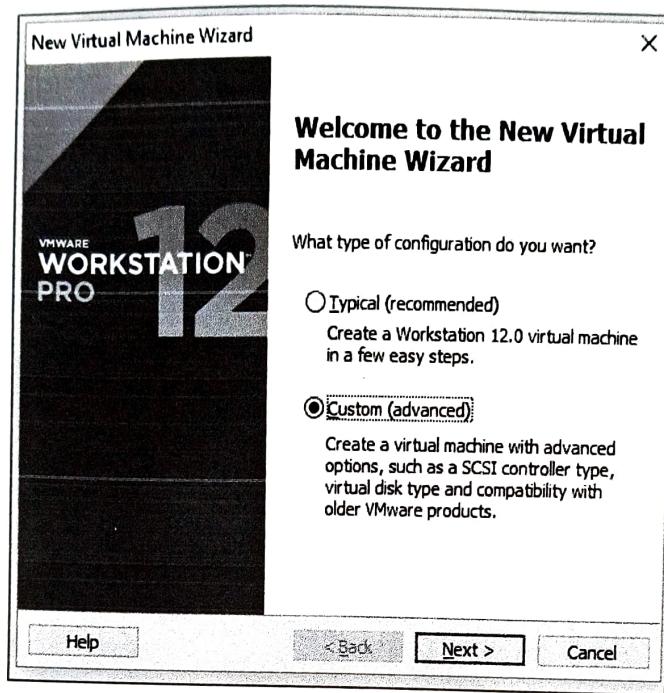


## Practical 5

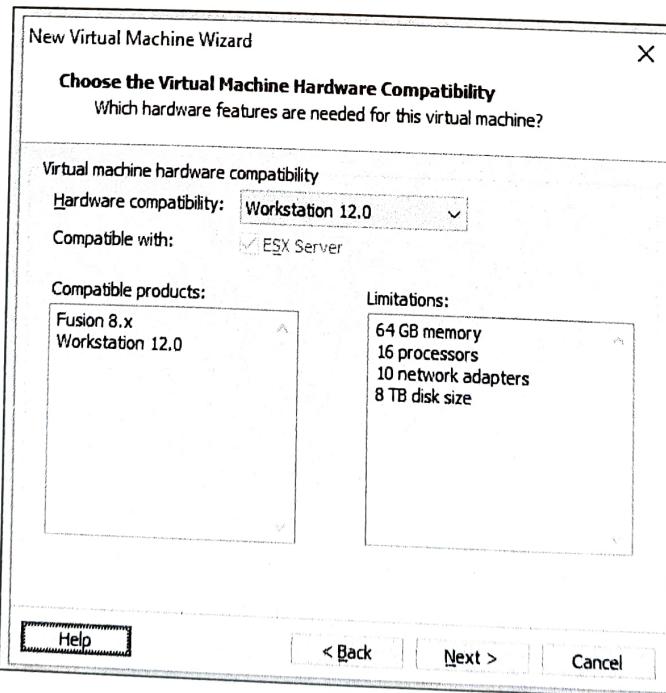
**Aim:** - Implement Xen virtualization and manage with Xen Center.

**Steps:**

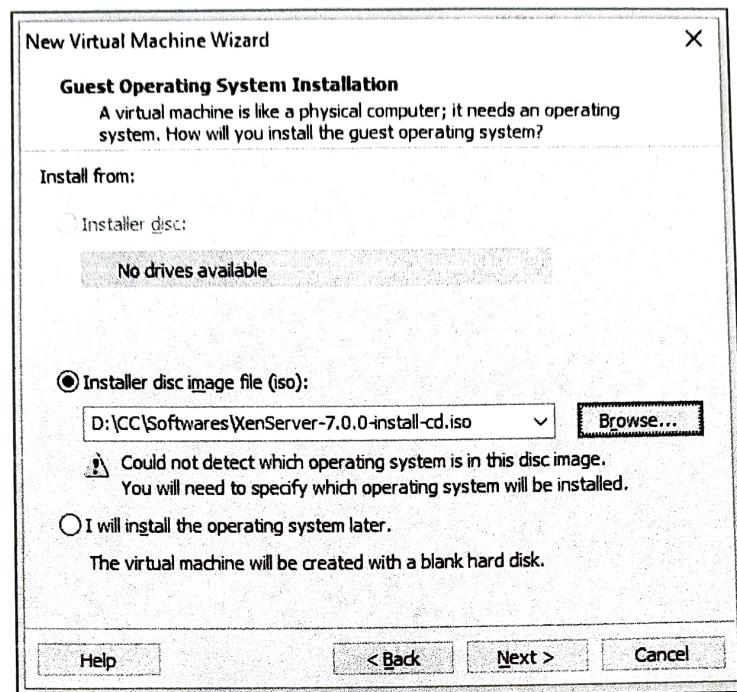
**Step 1:** - Click on new Virtual machine and then click on next button.



**Step 2:** - Click on the next.



**Step 3:** - Select the disc image file and click on the next button.



**Step 4:** - Select the Linux option and click on the next.

**Select a Guest Operating System**  
Which operating system will be installed on this virtual machine?

**Guest operating system**

- Microsoft Windows
- Linux
- Novell NetWare
- Solaris
- VMware ESX
- Other

**Version**

Other Linux 3.x kernel 64-bit

**Name the Virtual Machine**  
What name would you like to use for this virtual machine?

**Virtual machine name:**  
XenServer

**Location:**  
C:\Users\admin\Documents\Virtual Machines\XenServer

The default location can be changed at Edit > Preferences.

New Virtual Machine Wizard

### Name the Virtual Machine

What name would you like to use for this virtual machine?

**Virtual machine name:** XenServer

**Location:** C:\Users\admin\Documents\Virtual Machines\VMware ESXi 5.1\XenServer

The default location can be changed at Edit > Preferences.

< Back | Next > | Cancel

New Virtual Machine Wizard

### Processor Configuration

Specify the number of processors for this virtual machine.

**Processors**

**Number of processors:** 2

**Number of cores per processor:** 2

**Total processor cores:** 4

Help | < Back | Next > | Cancel

New Virtual Machine Wizard

### Memory for the Virtual Machine

How much memory would you like to use for this virtual machine?

Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.

64 GB	Memory for this virtual machine:	4096 MB
32 GB	<input type="checkbox"/>	
16 GB	<input type="checkbox"/>	
8 GB	<input type="checkbox"/>	
4 GB	<input checked="" type="checkbox"/>	
2 GB	<input type="checkbox"/>	
1 GB	<input type="checkbox"/>	
512 MB	<input type="checkbox"/>	
256 MB	<input type="checkbox"/>	
128 MB	<input type="checkbox"/>	
64 MB	<input type="checkbox"/>	
32 MB	<input type="checkbox"/>	
16 MB	<input type="checkbox"/>	
8 MB	<input type="checkbox"/>	
4 MB	<input type="checkbox"/>	

Maximum recommended memory: 6328 MB

Recommended memory: 384 MB

Guest OS recommended minimum: 32 MB

Help | < Back | Next > | Cancel

New Virtual Machine Wizard

### Network Type

What type of network do you want to add?

**Network connection**

Use bridged networking  
Give the guest operating system direct access to an external Ethernet network. The guest must have its own IP address on the external network.

Use network address translation (NAT)  
Give the guest operating system access to the host computer's dial-up or external Ethernet network connection using the host's IP address.

Use host-only networking  
Connect the guest operating system to a private virtual network on the host computer.

Do not use a network connection

Help | < Back | Next > | Cancel

New Virtual Machine Wizard

### Select I/O Controller Types

Which SCSI controller type would you like to use?

**I/O controller types**

**SCSI Controller:**

- BioLogic (Not available for 64-bit guests)
- LSI Logic (Recommended)
- LSI Logic SAS

Help | < Back | Next > | Cancel

New Virtual Machine Wizard

### Select a Disk Type

What kind of disk do you want to create?

**Virtual disk type**

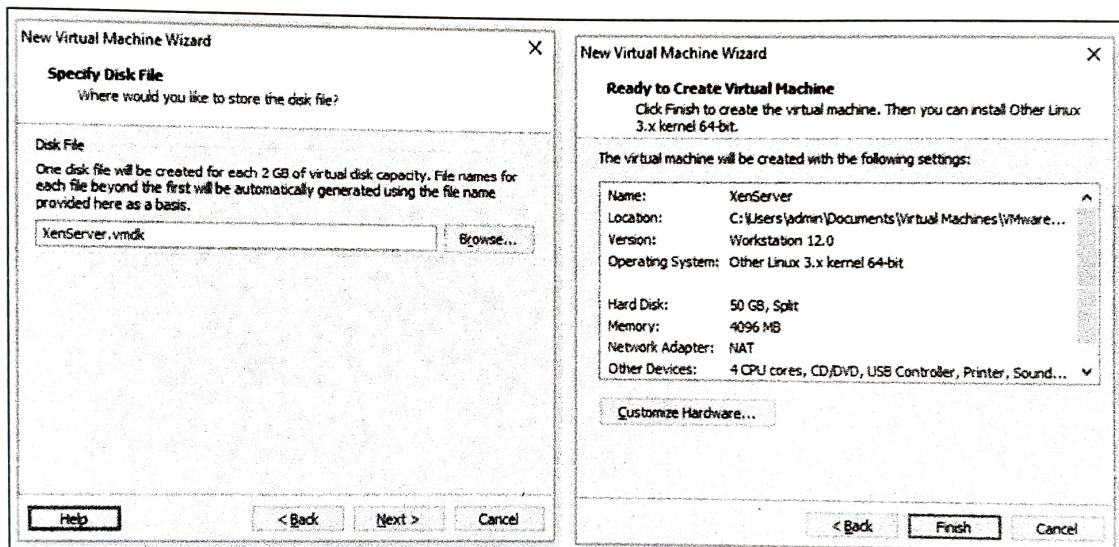
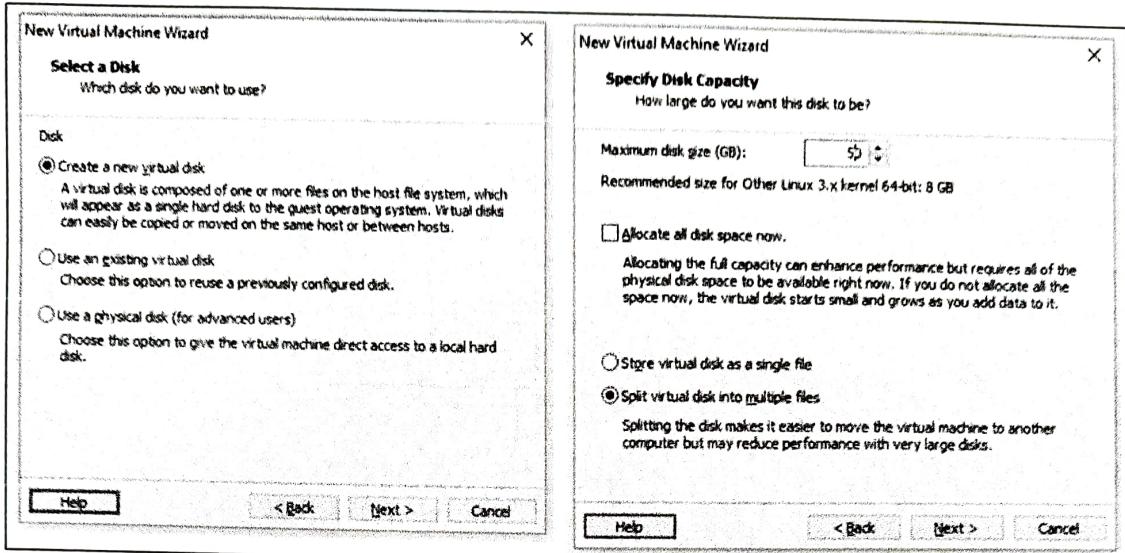
IDE

SCSI (Recommended)

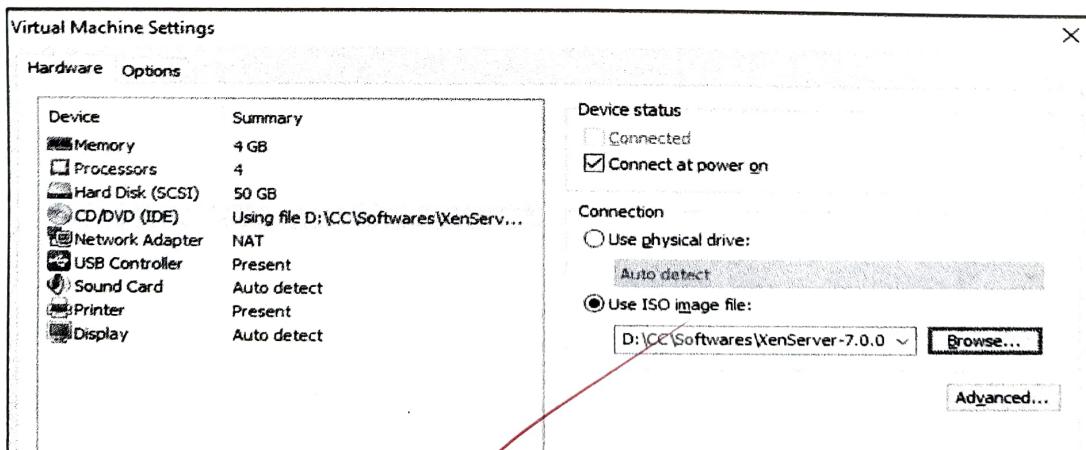
SATA

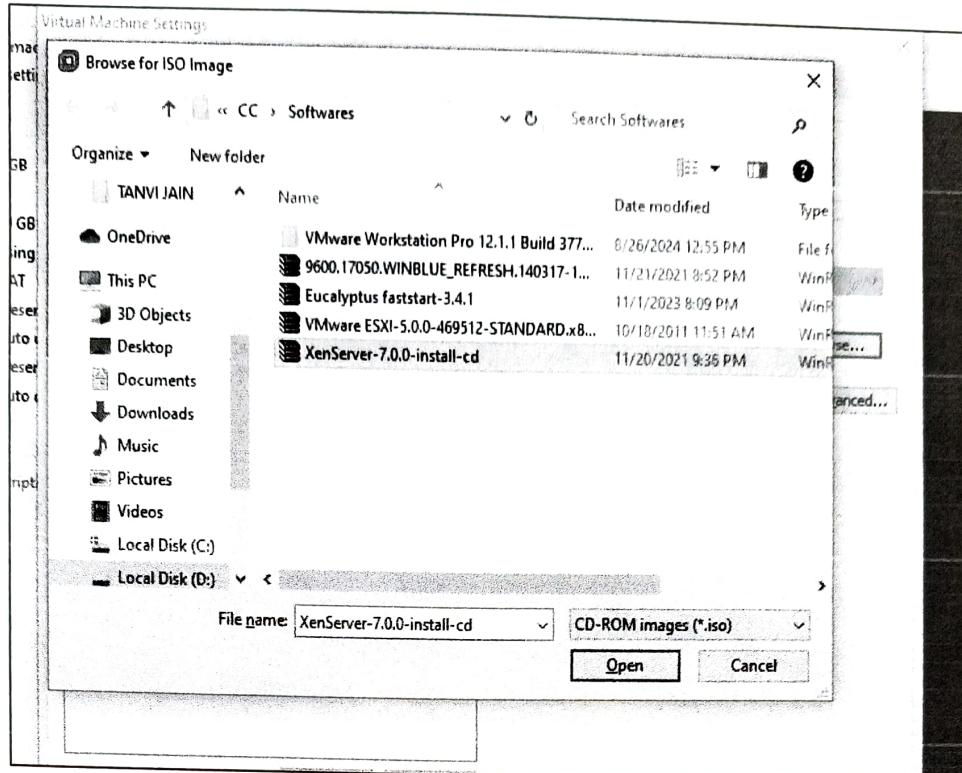
Help | < Back | Next > | Cancel

## Step 4: - Set the 50GB disk size.



## Step 5: - Select the ISO image file.

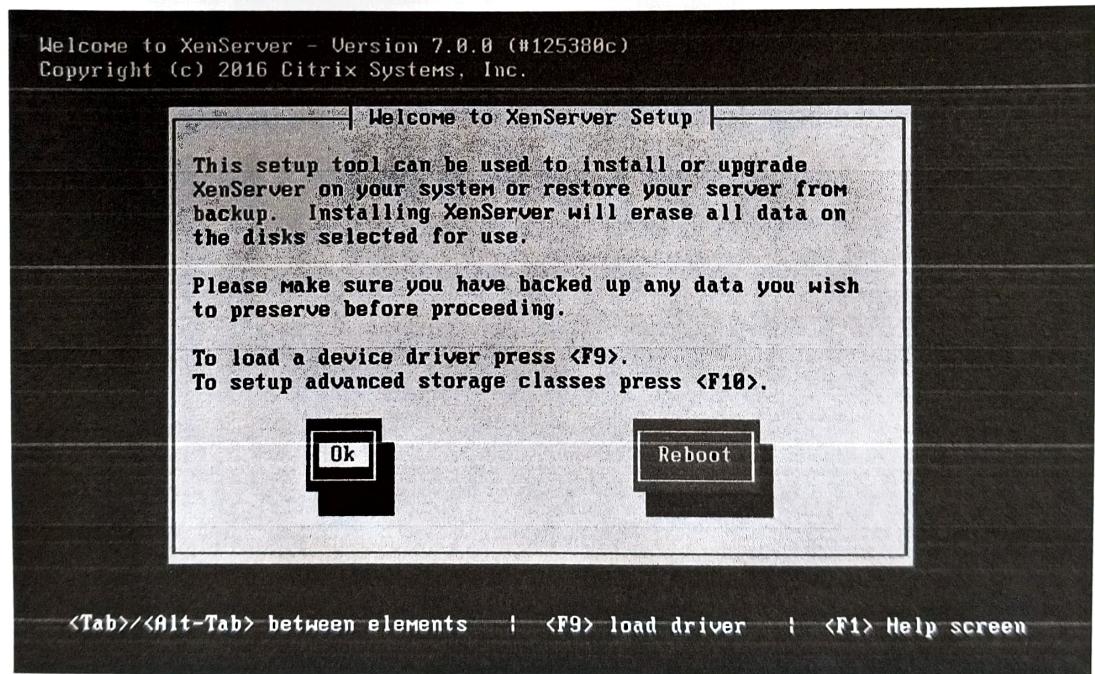
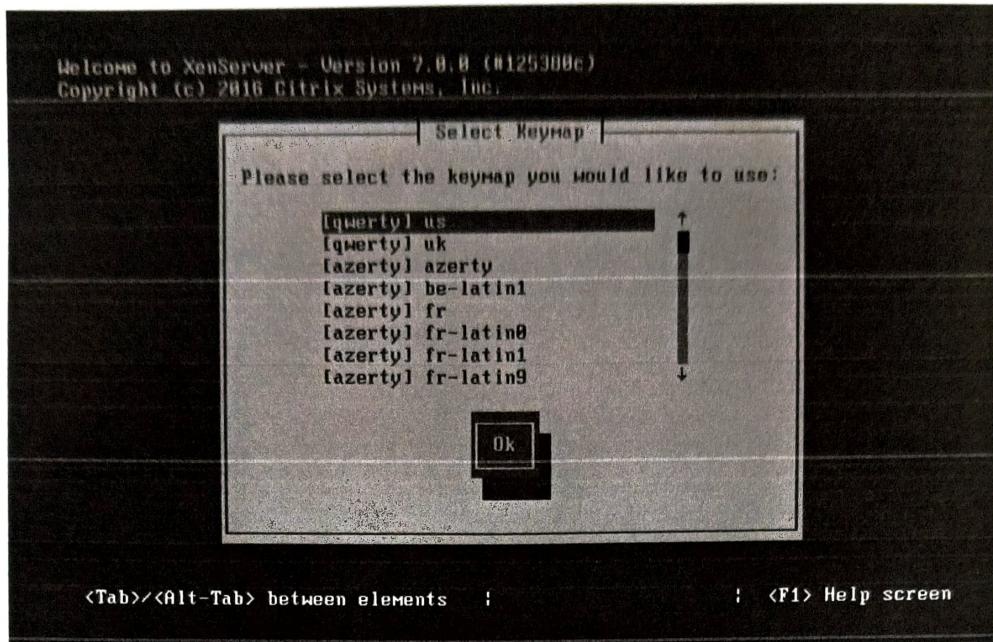




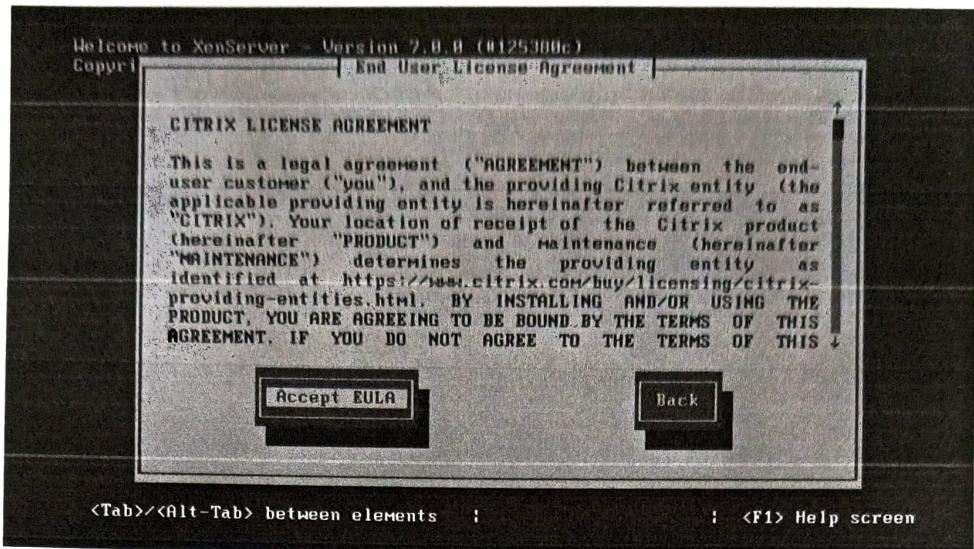
**Step 6:** - After selecting the ISO image file power on the virtual machine.



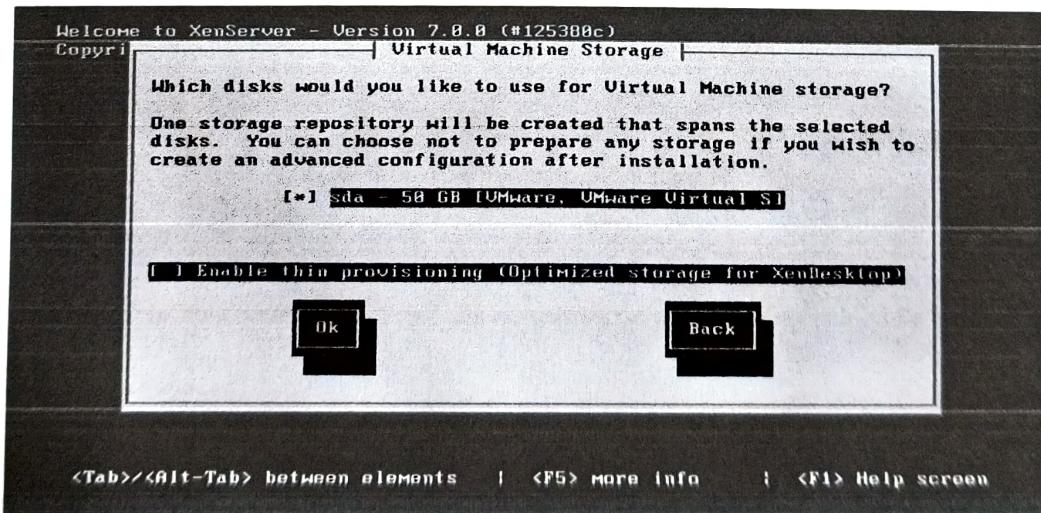
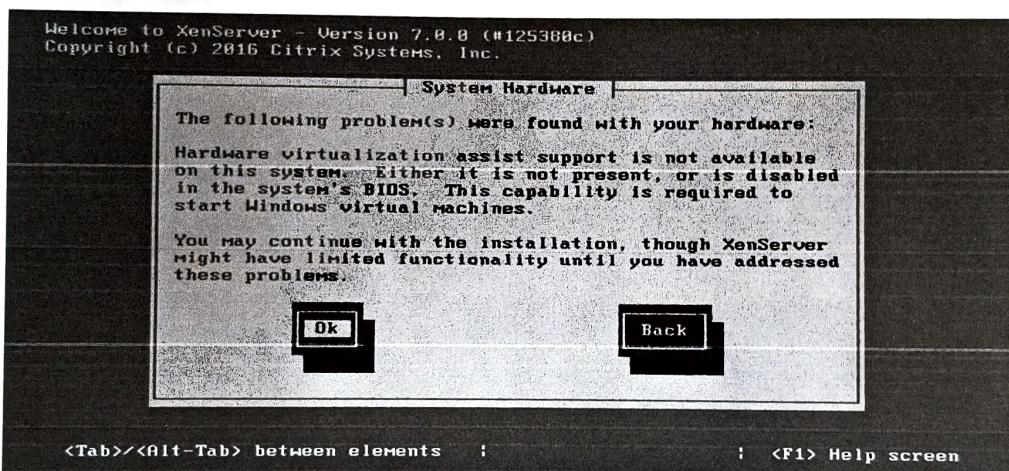
**Step 7:- Click on OK option.**

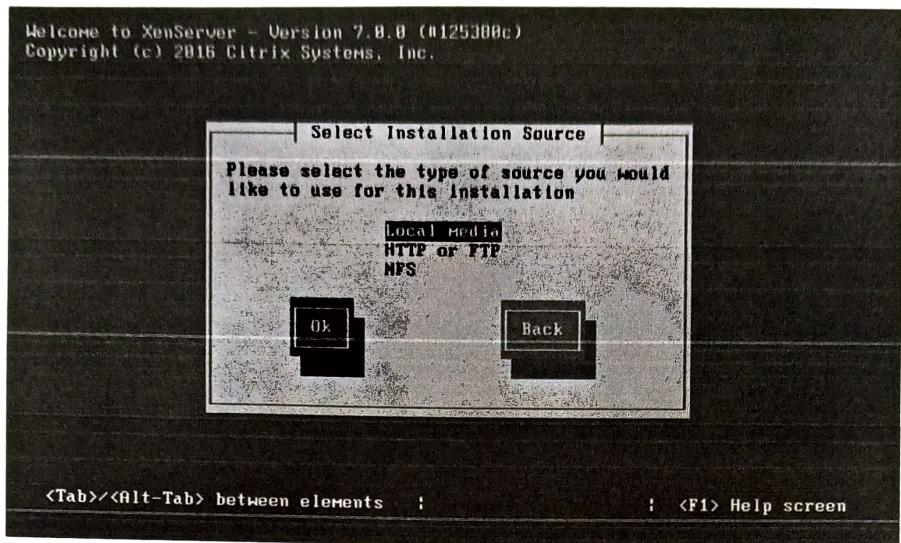


## Step 7:- Accept the License Agreement.

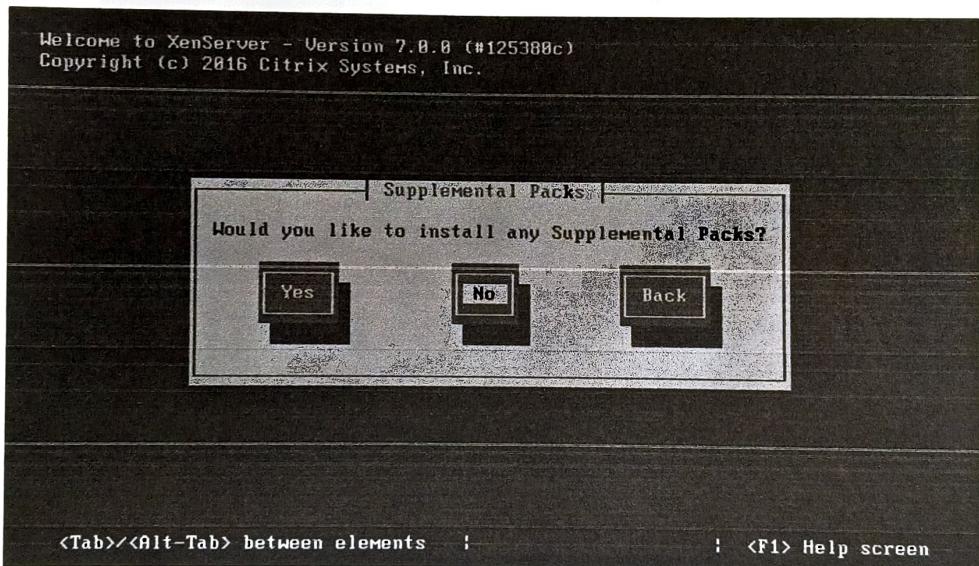


## Step 8:- Click on OK.

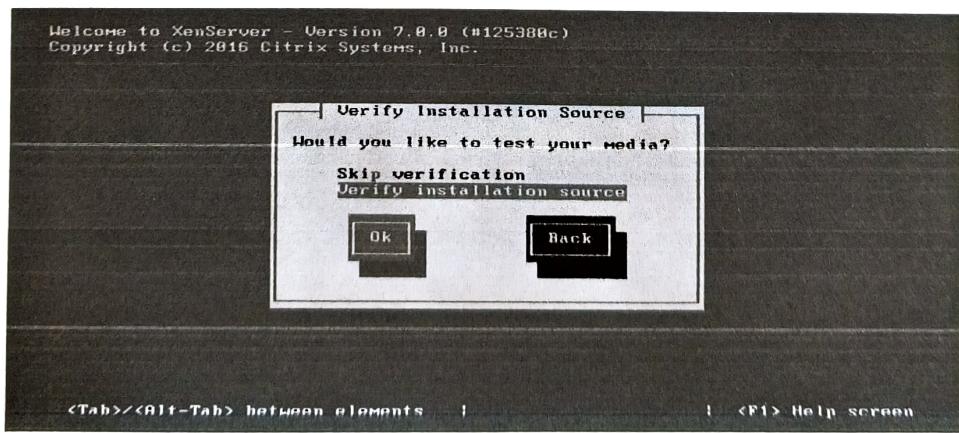


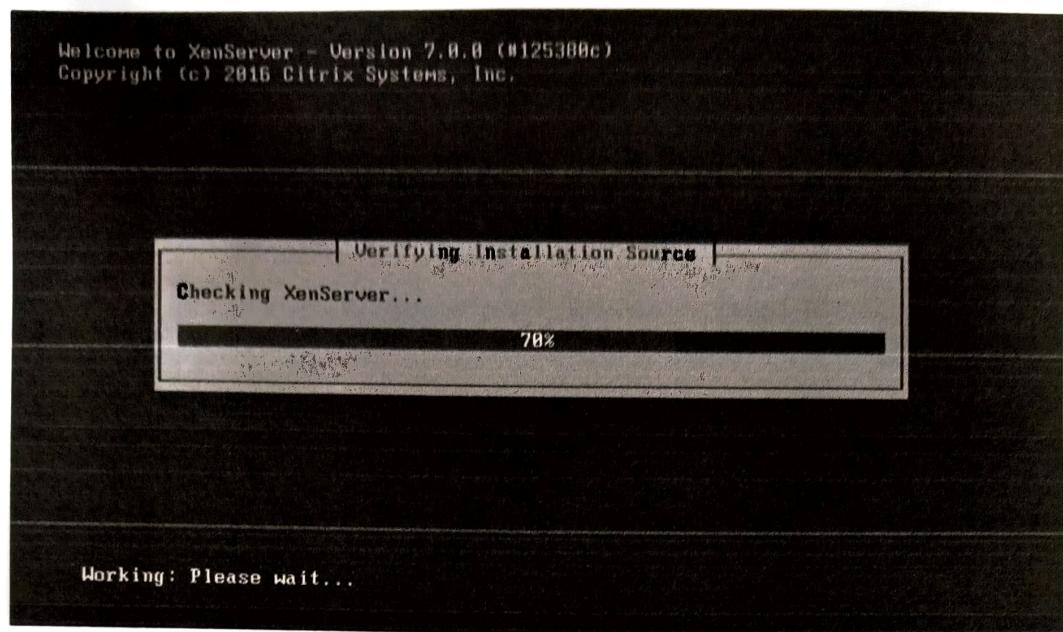


**Step 9:- Click on NO.**

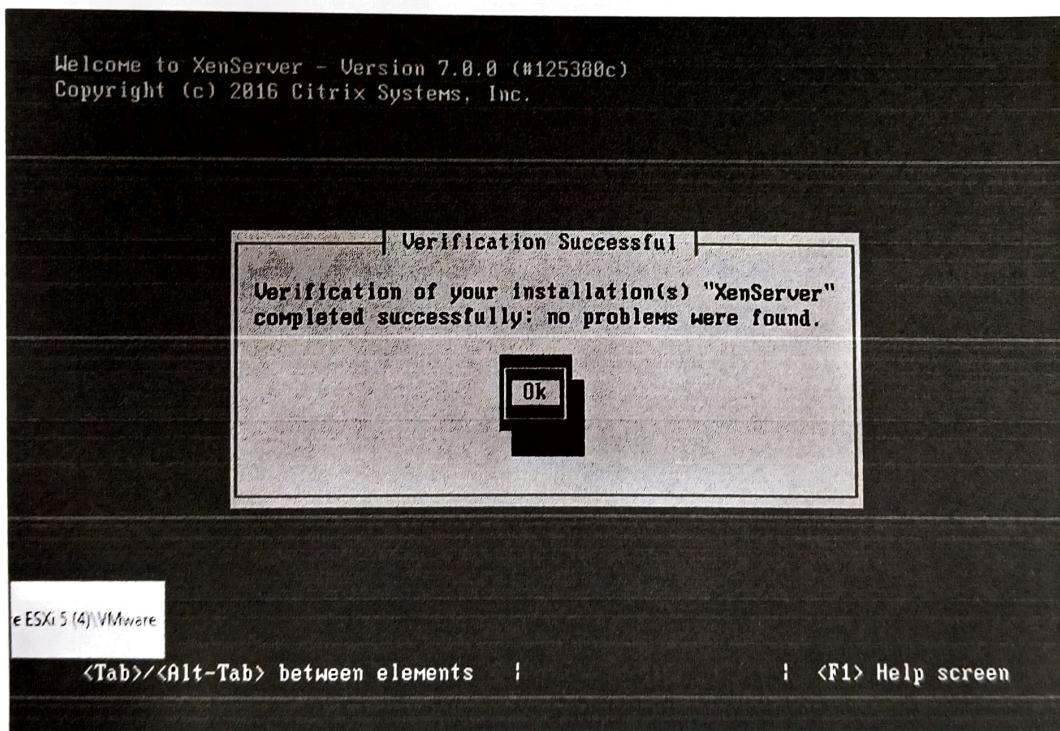


**Step 10:- Click on OK.**

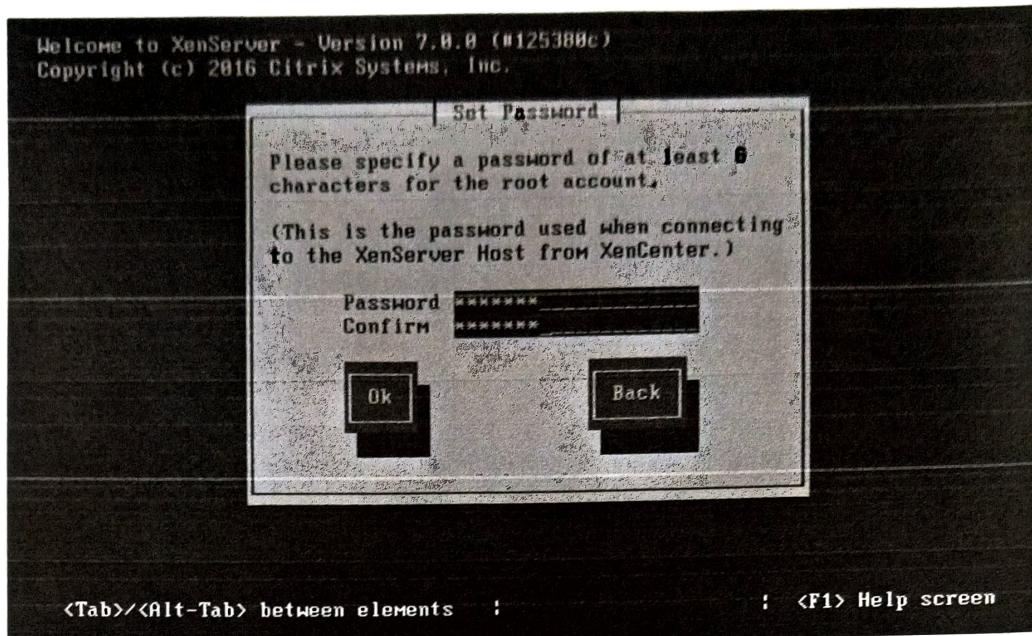




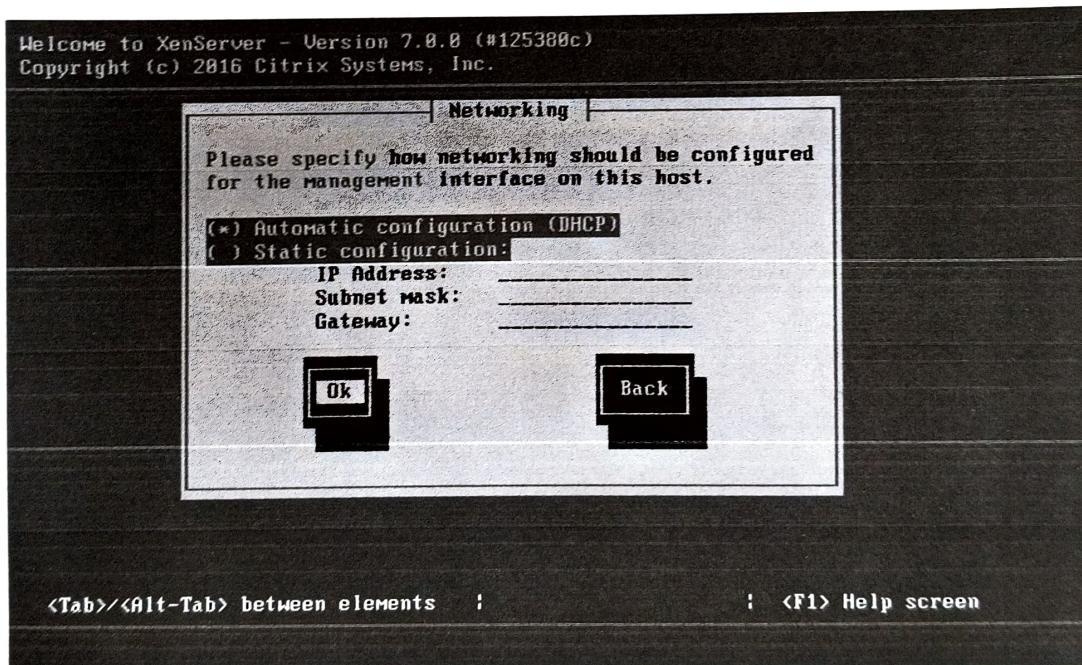
### Step 11:- Click on OK.

