

# WIPRO NGA Program – Datacenter Batch

Capstone Project Presentation – 06 April 2024

Project Title – Task 1

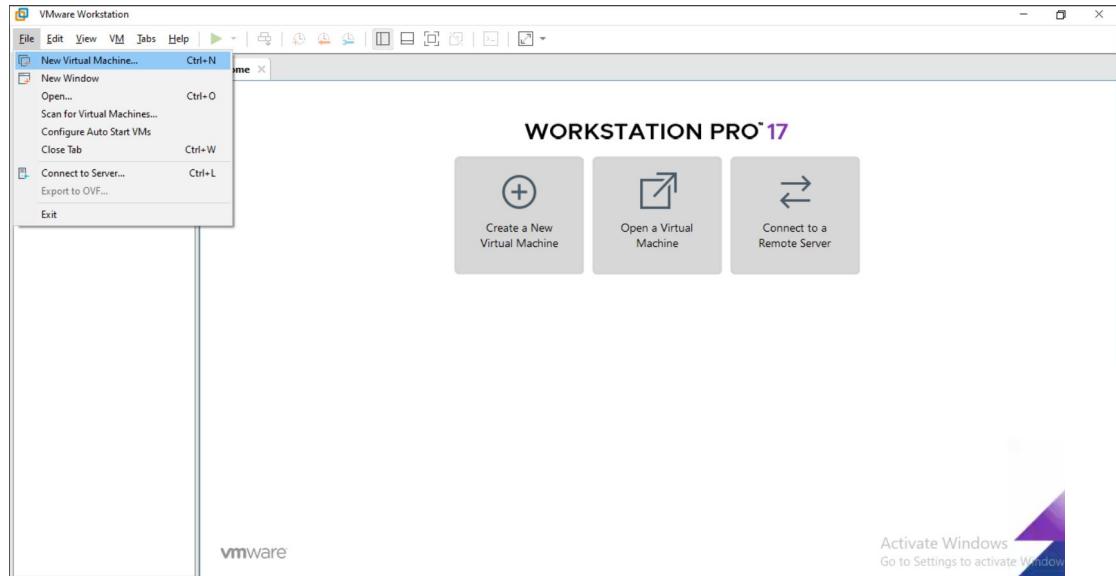
Presented by – Avdhut Sanjay Bhaland

# Objective :

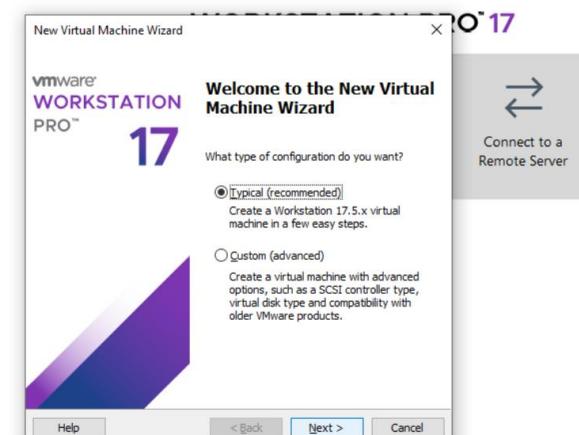
Create a domain controller using domain name as <yourname>.training and create a shared NFS folder (c:\sharables) on domain controller machine with read-only permissions and access this folder on the member machine.

# Create a windows server 2016 as domain controller

## Select New Virtual Machine-

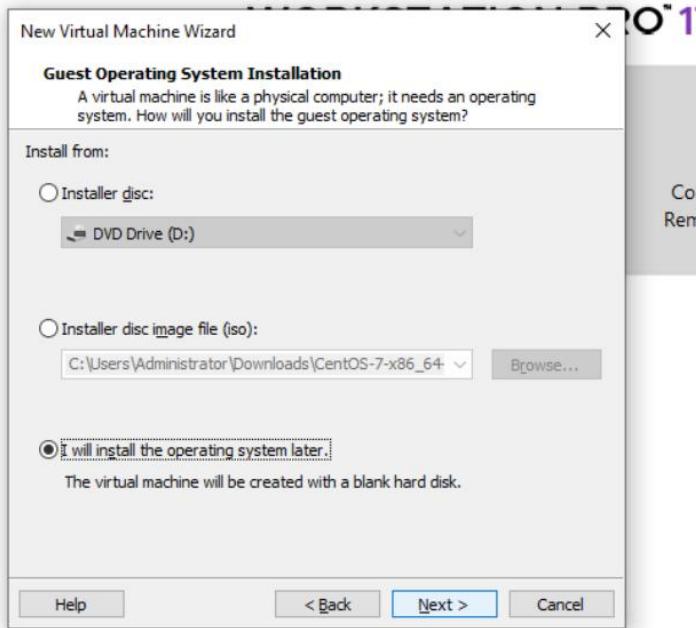


Select Typical-

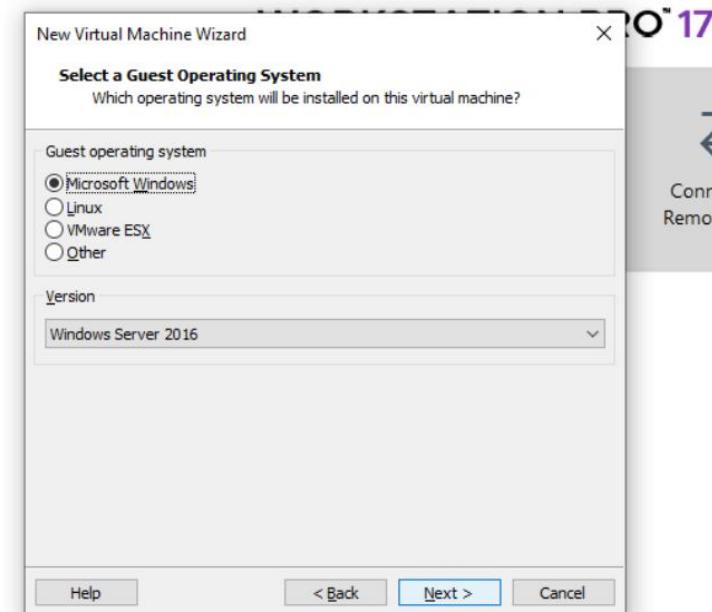


VMWARE

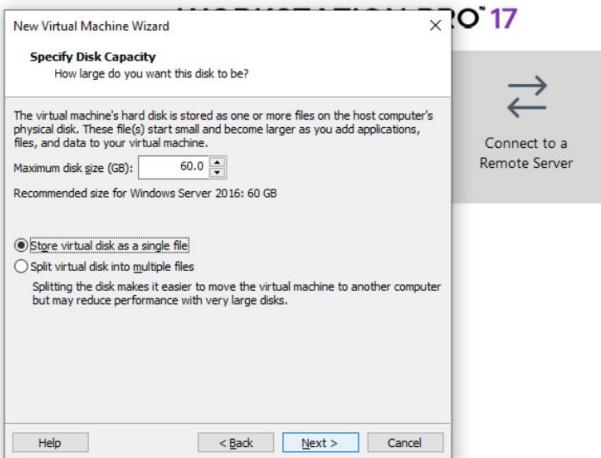
Select I will install later-



Select the Windows Server Version-



## Specify the disk capacity-



vmware

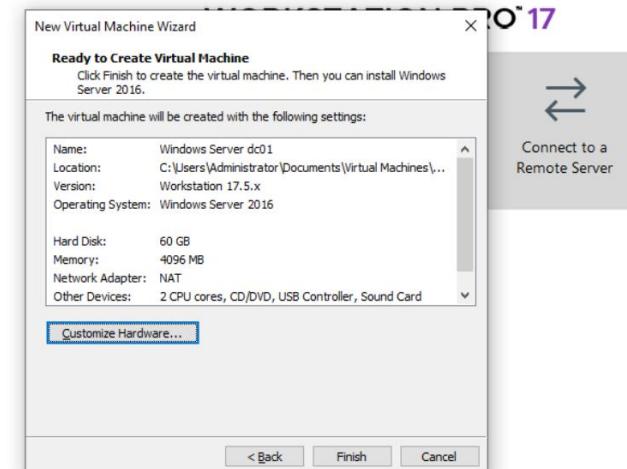
Activate Windows  
Go to Settings to activate Windows.

17



Connect to a  
Remote Server

## Select Customize Hardware-



vmware

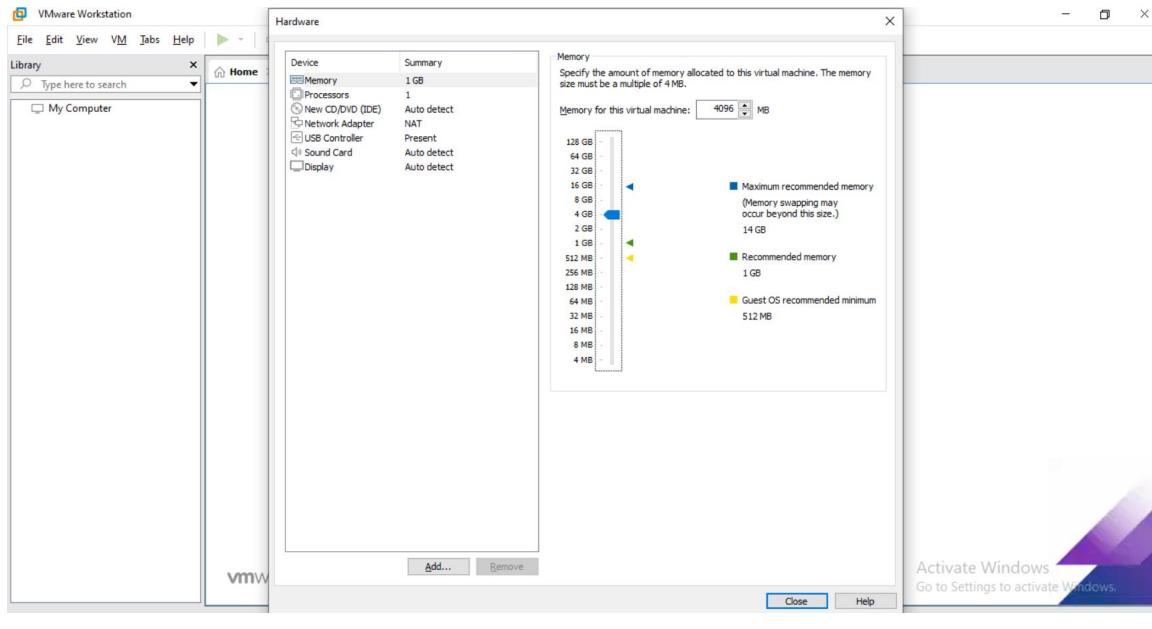
Activate Windows  
Go to Settings to activate Windows.

17

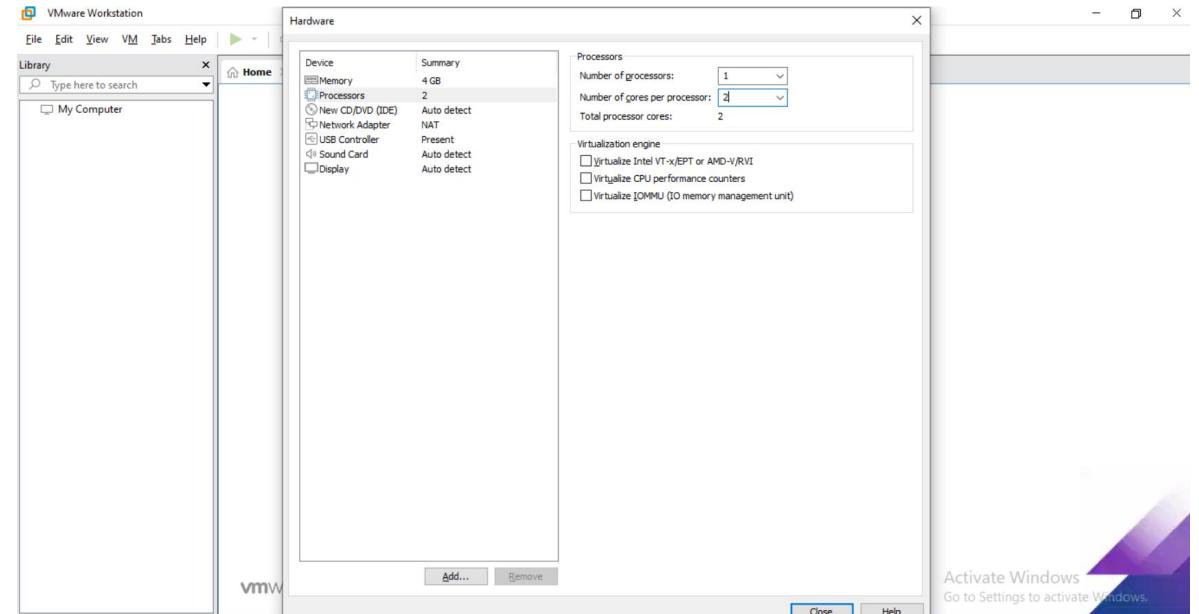


Connect to a  
Remote Server

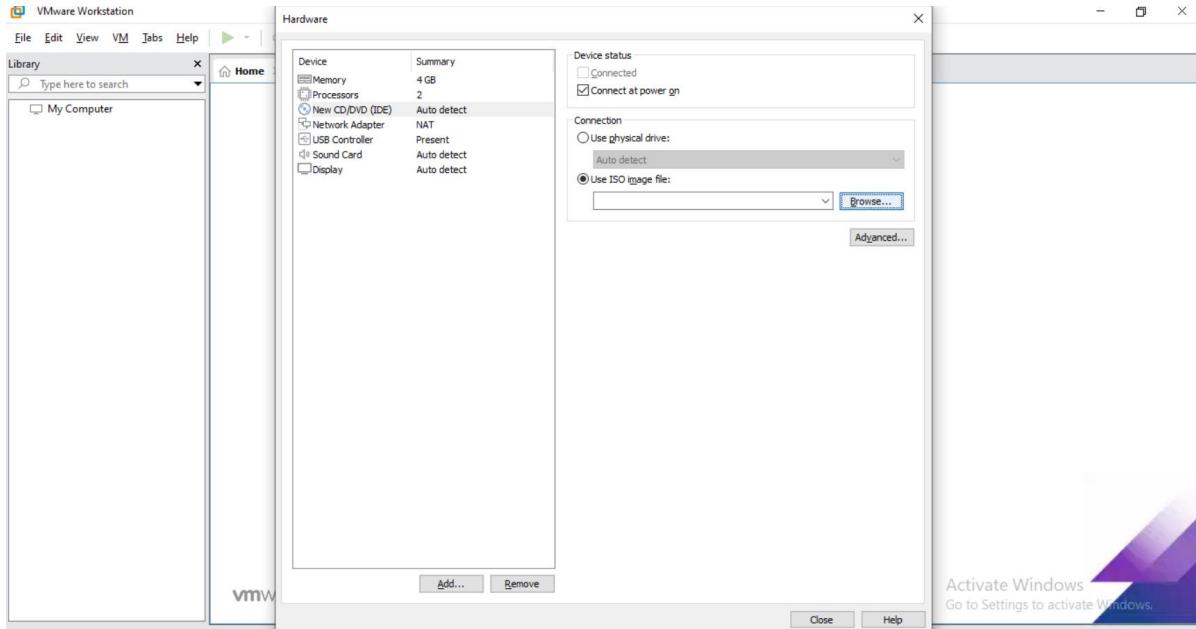
## Select memory size -



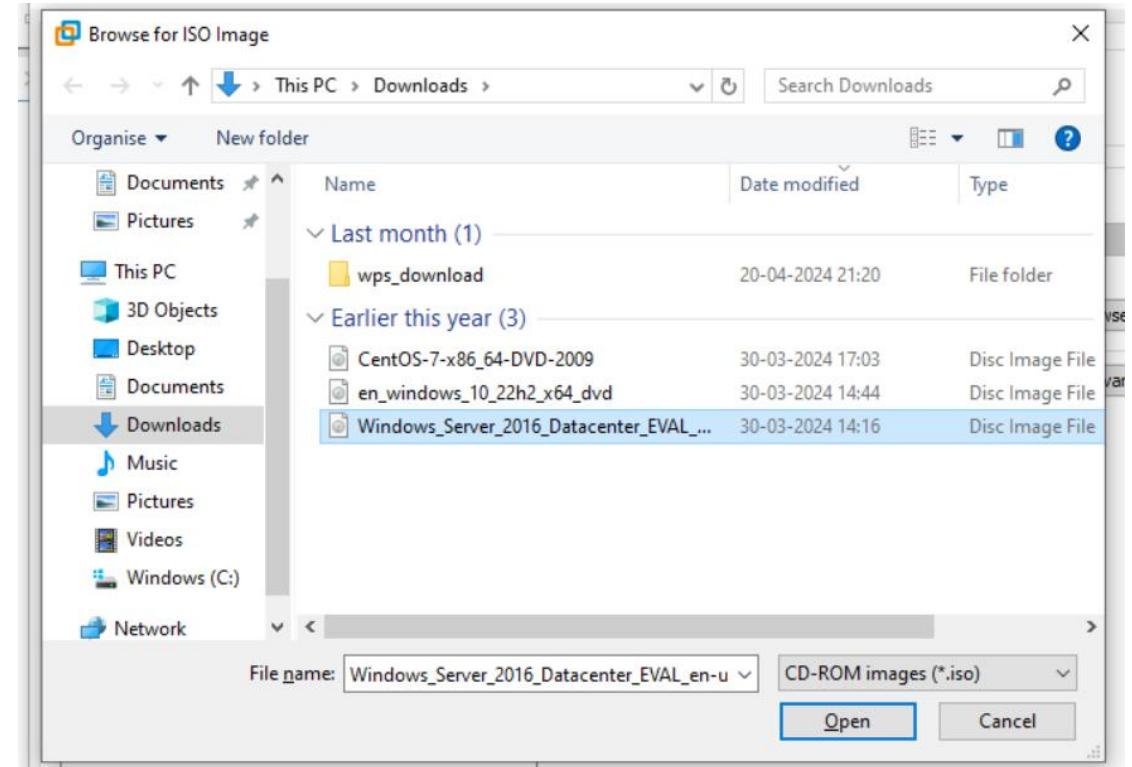
## Select number of processors -



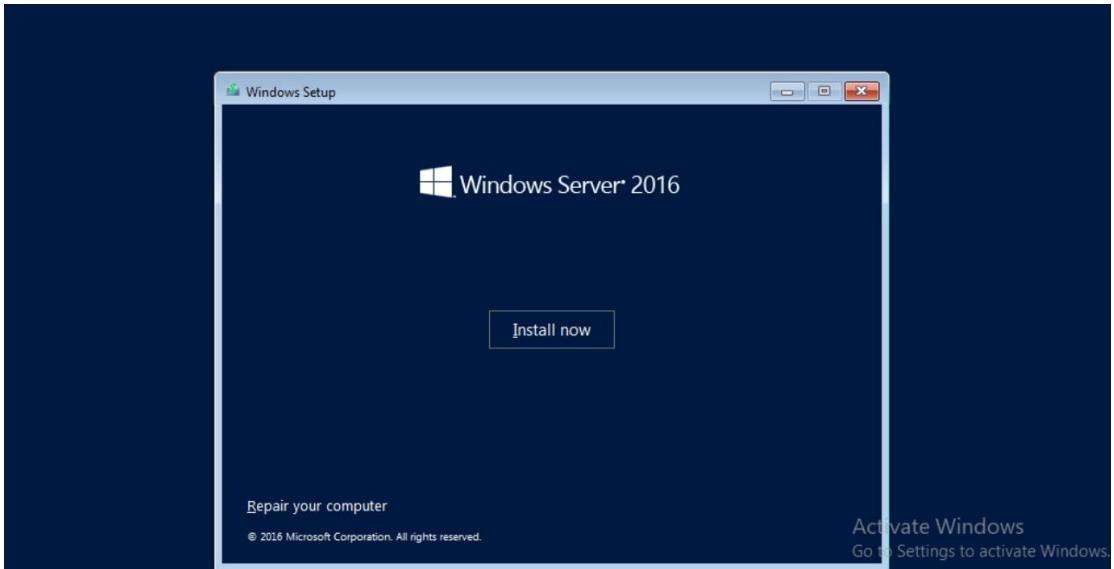
## Select Use ISO image file option-



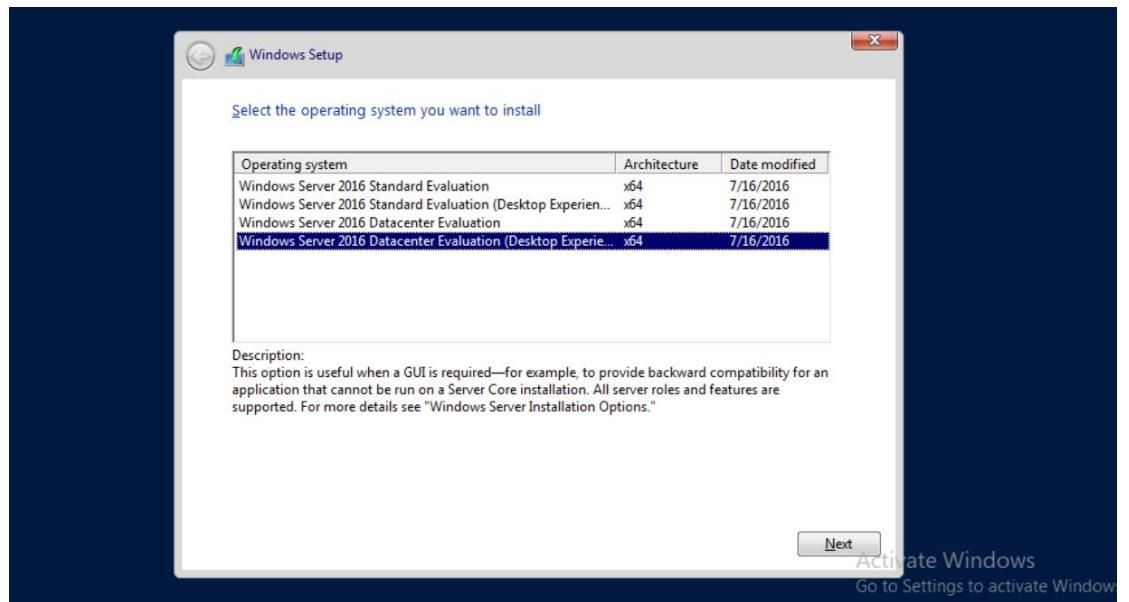
Browse and select the Server ISO image file-



