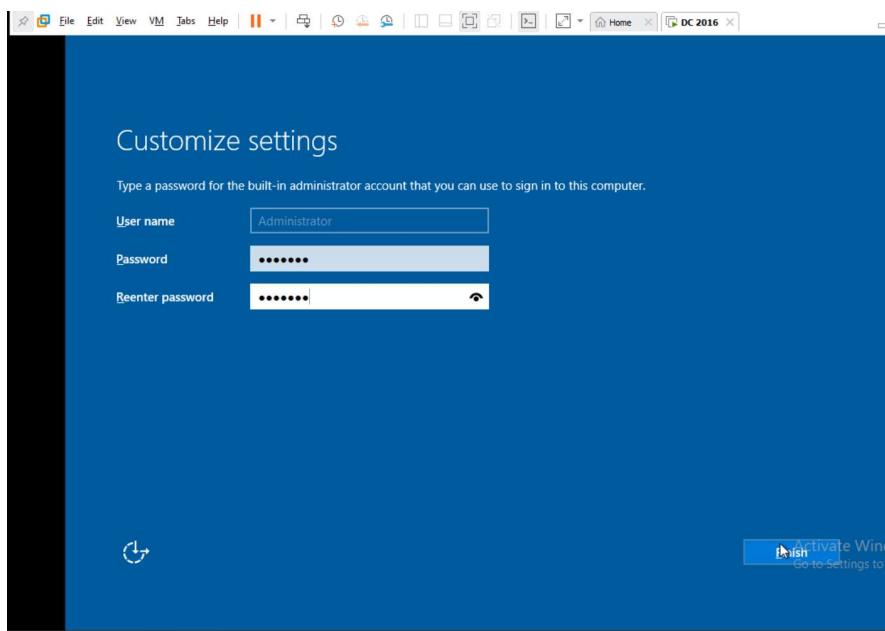
Select the disk to be installed in Windows Server 2016.



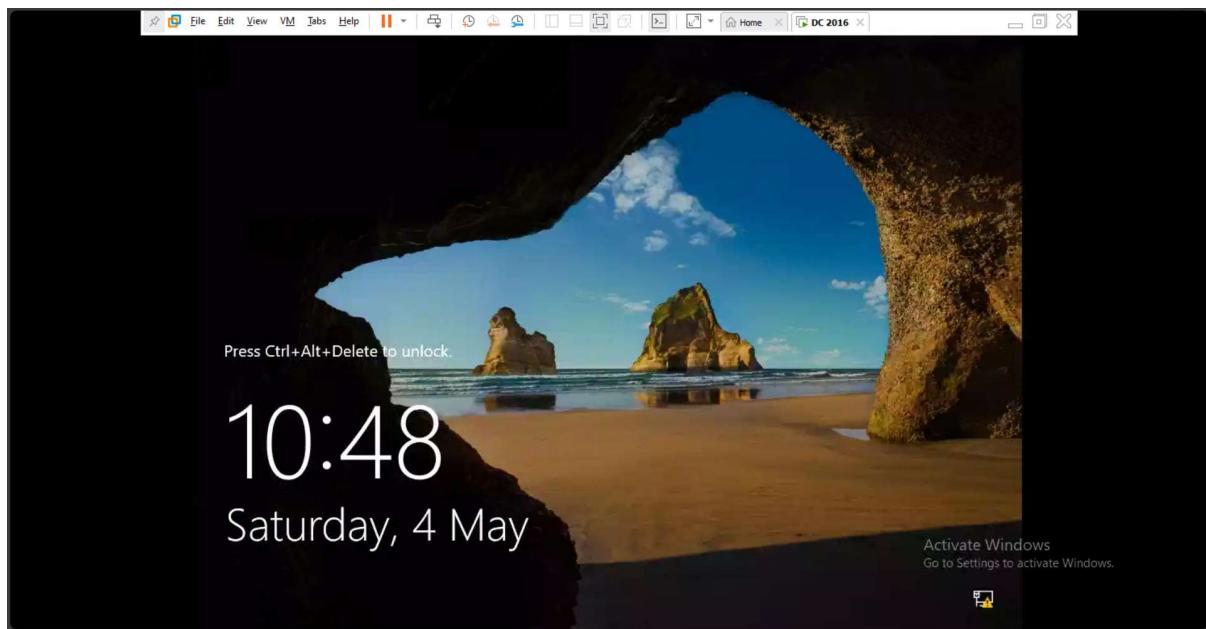
The installation of Windows Server 2016 is in progress. You will have to wait a few minutes.



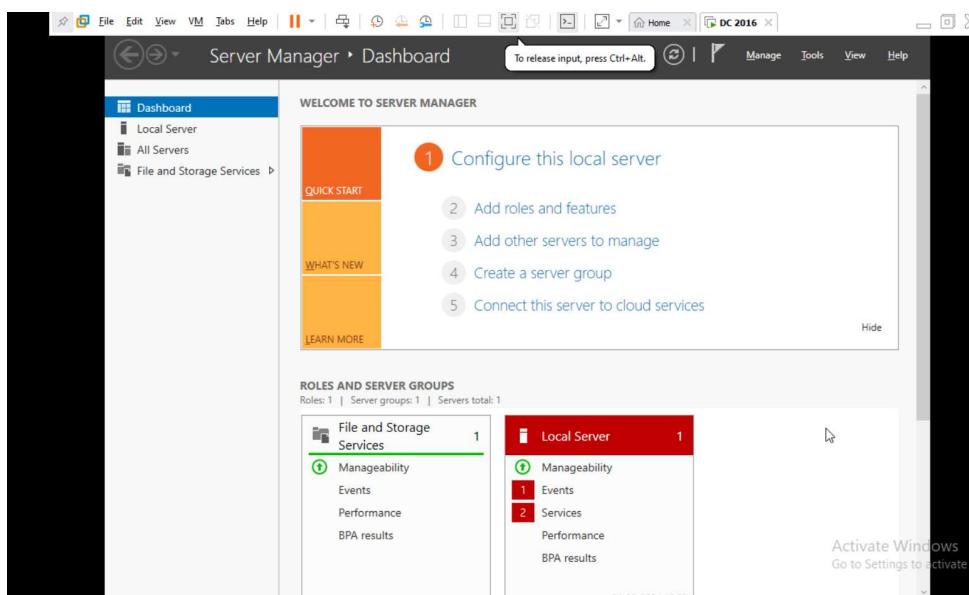
After restarting the server, you will be prompted to type the local administrator account password.



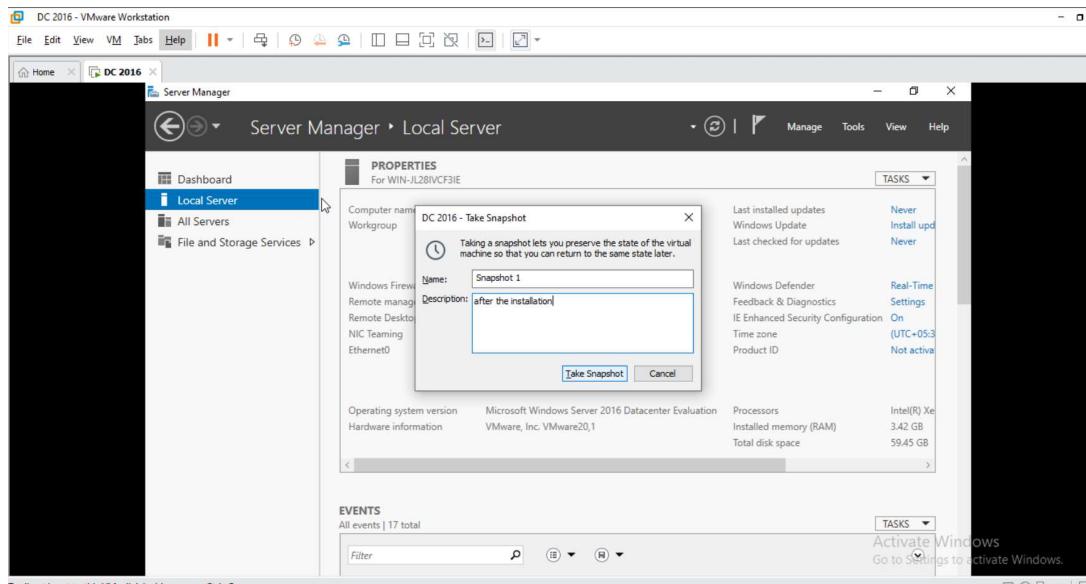
Now The DC 2016 machine is ready to use



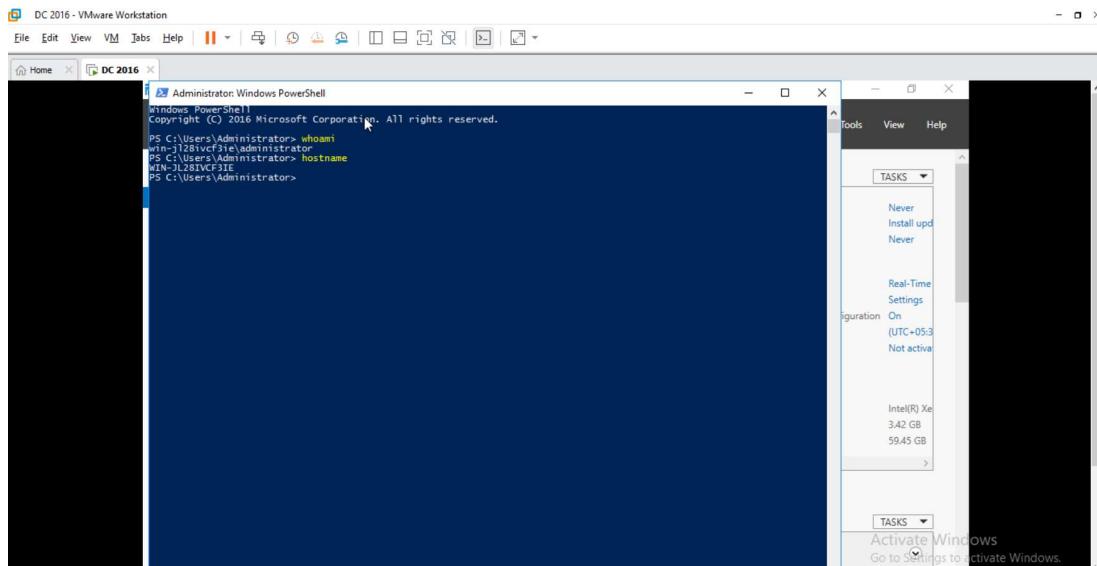
Open Server Manager on the Windows Server 2016 machine.



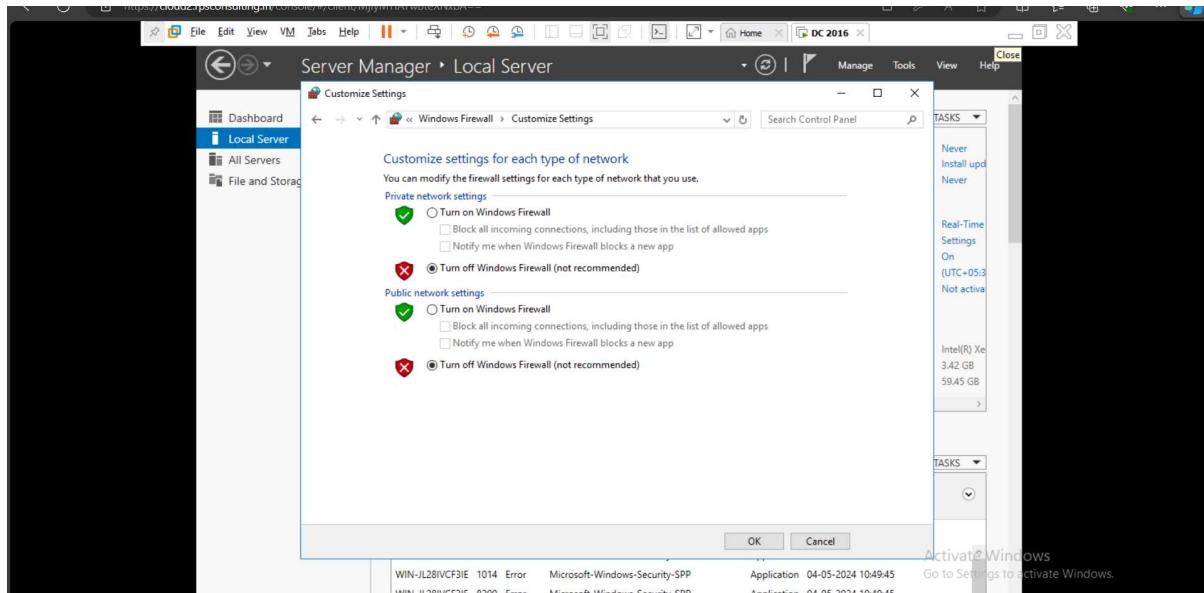
Take a snapshot here



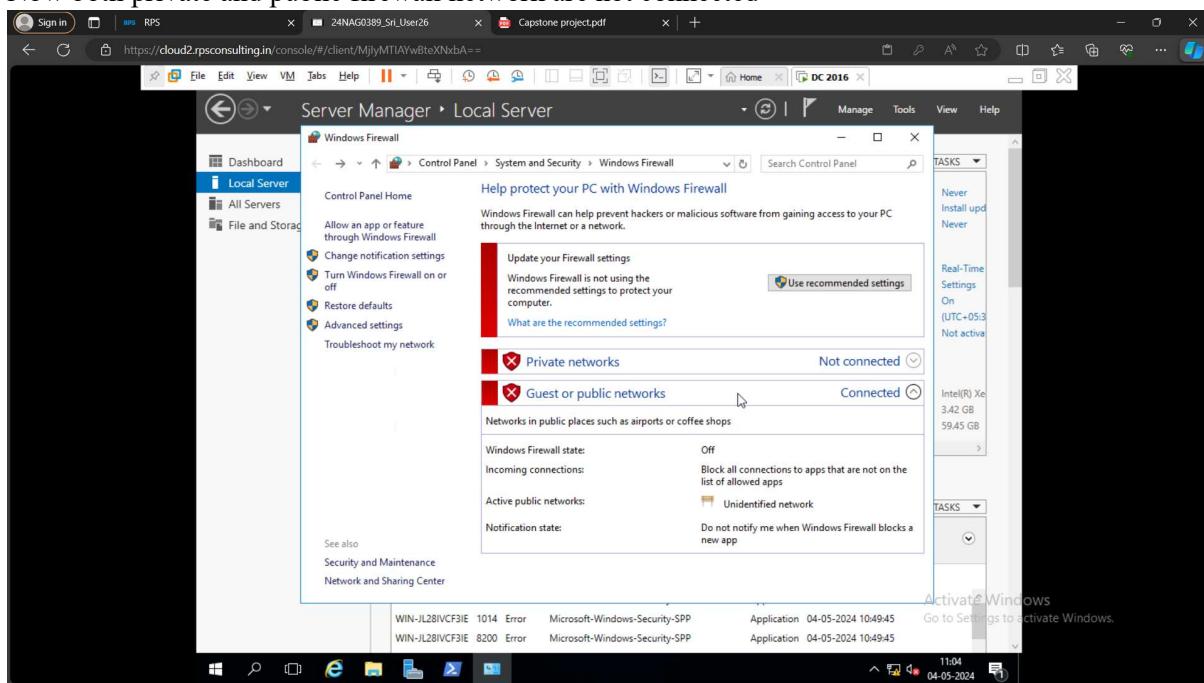
The whoami and hostname commands are used to display the current user and the hostname of the system you're working on, respectively.



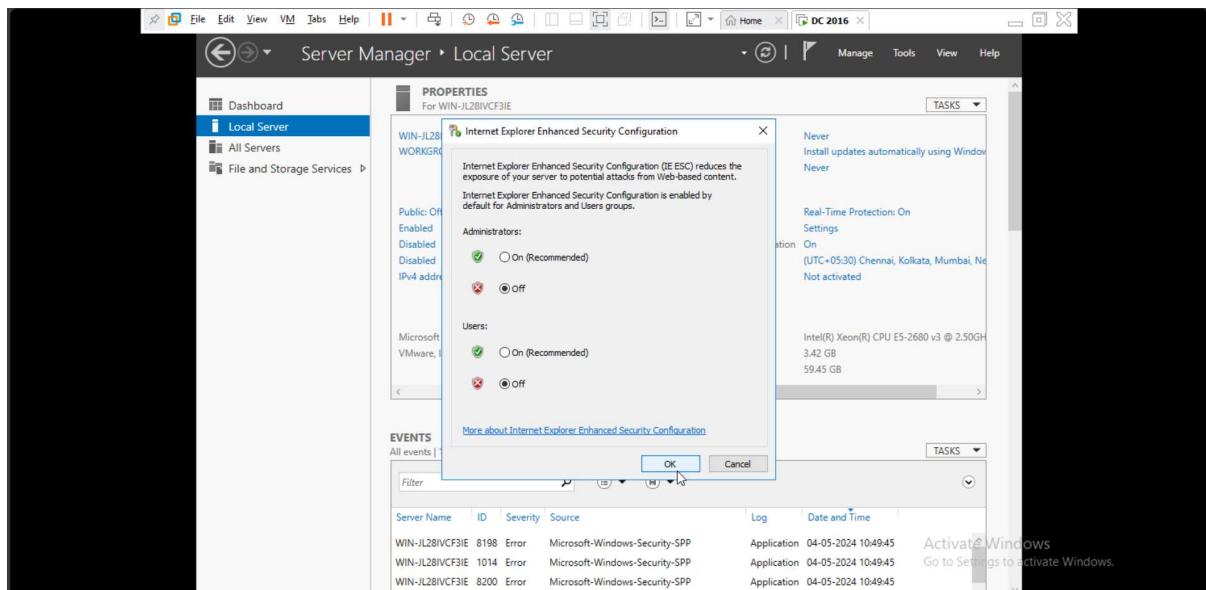
## Turn off the Firewall



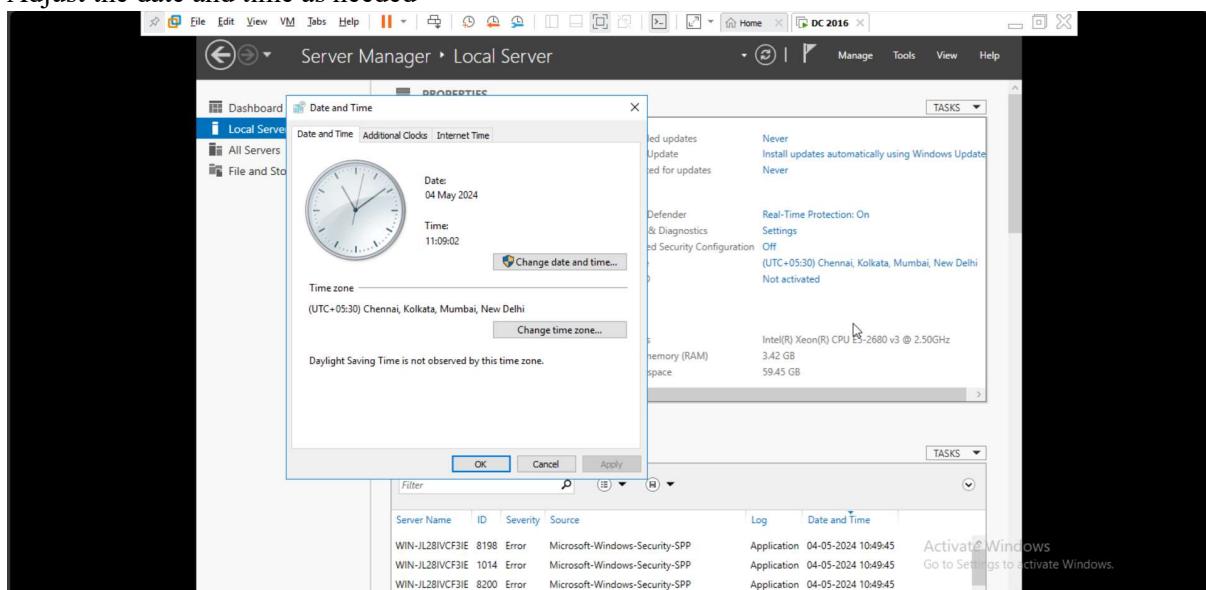
Now both private and public firewall network are not connected



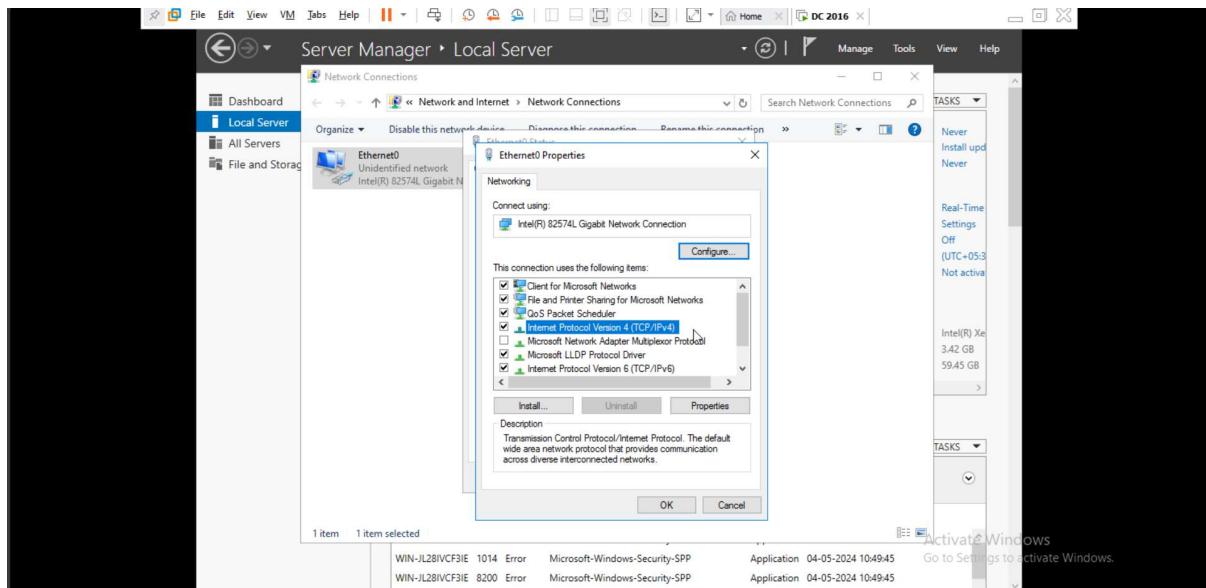
Turn off the Internet Explorer Enhanced security configuration



Adjust the date and time as needed



In the Ethernet Properties window, find and select "Internet Protocol Version 4 (TCP/IPv4)" from the list and Click on the "Properties" button below.



Enter the IP address, Subnet mask, Default gateway, and Preferred DNS server according to your network requirements.

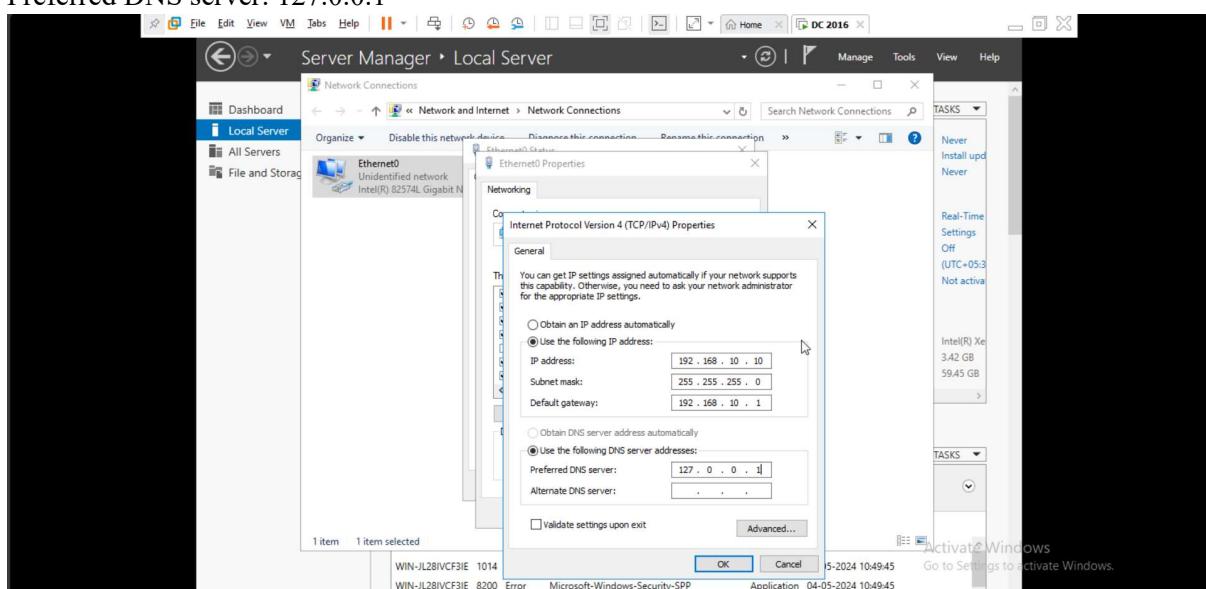
Here it is:

IP address: 192.168.10.10

Subnet mask: 255.255.255.0

Default gateway: 192.168.10.1

Preferred DNS server: 127.0.0.1



You can verify the IP configuration by opening a Command Prompt and running the command ipconfig.

```
Administrator: Windows PowerShell
Copyright (C) 2016 Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator> whoami
WIN-JL28IVCF3IE\administrator
PS C:\Users\Administrator> hostname
WIN-JL28IVCF3IE
PS C:\Users\Administrator> ipconfig

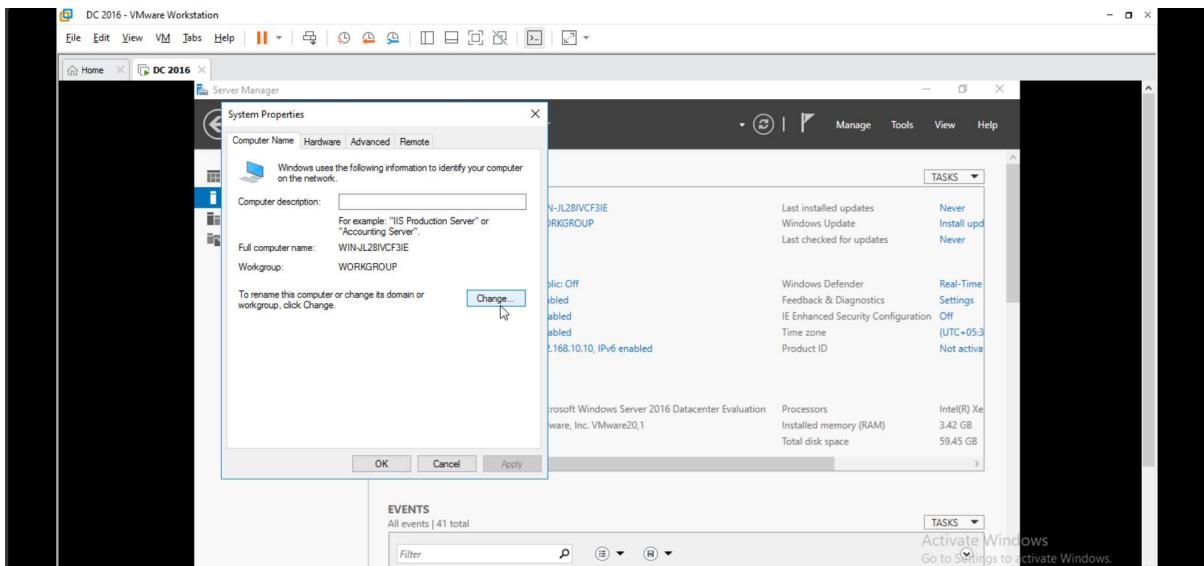
Windows IP Configuration

Ethernet adapter Ethernet0:
  Connection-specific DNS Suffix . . . . . fe80::20cf:c74c:4017:ea0b%2
  Link-Local IPv6 Address . . . . . 192.168.10.10
  IPv4 Address . . . . . 192.168.10.10
  Subnet Mask . . . . . 255.255.255.0
  Default Gateway . . . . . 192.168.10.1

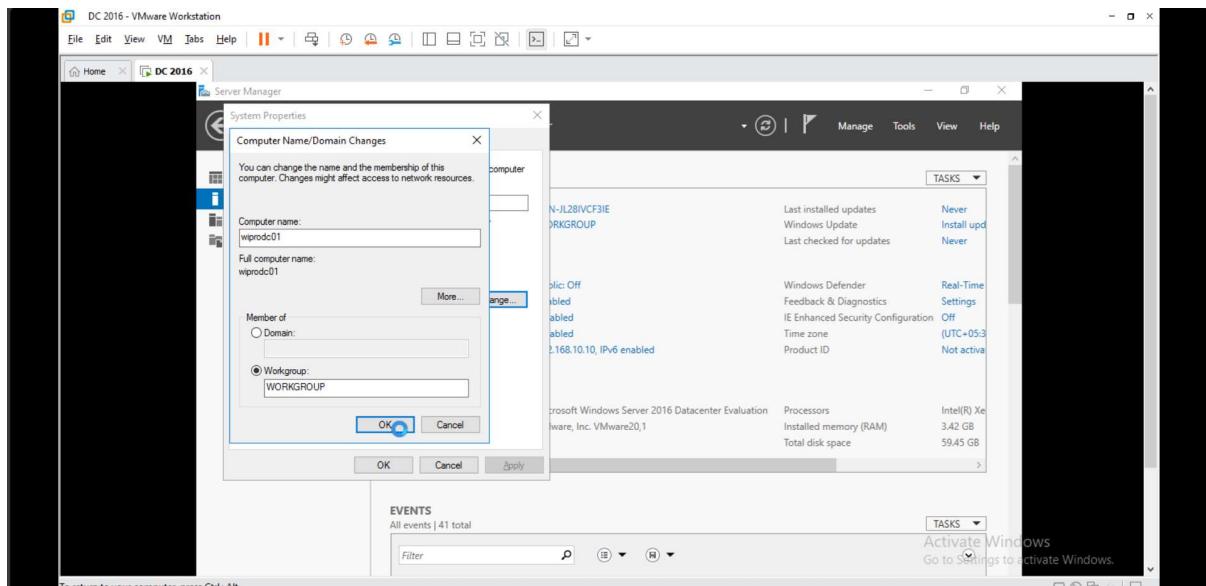
Tunnel adapter isatap.{4F6CAE8-98BD-41B3-8875-4B1D6931C2E3}:
  Media State . . . . . Media disconnected
  Connection-specific DNS Suffix . . .
PS C:\Users\Administrator>
```

Click on "Change settings" next to the computer name within the System window.

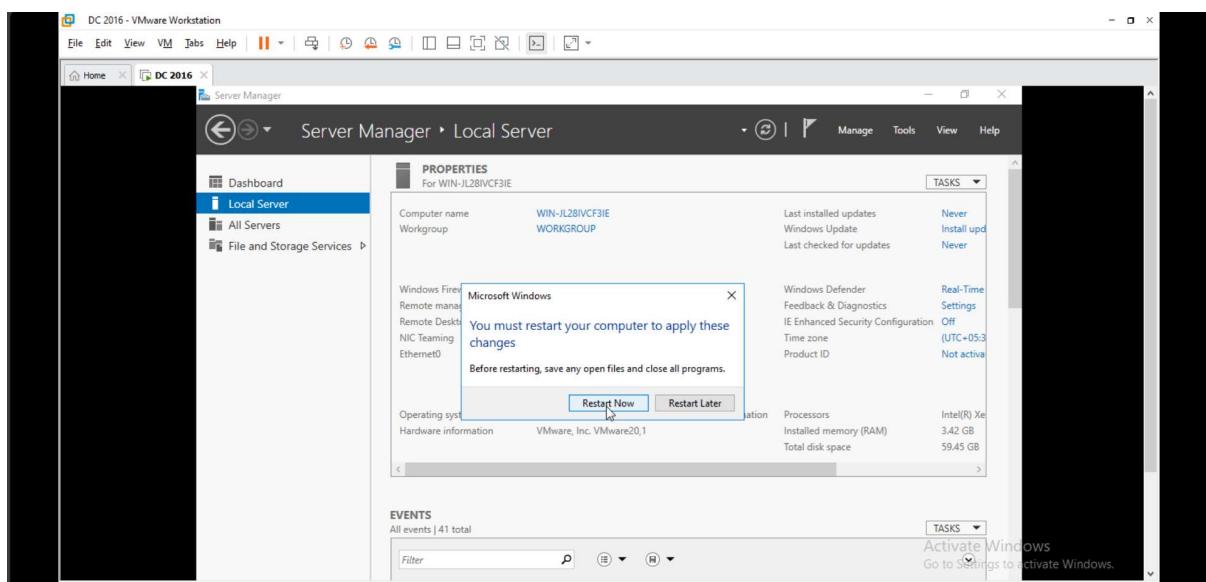
In the System Properties window, navigate to the "Computer Name" tab and click the "Change" button.



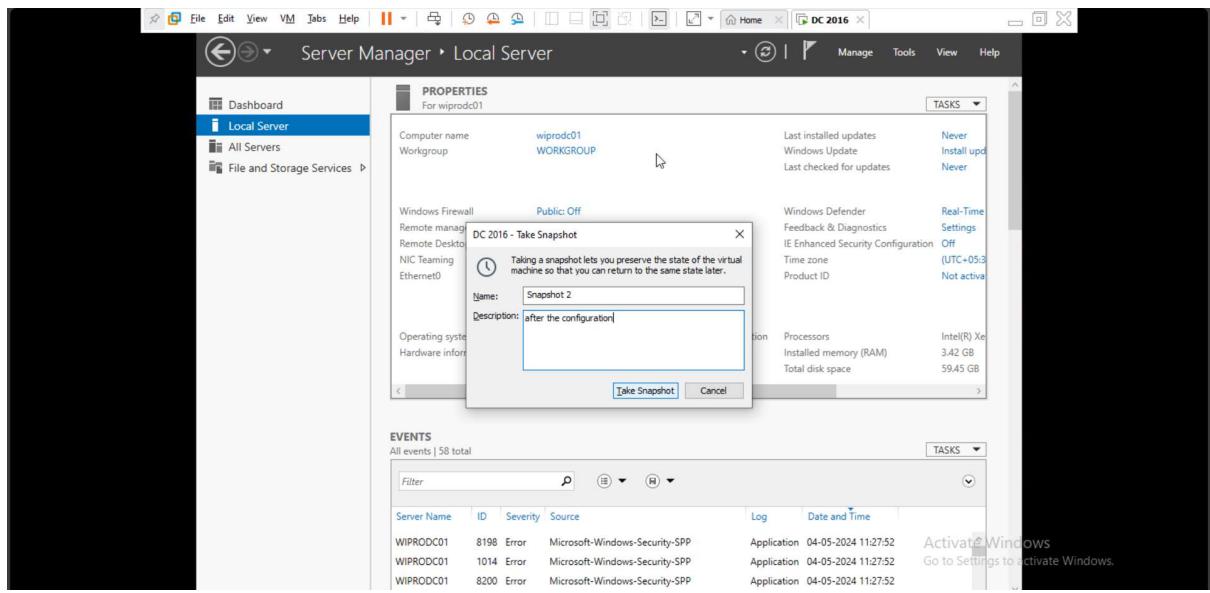
Enter the new computer name, such as "WiproDC01," in the designated field within the Computer Name/Domain Changes window.



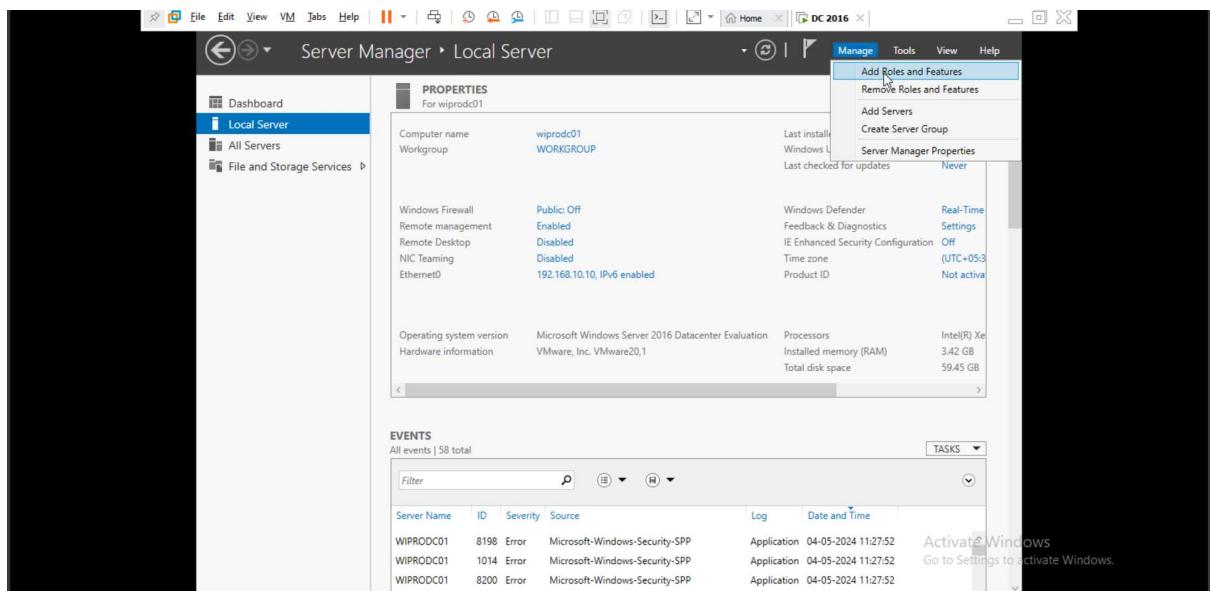
Confirm the changes by clicking "OK" and restart the virtual machine to apply the new computer name.



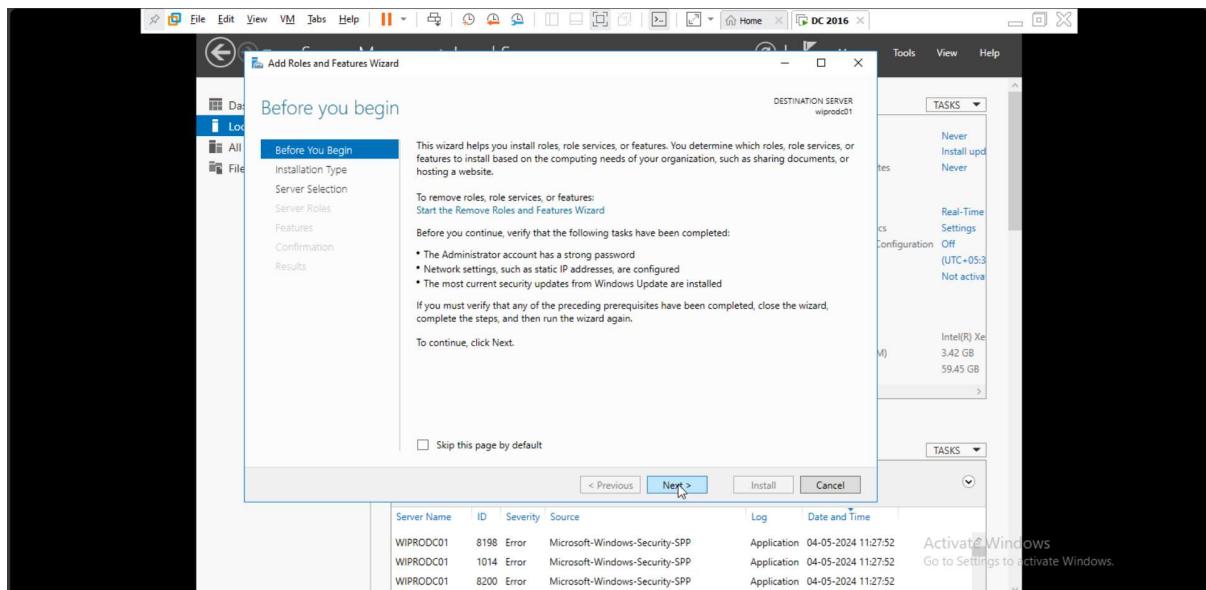
Take a snapshot here



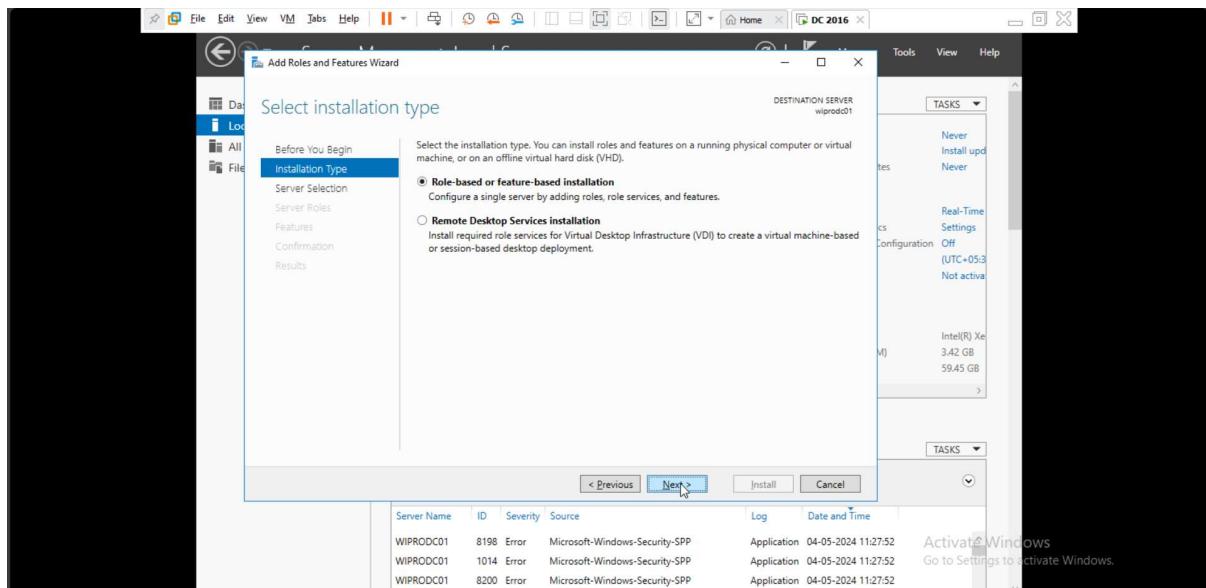
Open Server Manager. Click Manage and click Add Roles and Features as shown above.



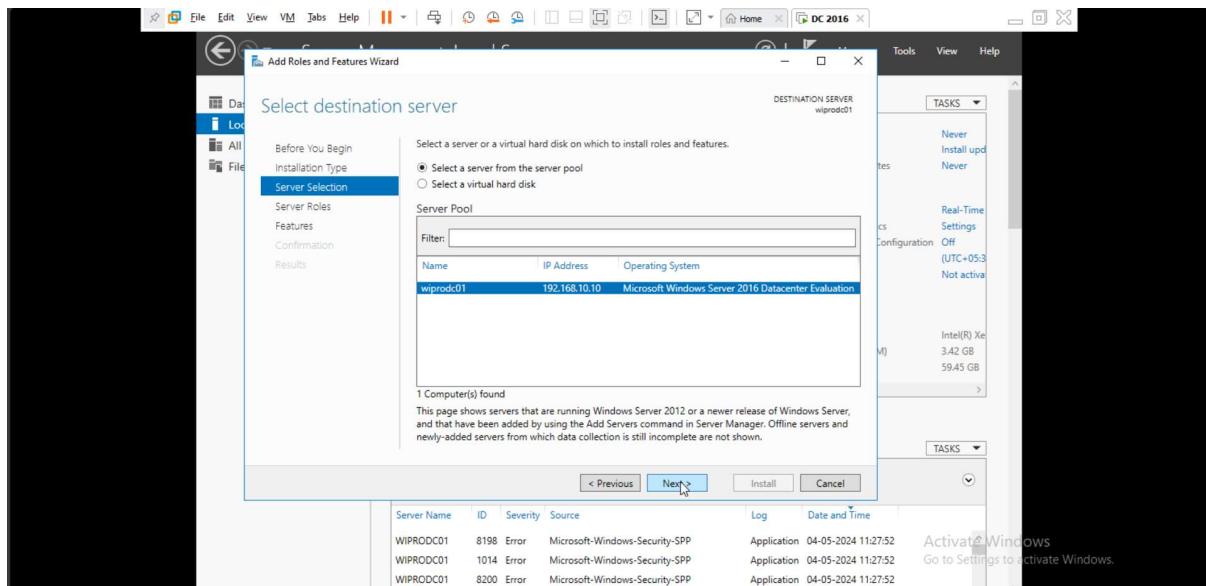
Click Next on the Before You Begin page.