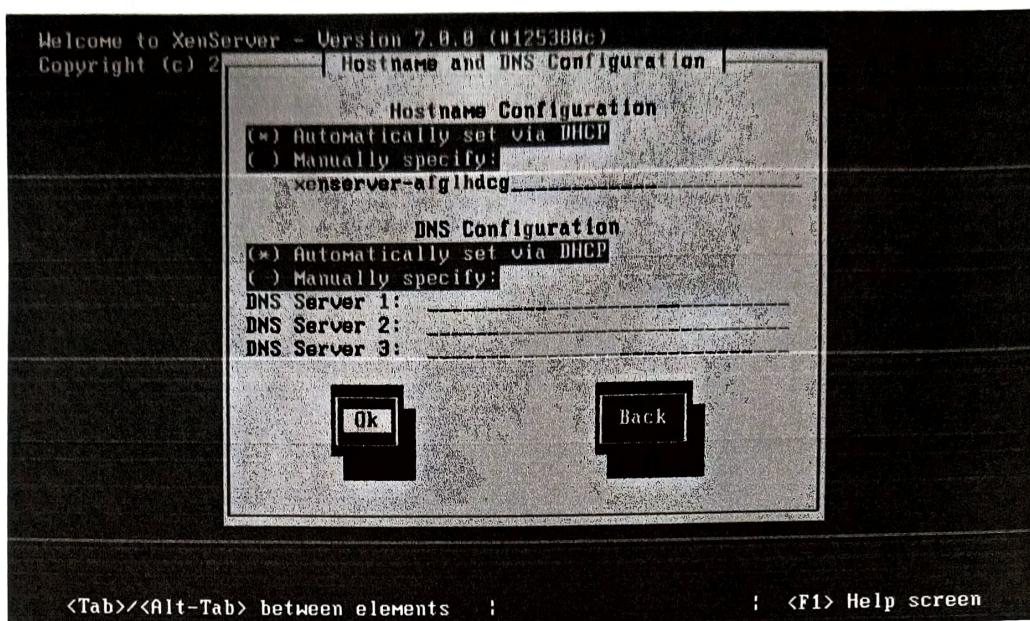


**Step 12:-** Now set the Password and click on OK.

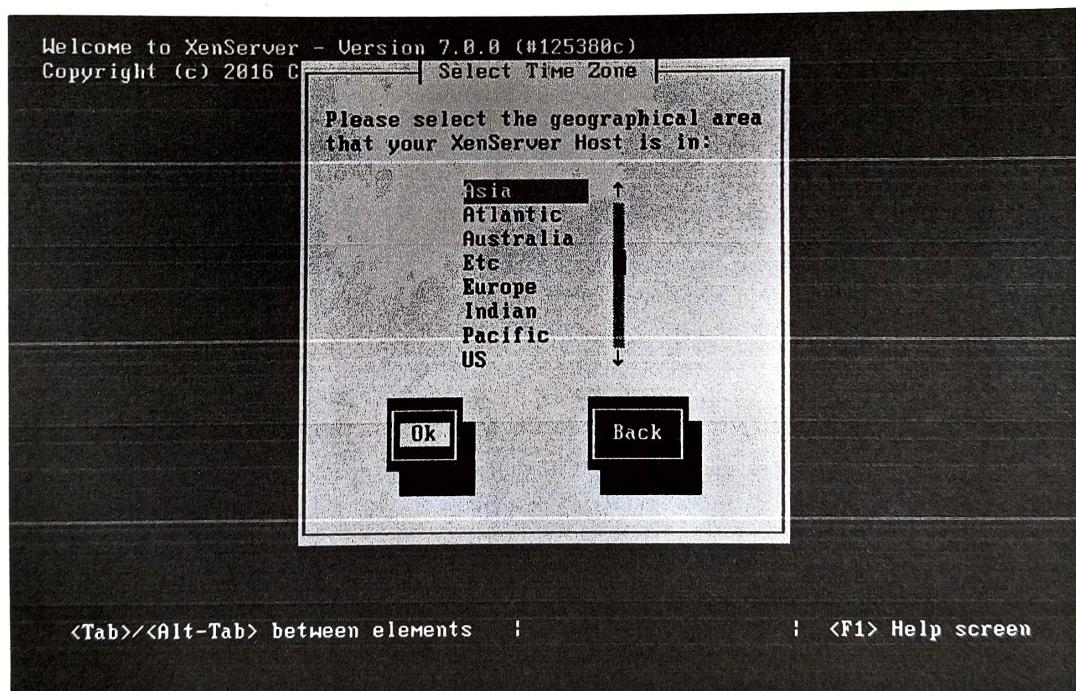


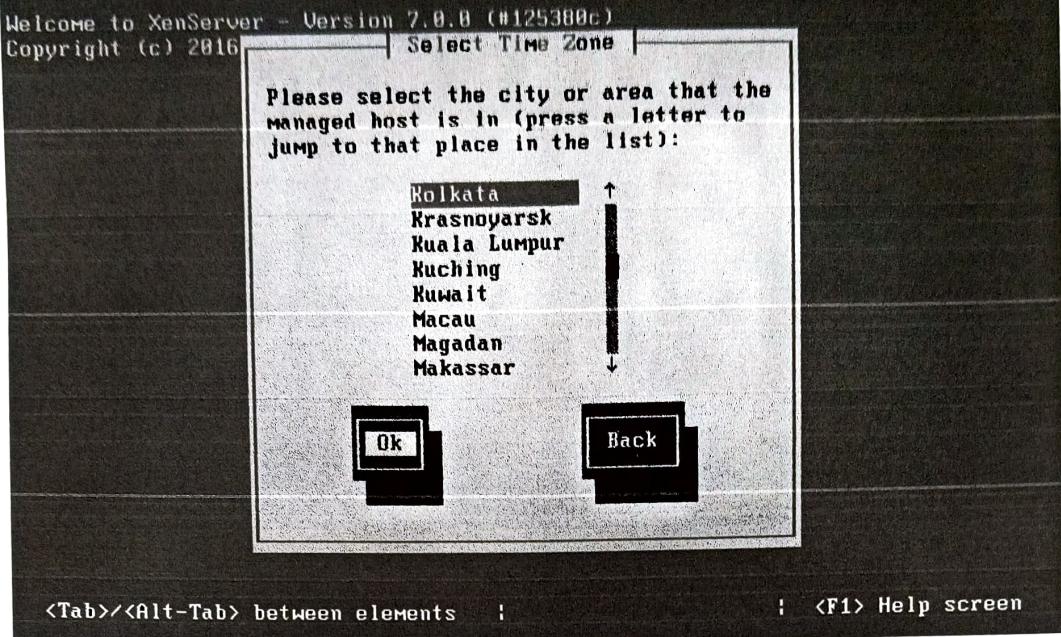
**Step 13:-** Click on OK.



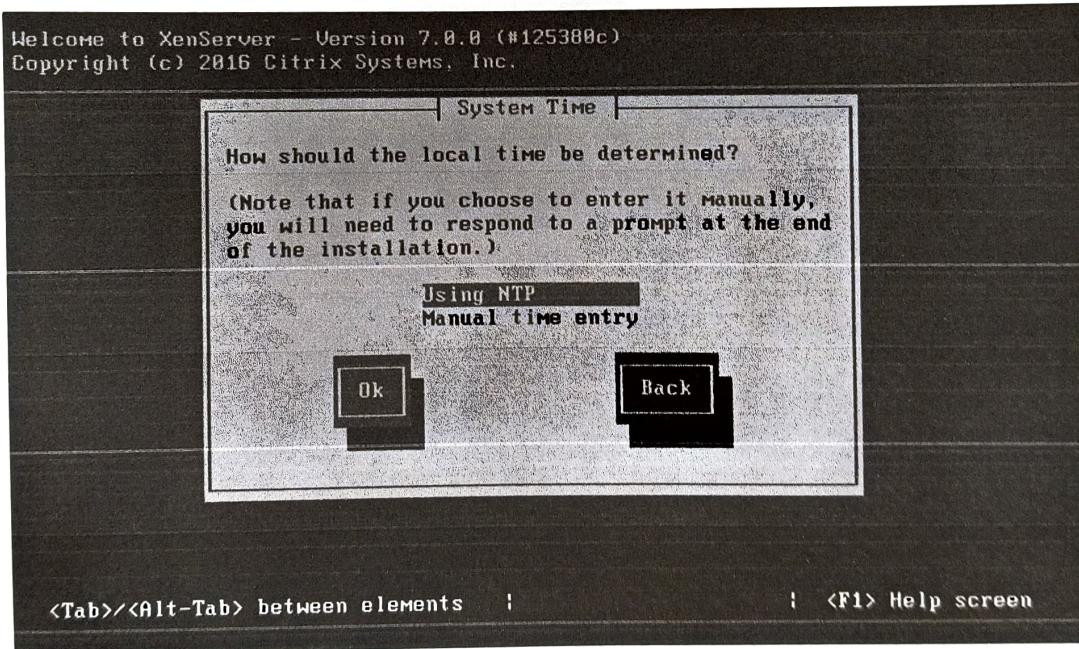


### Step 14:- Select the Asia>>Kolkata option.

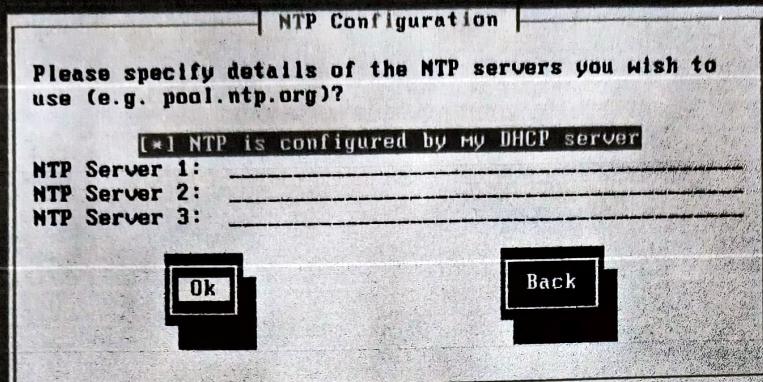




### Step 15:- Click on Ok.



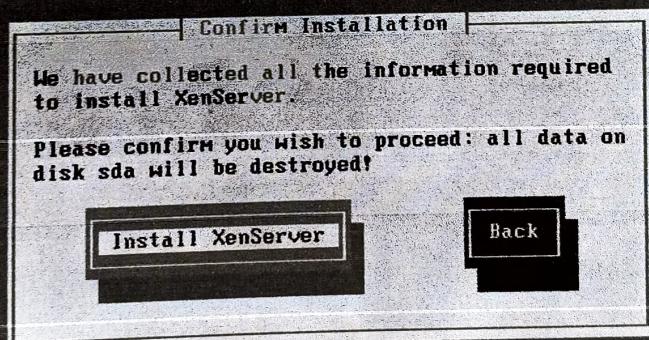
Welcome to XenServer - Version 7.0.0 (#125380c)  
Copyright (c) 2016 Citrix Systems, Inc.



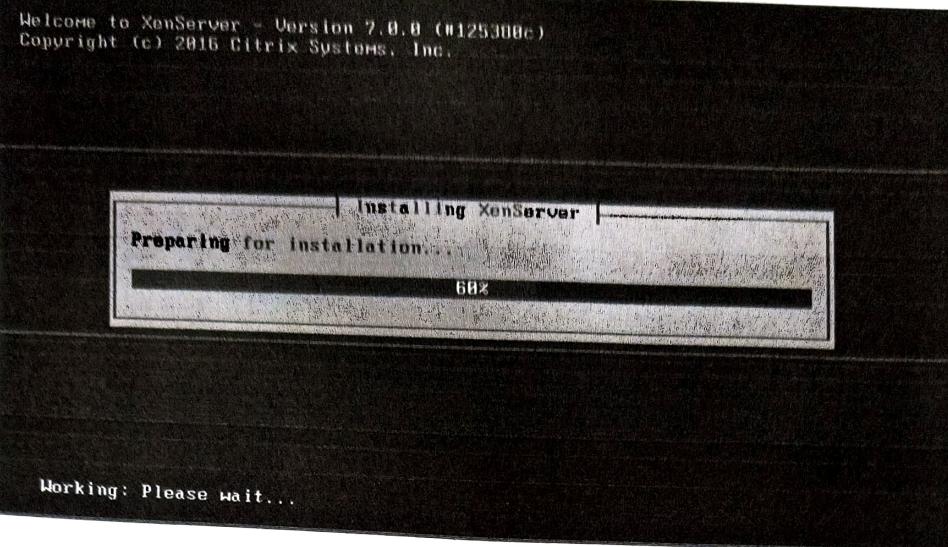
<Tab>/<Alt-Tab> between elements : <F1> Help screen

## Step 16:- Click on Install XenServer.

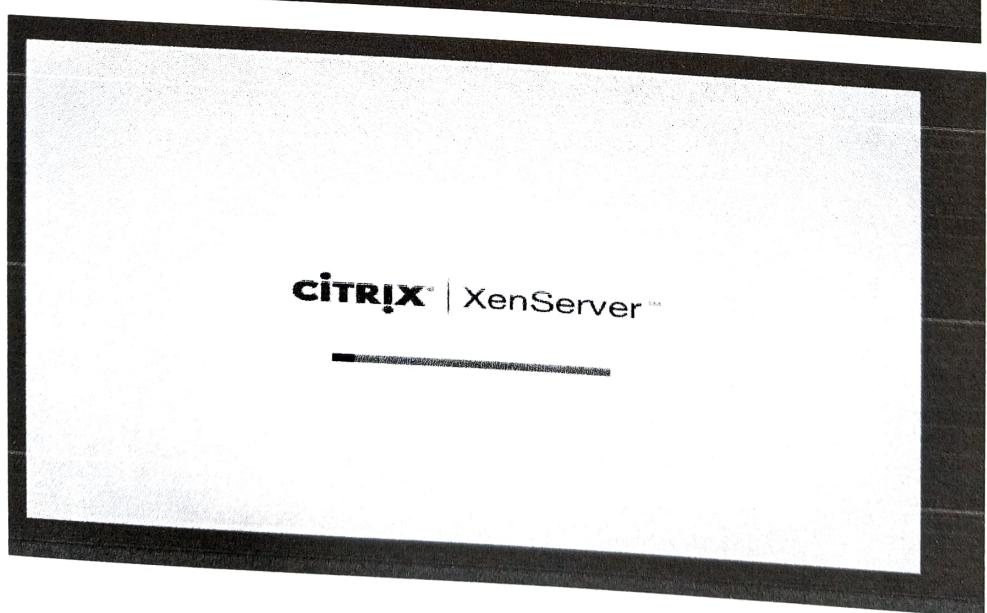
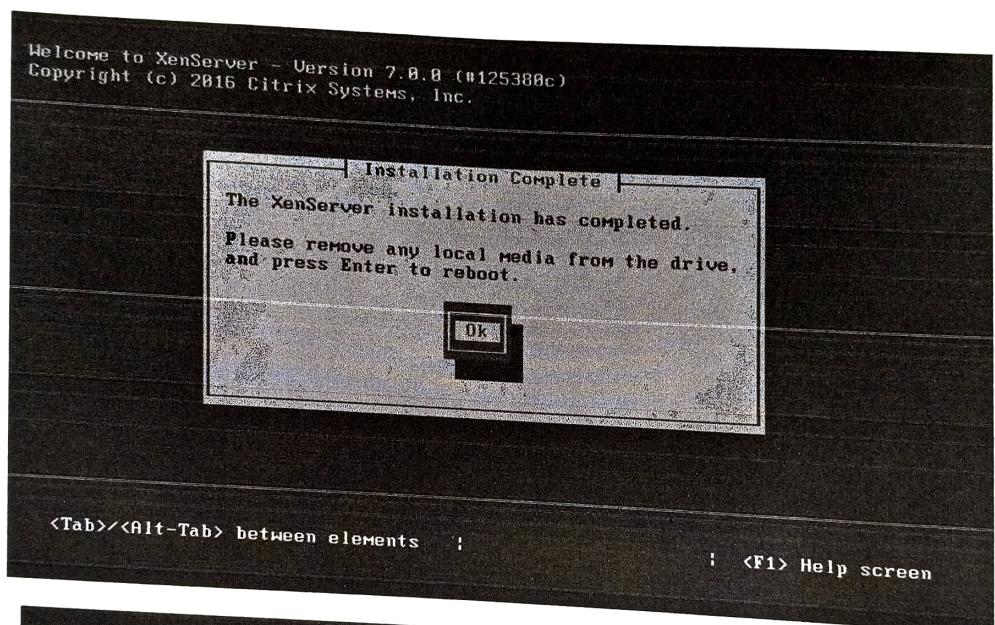
Welcome to XenServer - Version 7.0.0 (#125380c)  
Copyright (c) 2016 Citrix Systems, Inc.

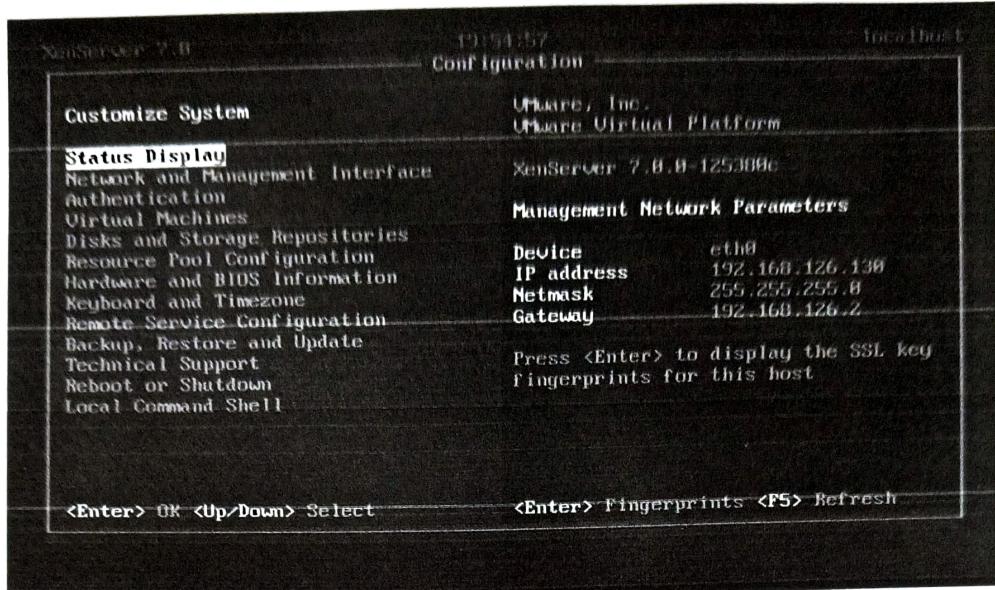


<Tab>/<Alt-Tab> between elements : <F1> Help screen

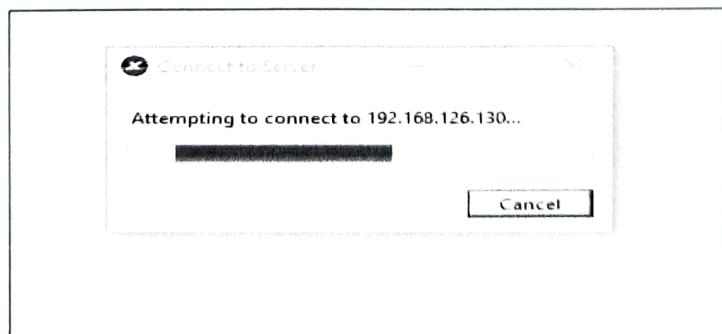
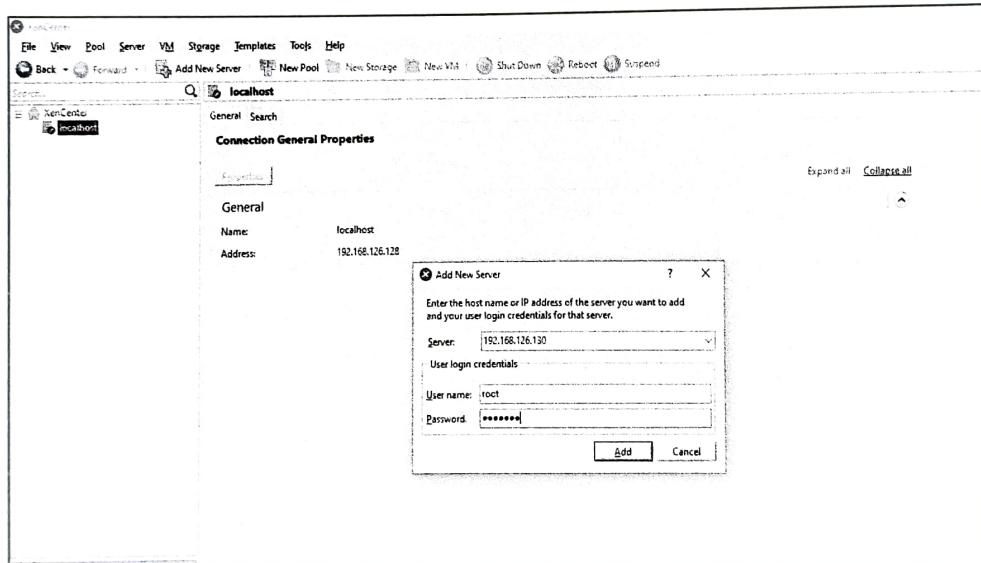


**Step 17:- Click on Ok.**





**Step 18:-** Now open XenCenter Software and then enter the user name and password.

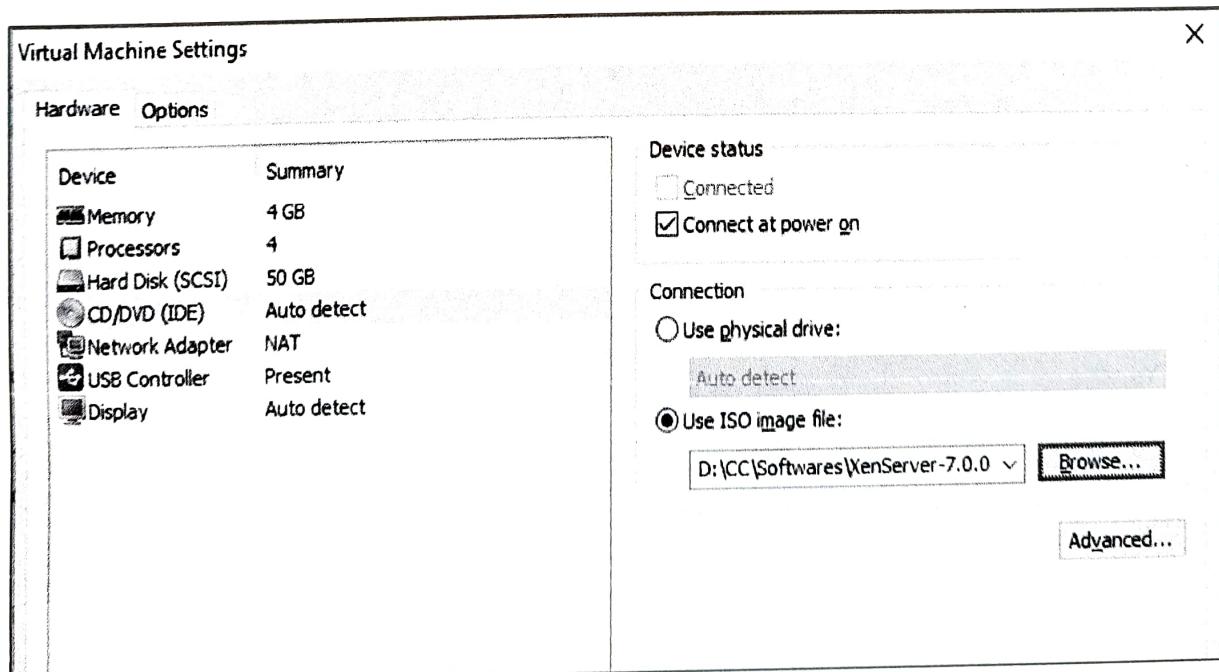
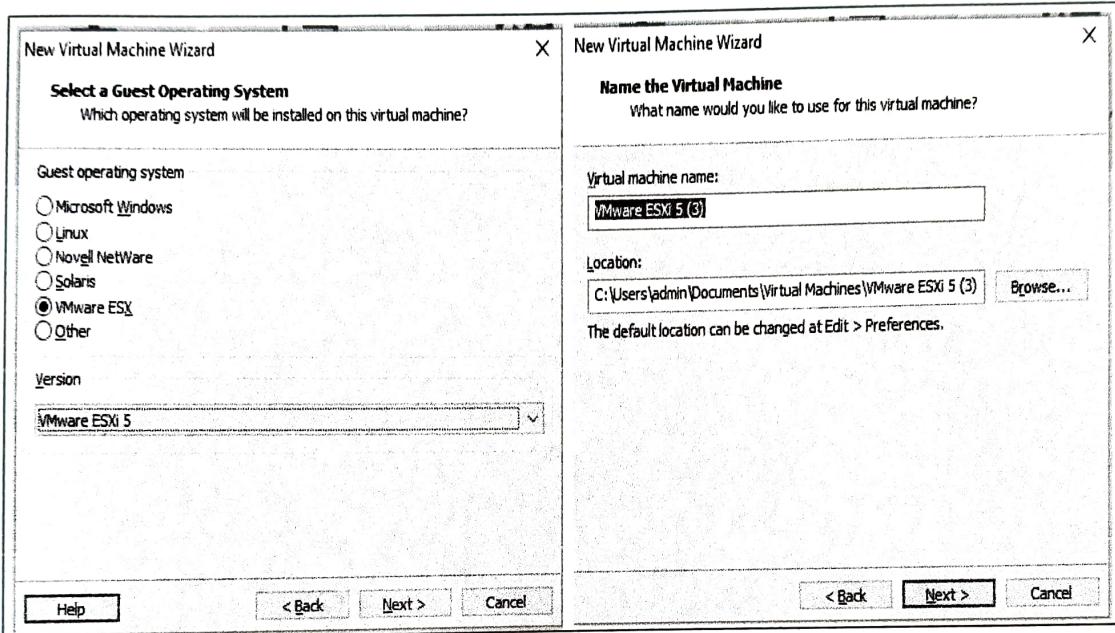


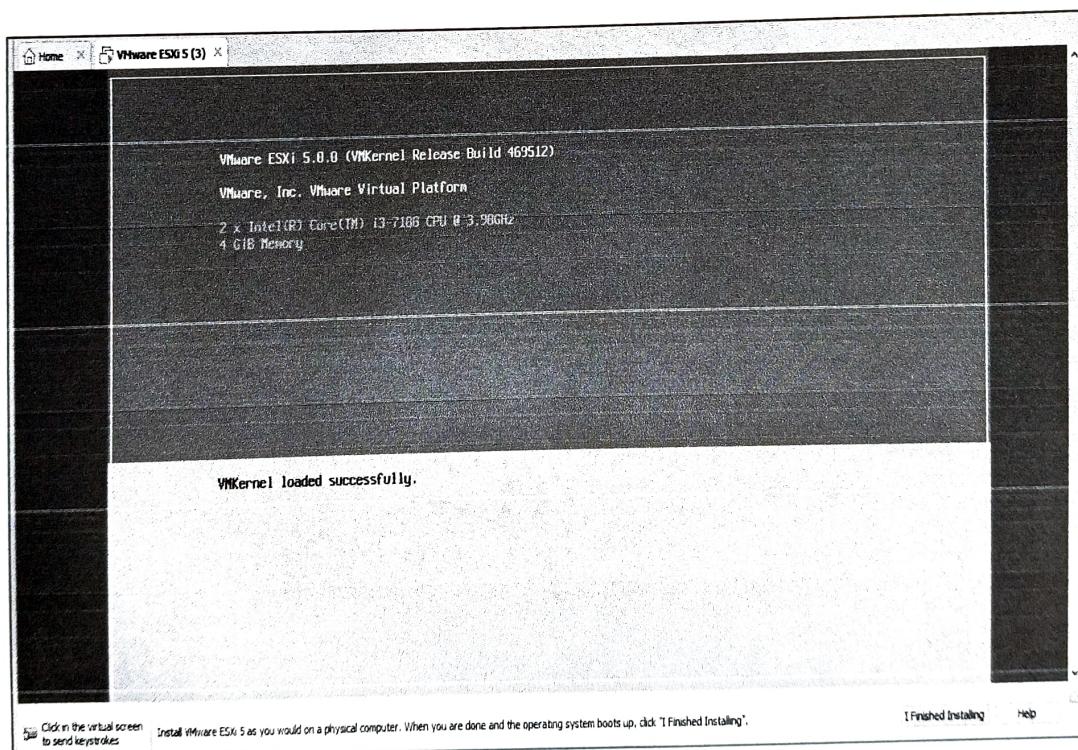
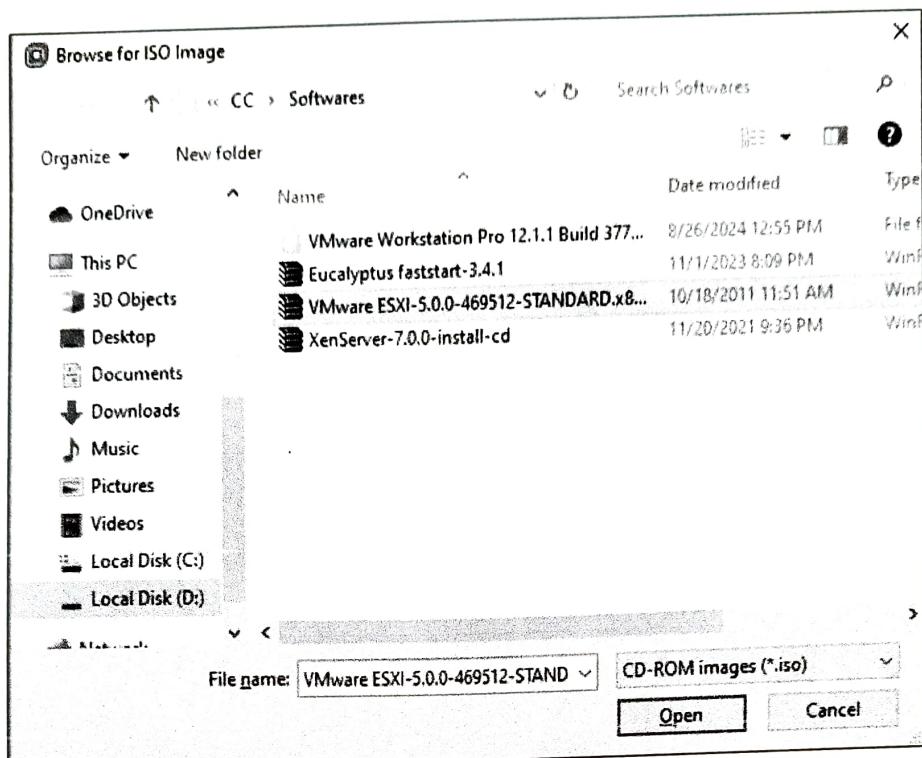
# Practical 6