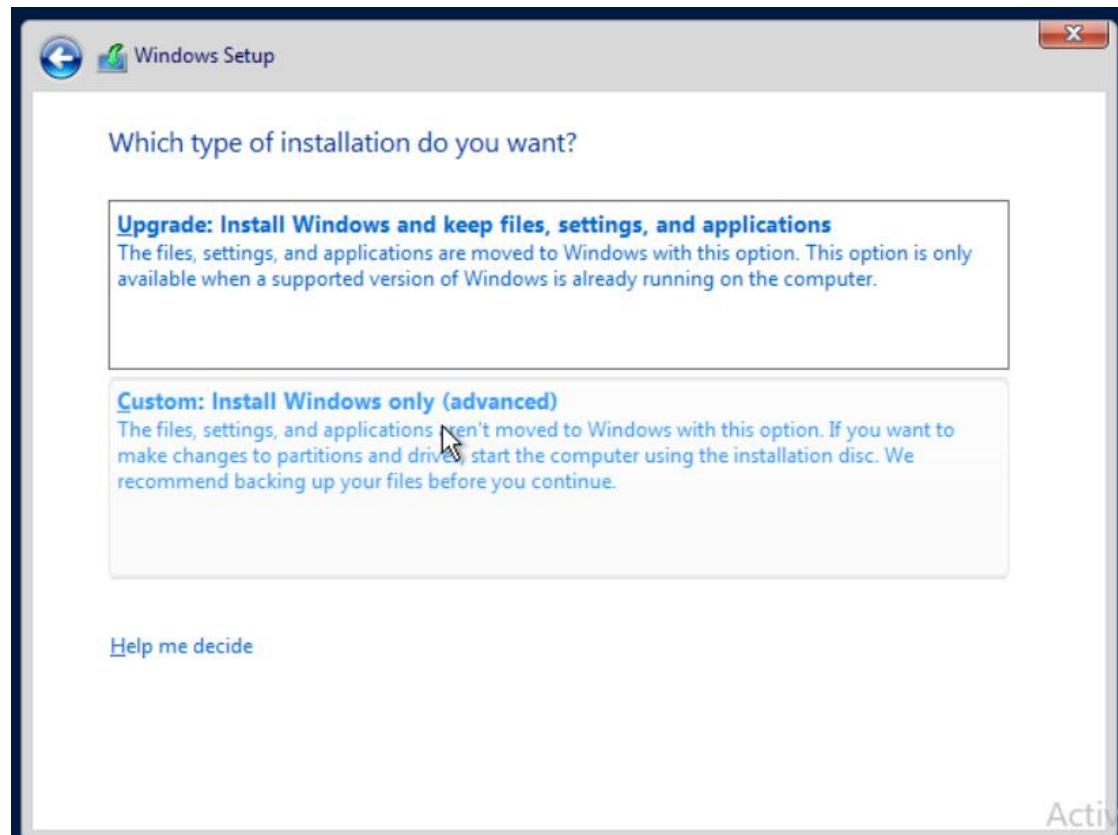
Click on Install now -



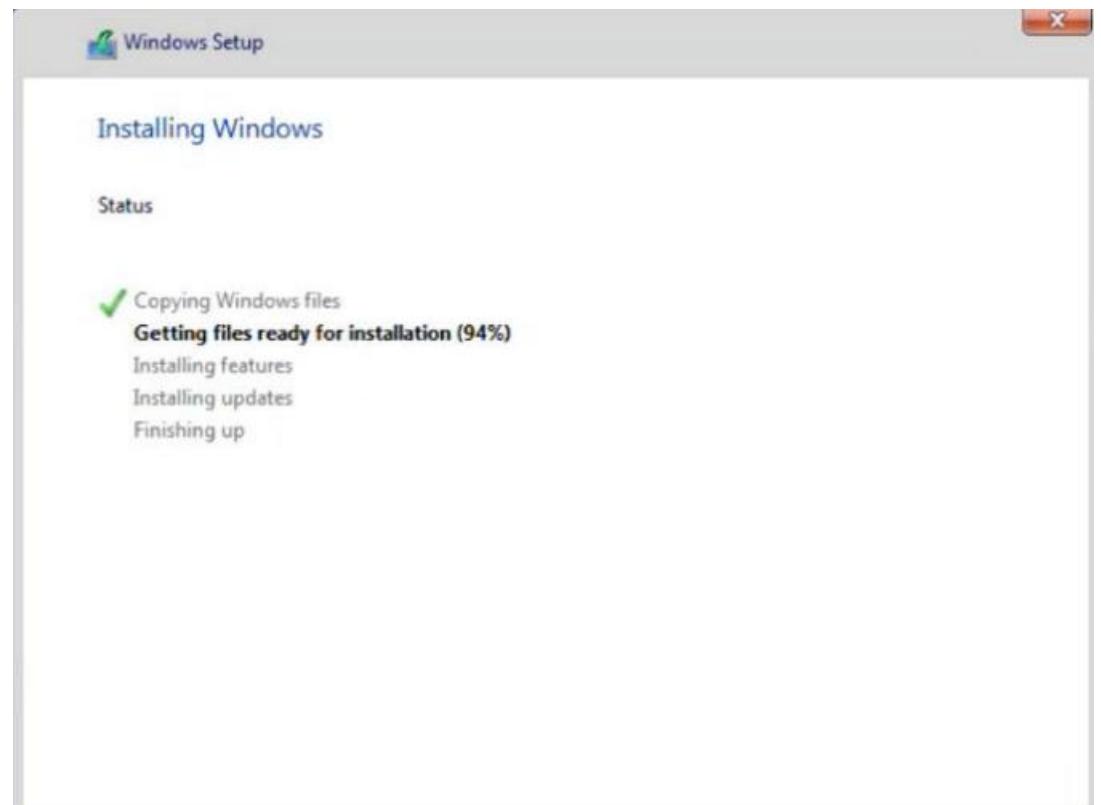
Select the Windows Server 2016 Datacenter Evaluation/Desktop Experience for GUI -



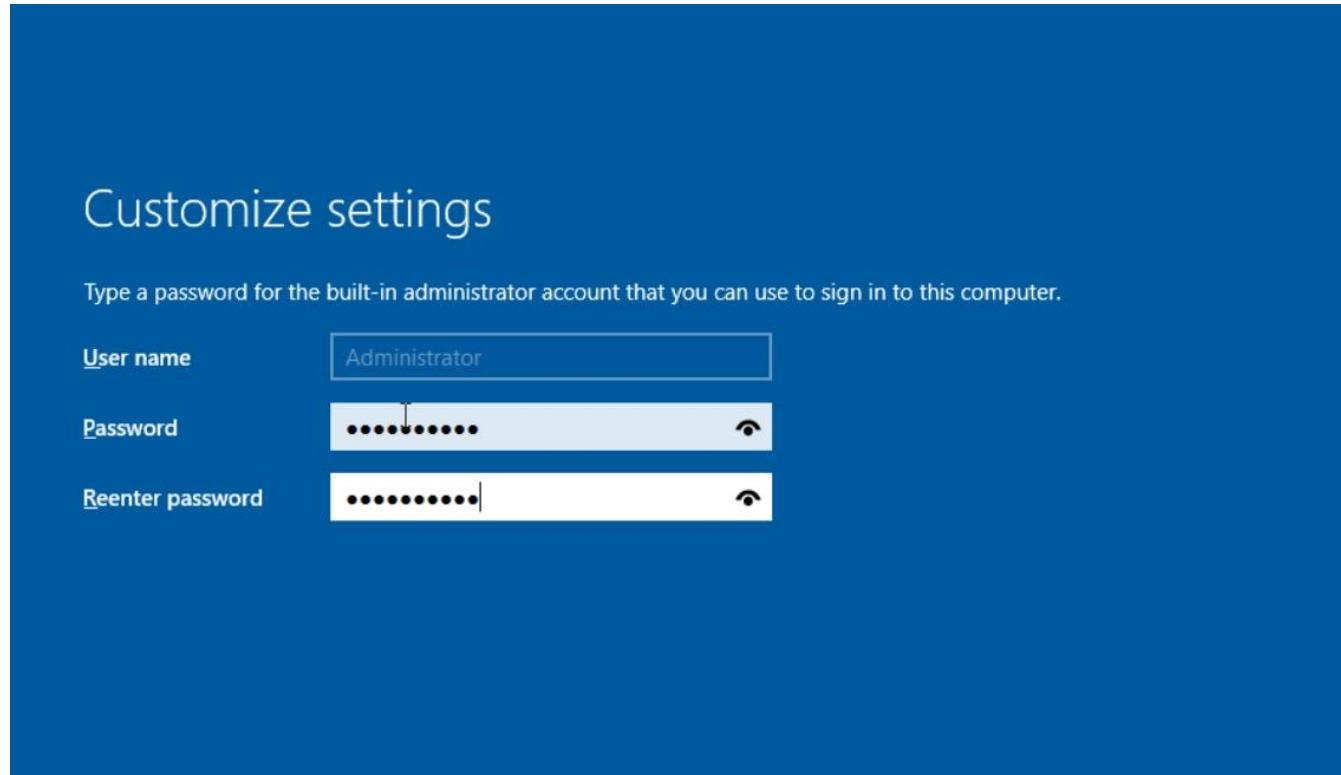
## Select Custom -



## Installation started -



*Enter the password provided for administrator -*



Windows server is ready for post-installation configuration-

Firewall - off

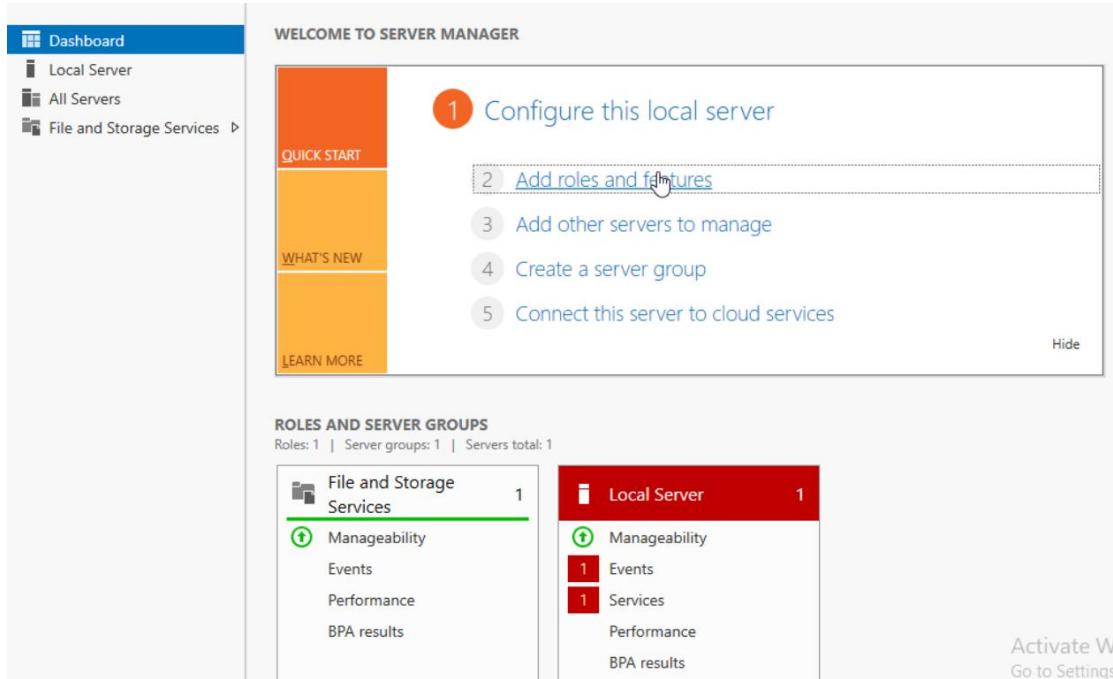
Time Zone - Asia/Kolkata

Ethernet0 - Specify the IP Address and DNS loopback address

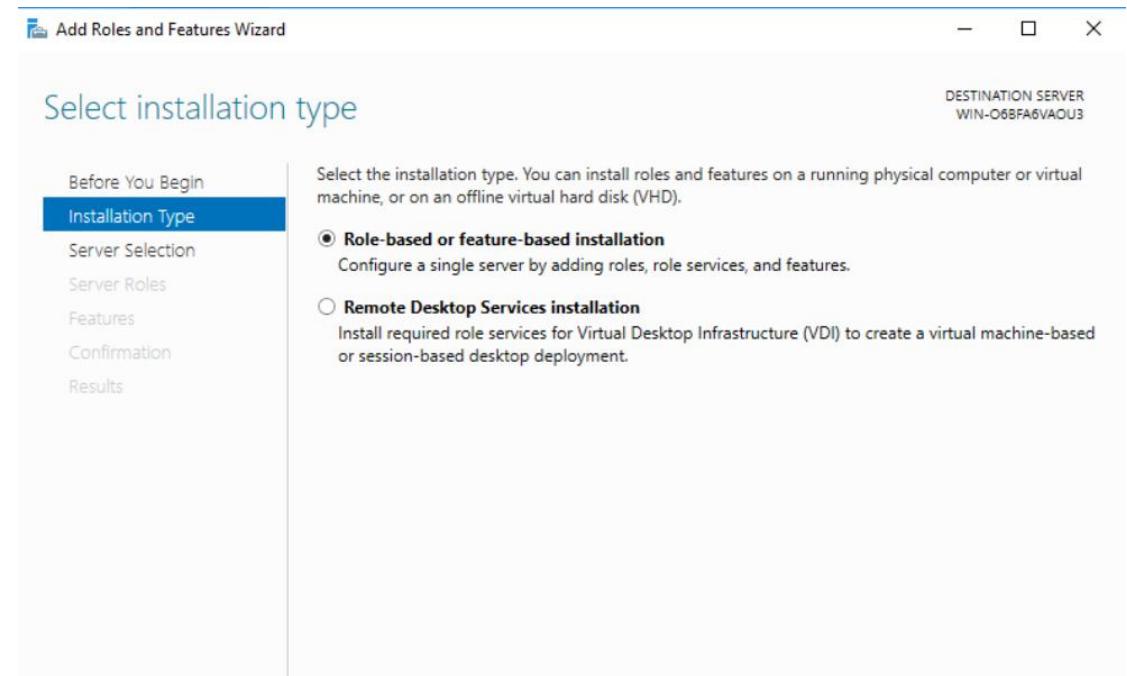
The screenshot shows the 'Properties' window for a Windows Server. The left sidebar has 'Local Server' selected. The main pane displays various system settings:

PROPERTIES		TASKS	
Computer name	WIN-O6BFA6VAOU3	Last installed updates	Never
Workgroup	WORKGROUP	Windows Update	Install update
		Last checked for updates	Never
Windows Firewall	Public: Off	Windows Defender	Real-Time
Remote management	Enabled	Feedback & Diagnostics	Settings
Remote Desktop	Disabled	IE Enhanced Security Configuration	On
NIC Teaming	Disabled	Time zone	(UTC-08:00)
Ethernet0	IPv4 address assigned by DHCP, IPv6 enabled	Product ID	Not activated
Operating system version	Microsoft Windows Server 2016 Datacenter Evaluation	Processors	Intel(R) Xeon
Hardware information	VMware, Inc. VMware20,1	Installed memory (RAM)	4 GB
		Total disk space	59.45 GB

Click on Add roles and features to add ADDS roles -



Select Role-based installation-



## Select the ADDS role and add features -

### Select server roles

Before You Begin  
Installation Type  
Server Selection  
**Server Roles**  
Features  
AD DS  
Confirmation  
Results

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

#### Roles

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

#### Description

Active Directory Domain Services (AD DS) stores information about objects on the network and makes this information available to users and network administrators. AD DS uses domain controllers to give network users access to permitted resources anywhere on the network through a single logon process.

< Previous      Next >      Install      Cancel

< Previous      Next >      Close      Cancel

DESTINATION SERVER  
dc01

### Installation progress

Before You Begin  
Installation Type  
Server Selection  
Server Roles  
Features  
AD DS  
Confirmation  
**Results**

#### View installation progress

##### Feature installation

Installation started on dc01

##### Active Directory Domain Services

##### Group Policy Management

##### Remote Server Administration Tools

##### Role Administration Tools

##### AD DS and AD LDS Tools

##### Active Directory module for Windows PowerShell

##### AD DS Tools

##### Active Directory Administrative Center

##### AD DS Snap-Ins and Command-Line Tools

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

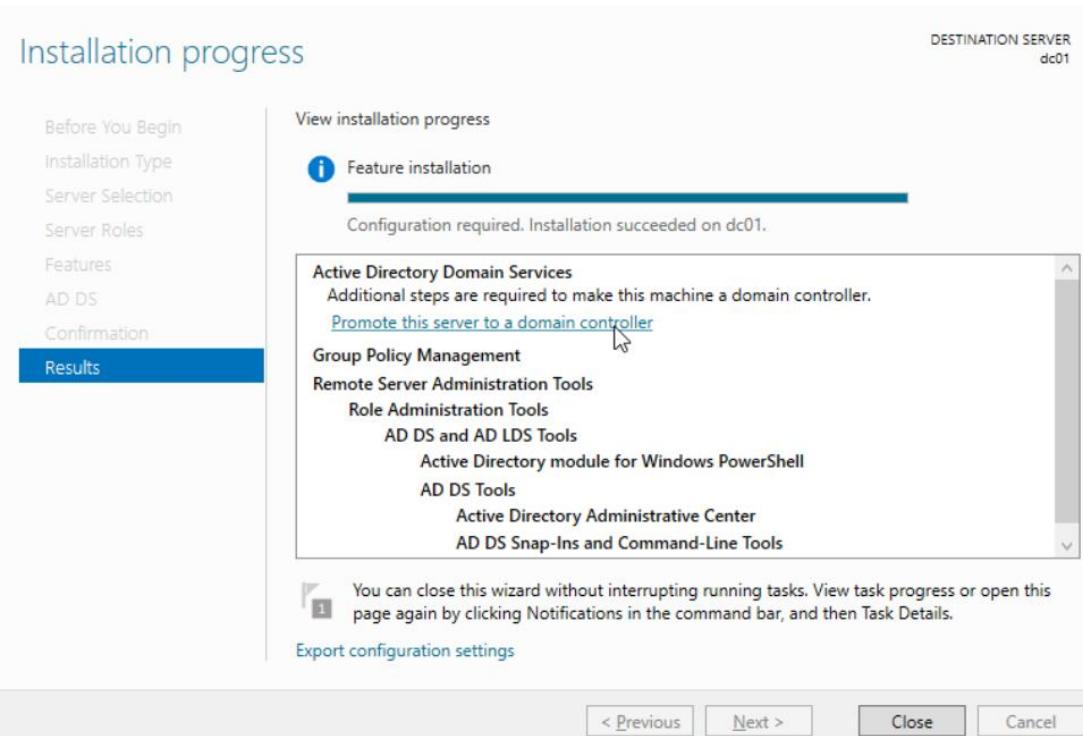
Export configuration settings

< Previous      Next >      Close      Cancel

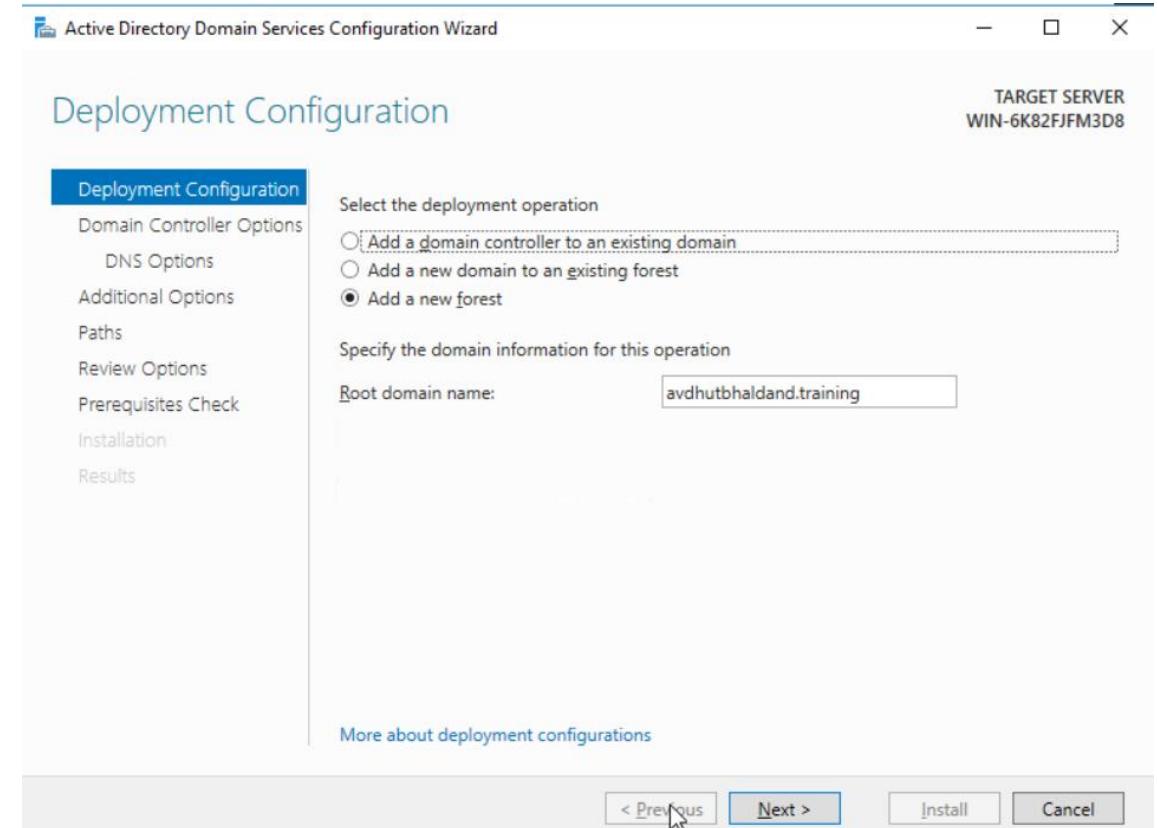
DESTINATION SERVER  
dc01

*Click on the Blue line to promote server to domain controller-*

## Installation progress



*Click on Add a forest and specify domain name*



## Give the Password for domain and Click on Install -

### Domain Controller Options

Deployment Configuration  
**Domain Controller Options**

DNS Options

Additional Options

Paths

Review Options

Prerequisites Check

Installation

Results

Select functional level of the new forest and root domain

Forest functional level:

Windows Server 2016

Domain functional level:

Windows Server 2016

TARGET SERVER  
dc01

Specify domain controller capabilities

- Domain Name System (DNS) server
- Global Catalog (GC)
- Read only domain controller (RODC)

Type the Directory Services Restore Mode (DSRM) password

Password:

\*\*\*\*\*

Confirm password:

\*\*\*\*\*

[More about domain controller options](#)

### Prerequisites Check

TARGET SERVER  
dc01

 All prerequisite checks passed successfully. Click 'Install' to begin installation.

[Show more](#)



Deployment Configuration

Domain Controller Options

DNS Options

Additional Options

Paths

Review Options

**Prerequisites Check**

Installation

Results

Prerequisites need to be validated before Active Directory Domain Services is installed on this computer

[Rerun prerequisites check](#)

[View results](#)

 Windows Server 2016 domain controllers have a default for the security setting named "Allow cryptography algorithms compatible with Windows NT 4.0" that prevents weaker cryptography algorithms when establishing security channel sessions.

For more information about this setting, see Knowledge Base article 942564 (<http://go.microsoft.com/fwlink/?LinkId=104751>).

 A delegation for this DNS server cannot be created because the authoritative parent zone cannot be found or it does not run Windows DNS server. If you are integrating with an existing DNS infrastructure, you should manually create a delegation to this DNS server in the parent zone to ensure reliable name resolution from outside the domain "avdhutbhaldand.in". Otherwise, no action is required.

 If you click Install, the server automatically reboots at the end of the promotion operation.

[More about prerequisites](#)

< Previous

Next >

Install

Cancel

Ac

Go

Now the Server is promoted to Domain Controller and the ADDS roles & features are installed-

The screenshot shows the Windows Server Management Portal interface. On the left, a navigation sidebar lists 'Dashboard', 'Local Server' (which is selected and highlighted in blue), 'All Servers', 'AD DS', 'DNS', and 'File and Storage Services'. The main content area is divided into two sections: 'PROPERTIES' and 'EVENTS'.

**PROPERTIES** section (For dc01):

Computer name	dc01	Last installed updates	Never
Domain	avdhutbhaldand.training	Windows Update	Download
		Last checked for updates	Never
Windows Firewall	Public: Off	Windows Defender	Real-Time
Remote management	Enabled	Feedback & Diagnostics	Settings
Remote Desktop	Disabled	IE Enhanced Security Configuration	Off
NIC Teaming	Disabled	Time zone	(UTC+05:30)
Ethernet0	192.168.10.10, IPv6 enabled	Product ID	Not activated

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

**EVENTS** section (All events | 42 total):

Server Name	ID	Severity	Source	Log	Date and Time	Actions
DC01	8198	Error	Microsoft-Windows-Security-SPP	Application	5/5/2024 11:41:18 PM	Activate Windows
DC01	1014	Error	Microsoft-Windows-Security-SPP	Application	5/5/2024 11:41:18 PM	Go to Settings
DC01	8200	Error	Microsoft-Windows-Security-SPP	Application	5/5/2024 11:41:18 PM	

# Open Active Directory Users and Computers -

The screenshot shows the Windows Server Manager interface. The left navigation pane includes Dashboard, Local Server (selected), All Servers, AD DS, DNS, and File and Storage Services. The main area displays the properties for the local server 'dc01'. Key details include:

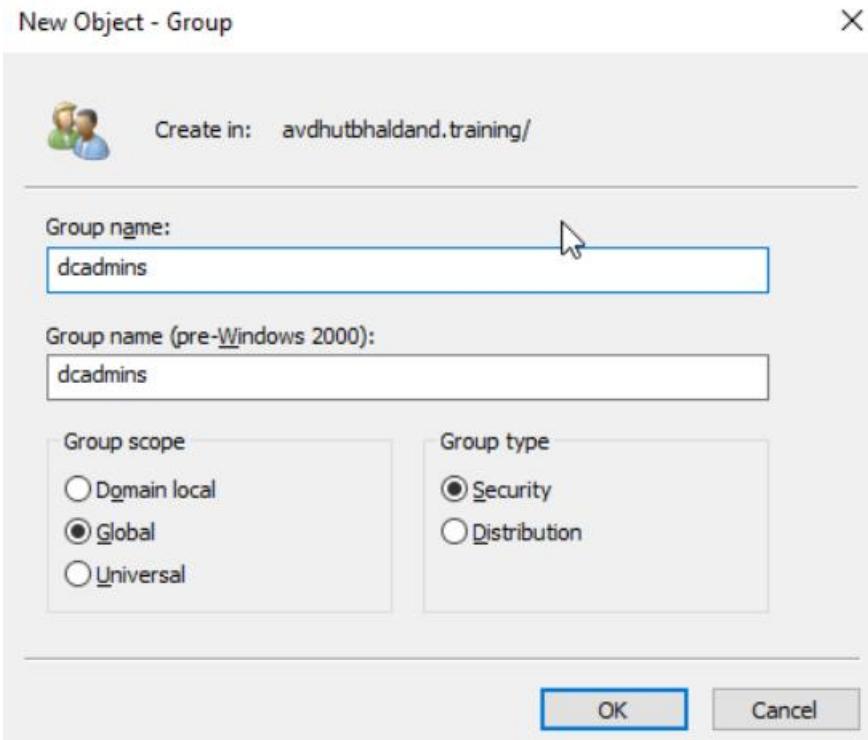
- Computer name: dc01
- Domain: avdhutbaldand.training
- Windows Firewall: Public: Off
- Remote management: Enabled
- Remote Desktop: Disabled
- NIC Teaming: Disabled
- Ethernet0: 192.168.10.10, IPv6 enabled
- Operating system version: Microsoft Windows Server 2016 Datacenter Evaluation
- Hardware information: VMware, Inc. VMware20.1

The right pane shows a context menu with options like Active Directory Administrative Center, Active Directory Domains and Trusts, Active Directory Module for Windows PowerShell, Active Directory Sites and Services, and Active Directory Users and Computers (which is highlighted).