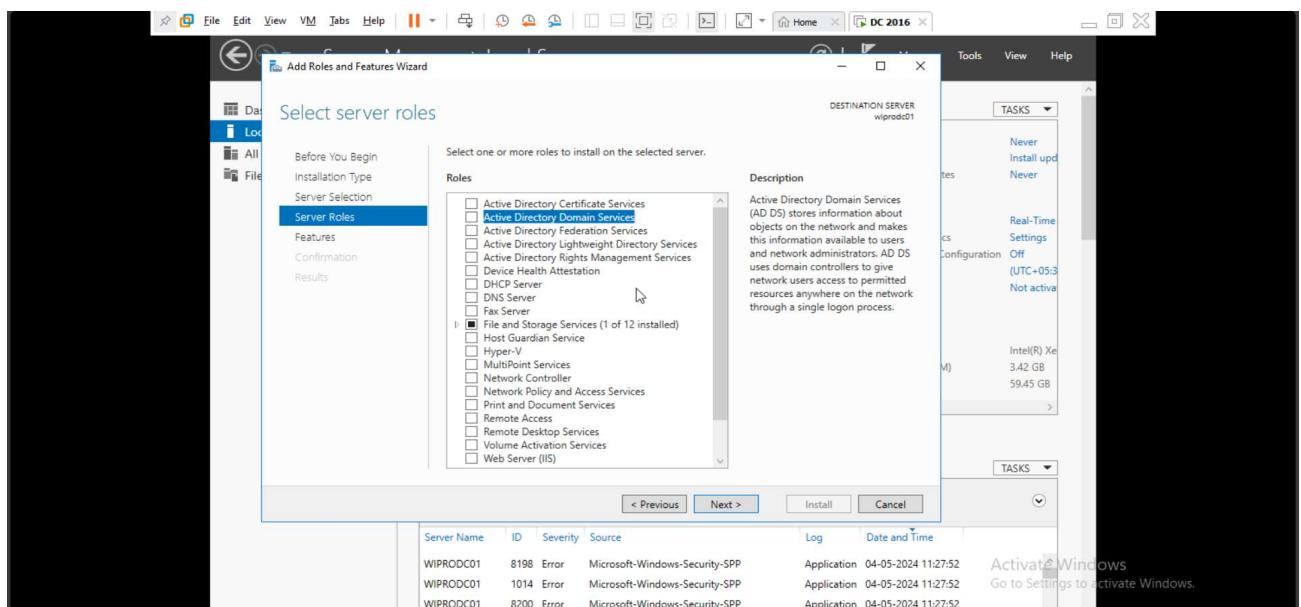
Choose **Role-based or feature-based installation** option for installation type. Click **Next**.

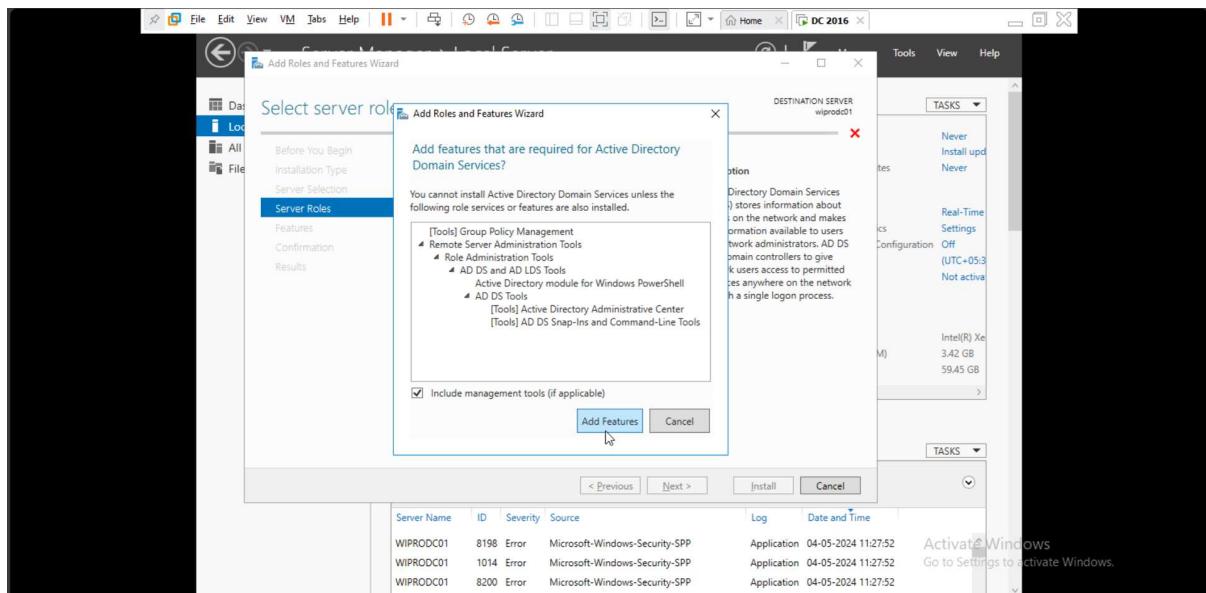


Under **Server Selection** page, choose the server where AD DS role will be installed and click **Next**. Here, only one server is shown as this is the first domain controller in the network and it shows itself.

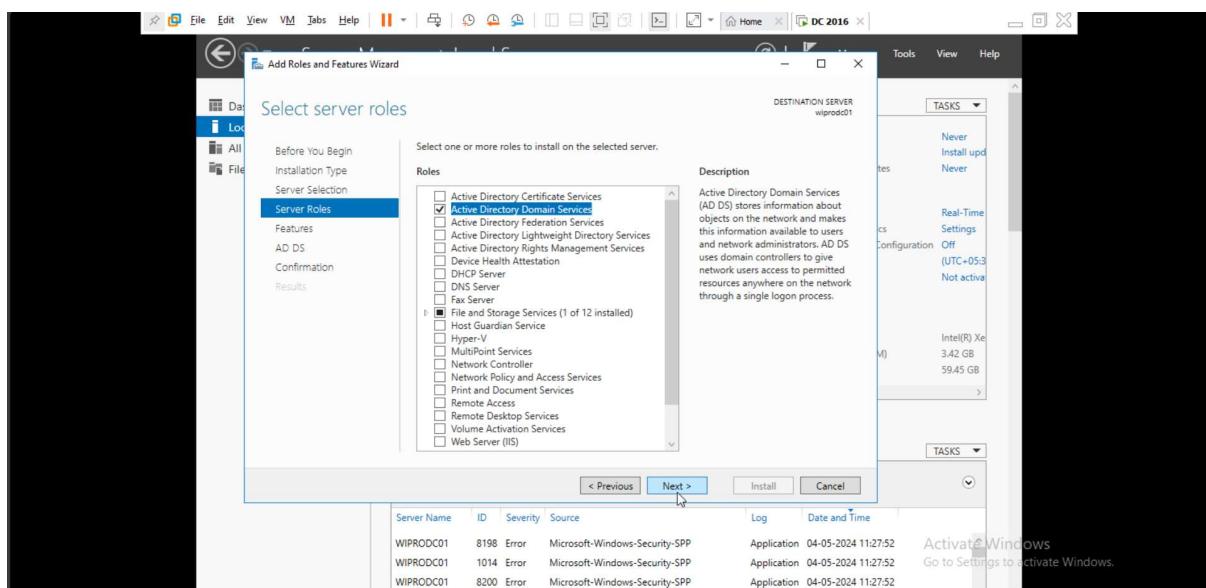


In **Server Roles** page, check **Active Directory Domain Services**. When you check this role, it will ask for confirmation to installation additional features that are required for this role. Click **Add Features**

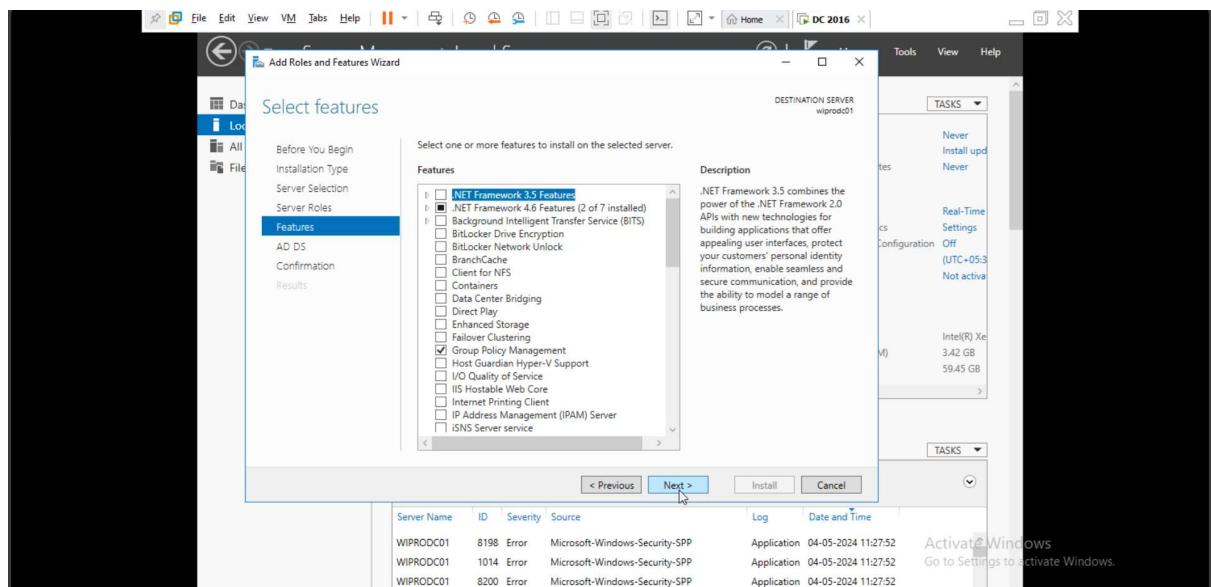




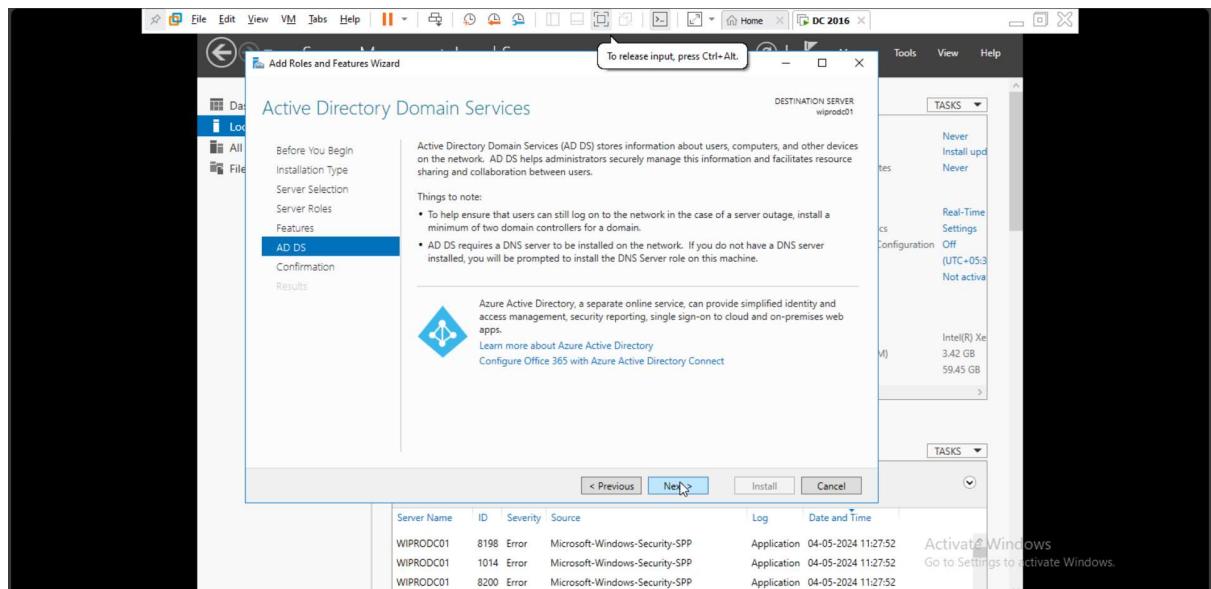
Click **Next** after verifying Active Directory Domain Services role is checked.



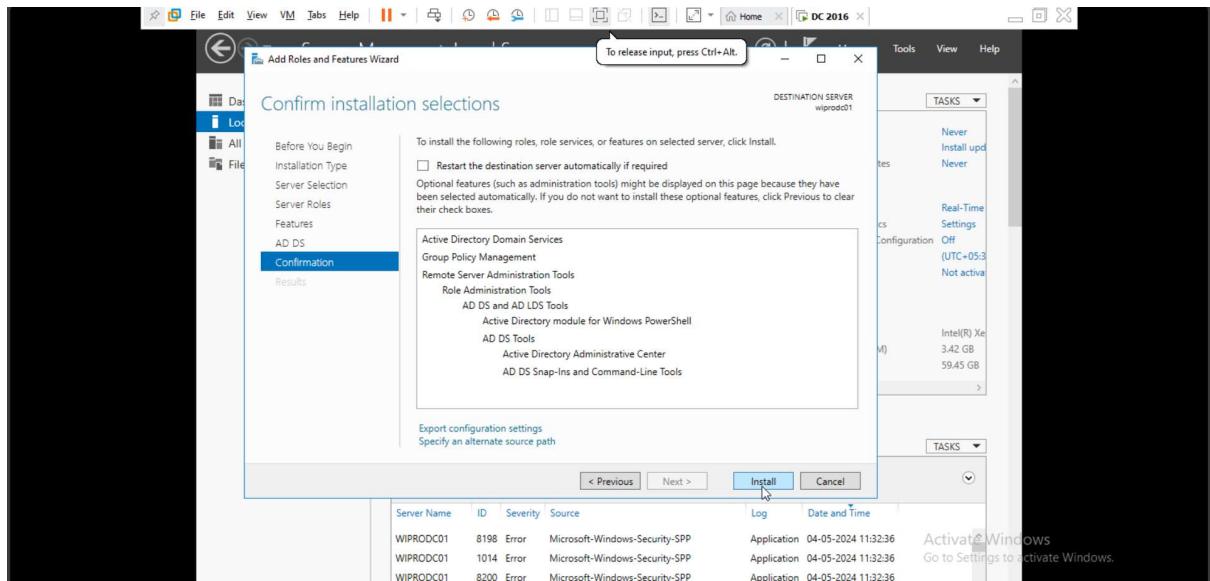
On the **Features** page, additional features like **Group Policy Management** and **Remote Server Administration Tools** are already selected. Click **Next**.



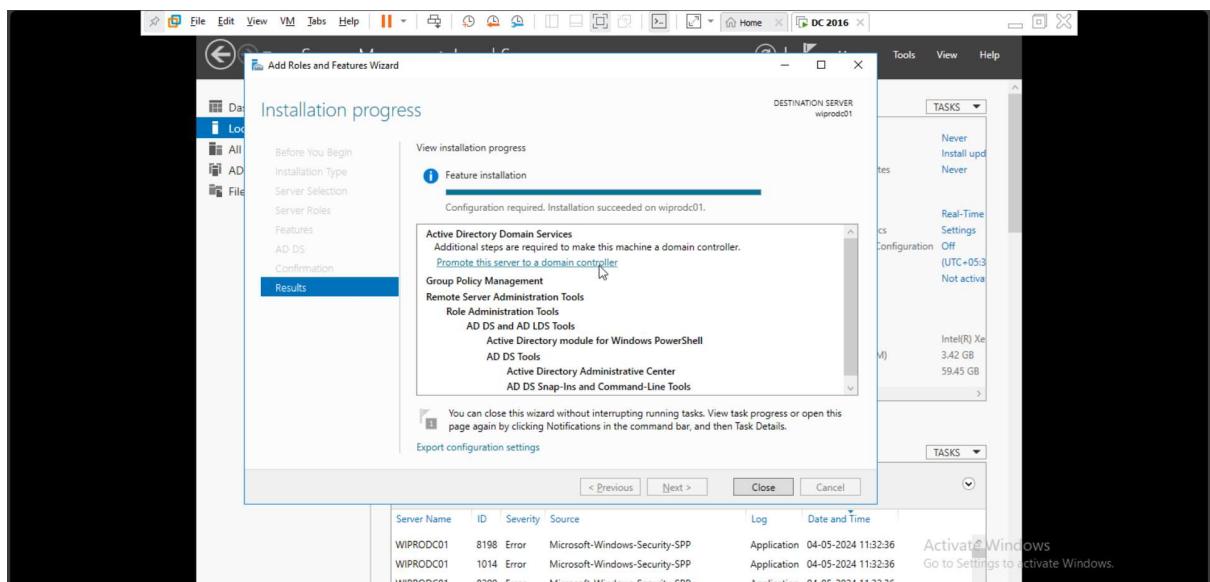
Click **Next** on Active Directory Domain Services page introduction.



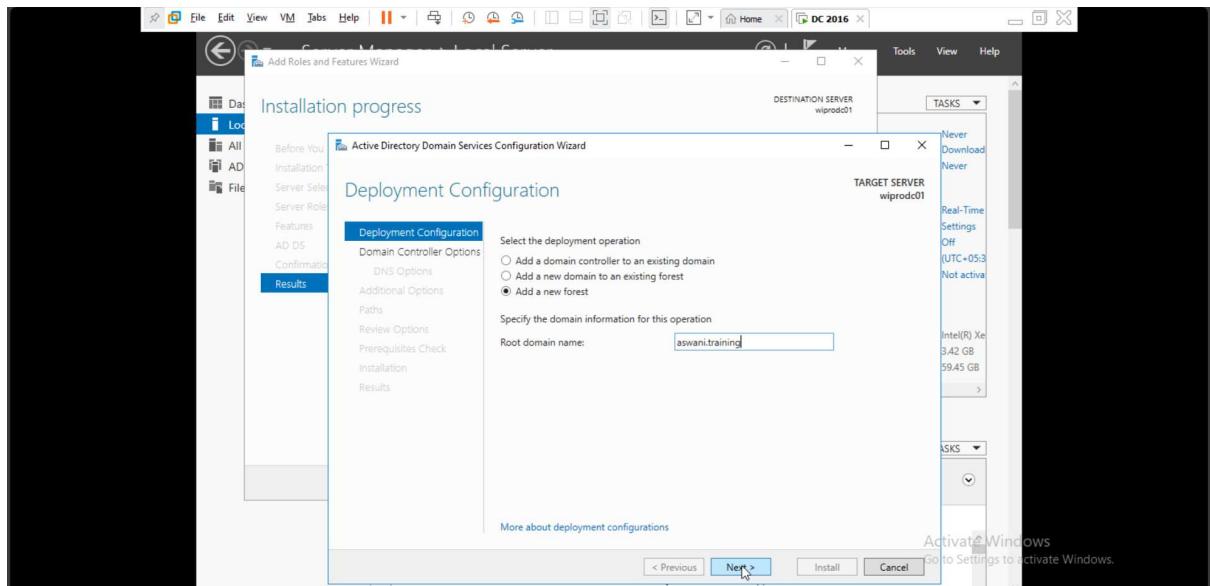
Click **Install** on Confirmation page to start the installation of AD DS role.



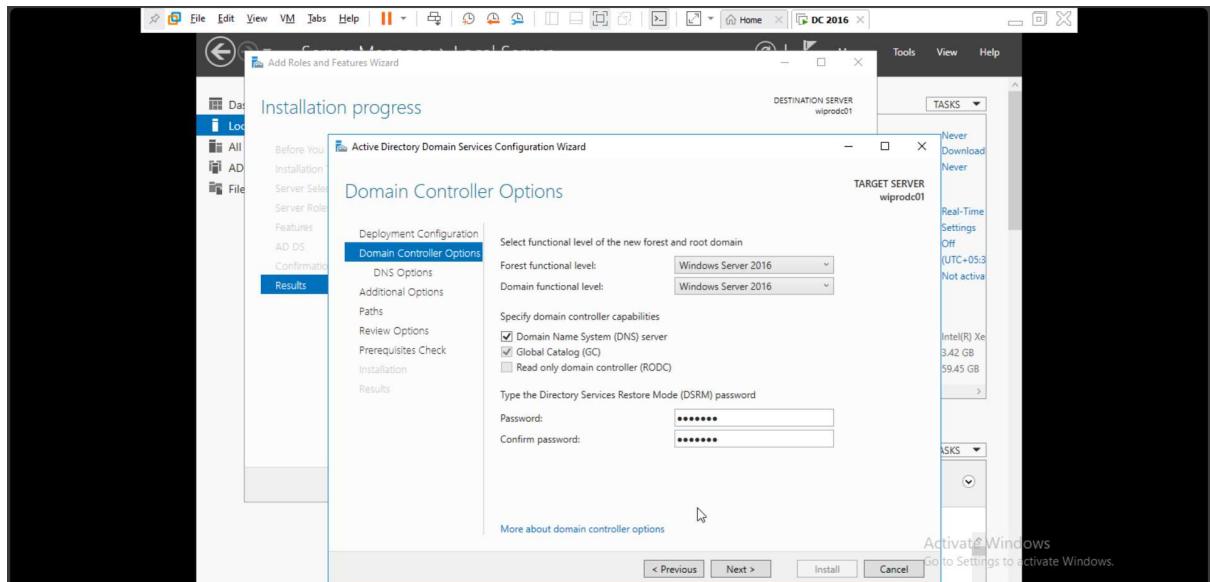
Once the installation of role and features are complete, click **Promote this server to a domain controller** option.



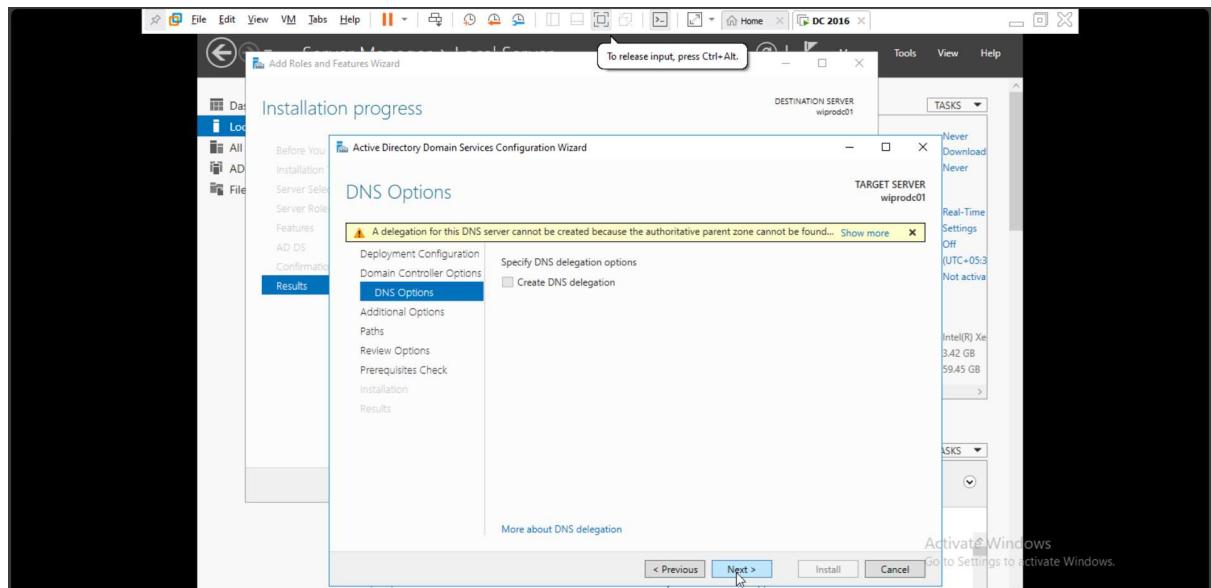
**Active Directory Domain Services Configuration Wizard** will open as shown above. Under **Select the deployment operation**, click **Add a new forest** option. And type domain name in root domain name option. This is the domain name for forest root of the Active Directory. User accounts will have user principal name of aswani.training in this case.



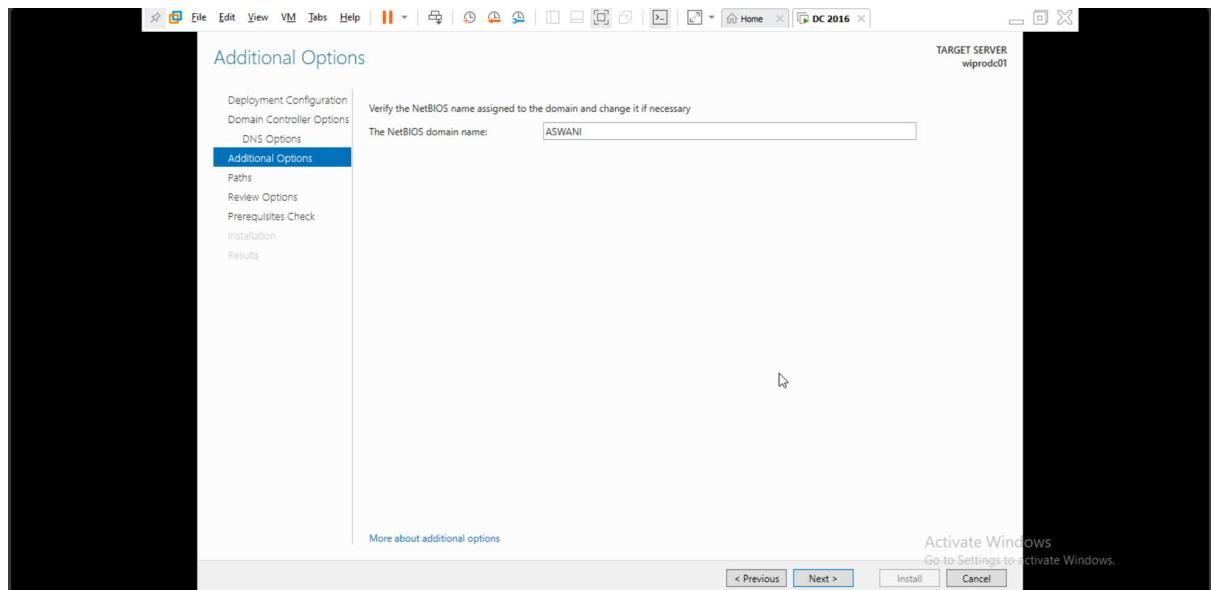
Under **Domain Controller Options**, **DNS server** is already checked and **Global Catalog (GC)** is checked. You can also change or lower the **Forest functional level** if needed. Enter the password for **Directory Services Restore Mode (DSRM)** and click **Next**.



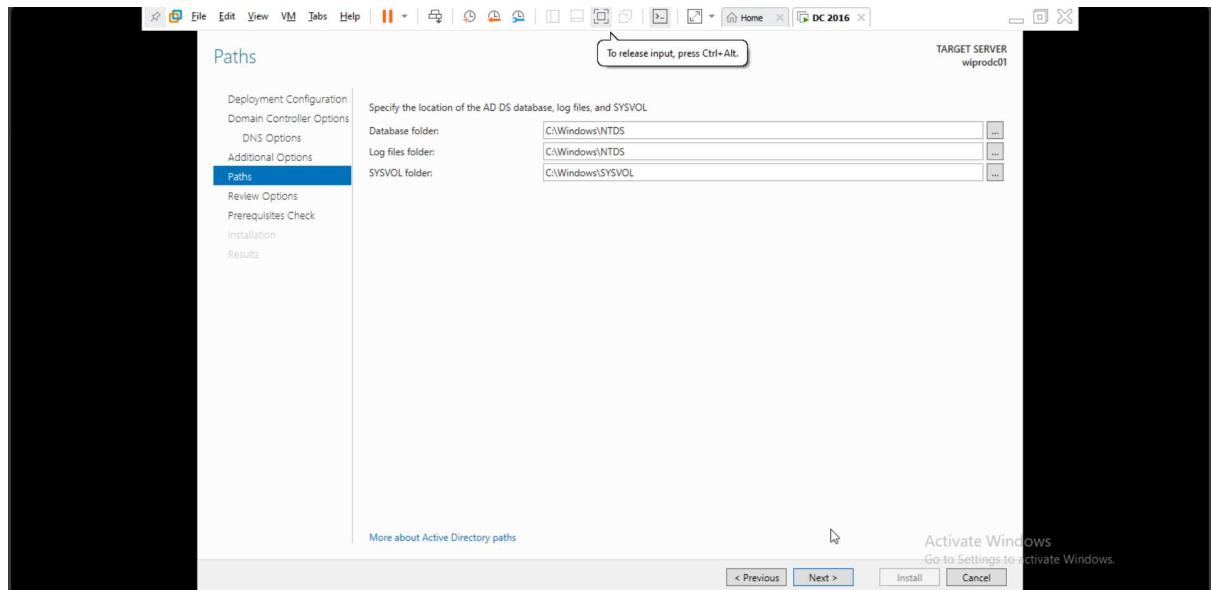
In DNS Options page click Next.



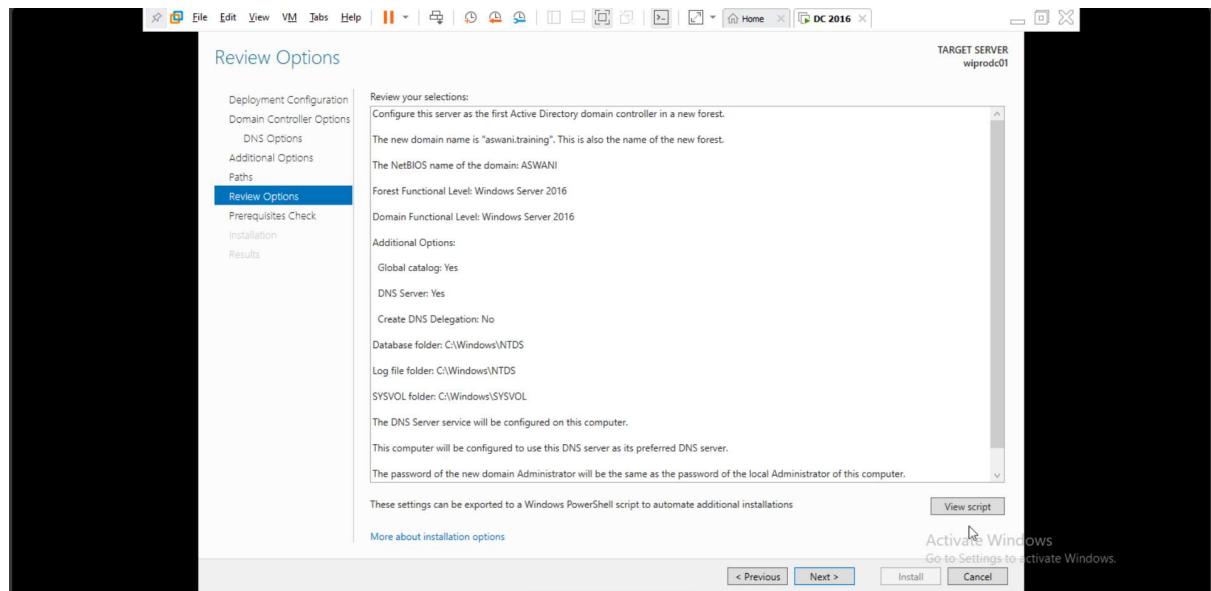
In Additional Options page you have option to change the default NetBIOS name. Default is mostly fine. Click Next.



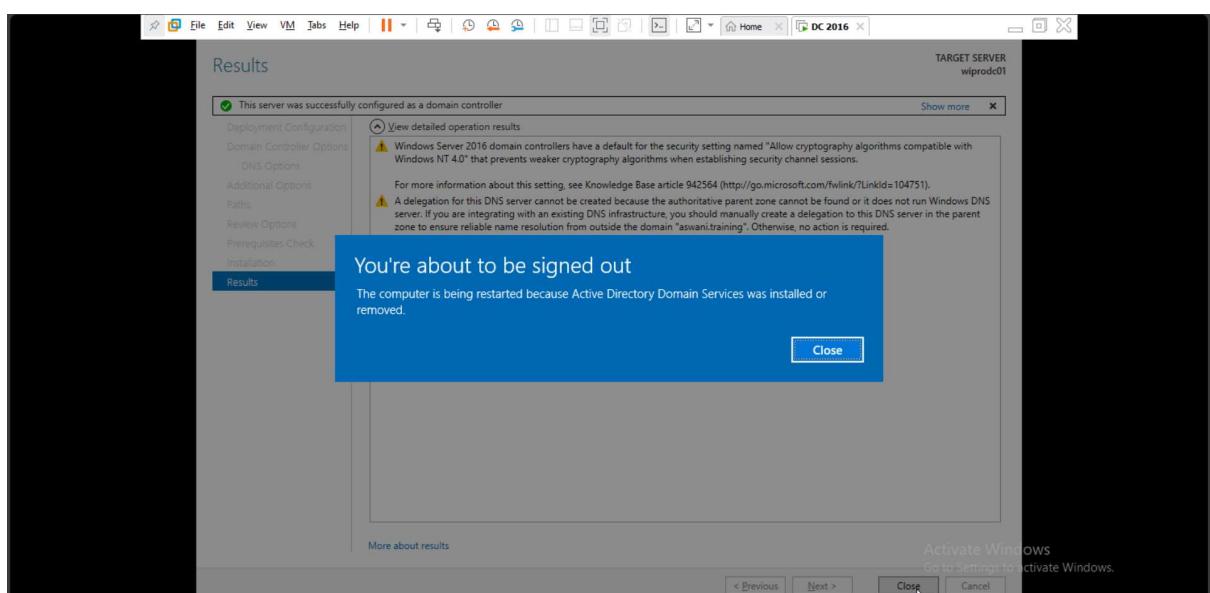
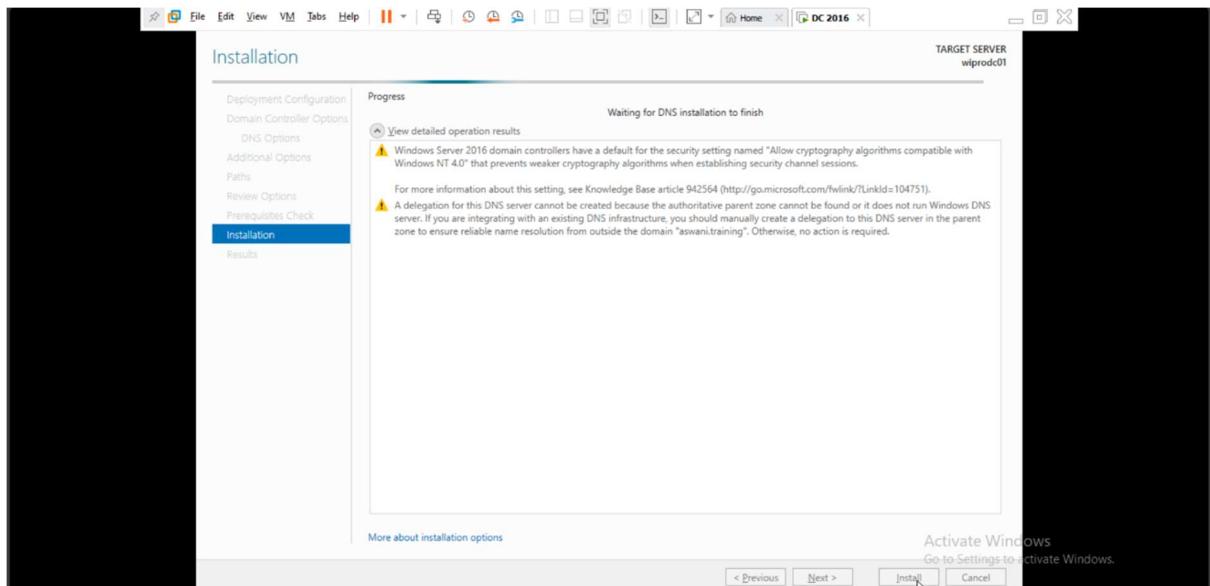
In **Paths** you can specify location for **Database folder**, **Log files folder** or **SYSVOL folder**. Click **Next**.



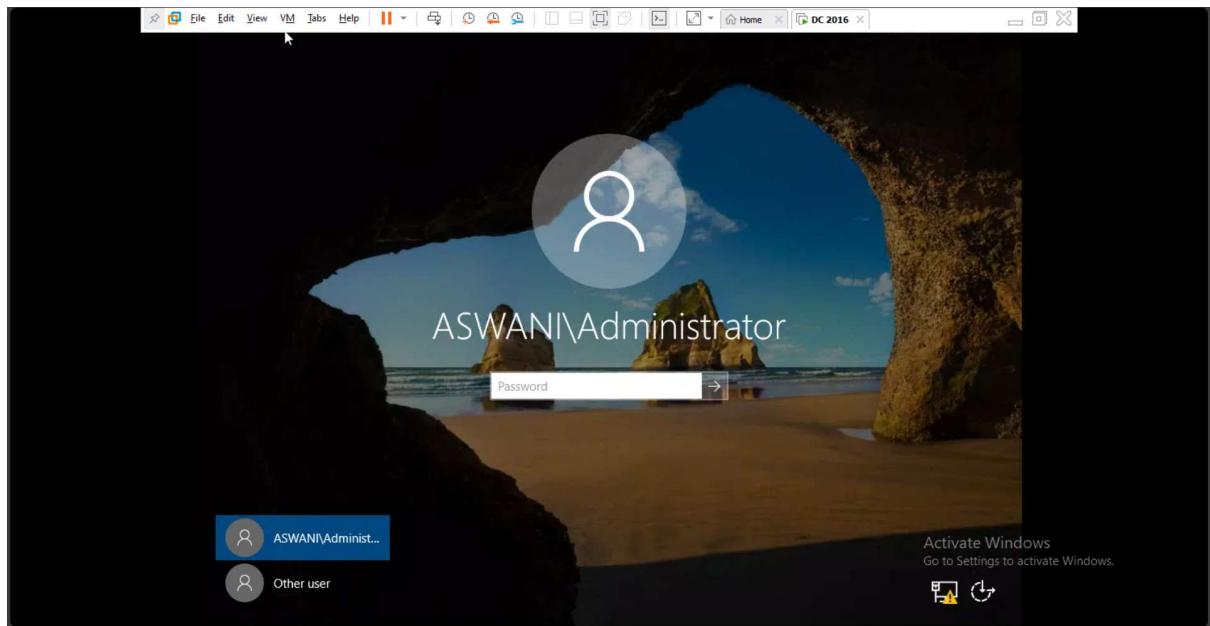
In **Review Options** page, you can review the settings for this brand new **Active Directory** and click **Next**.



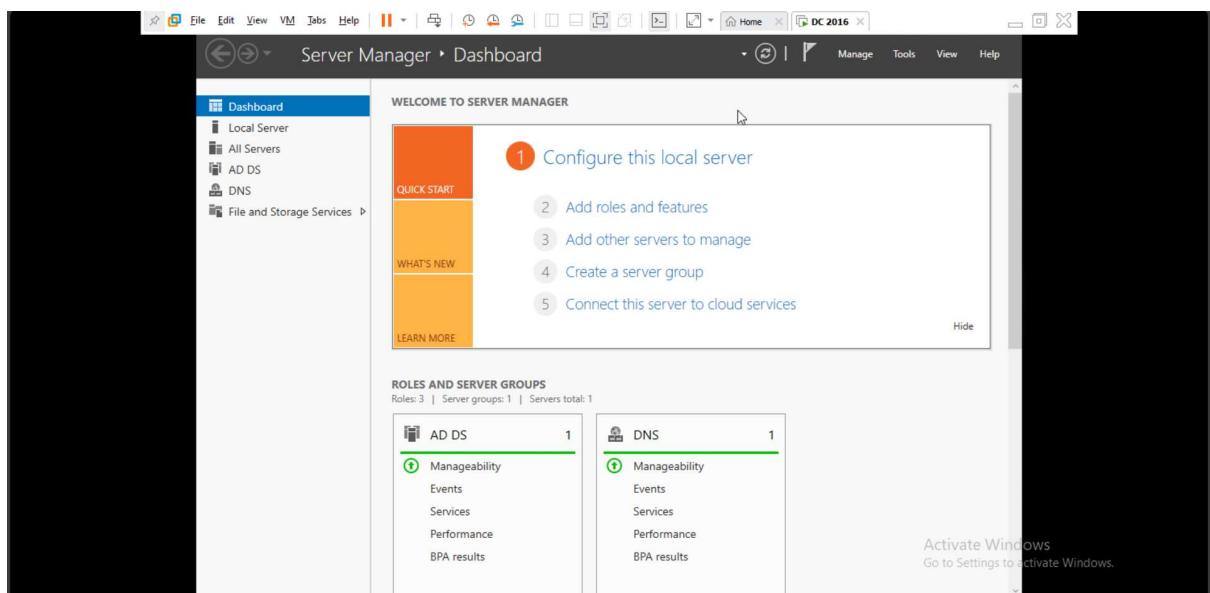
The installation will run some checks. If you get all prerequisite check passes successfully message, click **Install** to start Active Directory setup. The server will reboot automatically after installation.



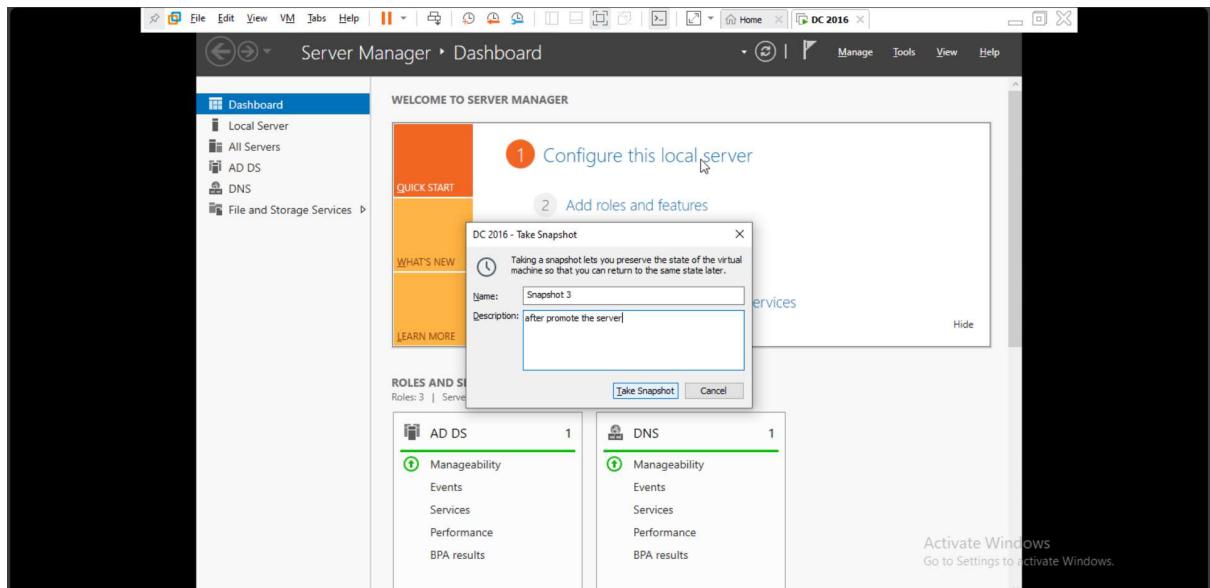
Once the server reboots, you will see **NetBIOS Domain Name\administrator** as your login name. The local administrator account have now turned into Domain Administrator account.