**Aim:** Implement virtualization using VMWare ESXi Server and managing with vCenter.

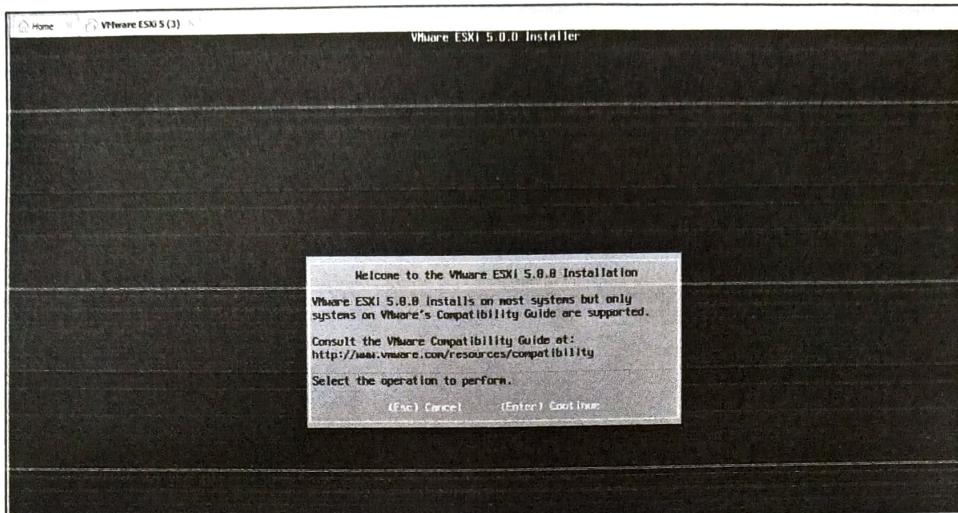
## Steps:

**Step 1:-** Click on new Virtual machine and then click on next button and Select the ISO image file.

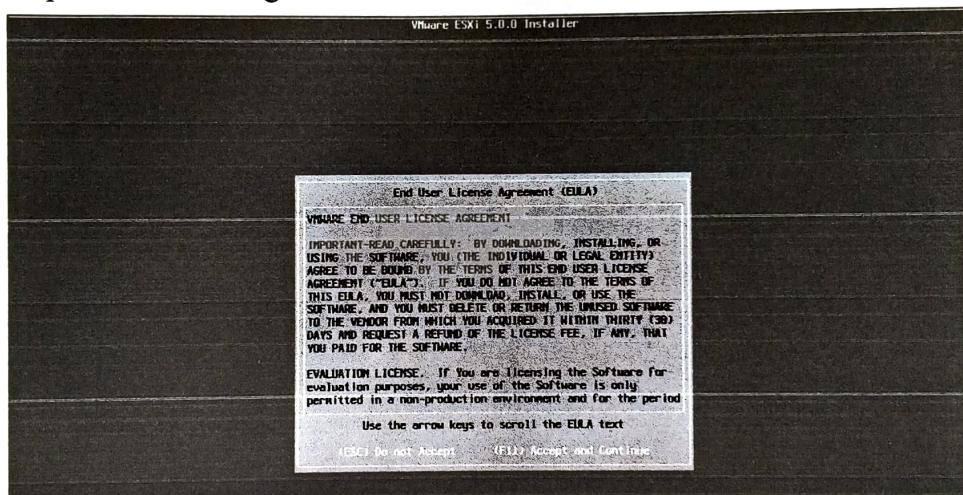




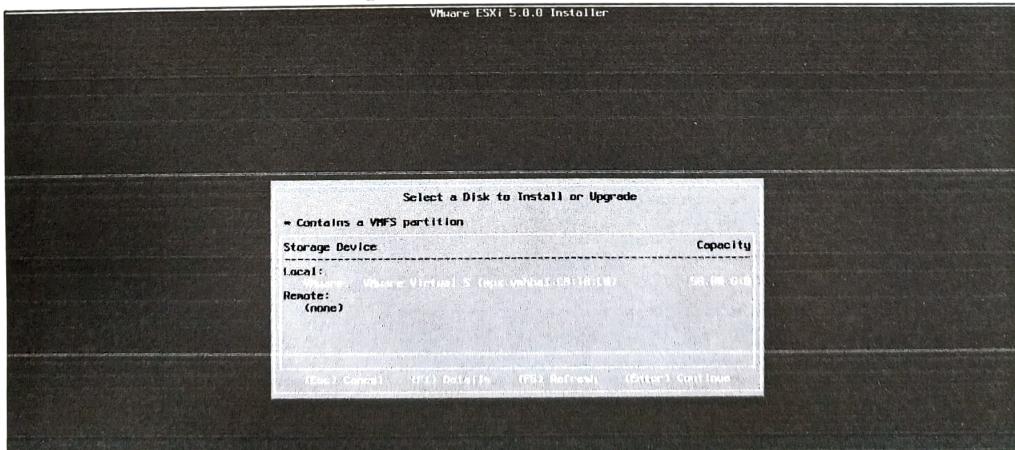
## Step 2:- Press the continue.



## Step 3:-Accept the License Agreement

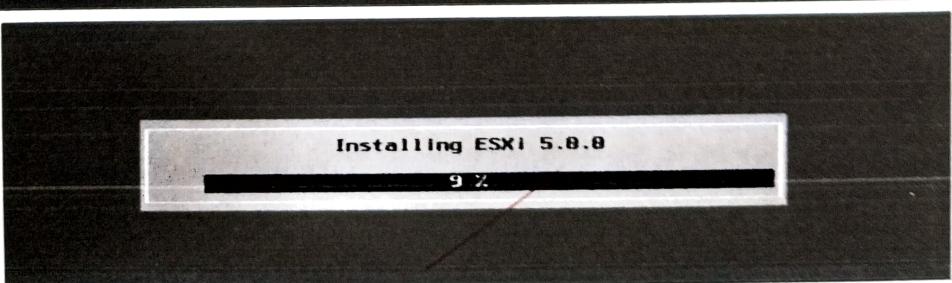
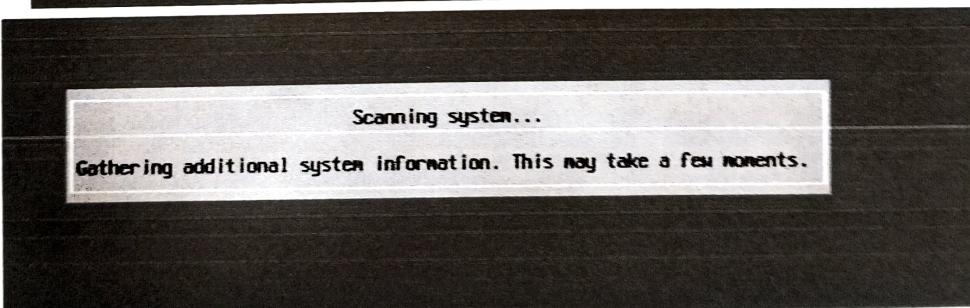
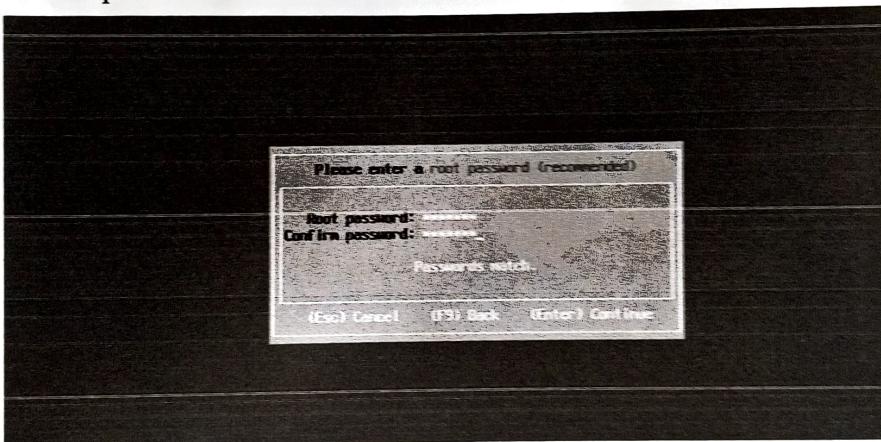


## Step 4:- Select the all default one option which one is recommended by the system.

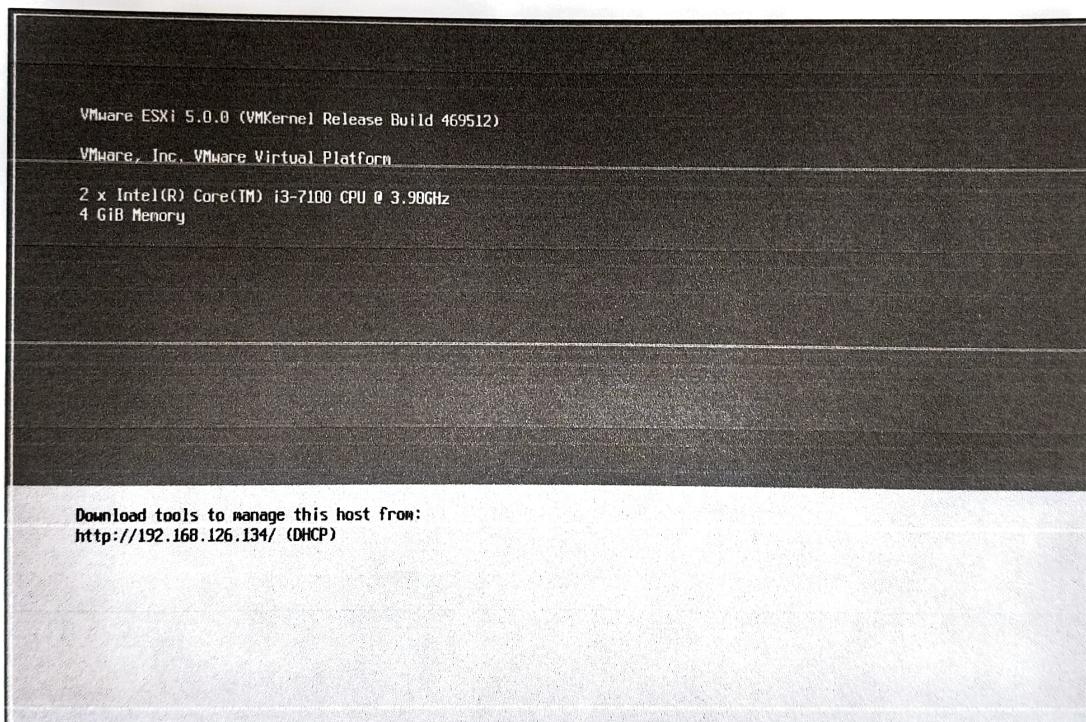
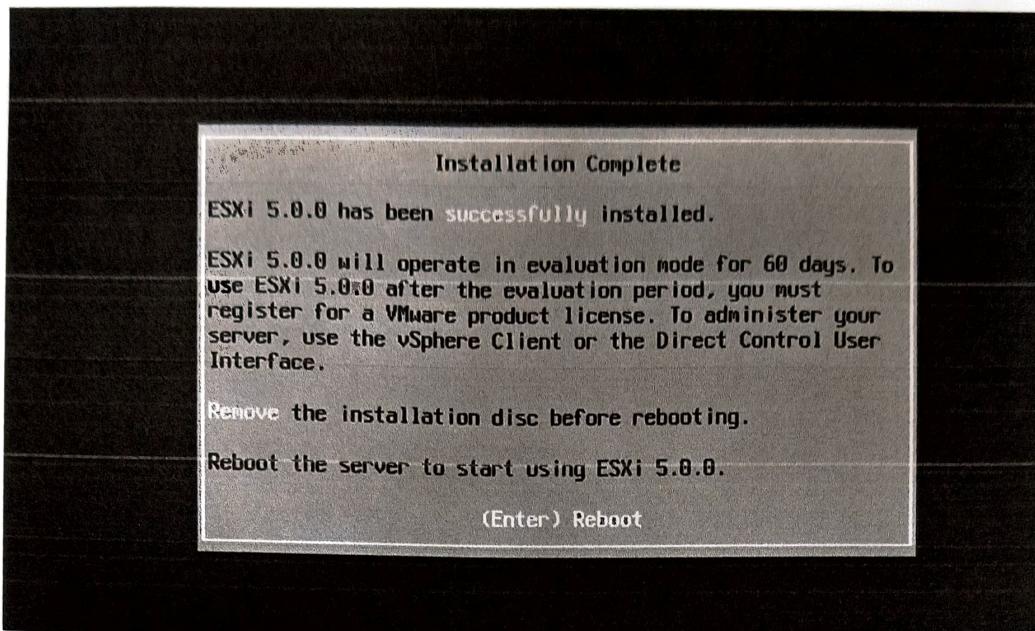




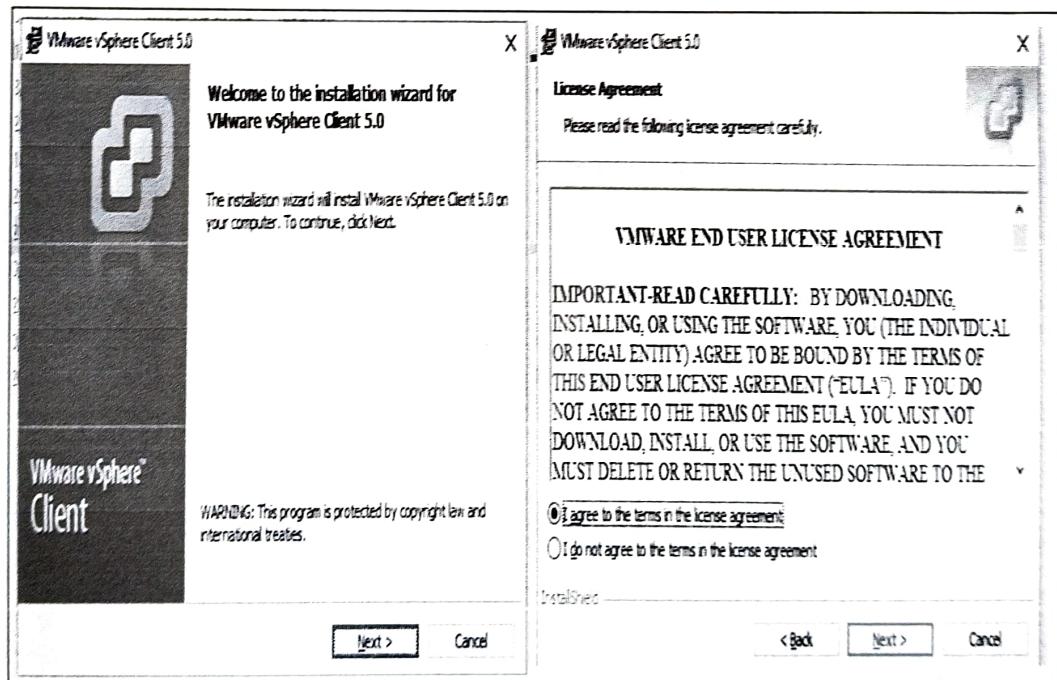
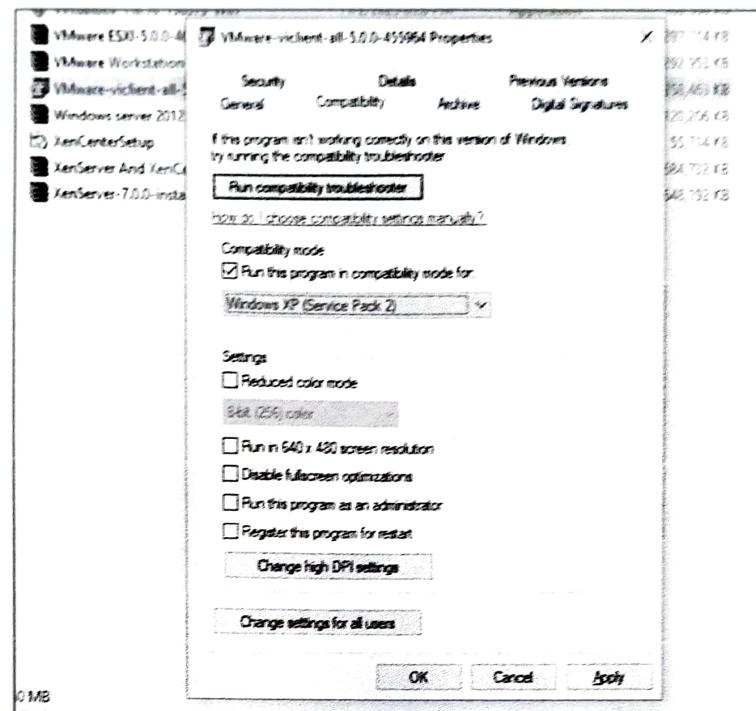
Step 5:- Enter the password.



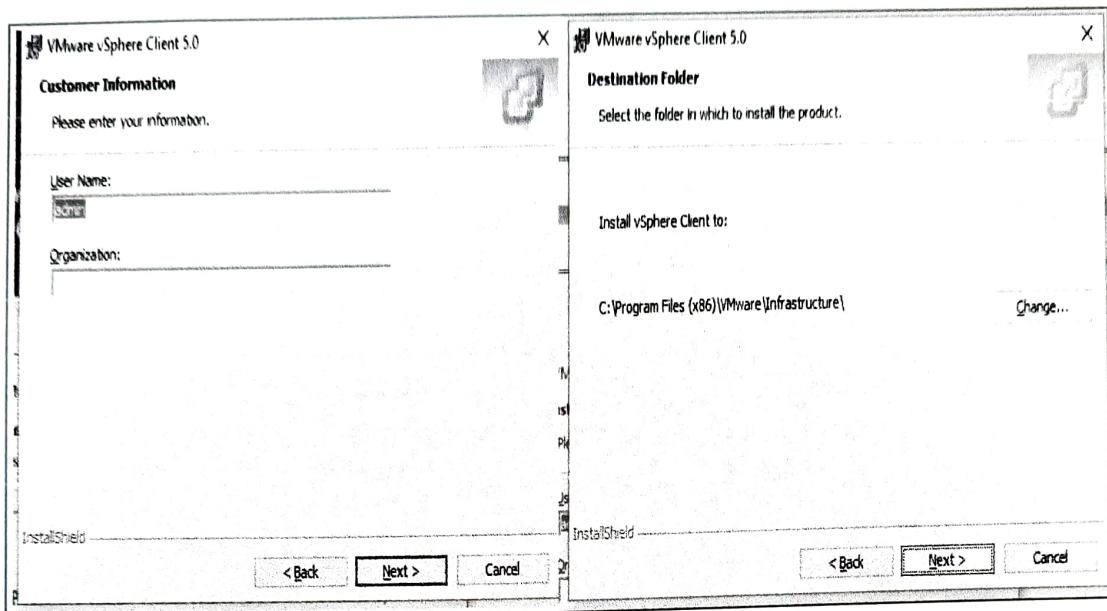
## Step 6:- Reboot the system



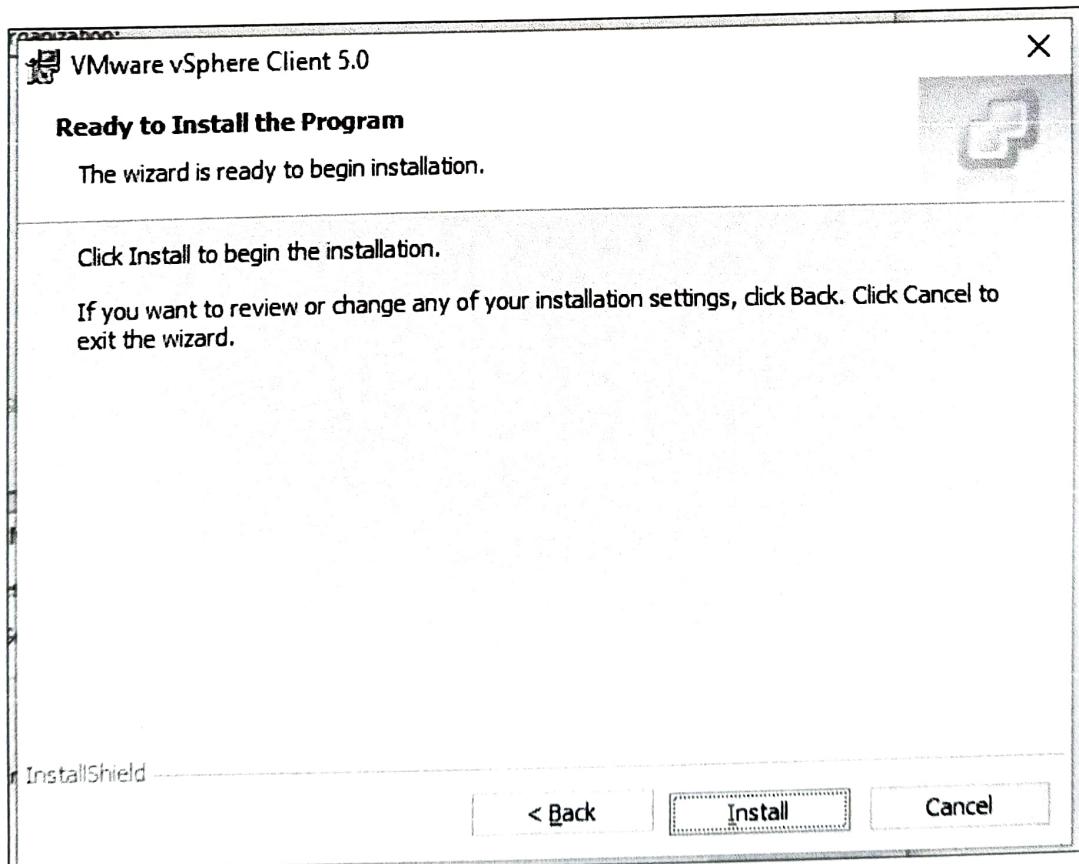
## Step 7:- Install the vSphere Client. Click on the Next.

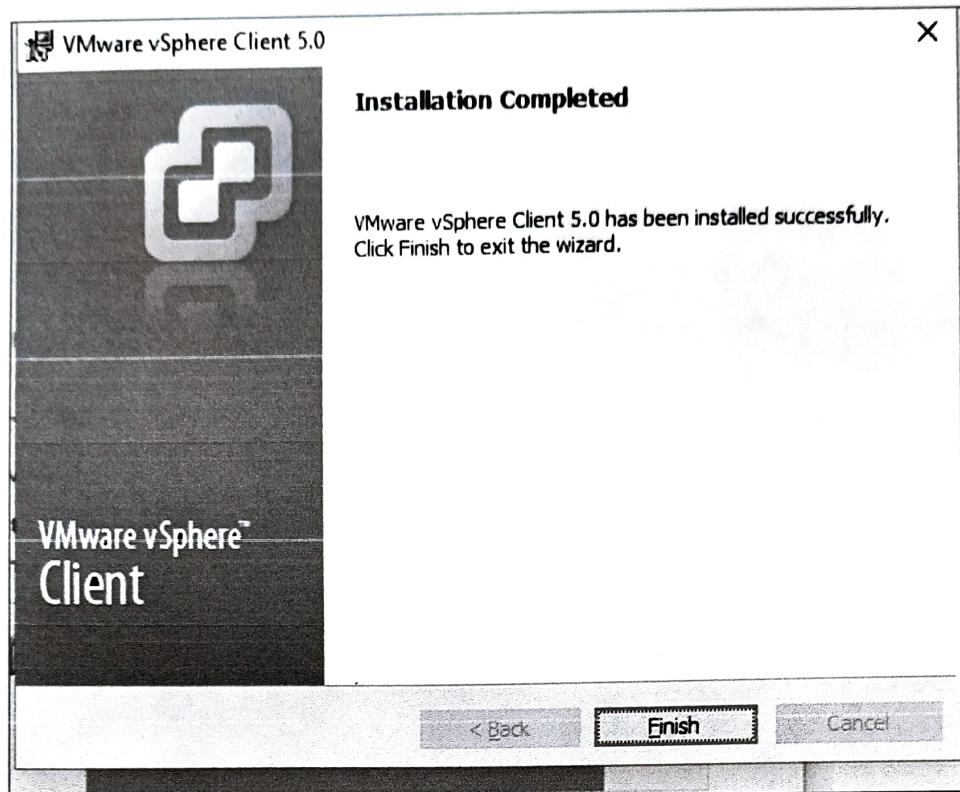


**Step 8:-** Enter the User Name. And click on the Next.

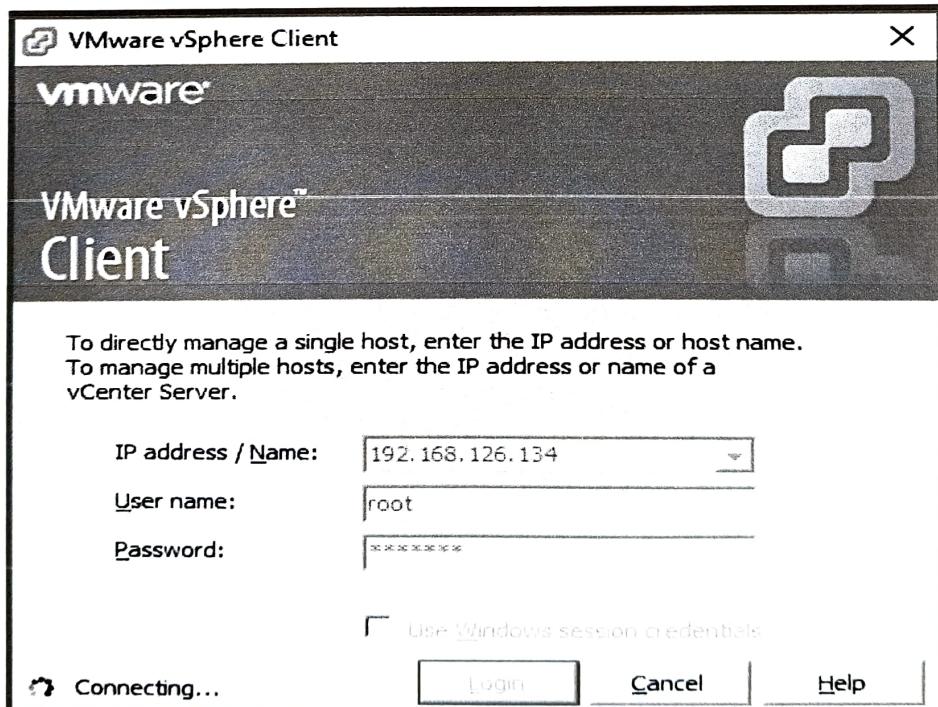


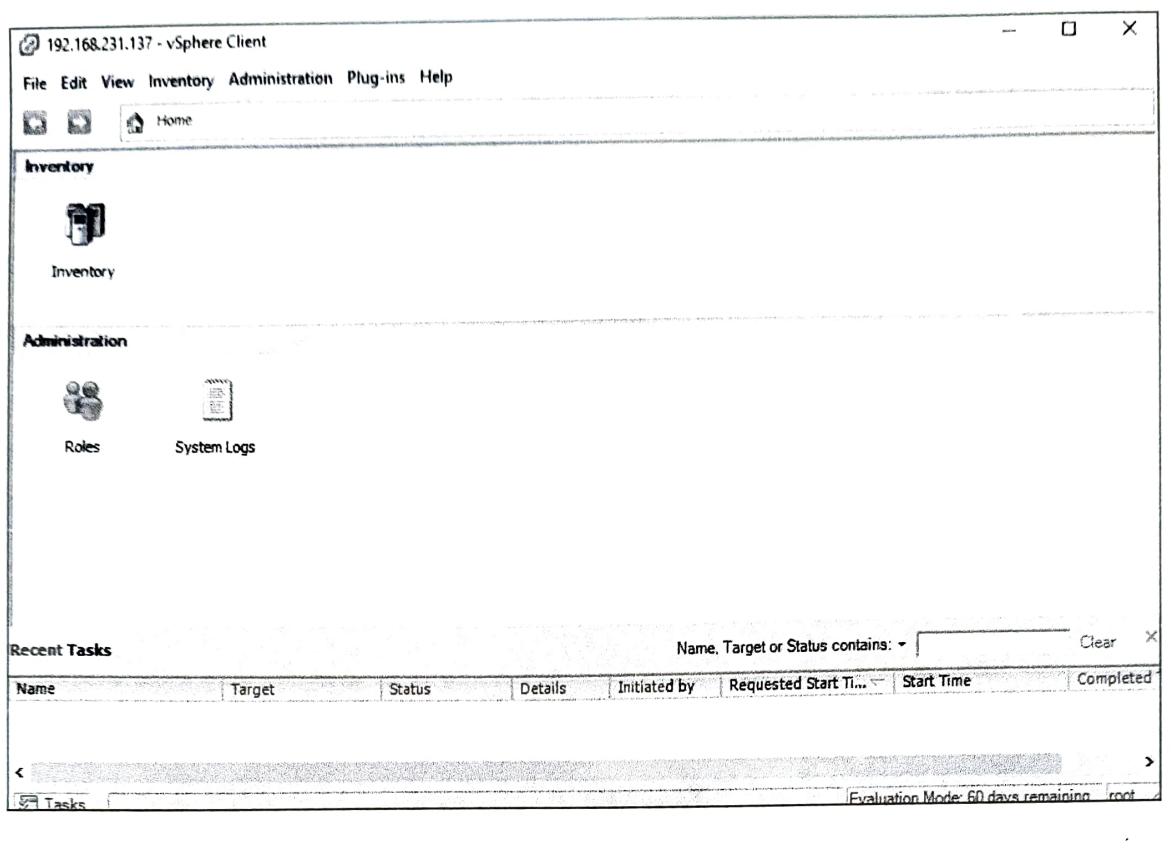
**Step 9:-** Click on install





**Step 10:-** Enter the IP address, Username and Password and then login.



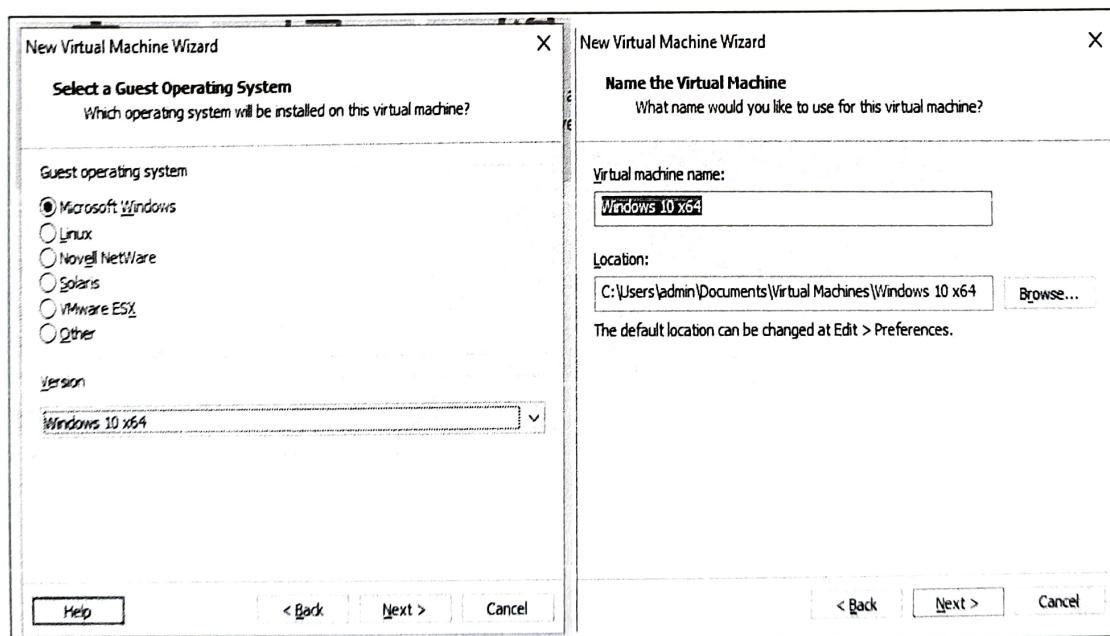
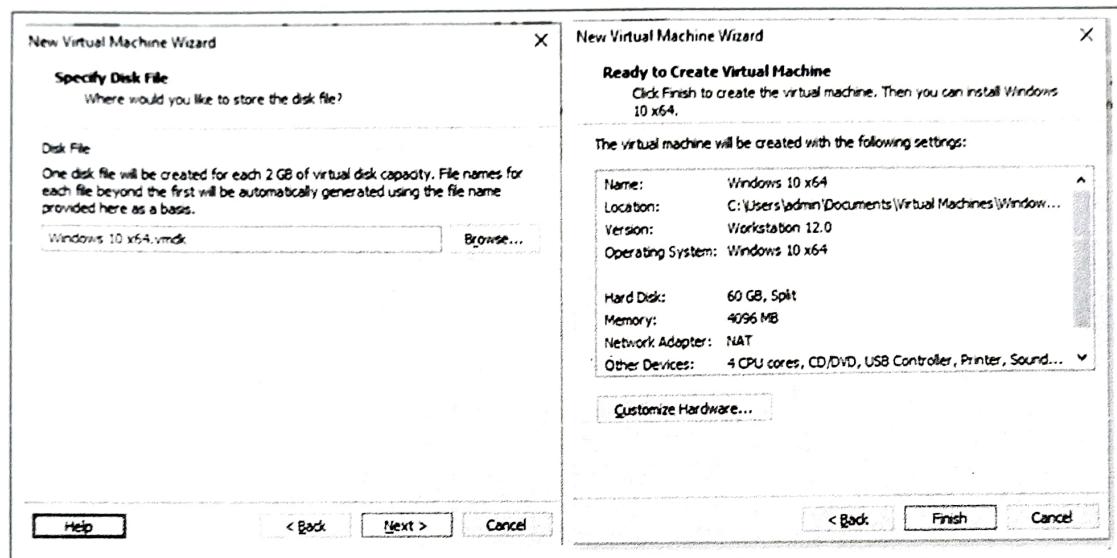