Add Group "dcadmins" in domain-

The screenshot shows the Active Directory Users and Computers (ADUC) console window. The left navigation pane shows the tree structure under 'Active Directory Users and Computers' for the 'avdhutbaldand' domain. A context menu is open over a 'New' item, with 'Group' selected. A secondary context menu is displayed, listing various object types: Computer, Contact, Group (selected), InetOrgPerson, msDS-ShadowPrincipalContainer, msImaging-PSPs, MSMQ Queue Alias, Organizational Unit, Printer, and User.

## Create a group 'dcadmins' in the domain-



## Add 2 users in the dcaadmins group-

Copy Object - User

Create in: avdhutbhaldand.training/Users

First name: Ashutosh      Initials:

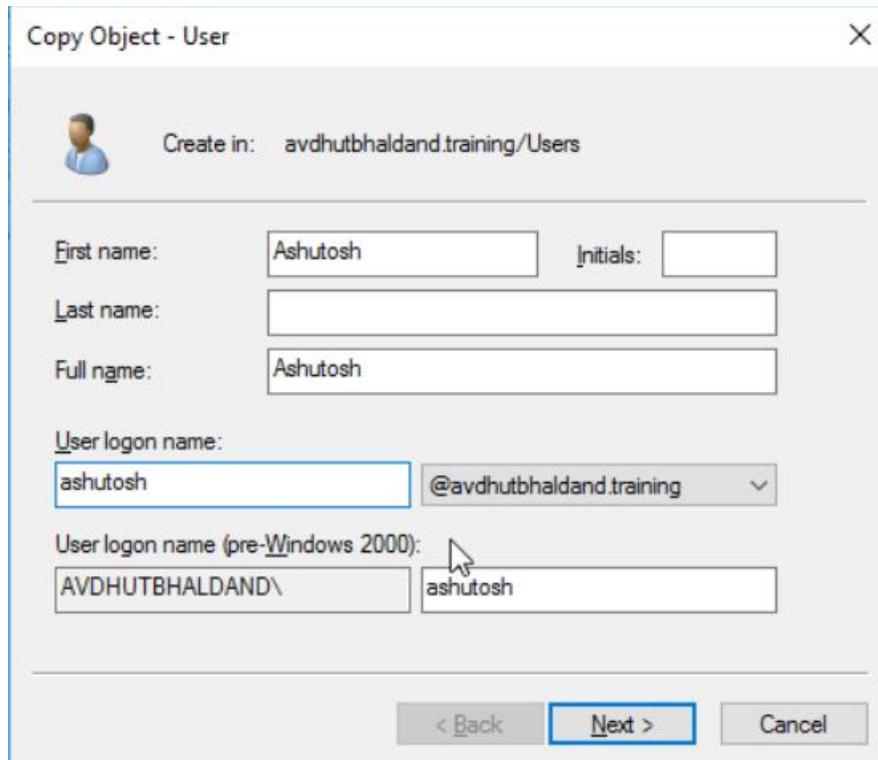
Last name:

Full name: Ashutosh

User logon name:  
ashutosh @avdhutbhaldand.training

User logon name (pre-Windows 2000):  
AVDHUTBHALDAND\ashutosh

< Back **Next >** Cancel



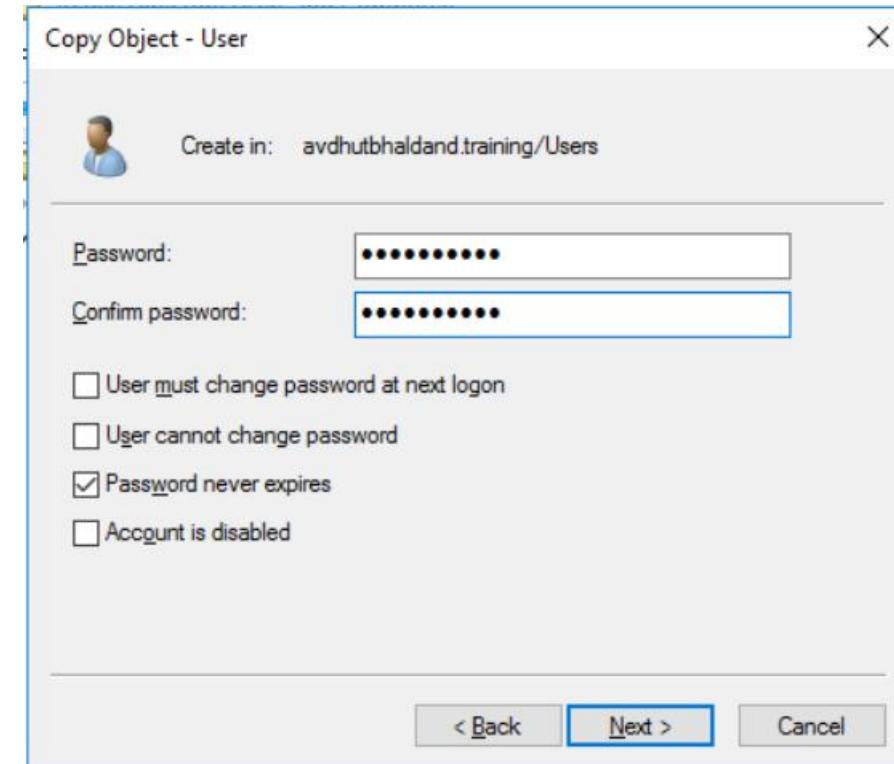
Copy Object - User

Create in: avdhutbhaldand.training/Users

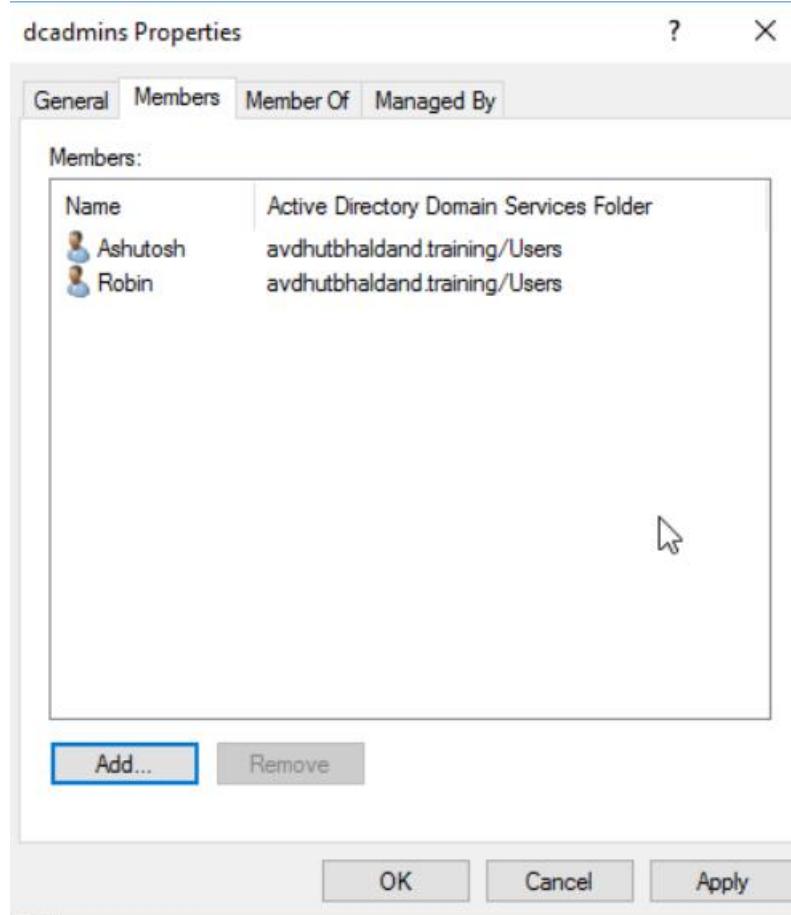
Password:  Confirm password:

User must change password at next logon  
 User cannot change password  
 Password never expires  
 Account is disabled

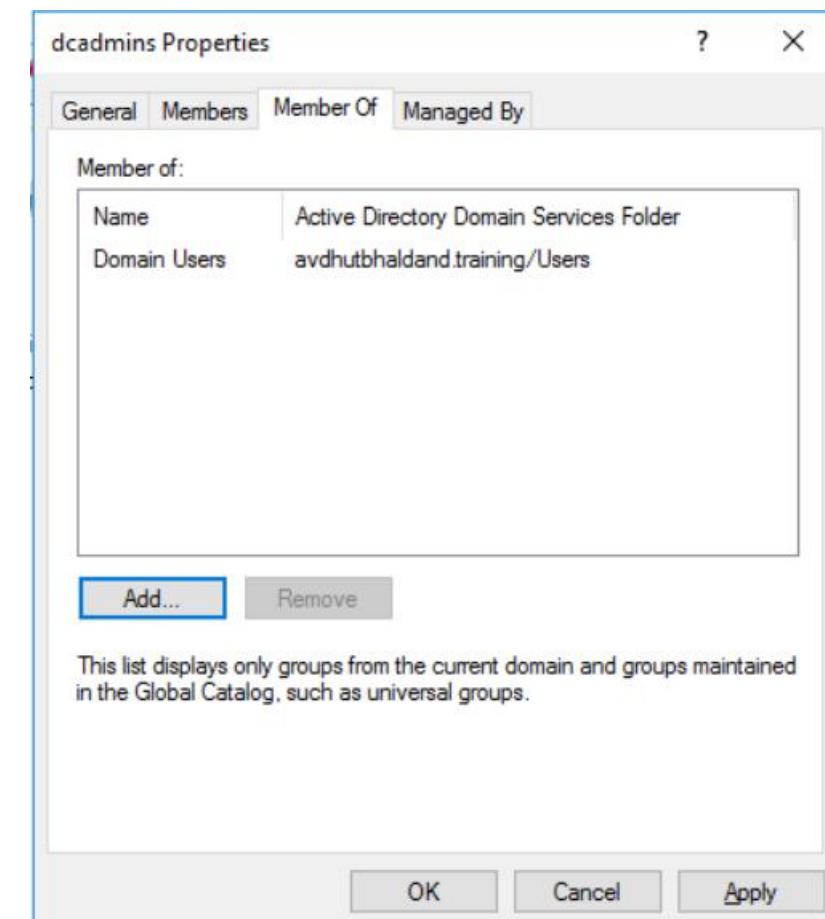
< Back **Next >** Cancel



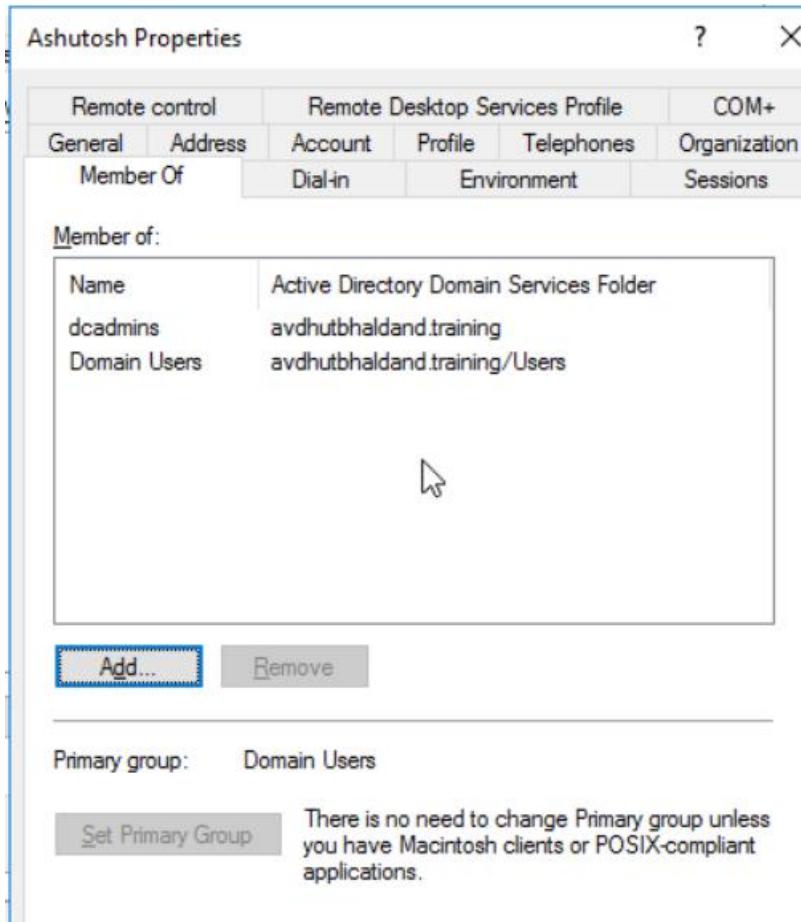
Add the users in the group-



Give the Group Domain Admins priorities-



## Add the users in the group-



Create another Windows server member machine -  
Firewall - off  
Time Zone - Asia/Kolkata  
Ethernet0 - Specify IP Address & Domain join the member to dc

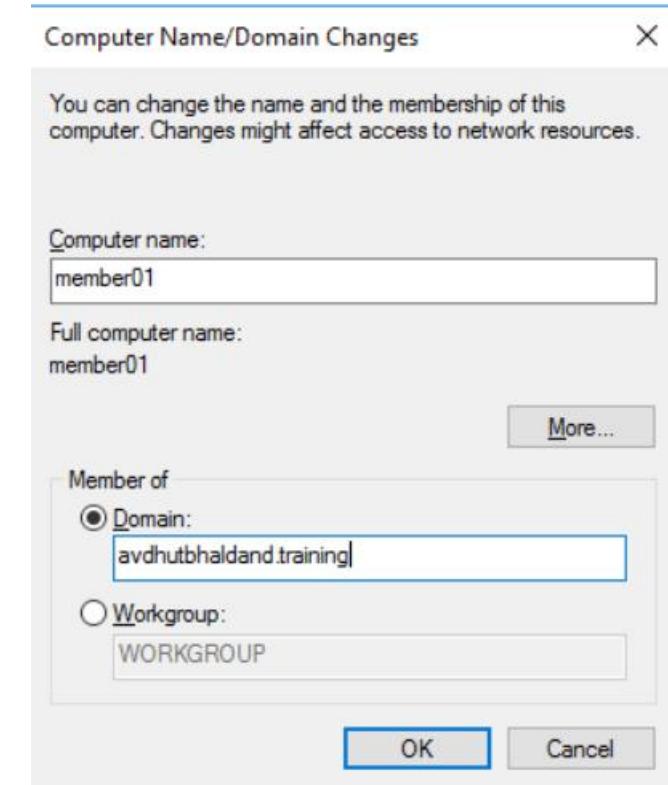
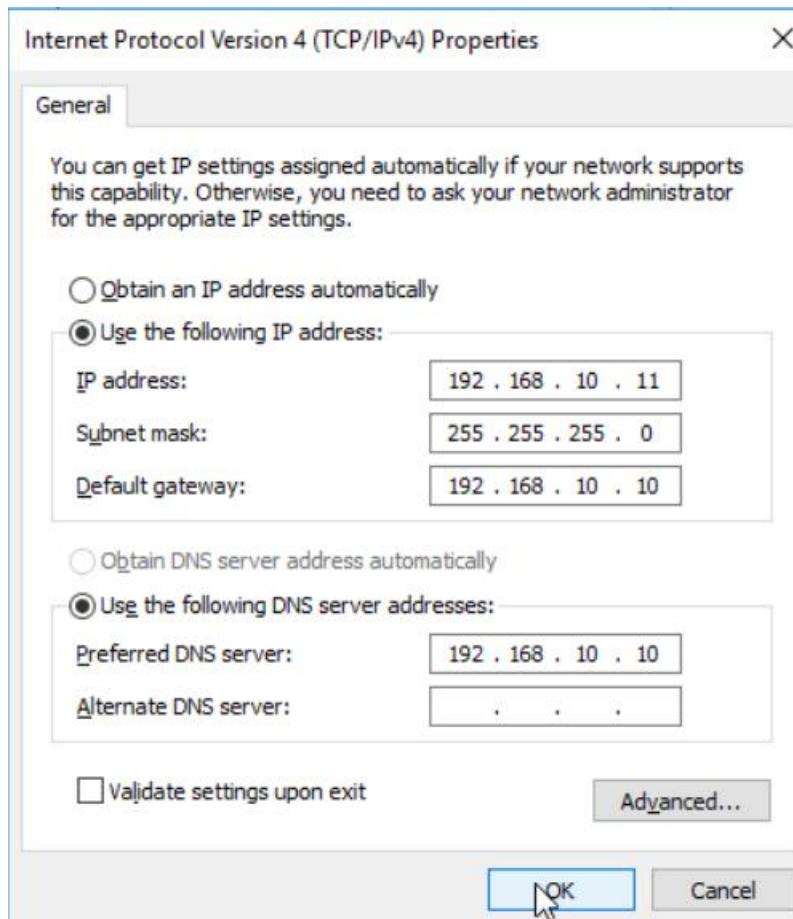
The screenshot shows the Windows Server Manager interface for the Local Server. The left navigation pane is visible with options like Dashboard, Local Server (which is selected), All Servers, and File and Storage Services. The main content area displays the properties for the local server, identified as WIN-1U9OD6ERC13.

**PROPERTIES**  
For WIN-1U9OD6ERC13

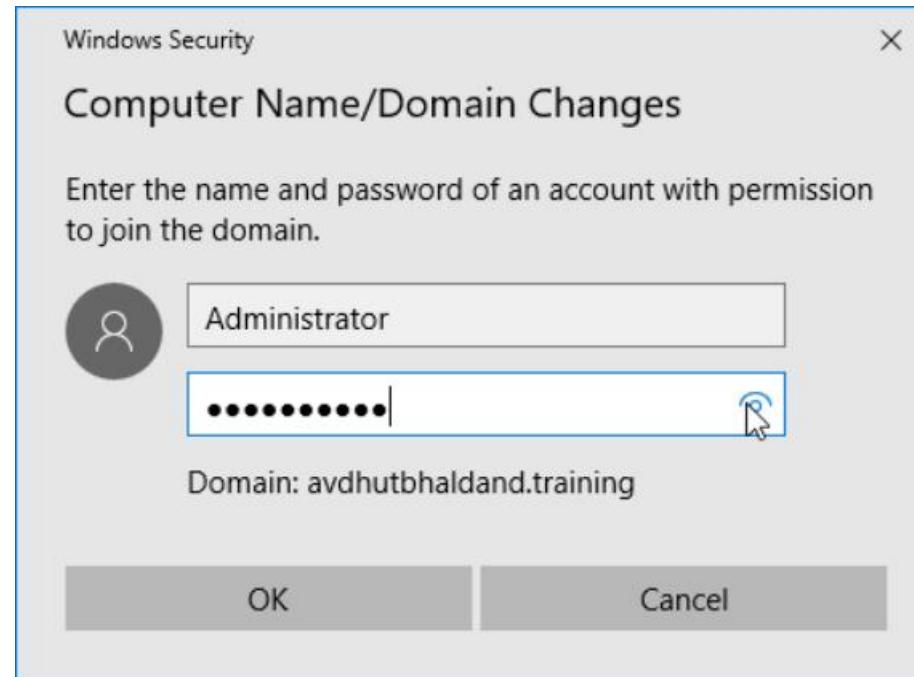
WORKGROUP	Last installed updates	Never
Windows Update	Install updates automatically using Windows Update	Never
Last checked for updates		
Public: Off	Windows Defender	Real-Time Protection: On
Enabled	Feedback & Diagnostics	Settings
Disabled	IE Enhanced Security Configuration	Off
Disabled	Time zone	(UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi
IPv4 address assigned by DHCP, IPv6 enabled	Product ID	Not activated
Microsoft Windows Server 2016 Datacenter Evaluation	Processors	Intel(R) Xeon(R) CPU E5-2680 v3 @ 2.50
VMware, Inc. VMware20.1	Installed memory (RAM)	4 GB
	Total disk space	59.45 GB

**EVENTS**  
All events | 17 total

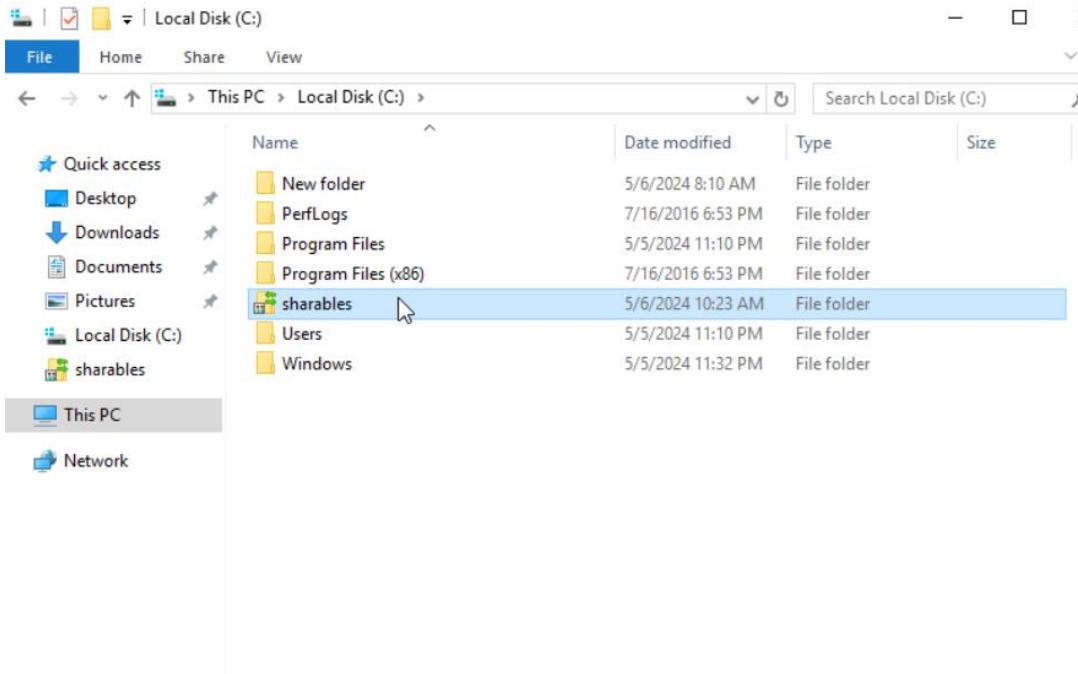
## Domain join the member machine -



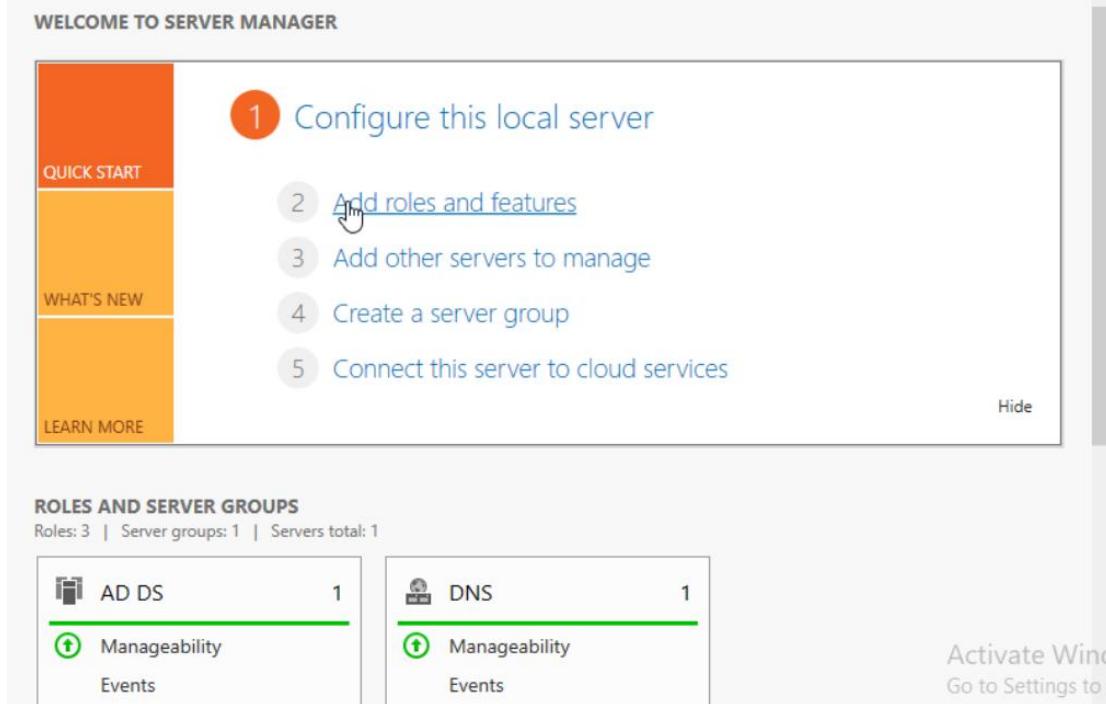
*Give domain privileges to member machine\_x0002\_*