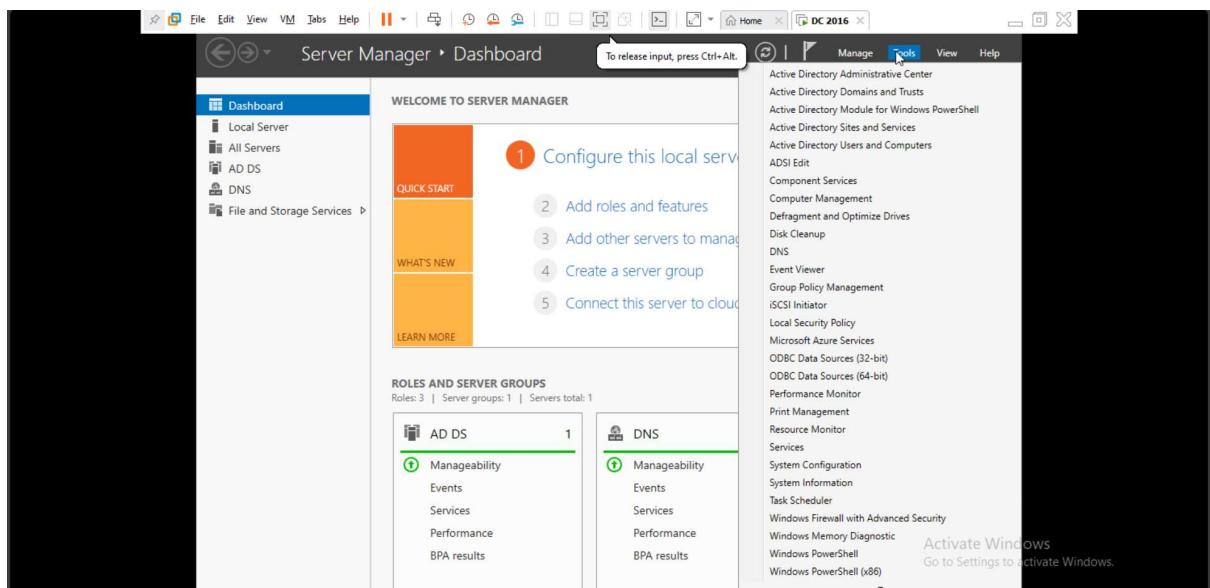
Now ADDS and DNS entries on the dashboard page.



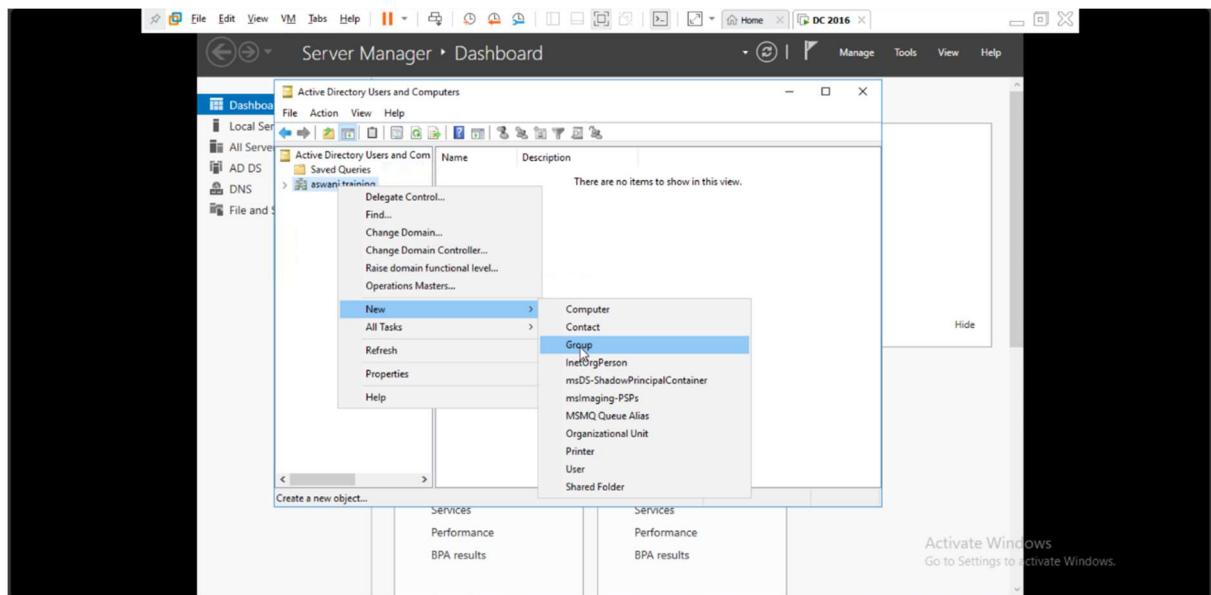
Take a snapshot after the promote server installation.



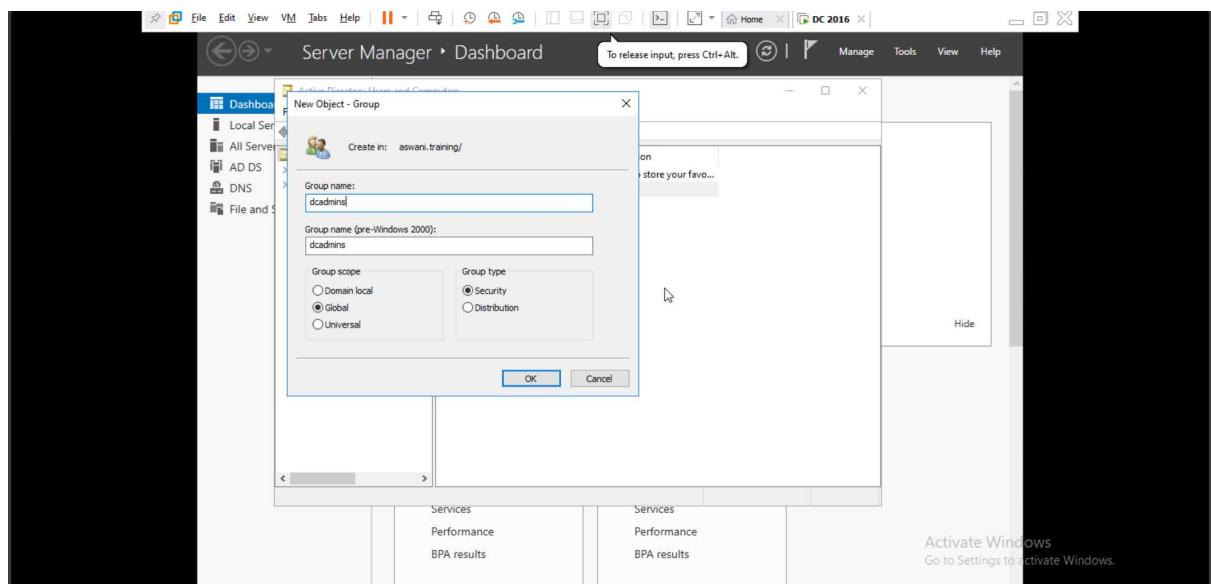
Click on "Manage" and then "Add Roles and Features" and Select "Active Directory Domain Services" as the role to install.



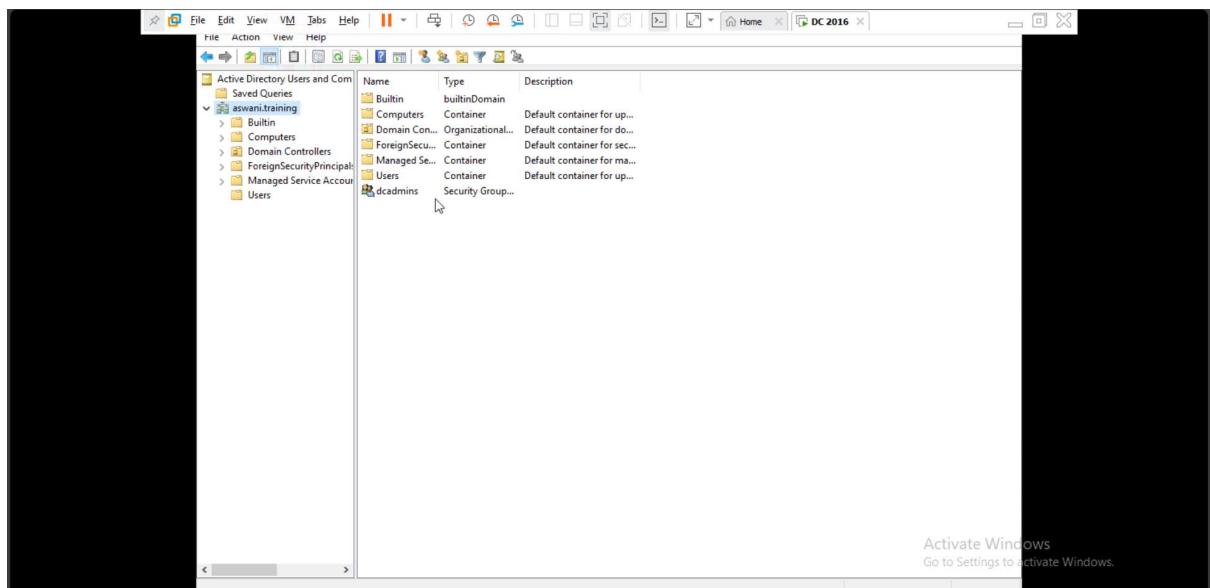
Create a new group.



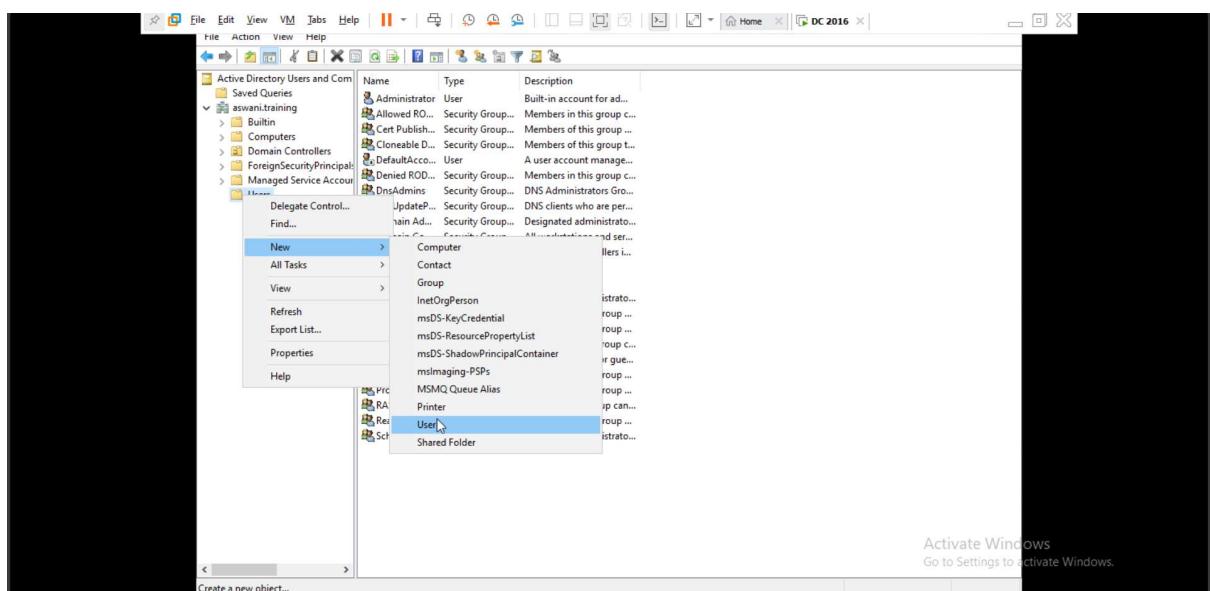
Group name set as "dcadmins"



The Group is created here



Create 2 users with basic details and password



**Create in:** aswan.training/Users

First name: anoop Initials:

Last name:

Full name: anoop

User logon name: anoop @aswan.training

User logon name (pre-Windows 2000): ASWAN\anoop

< Back Next > Cancel

Members of this group ...

- Enterprise R... Security Group... Members of this group ...
- Group Polic... Security Group... Members in this group ...
- Guest User Built-in account for gue...
- Key Admins Security Group... Members of this group ...
- Protected Us... Security Group... Members of this group ...
- RAS and IAS ... Security Group... Servers in this group can...
- Read-only D... Security Group... Members of this group ...
- Schema Ad... Security Group... Designated administrato...

Activate Windows  
Go to Settings to activate Windows.

**Create in:** aswan.training/Users

Password:  Confirm password:

User must change password at next logon

User cannot change password

Password never expires

Account is disabled

< Back Next > Cancel

Members of this group ...

- Enterprise R... Security Group... Members of this group ...
- Group Polic... Security Group... Members in this group ...
- Guest User Built-in account for gue...
- Key Admins Security Group... Members of this group ...
- Protected Us... Security Group... Members of this group ...
- RAS and IAS ... Security Group... Servers in this group can...
- Read-only D... Security Group... Members of this group ...
- Schema Ad... Security Group... Designated administrato...

Activate Windows  
Go to Settings to activate Windows.

**Create in:** aswan.training/Users

When you click **Finish**, the following object will be created.

Full name: anoop  
User logon name: anoop@aswan.training  
The password never expires.

< Back Finish > Cancel

Members of this group ...

- Enterprise R... Security Group... Members of this group ...
- Group Polic... Security Group... Members in this group ...
- Guest User Built-in account for gue...
- Key Admins Security Group... Members of this group ...
- Protected Us... Security Group... Members of this group ...
- RAS and IAS ... Security Group... Servers in this group can...
- Read-only D... Security Group... Members of this group ...
- Schema Ad... Security Group... Designated administrato...

Activate Windows  
Go to Settings to activate Windows.

2 users are created

The screenshot shows the Windows Server 2016 Active Directory Users and Computers console. The left navigation pane shows the tree structure: Active Directory Users and Computers, Saved Queries, aswani.training (selected), Builtin, Computers, Domain Controllers, ForeignSecurityPrincipals, Managed Service Accounts, and Users. The main pane displays a list of objects with columns for Name, Type, and Description. Two new users are listed: "anoop" (User) and "shiva priya" (User). A status bar at the bottom right says "Activate Windows Go to Settings to activate Windows."

Add two users into the "dadmins" the group

The screenshot shows the Windows Server 2016 Active Directory Users and Computers console. The left navigation pane shows the tree structure. The "dadmins" group under the "Users" container is selected. A context menu is open over the "dadmins" group, with the "Properties" option highlighted. A status bar at the bottom right says "Activate Windows Go to Settings to activate Windows."

The screenshot shows the Windows Active Directory Users and Computers management console. A context menu is open over a user object named 'dcadmins'. A 'Select Users, Contacts, Computers, Service Accounts, or Groups' dialog box is displayed, prompting the user to enter object names. The input field contains 'shiva priya (shiva@aswani.training)'. The 'OK' button is highlighted with a blue border.

Active Directory Users and Computers

| Name           | Type              | Description                 |
|----------------|-------------------|-----------------------------|
| Builtin        | builtinDomain     |                             |
| Computers      | Container         | Default container for up... |
| Domain Con...  | Organizational... | Default container for do... |
| ForeignSecu... | Conta             |                             |
| Managed Se...  | Conta             |                             |
| Users          | Conta             |                             |
| dcadmins       | Conta             |                             |

dcadmins Properties

Select Users, Contacts, Computers, Service Accounts, or Groups

Select this object type:  
Users, Service Accounts, Groups, or Other objects

From this location:  
aswani.training

Enter the object names to select (examples):  
shiva priya (shiva@aswani.training)

Advanced...

Add... Remove

Activate Windows  
Go to Settings to activate Windows.

12:58 04-05-2024

This screenshot is identical to the one above, showing the Active Directory Users and Computers interface and the 'Select Users, Contacts, Computers, Service Accounts, or Groups' dialog box. The 'OK' button is again highlighted with a blue border.

Active Directory Users and Computers

| Name           | Type              | Description                 |
|----------------|-------------------|-----------------------------|
| Builtin        | builtinDomain     |                             |
| Computers      | Container         | Default container for up... |
| Domain Con...  | Organizational... | Default container for do... |
| ForeignSecu... | Conta             |                             |
| Managed Se...  | Conta             |                             |
| Users          | Conta             |                             |
| dcadmins       | Conta             |                             |

dcadmins Properties

Select Users, Contacts, Computers, Service Accounts, or Groups

Select this object type:  
Users, Service Accounts, Groups, or Other objects

From this location:  
aswani.training

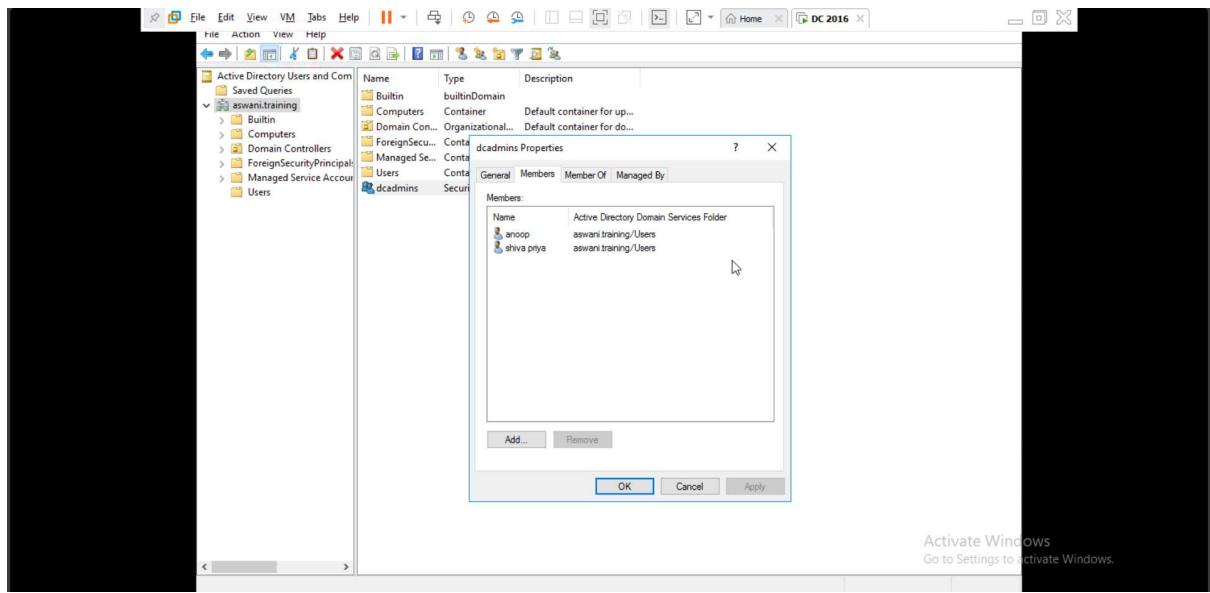
Enter the object names to select (examples):  
shiva priya (shiva@aswani.training)

Advanced...

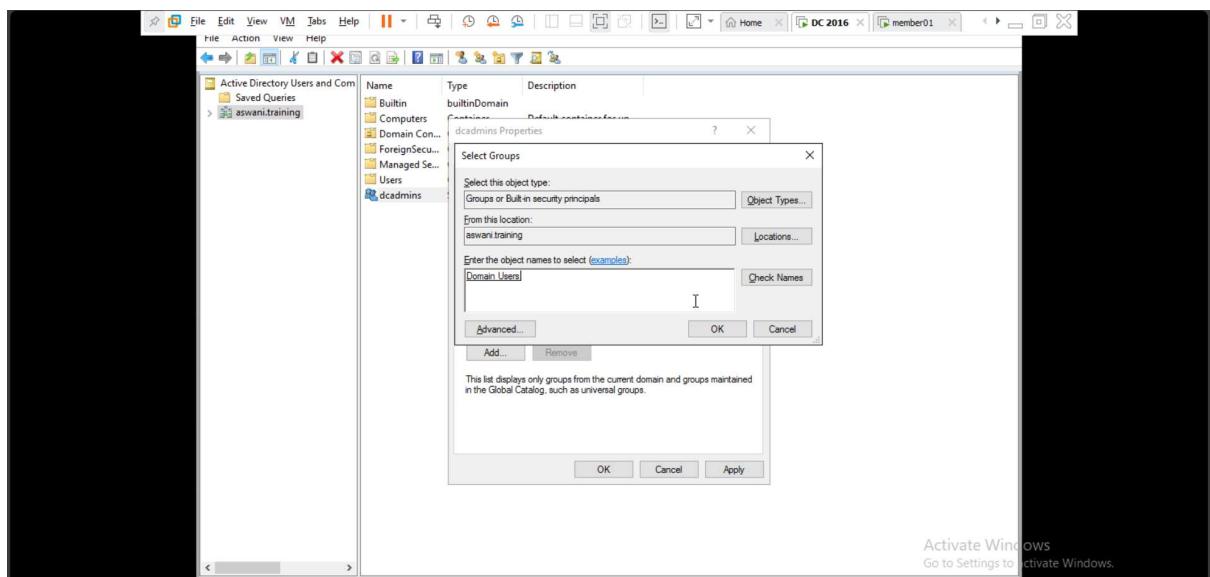
Add... Remove

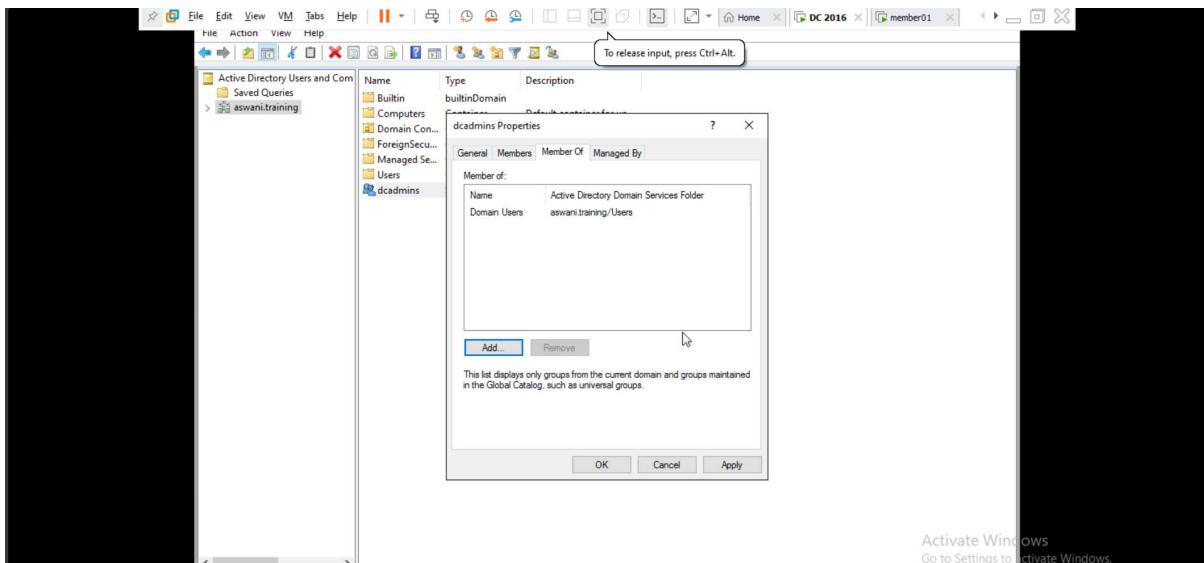
Activate Windows  
Go to Settings to activate Windows.

12:58 04-05-2024

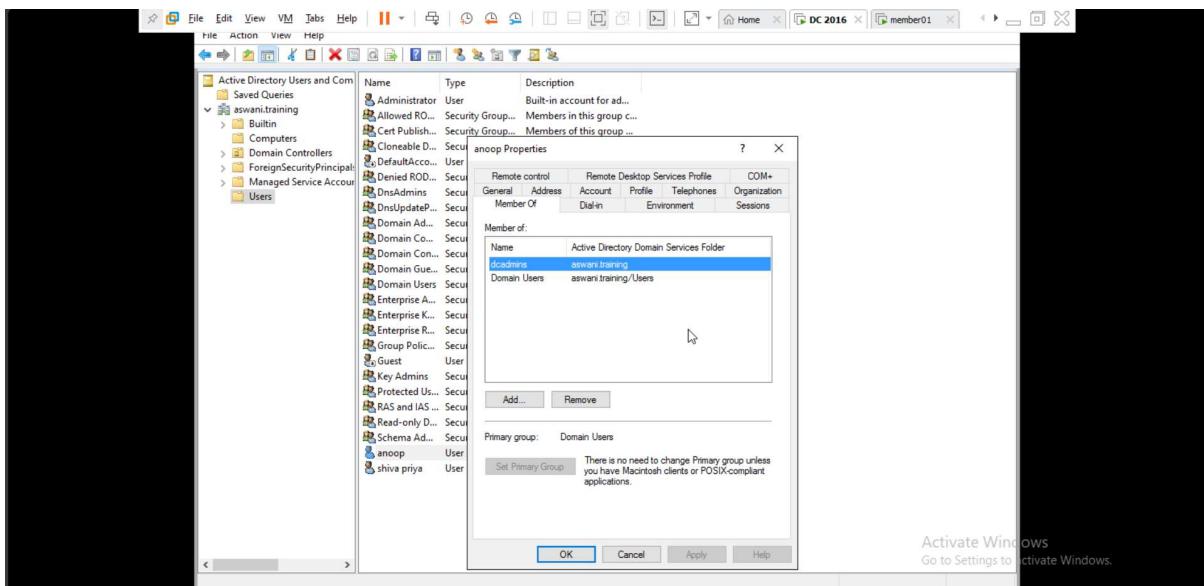


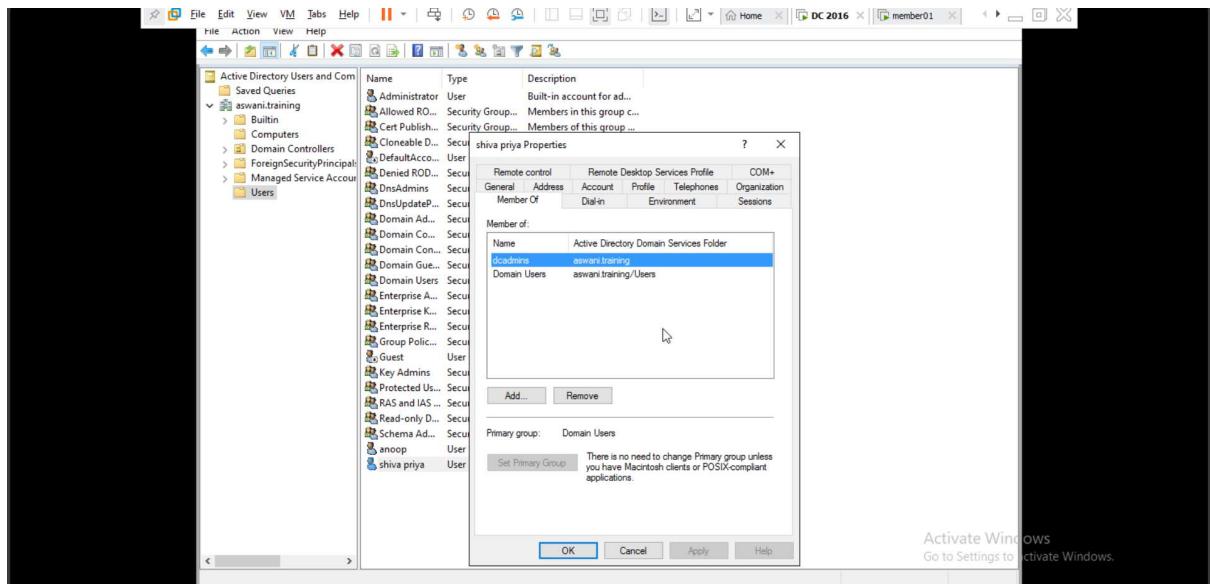
Now set as “Domain Users” as member of “dcadmins” group.



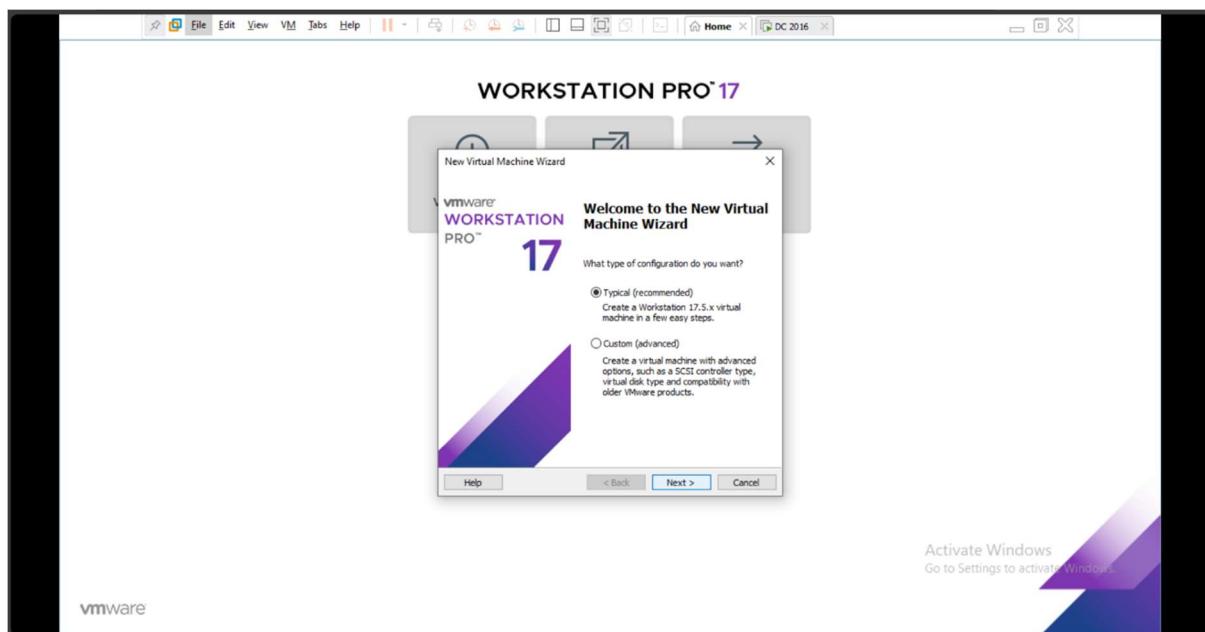


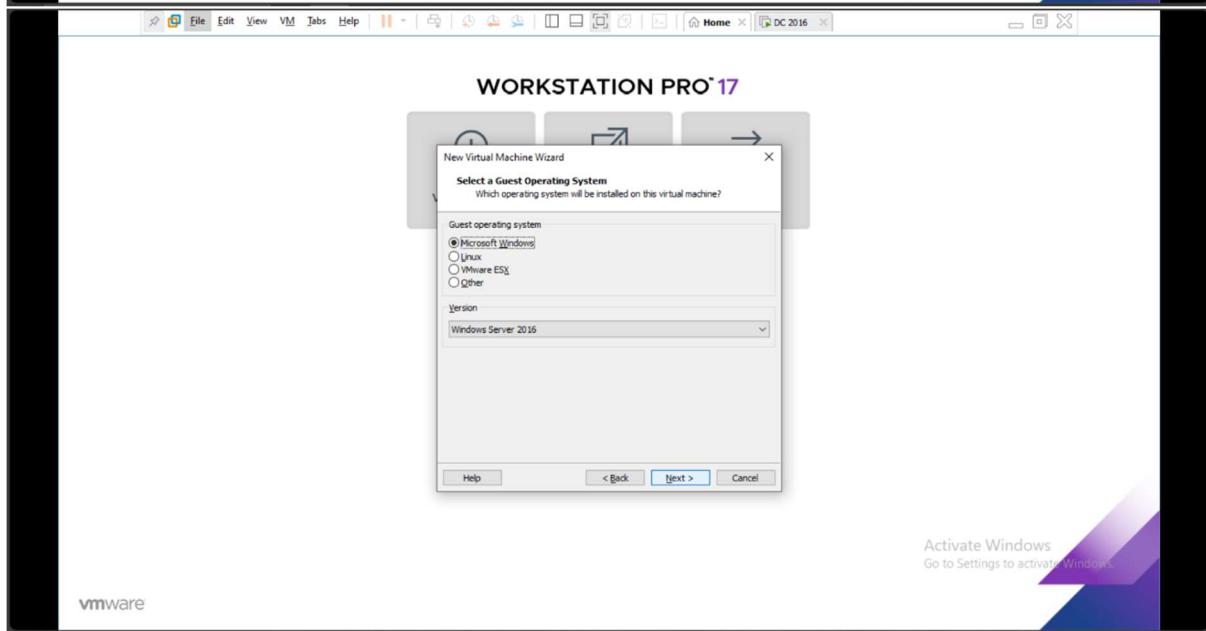
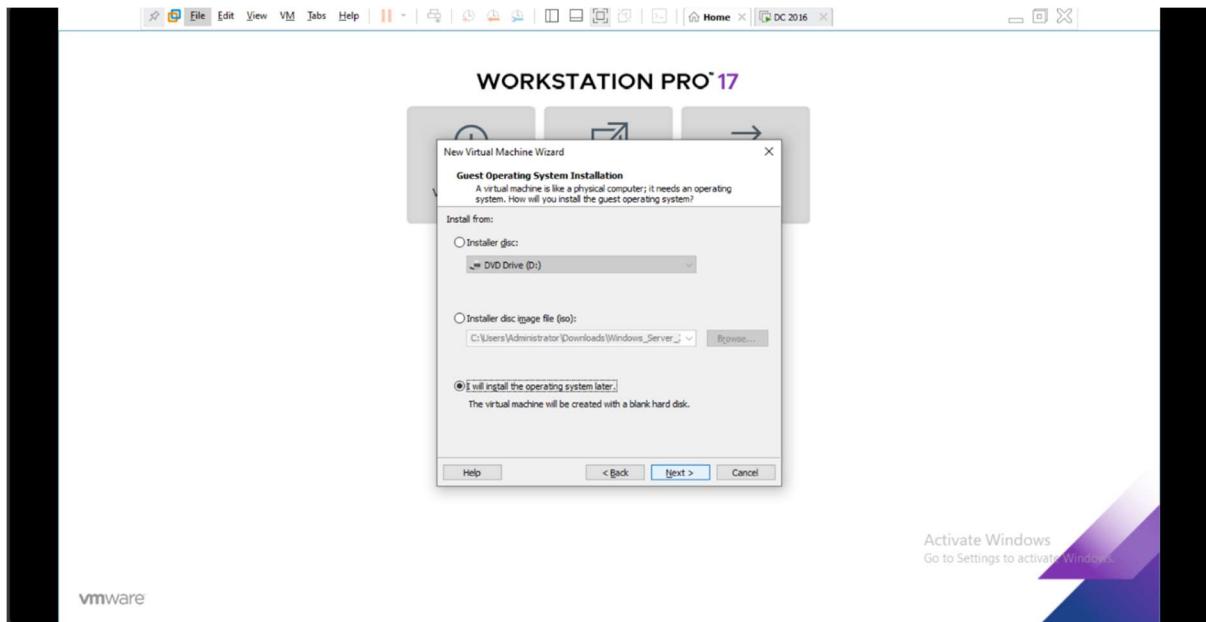
Now both users are member of “dadmins” group and Domain users.

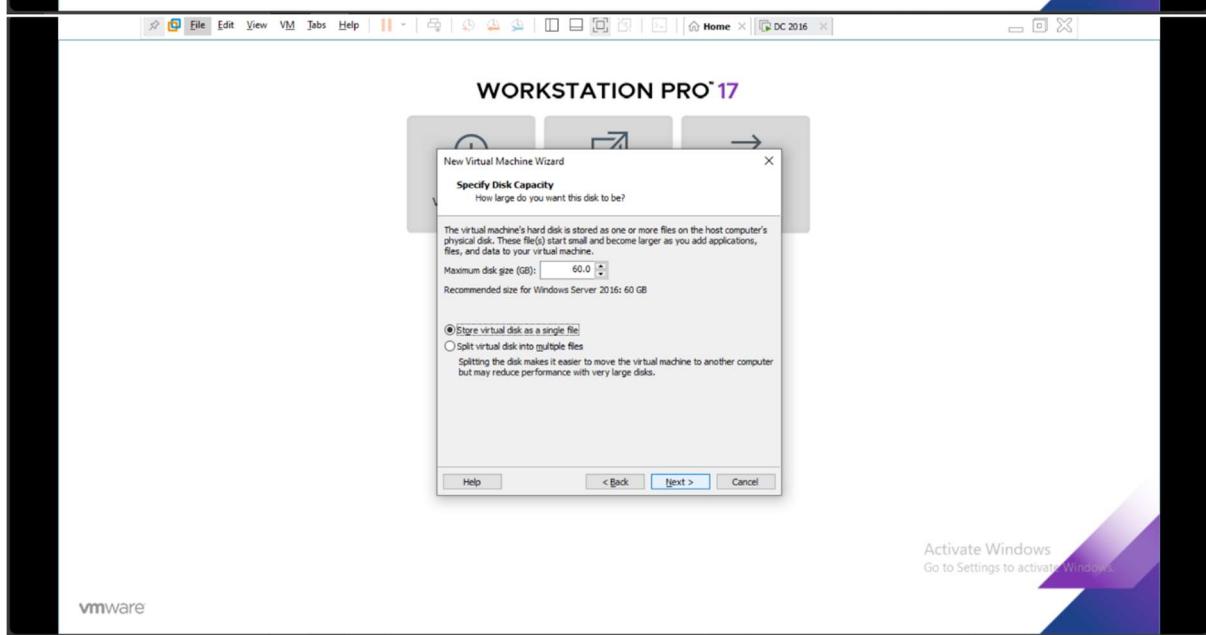
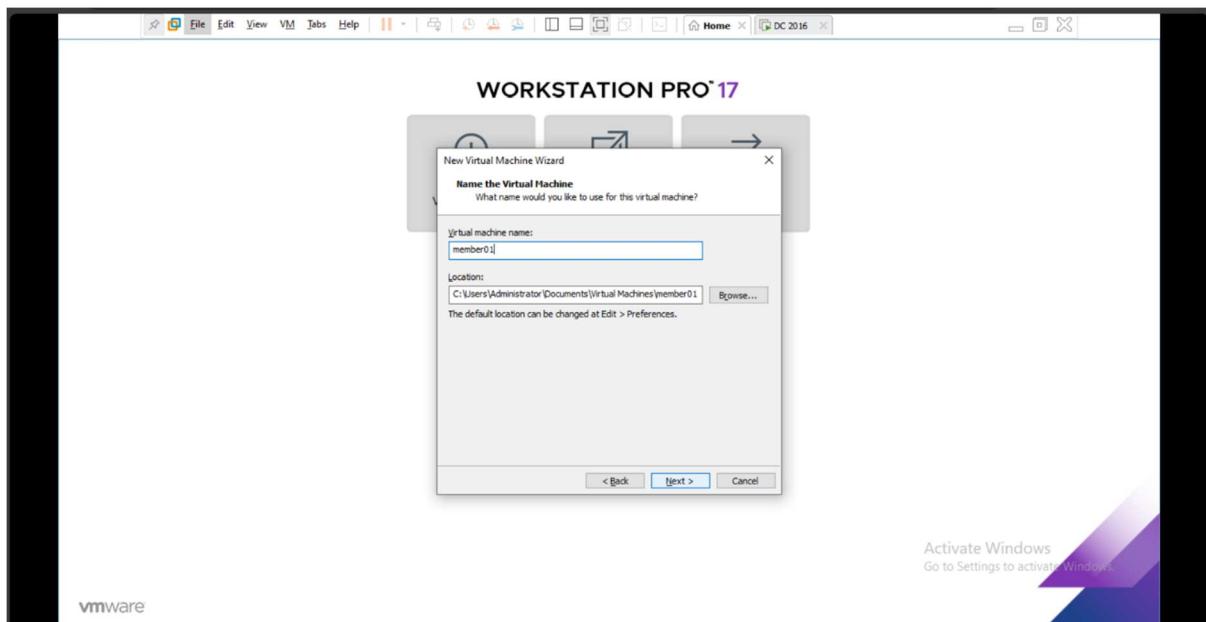




Install member01 server machine

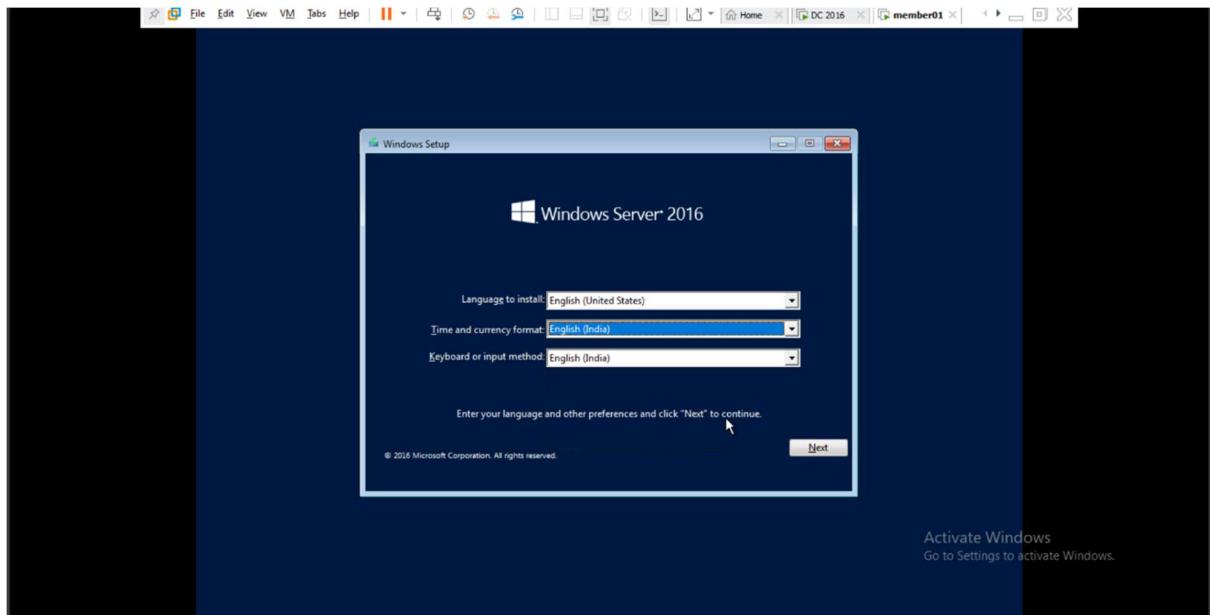




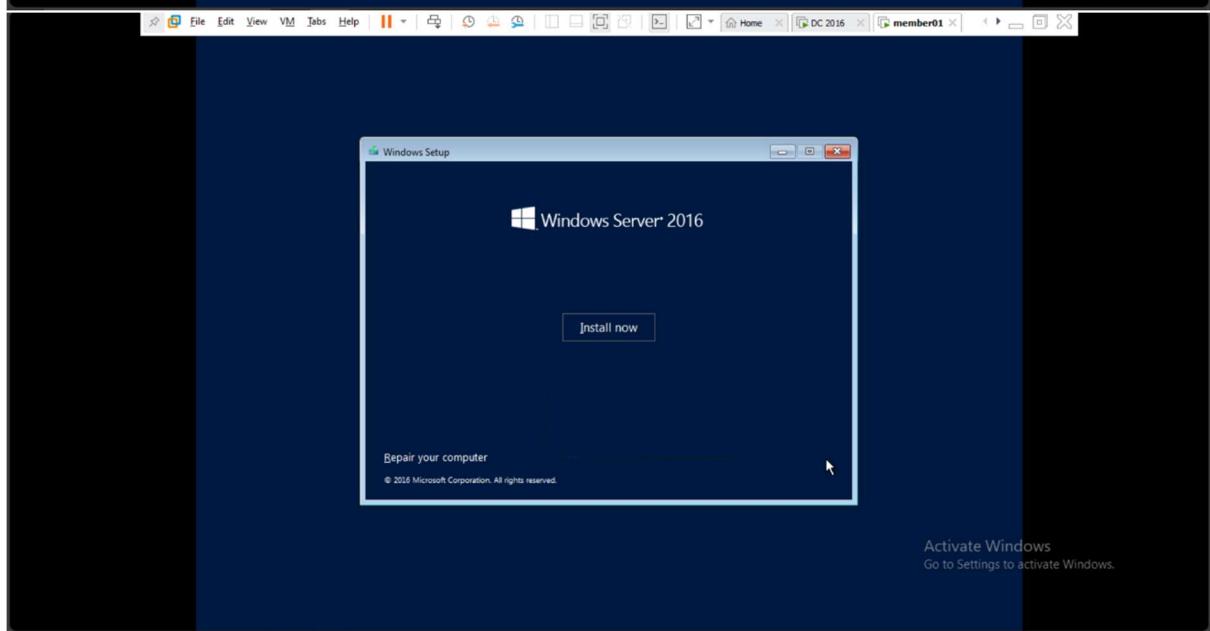


The screenshot shows the VMware Workstation interface with two main windows open:

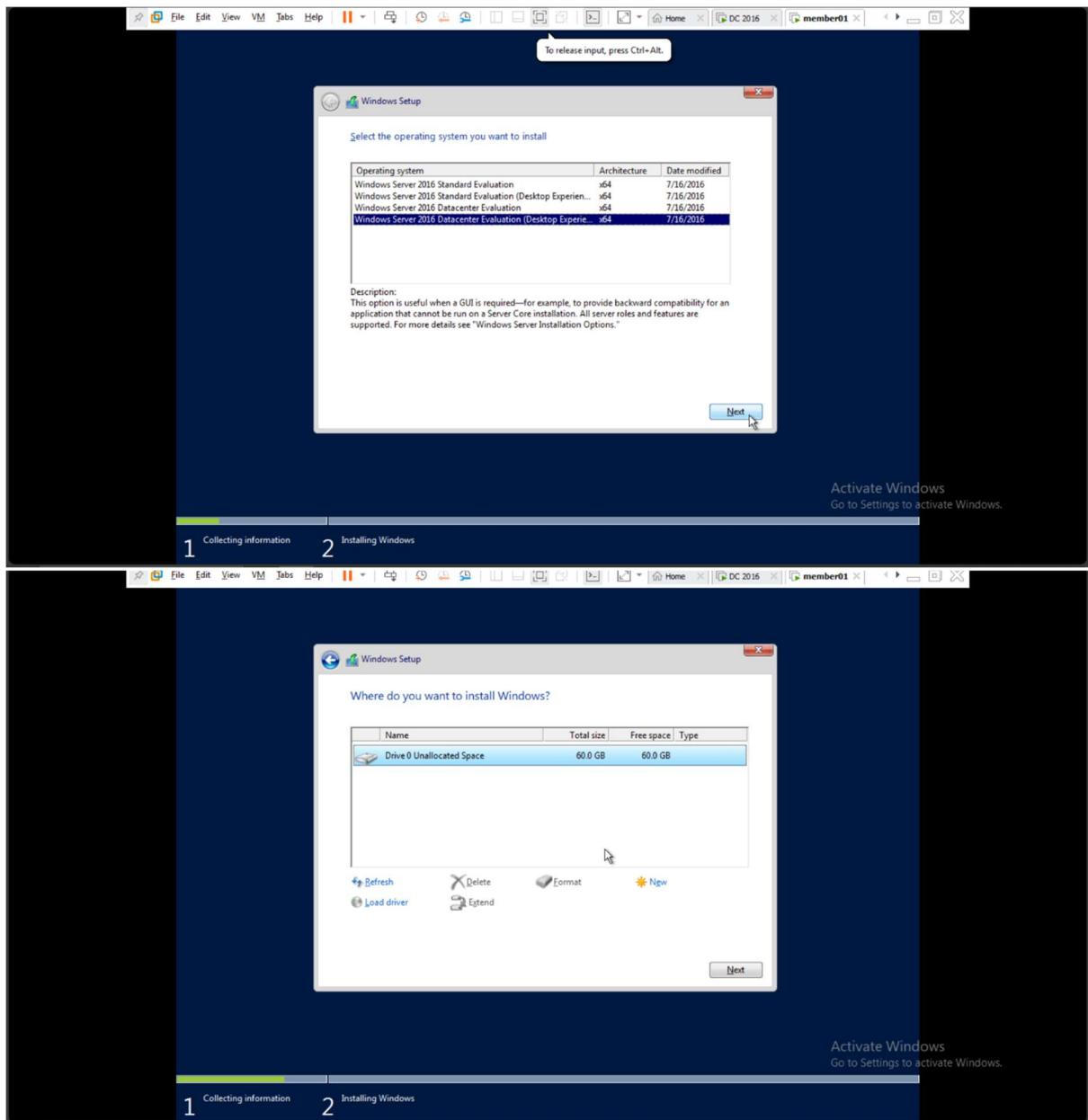
- Hardware Configuration Window:** This window is titled "Hardware" and is used for configuring network adapter settings. It lists various hardware components:
  - Device: Memory (2 GB), Processors (2), New CD/DVD (SATA) (Using file C:/Users/Administr..., Network Adapter (NAT), USB Controller (Present), Sound Card (Auto detect), Display (Auto detect).
- Network Adapter Configuration:** This section shows the "Device status" and "Network connection" settings for the selected network adapter.
  - Device status:** Connected, Connect at power on.
  - Network connection:** LAN segment: VMnet0 (Auto-bridging), LAN Segment: [iproute-network].
- Virtual Machine Details:** Shows the state as "Powered off", configuration file as "C:/Users/Administrator/Documents/Virtual Machines/member01/member01.vmx", hardware compatibility as "Workstation 17.5x virtual machine", and primary IP address as "Network information is not available".
- Activation Prompt:** A watermark-like message in the bottom right corner reads "Activate Windows Go to Settings to activate Windows."