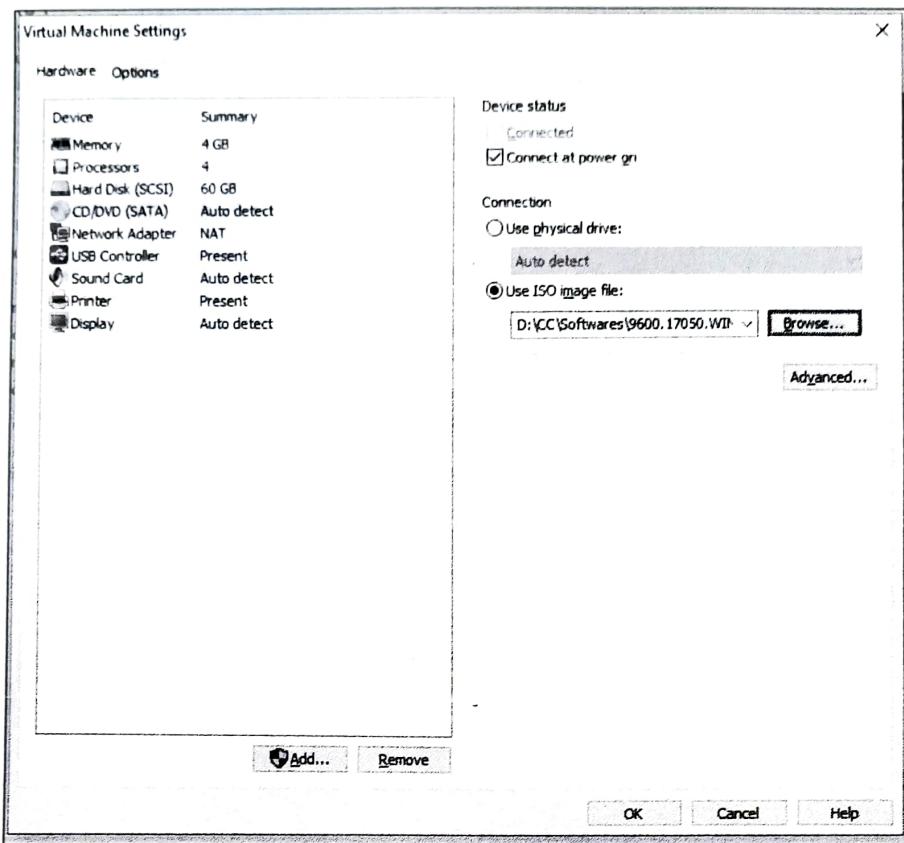
# Practical 7

**Aim:** Implement server cluster with Windows Server 2012.

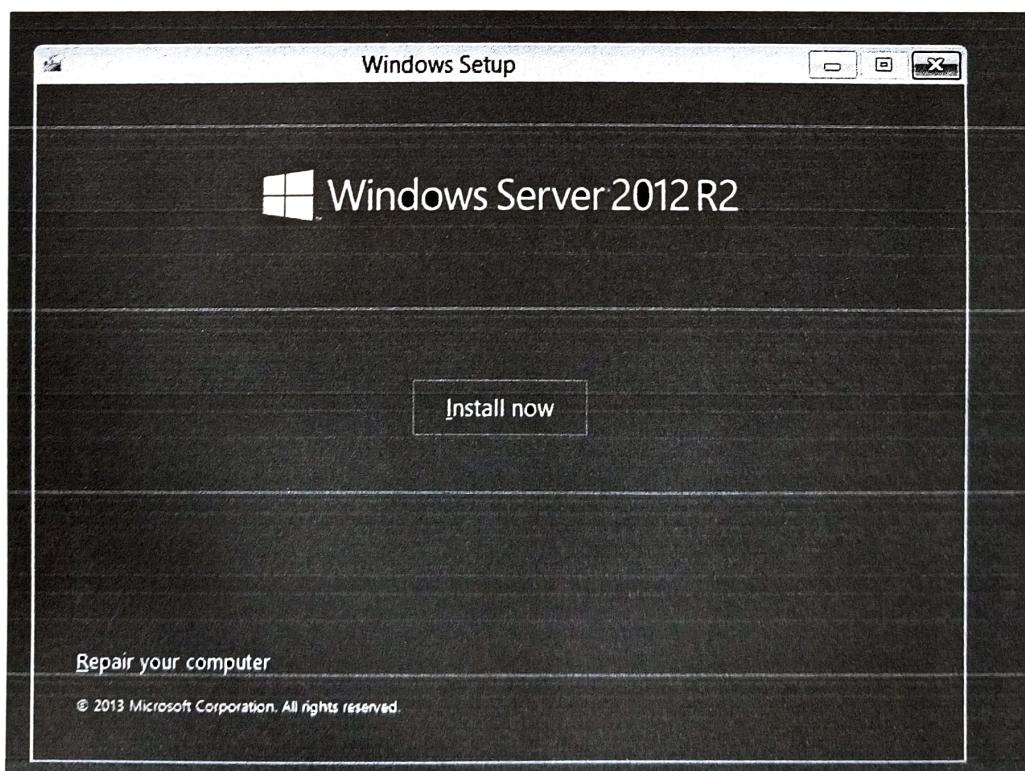
**Steps:**

**Step 1:-** Click on new Virtual machine and then click on next button and Select the ISO image file.

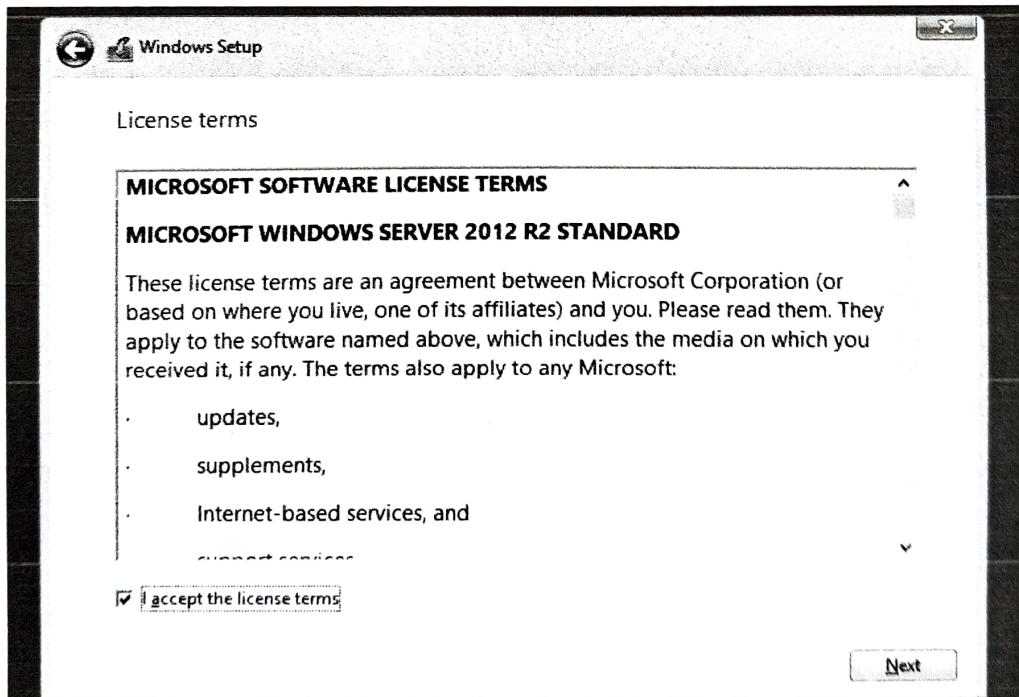
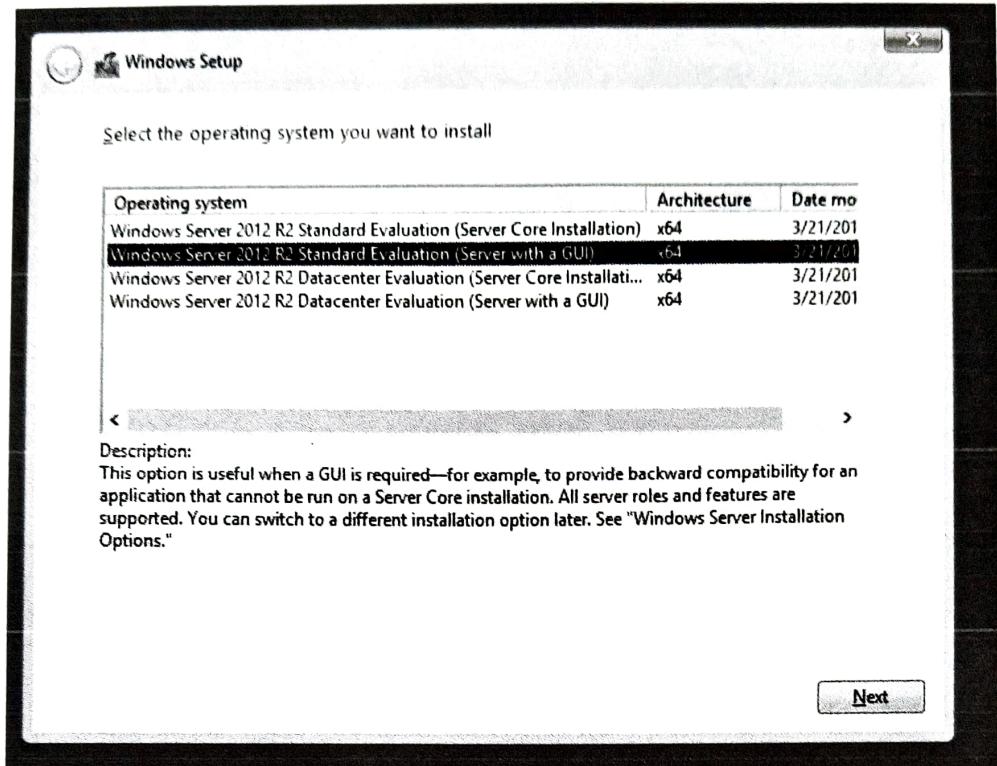




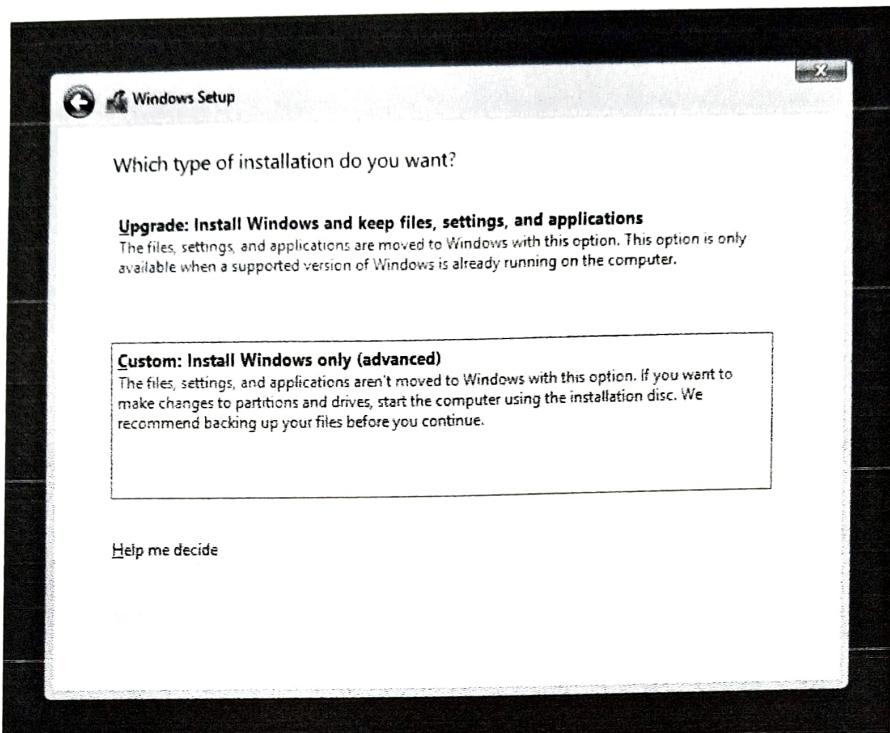
## Step 2:-Click on Install Now



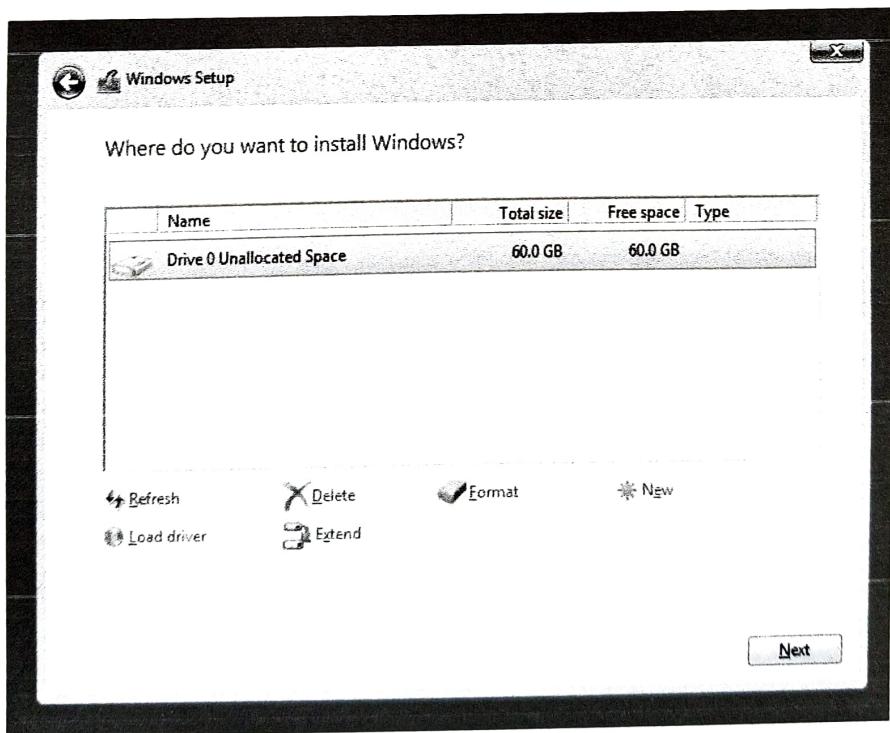
**Step 3:- Click on the Second option and click on the next**

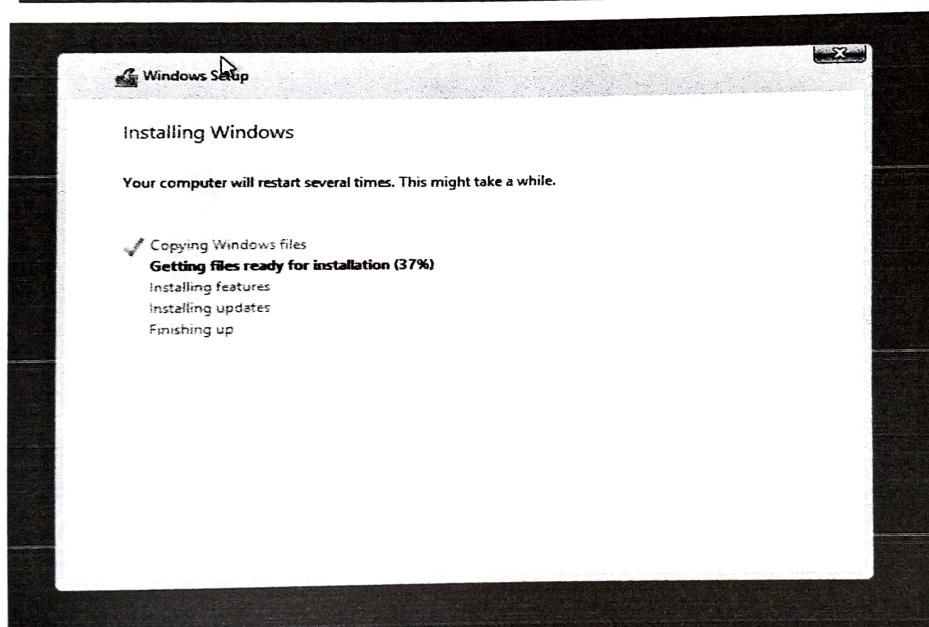
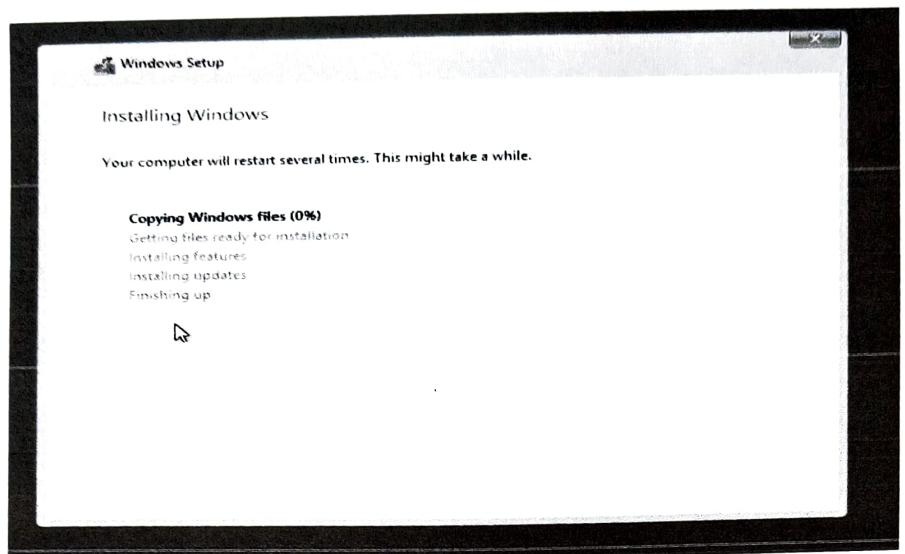


#### Step 4:- Click on the custom option

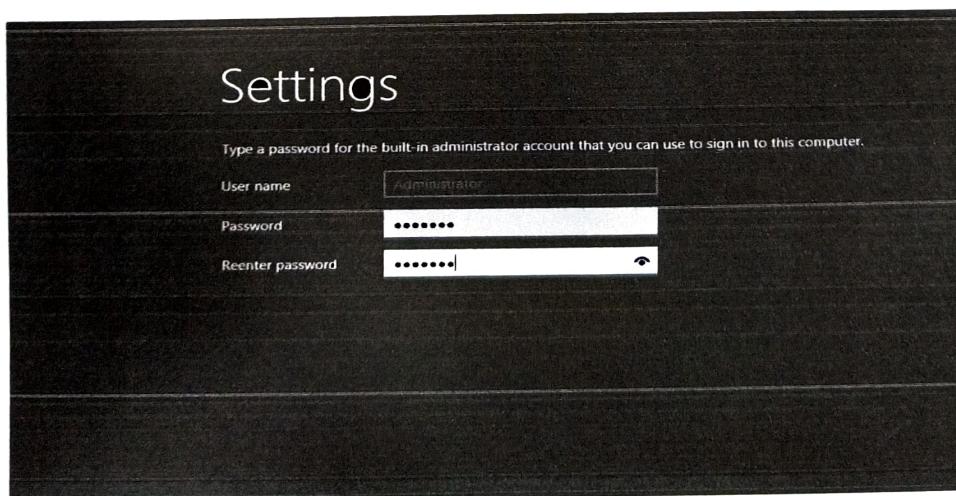


#### Step 5:- Click on the next

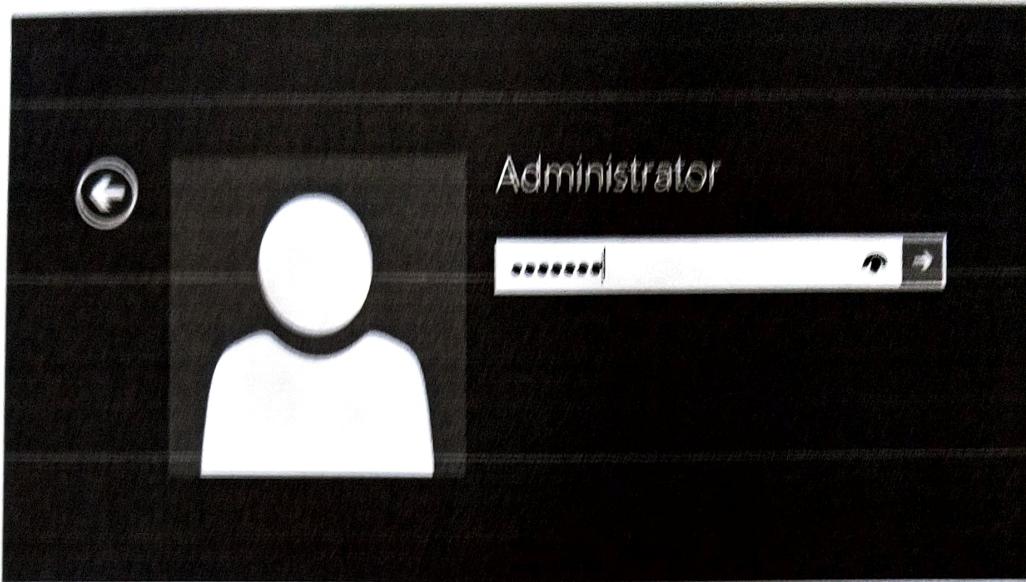




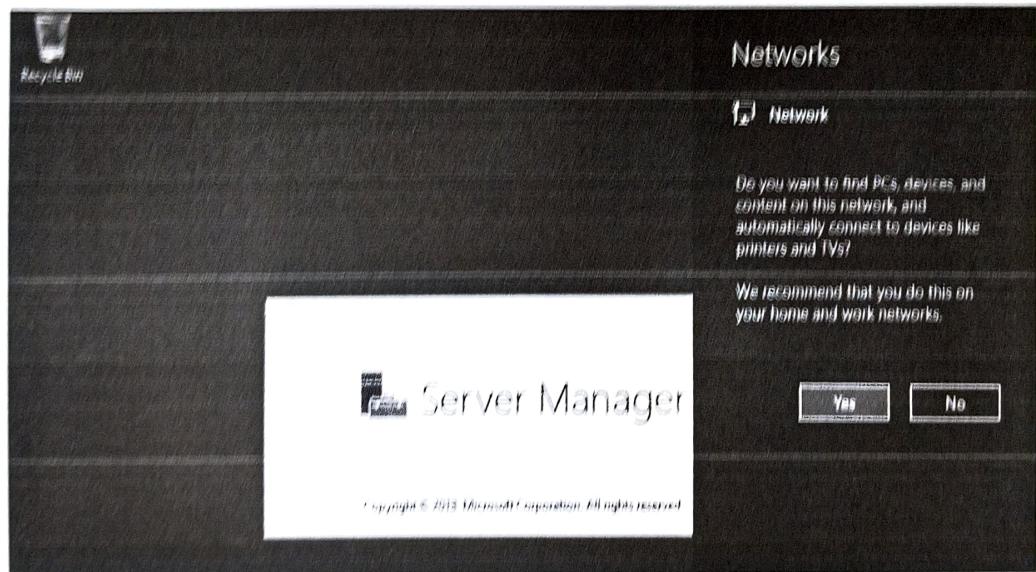
**Step 6:-** Enter the username and password.



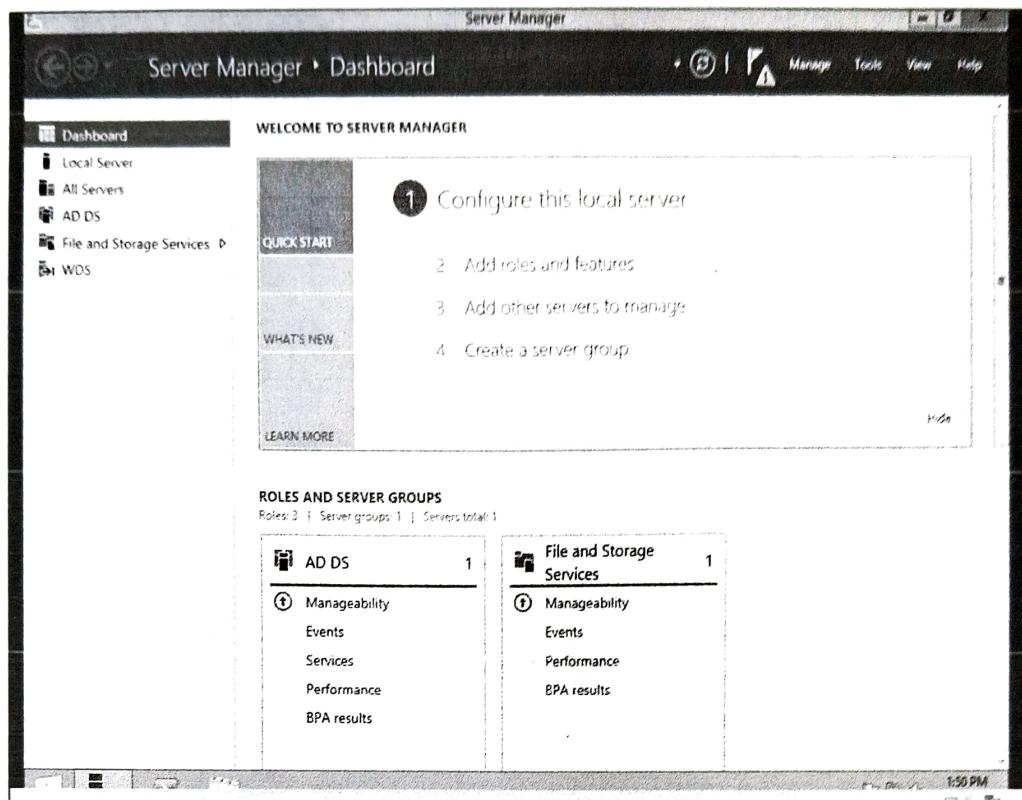
**Step 7:- Enter the system's password**



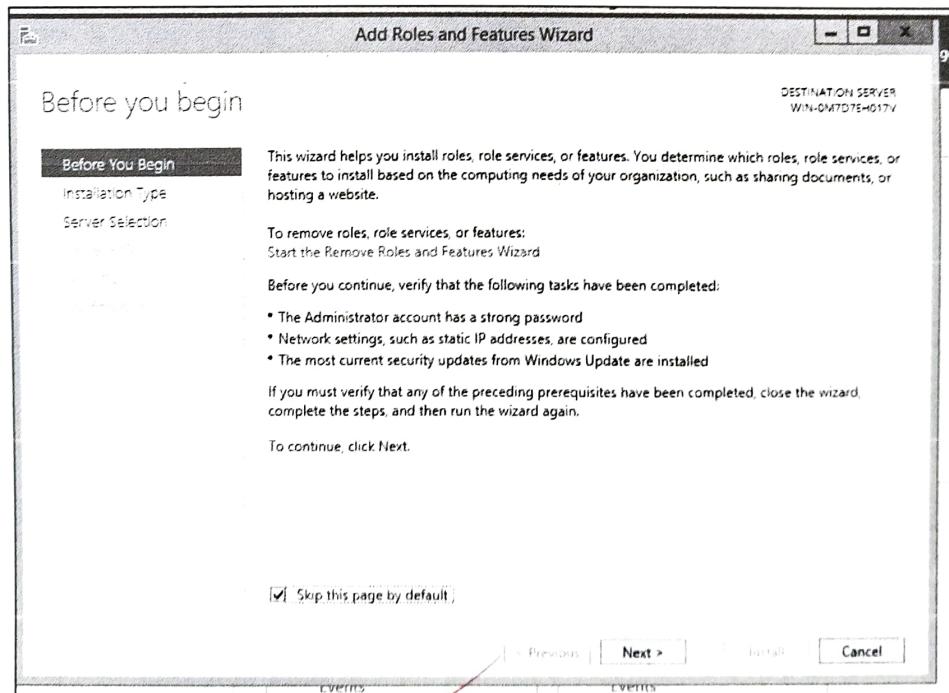
**Step 8:- Select the yes option.**

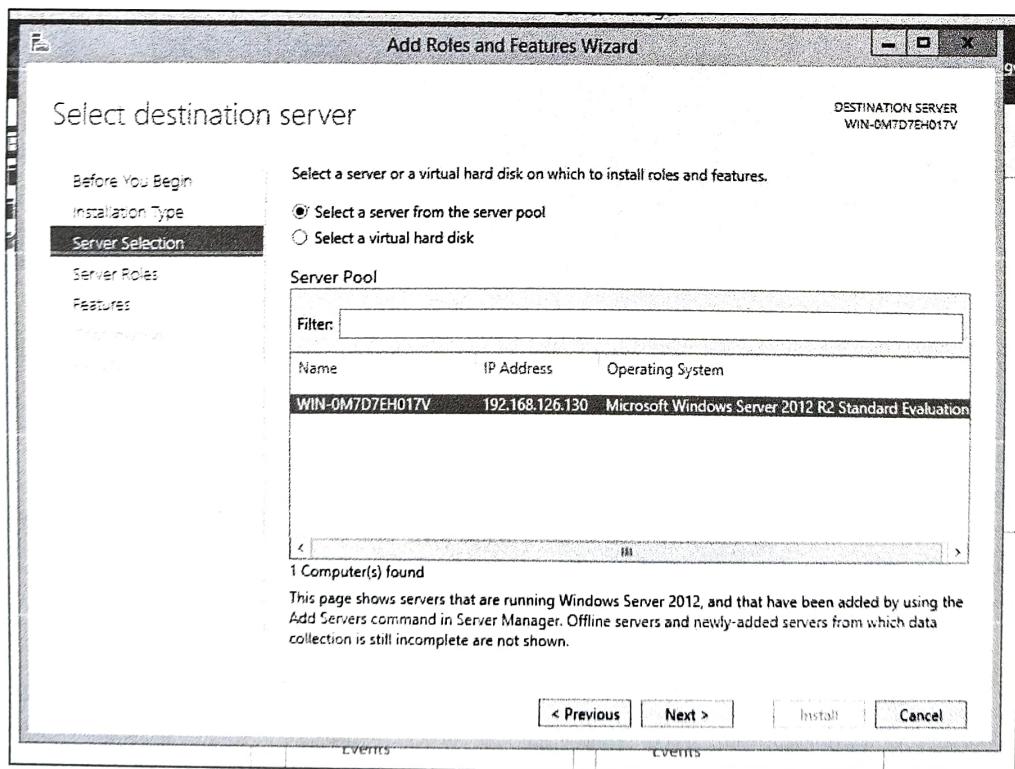
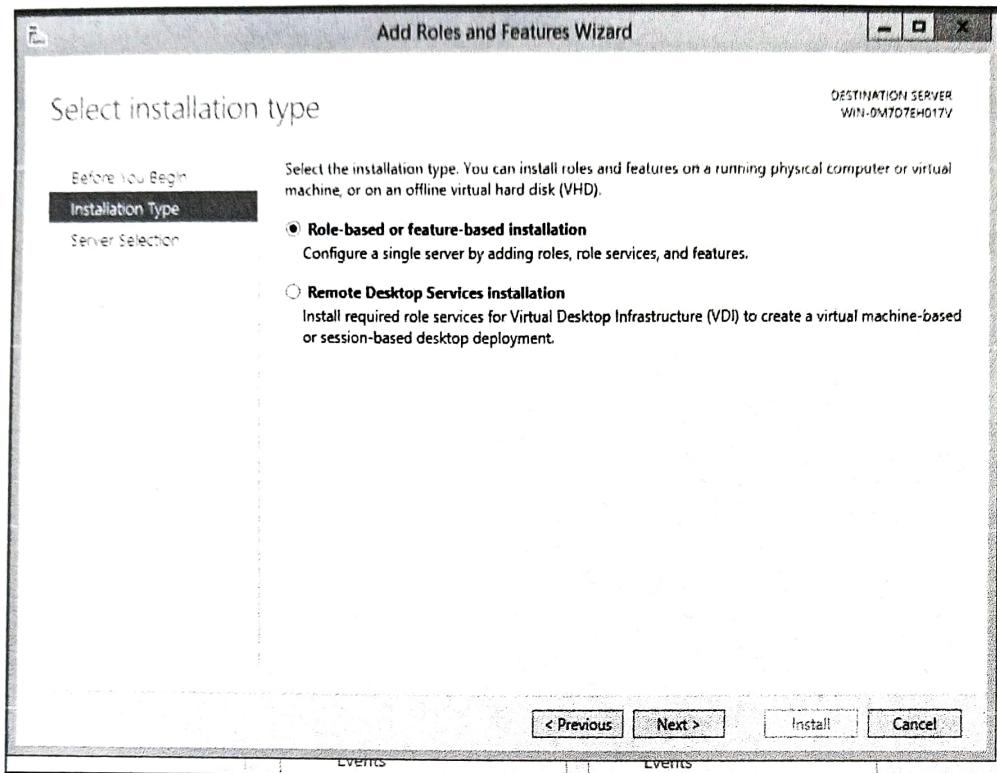