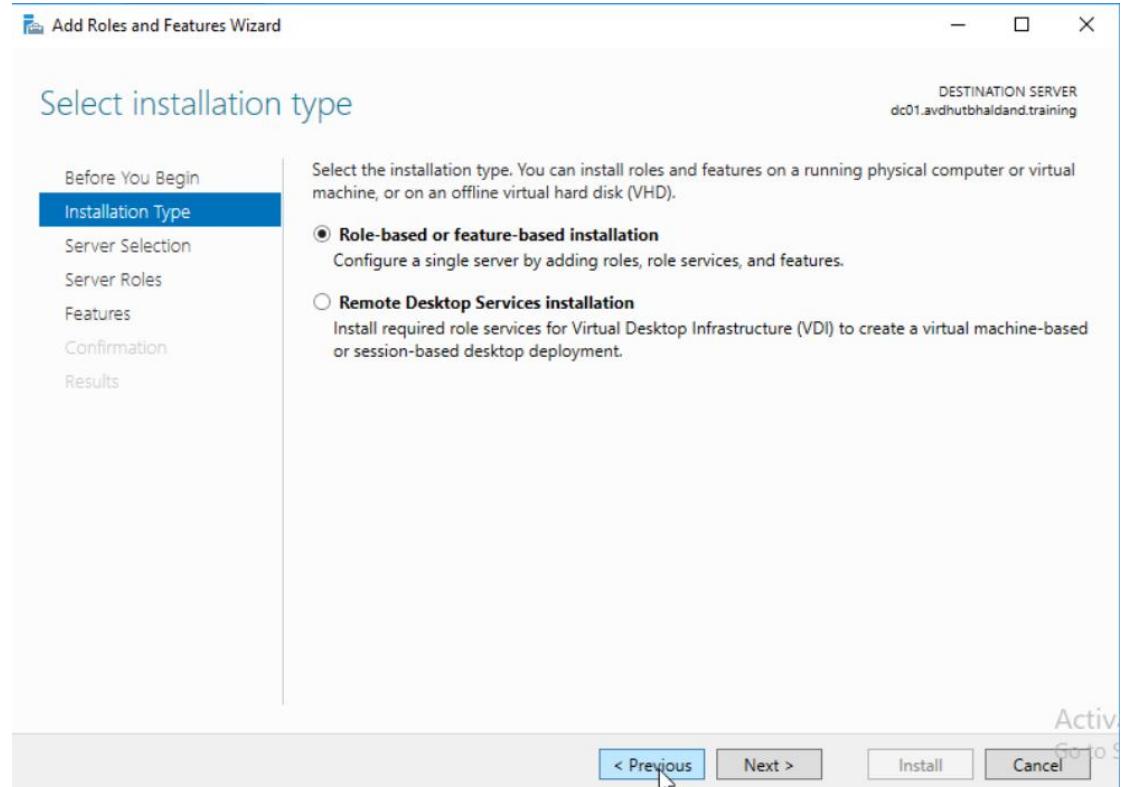
## Create a shared NFS folder (c:\sharables) on domain controller-



Click Add roles and features on dc machine-

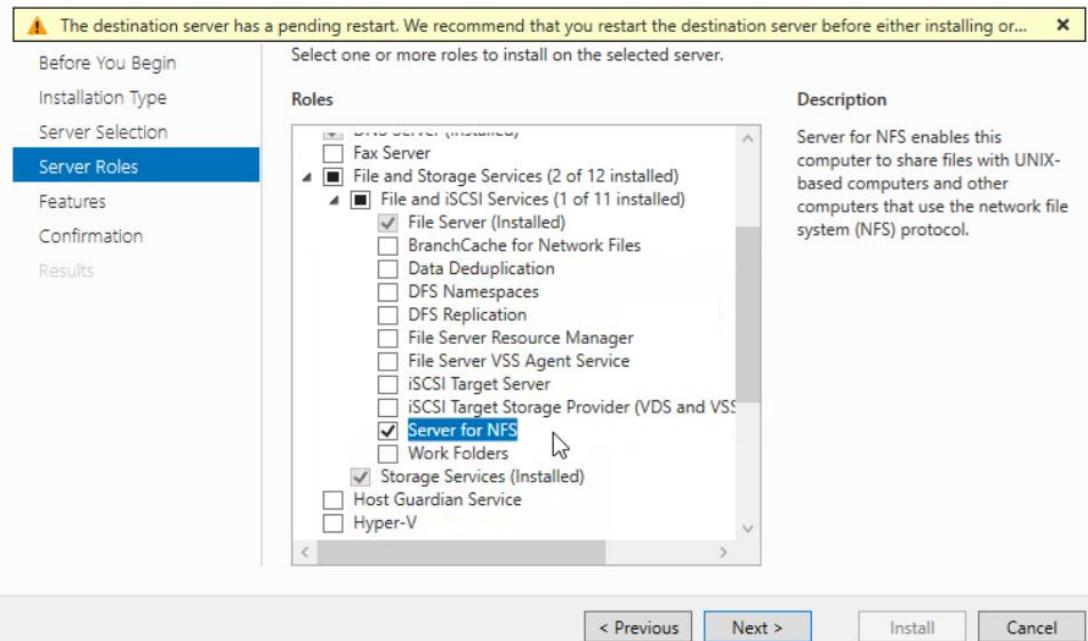


Select Installation type-

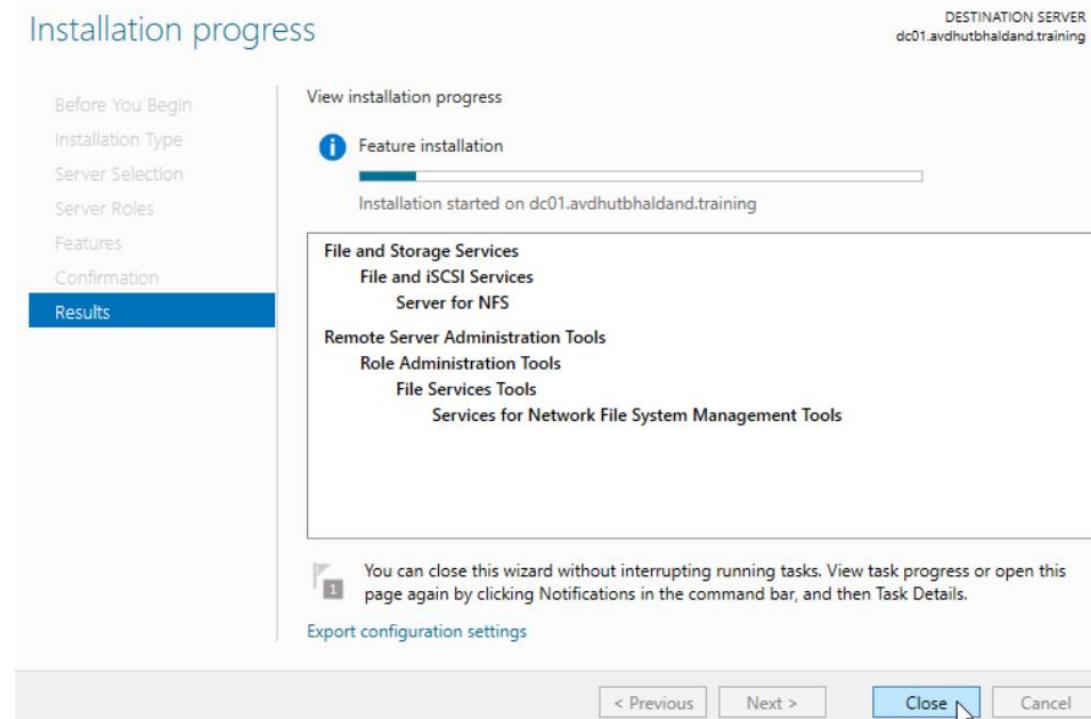


## Select Server for NFS and install -

### Select server roles



### Installation progress



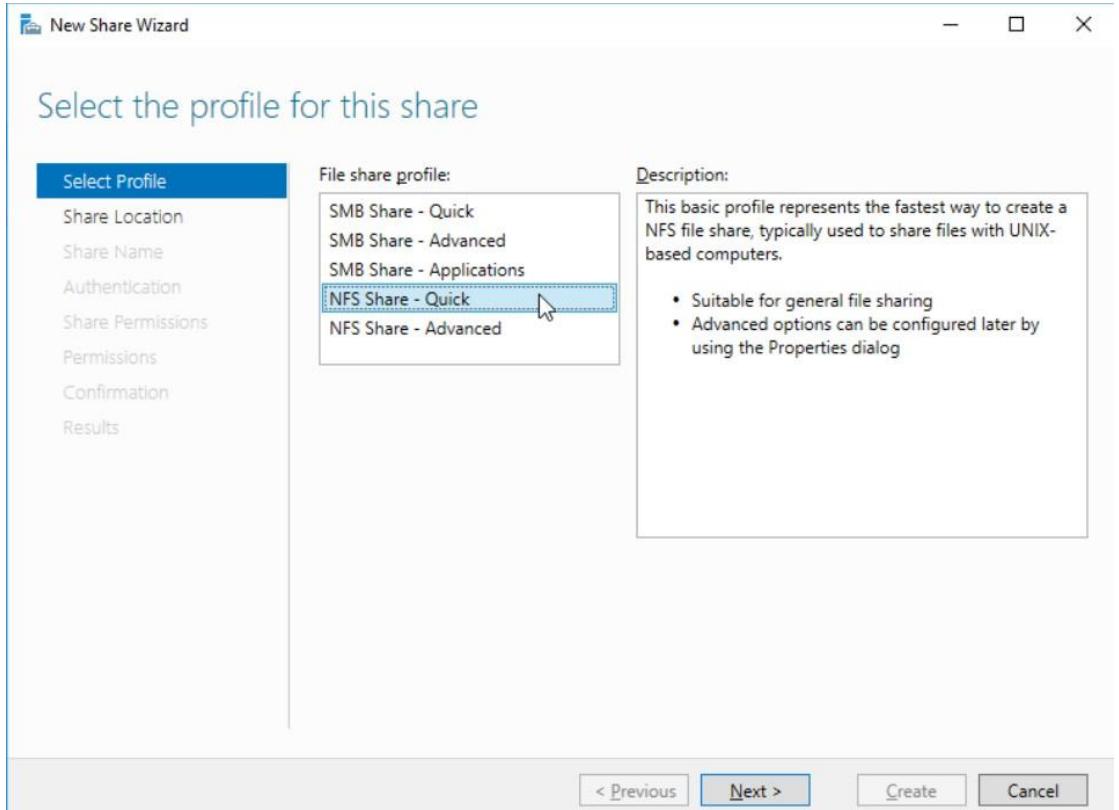
# Open File and Storage Services -

The screenshot shows the 'WELCOME TO SERVER MANAGER' screen. On the left, a navigation bar includes 'Dashboard', 'Local Server', 'All Servers', 'AD DS', 'DNS', and 'File and Storage Services >'. The 'File and Storage Services' item is highlighted with a cursor. The main area has a 'QUICK START' sidebar with five numbered steps: 1. Configure this local server, 2. Add roles and features, 3. Add other servers to manage, 4. Create a server group, and 5. Connect this server to cloud services. Below the sidebar, there's a 'WHAT'S NEW' section and a 'LEARN MORE' button. At the bottom, a 'ROLES AND SERVER GROUPS' section shows 'Roles: 3 | Server groups: 1 | Servers total: 1' with icons for AD DS (1) and DNS (1). The 'AD DS' role is underlined.

Select Shares & in Tasks select new Share-

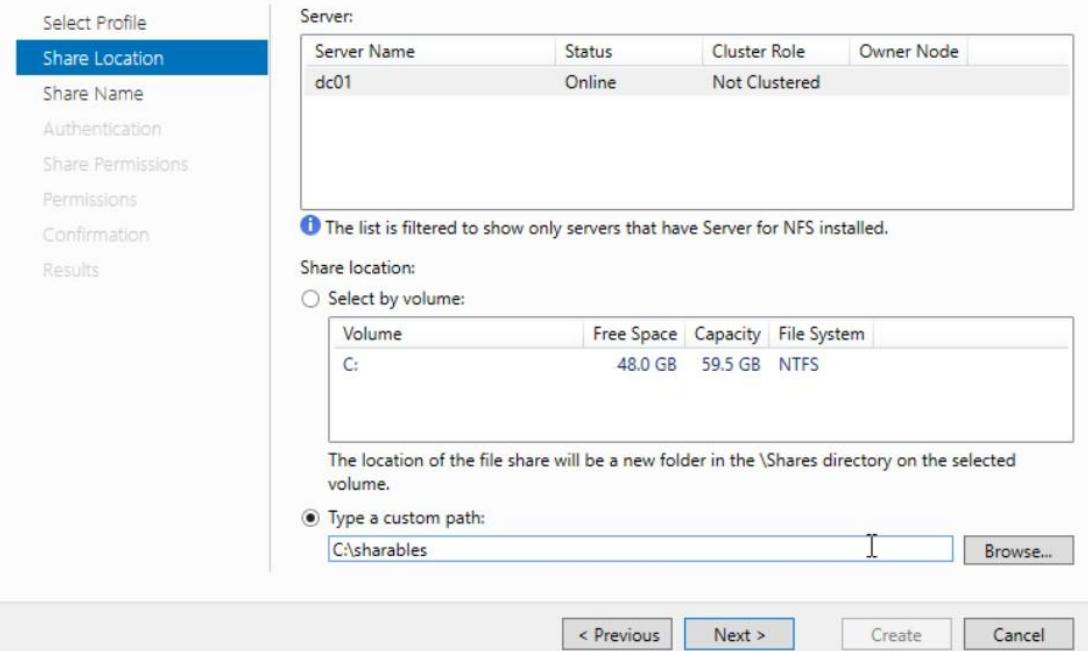
The screenshot shows the 'SHARES' management interface. On the left, a sidebar lists 'Servers', 'Volumes', 'Disks', 'Storage Pools', and 'Shares' (which is selected and highlighted in blue). Below the sidebar, there are sections for 'iSCSI' and 'Work Folders'. The main area displays a table of shares under the heading 'dc01 (2)'. The table has columns for 'Share' and 'Local Path'. Two entries are listed: 'NETLOGON' with path 'C:\Windows\SYSVOL\sysvol\avdh...' and 'SYSVOL' with path 'C:\Windows\SYSVOL\sysvol'. To the right of the table, there are 'TASKS' and 'VOLUME' sections. The 'TASKS' section has a 'New Share' button highlighted with a cursor. The 'VOLUME' section says 'No share is selected.' Below the table, there are links for 'Go to Volumes Overview >' and 'QUOTA' (with 'No share is selected.' message).

## Select NFS Share-Quick -



## Select Location of the folder 'sharables' -

Select the server and path for this share



## Specify share name-

Specify share name

Select Profile Share Location Share Name Authentication Share Permissions Permissions Confirmation Results

Share name: sharables

Local path to share: C:\sharables

Remote path to share: dc01:/sharables

< Previous Next > Create Cancel

Check all the boxes as followed -

Specify authentication methods

Select Profile Share Location Share Name Authentication Share Permissions Permissions Confirmation Results

Specify the authentication methods that you want to use for this NFS share.

Kerberos v5 authentication

Kerberos v5 authentication(Krb5)  
 Kerberos v5 authentication and integrity(Krb5i)  
 Kerberos v5 authentication and privacy(Krb5p)

No server authentication

No server authentication (AUTH\_SYS)  
 Enable unmapped user access  
 Allow unmapped user access by UID/GID  
 Allow anonymous access

< Previous Next > Create Cancel

*Click on Add to specify share permissions -*

Specify the share permissions

Select Profile  
Share Location  
Share Name  
Authentication  
**Share Permissions**  
Permissions  
Confirmation  
Results

The server evaluates the share permissions in the order they are shown below. The final access permissions on a file share are determined by taking into consideration both the share permission and the NTFS permission entries. The more restrictive permissions are then applied.

Name	Permissions	Root Access	Encoding

Add... Edit... Remove

< Previous Next > Create Cancel

*Select for All Machines and Read-Only Permissions -*

New Share Wizard

Specify the share permissions

Select Profile  
Share Location  
Share Name  
Authentication  
**Share Permissions**  
Permissions  
Confirmation  
Results

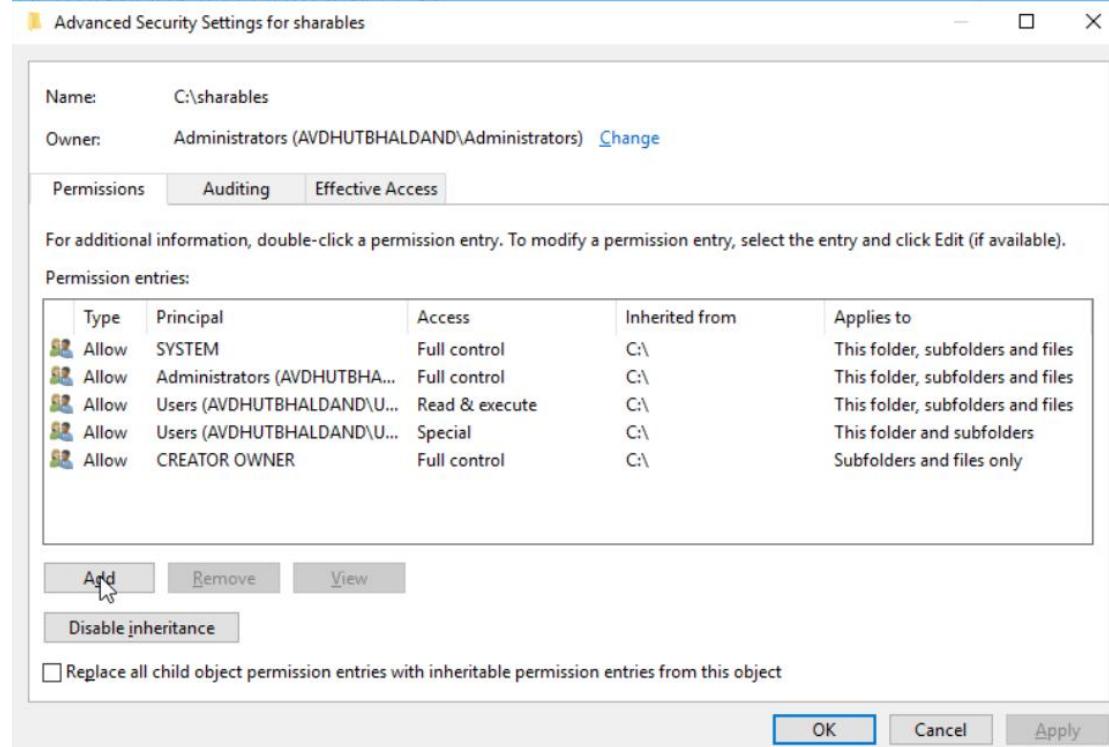
The server evaluates the share permissions in the order they are shown below. The final access permissions on a file share are determined by taking into consideration both the share permission and the NTFS permission entries. The more restrictive permissions are then applied.

Name	Permissions	Root Access	Encoding
All Machines	Read Only	Disallowed	ANSI

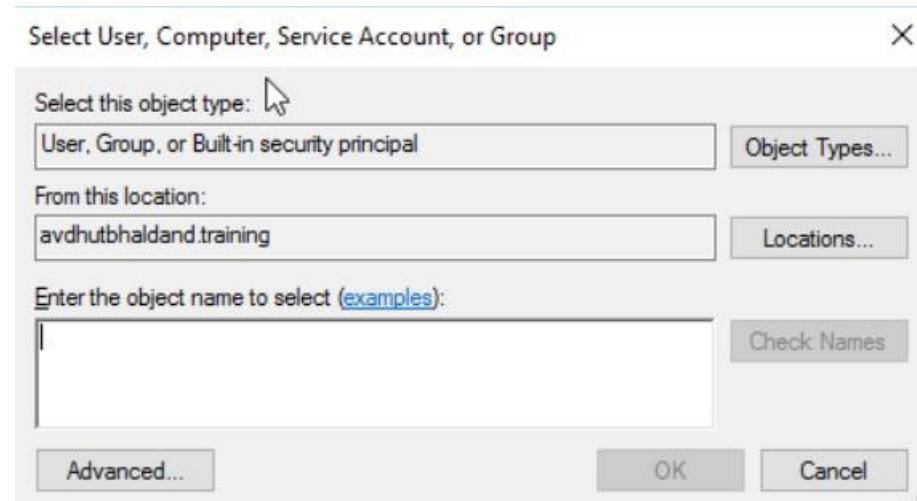
Add... Edit... Remove

< Previous Next > Create Cancel

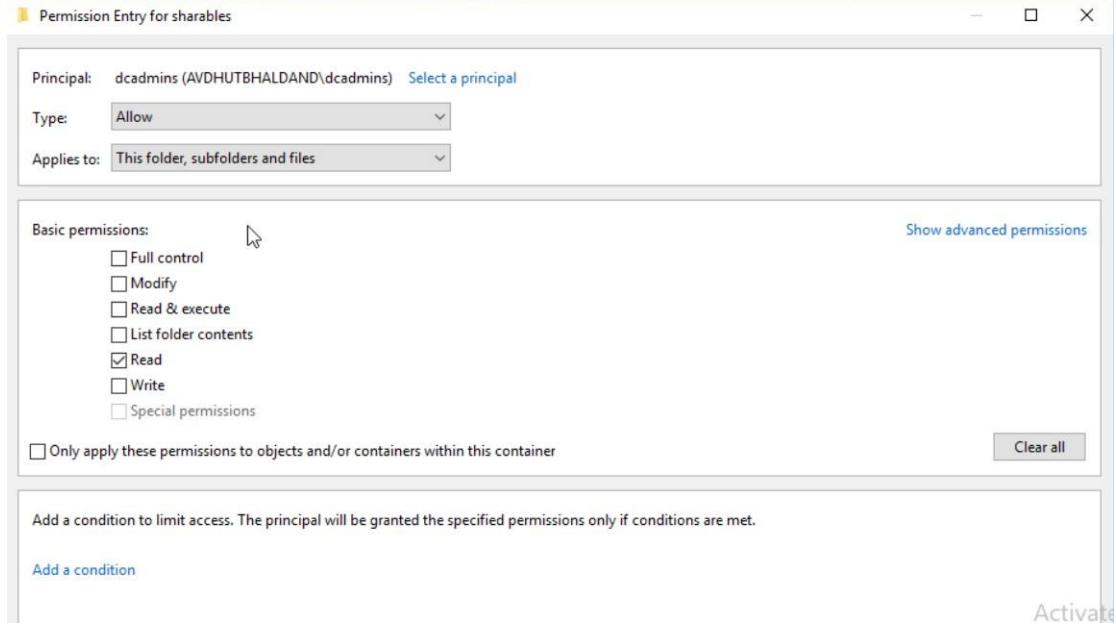
Click on Add to add the principal -



Enter the 'dadmins' group -



## Specify the Permissions-



Click on create to create share-

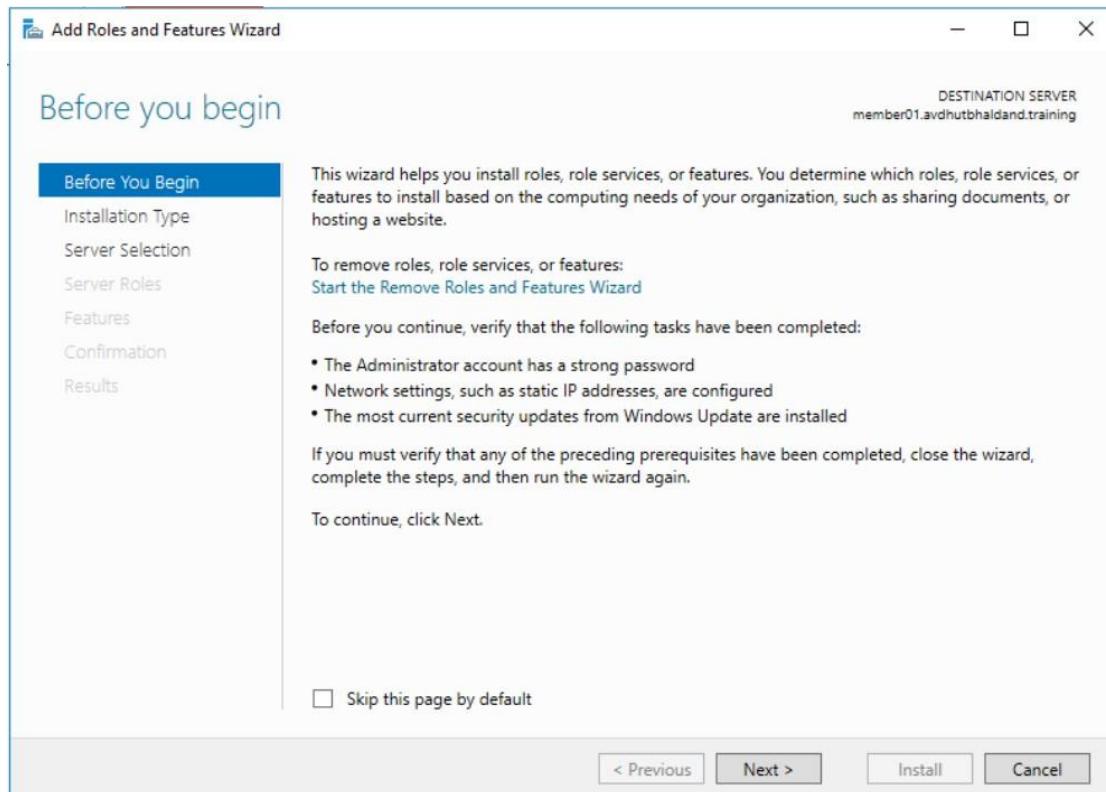
### Confirm selections

Confirm that the following are the correct settings, and then click Create.