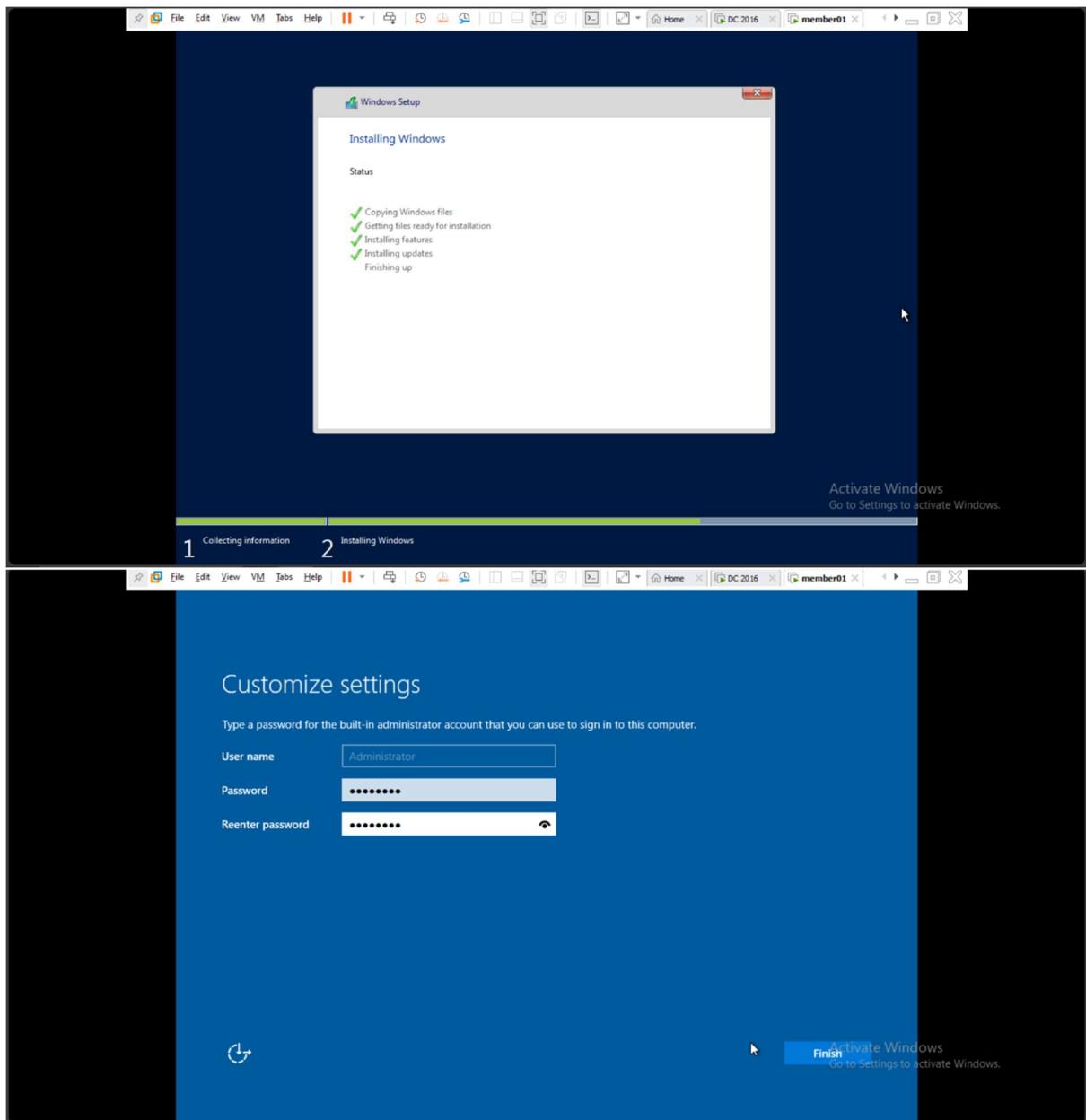


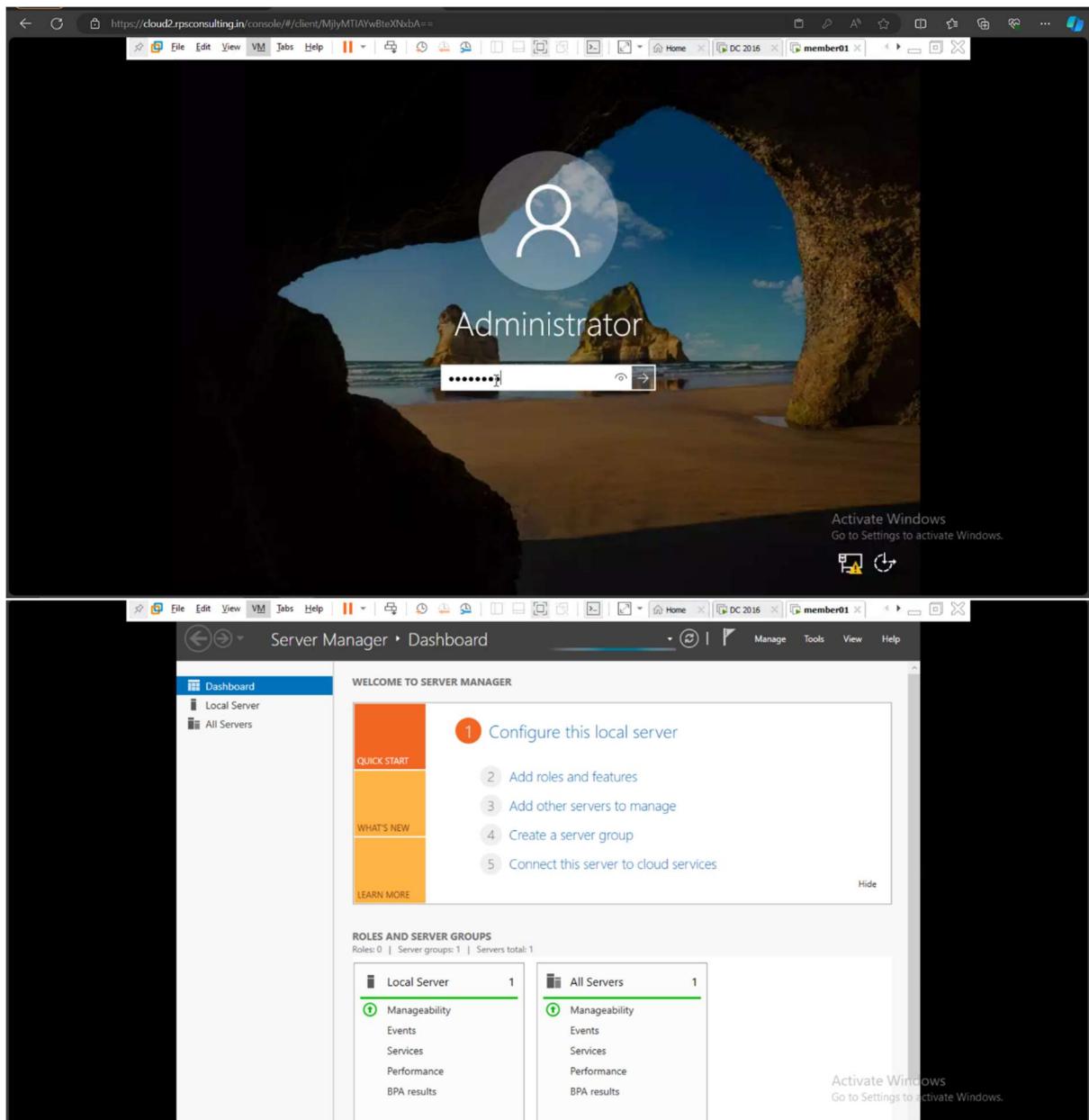
Activate Windows  
Go to Settings to activate Windows.

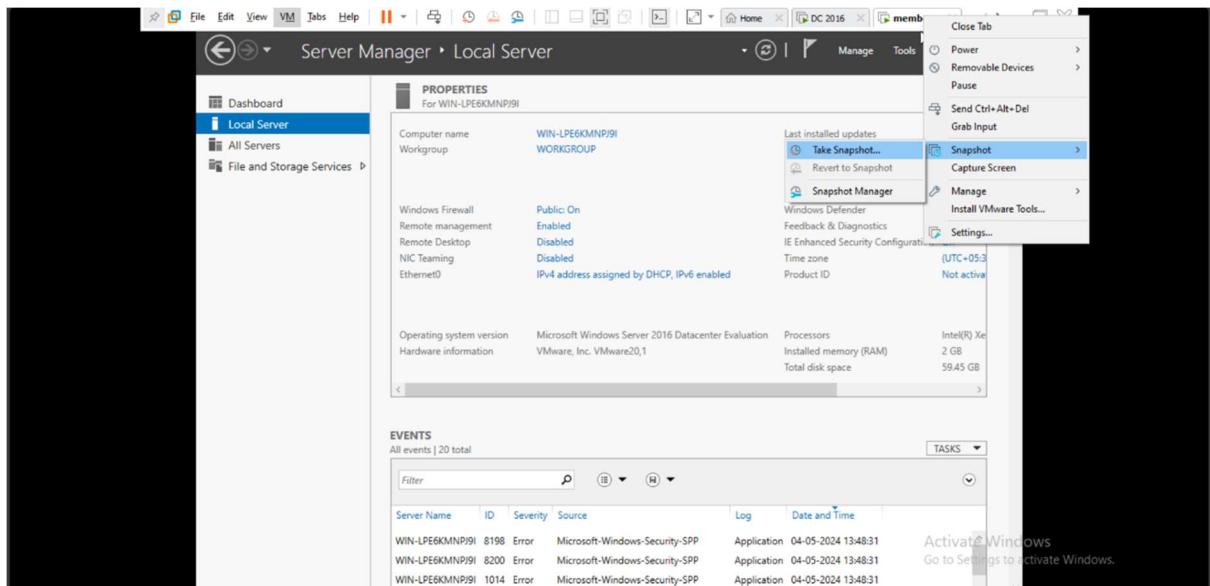


Activate Windows  
Go to Settings to activate Windows.

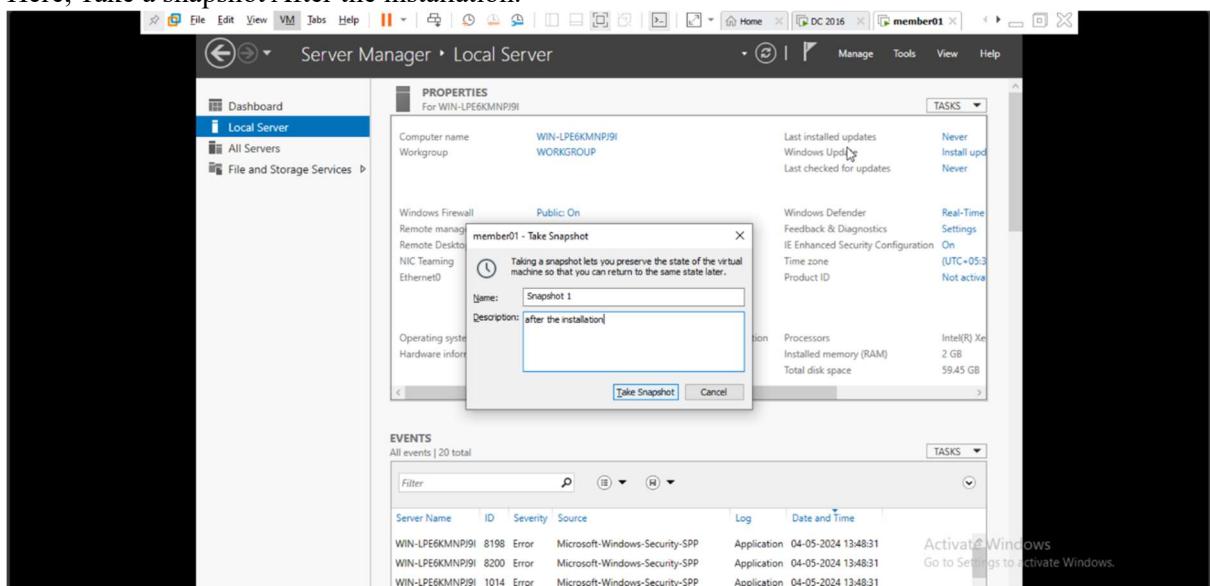




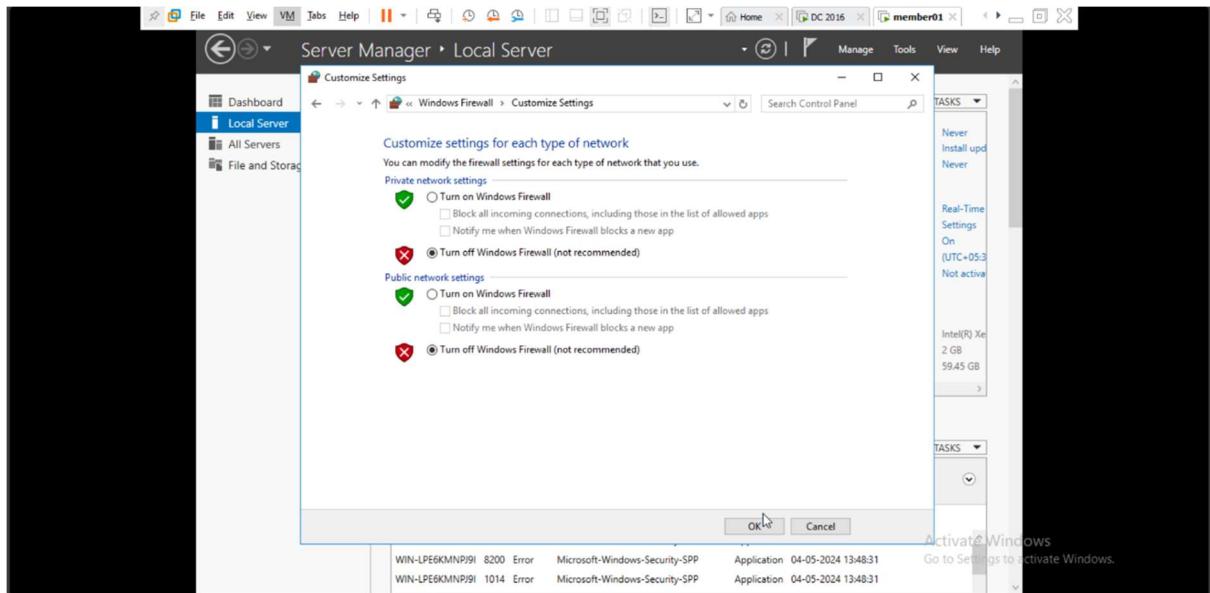




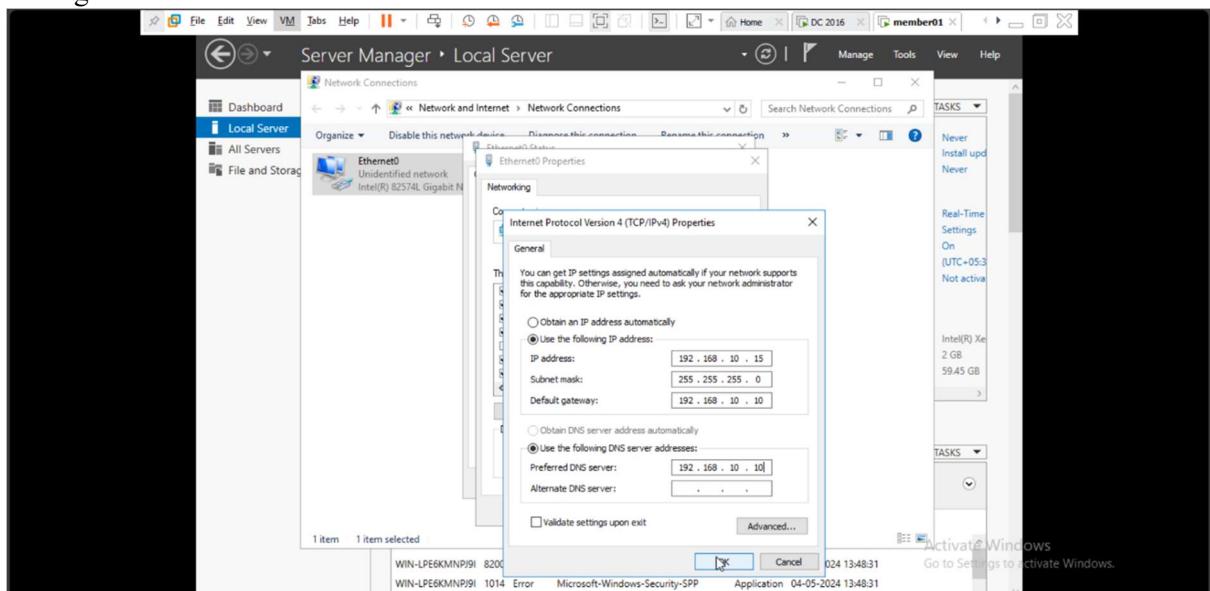
Here, Take a snapshot After the installation.



Turn off the firewall



Configure the IP address.



**Internet Explorer Enhanced Security Configuration**

Internet Explorer Enhanced Security Configuration (IE ESC) reduces the exposure of your server to potential attacks from Web-based content. Internet Explorer Enhanced Security Configuration is enabled by default for Administrators and Users groups.

**Administrators:**

- On (Recommended)
- Off

**Users:**

- On (Recommended)
- Off

[More about Internet Explorer Enhanced Security Configuration](#)

**Events**

| Server Name     | ID   | Severity | Source                         | Log         | Date and Time       |
|-----------------|------|----------|--------------------------------|-------------|---------------------|
| WIN-LPE6KMNPI9I | 8198 | Error    | Microsoft-Windows-Security-SPP | Application | 04-05-2024 13:48:31 |
| WIN-LPE6KMNPI9I | 8200 | Error    | Microsoft-Windows-Security-SPP | Application | 04-05-2024 13:48:31 |
| WIN-LPE6KMNPI9I | 1014 | Error    | Microsoft-Windows-Security-SPP | Application | 04-05-2024 13:48:31 |

**Properties**

For WIN-LPE6KMNPI9I

**Computer name:** WIN-LPE6KMNPI9I  
**Workgroup:** WORKGROUP

**Windows Firewall:** Private: Off  
**Remote management:** Enabled  
**Remote Desktop:** Disabled  
**NIC Teaming:** Disabled  
**Ethernet0:** 192.168.10.15; IPv6 enabled

**Operating system version:** Microsoft Windows Server 2016 Datacenter Evaluation  
**Hardware information:** VMware, Inc. VMware20.1

**Windows Defender:** Real-Time Protection: On  
**Feedback & Diagnostics:** Settings  
**IE Enhanced Security Configuration:** Off  
**Time zone:** (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi  
**Product ID:** Not activated

**Processors:** Intel(R) Xeon(R) CPU E5-2680 v3 @ 2.50GHz  
**Installed memory (RAM):** 2 GB  
**Total disk space:** 59.45 GB

**Events**

| Server Name     | ID   | Severity | Source                              | Log    | Date and Time       |
|-----------------|------|----------|-------------------------------------|--------|---------------------|
| WIN-LPE6KMNPI9I | 134  | Warning  | Microsoft-Windows-Time-Service      | System | 04-05-2024 14:08:01 |
| WIN-LPE6KMNPI9I | 134  | Warning  | Microsoft-Windows-Time-Service      | System | 04-05-2024 14:07:49 |
| WIN-LPE6KMNPI9I | 1014 | Warning  | Microsoft-Windows-DNS Client Events | System | 04-05-2024 14:07:49 |

**Activate Windows**

Go to Settings to activate Windows.

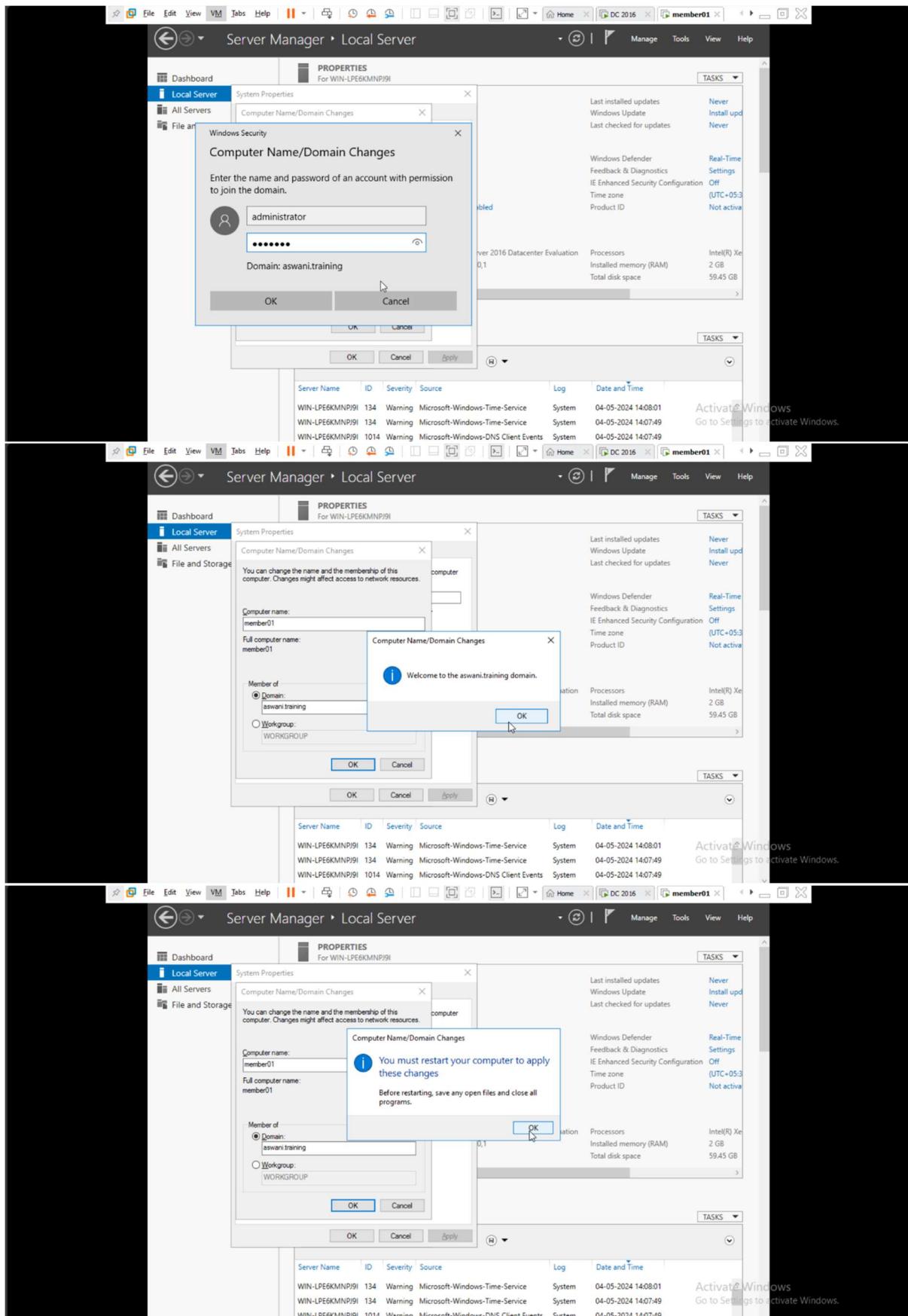
## Domain Joining

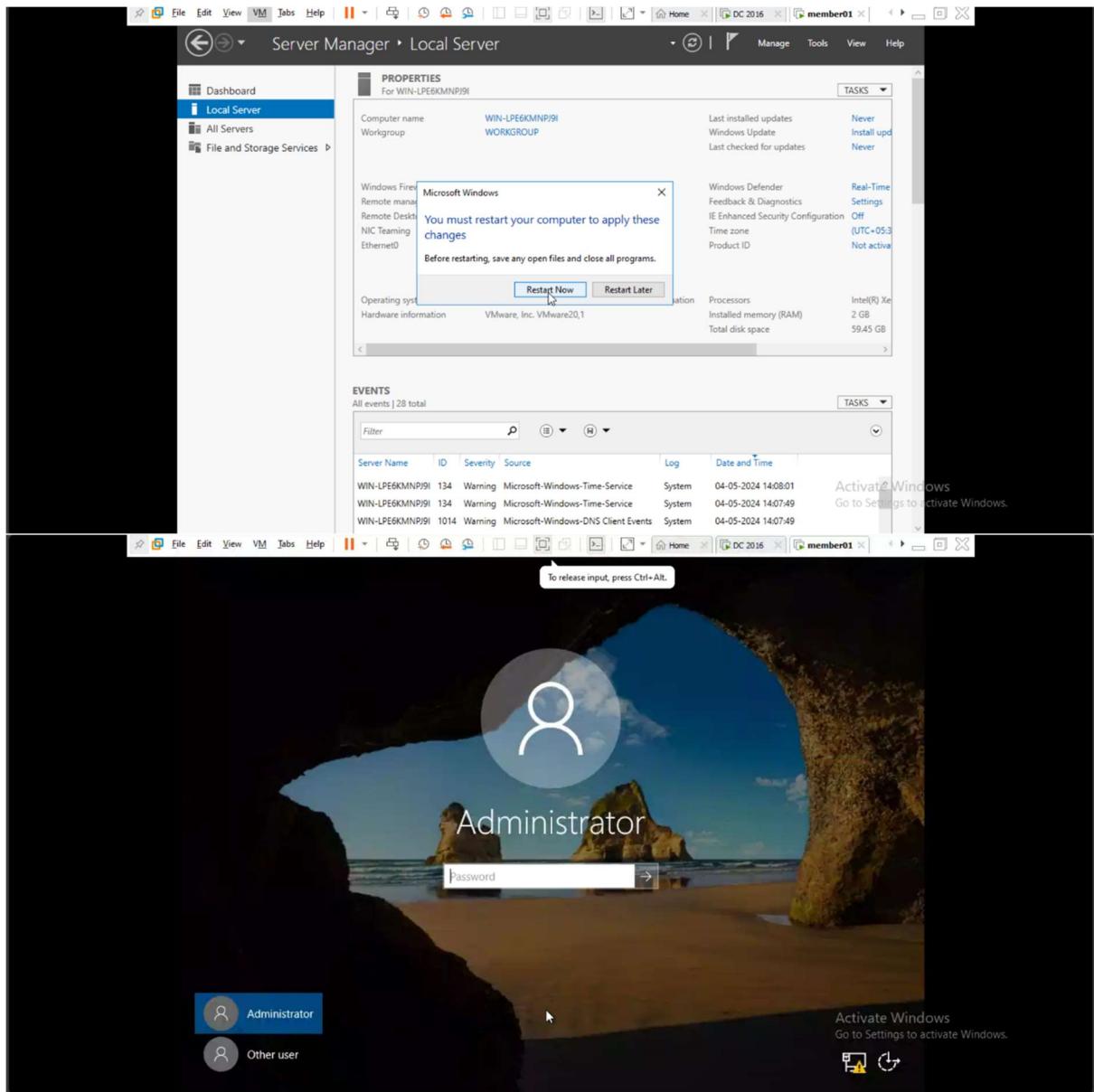
The image consists of three vertically stacked screenshots of the Windows Server Manager interface, specifically for a local server.

**Screenshot 1:** Shows the "Local Server" properties. The "Computer name" is set to "WIN-LPE6KMNPI9I" and the "Workgroup" is set to "WORKGROUP". The "Operating system version" is listed as "Microsoft Windows Server 2016 Datacenter Evaluation". The "Processor" is "Intel(R) Xeon". The "Installed memory (RAM)" is "2 GB" and the "Total disk space" is "59.45 GB". The "Windows Firewall" is set to "Off". The "Windows Update" status is "Never".

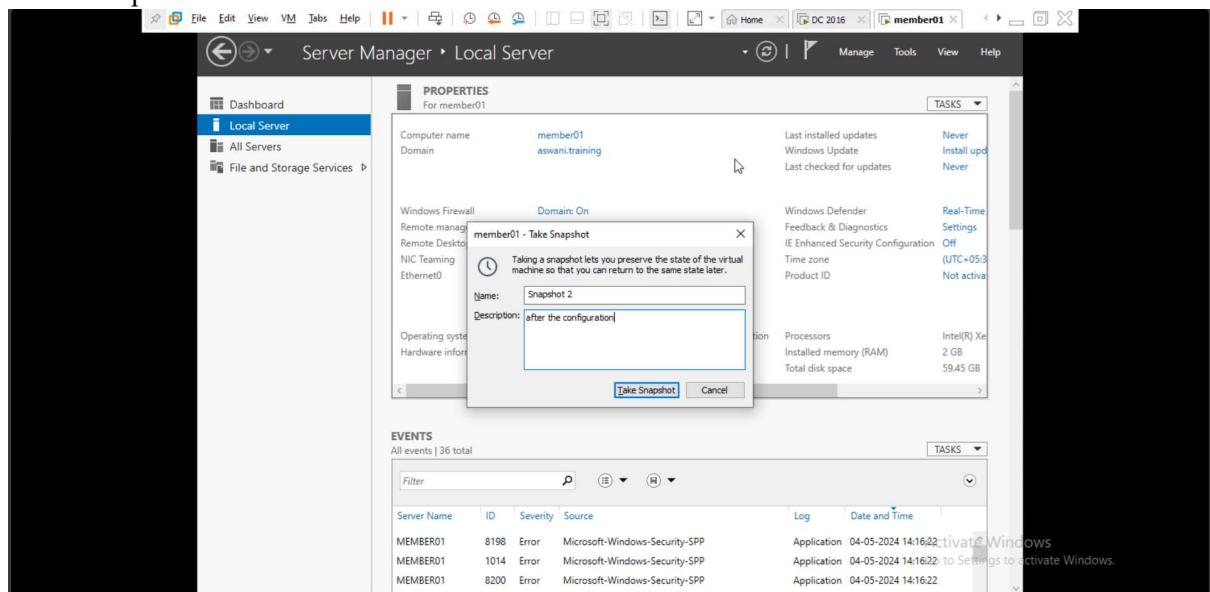
**Screenshot 2:** Shows the "System Properties" dialog box. The "Computer Name" tab is selected. The "Computer name" field contains "WIN-LPE6KMNPI9I" and the "Workgroup" field contains "WORKGROUP". A note says "Windows uses the following information to identify your computer on the network." The "OK" button is highlighted.

**Screenshot 3:** Shows the "System Properties" dialog box again, but this time the "Computer Name/Domain Changes" tab is selected. It shows the "Computer name" is "member01", "Full computer name" is "member01", and "Member of" is set to "Domain: aswan-training". The "OK" button is highlighted.

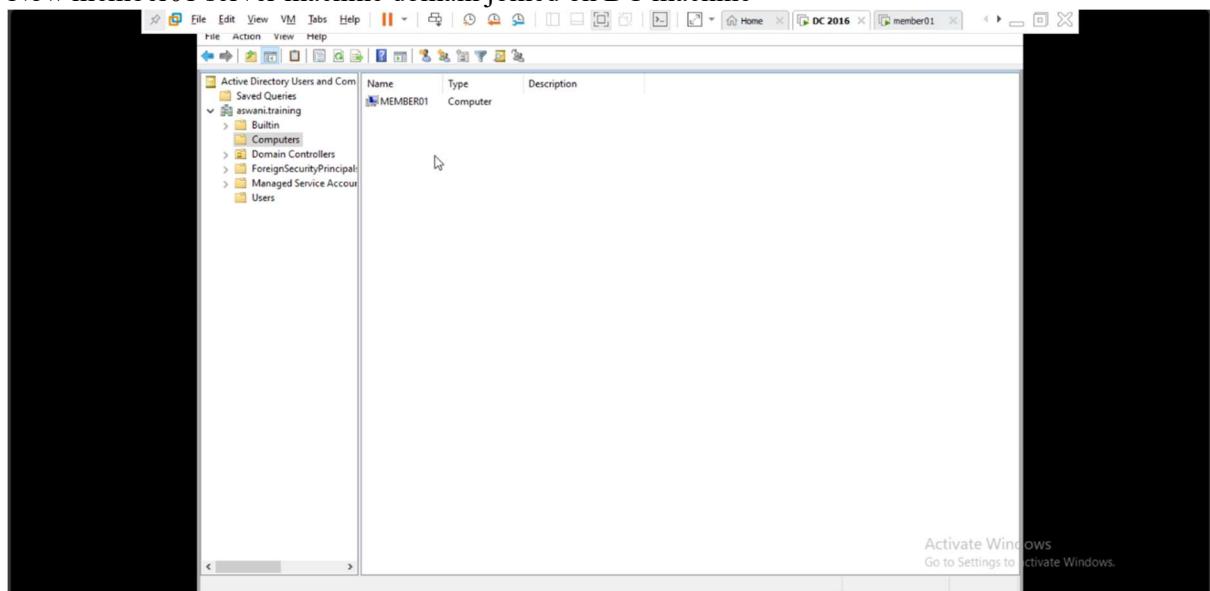




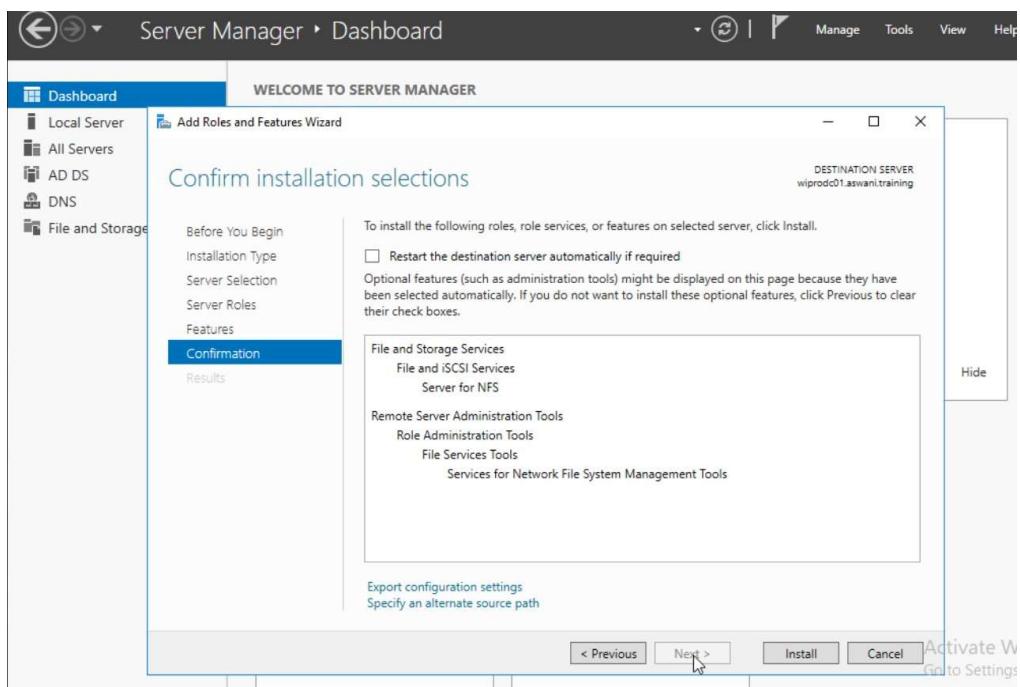
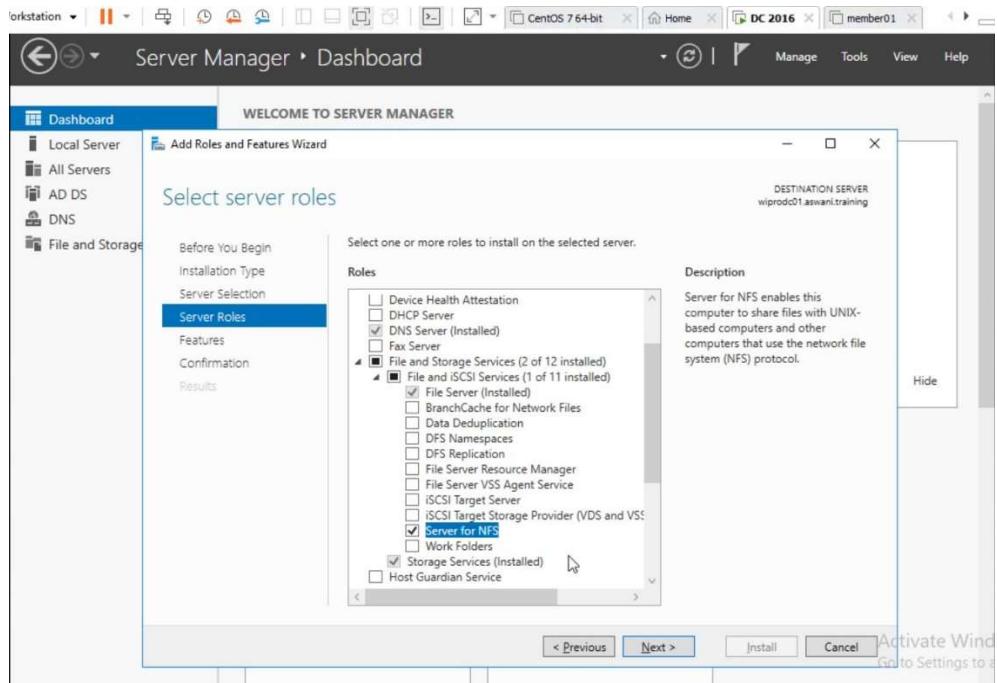
Take a snapshot here

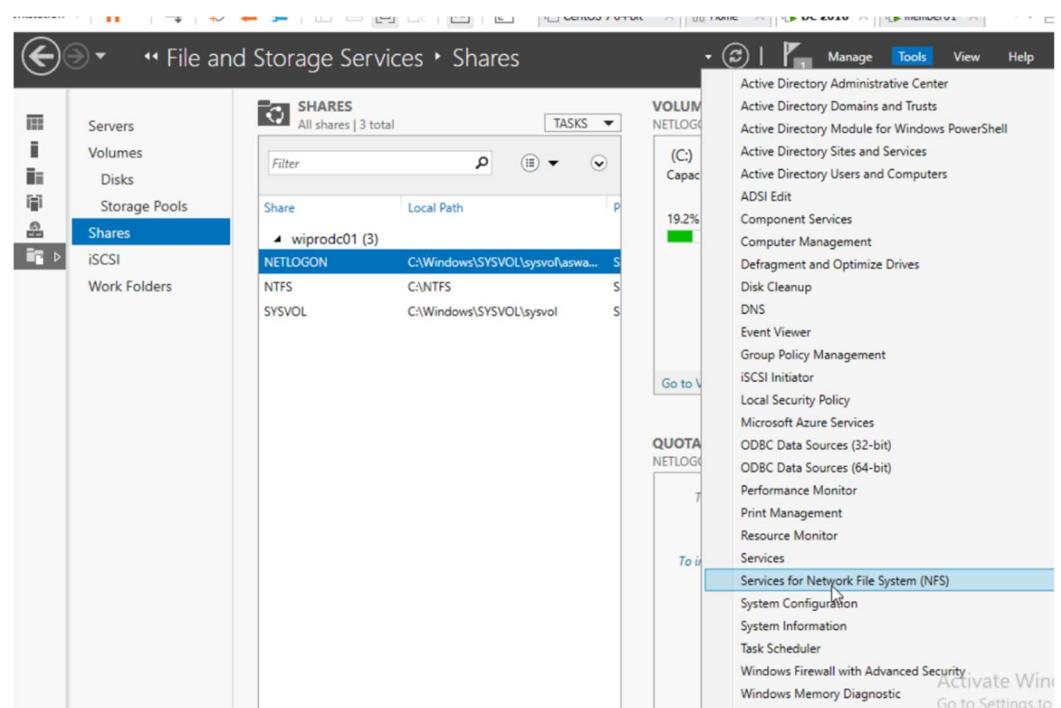
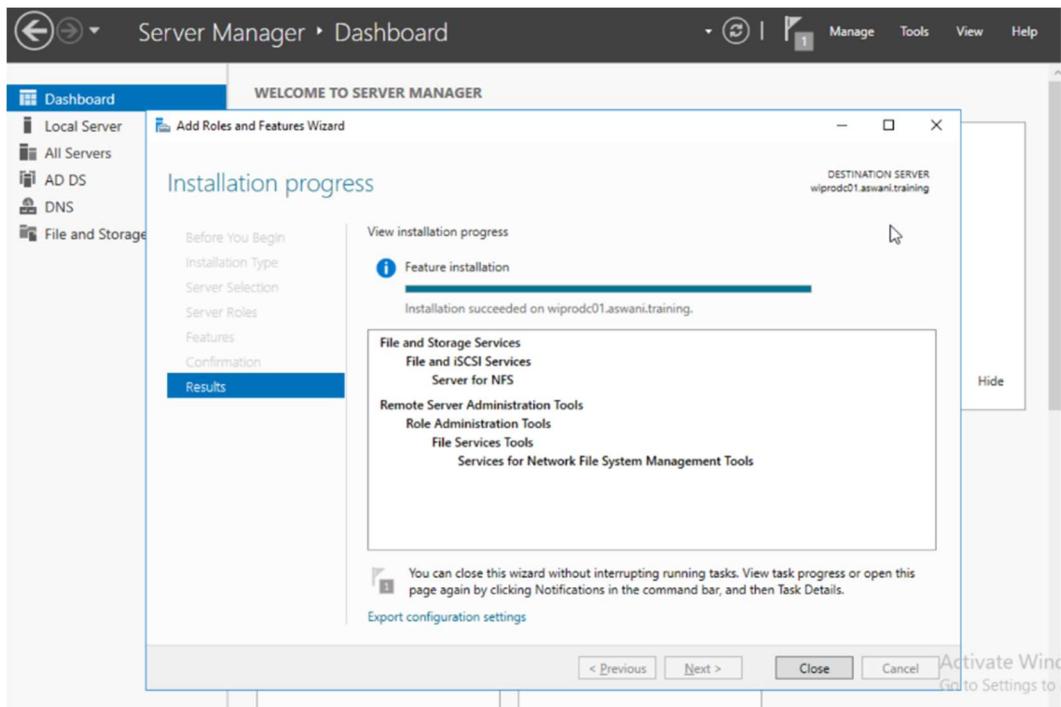