**Step 9:- Click on Add roles and features.**

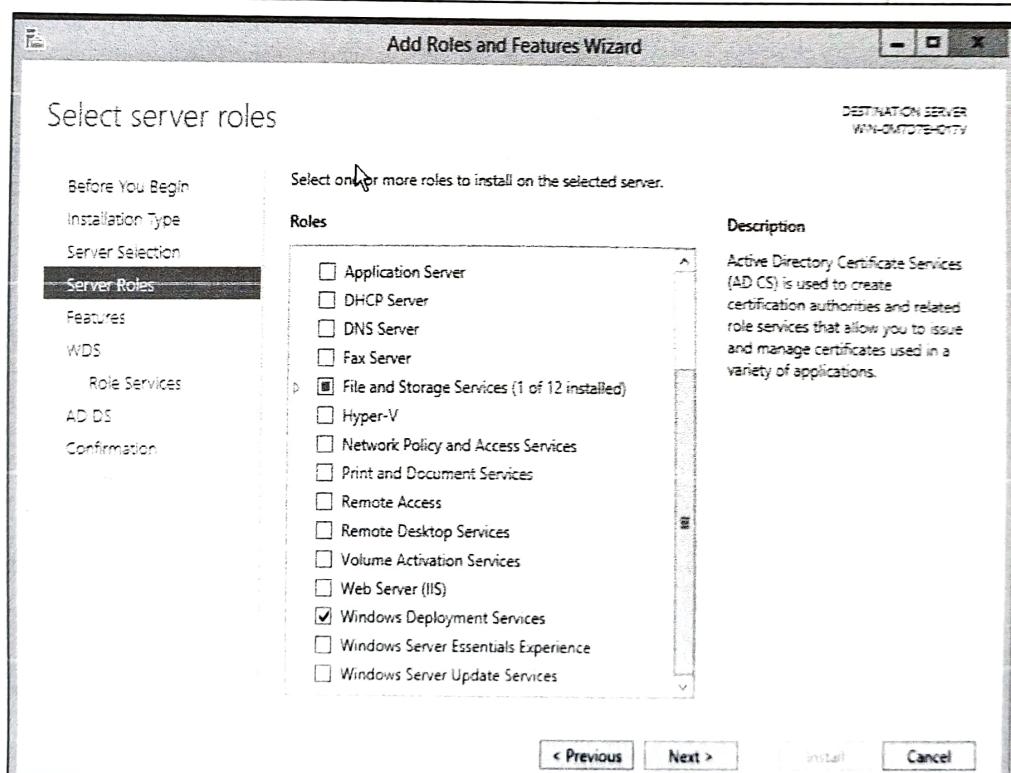
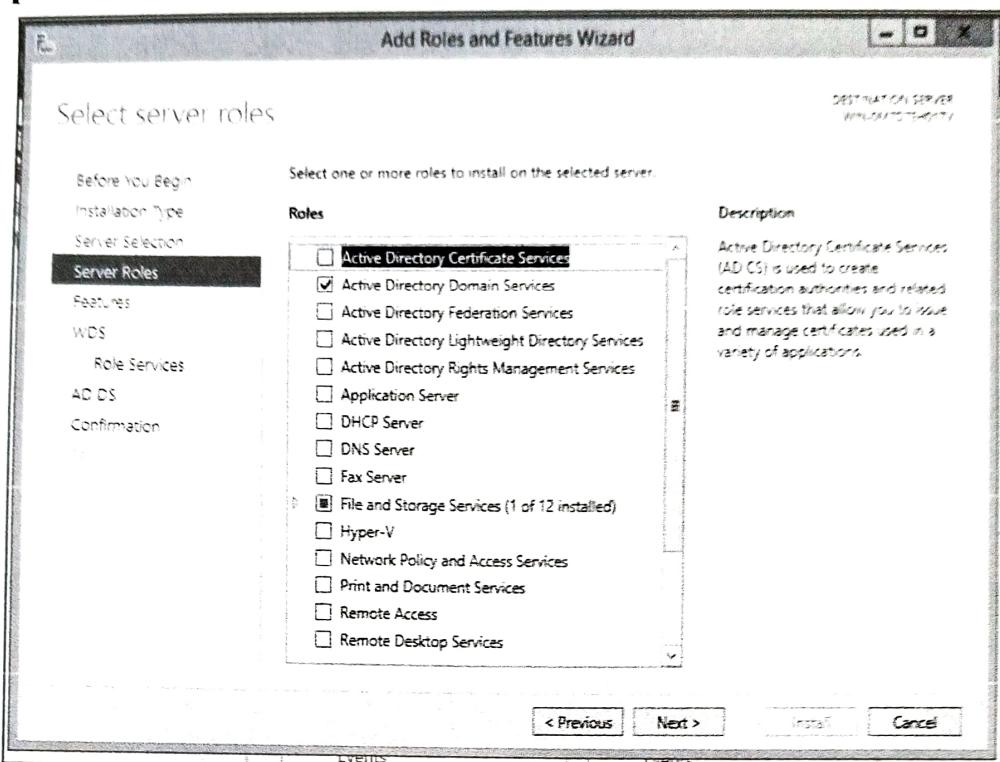


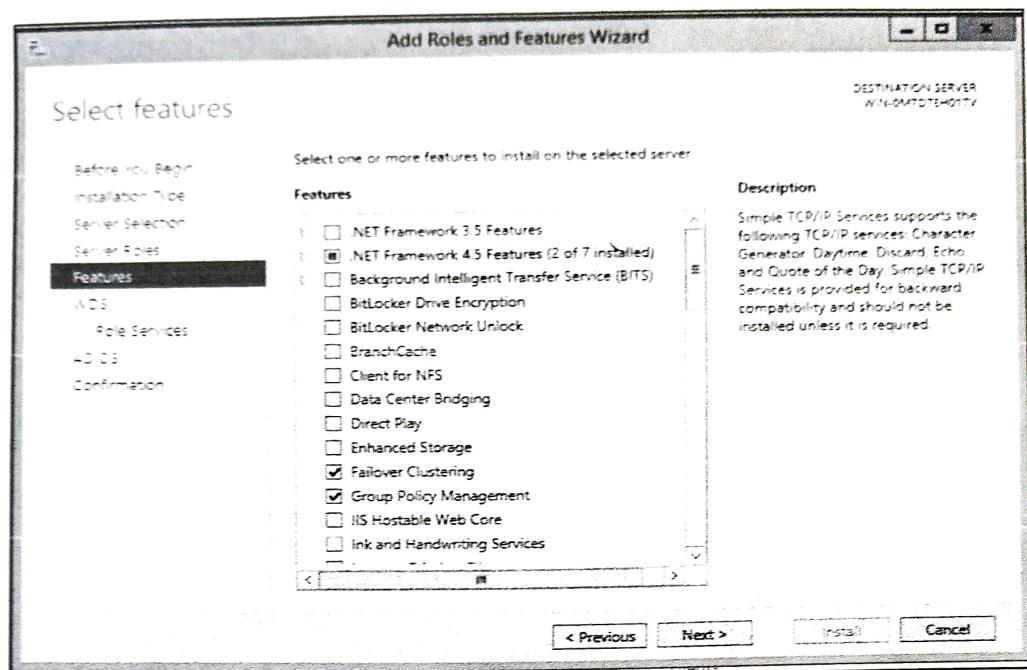
**Step 10:- Click on the next**



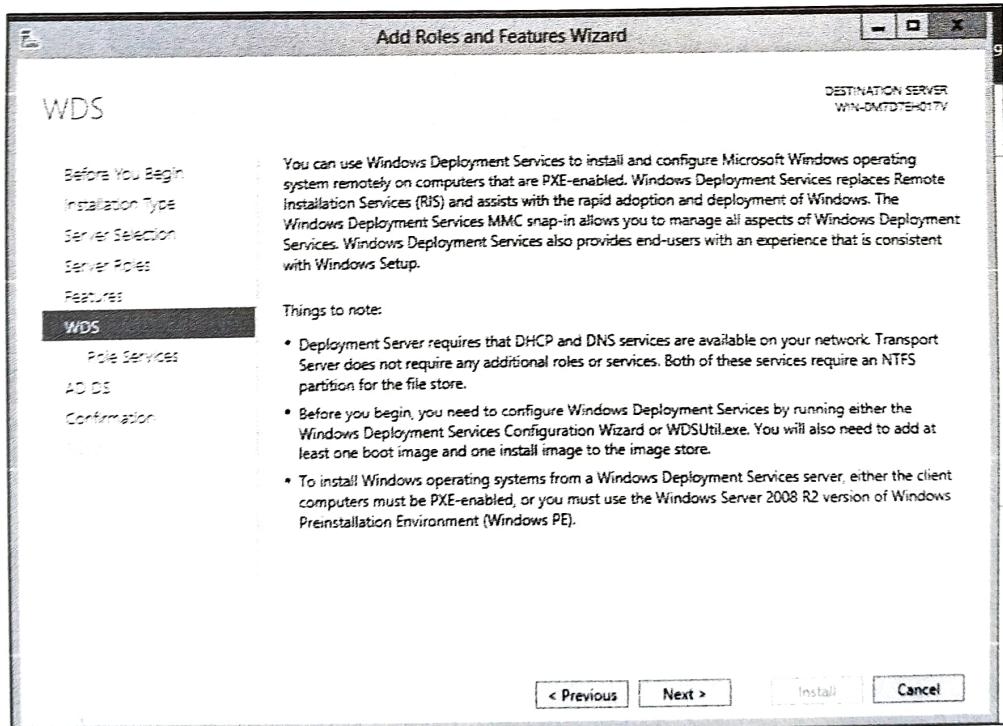


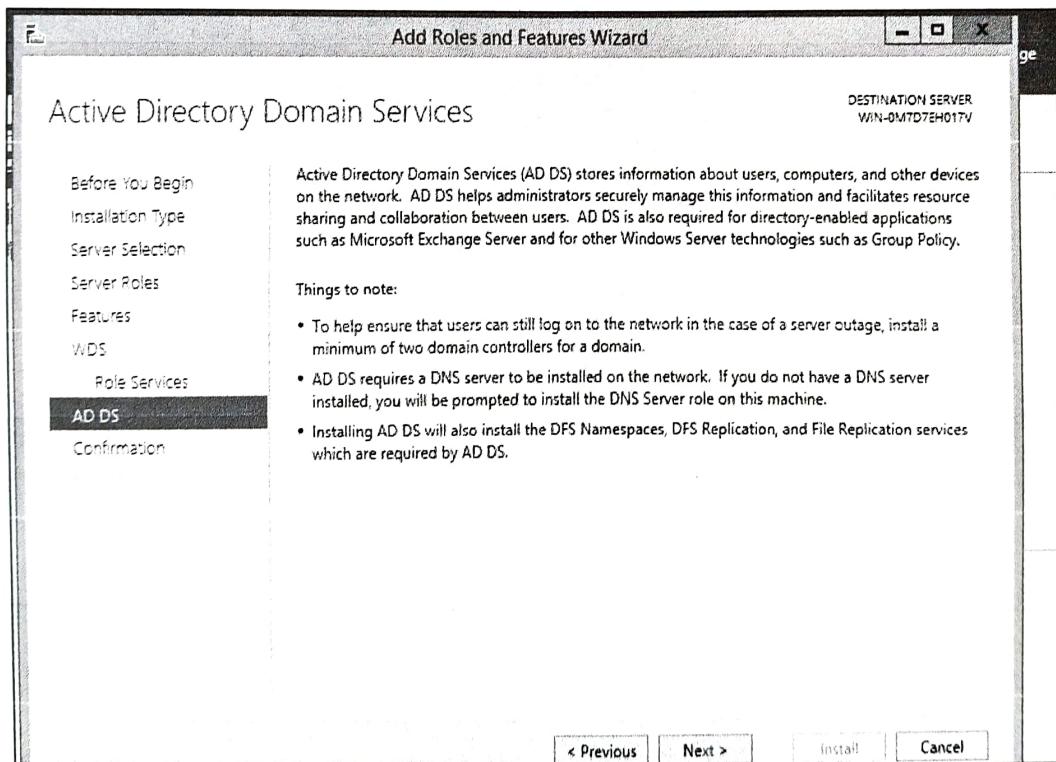
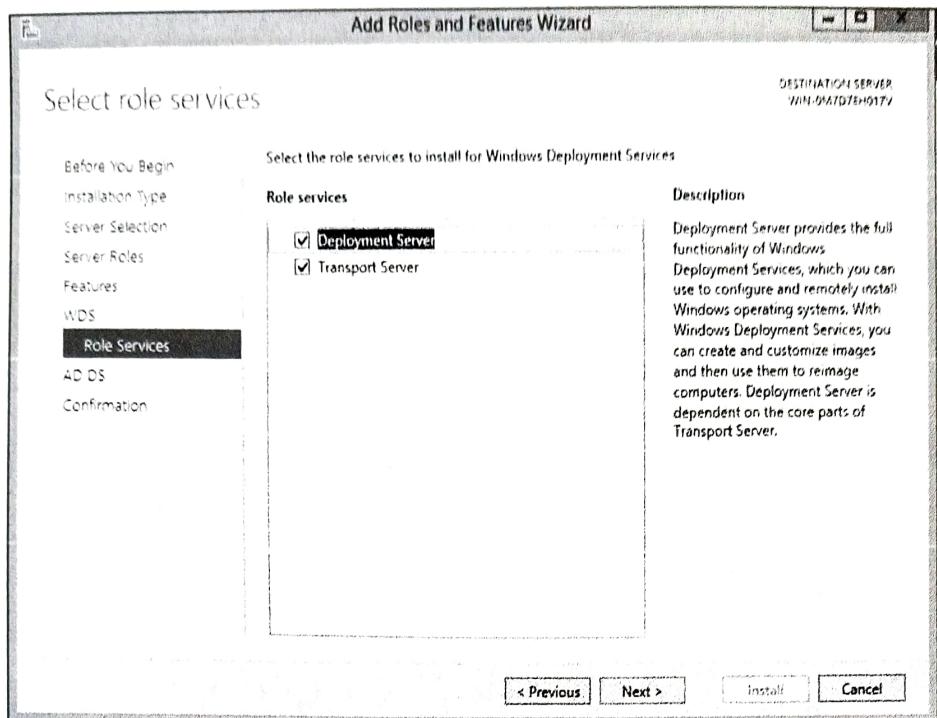
## Step 11:- Add the roles.

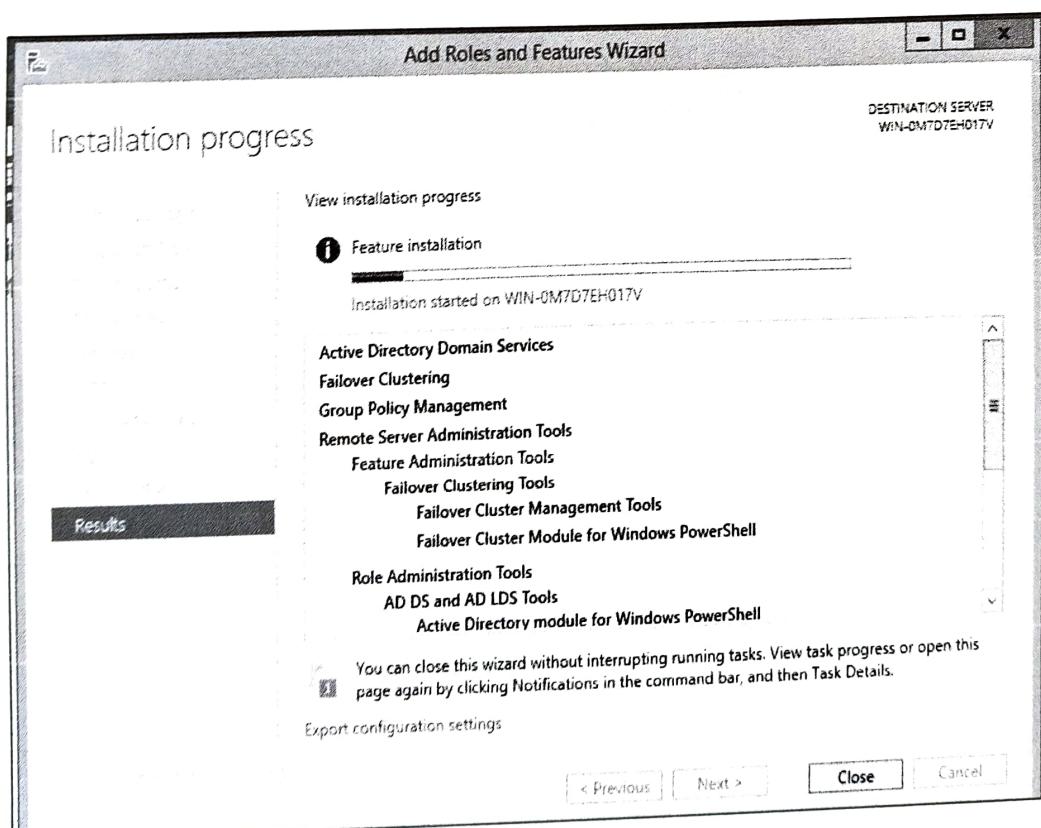
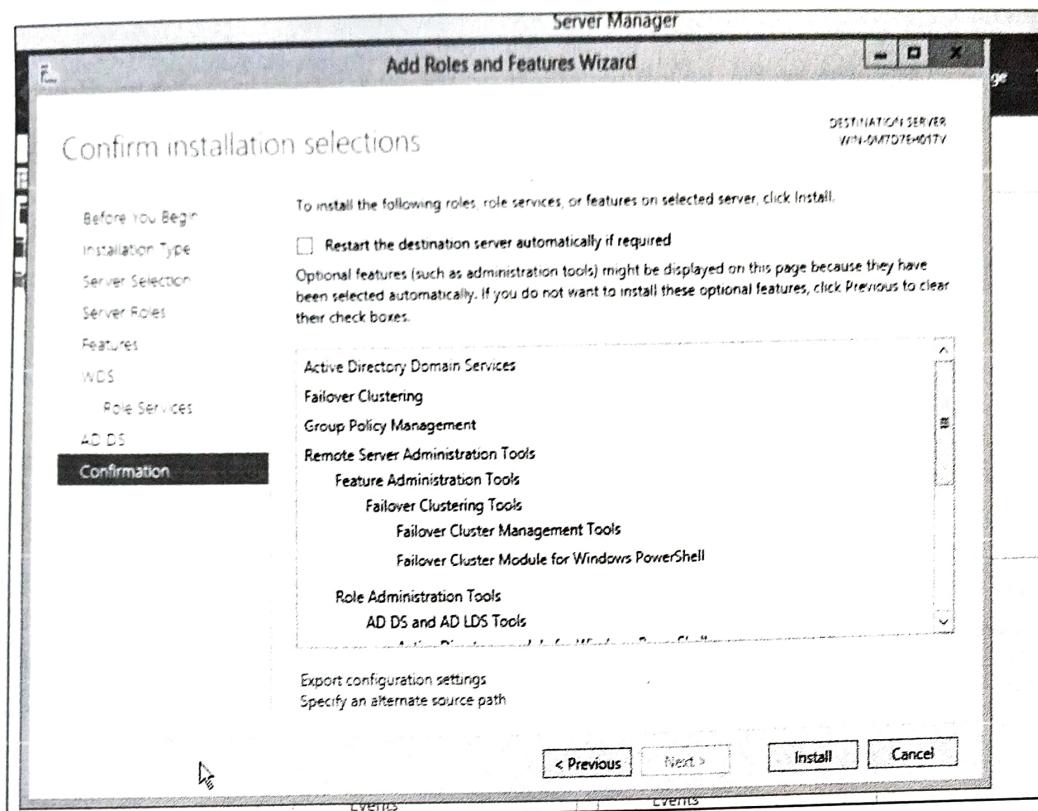


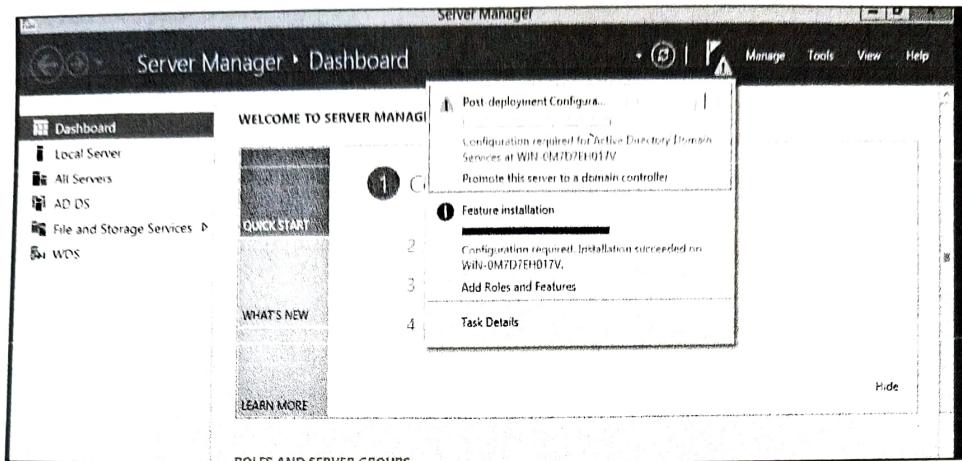


## Step 12:- Click on the next.

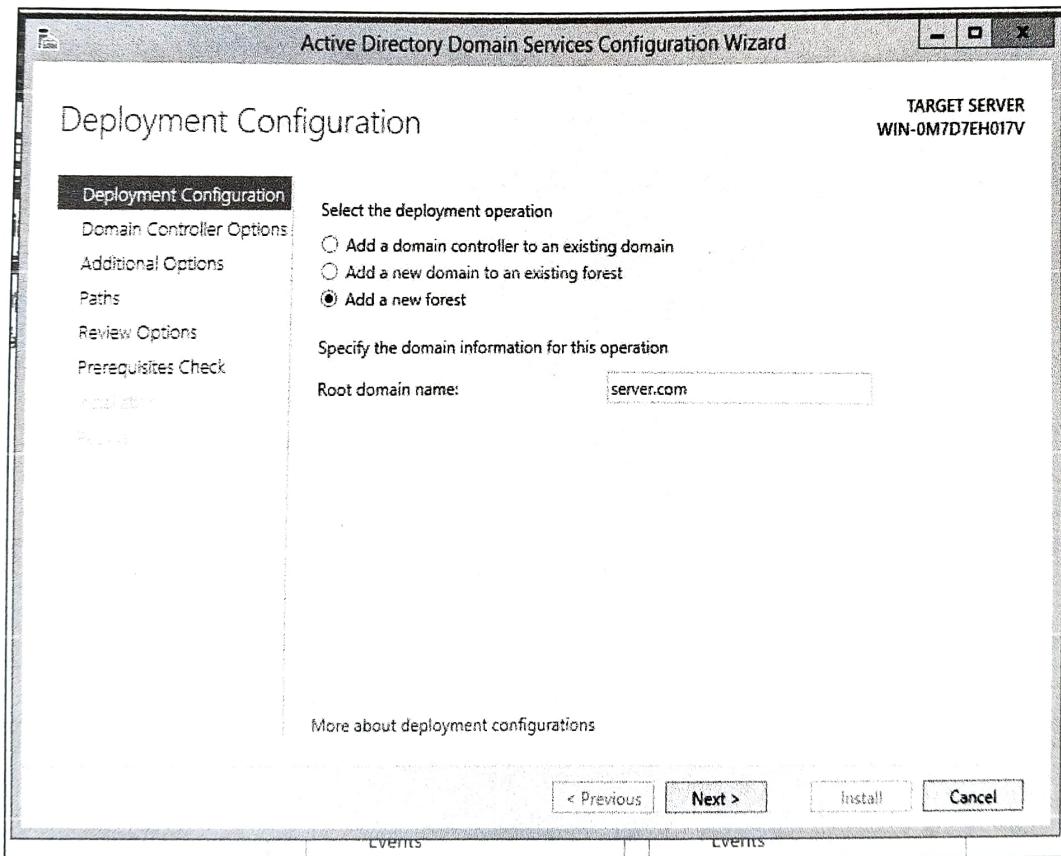




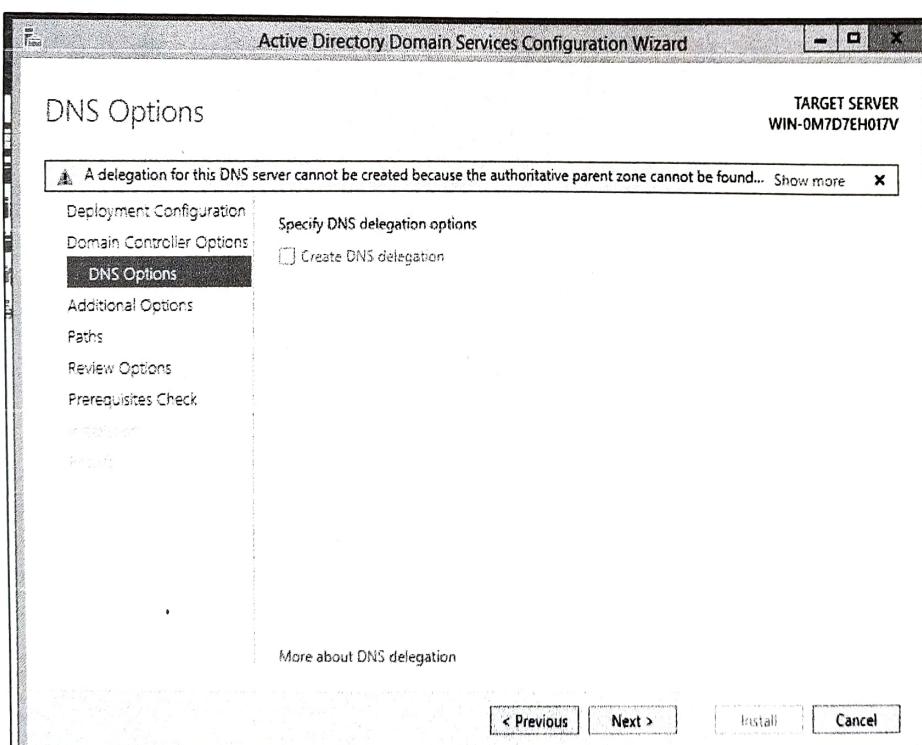
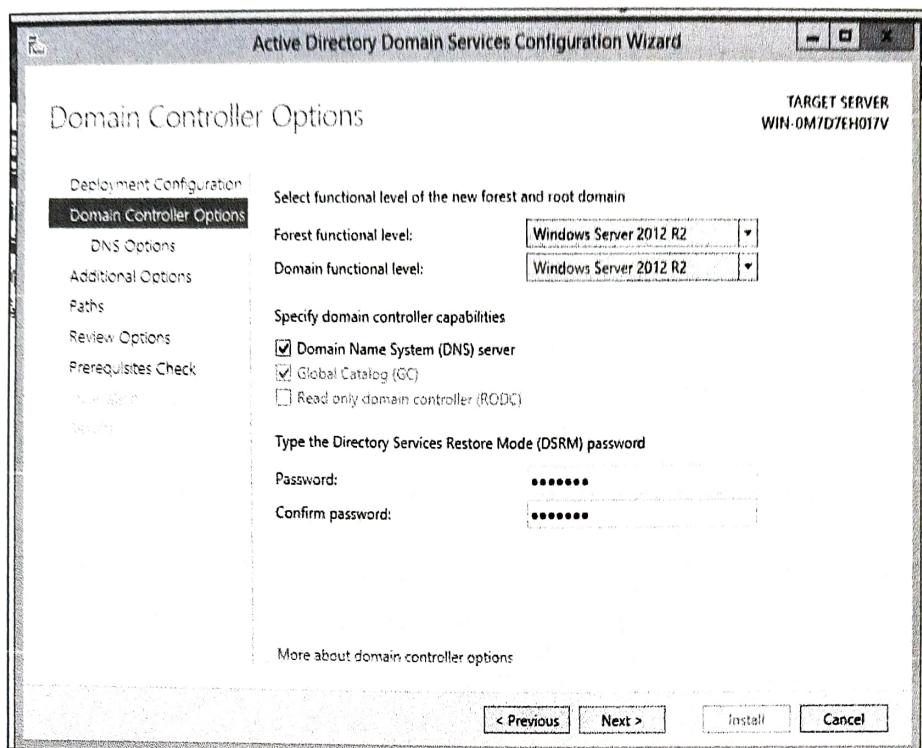


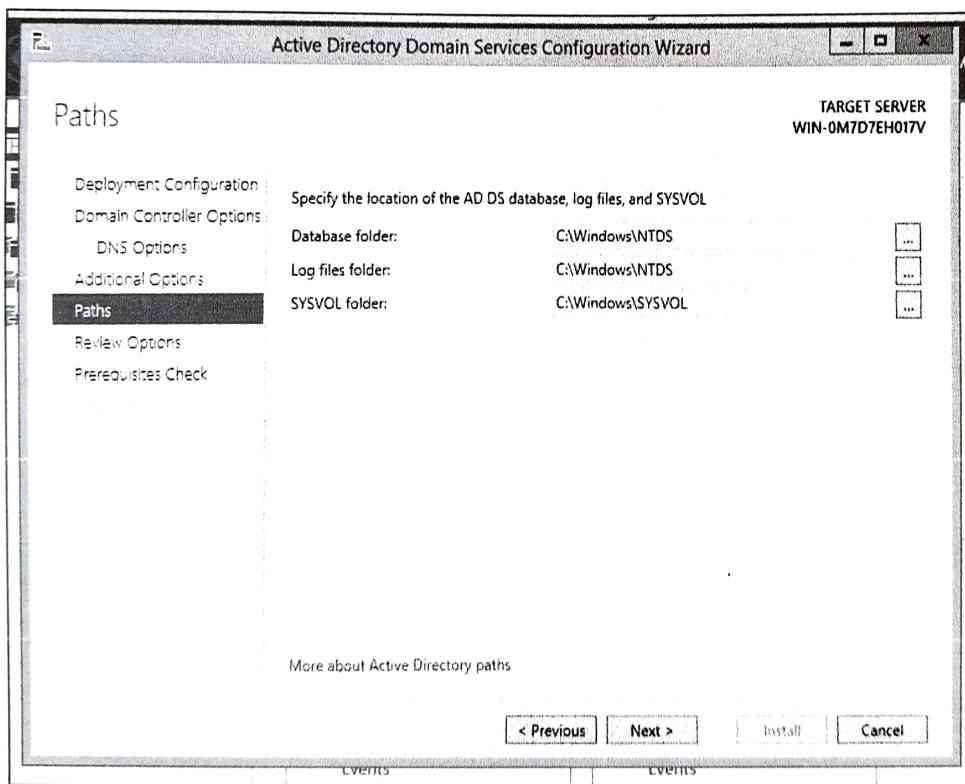
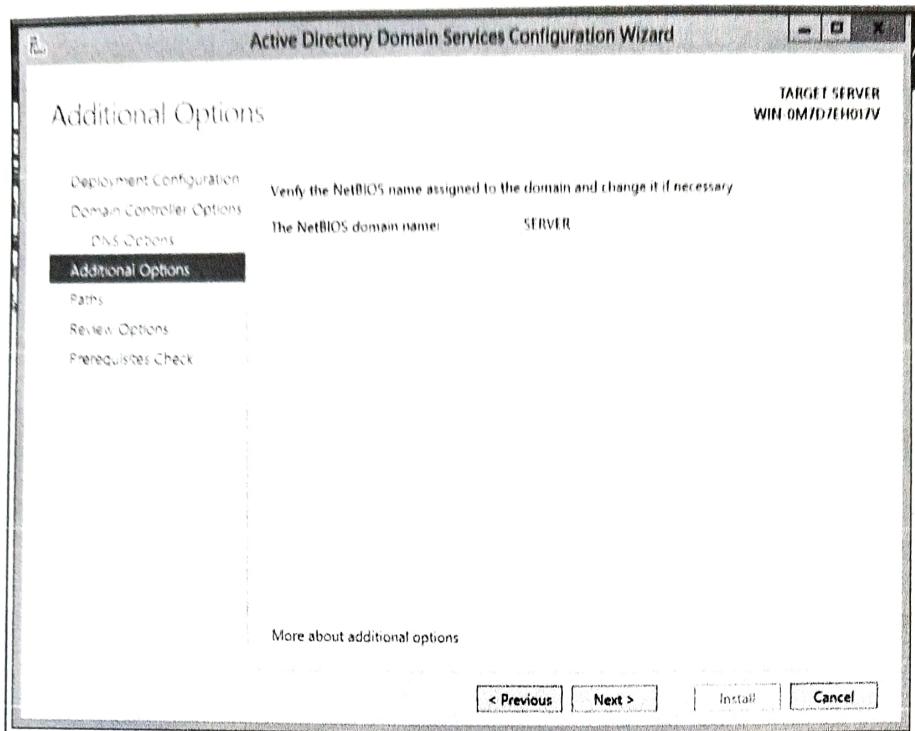


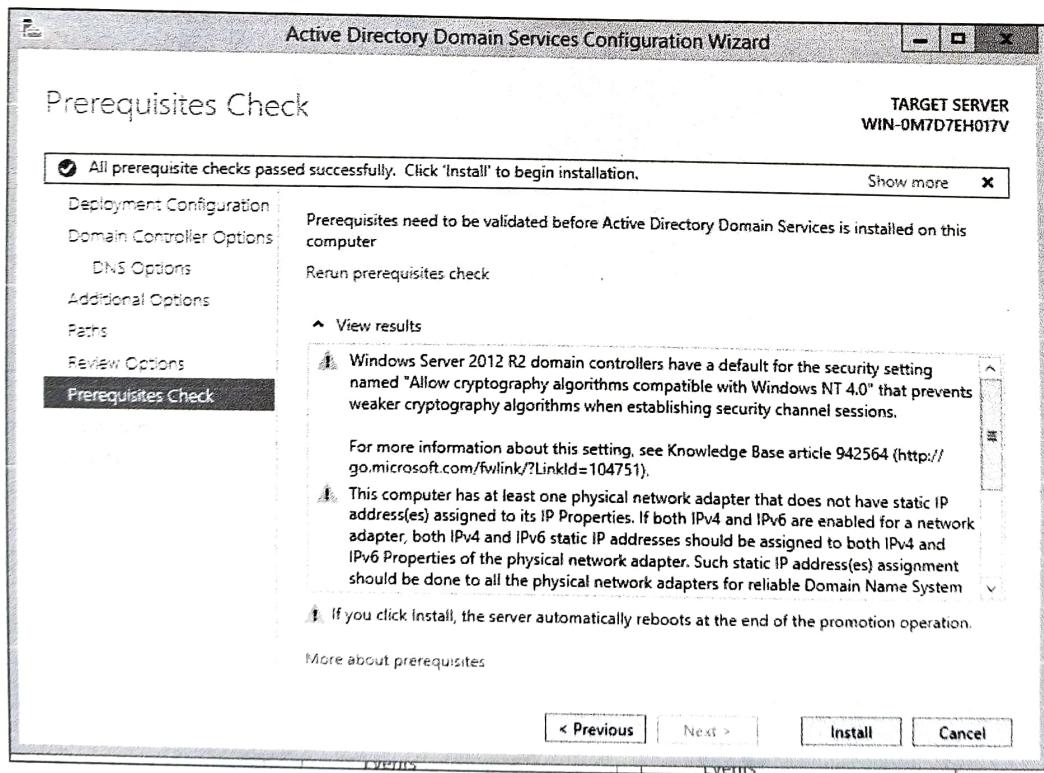
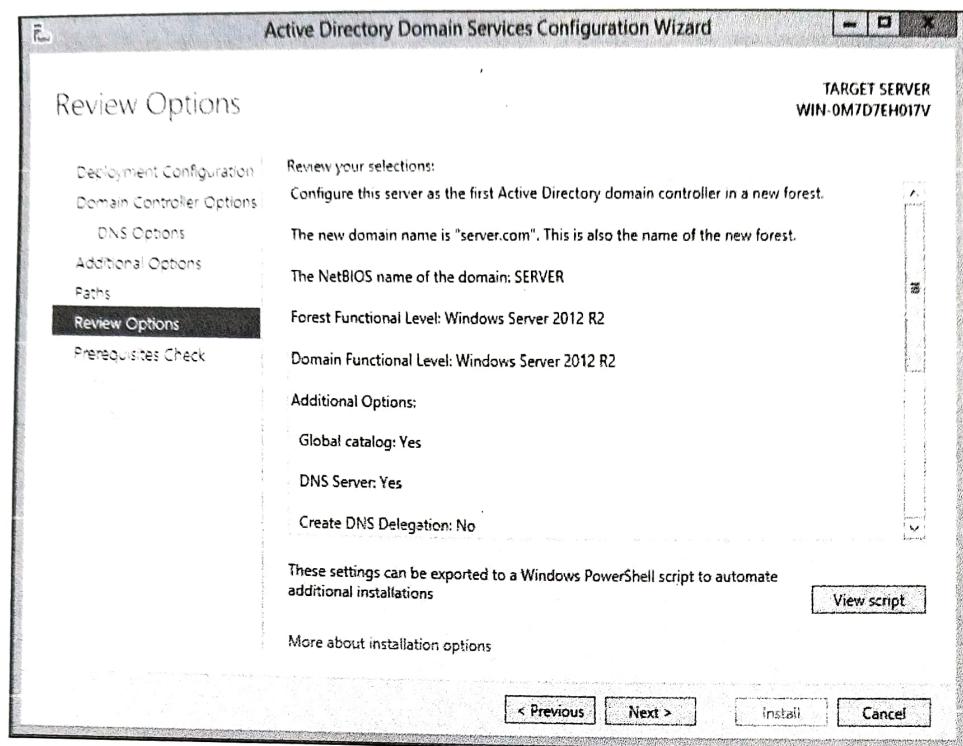
## Step 13:- Write domain name.