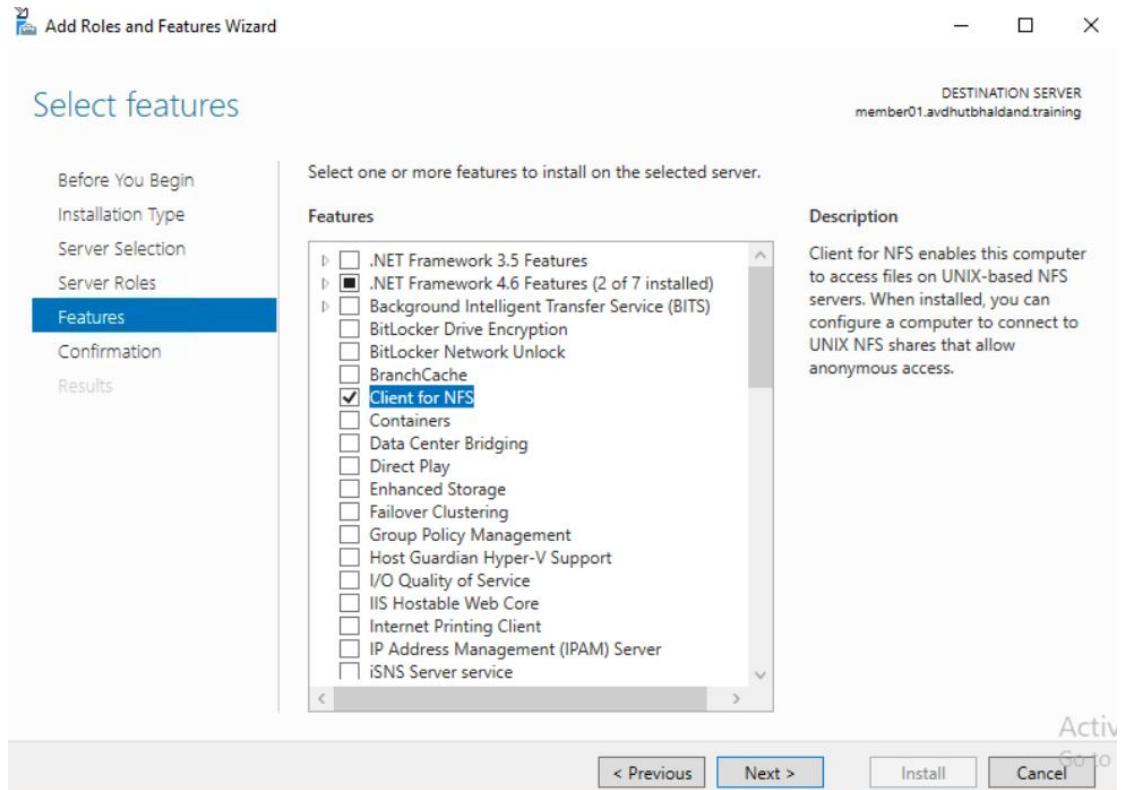
<b>SHARE LOCATION</b>
Server: dc01
Cluster role: Not Clustered
Local path: C:\sharables
<b>SHARE PROPERTIES</b>
Share name: sharables
Protocol: NFS

< Previous

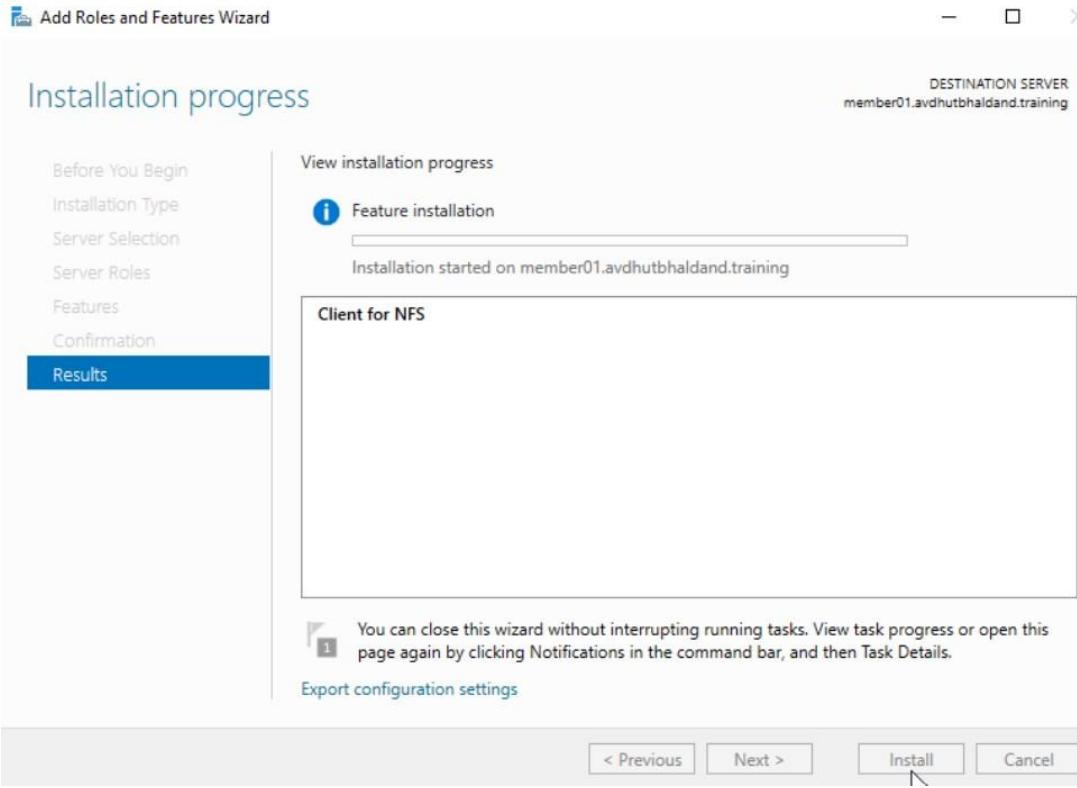
## Login to member machine and Click Add roles and features-



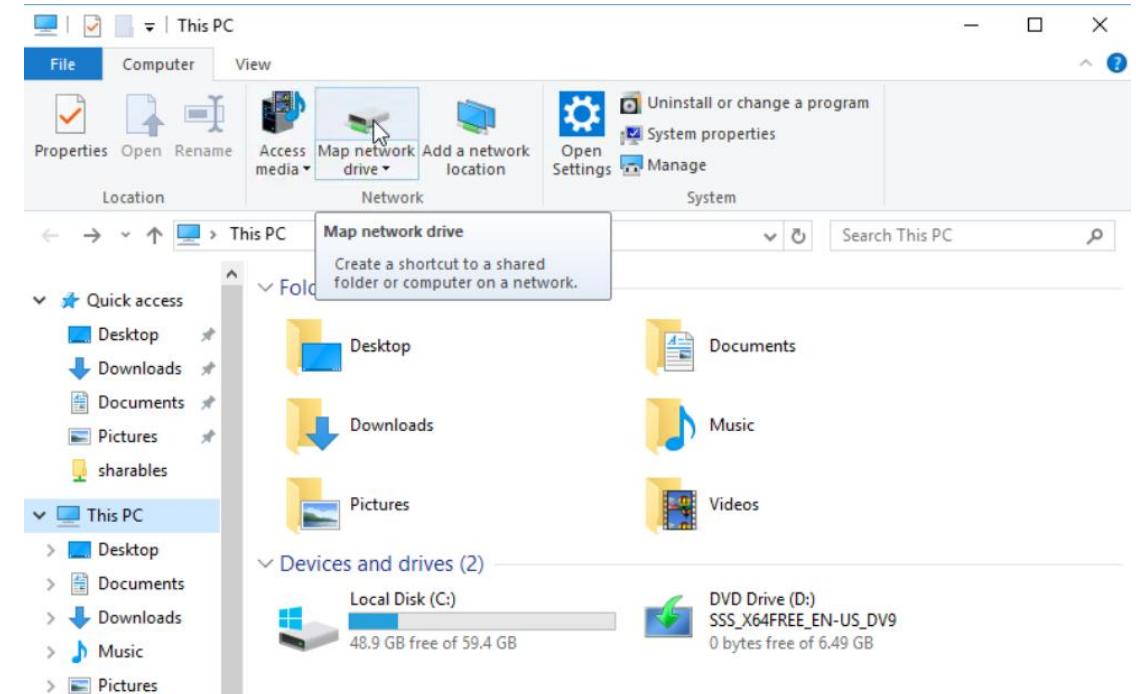
## Select Client for NFS features -



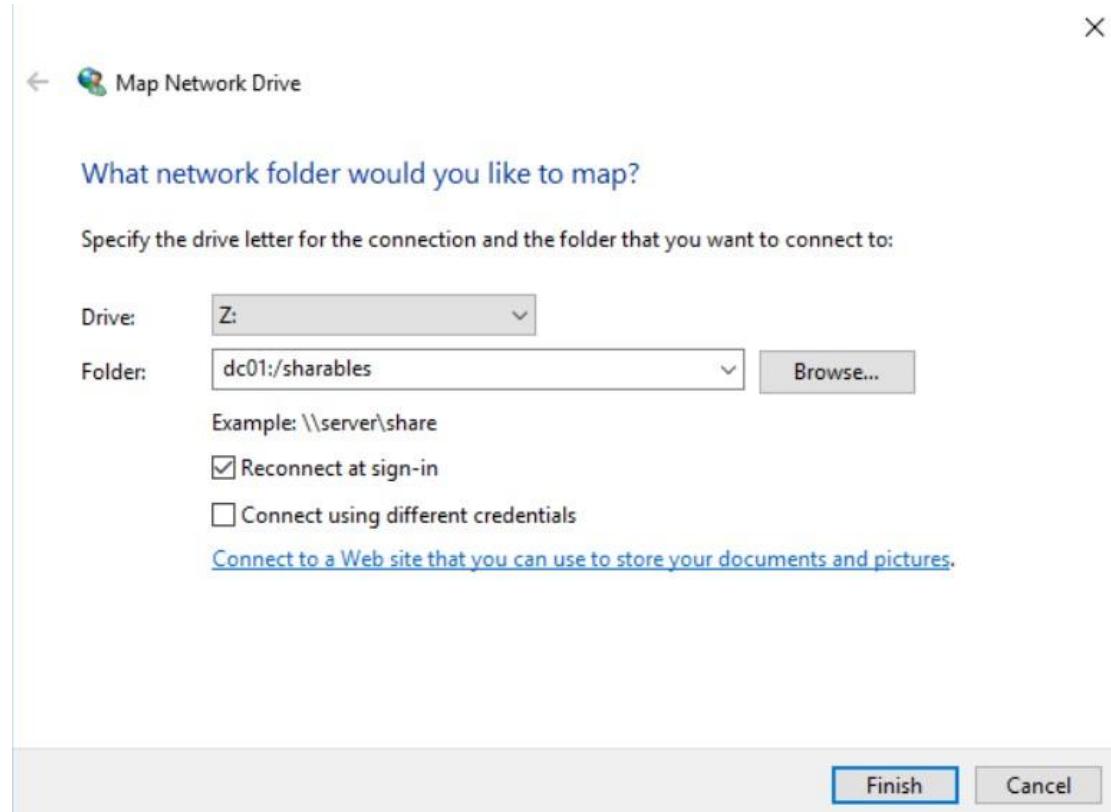
# Installation is in progress-



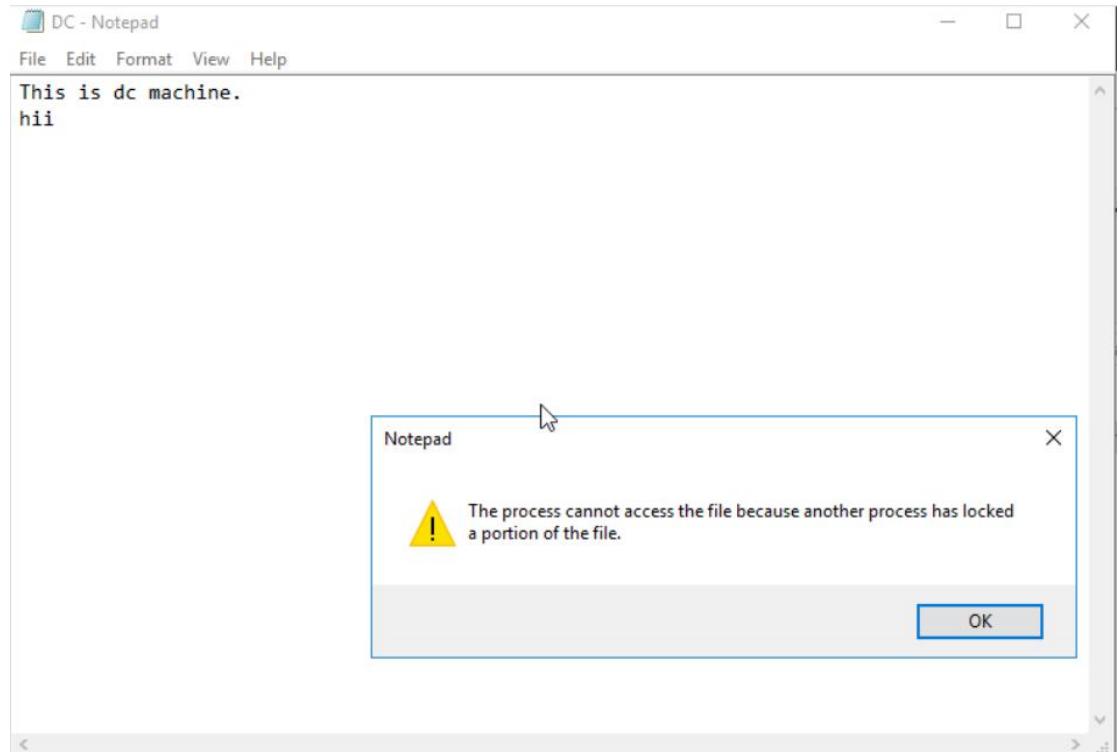
Open This PC on member machine and select Map network drive-



Enter the network path of the created share-



Try to modify the file in the folder and the access will be denied -



# WIPRO NGA Program – Datacenter Batch

Capstone Project Presentation – 06 April 2024

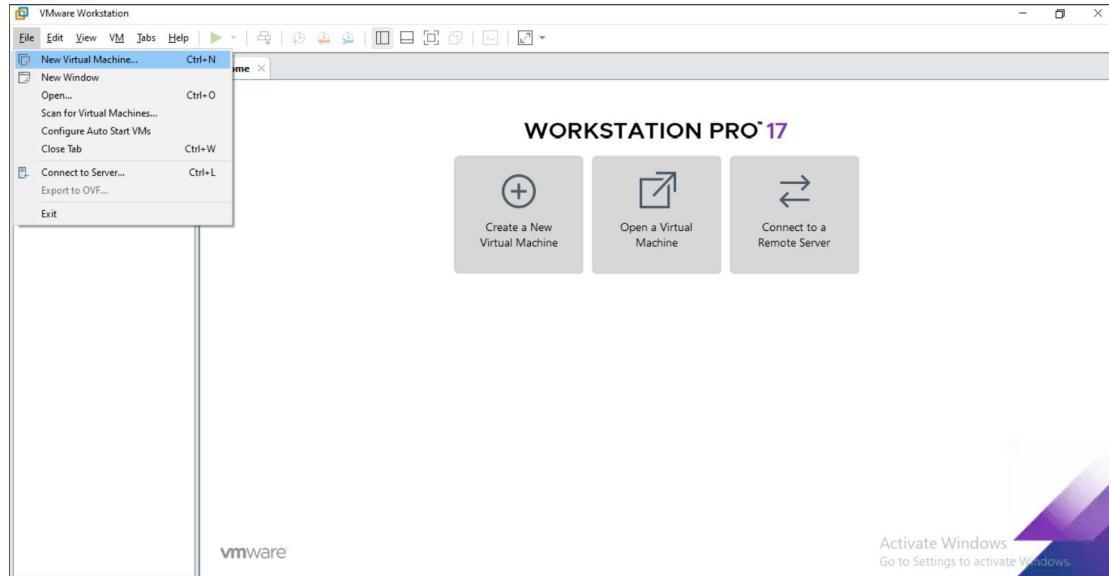
Project Title – Task 2

Presented by – Avdhut Sanjay Bhaland

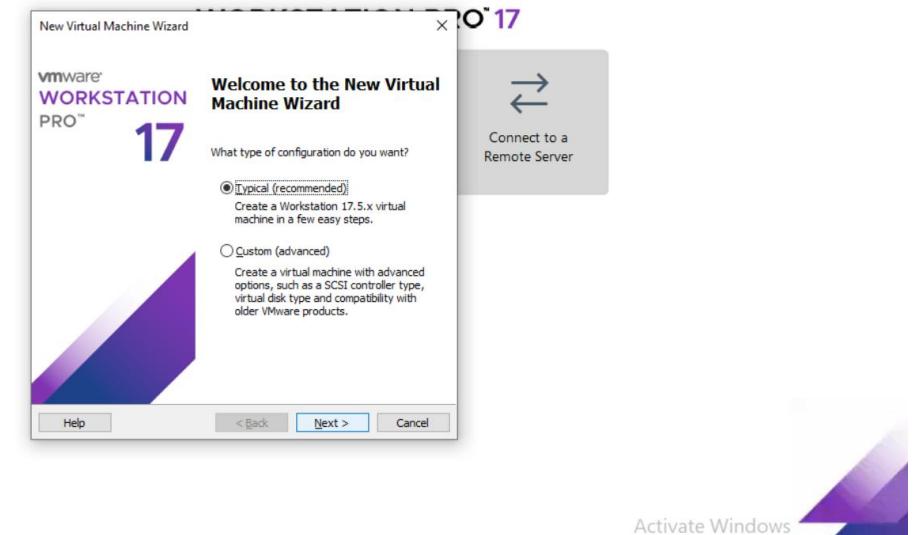
# Objective :

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.

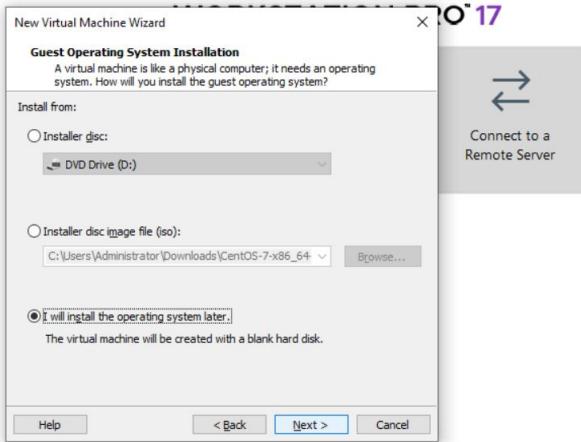
# Create New Virtual Machine



Select Typical-



Select I will install later-

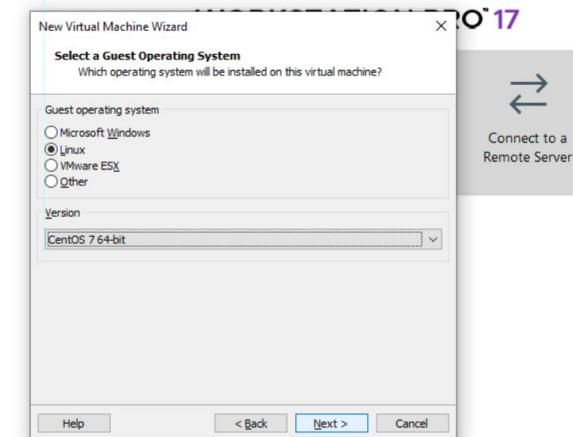


vmware



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Select the CentOS Version-

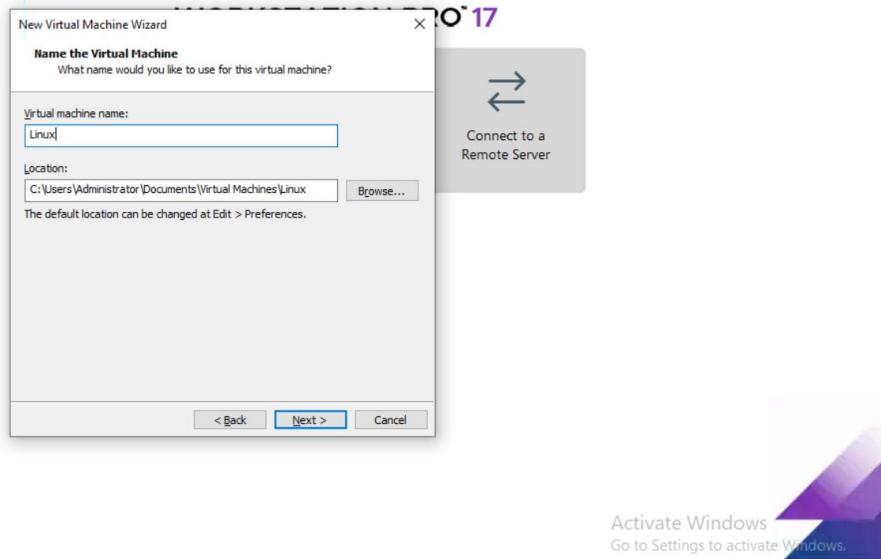


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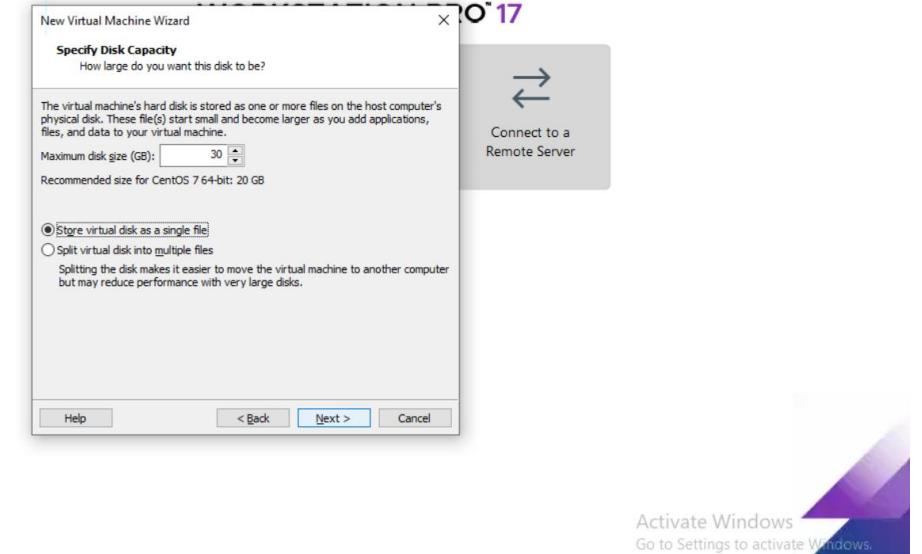