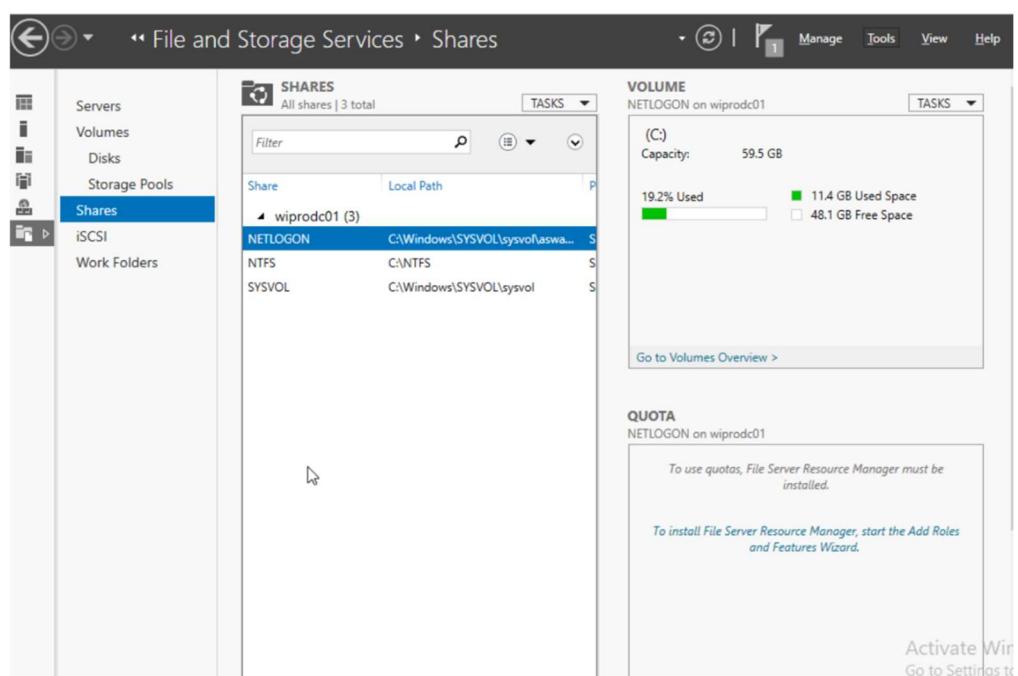
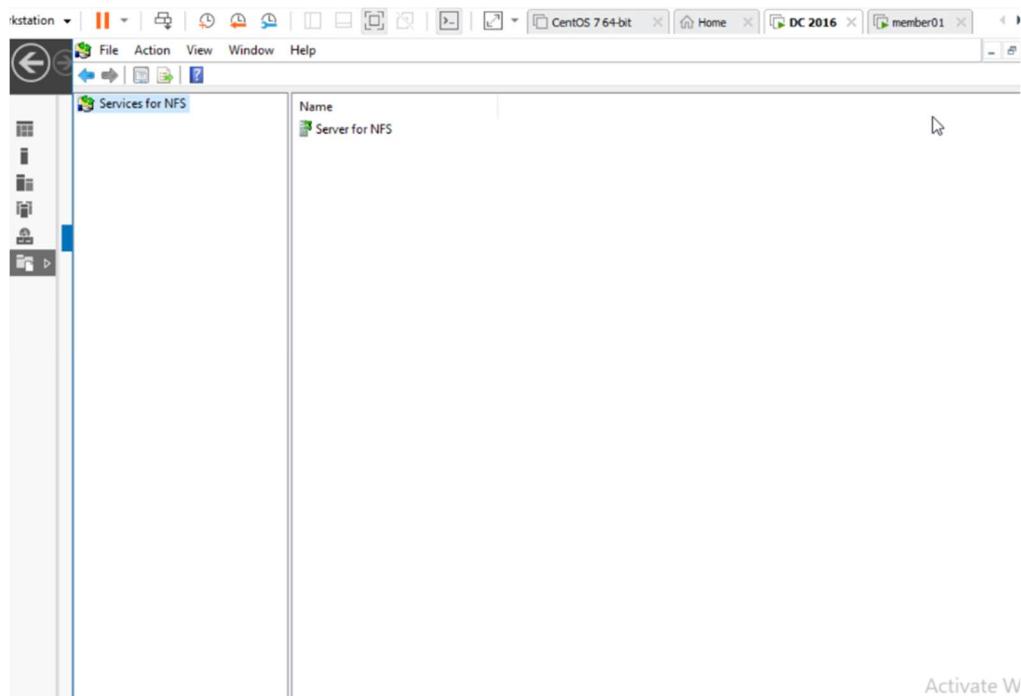
Now member01 server machine domain joined on DC machine

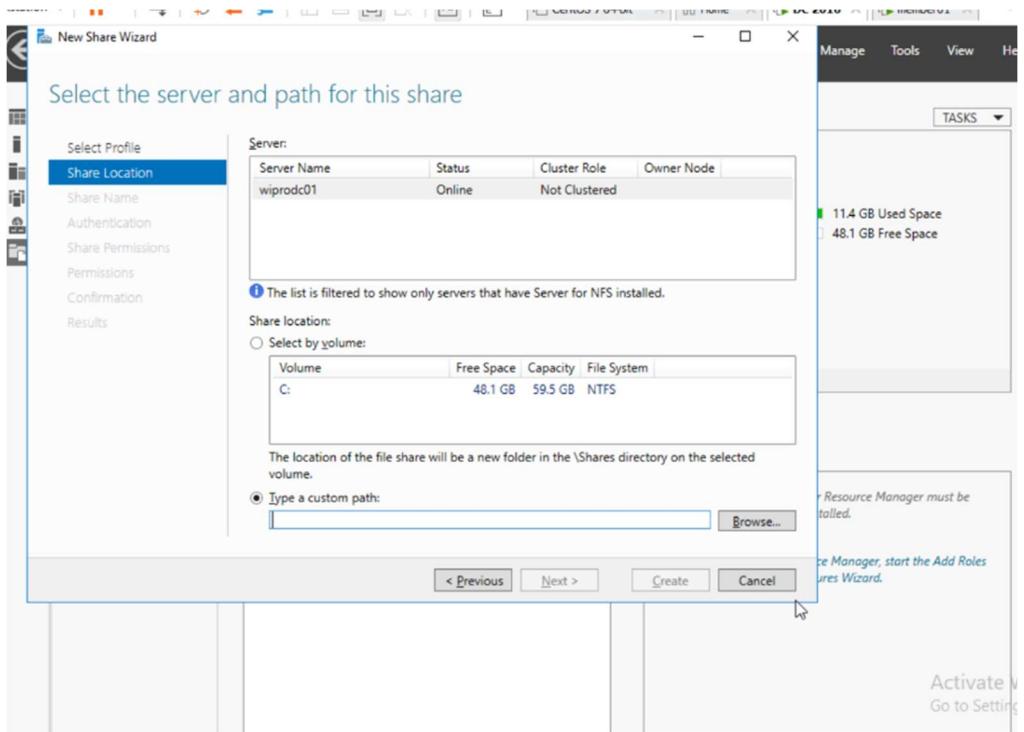
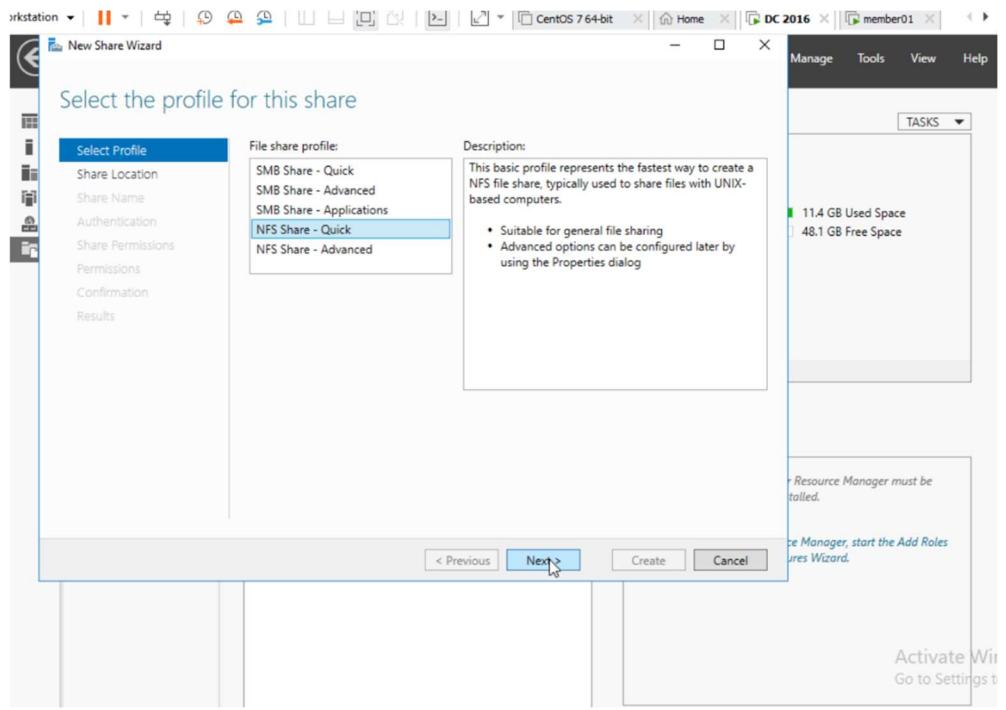


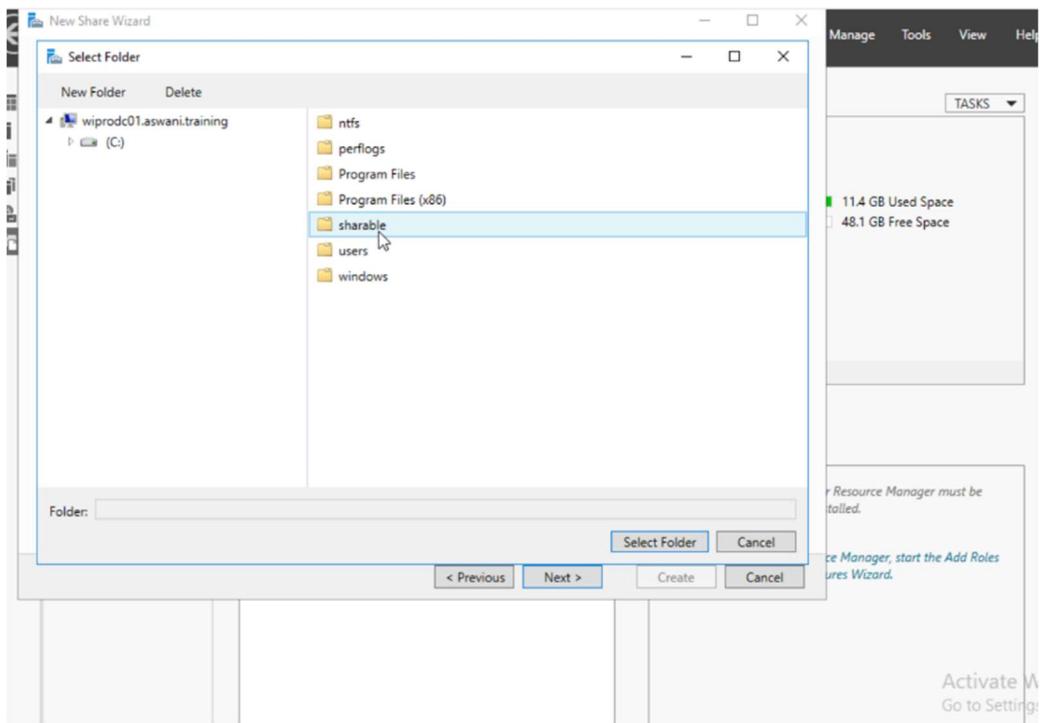
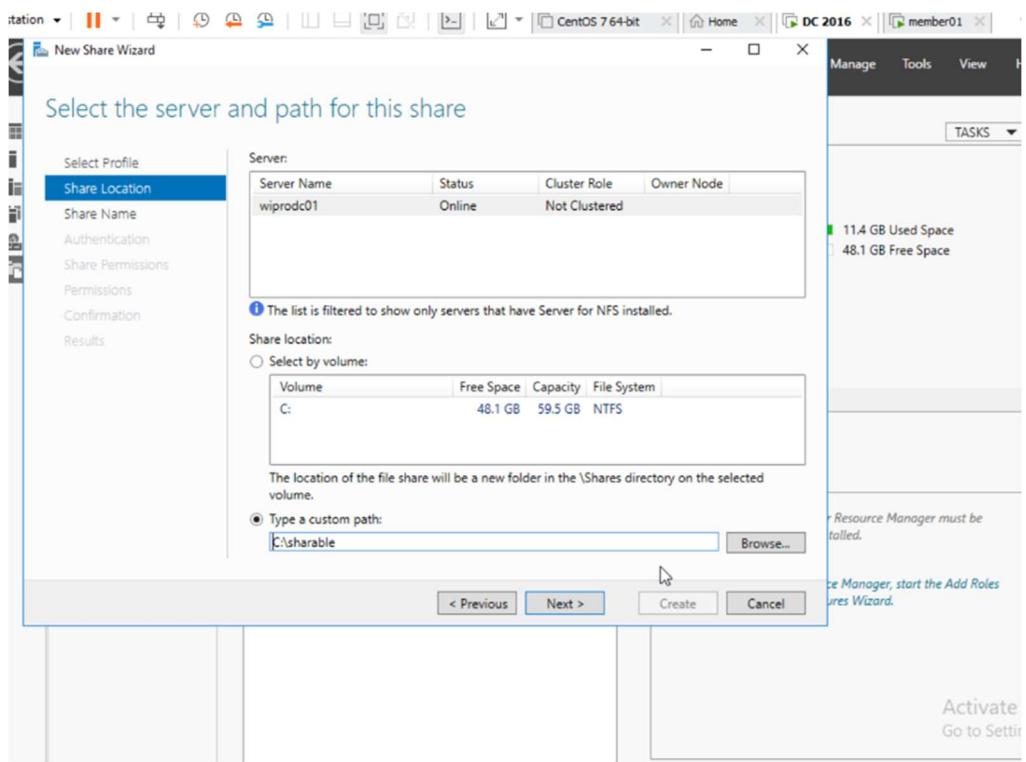
## NFS Sharing

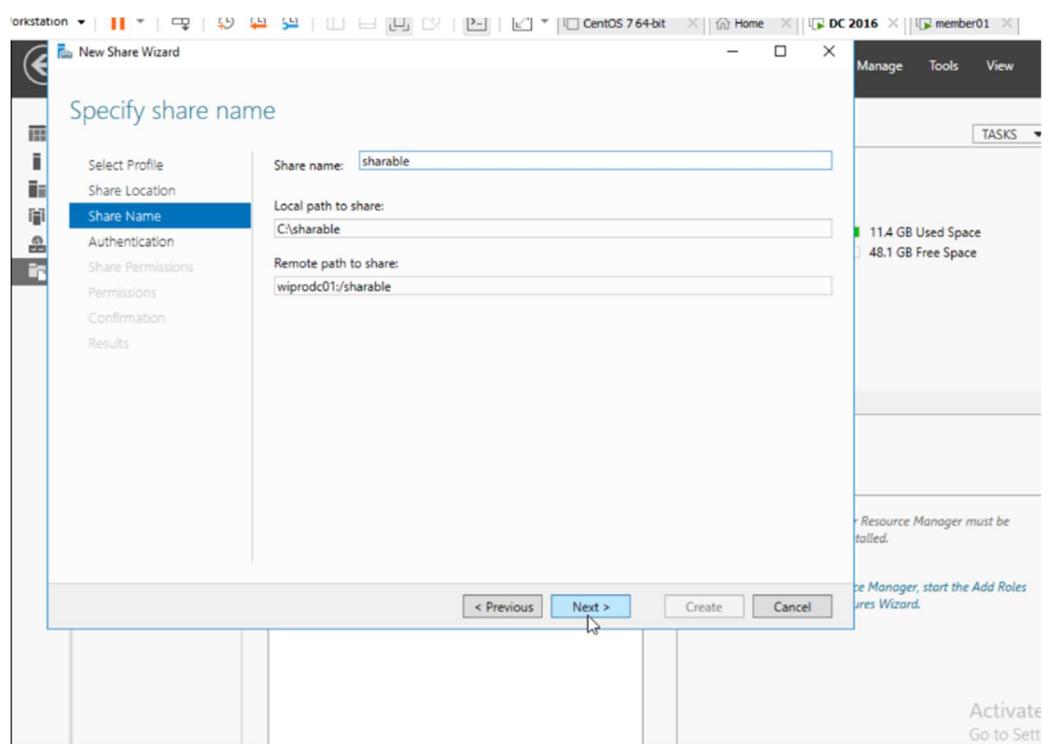
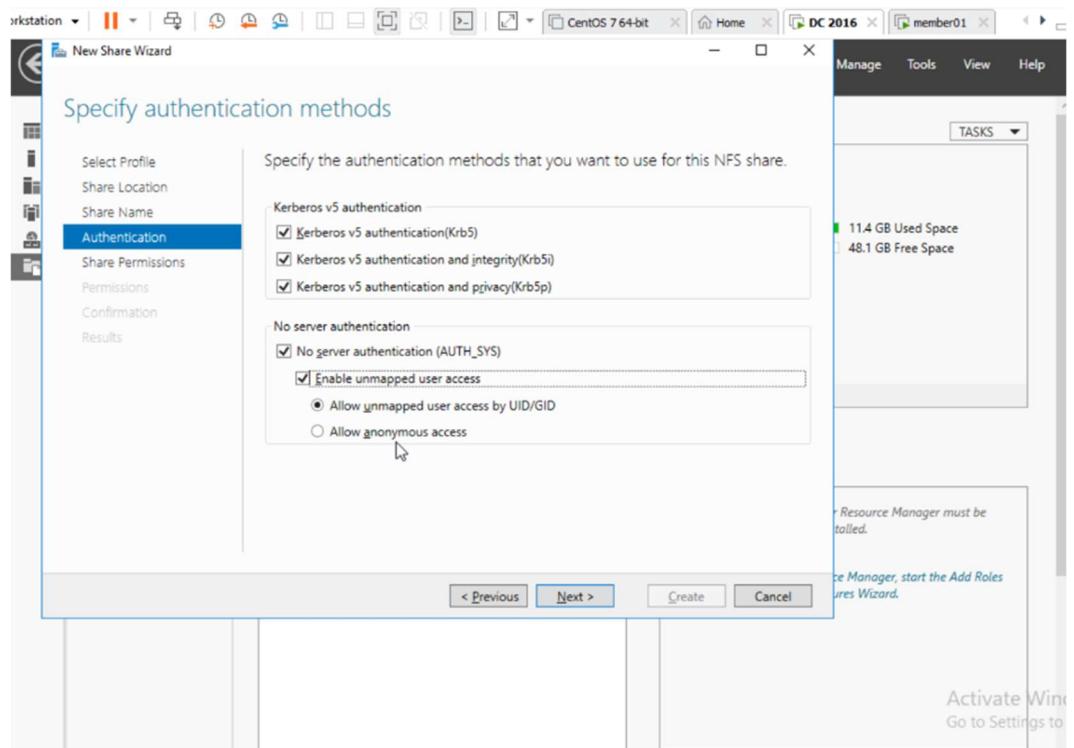


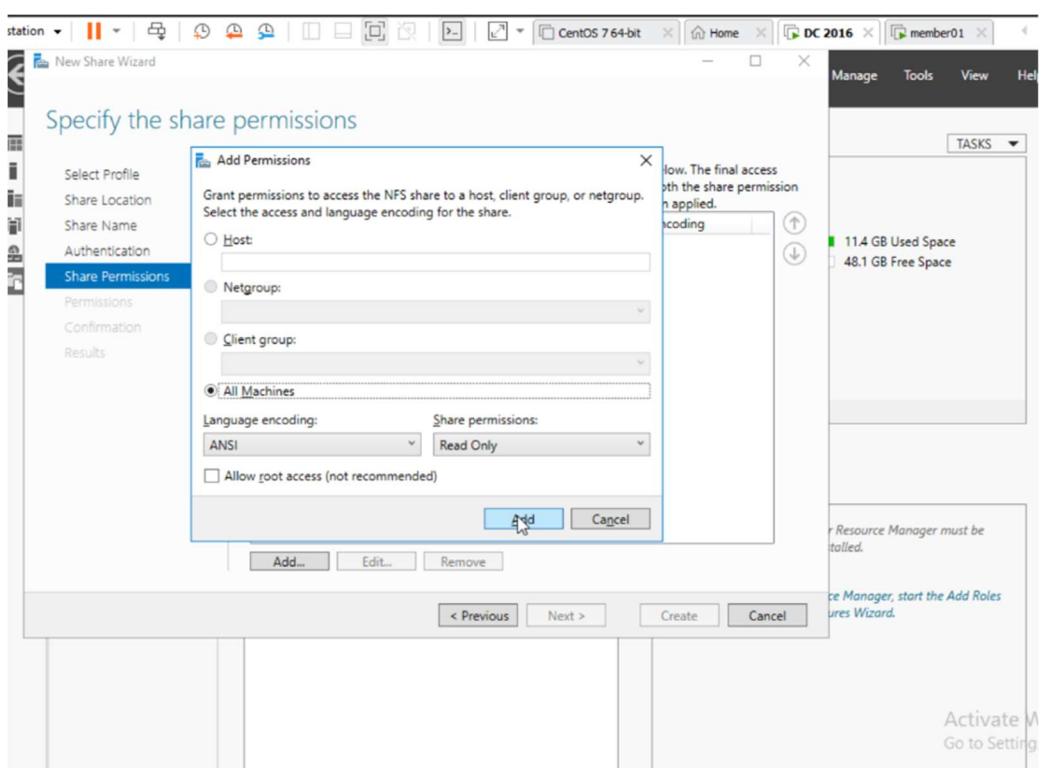
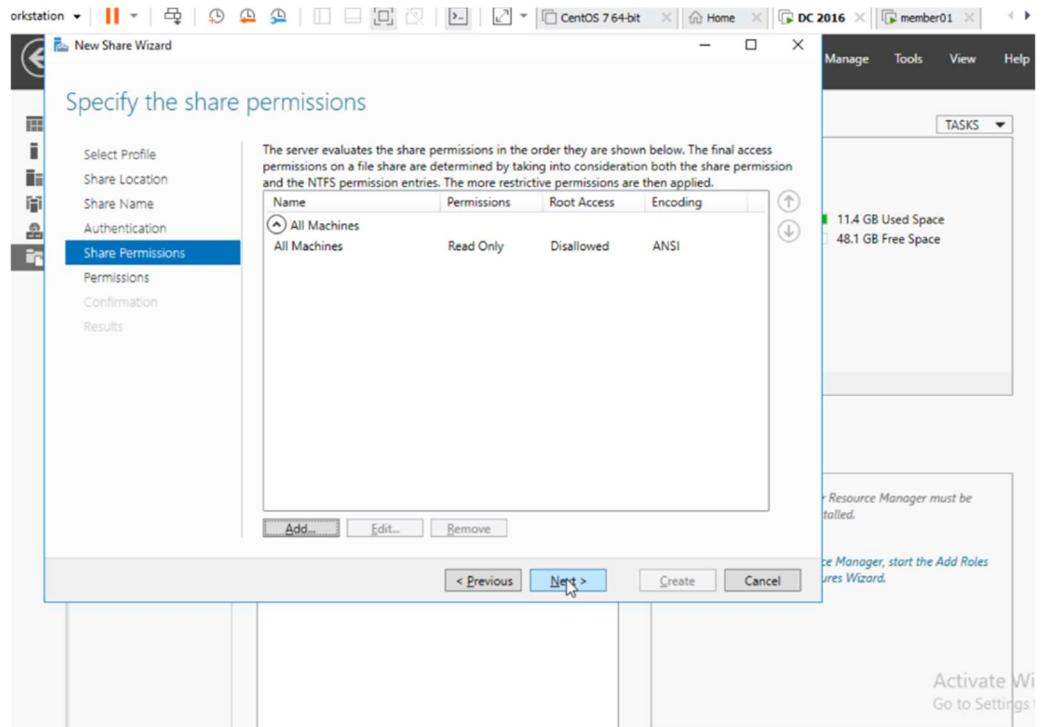


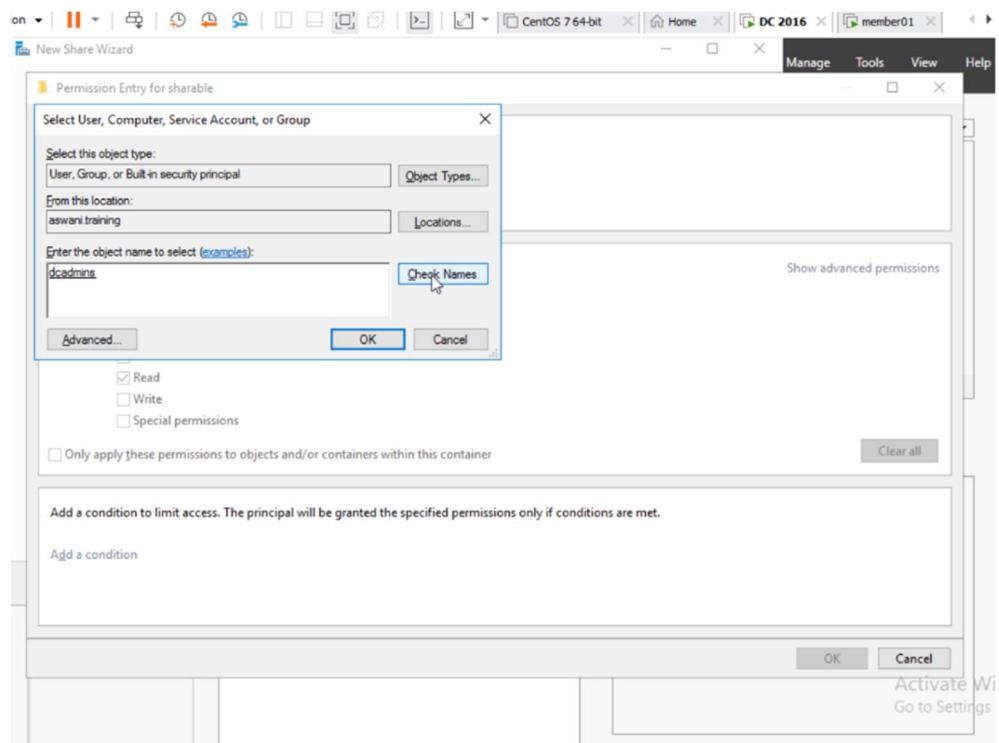
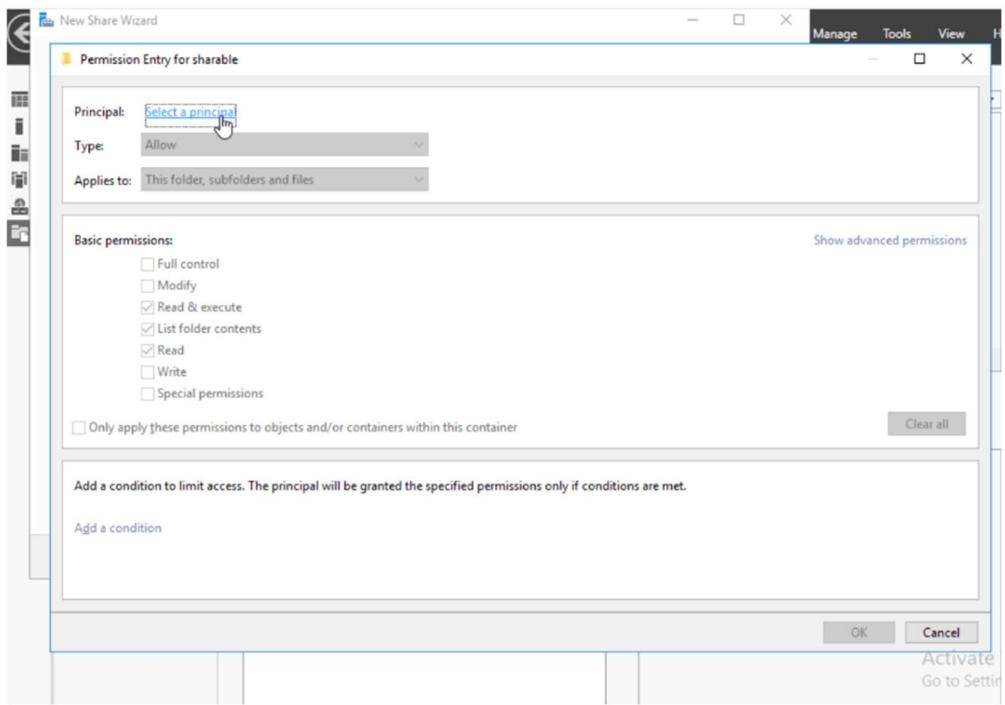


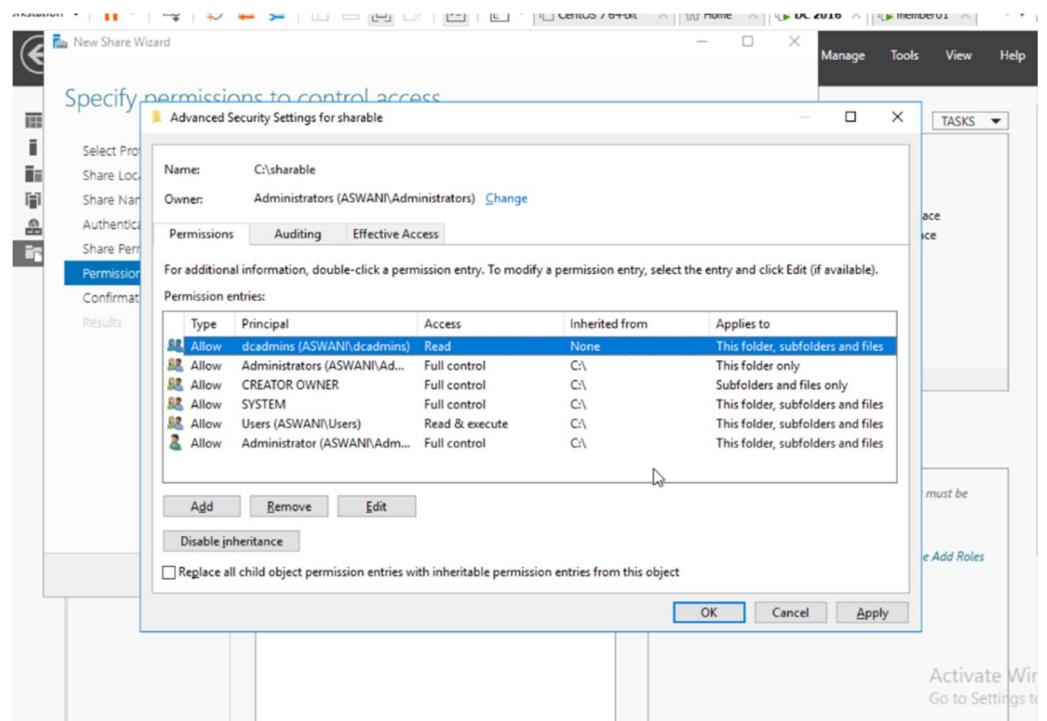
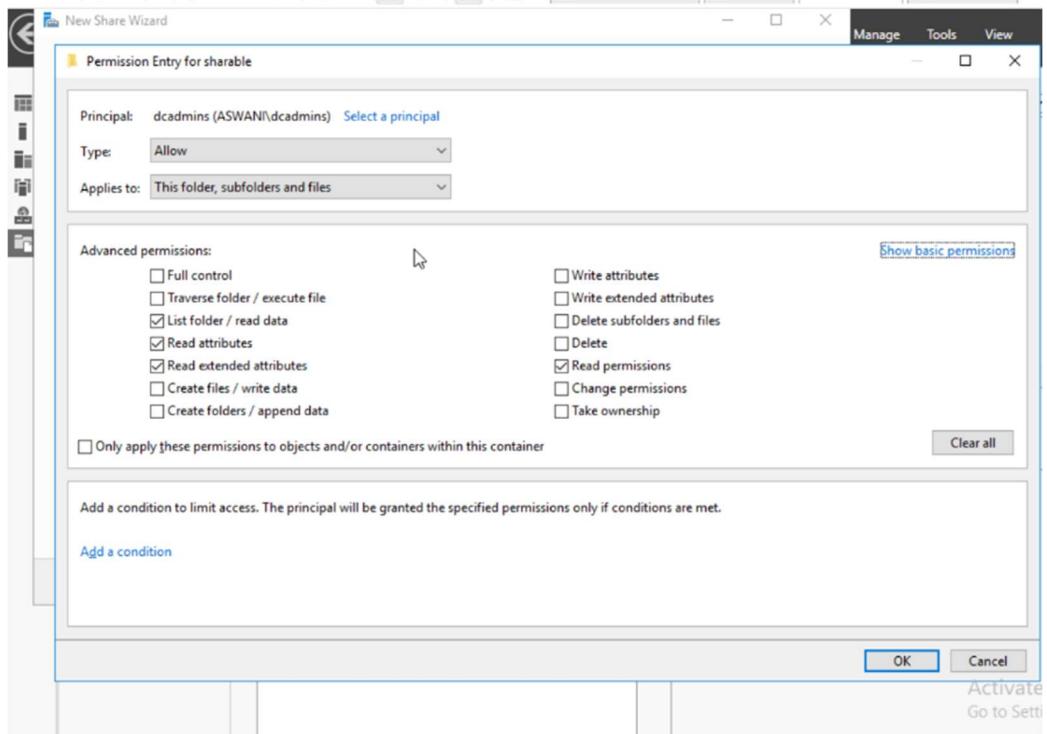


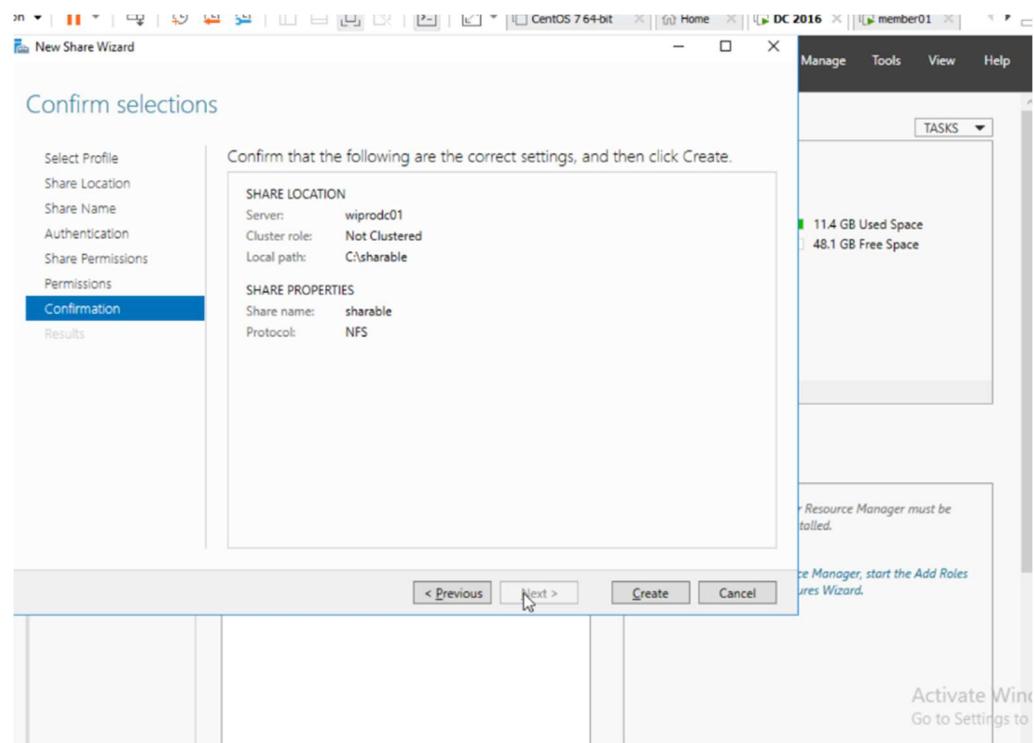
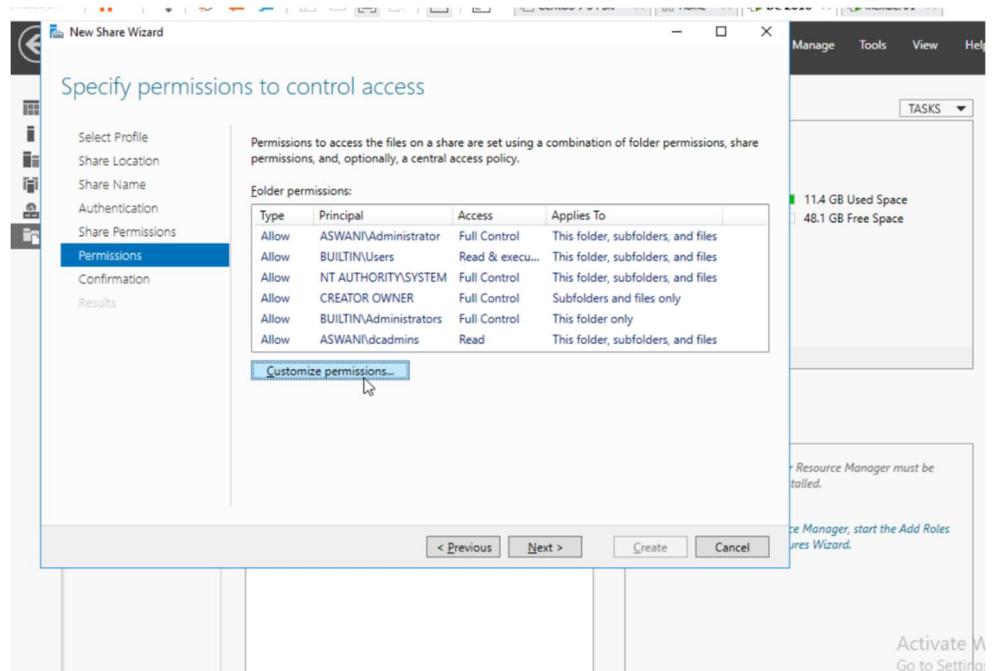


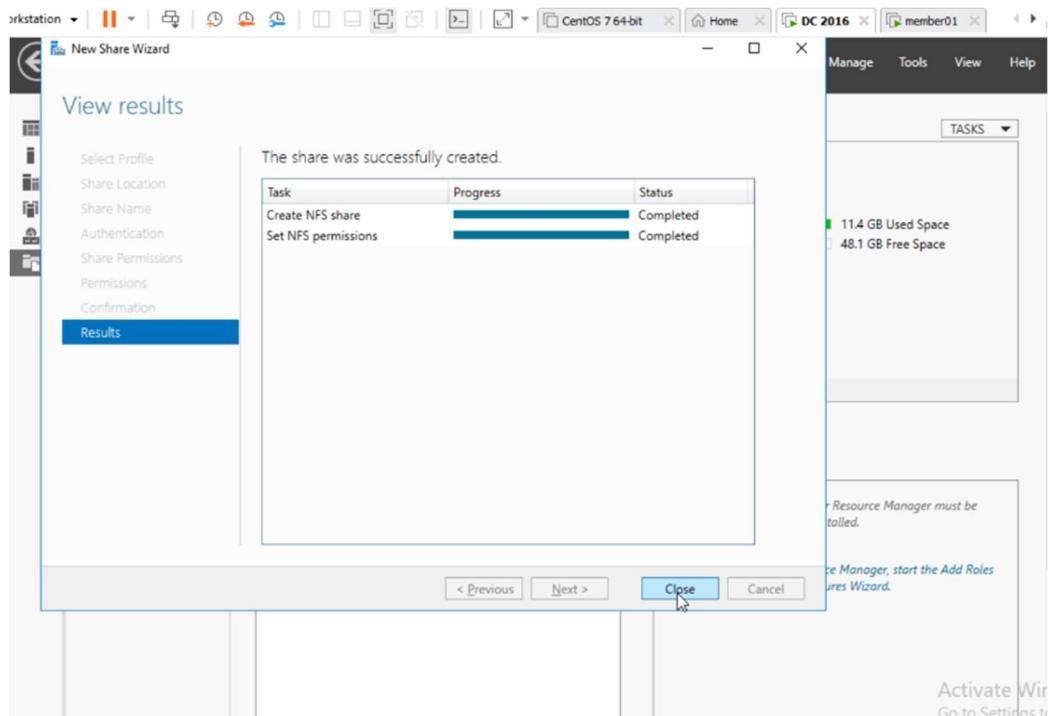












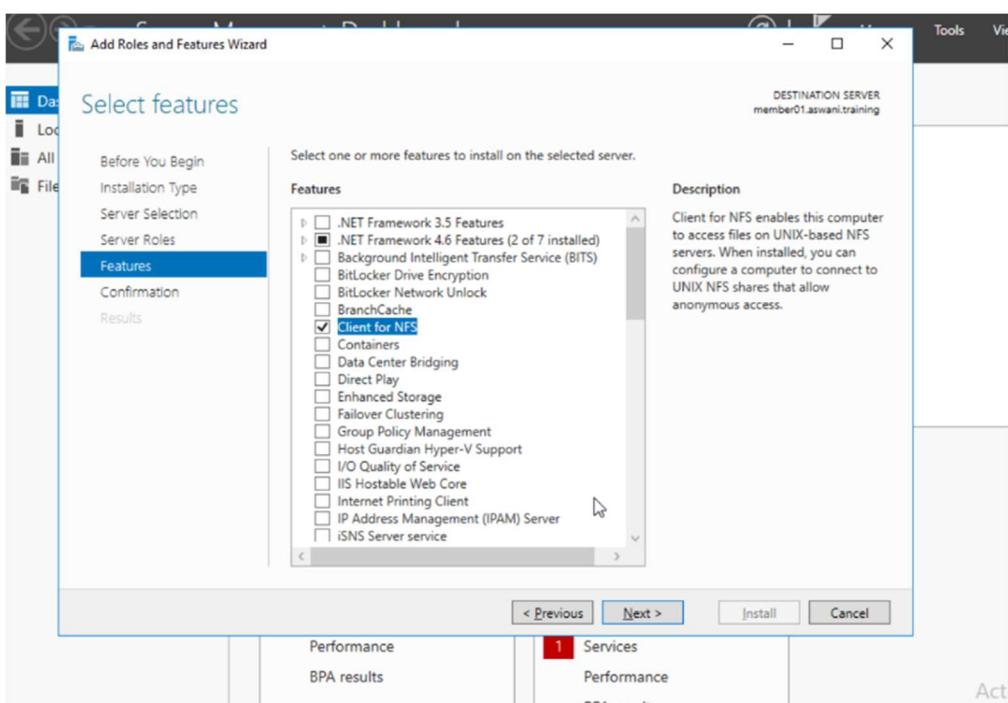
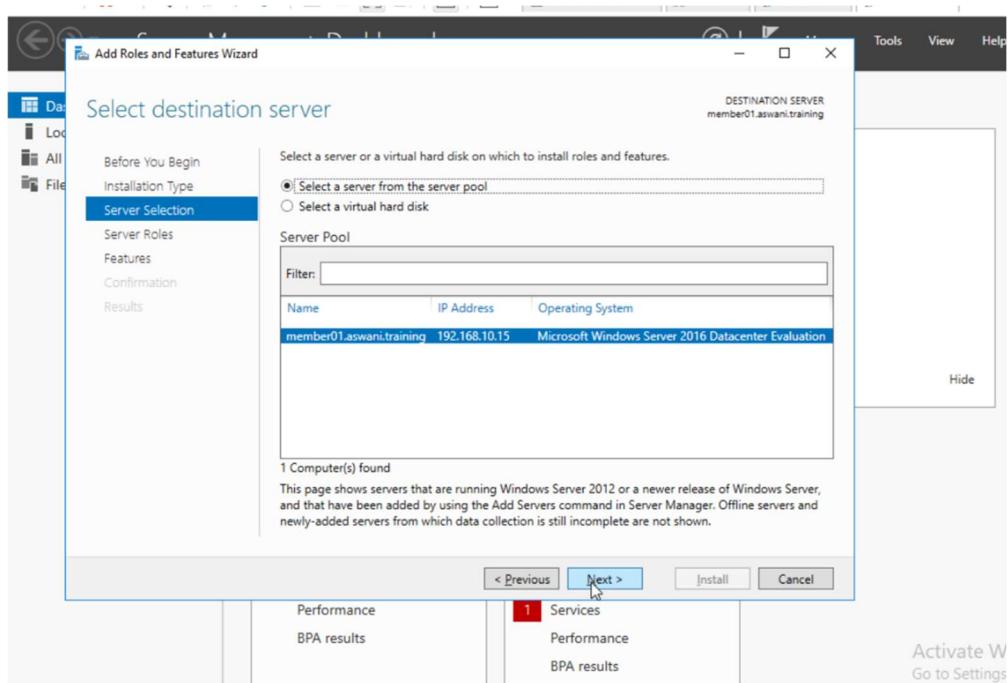
The screenshot shows the "Shares" section of the File and Storage Services interface. The left sidebar lists: Servers, Volumes, Disks, Storage Pools, Shares (selected), iSCSI, and Work Folders. The main pane displays the "SHARES" table:

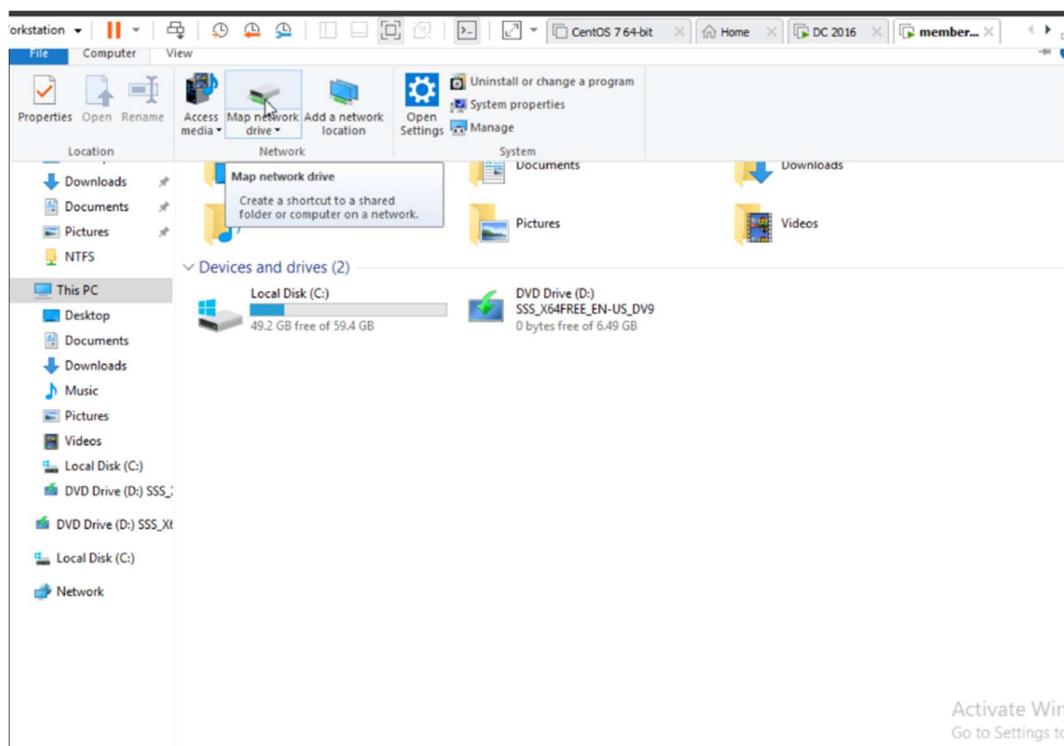
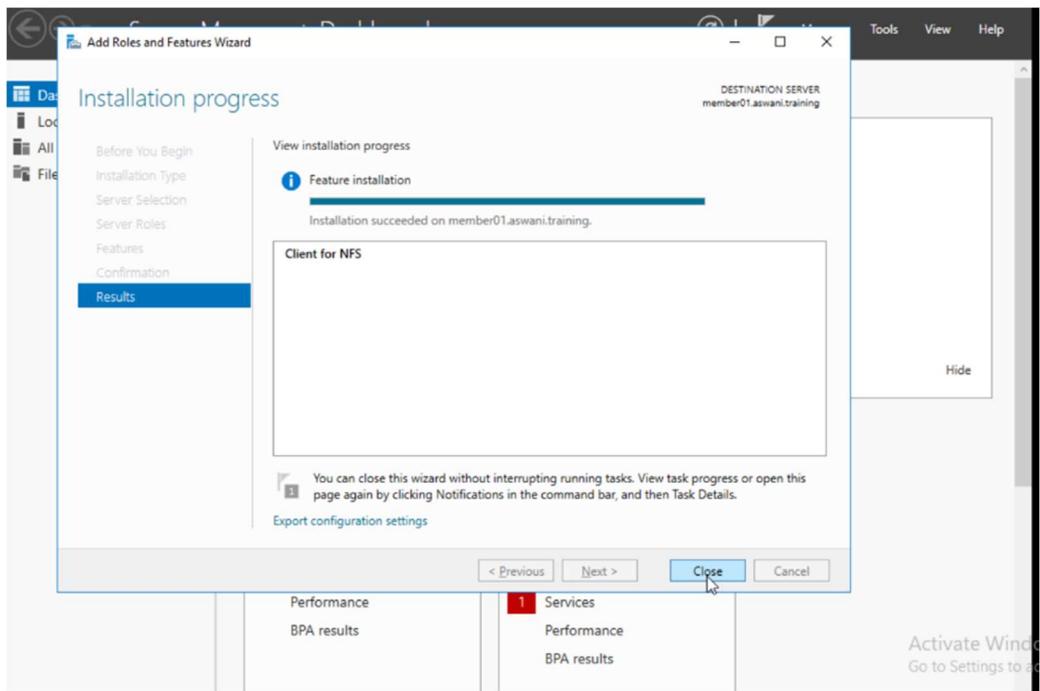
| Share    | Local Path                       | Protocol | Availability Type |
|----------|----------------------------------|----------|-------------------|
| NETLOGON | C:\Windows\SYSVOL\sysvol\aswa... | SMB      | Not Clustered     |
| NTFS     | C:\NTFS                          | SMB      | Not Clustered     |
| SYSVOL   | C:\Windows\SYSVOL\sysvol         | SMB      | Not Clustered     |
| sharable | C:\sharable                      | NFS      | Not Clustered     |

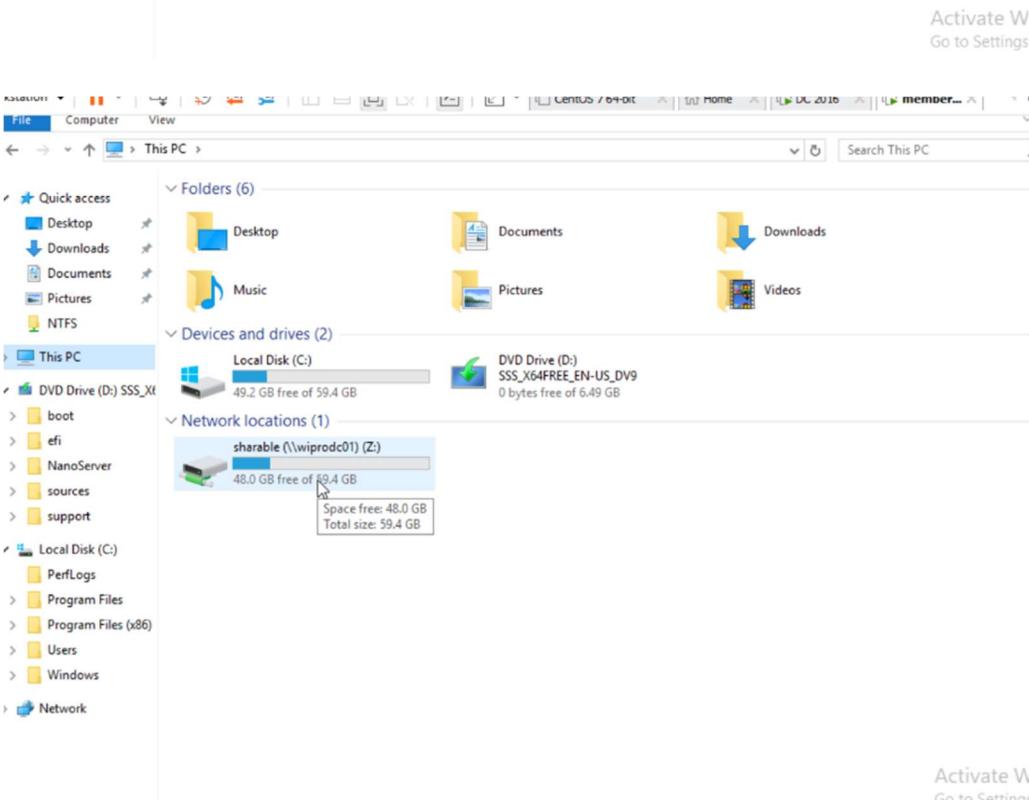
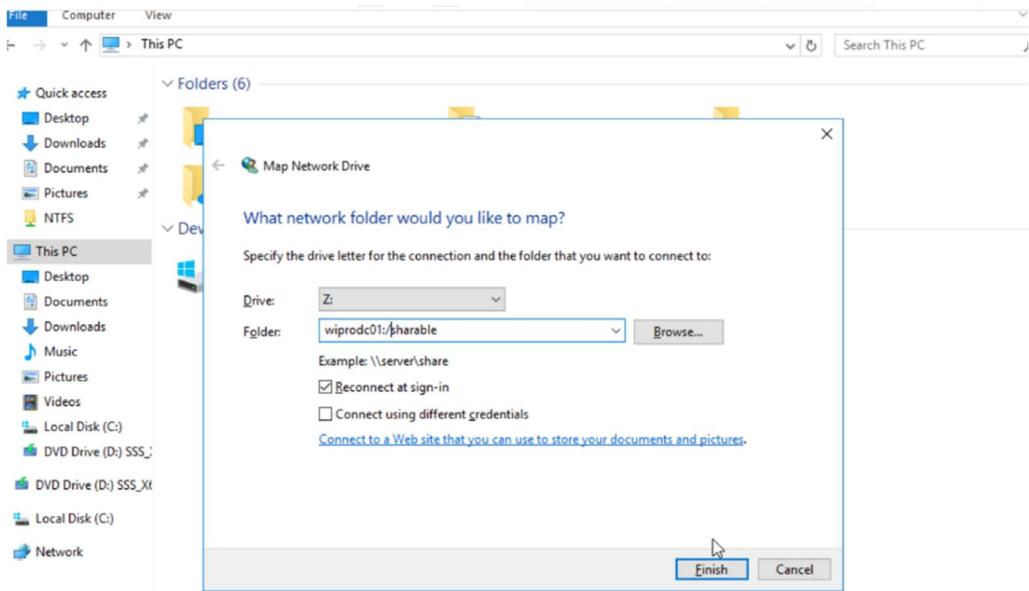
To the right, the "VOLUME" section shows:

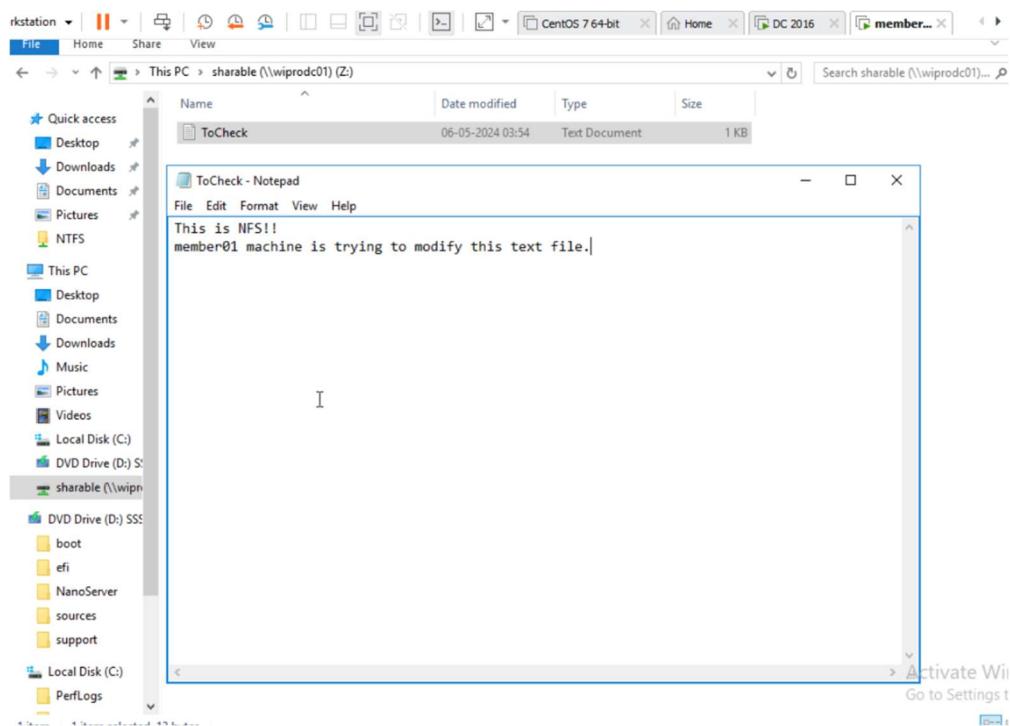
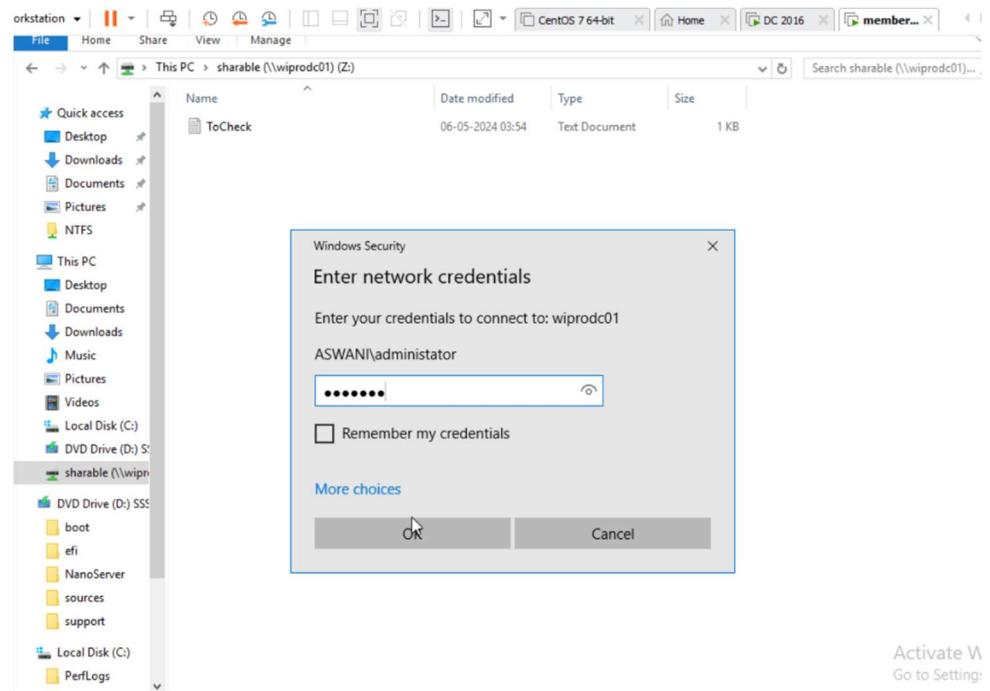
| (C:)      | Capacity: | 11.4 GB Used Space | 48.1 GB Free Space                       |
|-----------|-----------|--------------------|--|
| Capacity: | 59.5 GB   | 19.2% Used         | 11.4 GB Used Space<br>48.1 GB Free Space |

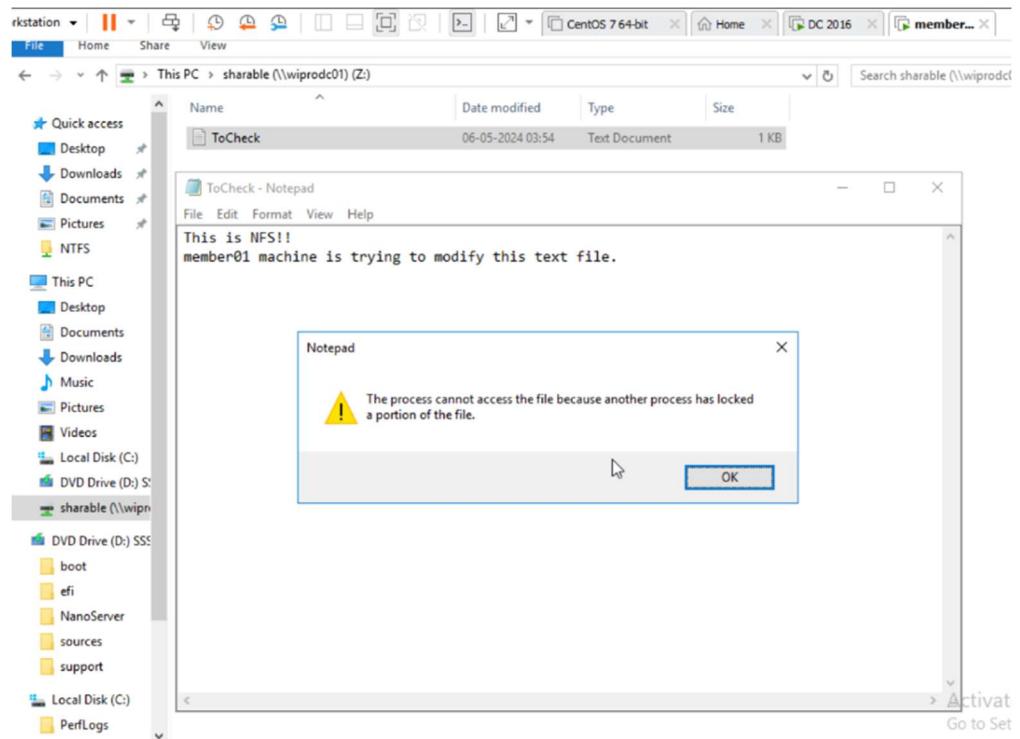
Below the volume details are sections for "QUOTA" and "File Server Resource Manager".



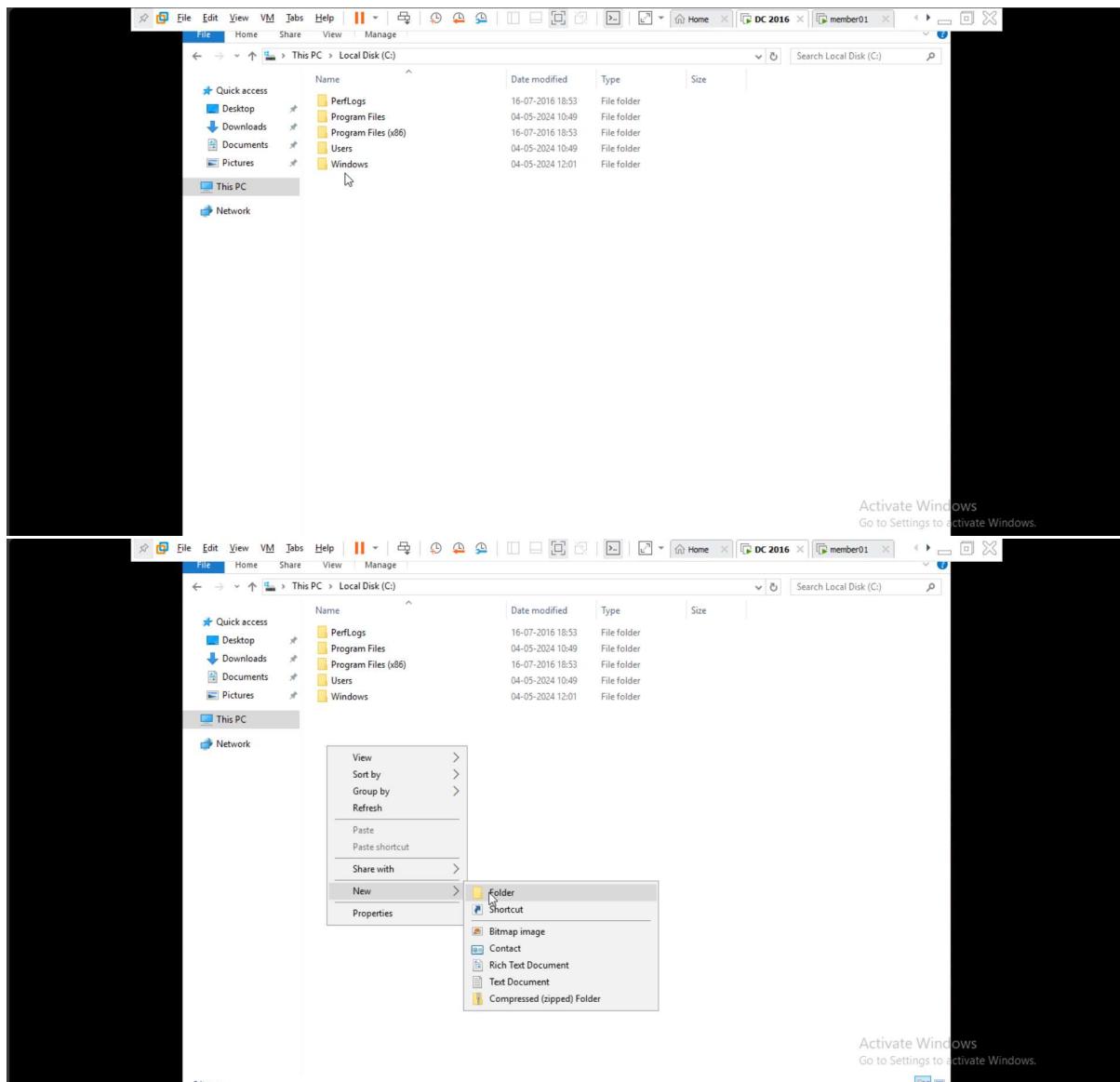


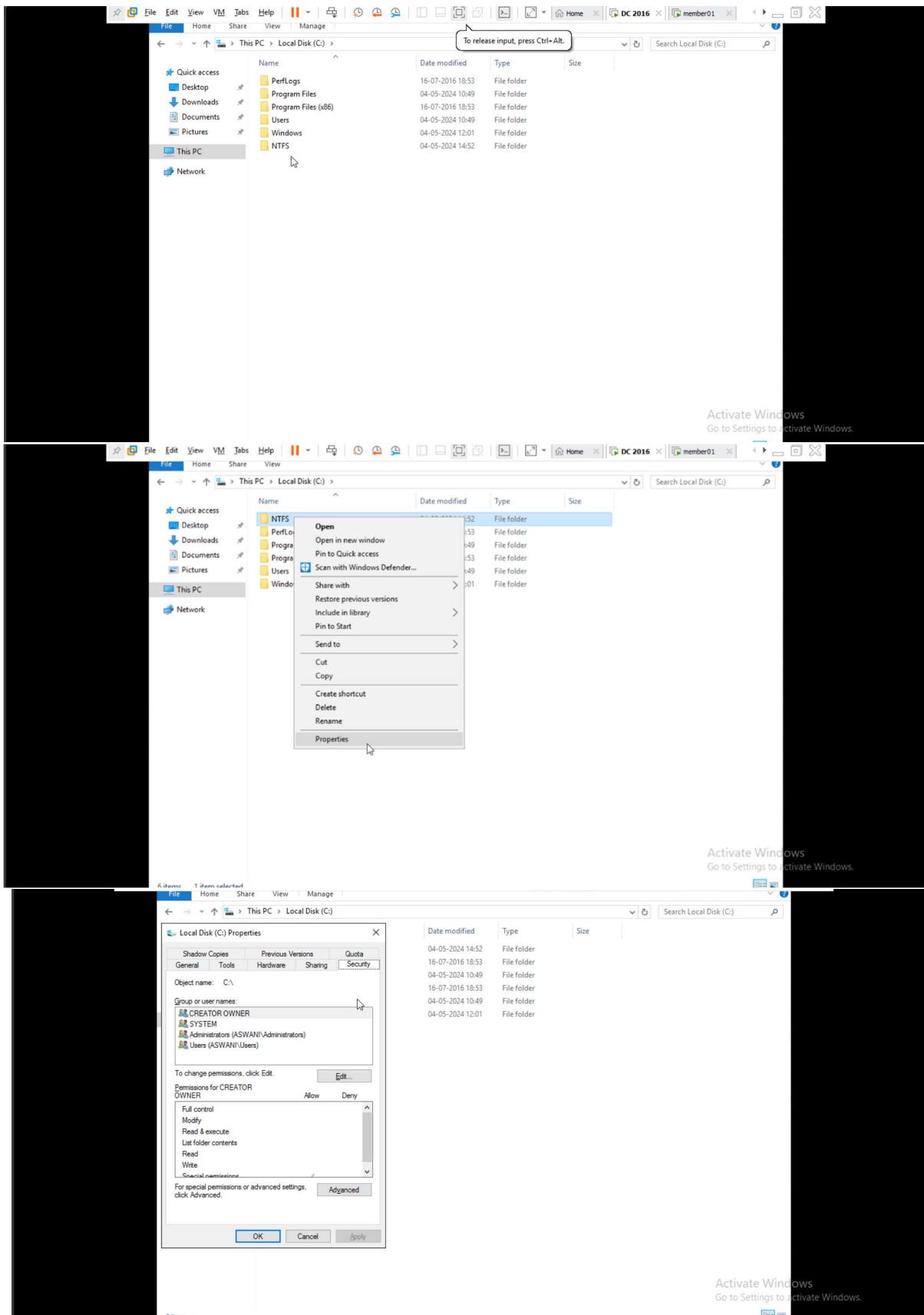


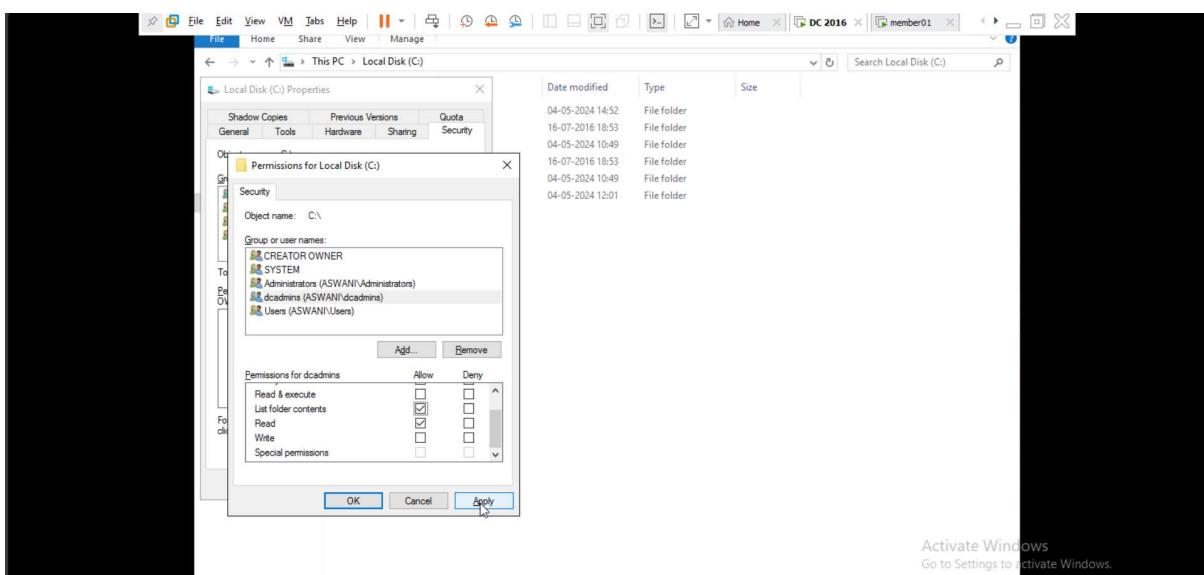
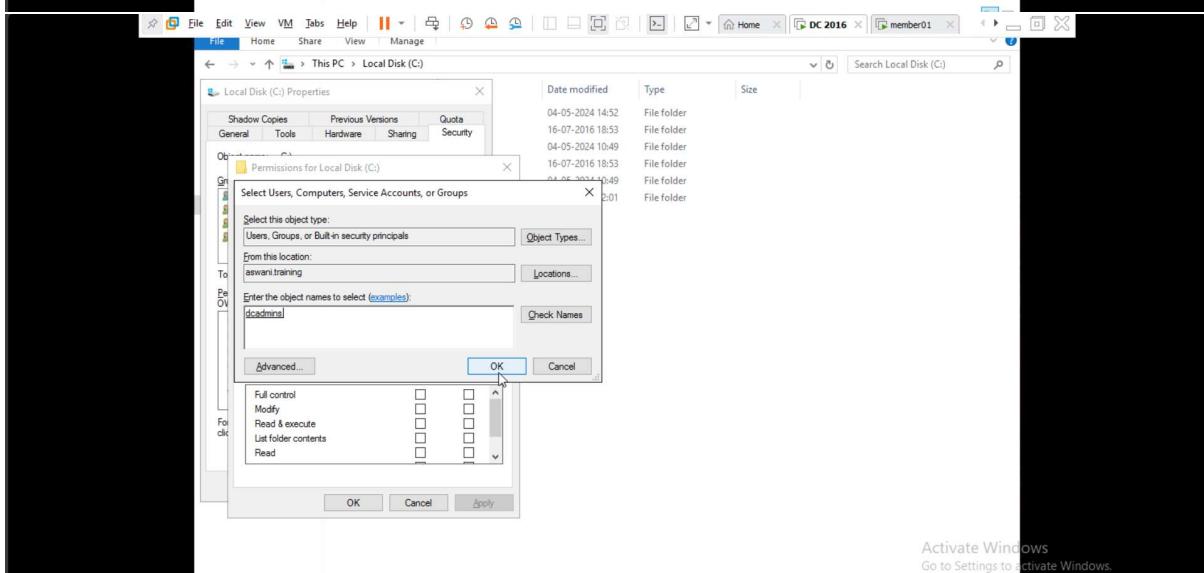
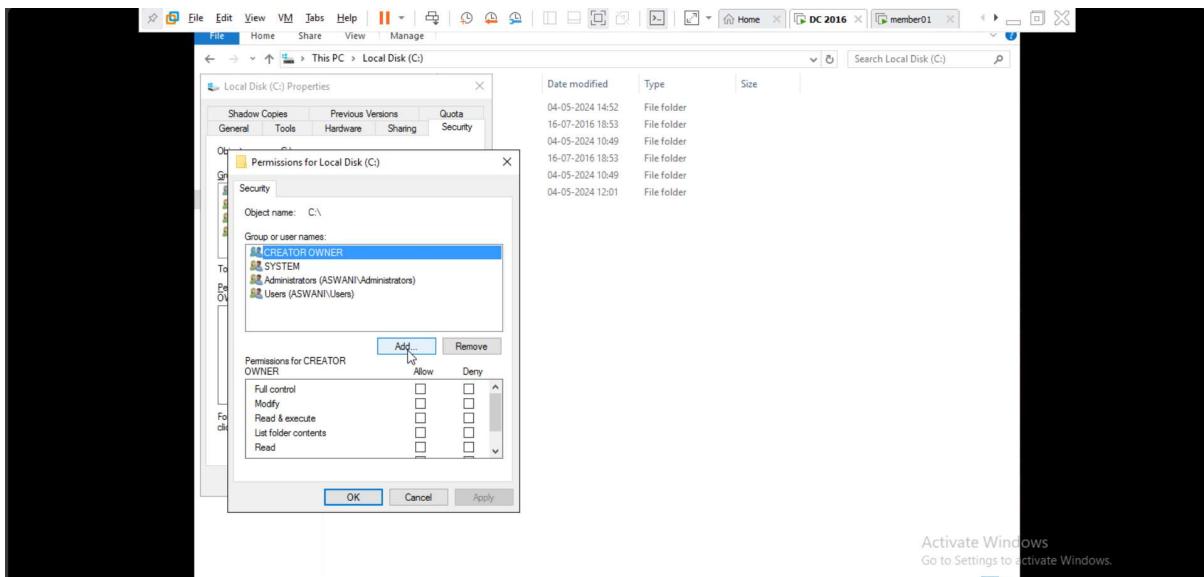


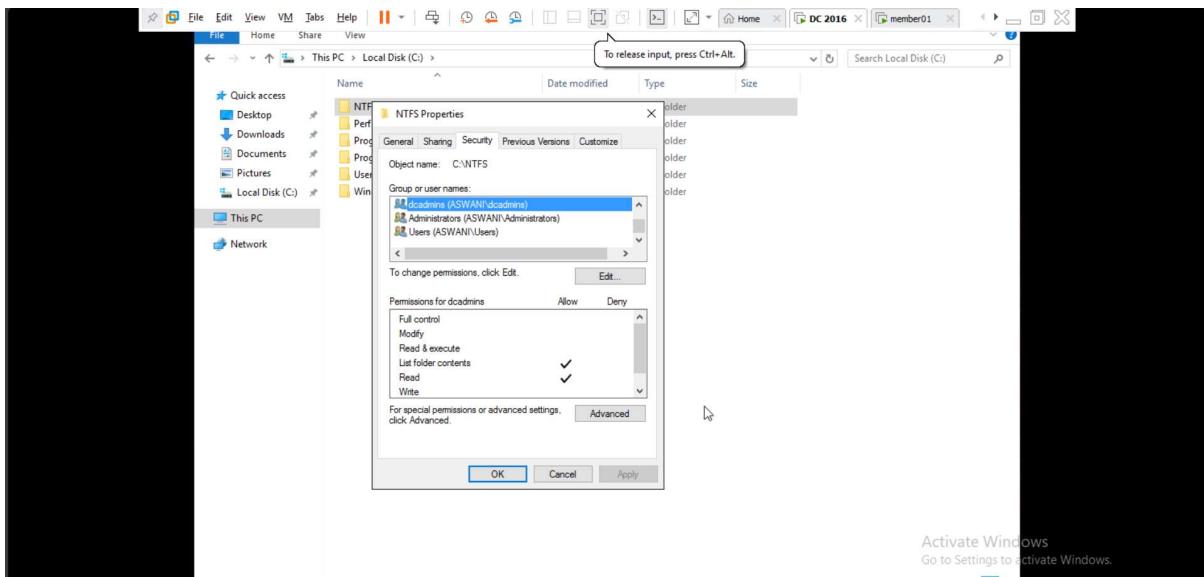


## NTFS

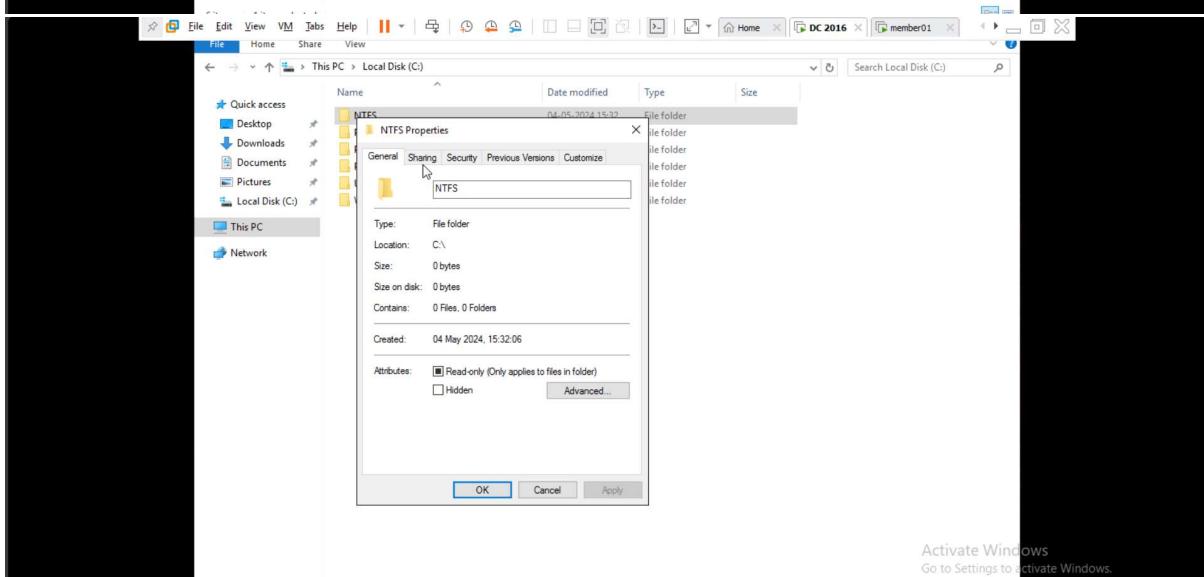




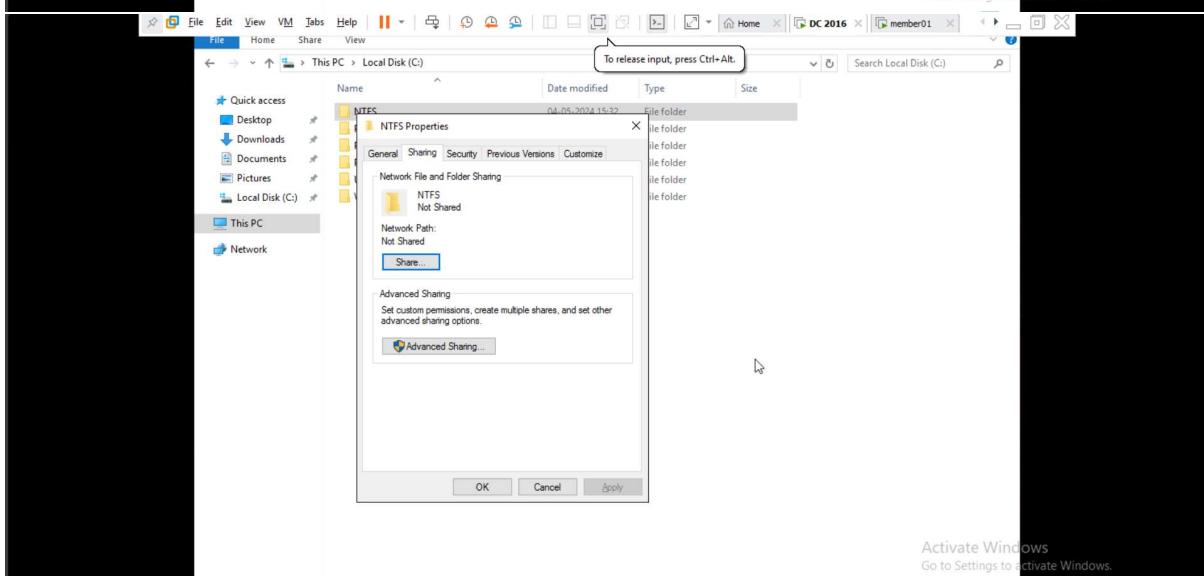




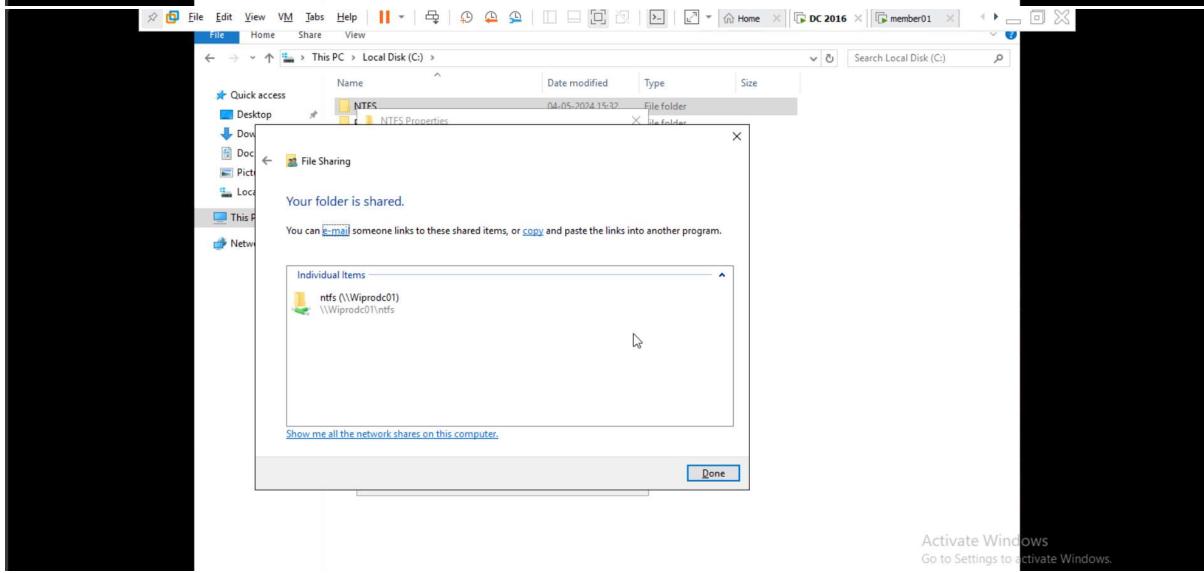
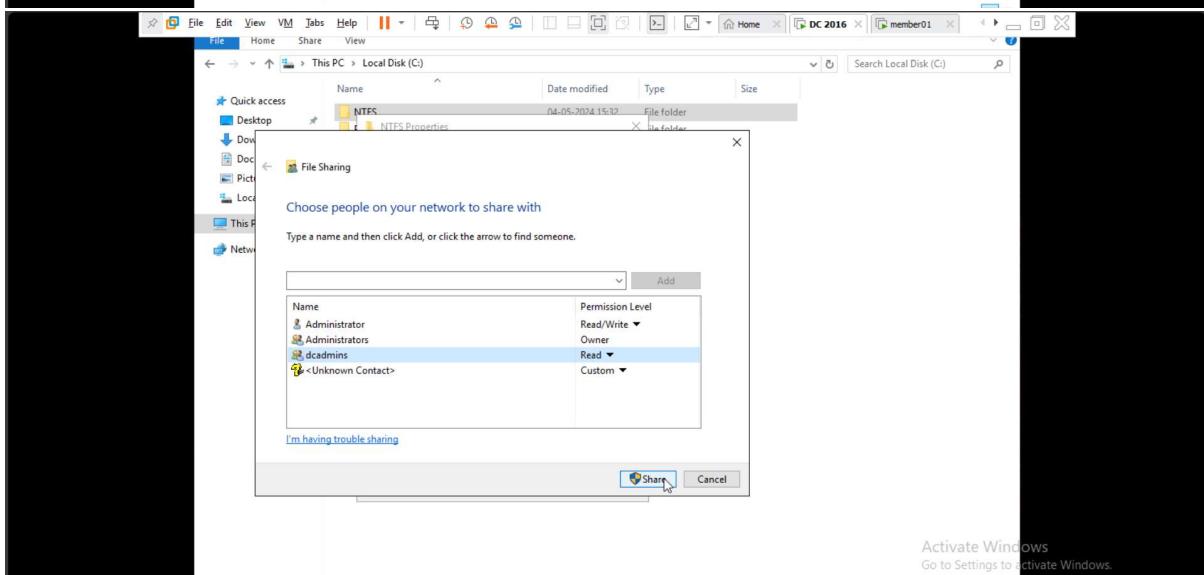
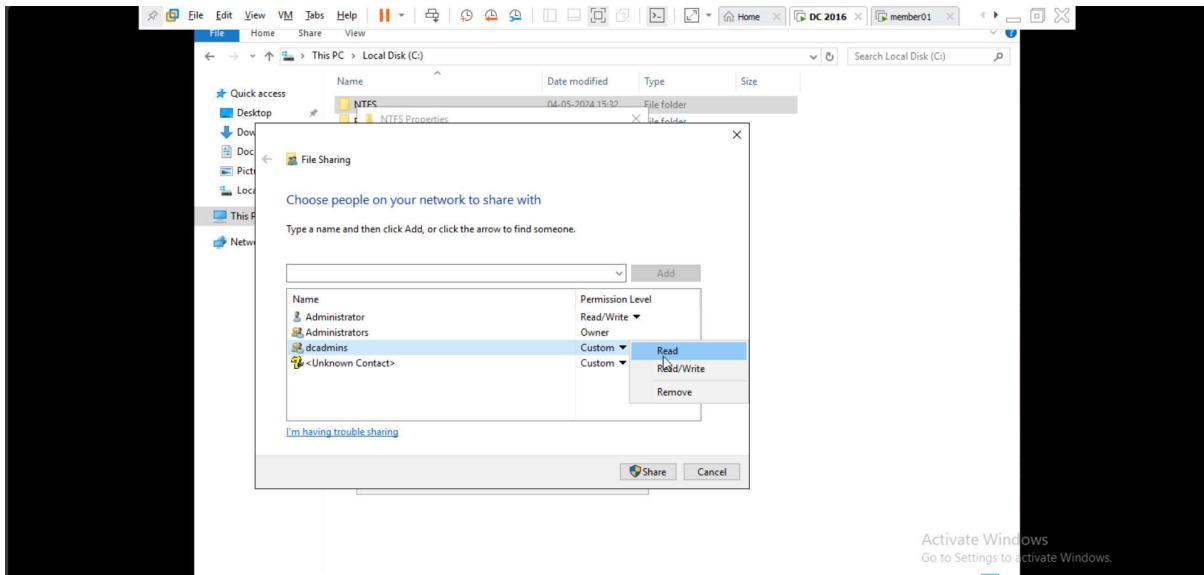
Activate Windows  
Go to Settings to activate Windows.