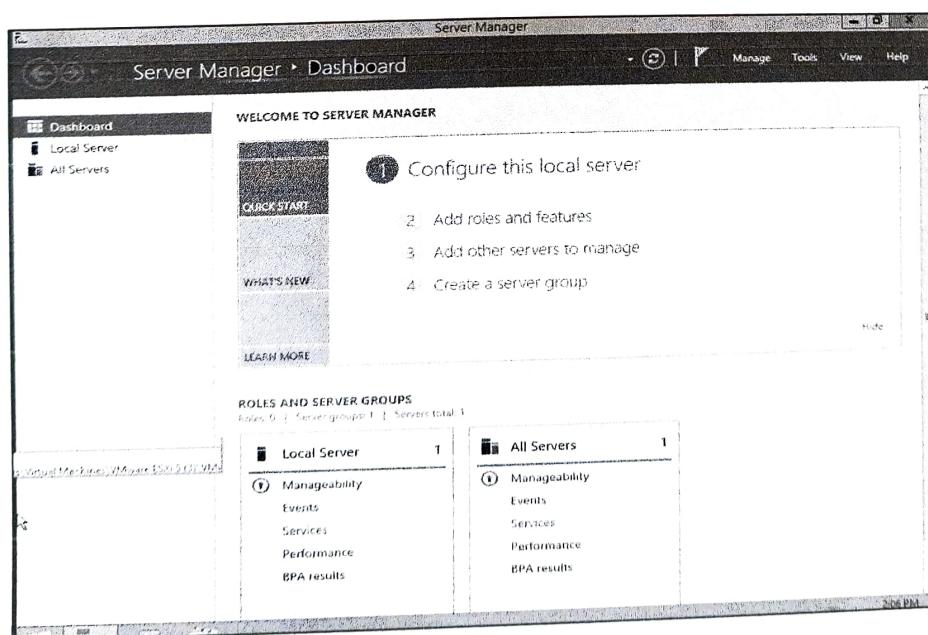
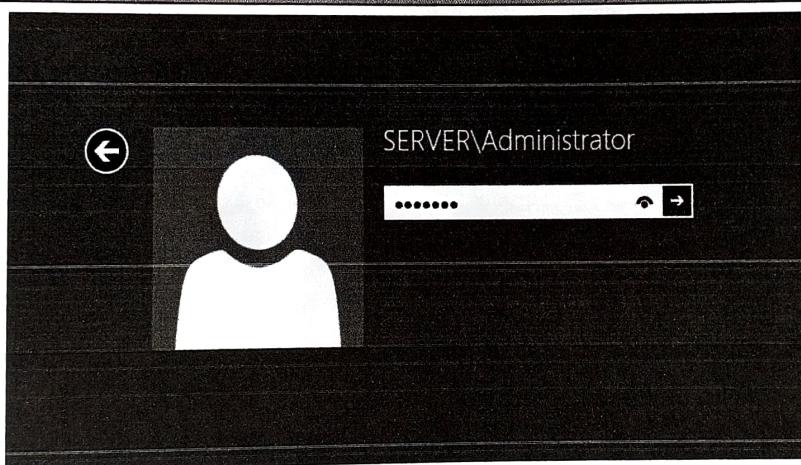
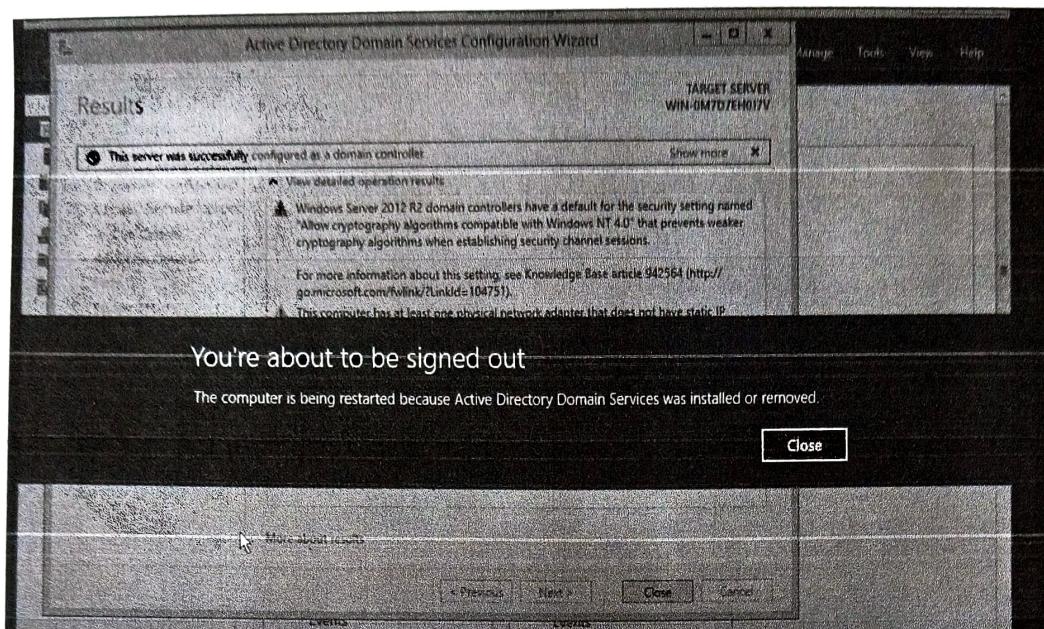


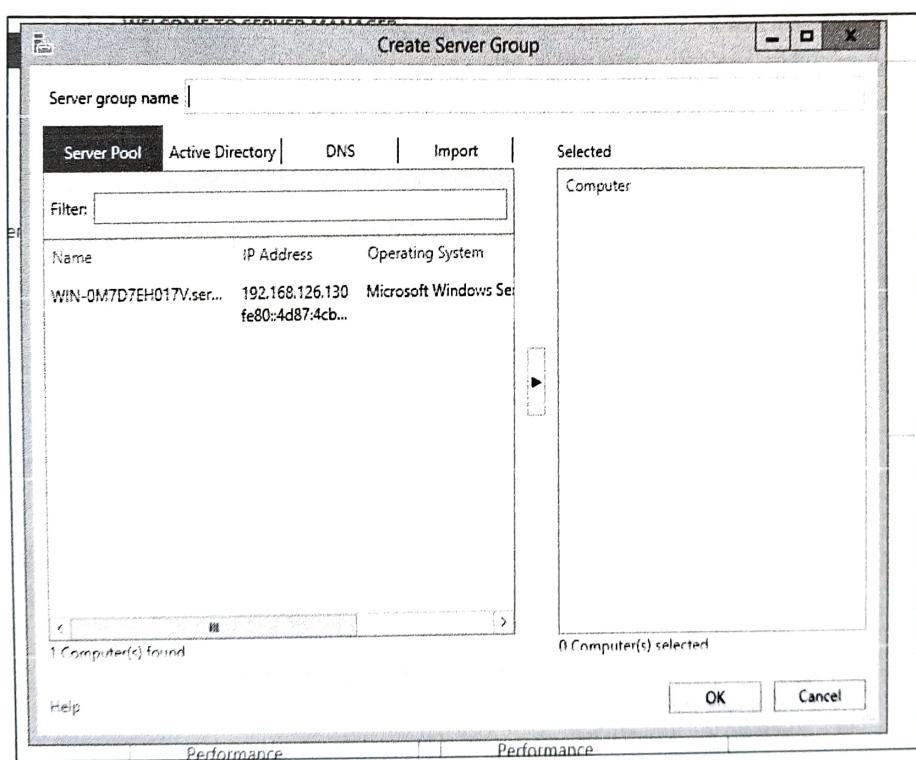
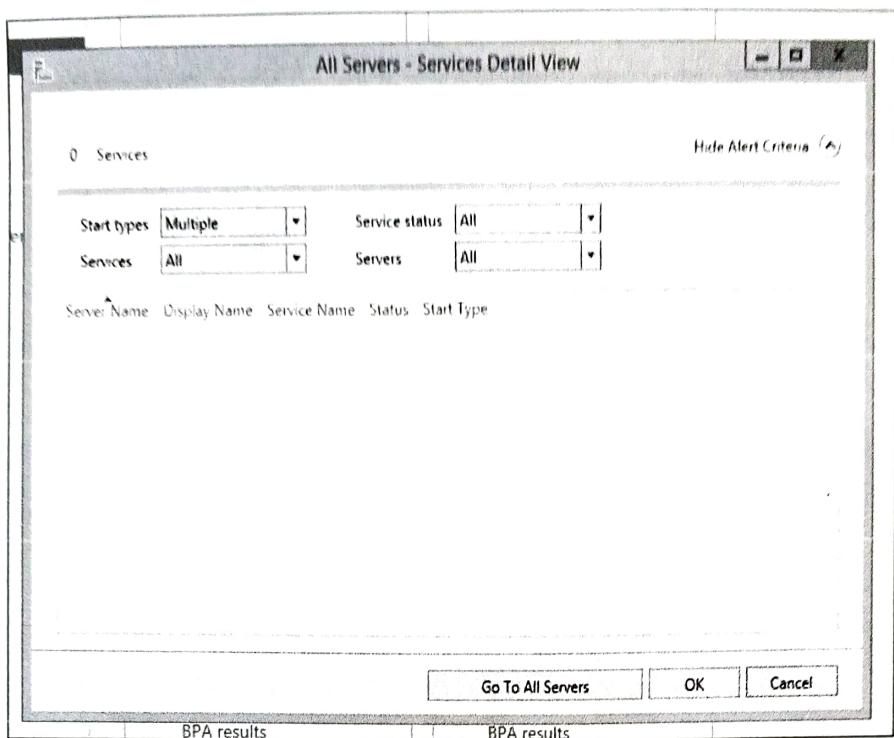
## Step 14:- Enter Password.











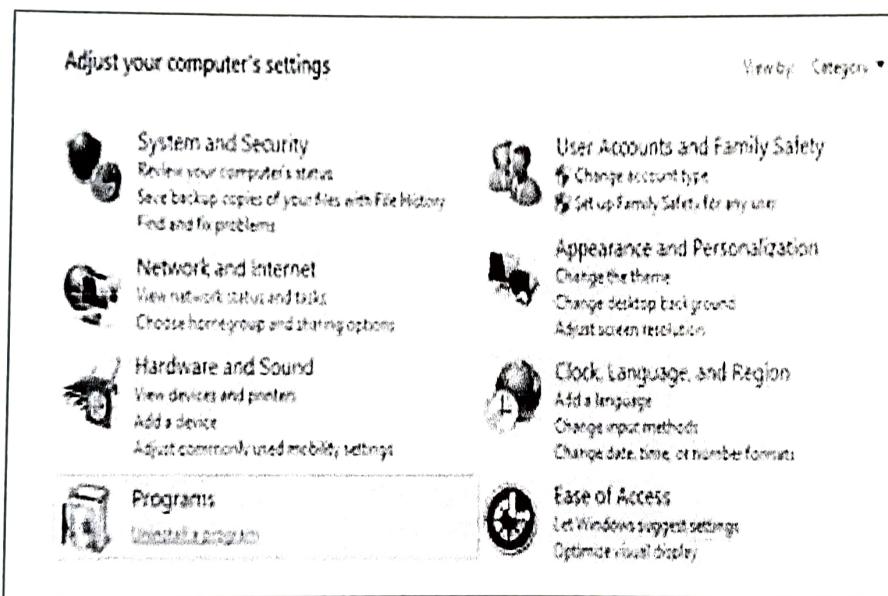


# Practical 8

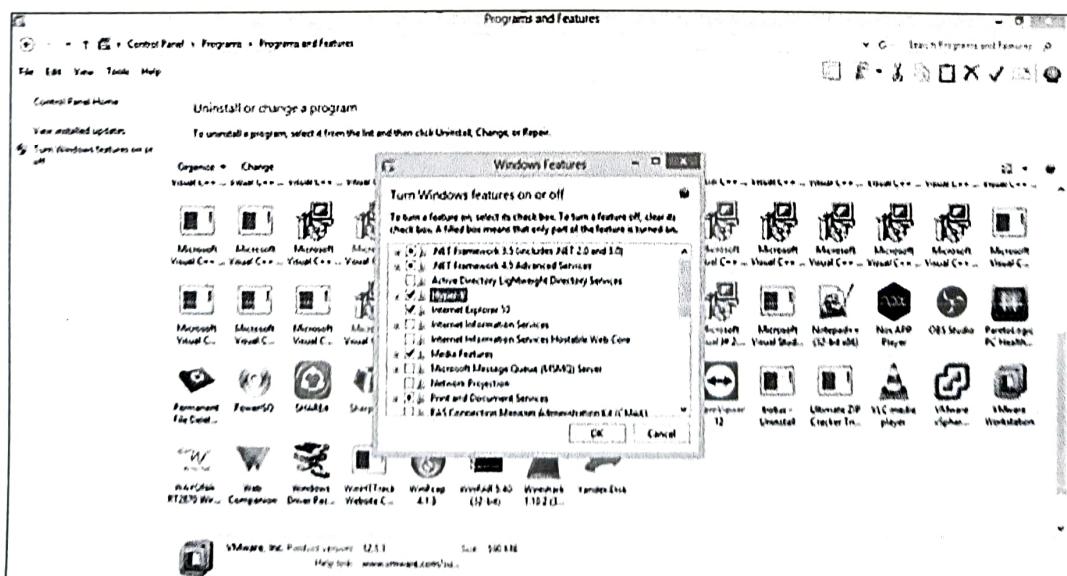
**Aim:** - Implement virtualization using Hyper-V.

**Steps:-**

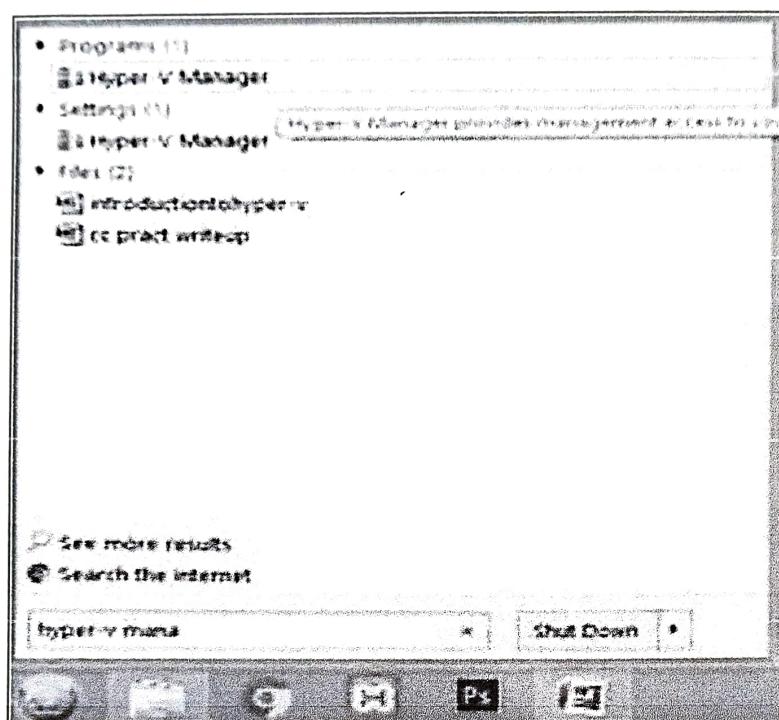
**Step 1:-** Because the VMware Workstation installer does not allow running on a Hyper-V virtual machine, we must first uninstall any VMware software that may already be installed on the PC. Once VMware has been removed, we can move on to the next step, which is to go to the control panel and select Uninstall a Program.



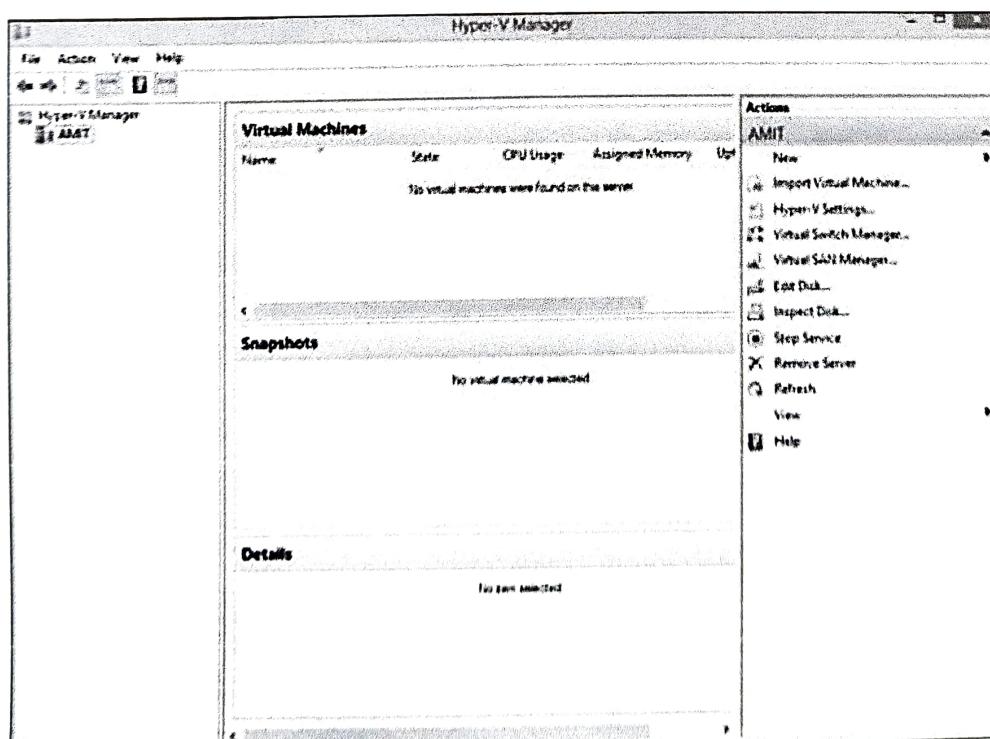
**Step 2:-** Turn Windows features on or off by clicking on it. The Hyper-V option in Windows features check is now available.



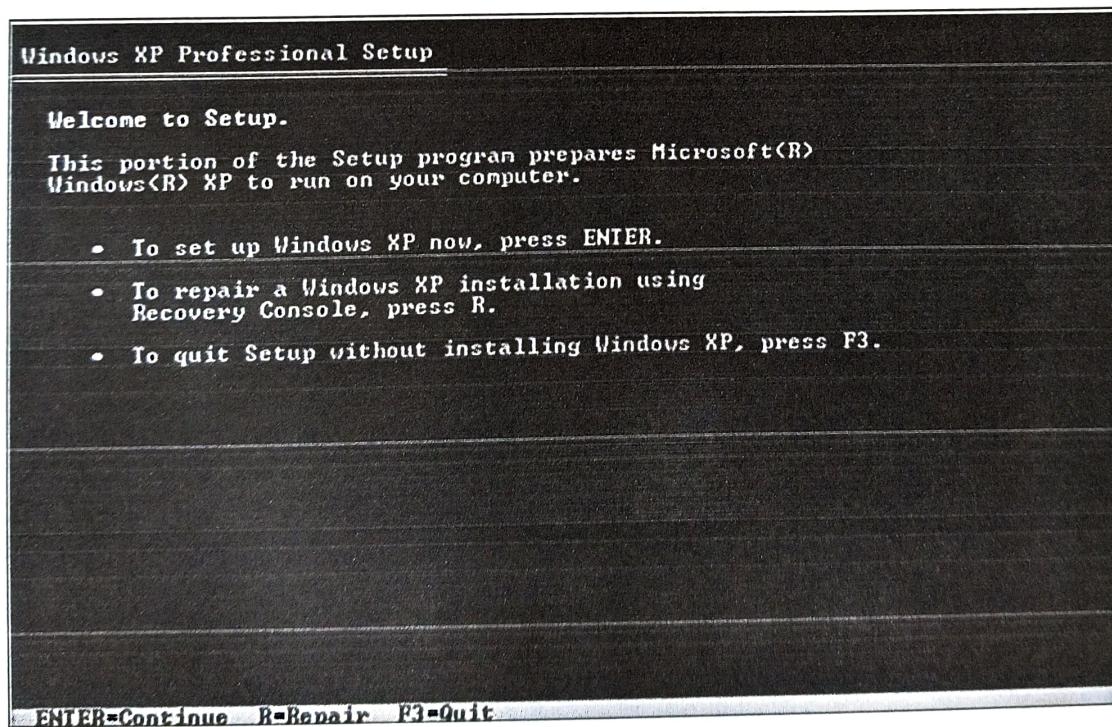
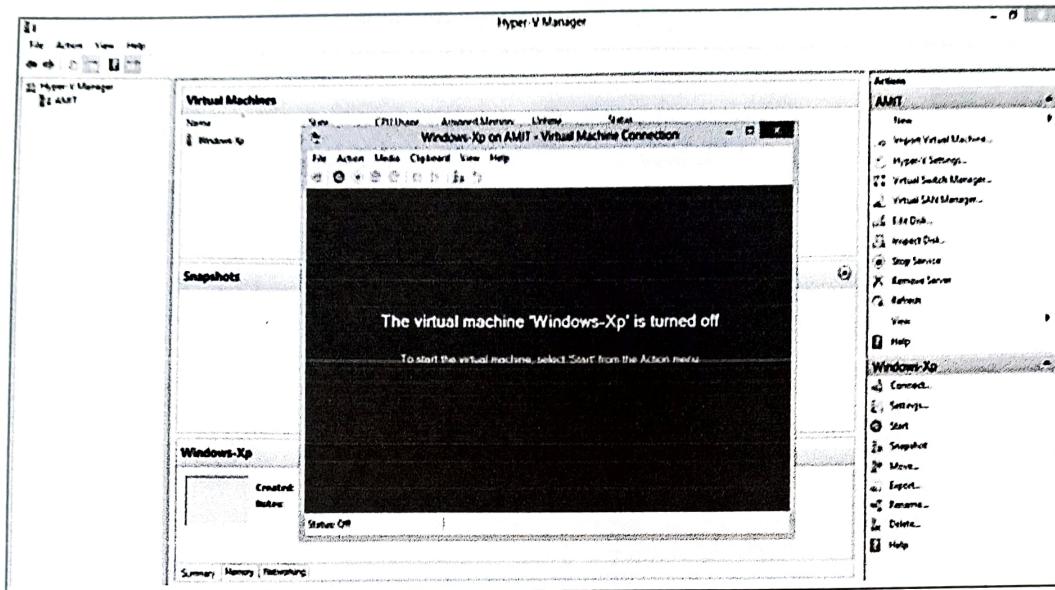
**Step 3:-** After Restart Search for hyper-v manager in search box and click on that.



**Step 4:-** We need to set up a virtual switch before we can create a virtual machine. Select an option for virtual switch manager.



**Step 5:-** After choosing External as the connection type, click "Create Virtual Switch." Install the Windows XP.iso file and create a new virtual switch and virtual machine will start.

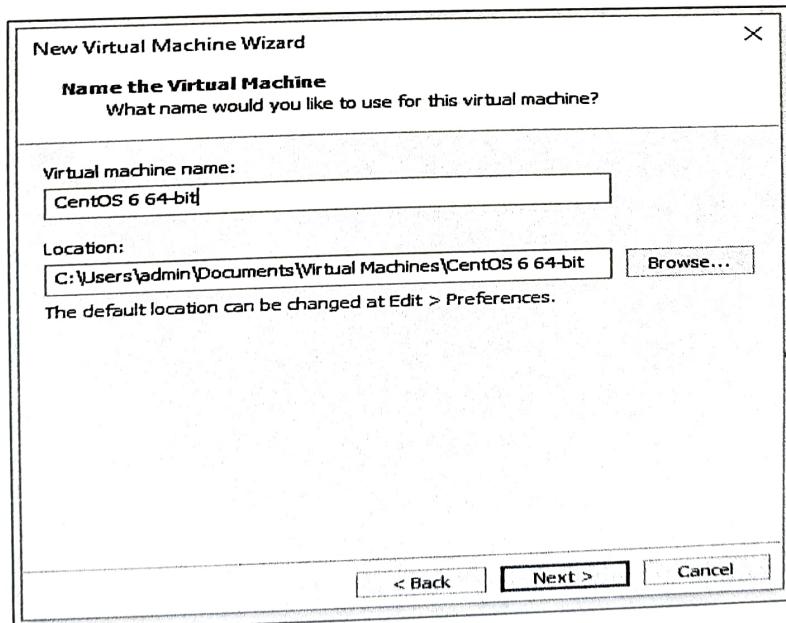
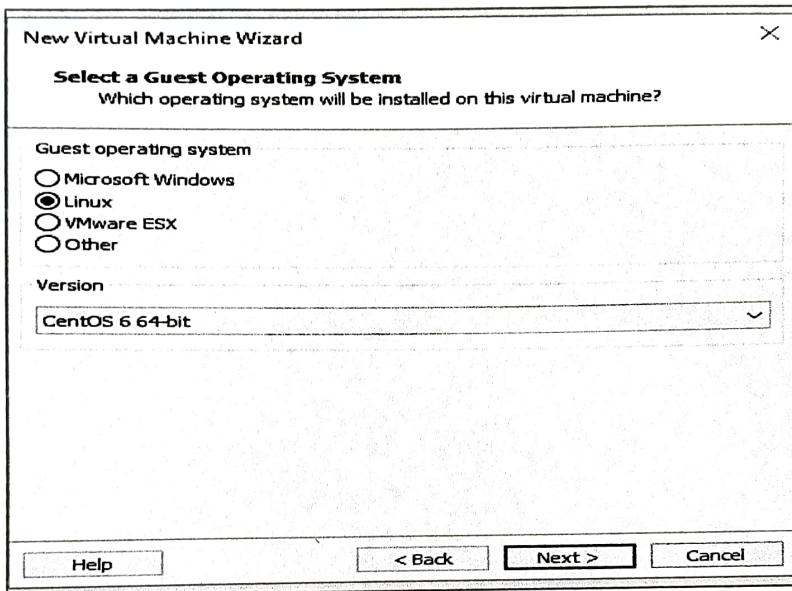


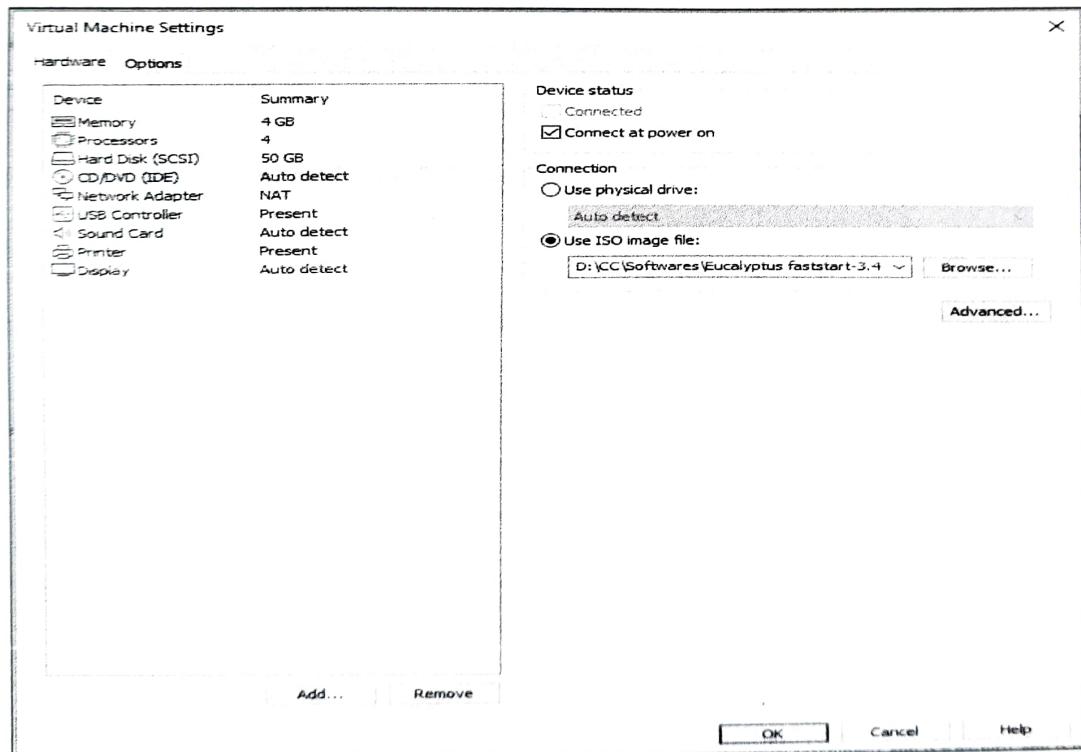
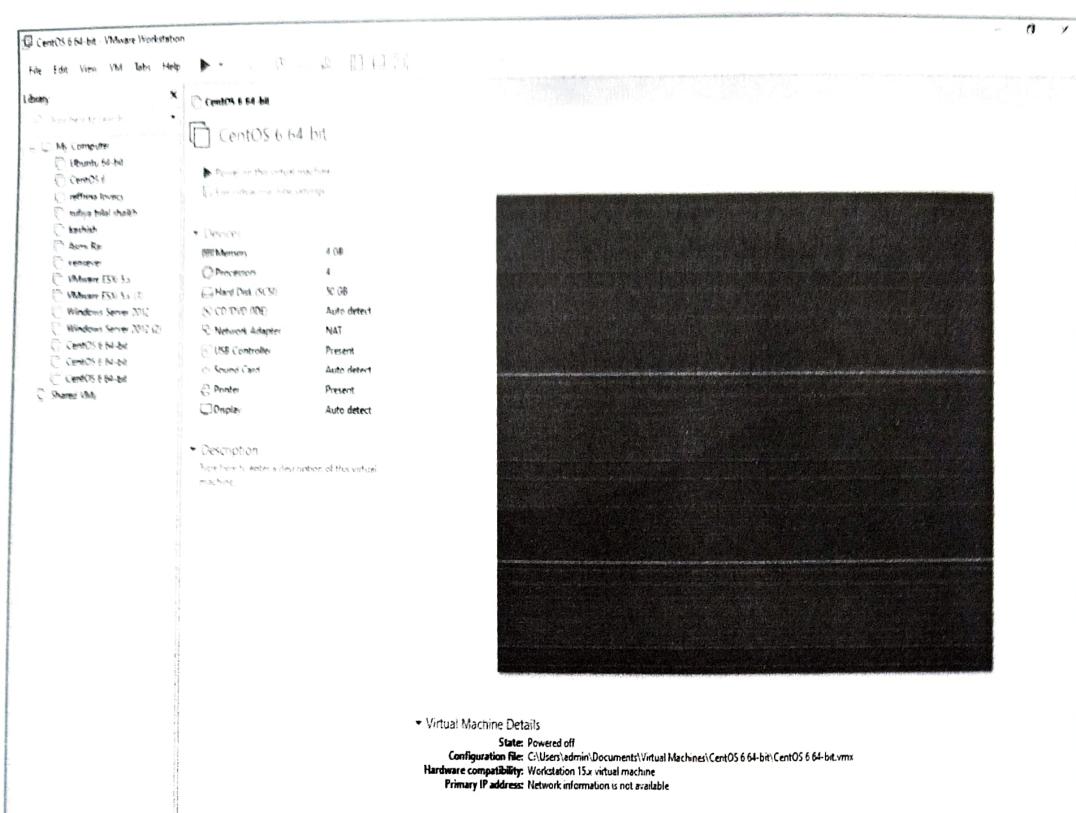
# Practical 9