vmware

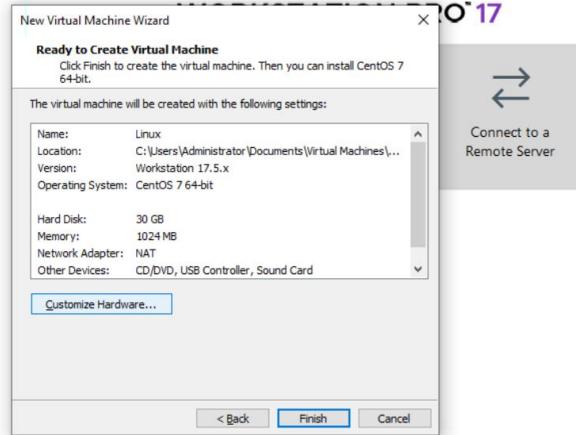
## Specify VM Name-



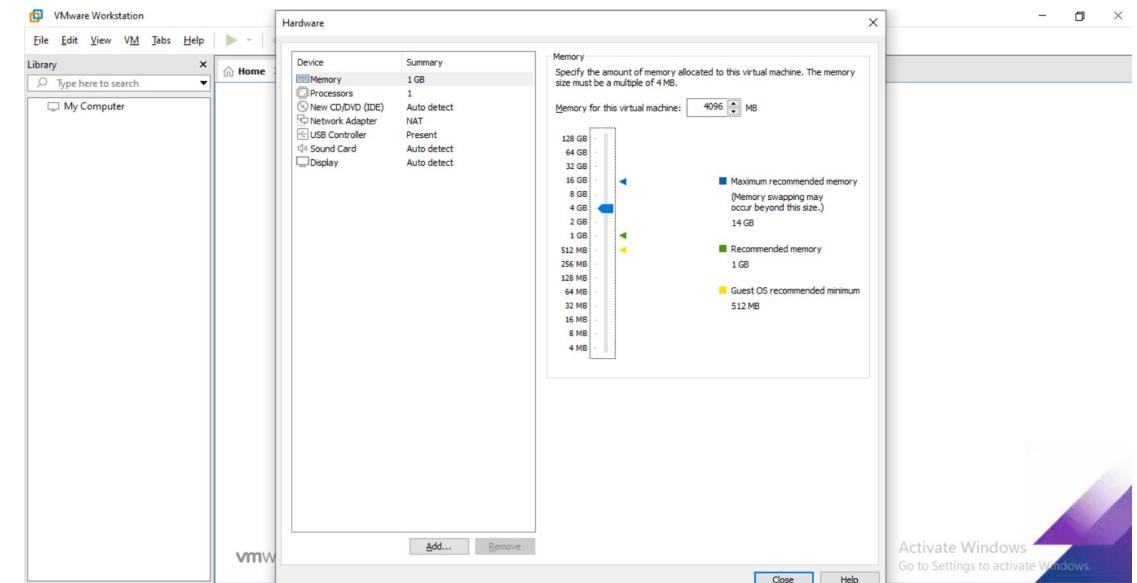
## Specify the disk capacity-



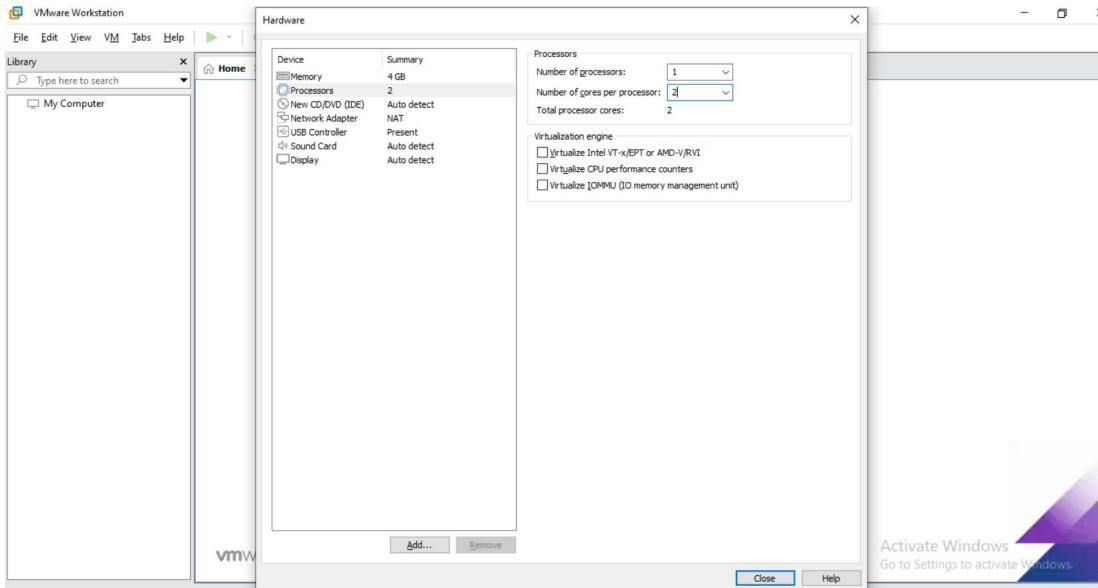
## Select Customize Hardware-



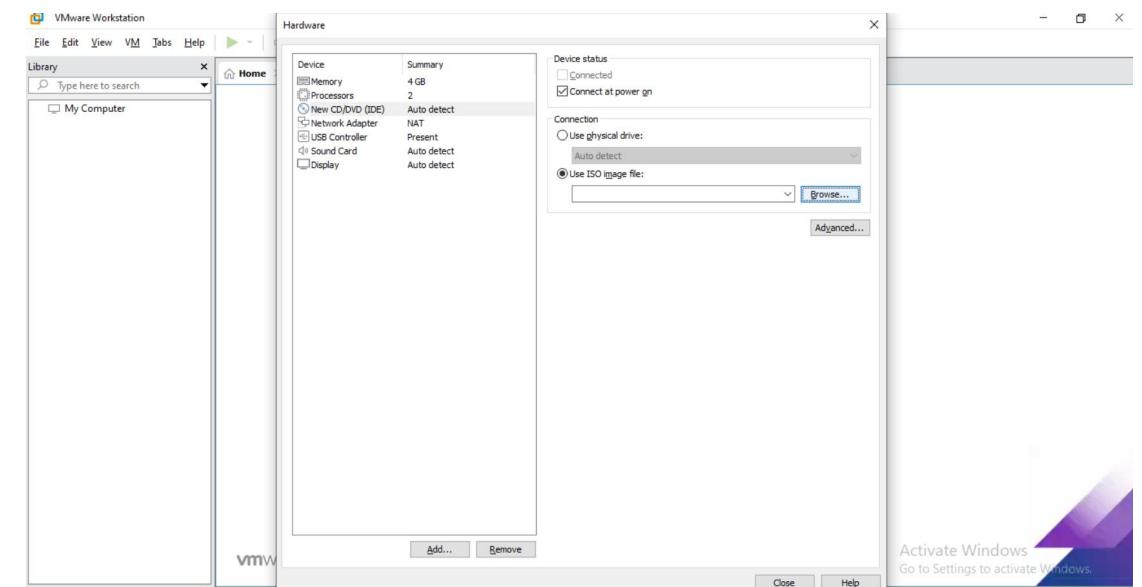
Select memory size-



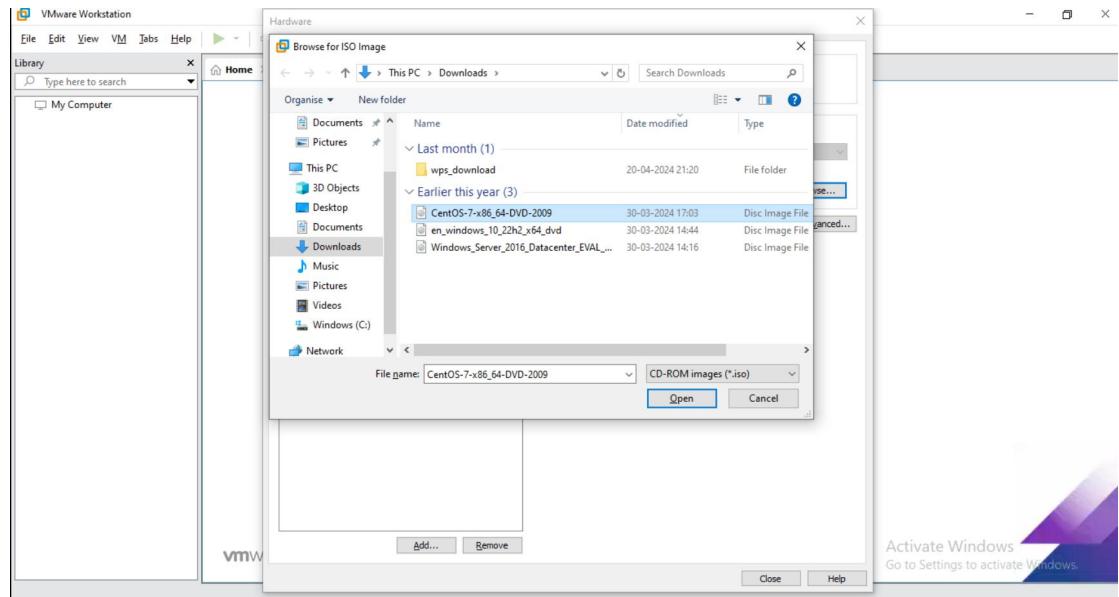
Select number of processors -



Select Use ISO image file option-



## Browse and select the Server ISO image file-



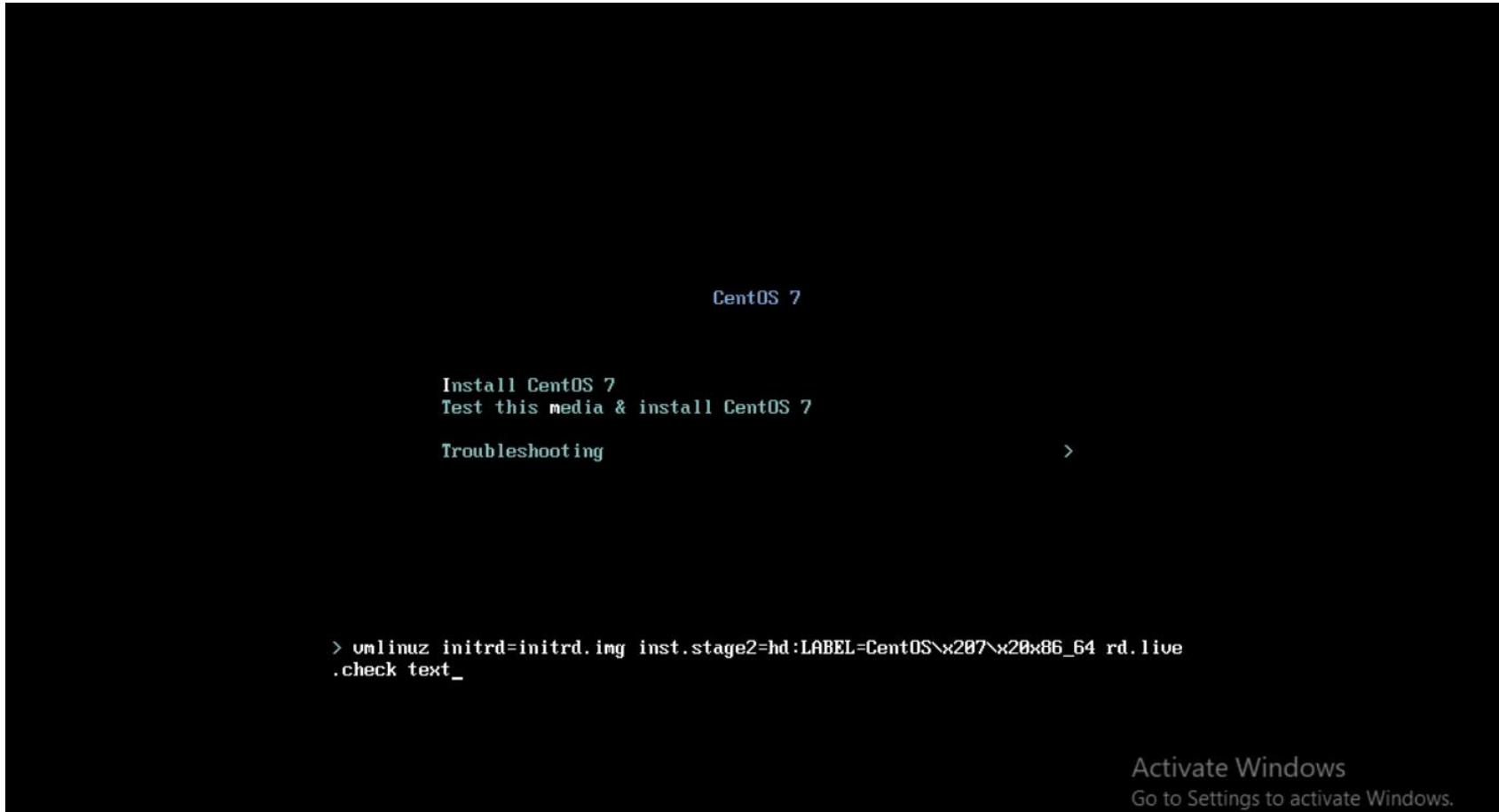
## Power ON this VM-

The screenshot shows the VMware Workstation interface with a virtual machine configuration window for a machine named 'Linux'. The window includes the following sections:

- Devices**:
  - Memory: 4 GB
  - Processors: 2
  - Hard Disk (SCSI): 30 GB
  - CD/DVD (IDE): Using file C:\Users\...
  - Network Adapter: NAT
  - USB Controller: Present
  - Sound Card: Auto detect
  - Display: Auto detect
- Description**: Type here to enter a description of this virtual machine.
- Virtual Machine Details**:
  - State: Powered off
  - Configuration file: C:\Users\Administrator\Documents\Virtual Machines\Linux\Linux.vmx
  - Hardware compatibility: Workstation 17.5.x virtual machine
  - Primary IP address: Network information is not available

An 'Activate Windows' message is displayed at the bottom right of the screen.

Hit Tab button and add 'text' to the line below-



## Type 1 to set Time zone-

```
=====
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             Please make your choice from above [q' to quit | 'b' to begin installation |
   (No user will be created)      'r' to refresh]: 2
=====
=====
Time settings

Timezone: not set
NTP servers: not configured

1) Set timezone
2) Configure NTP servers
Please make your choice from above [q' to quit | 'c' to continue |
   'r' to refresh]: 1_
```

## Select the region-

```
Available timezones in region Asia
1) Aden                      29) Hong_Kong                  56) Pontianak
2) Almaty                     30) Hovd                      57) Pyongyang
3) Amman                     31) Irkutsk                   58) Qatar
4) Atyrau                     32) Jakarta                   59) Qostanay
5) Aqttau                     33) Jayapura                  60) Qyzylorda
6) Aqtobe                     34) Jerusalem                 61) Riyadh
7) Ashgabat                  35) Kabul                     62) Sakhalin
8) Atyrau                     36) Kamchatka                63) Samarkand
9) Baghdad                    37) Karachi                   64) Seoul
10) Bahrain                   38) Kathmandu                65) Shanghai
11) Baku                      39) Khandyga                 66) Singapore
12) Bangkok                   40) Kolkata                   67) Srednekolymsk
13) Barnaul                   41) Krasnoyarsk              68) Taipei
14) Beirut                     42) Kuala_Lumpur              69) Tashkent
15) Bishkek                   43) Kuching                   70) Tbilisi
16) Brunei                    44) Kuwait                   71) Tehran
17) Chita                      45) Macau                     72) Thimphu
18) Choibalsan                46) Magadan                  73) Tokyo
19) Colombo                   47) Makassar                  74) Tomsk
20) Damascus                  48) Manila                   75) Ulaanbaatar
21) Dhaka                     49) Muscat                   76) Urumqi
22) Dili                       50) Nicosia                  77) Ust-Nera
Press ENTER to continue
23) Dubai                     51) Novokuznetsk             78) Vientiane
24) Dushanbe                  52) Novosibirsk              79) Vladivostok
25) Famagusta                 53) Omsk                      80) Yakutsk
26) Gaza                      54) Oral                      81) Yangon
27) Hebron                   55) Phnom_Penh               82) Yekaterinburg
28) Ho_Chi_Minh               Please select the timezone.
Use numbers or type names directly [b to region list, q to quit]: 40
```

Type 4 for Software selection and type 7 to select 'Server with GUI'-

```
=====
Installation
1) [x] Language settings           2) [x] Time settings
      (English (United States))   (Asia/Kolkata timezone)
3) [x] Installation source        4) [x] Software selection
      (Local media)               (Minimal Install)
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             Please make your choice from above [‘q’ to quit | ‘b’ to begin installation | ‘r’ to refresh]: 4
=====
Base environment
Software selection
Base environment
1) [x] Minimal Install           7) [ ] Server with GUI
2) [ ] Compute Node              8) [ ] GNOME Desktop
3) [ ] Infrastructure Server     9) [ ] KDE Plasma Workspaces
4) [ ] File and Print Server    10) [ ] Development and Creative
5) [ ] Basic Web Server          Workstation
6) [ ] Virtualization Host
Please make your choice from above [‘q’ to quit | ‘c’ to continue | ‘r’ to refresh]:
Please make your choice from above [‘q’ to quit | ‘c’ to continue | ‘r’ to refresh]: 7
```

## Type 5 for selecting disk -

```
=====
Installation

1) [x] Language settings
    (English (United States))
2) [x] Time settings
    (Asia/Kolkata timezone)
3) [!] Installation source
    (Processing...)
4) [!] Software selection
    (Processing...)
5) [!] Installation Destination
    (No disks selected)
6) [x] Kdump
    (Kdump is enabled)
7) [ ] Network configuration
    (Not connected)
8) [!] Root password
    (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]: Please make your choice from above ['q' to quit | 'b' to begin installation |
'r' to refresh]: 5
=====
Probing storage...
Installation Destination

[x] 1) VMware Virtual S: 30 GiB (sda)

1 disk selected; 30 GiB capacity; 30 GiB free ...

Please make your choice from above ['q' to quit | 'c' to continue |
'r' to refresh]: c_
```

```
Autopartitioning Options

[ ] 1) Replace Existing Linux system(s)
[x] 2) Use All Space
[ ] 3) Use Free Space

Installation requires partitioning of your hard drive. Select what space to use
for the install target.

Please make your choice from above ['q' to quit | 'c' to continue |
'r' to refresh]: c
=====

Partition Scheme Options

[ ] 1) Standard Partition
[ ] 2) Btrfs
[x] 3) LVM
[ ] 4) LVM Thin Provisioning

Select a partition scheme configuration.

Please make your choice from above ['q' to quit | 'c' to continue |
'r' to refresh]: c
```

## Type 7 for Network configuration-

```
Installation
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) [ ] Network configuration
    (Not connected)
8) [!] Root password
    (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]: ?
=====
=====
Network configuration
Wired (ens33) disconnected
Host name: localhost.localdomain
Current host name: localhost
1) Set host name
2) Configure device ens33
Please make your choice from above ['q' to quit | 'c' to continue |
'r' to refresh]: _
```

Type 1 to specify host name-

```
1) Set host name
2) Configure device ens33
Please make your choice from above ['q' to quit | 'c' to continue |
'r' to refresh]: Please make your choice from above ['q' to quit | 'c' to continue |
'r' to refresh]: Please make your choice from above ['q' to quit | 'c' to continue |
'r' to refresh]: 1
=====
=====
Enter new value for 'Host name' and press enter
server
=====
=====
Network configuration
Wired (ens33) disconnected
Host name: server
Current host name: localhost
1) Set host name
2) Configure device ens33
Please make your choice from above ['q' to quit | 'c' to continue |
'r' to refresh]: 2
```

## Type 2 for network configuration-

```
=====
Device configuration

1) IPv4 address or "dhcp" for DHCP
   dhcp
2) IPv4 netmask
3) IPv4 gateway
4) IPv6 address[/prefix] or "auto" for automatic, "dhcp" for DHCP, "ignore" to
   turn off
   auto
5) IPv6 default gateway
6) Nameservers (comma separated)
7) [x] Connect automatically after reboot
8) [x] Apply configuration in installer
Configuring device ens33.

Please make your choice from above ['q' to quit | 'c' to continue |
'r' to refresh]:
```

[Anaconda] 1:main\* 2:shell 3:log 4:storage-log 5:program-log      Switch tab: All

## Type 8 for creating user-

```
=====
Installation

1) [x] Language settings
   (English (United States))
3) [x] Installation source
   (Local media)
5) [x] Installation Destination
   (Automatic partitioning
   selected)
7) [x] Network configuration
   (Wired (ens33) connected)
9) [!] User creation
   (No user will be created)
Please make your choice from above ['q' to quit | 'b' to begin installation |
'r' to refresh]: 8
=====

Please select new root password. You will have to type it twice.

Password:
Password (confirm):
```

## Type 9 for User Creation-

```
=====
Installation
1) [x] Language settings
    (English (United States))
3) [!] Installation source
    (Processing...)
5) [x] Installation Destination
    (Automatic partitioning
     selected)
7) [x] Network configuration
    (Wired (ens33) connected)
9) [ ] User creation
    (No user will be created)
Please make your choice from above ['q' to quit | 'b' to begin installation |
'r' to refresh]: 9
=====
=====
User creation
1) [ ] Create user
Please make your choice from above ['q' to quit | 'c' to continue |
'r' to refresh]: 1
```

## Type 2 for specifying User name-

```
=====
User creation
1) [ ] Create user
Please make your choice from above ['q' to quit | 'c' to continue |
'r' to refresh]: 1
=====
=====
User creation
1) [x] Create user
2) Fullname
3) Username
4) [ ] Use password
5) [ ] Administrator
6) Groups
Please make your choice from above ['q' to quit | 'c' to continue |
'r' to refresh]: 2
=====
=====
Enter new value for 'Fullname' and press enter
Avdhut Bhaldand
```

Type 5 to set password-

```
User creation

1) [x] Create user
2) Fullname
   Avdhut Bhaland
3) Username
   avdhut
4) [x] Use password
5) Password
6) [ ] Administrator
7) Groups
Please make your choice from above ['q' to quit | 'c' to continue |
'r' to refresh]: 5
=====
=====
Password:
Password (confirm):
=====
=====
Question

The password you have provided is weak: The password fails the dictionary check
- it is based on a dictionary word.
Would you like to use it anyway?

Please respond 'yes' or 'no': yes
```

Type 6 to specify administrator privileges to user-

```
User creation

1) [x] Create user
2) Fullname
   Avdhut Bhaland
3) Username
   avdhut
4) [x] Use password
5) Password
   Password set.
6) [ ] Administrator
7) Groups
   Please make your choice from above ['q' to quit | 'c' to continue |
   'r' to refresh]: 6
=====
=====
User creation

1) [x] Create user
2) Fullname
   Avdhut Bhaland
3) Username
   avdhut
4) [x] Use password
5) Password
   Password set.
6) [x] Administrator
7) Groups
   wheel
   Please make your choice from above ['q' to quit | 'c' to continue |
   'r' to refresh]: c
```

Type **b** to begin installation-

```
=====
Installation

1) [x] Language settings
      (English (United States))
3) [x] Installation source
      (Local media)
5) [x] Installation Destination
      (Automatic partitioning
       selected)
7) [x] Network configuration
      (Wired (ens33) connected)
9) [x] User creation
      (Administrator avdhut will be
       created)

Please make your choice from above ['q' to quit | 'b' to begin installation |
'r' to refresh]: b_
```

*Installation Completed, hit enter -*

```
Performing post-installation setup tasks
Installing boot loader
.
Performing post-installation setup tasks
.

Configuring installed system
.
Writing network configuration
.
Creating users
.
Configuring addons
.
Generating initramfs
.
Running post-installation scripts
.

Use of this product is subject to the license agreement found at /usr/share/centos-release/E
ULA

Installation complete. Press return to quit_ A
```