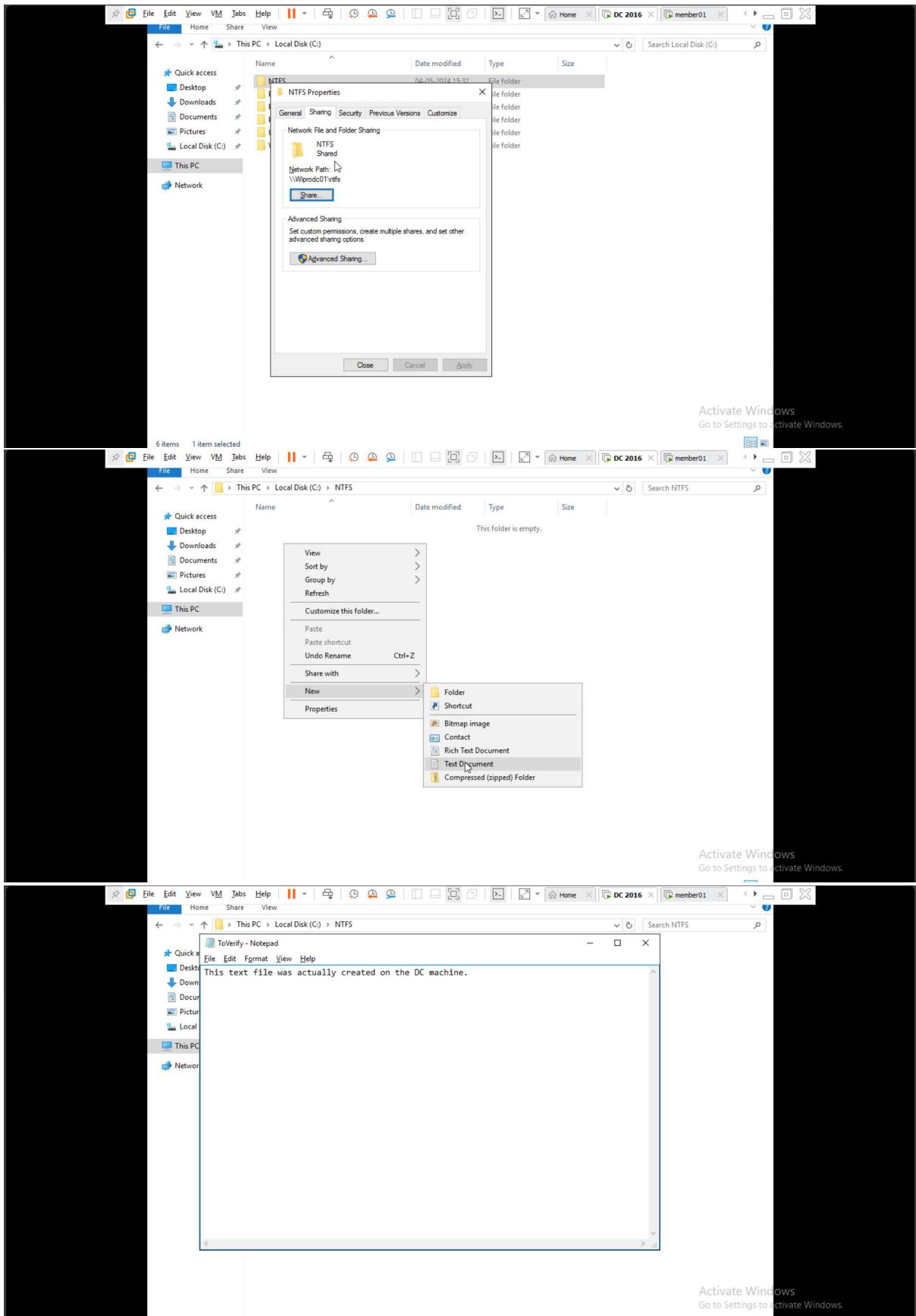


Activate Windows  
Go to Settings to activate Windows.



Activate Windows  
Go to Settings to activate Windows.





Server Manager - Local Server

Best match

- Windows Defender
- Command Prompt

Apps

Run

Information

Windows Defender

Domain: On

Enabled

Disabled

Disabled

192.168.10.15, IPv6 enabled

Windows Defender

Feedback & Diagnostics

IE Enhanced Security Configuration

Time zone

Product ID

Real-Time

Settings

Off

(UTC+05:30)

Last installed updates

Windows Update

Last checked for updates

Never

Install update

Never

Processor

Microsoft Windows Server 2016 Datacenter Evaluation

VMware, Inc. VMware20.1

Installed memory (RAM)

Total disk space

Intel(R) Xeon

2 GB

59.45 GB

Severity Source Log Date and Time

016 Error Microsoft-Windows-DistributedCOM System 04-05-2024 14:57:15 activate Windows

016 Error Microsoft-Windows-DistributedCOM System 04-05-2024 14:27:46 Go to Settings to activate Windows.

98 Error Microsoft-Windows-Security-SPP Application 04-05-2024 14:16:22

File Edit View VM Tabs Help | Home DC 2016 member01

Server Manager - Local Server

Dashboard

Local Server

All Servers

File and Storage Services

PROPERTIES

For member01

Computer name: member01

Domain: aswani.training

Last installed updates: Never

Windows Firewall: Domain: On

Remote management: Enabled

Remote Desktop: Disabled

NIC Teaming: Disabled

Ethernet0: 192.168.10.15, IPv6 enabled

Windows Defender: Real-Time

Feedback & Diagnostics: Settings

IE Enhanced Security Configuration: Off

Time zone: (UTC+05:30)

Product ID: Not activated

Operating system version: Microsoft Windows Server 2016 Datacenter Evaluation

Hardware information: VMware, Inc. VMware20.1

Processors: Intel(R) Xeon

Installed memory (RAM): 2 GB

Total disk space: 59.45 GB

Run

Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.

Open: \\wiprod01

This task will be created with administrative privileges.

OK Cancel Browse...

Severity Source Log Date and Time

Microsoft-Windows-DistributedCOM System 04-05-2024 14:57:15 activate Windows

Microsoft-Windows-DistributedCOM System 04-05-2024 14:27:46 Go to Settings to activate Windows.

Microsoft-Windows-Security-SPP Application 04-05-2024 14:16:22

File Edit View VM Tabs Help | Home DC 2016 member01

File Edit View VM Tabs Help | Home DC 2016 member01

Network wiprod01

Quick access

Desktop

Downloads

Documents

Pictures

This PC

DVD Drive (D): SSS\_XI

Local Disk (C):

Network

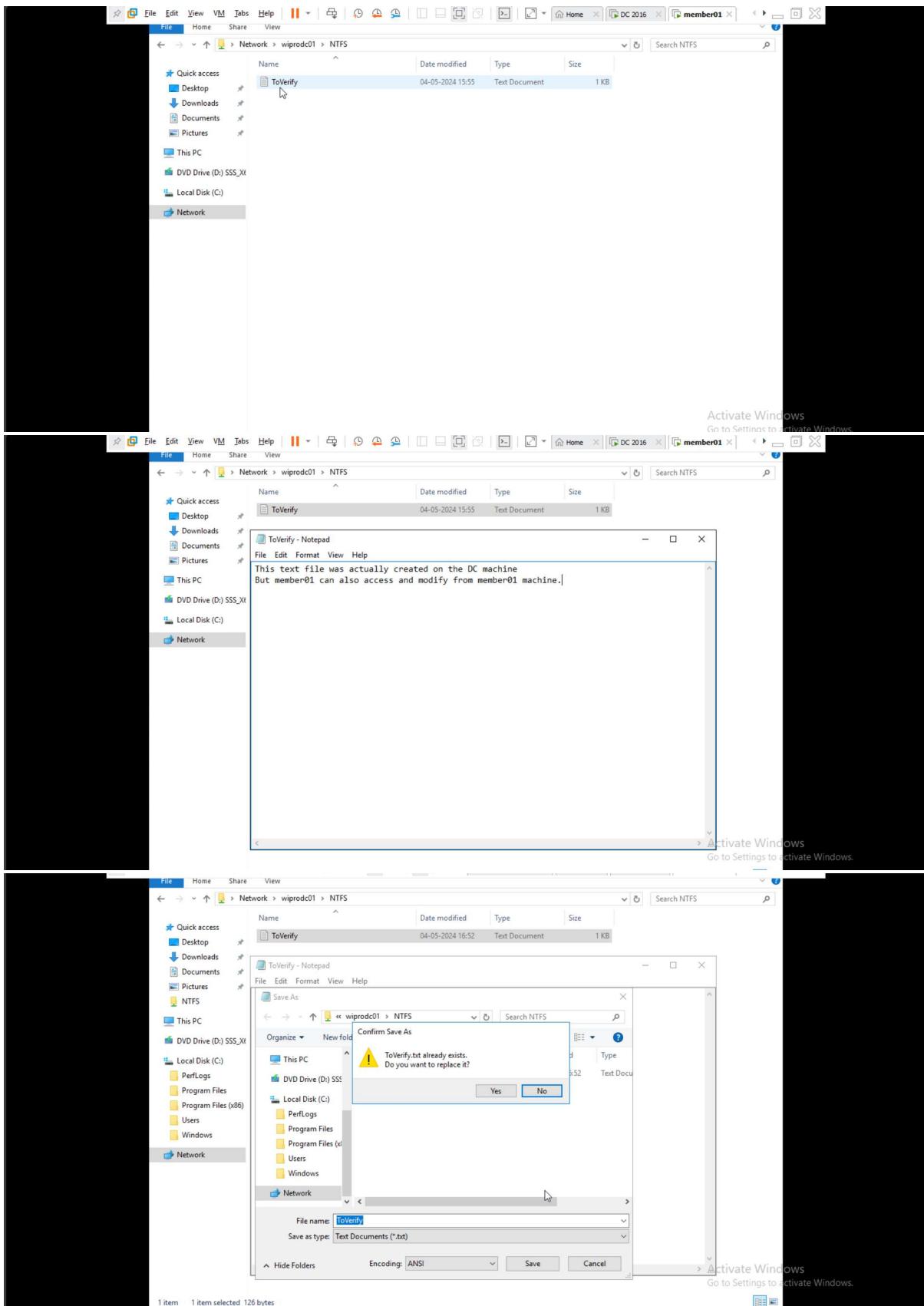
NETLOGON

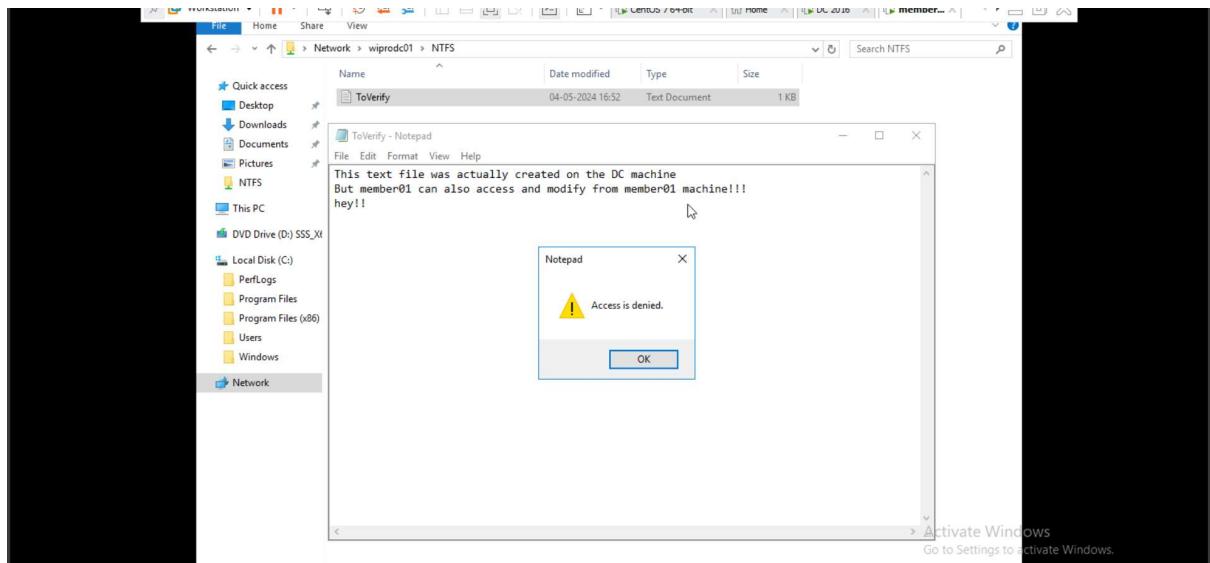
NTFS

SYSVOL

Activate Windows

Go to Settings to activate Windows.





# Project Task 2: -

## Objective:

Install CentOS 7 server (after installation GUI must be present). Attach 3 disks of 5GB each & create 2 LVMs from these disks of 7GB (/lvm1) and 8GB (/lvm2) with XFS and EXT4 file systems respectively and verify. Install the following RPM packages using the package manager of your choice using single command.

- VSFTPD
- PHP
- System-Config-Kickstart
- finger.

Start “YES” process and use TOP command to kill this process.

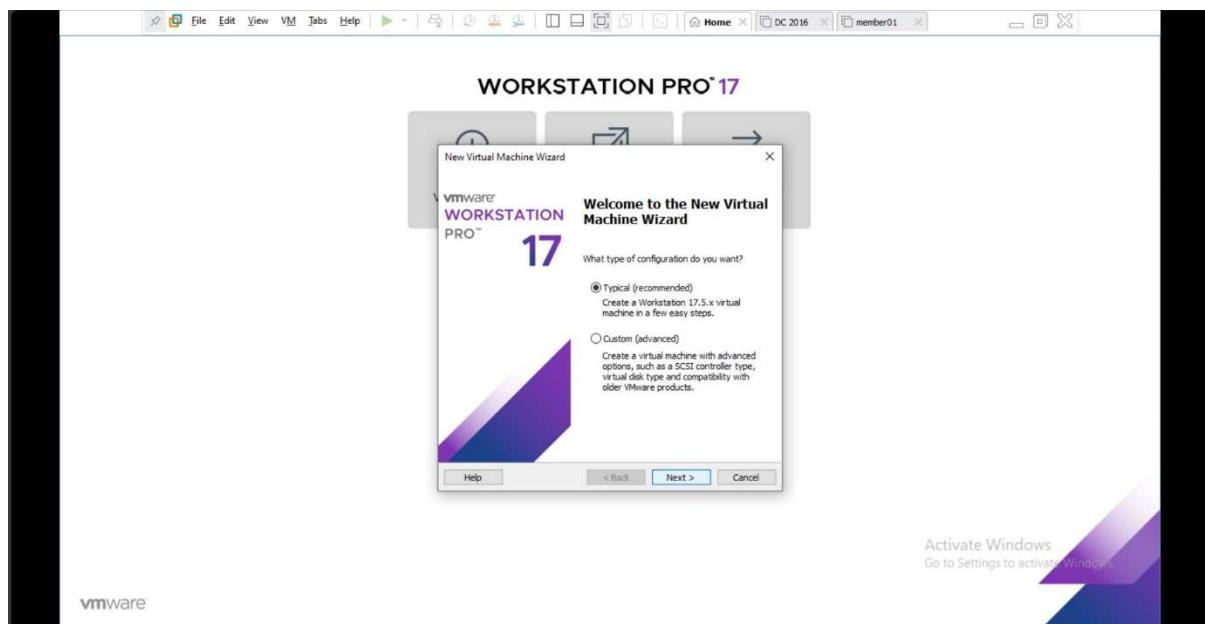
## Setup:

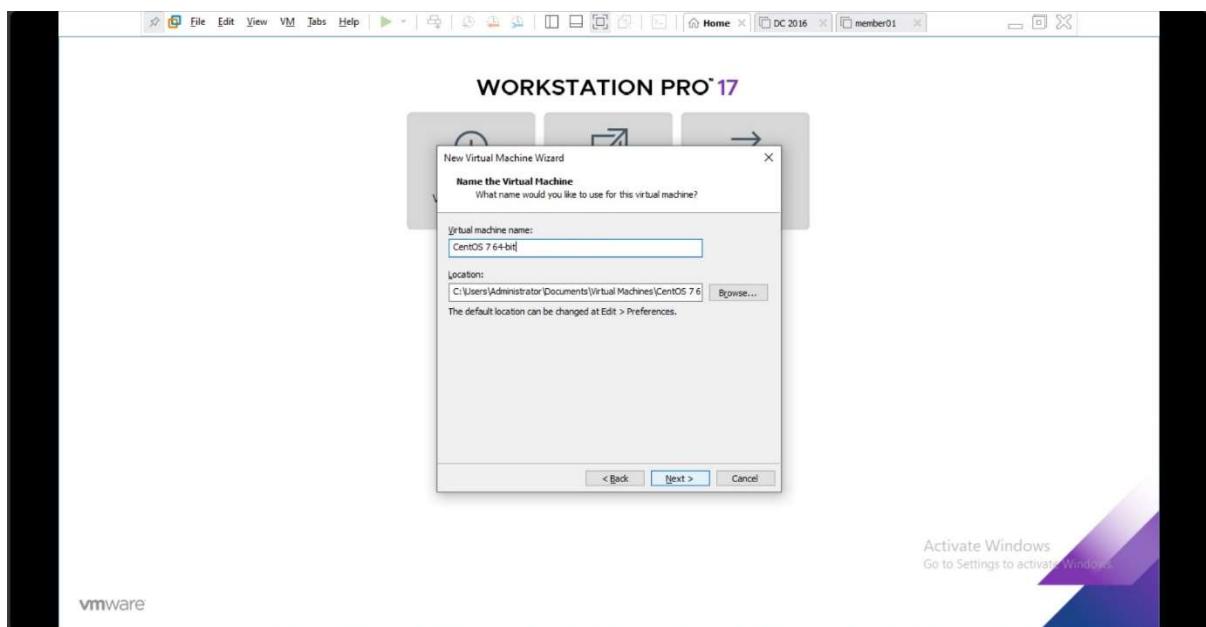
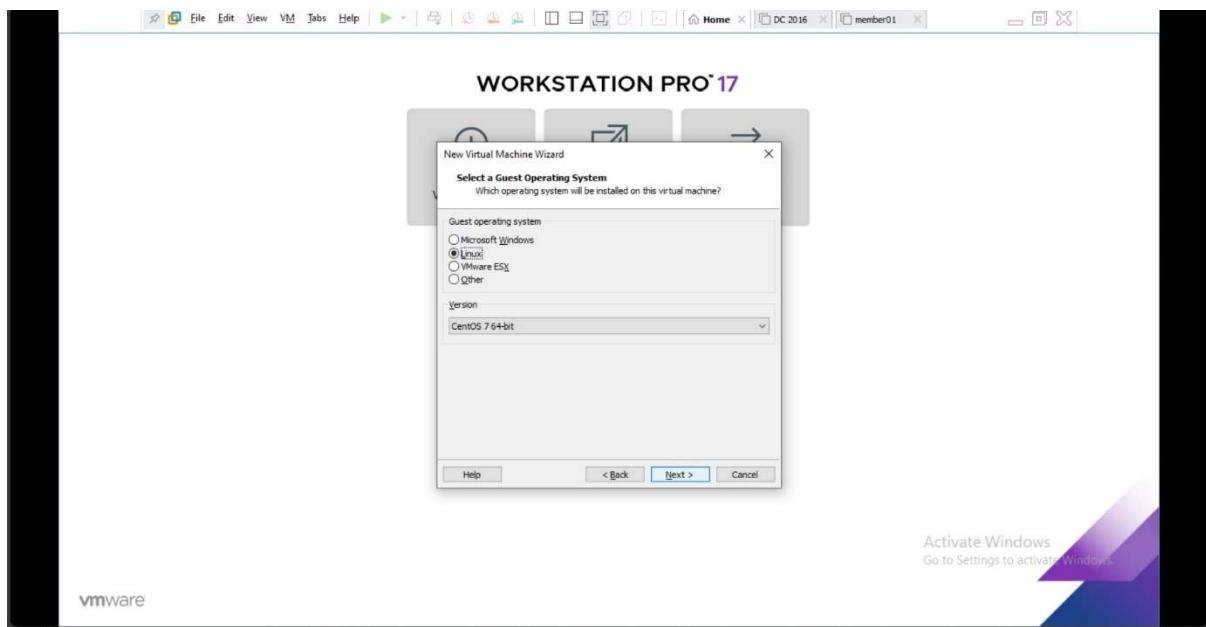
- Use VMWare workstation 17 or above to create a new CentOS 7 using text-mode installation.
- Change your linux server name to "LNX-SVR-01" using NMTUI command. Change the IP address on linux to 192.168.10.10/24.
- Install the packages using YUM package manager.
- Use appropriate commands to start and kill the ‘yes’ process and verify.

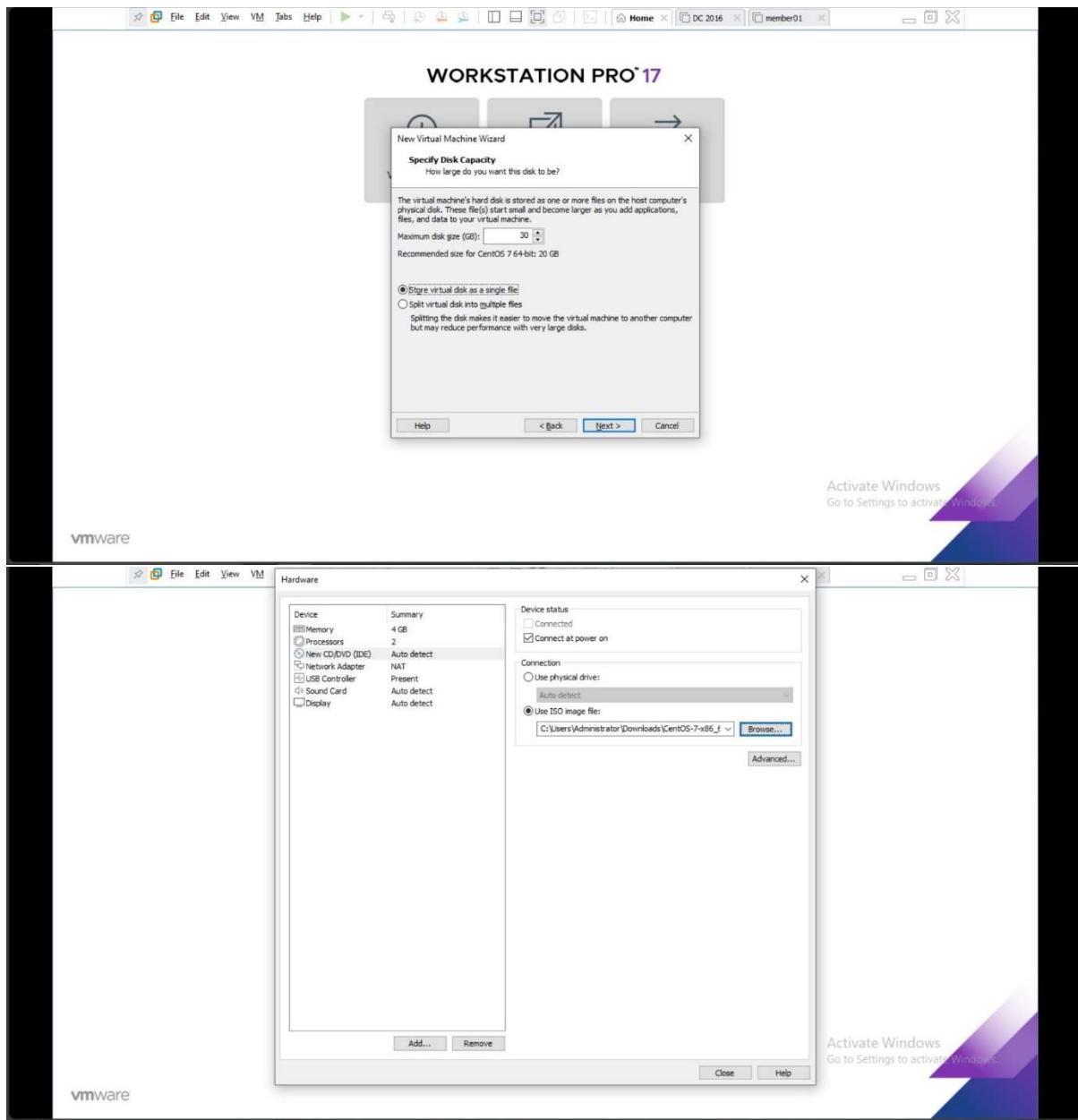
## Project deliverables:

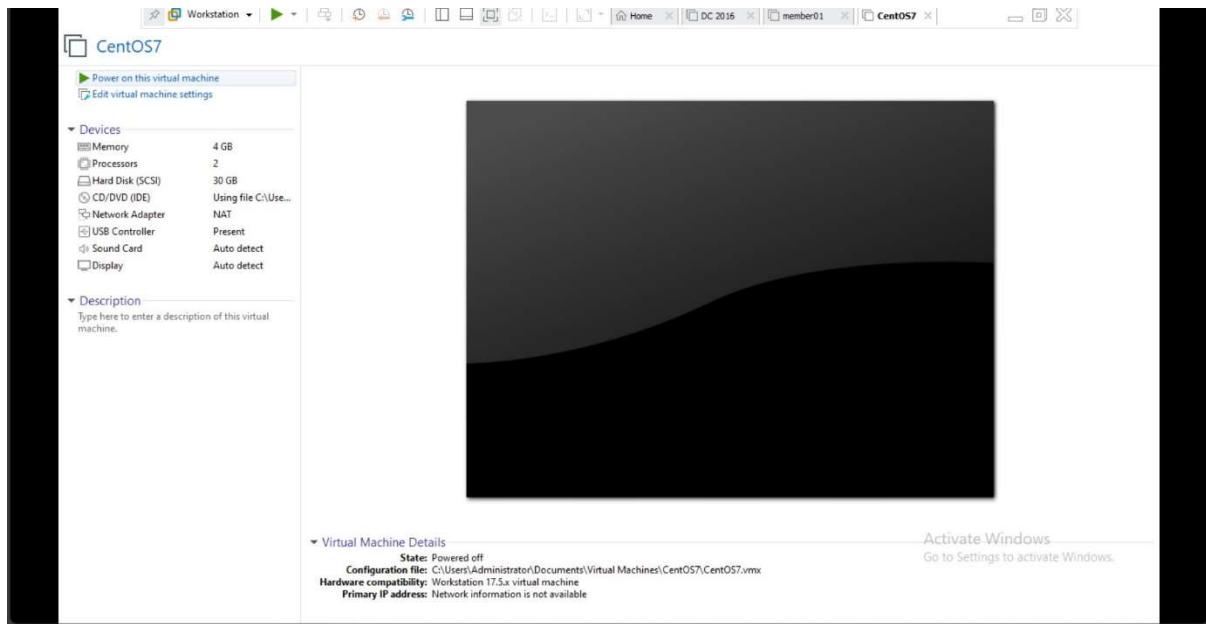
- Create document (take snapshots) installation of linux server.
- Create document (take snapshots) of LVM creation.
- Create document (take snapshots) of installation of packages using YUM command.
- Create document (take snapshots) of all process related commands.

### 1. Install CentOS 7 server

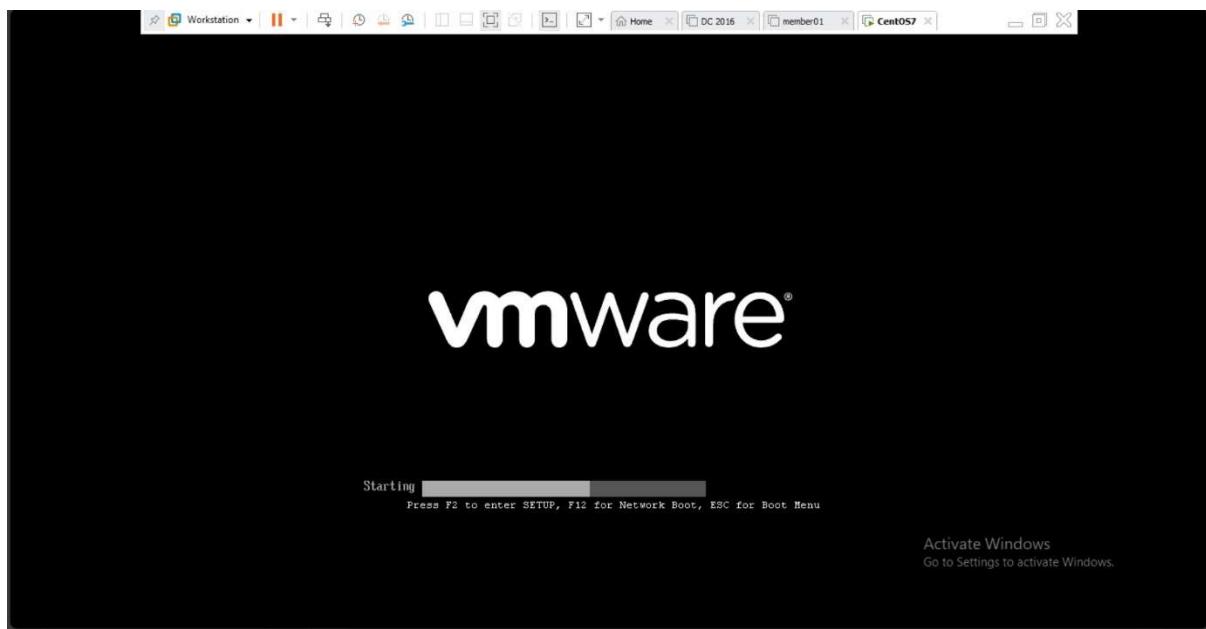








## 2. Choose the Text mode installation



```
Starting Device-Mapper Multipath Device Controller...
[ OK ] Started Device-Mapper Multipath Device Controller.
[ OK ] Started udev Wait for Complete Device Initialization.
      Starting Activation of DM RAID sets...
[ OK ] Started Activation of DM RAID sets.
[ OK ] Reached target Local Encrypted Volumes.
[ OK ] Reached target Local File Systems.
      Starting Tell Pimouth To Write Out Runtime Data...
      Starting Migrate local SELinux policy changes ... old store structure to the new structure...
      Starting Rebuild Journal Catalog...
      Starting Import network configuration from initramfs...
[ OK ] Imported Tell Pimouth To Write Out Runtime Data.
[ OK ] Migrated local SELinux policy changes ... old store structure to the new structure.
[ OK ] Reached target Local SELinux policy Catalog.
      Starting Update Is Completed...
      Starting Update Is Completed.
[ OK ] Started Import network configuration from initramfs.
      Starting Create Volatile Files and Directories...
[ OK ] Started Create Volatile Files and Directories.
      Starting Update Utmp about System Boot/Shutdown...
[ OK ] Started Update Utmp about System Boot/Shutdown.
[ OK ] Reached target System Initialization.
[ OK ] Listening on D-Bus System Message Bus Socket.
[ OK ] Listening on Open-iscsi iscsid Socket.
[ OK ] Listening on Open-iscsi iscsid Socket.
[ OK ] Reached target Sockets.
[ OK ] Reached target Basic System.
      Starting Wait for Plymouth Boot Screen to Quiet...
      Starting pre-anaconda logging service...
[ OK ] Started anaconda NetworkManager configuration.
      Starting Login Service...
      Starting Service enabling compressing RRM with zRam...
      Starting Network Manager...
      Starting Dump dmesg to /var/log/dmesg...
      Starting Terminate Plymouth Boot Screen...
[ OK ] Started Hardware RNG Entropy Gatherer Daemon.

-
```

Activate Windows  
Go to Settings to activate Windows.

```
Starting installer, one moment...
anaconda 21.40.22.159-1 for CentOS 7 started.
* Installation log files are stored in /tmp during the installation
* serial logs available via TTY:
* when reporting a bug add logs from /tmp as separate text/plain attachments
11:39:13 Not asking for UNC because we don't have a network
=====
Installation
1) [x] Language settings           2) [!] Time settings
   (English (United States))       (Timezone is not set.)
3) [!] Installation source        4) [!] Software selection
   (Processing...)
5) [!] Installation Destination   6) [x] Kdump
   (No disks selected)           (Kdump is enabled)
7) [ ] Network Configuration      8) [!] Root password
   (Not connected)                (Password is not set.)
9) [!] User creation
   (No user will be created)
Please make your choice from above [q] to quit [b] to begin installation [r] to refresh:
```

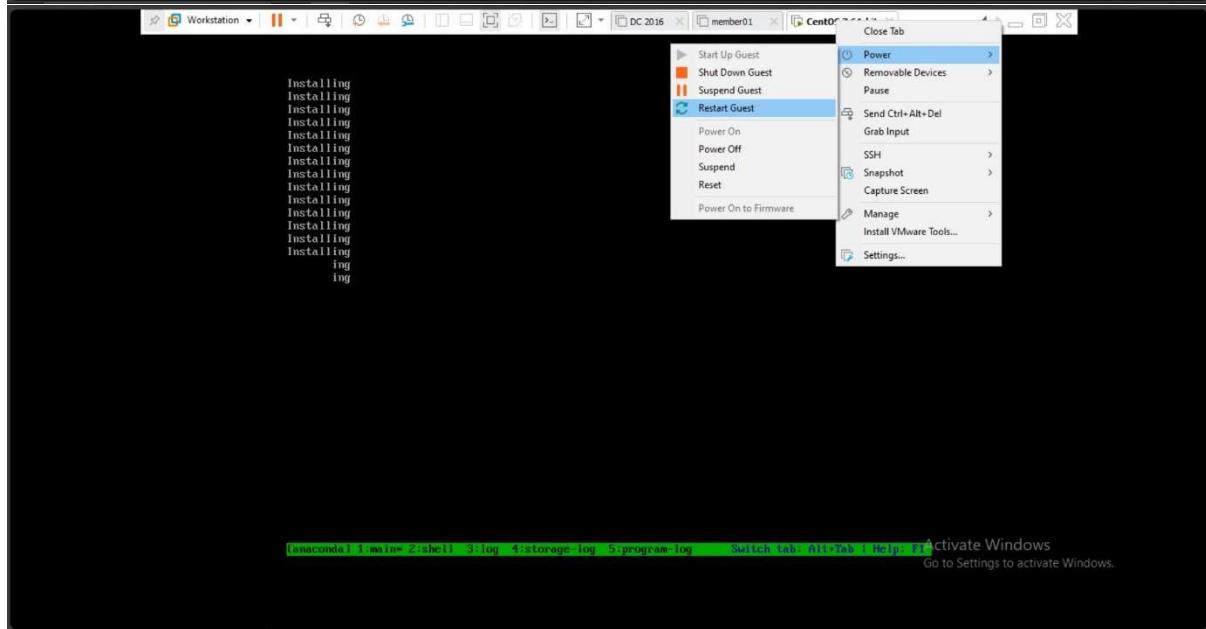
[anaconda] 1:main# Z:\shell 3:log 4:storage-log 5:program-log Switch tab: Alt+Tab | Help: F1 Activate Windows
Go to Settings to activate Windows.

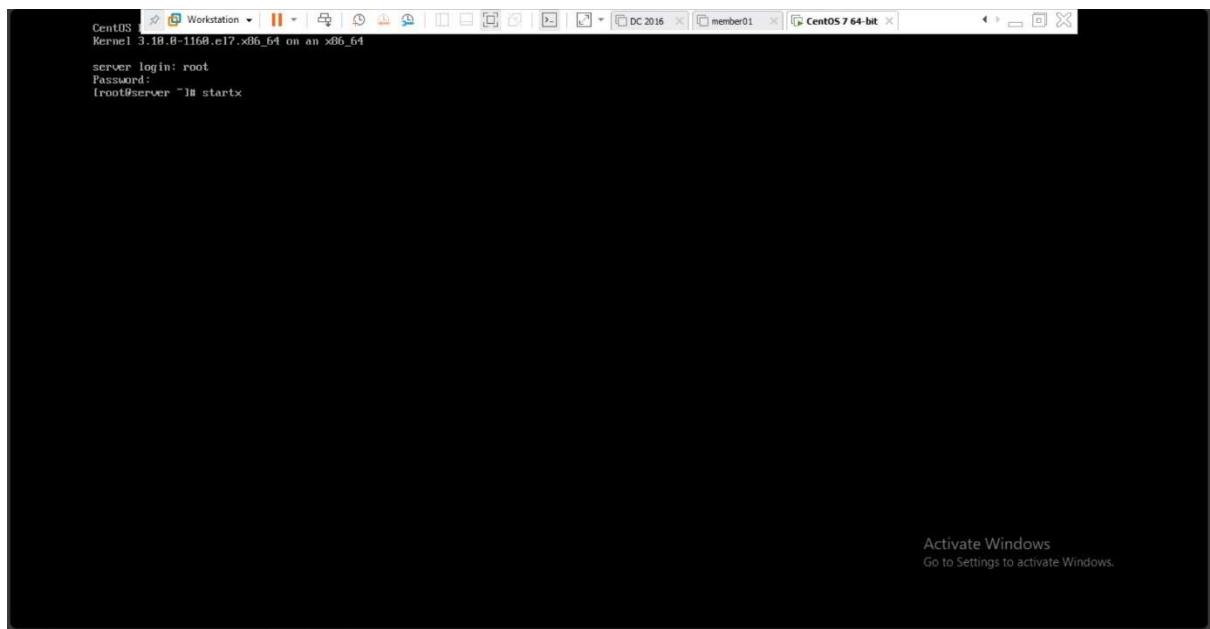
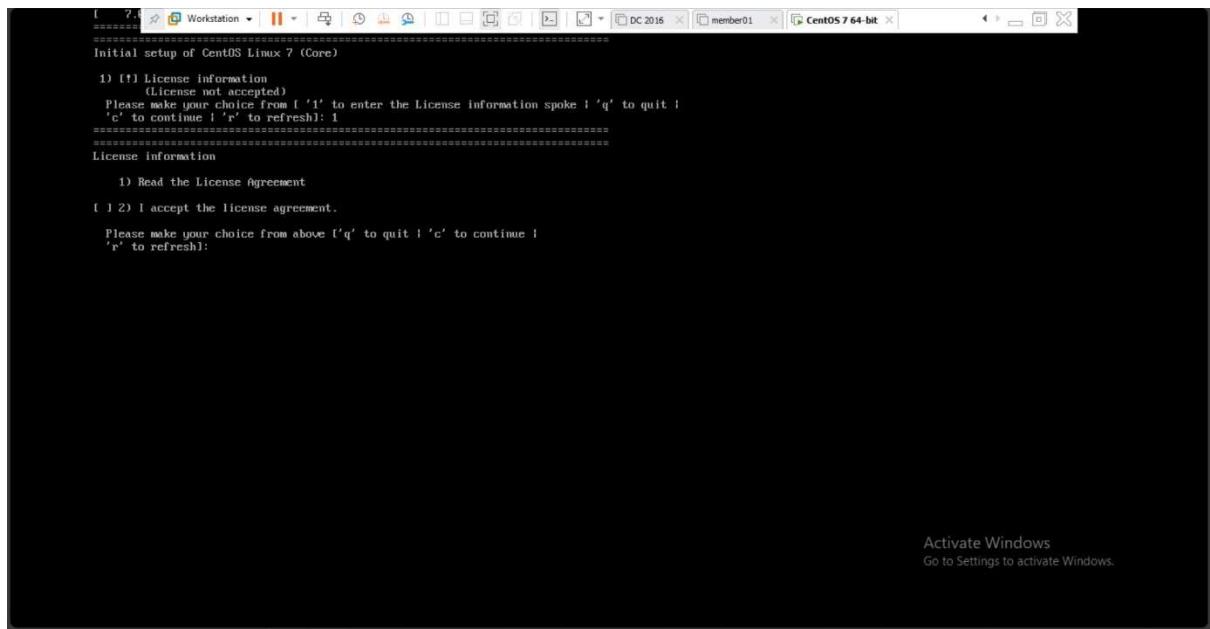
```
Workstation | DC 2016 | member01 | CentOS | Home | Log | Storage | Program | Help | F1: activate Windows Go to Settings to activate Windows.

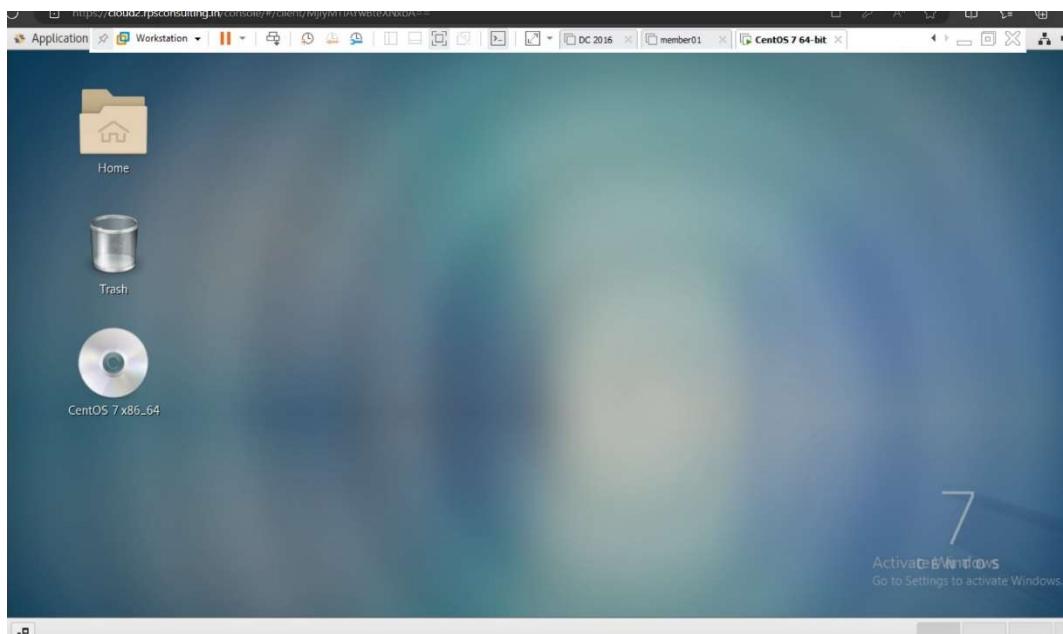
1) [x] Language settings (English (United States))
2) [x] Time settings (Asia/Kolkata timezone)
3) [x] Installation source (Local media)
4) [x] Software selection (Server with GUI)
5) [x] Installation Destination (Automatic partitioning selected)
6) [x] Kdump (Kdump is enabled)
7) [x] Network configuration (Wired (ens3) connected)
8) [x] Root password (Password is set.)
9) [x] User creation (Administrator awani will be created)

Please make your choice from above ('q' to quit ! 'b' to begin installation ! 'r' to refresh):
Please make your choice from above ('q' to quit ! 'b' to begin installation ! 'r' to refresh): b
=====
Progress
Setting up the installation environment
Creating disklabel on /dev/sda
Creating xfs on /dev/sda1
Creating lvmv on /dev/sda2
Creating swap on /dev/mapper/centos-swap
Creating xfs on /dev/mapper/centos-root
Running pre-installation scripts
Starting package installation process

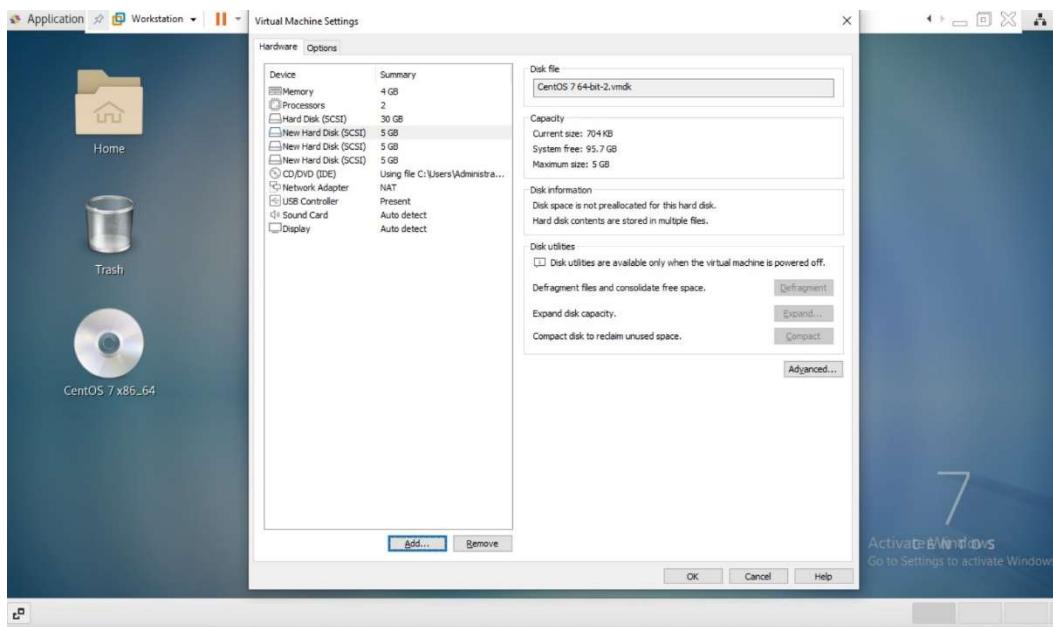
[anaconda] 1:main* Z:shell 3:log 4:storage-log 5:program-log Switch tab: Alt+Tab | Help: F1: activate Windows
Go to Settings to activate Windows.
```







### 3. Attach 3 Disks and Create LVMs



```
[root@server ~]# lsblk
NAME   MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda      8:0    0  30G  0 disk 
└─sda1   8:1    0   1G  0 part /boot
└─sda2   8:2    0  29G  0 part
  ├─centos-root 253:0    0 26G  0 lvm  /
  └─centos-swap 253:1    0   3G  0 lvm  [SWAP]
sdb      8:16   0   5G  0 disk 
sdc      8:32   0   5G  0 disk 
sdd      8:48   0   5G  0 disk 
sr0     11:0    1 4.4G  0 rom  /run/media/root/CentOS 7 x86_64
[root@server ~]#
```

Activate Windows  
Go to Settings to activate Windows.

```
[root@server ~]# lsblk
NAME      MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda        8:0    0   30G  0 disk 
└─sda1     8:1    0   1G  0 part /boot
  └─sda2     8:2    0   29G  0 part
    ├─centos-root 253:0    0   26G  0 lvm  /
    └─centos-swap 253:1    0   3G  0 lvm  [SWAP]
sdb        8:16   0   5G  0 disk 
└─sdb1     8:17   0   5G  0 part
sdc        8:32   0   5G  0 disk 
└─sdc1     8:33   0   5G  0 part
sdd        8:48   0   5G  0 disk 
└─sdd1     8:49   0   5G  0 part
sr0       11:0    1  4.4G  0 rom   /run/media/root/CentOS 7 x86_64
[root@server ~]#
```

---

ANSWER

```
Application Workstation DC 2016 member01 CentOS 7 64-bit
root@server:~#
File Edit View Search Terminal Help
[root@server ~]# pvs
PV   VG   Fmt Attr PSize  PFree
/dev/sda2 centos lvm2 a-- <29.00g  0
[root@server ~]# pvcreate /dev/sdb1 /dev/sdc1 /dev/sdd1
Physical volume "/dev/sdb1" successfully created.
Physical volume "/dev/sdc1" successfully created.
Physical volume "/dev/sdd1" successfully created.
[root@server ~]# pvs
PV   VG   Fmt Attr PSize  PFree
/dev/sda2 centos lvm2 a-- <29.00g  0
/dev/sdb1    lvm2 --- <5.00g <5.00g
/dev/sdc1    lvm2 --- <5.00g <5.00g
/dev/sdd1    lvm2 --- <5.00g <5.00g
[root@server ~]#
```

CentOS 7 64-bit - VMware Workstation

File Edit View Search Terminal Help

[root@server ~]# vgcreate vg1 /dev/sdb1 /dev/sdc1 /dev/sdd1  
Volume group "vg1" successfully created

[root@server ~]# vgs

| VG     | #PV | #LV | #SN | Attr   | VSize   | VFree   |
|--------|-----|-----|-----|--------|---------|---------|
| centos | 1   | 2   | 0   | wz--n- | <29.00g | 0       |
| vg1    | 3   | 0   | 0   | wz--n- | <14.99g | <14.99g |

[root@server ~]#

root@server:~

Activate Windows  
Go to Settings > activate Windows.