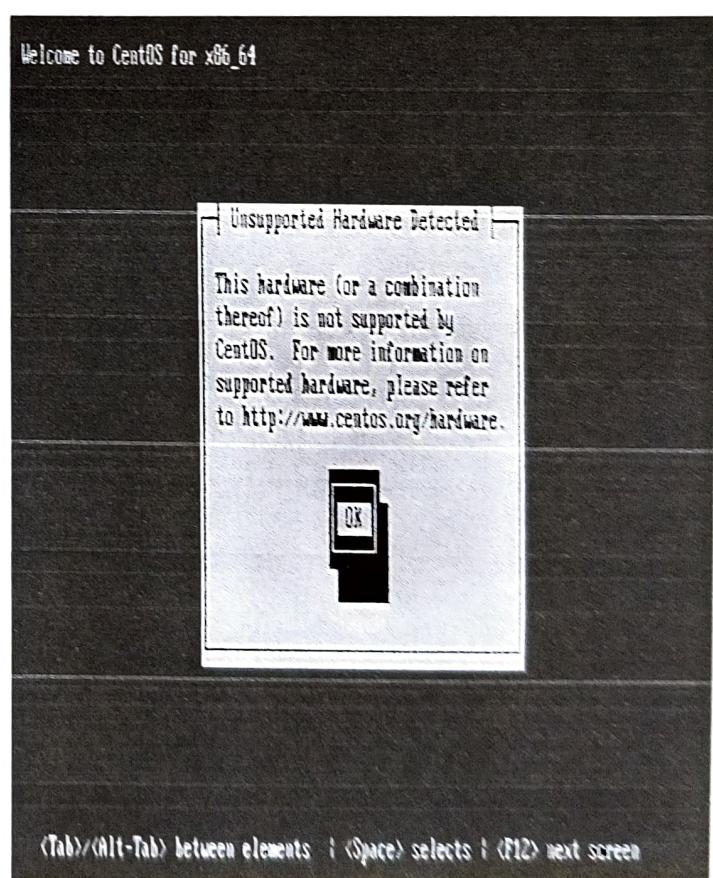
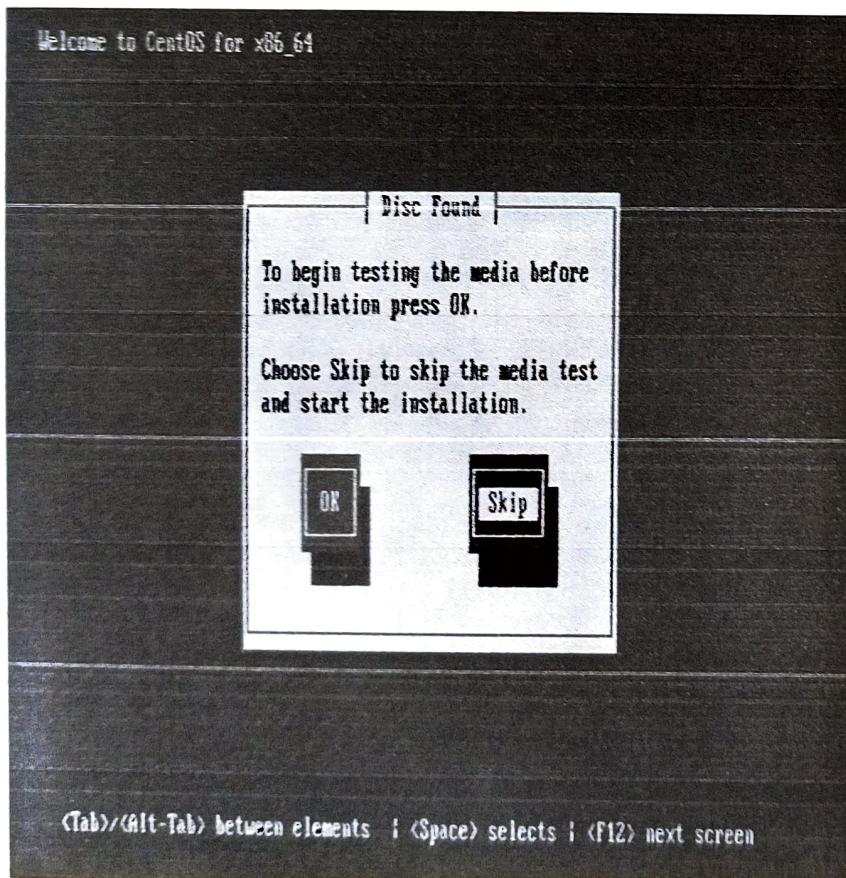
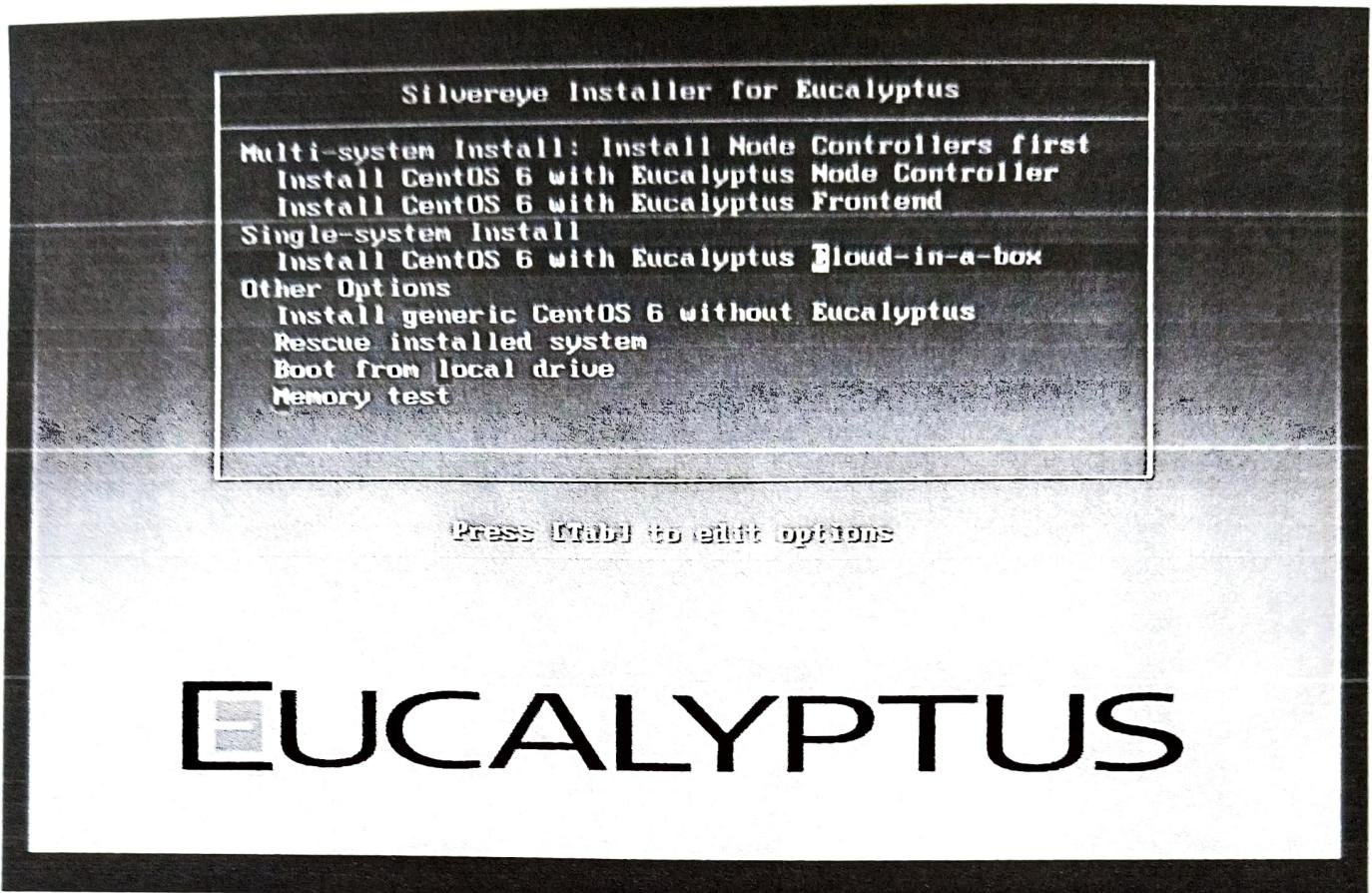
**Aim:** - Implement IaaS with Eucalyptus.

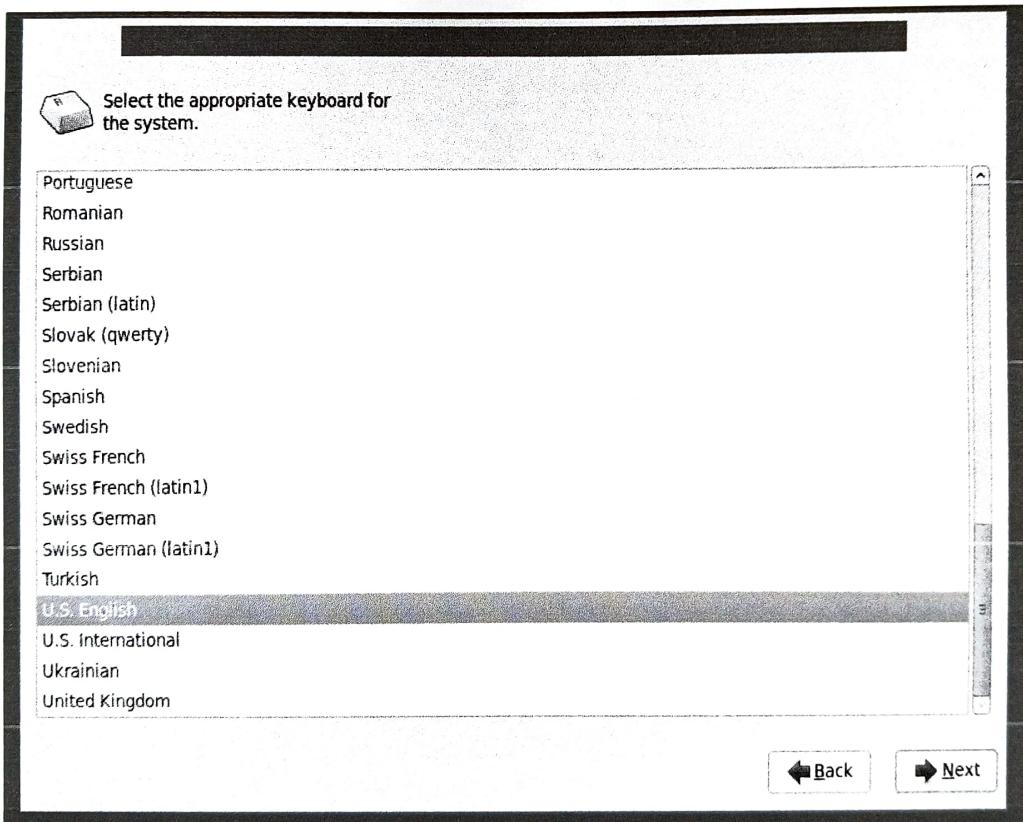
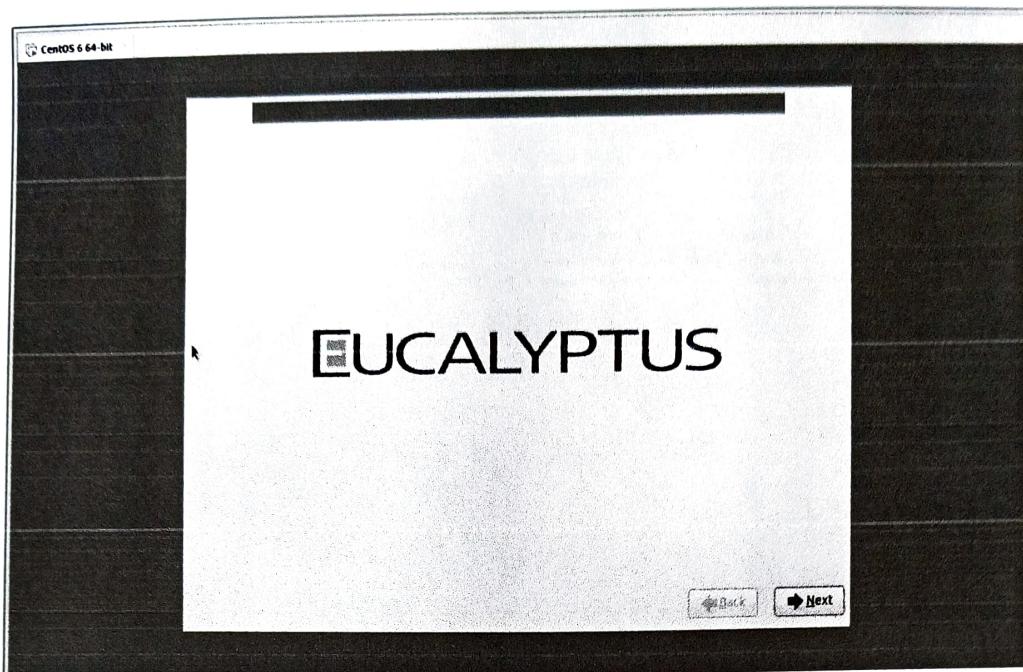
**Steps:** -

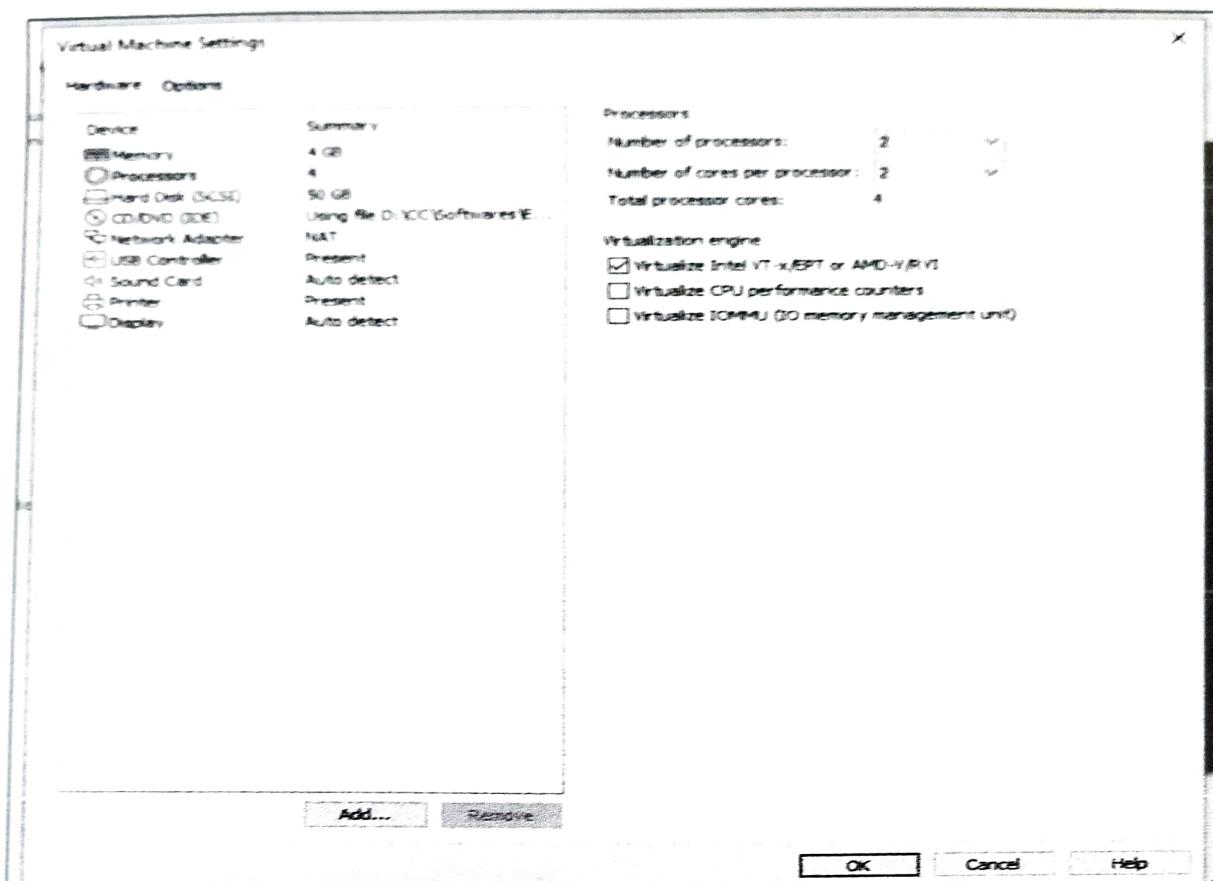
**Step 1:-** Click on new Virtual machine and then click on next button and Select the ISO image file.



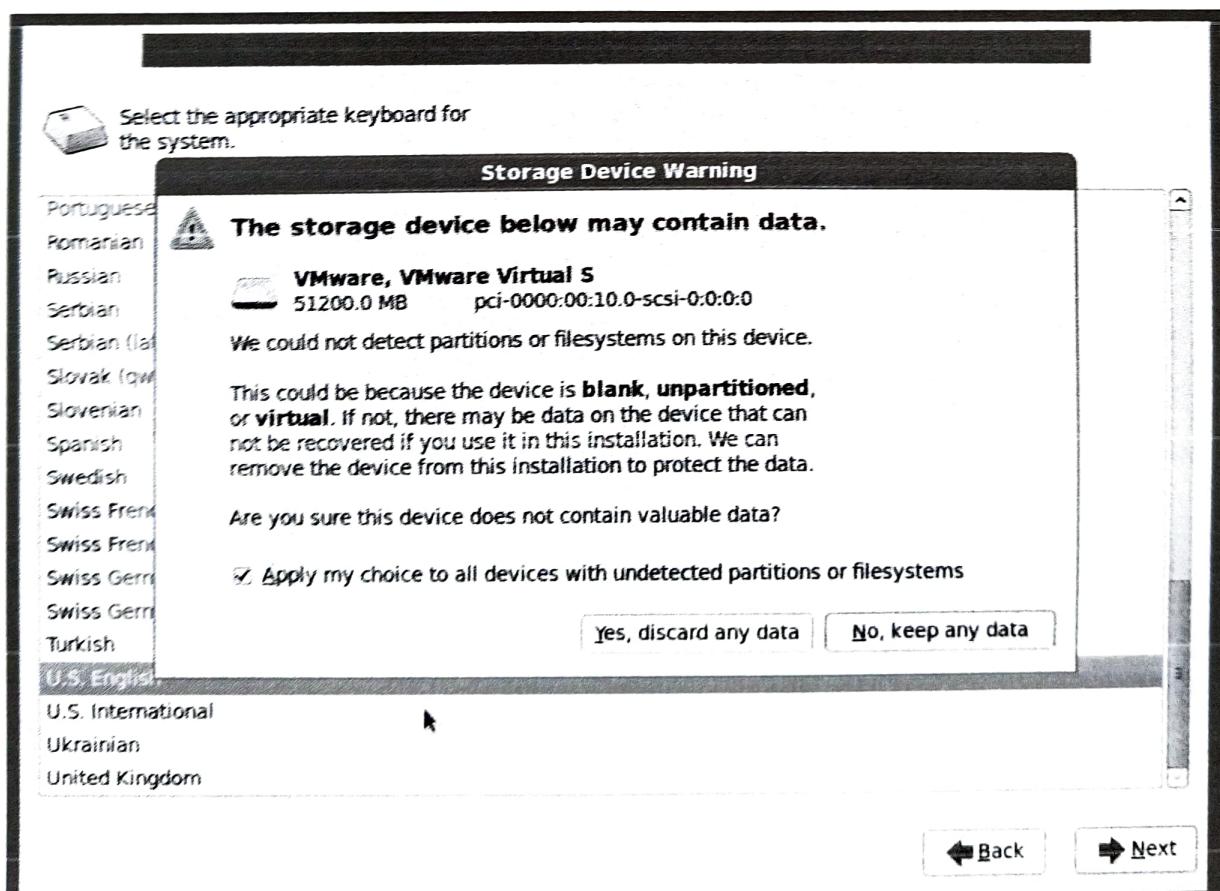




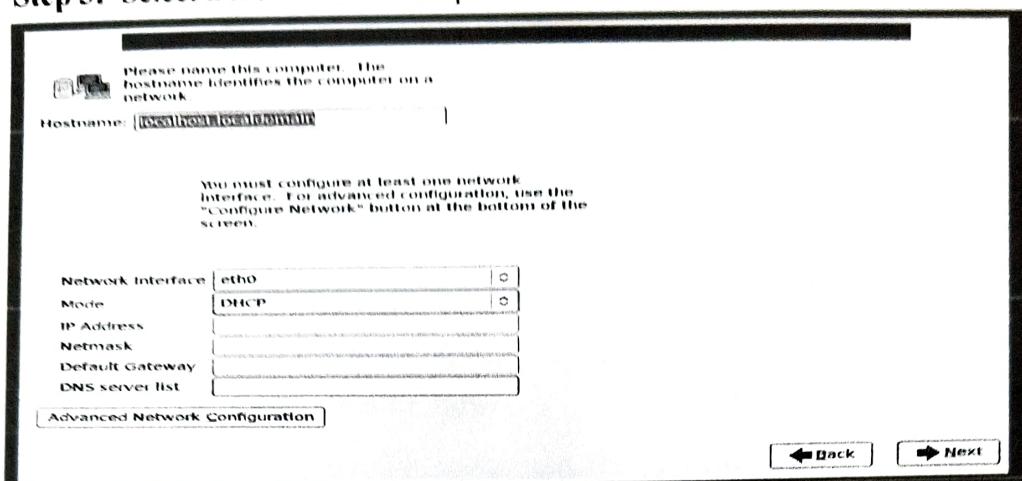




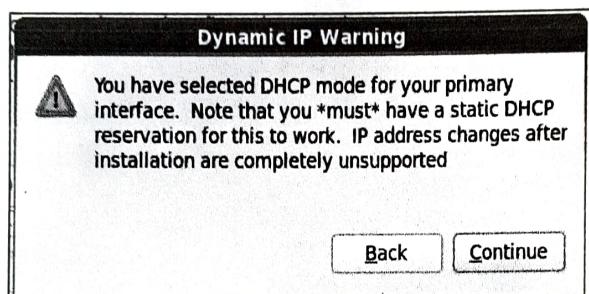
Step 2:- Click on yes discard any data



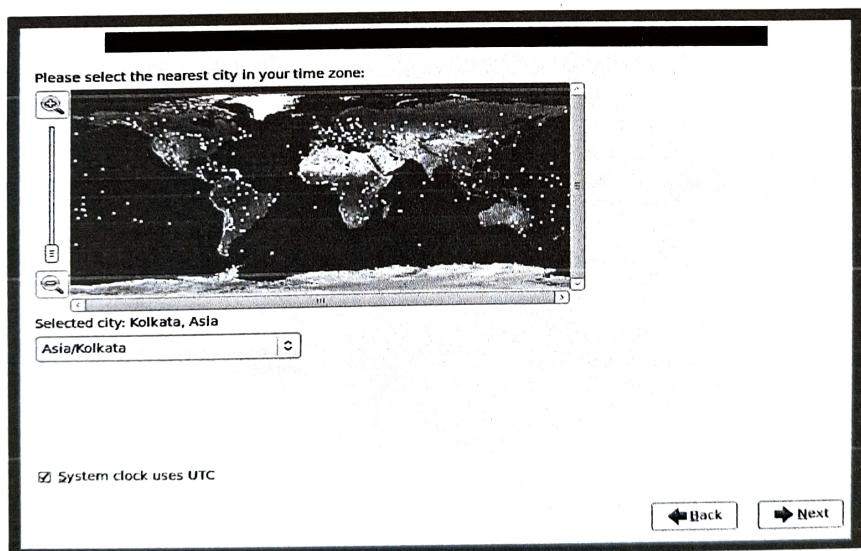
**Step 3:- Select DHCP from the dropdown list.**



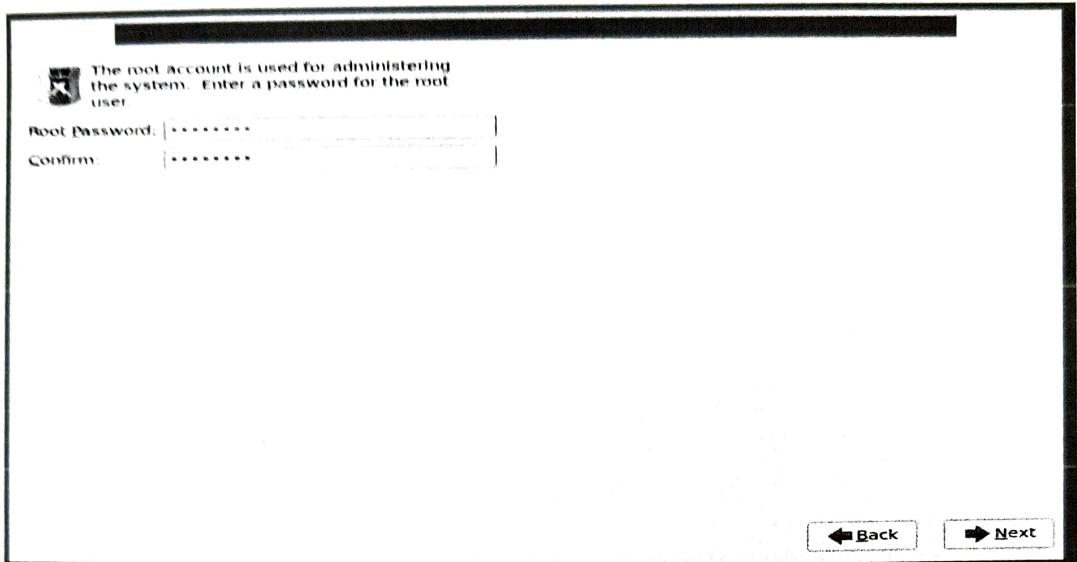
**Step 4:- Click on continue.**



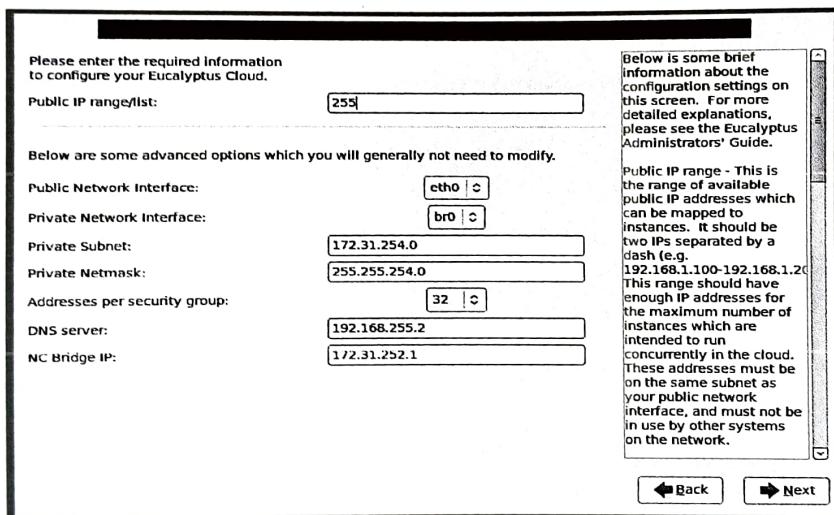
**Step 5:- Select Asia/Kolkata from the dropdown list.**



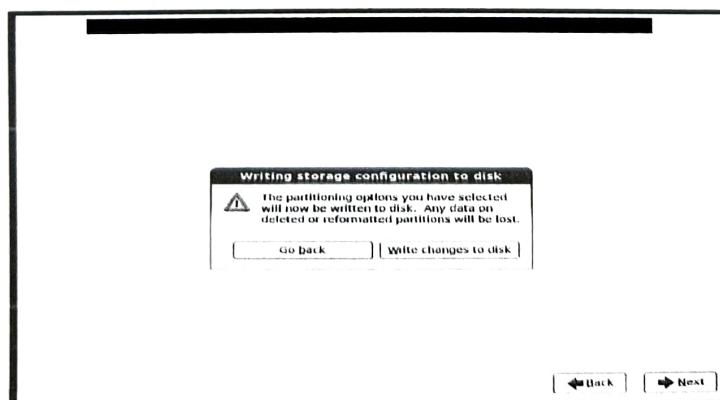
## Step 6:- Enter root password : tesc@123

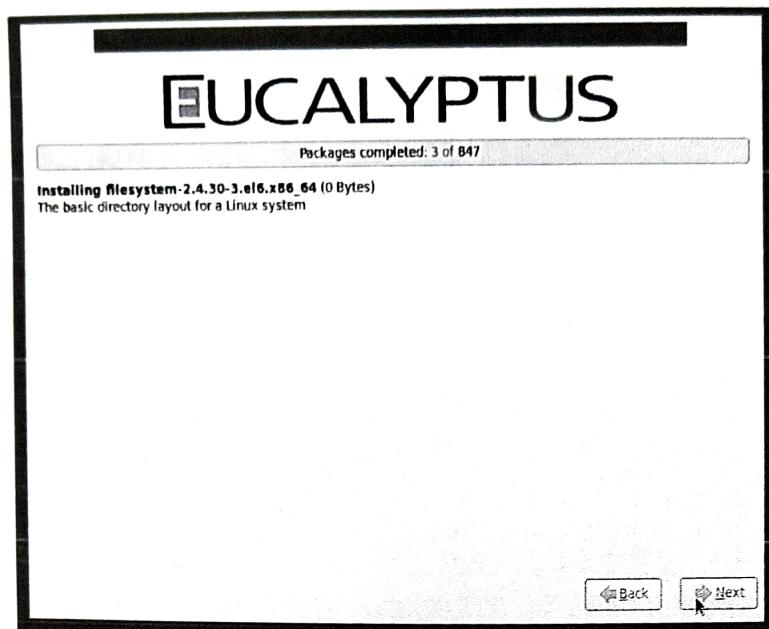


## Step 7:- Confirm it same and Write 255 in Public IP range/list.

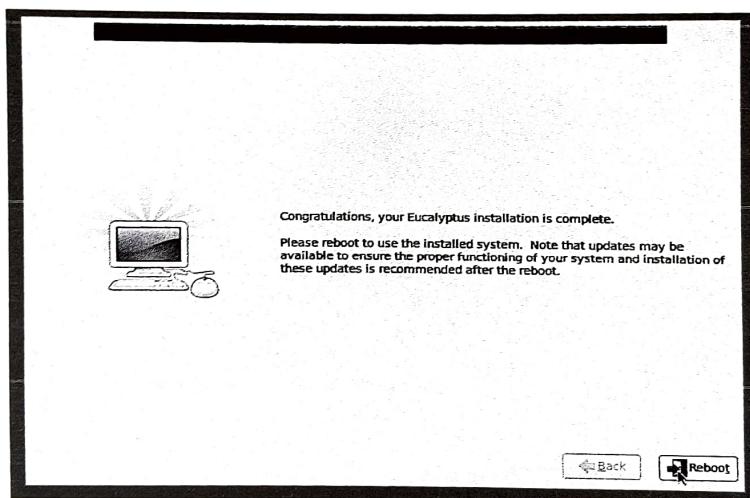


## Step 8:- Click on write changes to disk.





Step 9:- Click on Reboot.

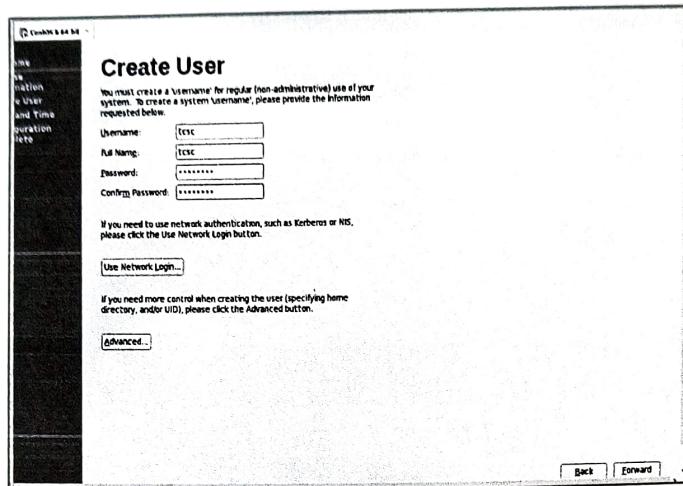


Step 10:- Click on forward.

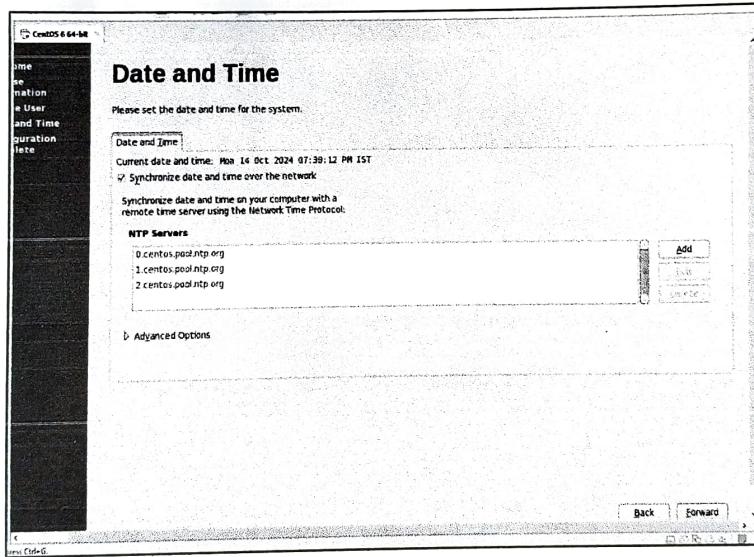


**Step 11:- Write username and full name : tsc**

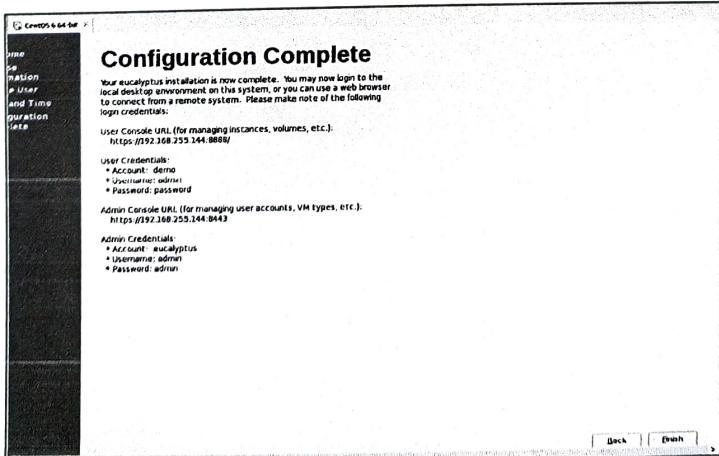
**Write password and confirm password : tsc@123**



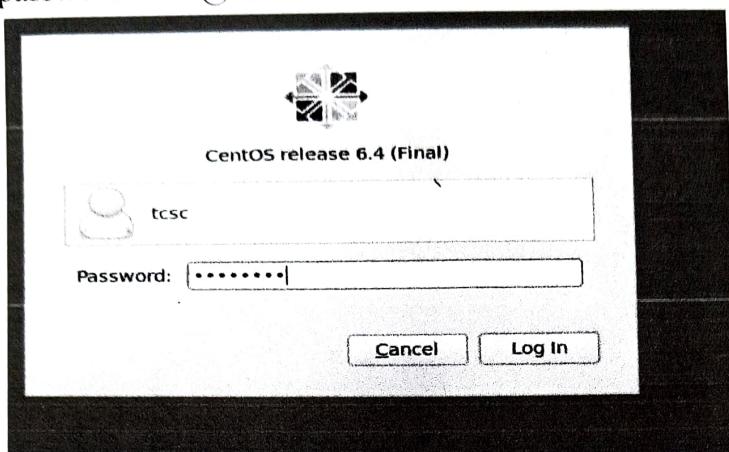
**Step 12:- Click on forward.**



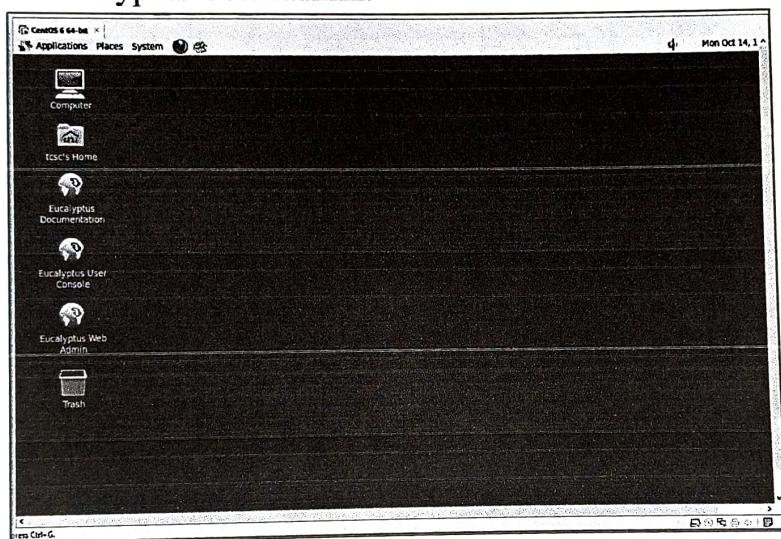
**Step 13:- Click on finish.**



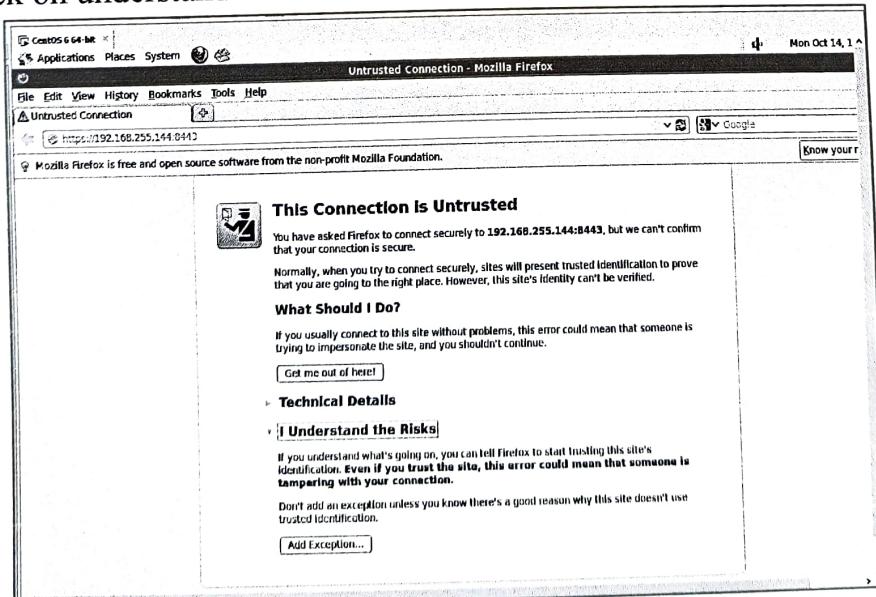
**Step 14:- Write password : tcsc@123**



**Step 15:- Click on Eucalyptus User Admin.**



**Step 16:- Click on understand the risks and Click on add exception.**



**Step 17:-** Click on confirm security exception.



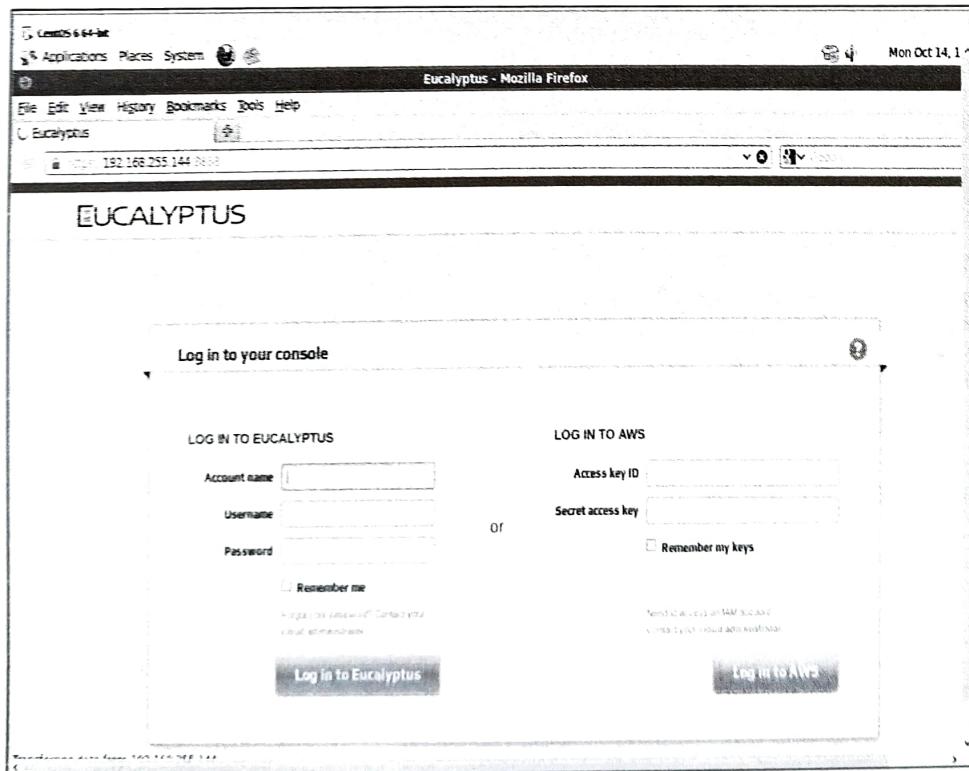
**Step 18:-** A new page will appear. Enter the admin name and password.