## Accept the Licence Agreement-

```
=====
Initial setup of CentOS Linux 7 (Core)

1) [!] License information
   (License not accepted)
Please make your choice from [ '1' to enter the License information spoke | 'q' to quit |
 'c' to continue | 'r' to refresh]: 1
=====
=====
License information

 1) Read the License Agreement

[ 1 2) I accept the license agreement.

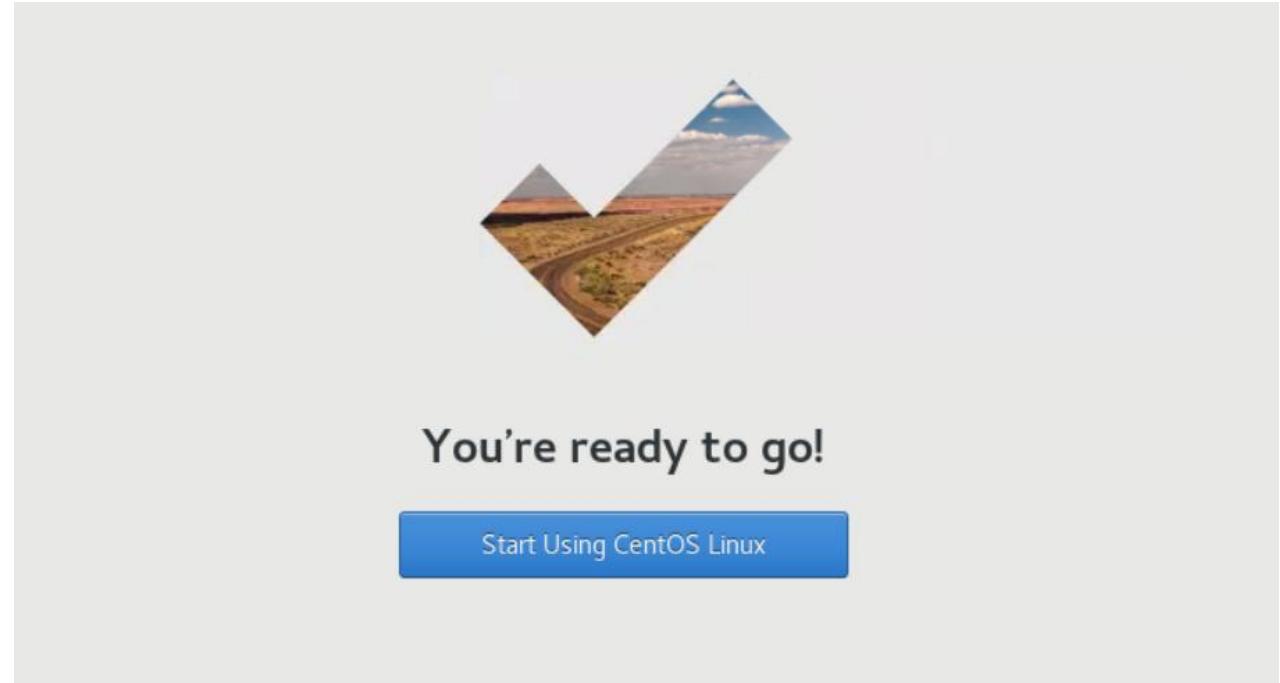
Please make your choice from above [ 'q' to quit | 'c' to continue |
 'r' to refresh]: 2
```

Login using root-  
Type Command 'startx' to run GUI-

```
CentOS Linux 7 (Core)
Kernel 3.10.0-1160.el7.x86_64 on an x86_64

server login: root
Password:

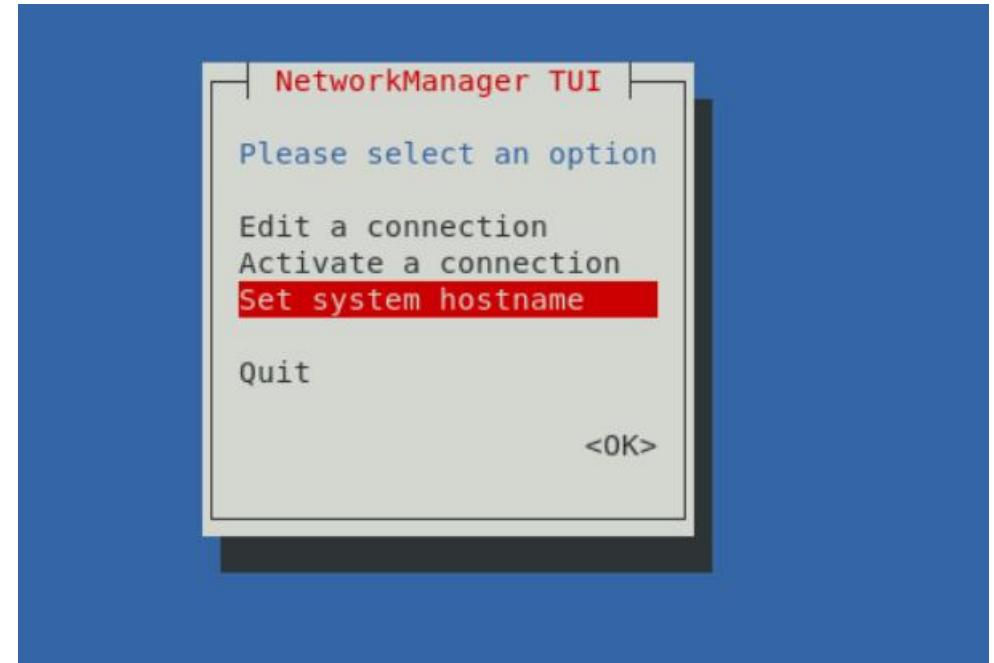
[root@server ~]#
[root@server ~]#
[root@server ~]# startx
```

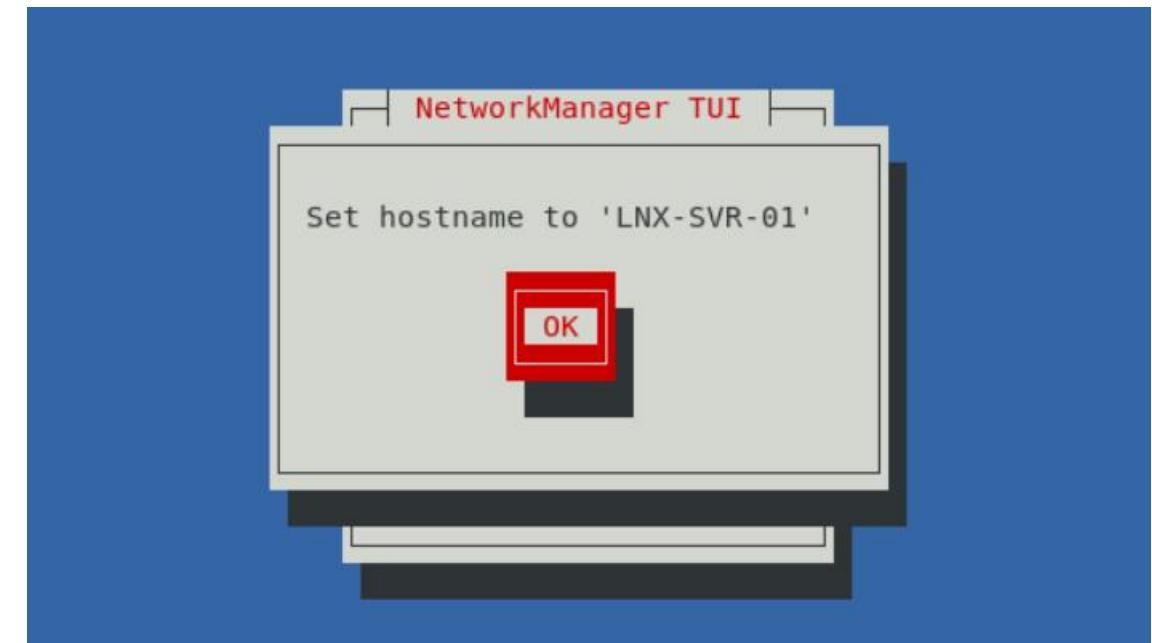
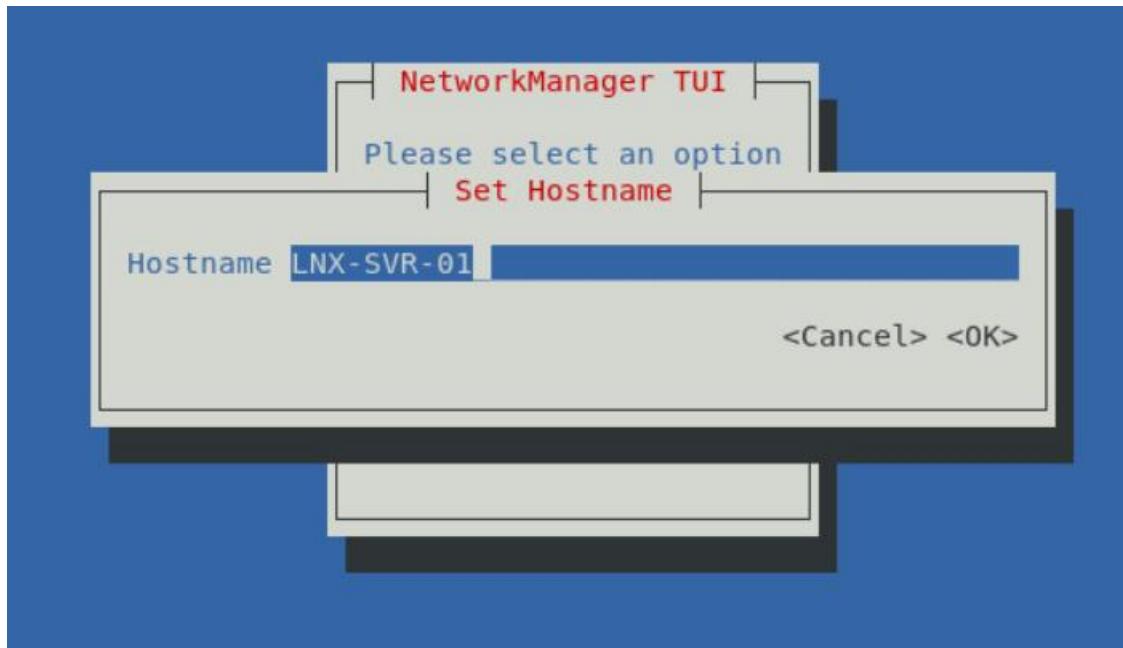


Change your linux server name to "LNX-SVR-01" using NMTUI command.  
Change the IP address on linux to 192.168.10.10/24

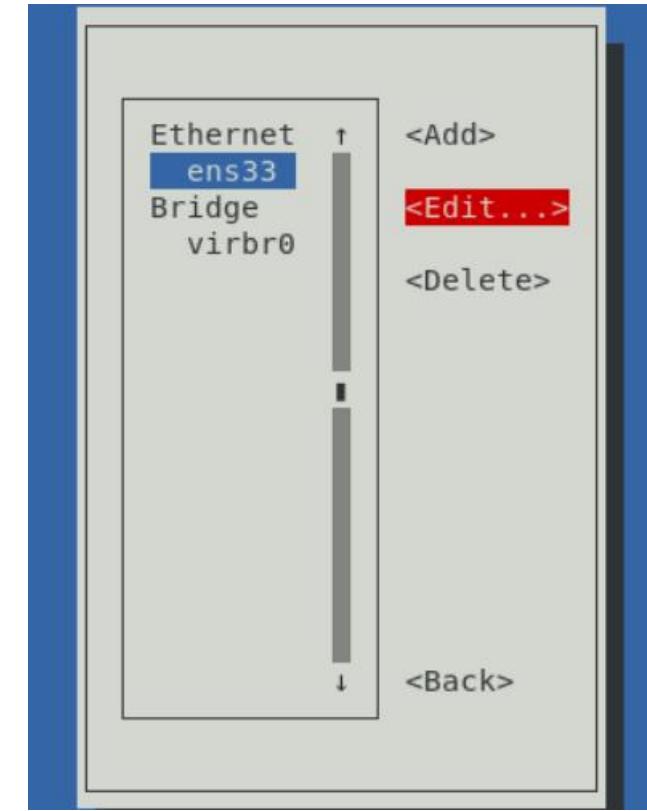
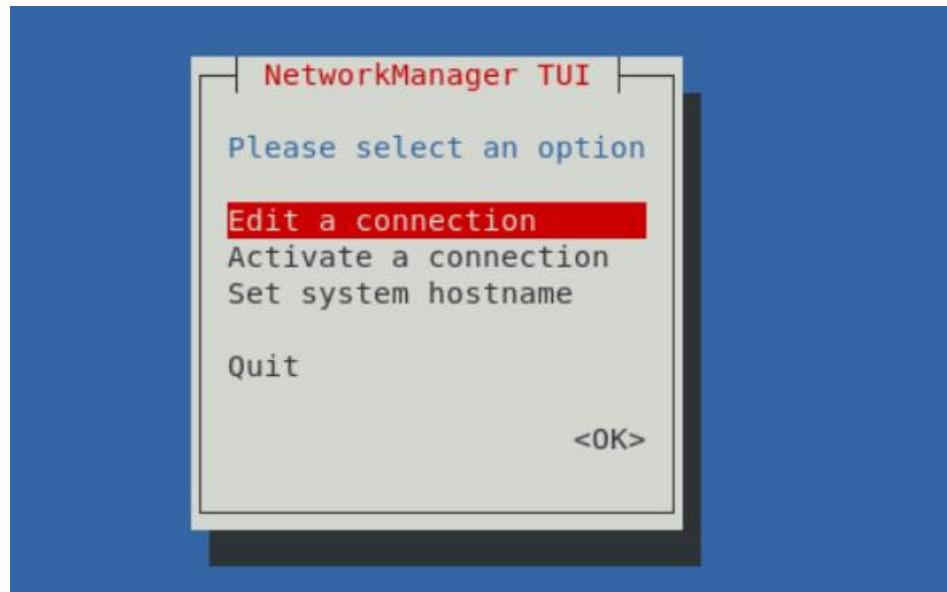
```
root@server:~  
File Edit View Search Terminal Help  
[root@server ~]# nmtui
```

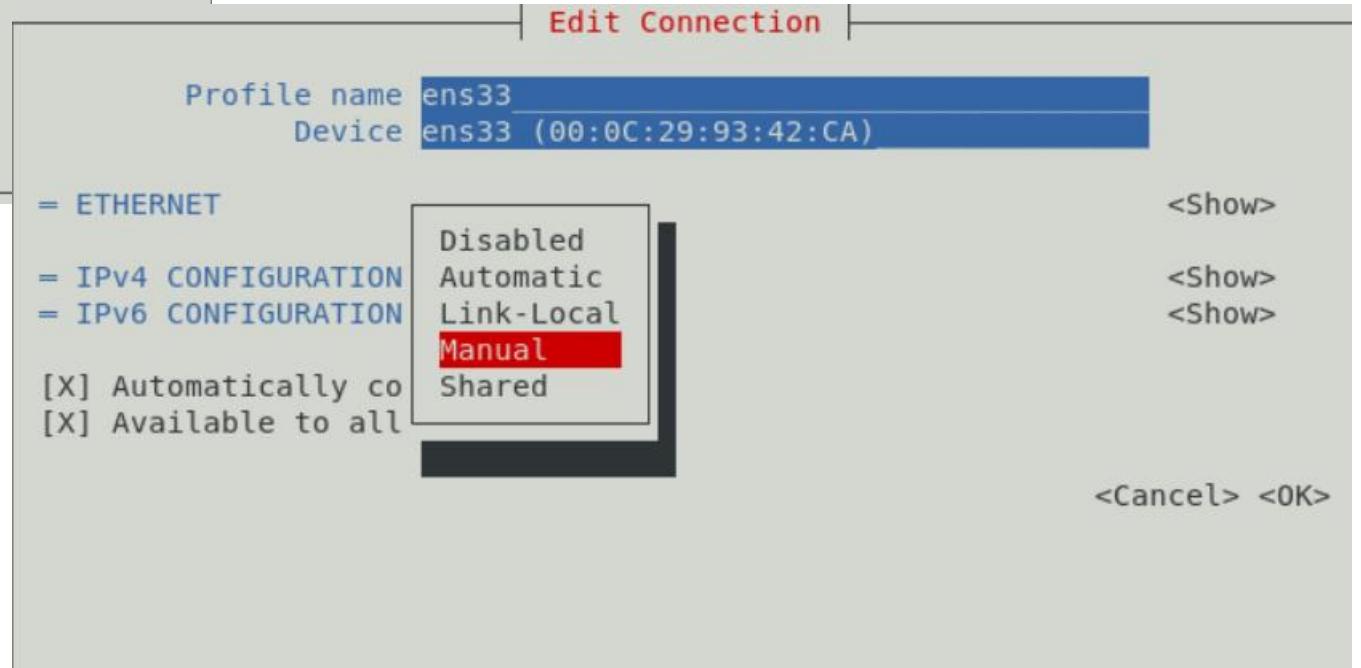
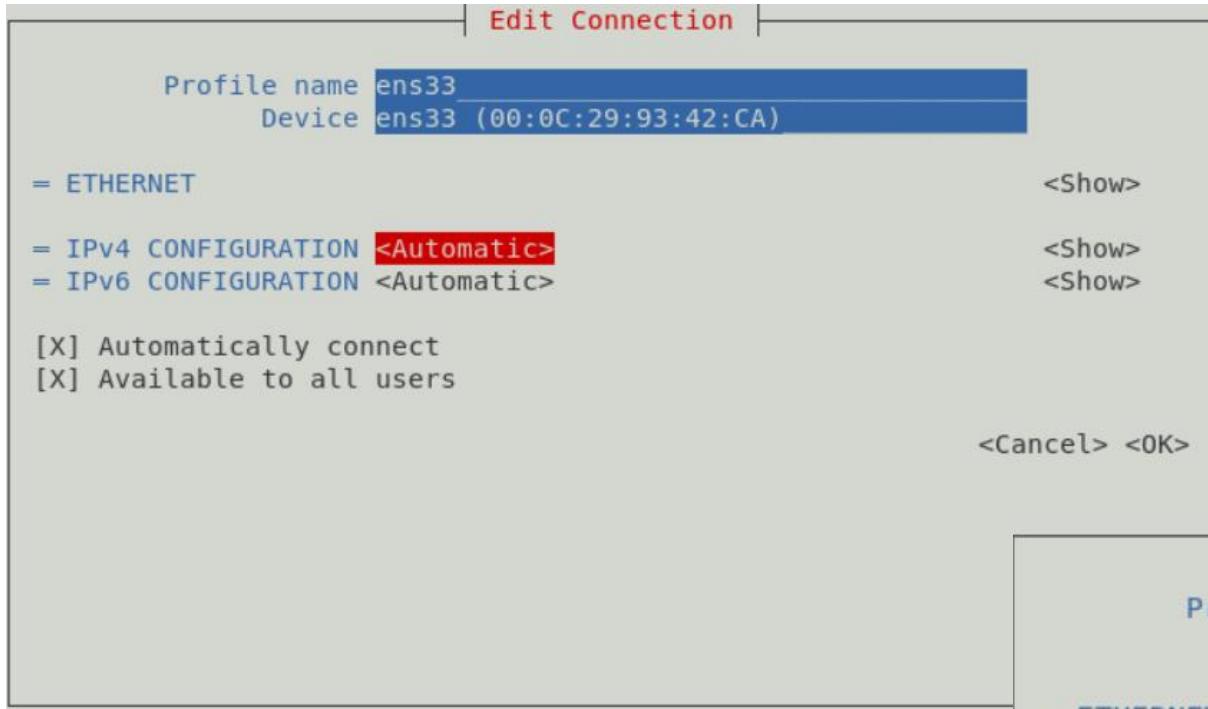
Select Set System Hostname -



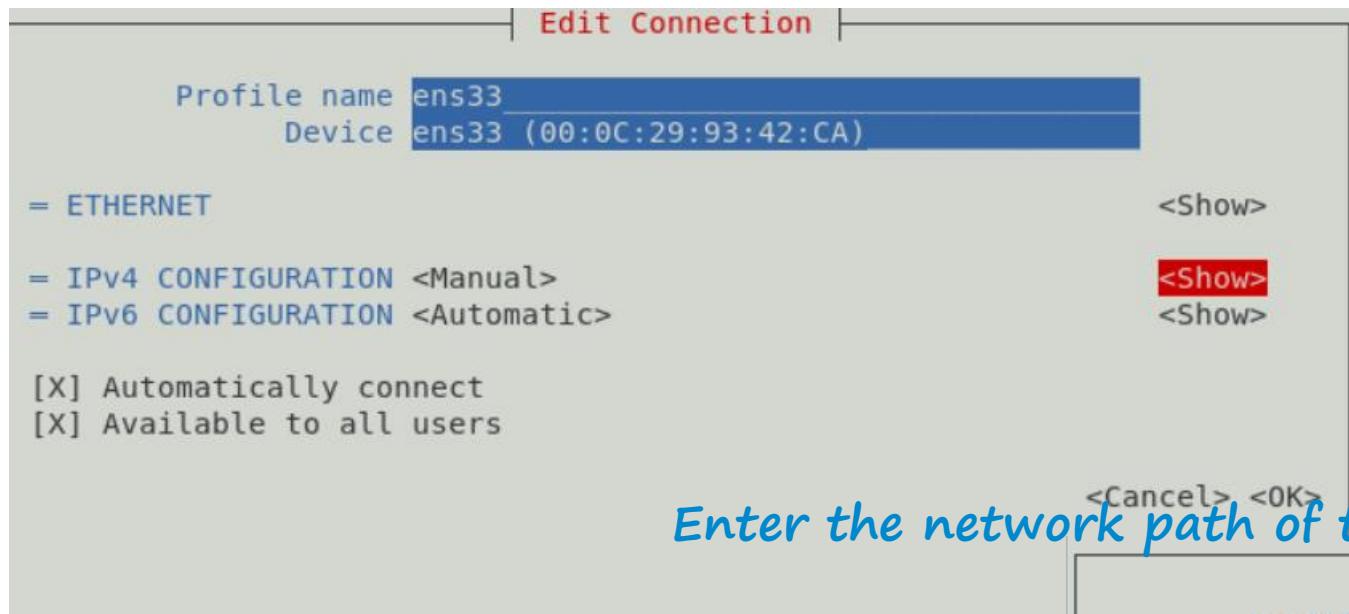


Select Edit a Connection to specify IP Address-

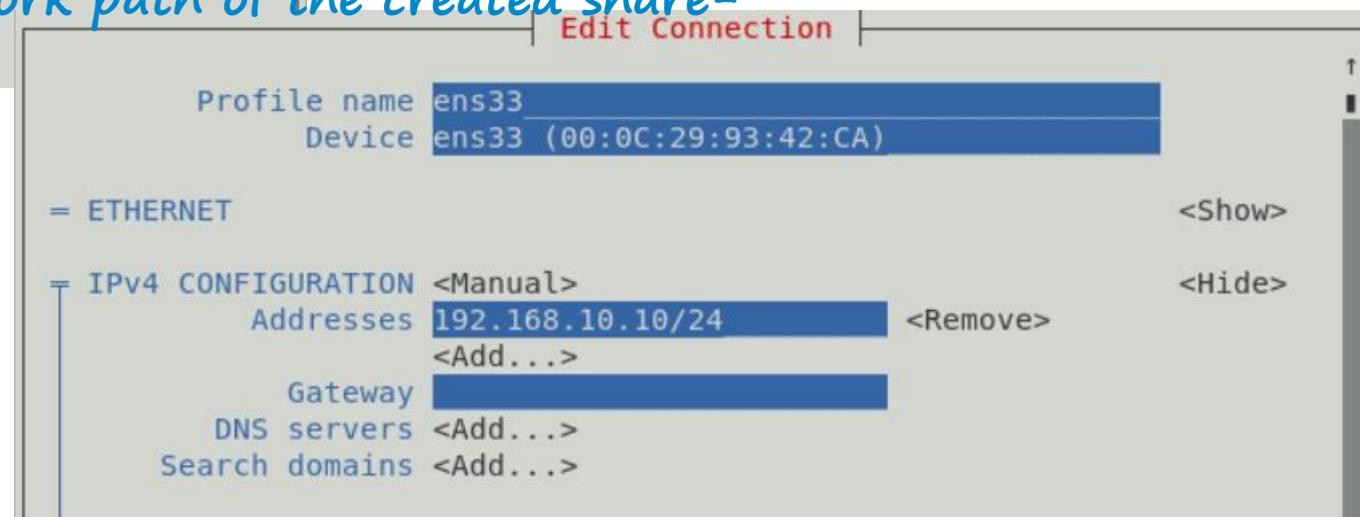




# Open MySQL workbench setup



Enter the network path of the created share-



## *Run cmd systemctl restart network to update network-*

```
[root@server ~]# systemctl restart network
[root@server ~]# 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::20a2:775c:35f5:3188  prefixlen 64  scopeid 0x20<link>
        ether 00:0c:29:93:42:ca  txqueuelen 1000  (Ethernet)
          RX packets 455960  bytes 684870731 (653.1 MiB)
          RX errors 0  dropped 0  overruns 0  frame 0
          TX packets 71217  bytes 4360359 (4.1 MiB)
          TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0
```

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.

```
[root@LNX-SVR-01 ~]# 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 1024M 0 rom 
[root@LNX-SVR-01 ~]#
```