Applications Places Terminal

Mon 03:56

File Edit View Search Terminal Help

[root@server ~]# lvcreate -l 47%FREE -n lv1 vg1  
Logical volume "lv1" created.

[root@server ~]# lvcreate -l 100%FREE -n lv2 vg1  
Logical volume "lv2" created.

[root@server ~]# vgs

| VG     | #PV | #LV | #SN | Attr   | VSize   | VFree |
|--------|-----|-----|-----|--------|---------|-------|
| centos | 1   | 2   | 0   | wz--n- | <29.00g | 0     |
| vg1    | 3   | 2   | 0   | wz--n- | <14.99g | 0     |

[root@server ~]# lsblk

| NAME          | MAJ:MIN | RM | SIZE | RO | TYPE | MOUNTPOINT |
|---------------|---------|----|------|----|------|------------|
| sda           | 8:0     | 0  | 30G  | 0  | disk |            |
| └─sda1        | 8:1     | 0  | 1G   | 0  | part | /boot      |
| └─sda2        | 8:2     | 0  | 29G  | 0  | part |            |
| └─centos-root | 253:0   | 0  | 26G  | 0  | lvm  | /          |
| └─centos-swap | 253:1   | 0  | 3G   | 0  | lvm  | [SWAP]     |
| sdb           | 8:16    | 0  | 5G   | 0  | disk |            |
| └─sdb1        | 8:17    | 0  | 5G   | 0  | part |            |
| └─vg1-lv1     | 253:2   | 0  | 7G   | 0  | lvm  |            |
| sdc           | 8:32    | 0  | 5G   | 0  | disk |            |
| └─sdcl        | 8:33    | 0  | 5G   | 0  | part |            |
| └─vg1-lv1     | 253:2   | 0  | 7G   | 0  | lvm  |            |
| └─vg1-lv2     | 253:3   | 0  | 8G   | 0  | lvm  |            |
| sdd           | 8:48    | 0  | 5G   | 0  | disk |            |
| └─sdd1        | 8:49    | 0  | 5G   | 0  | part |            |
| └─vg1-lv2     | 253:3   | 0  | 8G   | 0  | lvm  |            |

root@server:~

Applications Places Terminal Mon 03:56

root@server:~

```
File Edit View Search Terminal Help
[root@server ~]# lsblk
NAME      MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda        8:0    0   30G  0 disk 
└─sda1     8:1    0   1G  0 part /boot
sda2      8:2    0   29G  0 part 
  ├─centos-root 253:0  0   26G  0 lvm   /
  └─centos-swap 253:1  0   3G  0 lvm   [SWAP]
sdb        8:16   0   5G  0 disk 
└─sdb1     8:17   0   5G  0 part 
  └─vg1-lv1   253:2  0   7G  0 lvm 
sdc        8:32   0   5G  0 disk 
└─sdc1     8:33   0   5G  0 part 
  └─vg1-lv1   253:2  0   7G  0 lvm 
  └─vg1-lv2   253:3  0   8G  0 lvm 
sdd        8:48   0   5G  0 disk 
└─sdd1     8:49   0   5G  0 part 
  └─vg1-lv2   253:3  0   8G  0 lvm 
sr0       11:0    1  4.4G 0 rom   /run/media/root/CentOS 7 x86_64
[root@server ~]#
```

root@server:~

Applications Places Terminal Mon 04:02

root@server:~

```
File Edit View Search Terminal Help
[root@server ~]# mkfs.xfs /dev/vg1/lv1
meta-data=/dev/vg1/lv1      isize=512    agcount=4, agsize=461568 blks
                           sectsz=512  attr=2, projid32bit=1
                           =          crc=1    finobt=0, sparse=0
data      =           bsize=4096   blocks=1846272, imaxpct=25
                           =          sunit=0   swidth=0 blks
naming   =version 2      bsize=4096   ascii-ci=0 ftype=1
log       =internal log   bsize=4096   blocks=2560, version=2
                           =          sectsz=512  sunit=0 blks, lazy-count=1
realtime =none           extsz=4096   blocks=0, rtextents=0
[root@server ~]#
```

```
[root@server ~]# mkfs.ext4 /dev/vg1/lv1
mke2fs 1.42.9 (28-Dec-2013)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
462384 inodes, 1846272 blocks
92313 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=1891631104
57 block groups
32768 blocks per group, 32768 fragments per group
8112 inodes per group
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632

Allocating group tables: done
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done

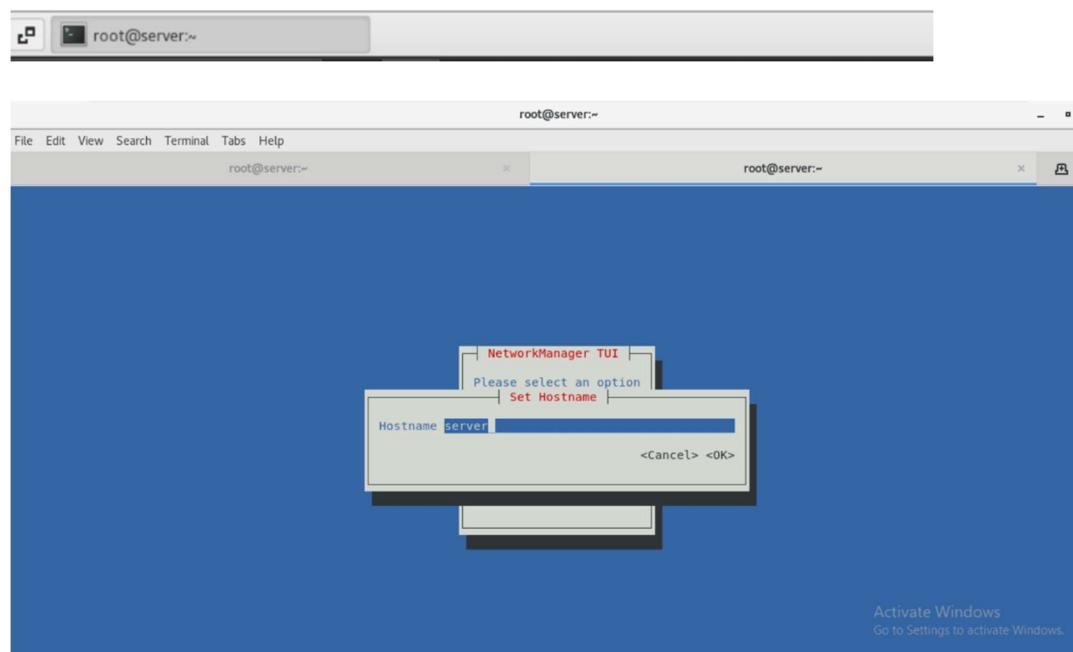
[root@server ~]#
```

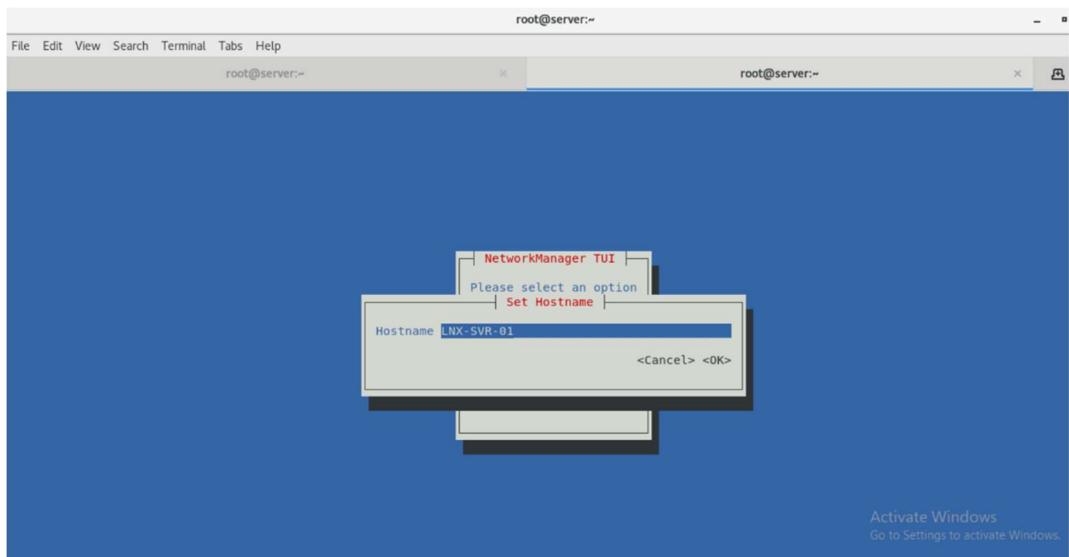
```
[root@server ~]# lsblk
NAME      MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda        8:0     0   30G  0 disk 
└─sda1     8:1     0   1G   0 part /boot
└─sda2     8:2     0   29G  0 part 
  ├─centos-root 253:0   0   26G  0 lvm  /
  └─centos-swap 253:1   0   3G   0 lvm  [SWAP]
sdb        8:16    0   5G   0 disk 
└─sdb1     8:17    0   5G   0 part 
  └─vg1-lv1   253:2   0   7G   0 lvm 
sdc        8:32    0   5G   0 disk 
└─sdc1     8:33    0   5G   0 part 
  └─vg1-lv1   253:2   0   7G   0 lvm 
  └─vg1-lv2   253:3   0   8G   0 lvm 
sdd        8:48    0   5G   0 disk 
└─sdd1     8:49    0   5G   0 part 
  └─vg1-lv2   253:3   0   8G   0 lvm 
sr0       11:0     1  4.4G  0 rom  /run/media/root/CentOS 7 x86_64

[root@server ~]#
```

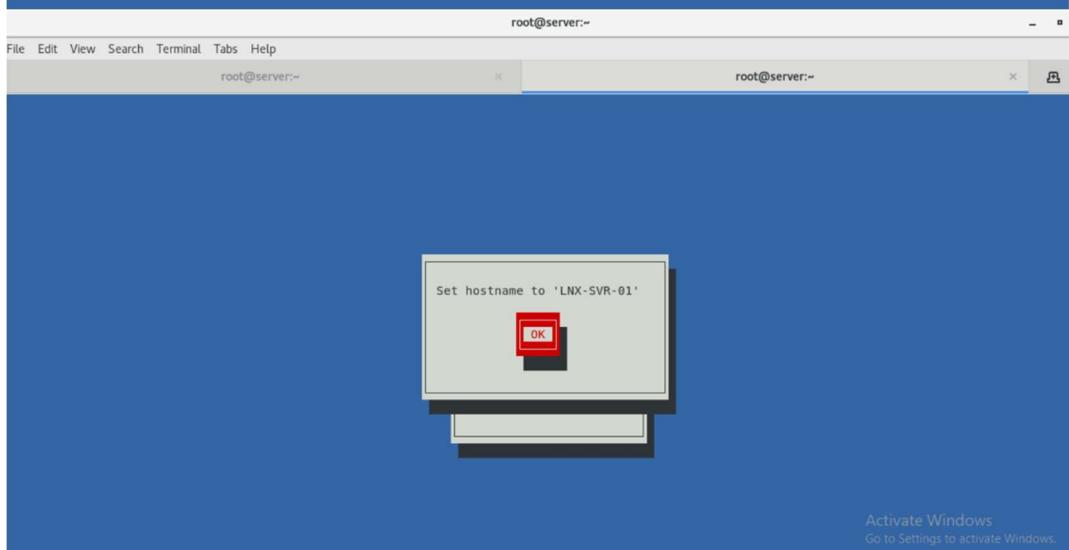
#### 4. Change the Hostname and IP address

```
File Edit View Search Terminal Tabs Help
root@server:~ root@server:~
root@server ~]# nmtui
root@server ~]#
```

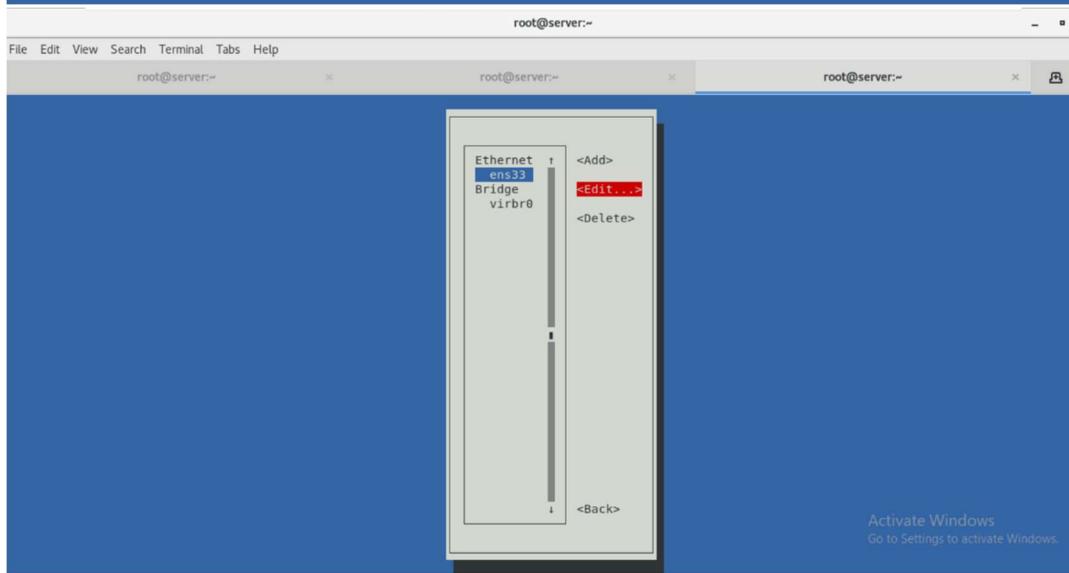




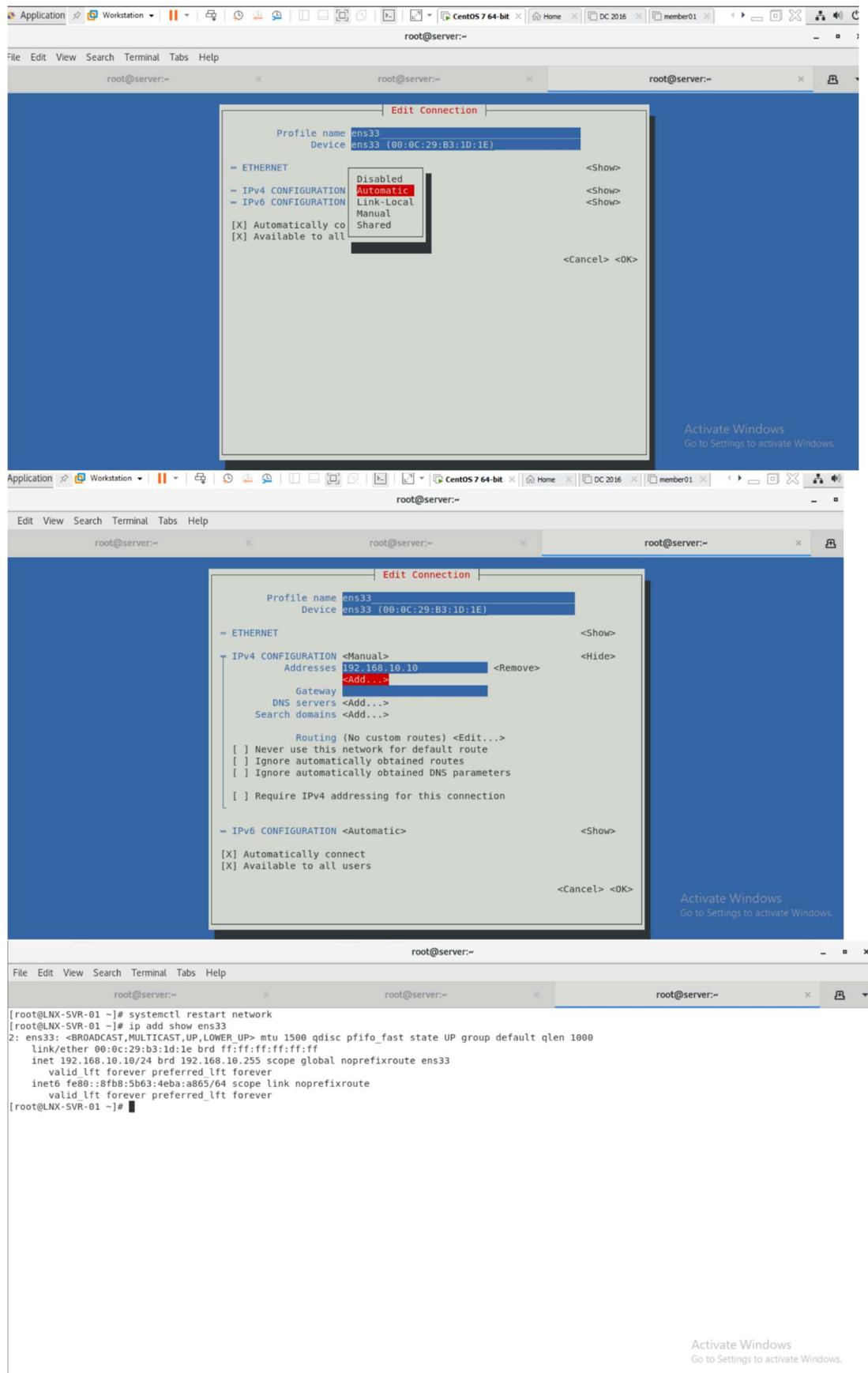
Activate Windows  
Go to Settings to activate Windows.



Activate Windows  
Go to Settings to activate Windows.



Activate Windows  
Go to Settings to activate Windows.



root@server:~

File Edit View Search Terminal Tabs Help

root@server:~

root@server:~

```
[root@LNX-SVR-01 ~]# systemctl restart network
[root@LNX-SVR-01 ~]# ip addr show ens33
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 00:0c:29:b3:1d:1e brd ff:ff:ff:ff:ff:ff
        inet 192.168.10.24 brd 192.168.10.255 scope global noprefixroute ens33
            valid_lft forever preferred_lft forever
            inet6 fe80::8fb8:5b63:4eba:a865/64 scope link noprefixroute
                valid_lft forever preferred_lft forever
[root@LNX-SVR-01 ~]#
```

Activate Windows  
Go to Settings to activate Windows.

root@server:~

File Edit View Search Terminal Tabs Help

root@server:~

root@server:~

```
[root@LNX-SVR-01 ~]# ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
    inet 192.168.10.10  netmask 255.255.255.0  broadcast 192.168.10.255
        inet6 fe80::8fb8:5b63:4eba:a865  prefixlen 64  scopeid 0x20<link>
            ether 00:0c:29:b3:1d:1e  txqueuelen 1000  (Ethernet)
            RX packets 2122  bytes 138985 (135.7 KiB)
            RX errors 0  dropped 0  overruns 0  frame 0
            TX packets 577  bytes 56621 (54.7 KiB)
            TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
    inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
            loop  txqueuelen 1000  (Local Loopback)
            RX packets 96  bytes 7776 (7.5 KiB)
            RX errors 0  dropped 0  overruns 0  frame 0
            TX packets 96  bytes 7776 (7.5 KiB)
            TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0

virbr0: flags=4099<UP,BROADCAST,MULTICAST>  mtu 1500
    inet 192.168.122.1  netmask 255.255.255.0  broadcast 192.168.122.255
        ether 52:54:00:3b:c9:98  txqueuelen 1000  (Ethernet)
        RX packets 0  bytes 0 (0.0 B)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 0  bytes 0 (0.0 B)
        TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0

[root@LNX-SVR-01 ~]#
```

Activate Windows  
Go to Settings to activate Windows.

root@server:~

File Edit View Search Terminal Tabs Help

root@server:~

root@server:~

```
[root@LNX-SVR-01 ~]# ifconfig | grep inet
    inet 192.168.10.10  netmask 255.255.255.0  broadcast 192.168.10.255
    inet6 fe80::8fb8:5b63:4eba:a865  prefixlen 64  scopeid 0x20<link>
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
            inet 192.168.122.1  netmask 255.255.255.0  broadcast 192.168.122.255
[root@LNX-SVR-01 ~]#
```

Activate Windows  
Go to Settings to activate Windows.

5. Start and kill “yes” process

```
File Edit View Search Terminal Tabs Help  
root@server:~  
[root@LNX-SVR-01 ~]# yes
```

```
root@server:  
File Edit View Search Terminal Tabs Help  
root@server:~ × root@server:~ ×  
[root@LNX-SVR-01 ~]# pgrep yes  
6741  
[root@LNX-SVR-01 ~]# █
```

# Project Task 6: -

## Objective:

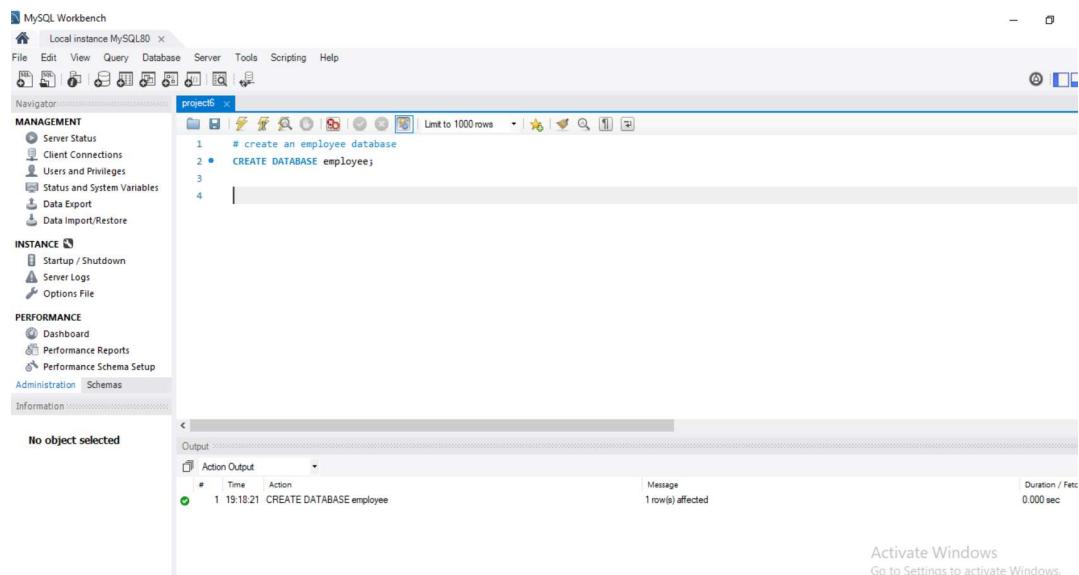
Use MySQL workbench and create an employee database. Create a table empdetails (emp\_id, Name, Age, Salary, Position). Create another table emplocation (emp\_id, location). Create primary key & foreign key in the tables accordingly and perform CRUD operation on the table. Use joins to display “emp\_id, Name, Age, Salary, location” using primary key & foreign key concept.

## Setup:

- Use existing MySQL workbench setup.
- Create a database.
- Create 2 tables in it & verify.
- Insert data (according to your wish) & verify.
- Display (emp\_id, Name, Age, Salary, location) as a single output.

## Project deliverables:

- Create document (take snapshots) of creating database & table.
- Create document (take snapshots) of joined table as output



The screenshot shows the MySQL Workbench interface with the following details:

- Top Bar:** MySQL Workbench, Local instance MySQL80, File, Edit, View, Query, Database, Server, Tools, Scripting, Help.
- Toolbar:** Standard MySQL icons for connection, schema browser, object browser, etc.
- Navigator:** project6
- Left Sidebar:**
  - MANAGEMENT:** Server Status, Client Connections, Users and Privileges, Status and System Variables, Data Export, Data Import/Restore.
  - INSTANCE:** Startup / Shutdown, Server Logs, Options File.
  - PERFORMANCE:** Dashboard, Performance Reports, Performance Schema Setup.
  - Administration:** Schemas (selected), Information.
- Central Area:** SQL Editor with the following content:

```
1  # create an employee database
2  ● CREATE DATABASE employee;
3
4
```
- Output Panel:** Action Output table showing the result of the CREATE DATABASE command.

| # | Time     | Action                   | Message           | Duration / Fetch |
|---|----------|--------------------------|-------------------|------------------|
| 1 | 19:18:21 | CREATE DATABASE employee | 1 row(s) affected | 0.000 sec        |
- Bottom Right:** Activate Windows message.

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator project\*

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**INSTANCE**

- Startup / Shutdown
- Server Logs
- Options File

**PERFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

No object selected

Output

Action Output

| # | Time     | Action                   | Message           | Duration / Fetch |
|---|----------|--------------------------|-------------------|------------------|
| 1 | 19:18:21 | CREATE DATABASE employee | 1 row(s) affected | 0.000 sec        |
| 2 | 19:21:36 | USE employee             | 0 row(s) affected | 0.000 sec        |

Activate Windows  
Go to Settings to activate Windows.

Object Info Session

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator project\*

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**INSTANCE**

- Startup / Shutdown
- Server Logs
- Options File

**PERFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

No object selected

Output

Action Output

| # | Time     | Action   | Message           | Duration / Fetch |
|---|----------|--|-------------------|------------------|
| 1 | 19:58:37 | CREATE TABLE empdetails( emp_id INT AUTO_INCREMENT PRIMARY KEY, Nam VARCHAR(30) NOT NULL, Age INT, Salary DECIMAL (10,2), Position VARCHAR(30) ) | 0 row(s) affected | 0.031 sec        |

Activate Windows  
Go to Settings to activate Windows.

Object Info Session

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator project\*

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**INSTANCE**

- Startup / Shutdown
- Server Logs
- Options File

**PERFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

No object selected

Output

Action Output

| # | Time     | Action   | Message           | Duration / Fetch      |
|---|----------|--|-------------------|-----------------------|
| 1 | 19:58:37 | CREATE TABLE empdetails( emp_id INT AUTO_INCREMENT PRIMARY KEY, Nam VARCHAR(30) NOT NULL, Age INT, Salary DECIMAL (10,2), Position VARCHAR(30) ) | 0 row(s) affected | 0.031 sec             |
| 2 | 20:03:35 | SELECT * FROM empdetails LIMIT 0, 1000   | 0 row(s) returned | 0.000 sec / 0.000 sec |

Activate Windows  
Go to Settings to activate Windows.

MySQL Workbench

File Edit View Query Database Server Tools Scripting Help

Navigator: project\*

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**INSTANCE**

- Startup / Shutdown
- Server Logs
- Options File

**PERFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

Information

No object selected

Output

```

30
31
32  # Inserting into empdetails
33  INSERT INTO empdetails (emp_id, Nam, Age, Salary, Position) VALUES
34  (1,"John Thomas", 30, 60000.00, "Developer"),
35  (2,"Manu Kumar", 29, 55000.00, "Designer"),
36  (3,"cristina", 25, 70000.00, "Software Developer"),
37  (4,"Aswani", 21, 75000.00, "prompt engineer")
38
39
40
41
42
43
44
45

```

Action Output

| # | Time     | Action  | Message  | Duration / Fetch |
|---|----------|---|--|------------------|
| 1 | 23:08:08 | INSERT INTO empdetails (emp_id, Nam, Age, Salary, Position) VALUES (1,"John Thomas", 30, 60000.00, "Developer") | 4 row(s) affected Records: 4 Duplicates: 0 Warnings: 0 | 0.015 sec        |

Activate Windows  
Go to Settings to activate Windows.

MySQL Workbench

File Edit View Query Database Server Tools Scripting Help

Navigator: project\*

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**INSTANCE**

- Startup / Shutdown
- Server Logs
- Options File

**PERFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

Information

No object selected

Output

```

39
40
41  # To list the table
42  SELECT * FROM empdetails;
43
44
45

```

Result Grid

| emp_id | Nam         | Age | Salary   | Position           |
|--------|-------------|-----|----------|--------------------|
| 1      | John Thomas | 30  | 60000.00 | Developer          |
| 2      | Manu Kumar  | 29  | 55000.00 | Designer           |
| 3      | cristina    | 25  | 70000.00 | Software Developer |
| 4      | Aswani      | 21  | 75000.00 | prompt engineer    |

Action Output

| # | Time     | Action                                 | Message           | Duration / Fetch  |
|---|----------|--|-------------------|-------------------|
| 1 | 23:27:47 | SELECT * FROM empdetails LIMIT 0, 1000 | 4 row(s) returned | 0.000 sec / 0 sec |

Activate Windows  
Go to Settings to activate Windows.

MySQL Workbench

File Edit View Query Database Server Tools Scripting Help

Navigator: project\*

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**INSTANCE**

- Startup / Shutdown
- Server Logs
- Options File

**PERFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

Information

No object selected

Output

```

48
49  #create table emploc
50  CREATE TABLE emplocation (
51    emp_id INT,
52    location VARCHAR(30),
53    FOREIGN KEY(emp_id) REFERENCES empdetails(emp_id)
54  );
55

```

Action Output

| # | Time     | Action  | Message           | Duration / Fetch      |
|---|----------|---|-------------------|-----------------------|
| 1 | 23:27:47 | SELECT * FROM empdetails LIMIT 0, 1000  | 4 row(s) returned | 0.000 sec / 0.000 sec |
| 2 | 23:29:23 | CREATE TABLE emplocation ( emp_id INT, location VARCHAR(30), FOREIGN KEY(emp_id) REFERENCES empdetails(emp_id) ); | 0 row(s) affected | 0.078 sec             |

Activate Windows  
Go to Settings to activate Windows.

MySQL Workbench

File Edit View Query Database Server Tools Scripting Help

Navigator project5\*

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**INSTANCE**

- Startup / Shutdown
- Server Logs
- Options File

**PERFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

Information

No object selected

Output

```

39
40
41    # To list the table
42 •   SELECT * FROM emplocation;
43
44
45

```

Action Output

| # | Time     | Action   | Message           | Duration / Fetch |
|---|----------|--|-------------------|------------------|
| 1 | 23:27:47 | SELECT * FROM emplocation LIMIT 0, 1000  | 4 row(s) returned | 0.000 sec / 0.00 |
| 2 | 23:29:23 | CREATE TABLE emplocation ( emp_id INT, location VARCHAR(30), FOREIGN KEY(emp_id... | 0 row(s) affected | 0.078 sec        |
| 3 | 23:34:22 | SELECT * FROM emplocation LIMIT 0, 1000  | 0 row(s) returned | 0.000 sec / 0.00 |

Activate Windows  
Go to Settings to activate Windows.

MySQL Workbench

File Edit View Query Database Server Tools Scripting Help

Navigator project6\*

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**INSTANCE**

- Startup / Shutdown
- Server Logs
- Options File

**PERFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

Information

No object selected

Output

```

45
46
47    # inserting the data on emploc
48
49 •   INSERT INTO emplocation (emp_id, location) VALUES
50     (1,"London"),
51     (2,"chennai"),
52     (3,"USA"),
53     (4,"India")
54
55
56
57
58
59
60

```

Action Output

| # | Time     | Action  | Message  | Duration / Fetch |
|---|----------|---|--|------------------|
| 1 | 23:41:44 | INSERT INTO emplocation (emp_id, location) VALUES (1,"London"), (2,"chennai"), (3,"USA"...) | 4 row(s) affected Records: 4 Duplicates: 0 Warnings: 0 | 0.016 sec        |

Activate Windows  
Go to Settings to activate Windows.

MySQL Workbench

File Edit View Query Database Server Tools Scripting Help

Navigator project6\*

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**INSTANCE**

- Startup / Shutdown
- Server Logs
- Options File

**PERFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

Information

No object selected

Output

```

54    # To list the table
55 •   SELECT * FROM emplocation;
56
57
58
59
60

```

Action Output

| # | Time     | Action  | Message  | Duration / Fetch |
|---|----------|---|--|------------------|
| 1 | 23:41:44 | INSERT INTO emplocation (emp_id, location) VALUES (1,"London"), (2,"chennai"), (3,"USA"...) | 4 row(s) affected Records: 4 Duplicates: 0 Warnings: 0 | 0.016 sec        |
| 2 | 23:43:19 | SELECT * FROM emplocation LIMIT 0, 1000   | 4 row(s) returned                                      | 0.000 sec / 0.00 |

Activate Windows  
Go to Settings to activate Windows.

MySQL Workbench

File Edit View Query Database Server Tools Scripting Help

Navigator: project1

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**INSTANCE**

- Startup / Shutdown
- Server Logs
- Options File

**PERFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

No object selected

Object Info Session

```

58
59
60  #INSERT
61 •  INSERT INTO empdetails (Nam, Age, Salary, Position) VALUES
62 ("Alice", 23, 60000.00, " Project Manager")
63
64
65
66
67
68
69
70
71
72
73
    
```

Output

Action Output

| # | Time     | Action   | Message           | Duration / Fetch |
|---|----------|--|-------------------|------------------|
| 1 | 23:47:23 | INSERT INTO empdetails (Nam, Age, Salary, Position) VALUES ('Alice', 23, 60000.00, ' Project Manager') | 1 row(s) affected | 0.000 sec        |

Activate Windows  
Go to Settings to activate Windows.

MySQL Workbench

File Edit View Query Database Server Tools Scripting Help

Navigator: project1

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**STANCE**

- Startup / Shutdown
- Server Logs
- Options File

**RFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

No object selected

Object Info Session

```

65  # To list the table
66 •  SELECT * FROM empdetails;
67
68
69
70
71
    
```

Result Grid

| emp_id | Nam         | Age | Salary   | Position           |
|--------|-------------|-----|----------|--------------------|
| 1      | John Thomas | 30  | 60000.00 | Developer          |
| 2      | Manu Kumar  | 29  | 55000.00 | Designer           |
| 3      | cristina    | 25  | 70000.00 | Software Developer |
| 4      | Aswari      | 21  | 75000.00 | prompt engineer    |
| 5      | Alice       | 23  | 60000.00 | Project Manager    |

Output

Action Output

| # | Time     | Action                                 | Message           | Duration / Fetch      |
|---|----------|--|-------------------|-----------------------|
| 1 | 23:50:28 | SELECT * FROM empdetails LIMIT 0, 1000 | 5 row(s) returned | 0.000 sec / 0.000 sec |

Activate Windows  
Go to Settings to activate Windows.

MySQL Workbench

File Edit View Query Database Server Tools Scripting Help

Navigator: project1

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**STANCE**

- Startup / Shutdown
- Server Logs
- Options File

**RFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

No object selected

Object Info Session

```

69  # update
70 •  UPDATE empdetails SET Salary = 65000.00 WHERE emp_id = 1;
71
72  # To list the table
73 •  SELECT * FROM empdetails;
74
75
    
```

Result Grid

| emp_id | Nam         | Age | Salary   | Position           |
|--------|-------------|-----|----------|--------------------|
| 1      | John Thomas | 30  | 65000.00 | Developer          |
| 2      | Manu Kumar  | 29  | 55000.00 | Designer           |
| 3      | cristina    | 25  | 70000.00 | Software Developer |
| 4      | Aswari      | 21  | 75000.00 | prompt engineer    |
| 5      | Alice       | 23  | 60000.00 | Project Manager    |

Output

Action Output

| # | Time     | Action  | Message  | Duration / Fetch      |
|---|----------|---|--|-----------------------|
| 1 | 00:03:44 | SELECT * FROM empdetails WHERE position = "prompt engineer" LIMIT 0, 1000 | 1 row(s) returned  | 0.000 sec / 0.000 sec |
| 2 | 00:08:11 | UPDATE empdetails SET Salary = 65000.00 WHERE emp_id = 1                  | 1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0 | 0.000 sec             |
| 3 | 00:08:44 | SELECT * FROM empdetails LIMIT 0, 1000                                    | 5 row(s) returned  | 0.000 sec / 0.000 sec |

Activate Windows  
Go to Settings to activate Windows.

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

project13 x

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**INSTANCE**

- Startup / Shutdown
- Server Logs
- Options File

**PERFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

Information

No object selected

```

67 # read
68 • SELECT * FROM empdetails WHERE position = "prompt engineer";
69
70
71
72
73
    
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: |

| emp_id | Name   | Age | Salary   | Position        |
|--------|--------|-----|----------|-----------------|
| 4      | Aswari | 21  | 75000.00 | prompt engineer |

Action Output

| # | Time     | Action  | Message           | Duration / Fetch    |
|---|----------|---|-------------------|---------------------|
| 1 | 00:03:44 | SELECT * FROM empdetails WHERE position = "prompt engineer" LIMIT 0, 1000 | 1 row(s) returned | 0.000 sec / 0.000 s |

Activate Windows  
Go to Settings to activate Windows.

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

project16 x

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**STANCE**

- Startup / Shutdown
- Server Logs
- Options File

**RFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

Formation

No object selected

```

75 # Delete
76 • DELETE FROM empdetails WHERE emp_id = 8;
77
78
79 # To list the table
80 • SELECT * FROM empdetails;
81
    
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: |

| emp_id | Name        | Age | Salary   | Position           |
|--------|-------------|-----|----------|--------------------|
| 1      | John Thomas | 30  | 65000.00 | Developer          |
| 2      | Manu Kumar  | 29  | 55000.00 | Designer           |
| 3      | cristina    | 25  | 70000.00 | Software Developer |
| 4      | Aswari      | 21  | 75000.00 | prompt engineer    |

Action Output

| # | Time     | Action                                  | Message           | Duration / Fetch  |
|---|----------|---|-------------------|-------------------|
| 1 | 00:13:01 | DELETE FROM empdetails WHERE emp_id = 8 | 1 row(s) affected | 0.015 sec         |
| 2 | 00:13:06 | SELECT * FROM empdetails LIMIT 0, 1000  | 4 row(s) returned | 0.000 sec / 0.000 |

Activate Windows  
Go to Settings to activate Windows.

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

project17 x

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**STANCE**

- Startup / Shutdown
- Server Logs
- Options File

**RFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

ormation

No object selected

```

83
84 # joins
85
86 • SELECT empdetails.emp_id, empdetails.Name, empdetails.Age, empdetails.Salary, emplocation.location
87   FROM empdetails
88   JOIN emplocation ON empdetails.emp_id = emplocation.emp_id;
89
    
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

| emp_id | Name        | Age | Salary   | location |
|--------|-------------|-----|----------|----------|
| 1      | John Thomas | 30  | 65000.00 | London   |
| 2      | Manu Kumar  | 29  | 55000.00 | chennai  |
| 3      | cristina    | 25  | 70000.00 | USA      |
| 4      | Aswari      | 21  | 75000.00 | India    |

Action Output

| # | Time     | Action   | Message | Duration / Fetch    |
|---|----------|--|---------|---------------------|
| 1 | 00:20:17 | SELECT empdetails.emp_id, empdetails.Name, empdetails.Age, empdetails.Salary, emplocation... 4 row(s) returned |         | 0.000 sec / 0.000 s |

Activate Windows  
Go to Settings to activate Windows.