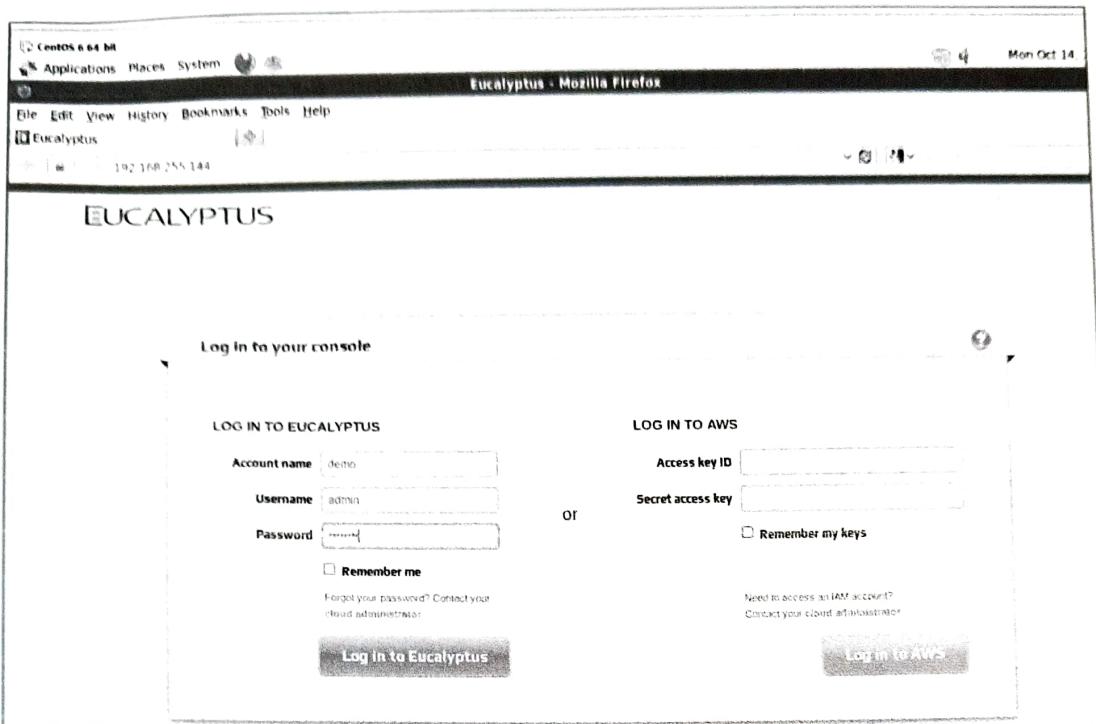
Next, select the Eucalyptus network console by clicking on it.

Select "understand the risks."

Select "Add Exception."

Select "Confirm Security Exception."





CentOS 6 64-bit

Eucalyptus - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Eucalyptus

192.168.255.144:8080/#dashboard

## EUCALYPTUS

Dashboard Images Instances Storage Network & Security

**Instances**

In all availability zones: 0

Running: 0 Stopped: 0 In Scaling Groups: 0

**Storage**

Volumes: 0 Snapshots: 0

**Network & Security**

Security Groups: 1 Key Pairs: 2 IP Addresses: 0

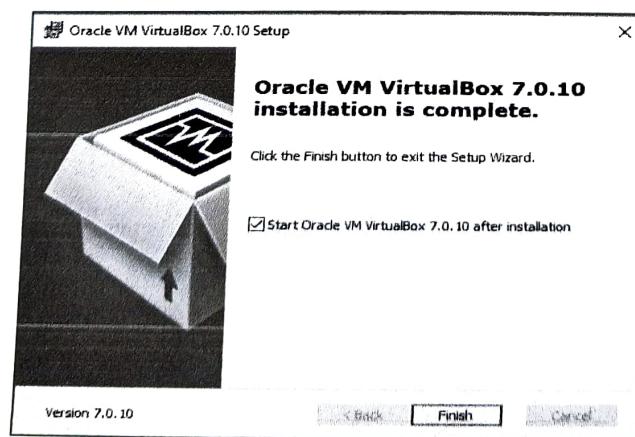
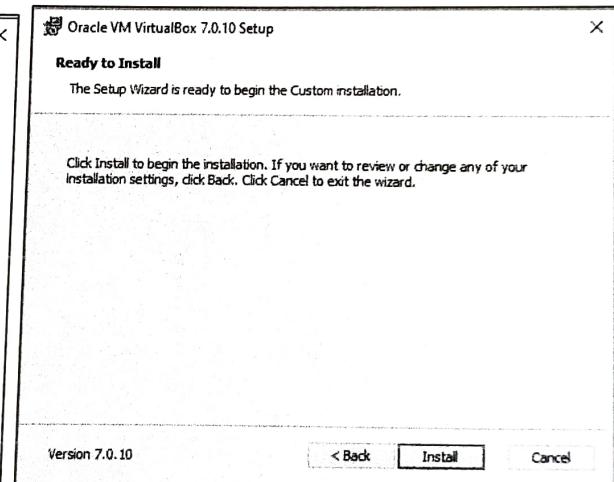
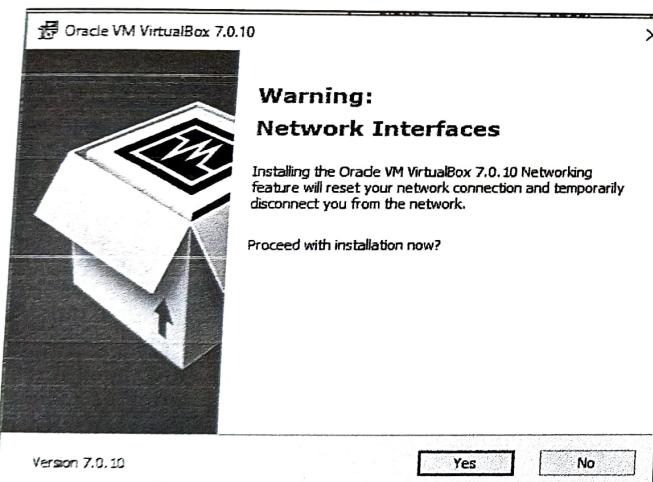
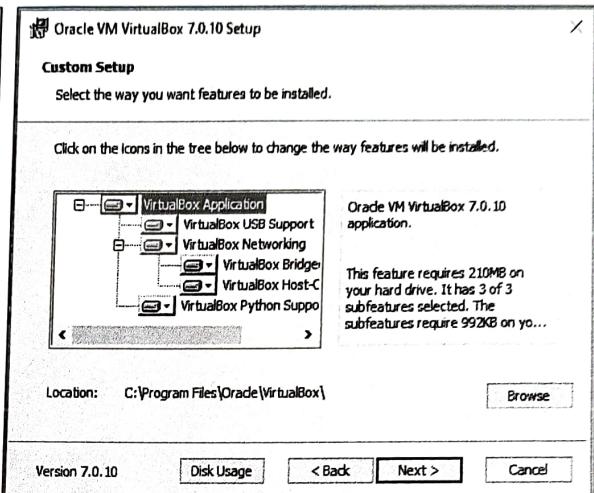
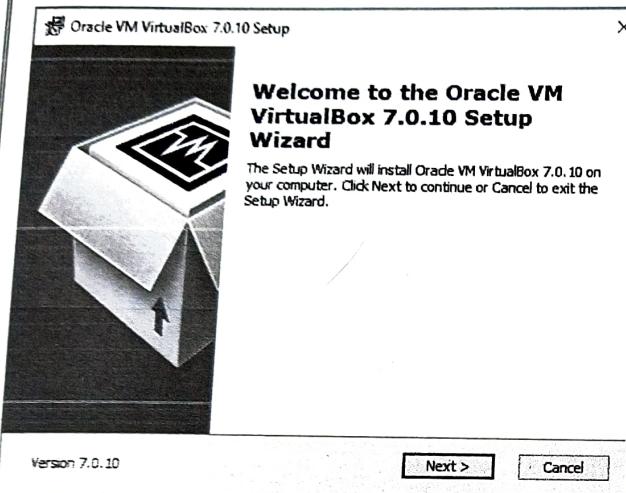
This screenshot shows the Eucalyptus dashboard. At the top, there are five navigation links: Dashboard, Images, Instances, Storage, and Network & Security. Below these, the 'Instances' section displays a summary of instance counts across availability zones, with zero instances listed. The 'Storage' section shows zero volumes and snapshots. The 'Network & Security' section shows one security group, two key pairs, and zero IP addresses.

# Practical 10

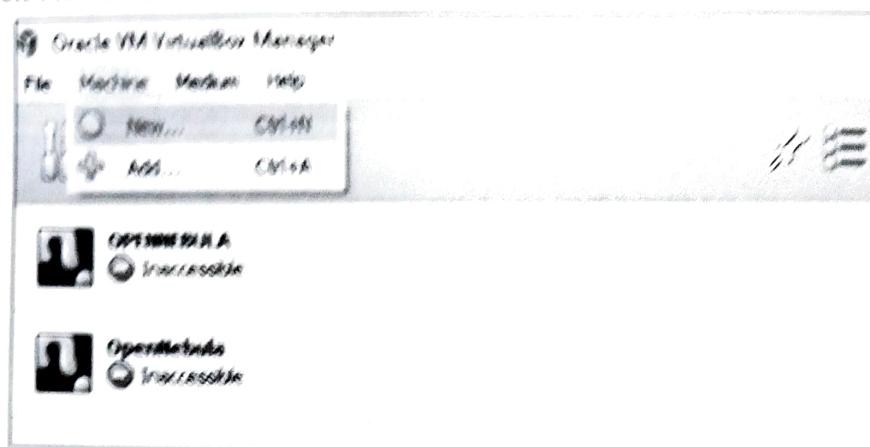
**Aim:** - Implement OpenNebula.

**Steps:** -

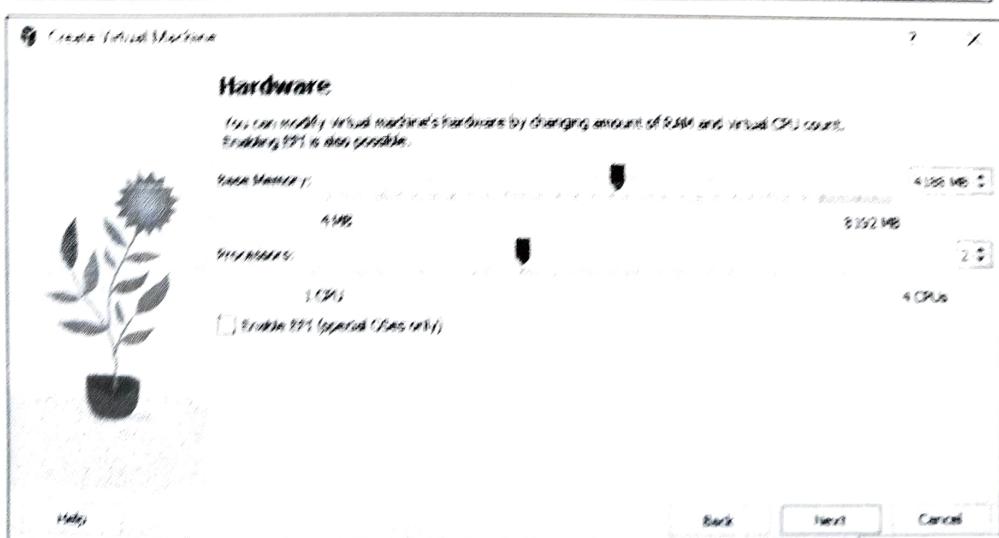
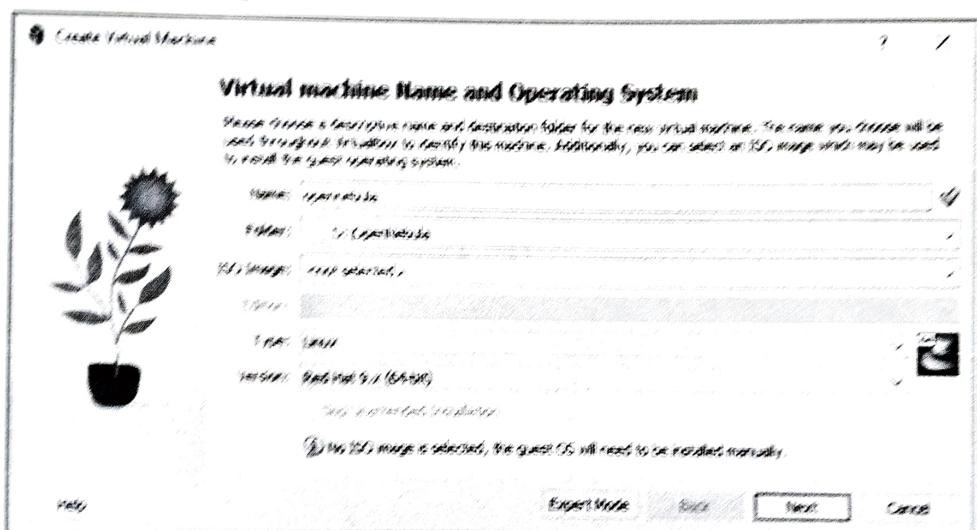
**Step 1:-** Install Oracle VM VirtualBox 7.0.10, Click on next >Click on Yes >Click on Install> Click on Finish.



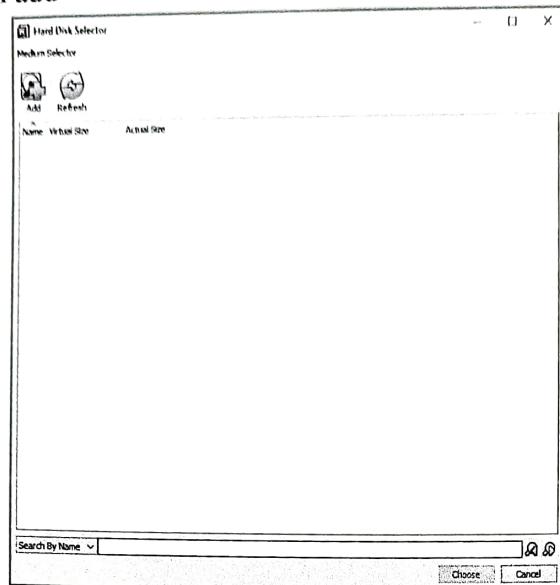
**Step 2:- Click on Machine and then New.**



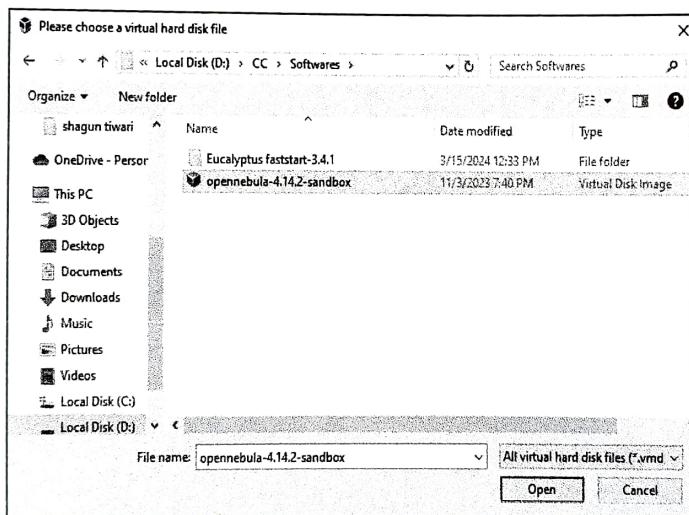
**Step 3:- Make a folder and give the destination.**



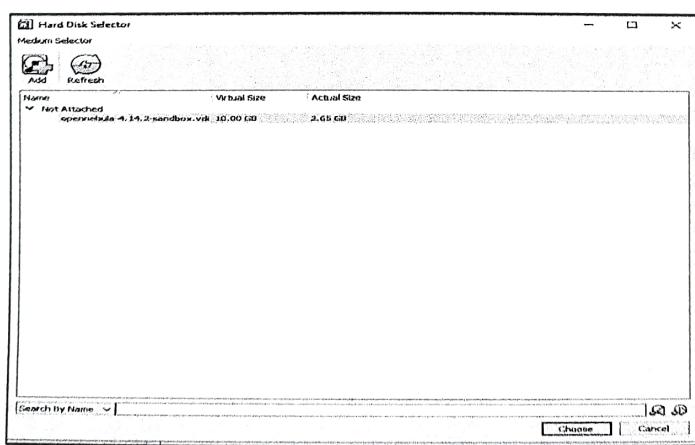
**Step 4:- Click on add**



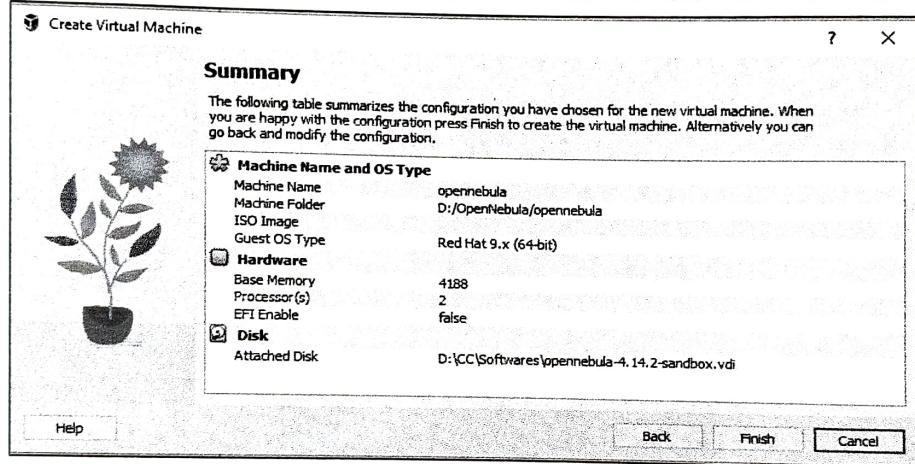
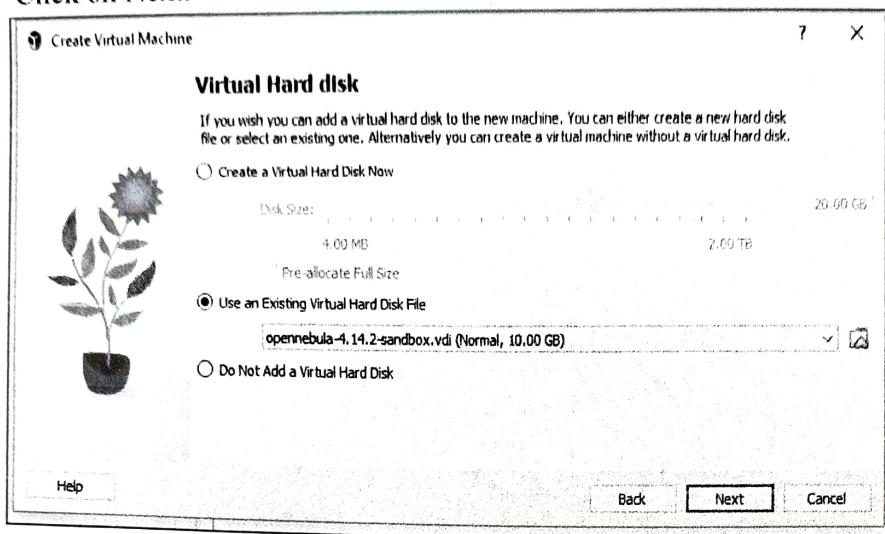
**Step 5:- Select the opennebula-4.14.2-sandbox.**



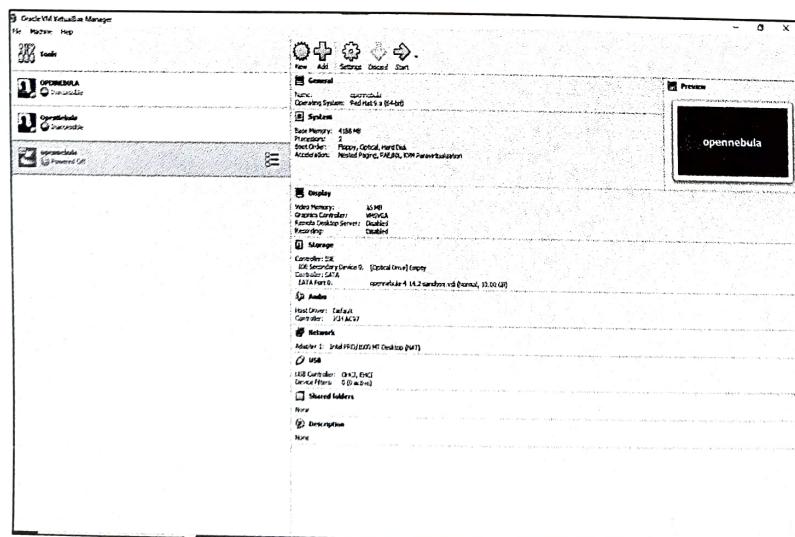
**Step 6:- Click on Choose.**

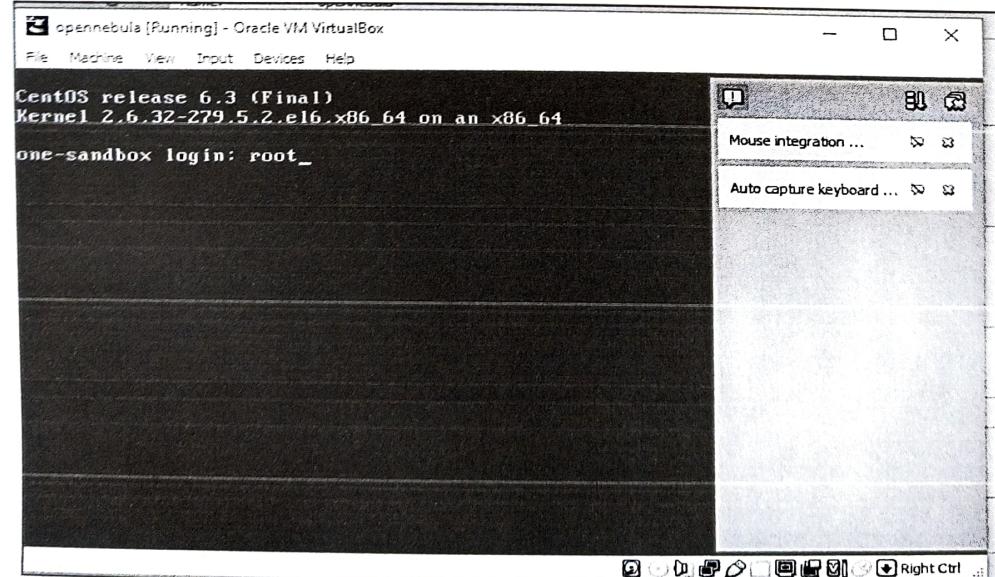
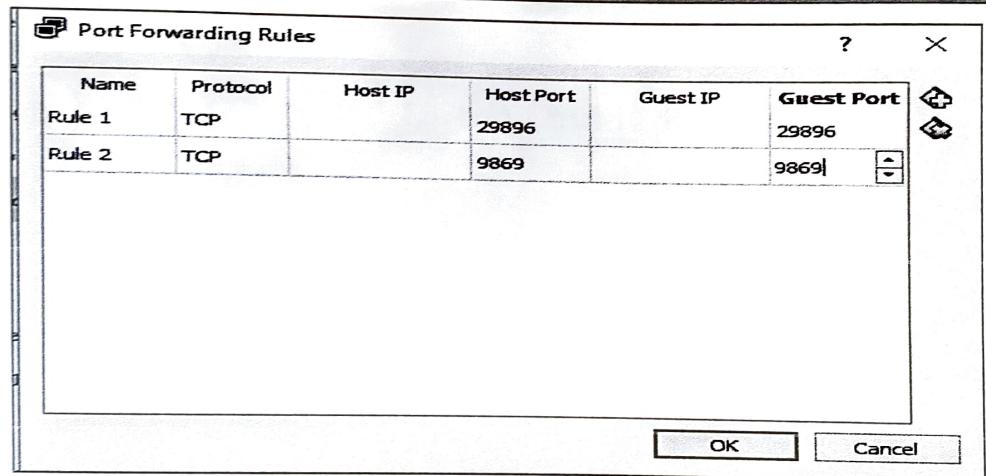
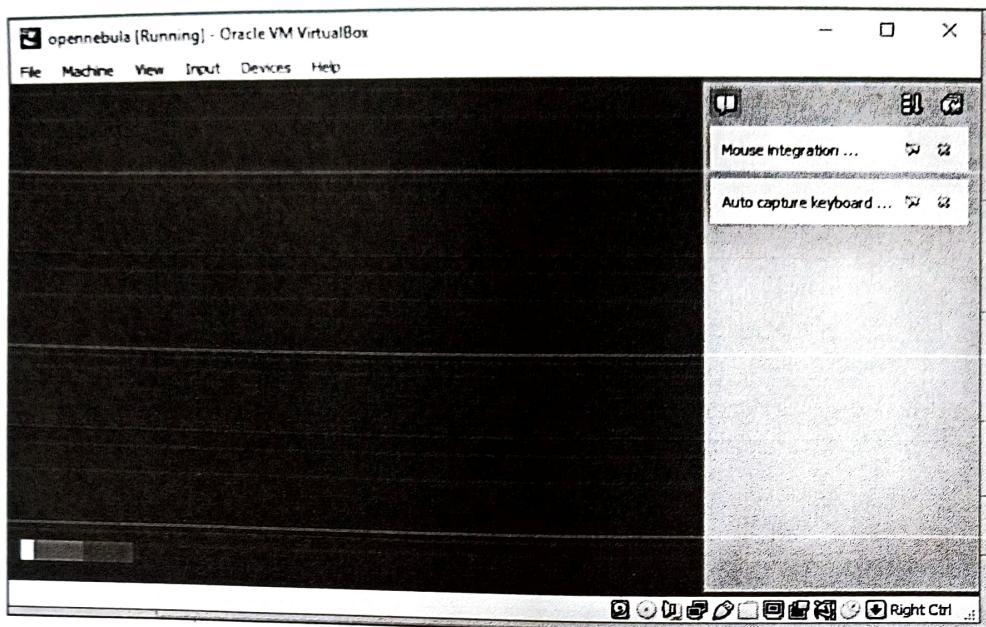


## Step 7:- Click on Next.



## Step 7:- Click on Next to Power On.



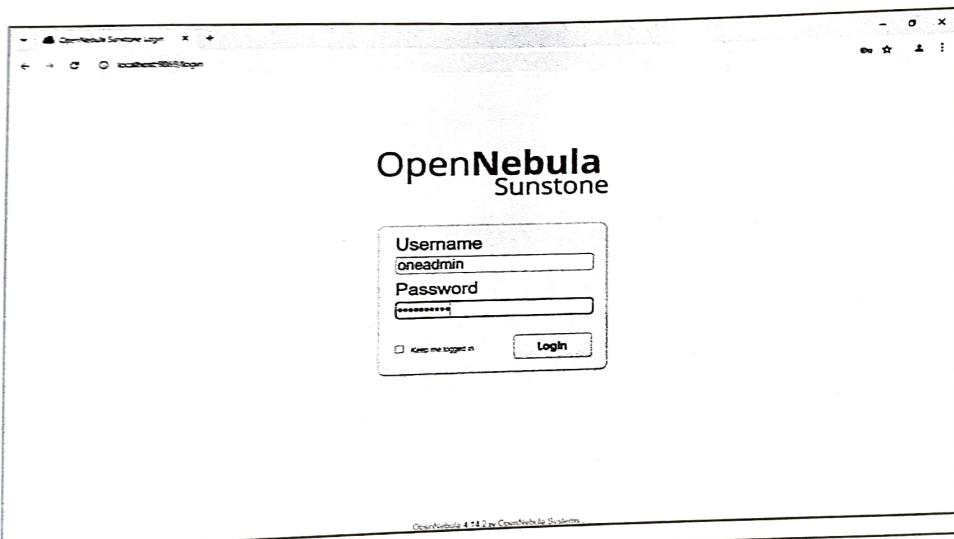
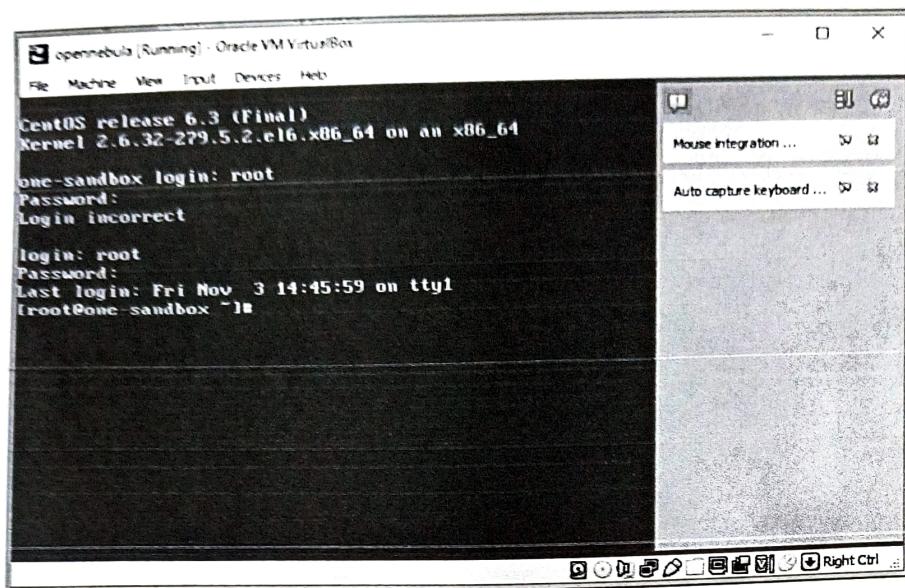


opennebula [Running] - Oracle VM VirtualBox  
File Machine View Input Devices Help

CentOS release 6.3 (Final)  
Kernel 2.6.32-279.5.2.el6.x86\_64 on an x86\_64

one-sandbox login: root  
Password:  
Login incorrect

login: root  
Password:  
Last login: Fri Nov 3 14:45:59 on ttym1  
[root@one-sandbox ~]#



OpenNebula Sunstone Dashboard

OpenNebula 4.11.2 by OpenNebula Sunstone

Dashboard

Overview

Compute Nodes

Virtual Machines

Storage Pools

Networks

Images

Logs

Metrics

Jobs

Events

Logs

Metrics

Jobs

Events