## Run cmd 'fdisk </dev/sd...>' to create partition of disk-

```
[root@LNX-SVR-01 ~]# fdisk /dev/sdb
Welcome to fdisk (util-linux 2.23.2).

Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table
Building a new DOS disklabel with disk identifier 0xfb18fe4d.

Command (m for help): n
Partition type:
  p  primary (0 primary, 0 extended, 4 free)
  e  extended
Select (default p):
Using default response p
Partition number (1-4, default 1):
First sector (2048-10485759, default 2048):
Using default value 2048
Last sector, +sectors or +size{K,M,G} (2048-10485759, default 10485759):
Using default value 10485759
Partition 1 of type Linux and of size 5 GiB is set
                                              Command (m for help): t
                                              Selected partition 1
                                              Hex code (type L to list all codes): 8e
                                              Changed type of partition 'Linux' to 'Linux LVM'

                                              Command (m for help): w
                                              The partition table has been altered!

                                              Calling ioctl() to re-read partition table.
                                              Syncing disks.
```

```
[root@LNX-SVR-01 ~]# fdisk /dev/sdc
Welcome to fdisk (util-linux 2.23.2).

Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table
Building a new DOS disklabel with disk identifier 0xa3833b4c.

Command (m for help): n
Partition type:
  p  primary (0 primary, 0 extended, 4 free)
  e  extended
Select (default p):
Using default response p
Partition number (1-4, default 1):
First sector (2048-10485759, default 2048):
Using default value 2048
Last sector, +sectors or +size{K,M,G} (2048-10485759, default 10485759): +2G
Partition 1 of type Linux and of size 2 GiB is set
```

```
Command (m for help): t
Selected partition 1
Hex code (type L to list all codes): 8e
Changed type of partition 'Linux' to 'Linux LVM'

Command (m for help): n
Partition type:
  p  primary (1 primary, 0 extended, 3 free)
  e  extended
Select (default p):
Using default response p
Partition number (2-4, default 2):
First sector (4196352-10485759, default 4196352):
Using default value 4196352
Last sector, +sectors or +size{K,M,G} (4196352-10485759, default 10485759):
Using default value 10485759
Partition 2 of type Linux and of size 3 GiB is set

Command (m for help): t
Partition number (1,2, default 2): 8e
Partition number (1,2, default 2): 2
Hex code (type L to list all codes): 8e
Changed type of partition 'Linux' to 'Linux LVM'

Command (m for help): w
The partition table has been altered!
```

```
[root@LNX-SVR-01 ~]# fdisk /dev/sdd
Welcome to fdisk (util-linux 2.23.2).

Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table
Building a new DOS disklabel with disk identifier 0xab8ece90.

Command (m for help): n
Partition type:
  p  primary (0 primary, 0 extended, 4 free)
  e  extended
Select (default p):
Using default response p
Partition number (1-4, default 1):
First sector (2048-10485759, default 2048):
Using default value 2048
Last sector, +sectors or +size{K,M,G} (2048-10485759, default 10485759):
Using default value 10485759
Partition 1 of type Linux and of size 5 GiB is set
```

```
Command (m for help): t
Selected partition 1
Hex code (type L to list all codes): 8e
Changed type of partition 'Linux' to 'Linux LVM'
```

```
Command (m for help): w
The partition table has been altered!
```

```
Calling ioctl() to re-read partition table.
```

```
Syncing disks.
```

```
[root@LNX-SVR-01 ~]# 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    2G  0 part
└─sdc2     8:34   0    3G  0 part
sdd        8:48   0    5G  0 disk
└─sdd1     8:49   0    5G  0 part
sr0       11:0    1 1024M 0 rom
[root@LNX-SVR-01 ~]#
```

*Run cmd 'pvcreate' to create Physical volumes*

*Run cmd 'vgcreate' to create Volume groups*

*Run cmd 'lvcreate' to create Logical volumes -*

```
[root@LNX-SVR-01 ~]# pvcreate /dev/sdb1 /dev/sdc1 /dev/sdc2 /dev/sdd1
Physical volume "/dev/sdb1" successfully created.
Physical volume "/dev/sdc1" successfully created.
Physical volume "/dev/sdc2" successfully created.
Physical volume "/dev/sdd1" successfully created.
[root@LNX-SVR-01 ~]#
[root@LNX-SVR-01 ~]# vgcreate vg1 /dev/sdb1 /dev/sdc1
Volume group "vg1" successfully created
[root@LNX-SVR-01 ~]# vgcreate vg2 /dev/sdc2 /dev/sdd1
Volume group "vg2" successfully created
[root@LNX-SVR-01 ~]#
[root@LNX-SVR-01 ~]# lvcreate -l 100%FREE -n lv1 vg1
Logical volume "lv1" created.
[root@LNX-SVR-01 ~]# lvcreate -l 100%FREE -n lv2 vg2
Logical volume "lv2" created.
[root@LNX-SVR-01 ~]#
```

## Add file systems to the Logical volumes-

```
[root@LNX-SVR-01 ~]# mkfs.xfs /dev/vg1/lv1
meta-data=/dev/vg1/lv1          isize=512      agcount=4, agsize=458240 blks
                                =           sectsz=512   attr=2, projid32bit=1
                                =           crc=1       finobt=0, sparse=0
data     =           bsize=4096    blocks=1832960, 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@LNX-SVR-01 ~]# mkfs.ext4 /dev/vg2/lv2
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
524288 inodes, 2095104 blocks
104755 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=2145386496
64 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
          32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632
```

## *Make directories and mount the volumes to lvm-*

```
[root@LNX-SVR-01 ~]# mkdir /lvm1
[root@LNX-SVR-01 ~]#
[root@LNX-SVR-01 ~]# vim /etc/fstab
[root@LNX-SVR-01 ~]# mount -a
[root@LNX-SVR-01 ~]# mount | grep /lvm1
/dev/mapper/vg1-lv1 on /lvm1 type xfs (rw,relatime,seclabel,attr2,inode64,noquota)
[root@LNX-SVR-01 ~]#
[root@LNX-SVR-01 ~]# mkdir /lvm2
[root@LNX-SVR-01 ~]# vim /etc/fstab
[root@LNX-SVR-01 ~]# mount -a
[root@LNX-SVR-01 ~]# mount | grep /lvm2
/dev/mapper/vg2-lv2 on /lvm2 type ext4 (rw,relatime,seclabel,data=ordered)
[root@LNX-SVR-01 ~]#
[root@LNX-SVR-01 ~]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        1.9G    0   1.9G  0% /dev
tmpfs          1.9G    0   1.9G  0% /dev/shm
tmpfs          1.9G  13M  1.9G  1% /run
tmpfs          1.9G    0   1.9G  0% /sys/fs/cgroup
/dev/mapper/centos-root  26G  4.8G  22G  19% /
/dev/sda1     1014M 185M  830M  19% /boot
tmpfs          378M   36K  378M  1% /run/user/0
/dev/mapper/vg1-lv1  7.0G  33M  7.0G  1% /lvm1
/dev/mapper/vg2-lv2  7.8G  36M  7.3G  1% /lvm2
```

Install the following RPM packages using the package manager of your choice using single command.

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

```
[root@LNX-SVR-01 Packages]# yum install -y --nodeps vsftpd-3.0.2-28.el7.x86_64.rpm php-5.4.16-48.el7.x86_64.rpm system-config-kickstart
oarch.rpm finger-0.17-52.el7.x86_64.rpm
Loaded plugins: fastestmirror, langpacks
Examining vsftpd-3.0.2-28.el7.x86_64.rpm: vsftpd-3.0.2-28.el7.x86_64
Marking vsftpd-3.0.2-28.el7.x86_64.rpm to be installed
Examining php-5.4.16-48.el7.x86_64.rpm: php-5.4.16-48.el7.x86_64
Marking php-5.4.16-48.el7.x86_64.rpm to be installed
Examining system-config-kickstart-2.9.7-1.el7.noarch.rpm: system-config-kickstart-2.9.7-1.el7.noarch
Marking system-config-kickstart-2.9.7-1.el7.noarch.rpm to be installed
Examining finger-0.17-52.el7.x86_64.rpm: finger-0.17-52.el7.x86_64
Marking finger-0.17-52.el7.x86_64.rpm to be installed
Resolving Dependencies
--> Running transaction check
---> Package finger.x86_64 0:0.17-52.el7 will be installed
---> Package php.x86_64 0:5.4.16-48.el7 will be installed
--> Processing Dependency: httpd-mmn = 20120211x8664 for package: php-5.4.16-48.el7.x86_64
```

Package	Arch	Version	Repository
<hr/>			
Installing:			
finger	x86_64	0.17-52.el7	/finger-0.17-52.el7.x86_64
php	x86_64	5.4.16-48.el7	/php-5.4.16-48.el7.x86_64
system-config-kickstart	noarch	2.9.7-1.el7	/system-config-kickstart-2.9.7-1.el7.noarch
vsftpd	x86_64	3.0.2-28.el7	/vsftpd-3.0.2-28.el7.x86_64

Use appropriate commands to start and kill the 'yes' process and verify

## Process 1-

Run process 'yes' in second tab and type following commands in tab 1-

```
root@LNX-SVR-01:~  
[root@LNX-SVR-01 ~]# pgrep yes  
3567  
[root@LNX-SVR-01 ~]# kill 3567  
[root@LNX-SVR-01 ~]#
```

Check in tab 2 the process gets killed/terminated-

## Process 2-

Run process 'yes' in second tab and type following commands in tab 1-

```
root@LNX-SVR-01:~
```

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

After running top command press 'k' to kill process and type process id-

top - 14:01:04 up 42 min, 3 users, load average: 0.79, 0.62, 0.30										
Tasks: 227 total, 3 running, 224 sleeping, 0 stopped, 0 zombie										
%Cpu(s): 56.4 us, 29.5 sy, 0.0 ni, 13.9 id, 0.0 wa, 0.0 hi, 0.2 si, 0.0 st										
KiB Mem : 3861300 total, 2296560 free, 834436 used, 730304 buff/cache										
KiB Swap: 3145724 total, 3145724 free, 0 used. 2772468 avail Mem										
PID to signal/kill [default pid = 3637] 3637										
PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+ COMMAND
3637	root	20	0	108056	356	280	S	68.2	0.0	0:08.28 yes
2042	root	20	0	3292220	181260	68612	S	47.4	4.7	1:40.51 gnome-shell
2590	root	20	0	682700	29940	17708	R	36.4	0.8	0:40.72 gnome-terminal-
1882	root	19	-1	340096	50436	25716	S	14.9	1.3	0:42.37 X
3645	root	20	0	162100	2348	1572	R	1.0	0.1	0:00.10 top
9	root	20	0	0	0	0	R	0.7	0.0	0:03.79 rcu_sched

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

```
root@LNX-SVR-01:~
```

# WIPRO NGA Program – Datacenter Batch

Capstone Project Presentation – 06 April 2024

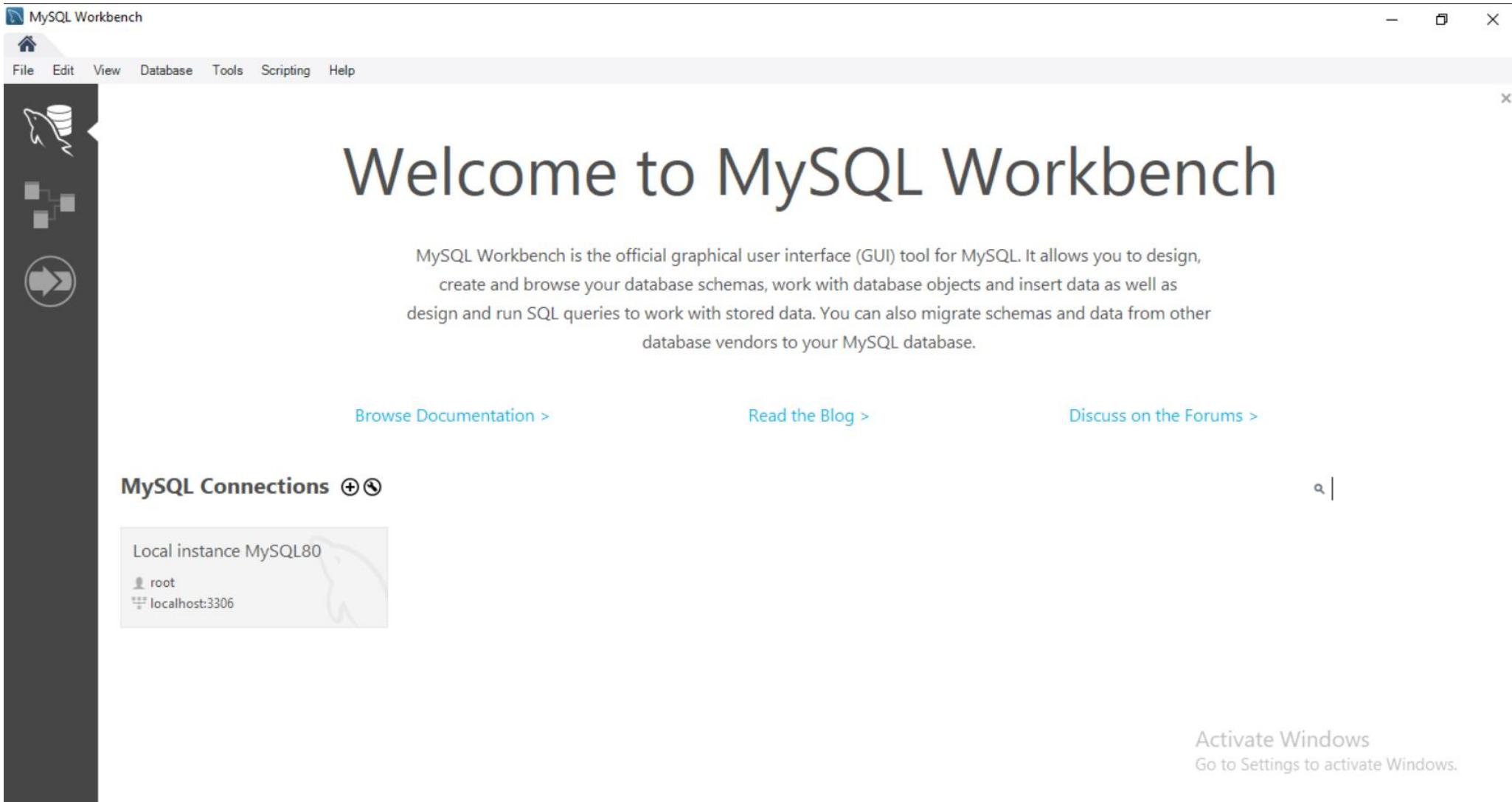
Project Title – Task 6

Presented by – Avdhut Sanjay Bhaland

# 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.

## Open MySQL workbench setup



*Click on MySQL Connections*



# Welcome to MySQL Workbench

MySQL Workbench is the official graphical user interface (GUI) tool for MySQL. It allows you to design, create and browse your database schemas, work with database objects and insert data as well as design and run SQL queries to work with stored data. You can also migrate schemas and data from other database vendors to your MySQL database.

[Browse Documentation >](#)

[Read the Blog >](#)

[Discuss on the Forums >](#)

**MySQL Connections**  

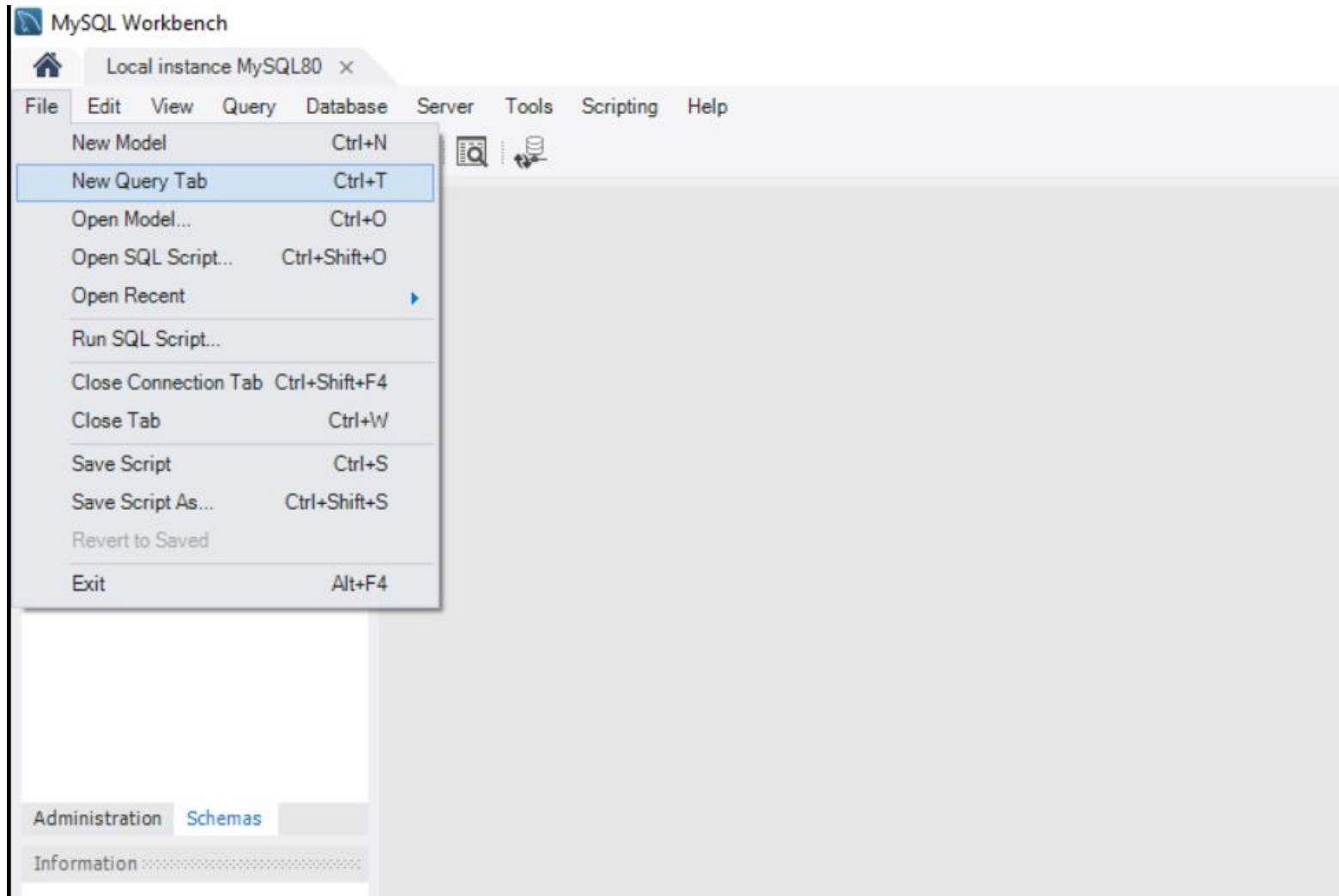
Local instance MySQL80

  root  
localhost:3306

 Filter connections

Activate Windows  
Go to Settings to activate Windows.

## Open new Query Tab



## Create a database 'employee'

The screenshot shows a MySQL Workbench interface. The top bar has various icons for file operations, database management, and search. A dropdown menu is open with the option "Limit to 1000 rows". Below the interface, a code editor displays the following SQL commands:

```
1 • CREATE DATABASE employee;
2
3 • USE employee;
```

The code editor has line numbers from 1 to 12 on the left. The "Output" tab is selected, showing the results of the executed commands:

Action Output	#	Time	Action	Message
	1	08:30:15	CREATE DATABASE employee	1 row(s) affected
	2	08:30:41	USE employee	0 row(s) affected

## Create a table 'empdetails' & insert data

The screenshot shows the MySQL Workbench interface. The top pane displays the SQL code for creating the 'empdetails' table and inserting five rows of data. The bottom pane shows the resulting data grid.

```
4
5 • CREATE TABLE empdetails(
6     emp_id INT auto_increment primary key,
7     Name varchar(30),
8     Age INT,
9     Salary decimal(10,2),
10    Position varchar(30)
11 );
12
13 • INSERT INTO empdetails (Name, Age, Salary, Position) values
14     ('John Doe', 30, 50000.00, 'Manager'),
15     ('Jane Smith', 25, 60000.00, 'Developer'),
16     ('Michael Johnson', 35, 55000.00, 'Analyst'),
17     ('David Wilson', 40, 70000.00, 'Engineer'),
18     ('Kylan Gentry', 32, 45000.00, 'Engineer');
19
20 • SELECT * FROM empdetails;
21
```

	emp_id	Name	Age	Salary	Position
▶	1	John Doe	30	50000.00	Manager
▶	2	Jane Smith	25	60000.00	Developer
▶	3	Michael Johnson	35	55000.00	Analyst
▶	4	David Wilson	40	70000.00	Engineer
▶	5	Kylan Gentry	32	45000.00	Engineer
*	HULL	HULL	HULL	HULL	HULL

## Create another table 'emplocation' & insert data

The screenshot shows a MySQL Workbench interface with the following code in the SQL editor:

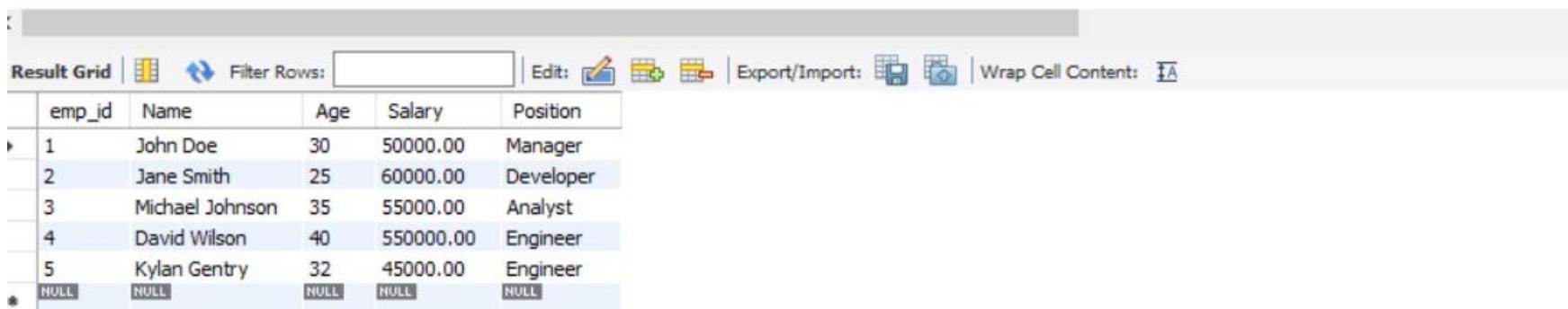
```
22 • CREATE TABLE emplocation(
23     emp_id INT auto_increment,
24     location varchar(30),
25     foreign key(emp_id) references empdetails(emp_id)
26 );
27
28 • INSERT INTO emplocation(emp_id, location) VALUES
29     (1, 'New York'),
30     (2, 'Los Angeles'),
31     (3, 'America'),
32     (4, 'London'),
33     (5, 'Tokyo');
34
35 • SELECT * FROM emplocation;
```

Below the editor is a Result Grid showing the data:

emp_id	location
1	New York
2	Los Angeles
3	America
4	London
5	Tokyo

## Updating data in empdetails

```
37 • UPDATE empdetails  
38     SET Salary = 550000.00  
39     WHERE emp_id = 4;  
40  
41 • SELECT * FROM empdetails;  
42  
43  
44  
45  
46  
47
```



The screenshot shows a database result grid with the following columns: emp\_id, Name, Age, Salary, and Position. The data is as follows:

	emp_id	Name	Age	Salary	Position
▶	1	John Doe	30	50000.00	Manager
	2	Jane Smith	25	60000.00	Developer
	3	Michael Johnson	35	55000.00	Analyst
	4	David Wilson	40	550000.00	Engineer
*	5	Kylan Gentry	32	45000.00	Engineer
*	HULL	HULL	HULL	HULL	HULL

## Deleting data in emplocation

```
42  
43 • DELETE FROM emplocation  
44 WHERE emp_id = 5 ;  
45  
46 • SELECT * FROM emplocation;
```

The screenshot shows a MySQL query editor interface. At the top, there is a code editor with the following SQL statements:

```
42  
43 • DELETE FROM emplocation  
44 WHERE emp_id = 5 ;  
45  
46 • SELECT * FROM emplocation;
```

Below the code editor is a result grid. The grid has a header row with columns labeled "emp\_id" and "location". The data rows are numbered 1 through 4, corresponding to the entries in the table.

	emp_id	location
▶	1	New York
	2	Los Angeles
	3	America
	4	London

Reading data using inner join to display (emp\_id, Name, Age, Salary, location) as a single output

```
47  
48 • select e.emp_id,e.Name,e.Age,e.Salary,emplocation.location from empdetails e  
49     inner join emplocation on e.emp_id=emplocation.emp_id;  
50  
51
```

	emp_id	Name	Age	Salary	location
▶	1	John Doe	30	50000.00	New York
	2	Jane Smith	25	60000.00	Los Angeles
	3	Michael Johnson	35	55000.00	America
	4	David Wilson	40	550000.00	London

THANK YOU!!!