**Tribhuvan University**

**Faculty of Humanities and Social Sciences**

**A Lab REPORT**
**Of**
**Software Project Management**

**Submitted to:**

**Department of Computer Application**

**Damak Multiple Campus**

*In partial fulfillment of the requirements for the Bachelors in Computer Application*

Submitted by

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(TU Symbol No: 6-2-202-885-2019)

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Under the Supervision of

Pradip Ghimire

# Acknowledgement

The lab work report has been prepared in the partial fulfillment of course "**Cloud Computing"** of Seven semester of Bachelor of art in computer application while preparing this report, I got a lot of co-operation and suggestion from different persons.

I am thankful to **Mr.Pradip Ghimire** (subject teacher) for properly guiding me. I also want to thank my friends who helps me a lot in the lab work.
I would like to express my hearty thanks to my family member who provided inspiration and motivation regularly for my success.

# Certificate

This is to certify that the lab report entitled Software Project Management is an academic work done by Sandip Chapagain submitted in the partial fulfillment of the requirements for the degree of Bachelor of Computer Application at Faculty of Humanities and Social Science ,Tribhuvan University under my guidance and supervision. To the best of my knowledge, the work performed by him in the lab report is his own creation.

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Signature

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## Lab 1: Install vmware and create two virtual machines(window and linux) on your system.

**Objective:** To install vmware and create virtual machine

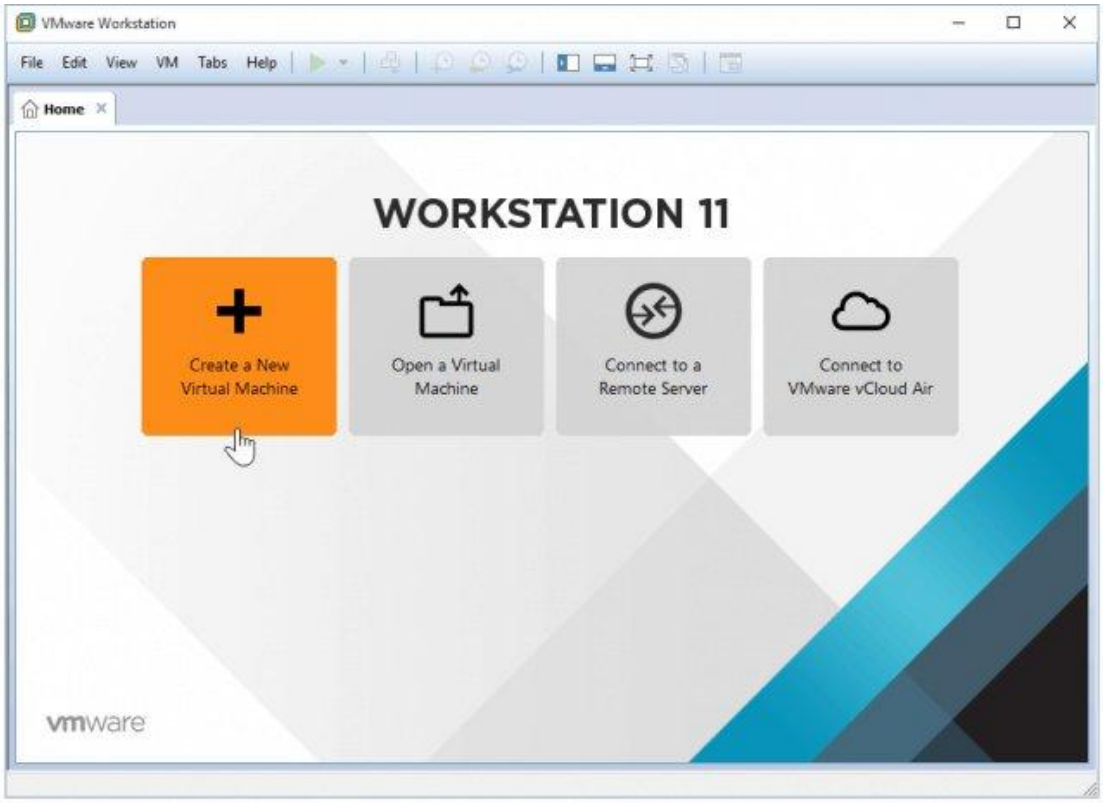
**Requirements:** 8GB Ram, 100 HDD, i5 Processor, vmware and ISO file

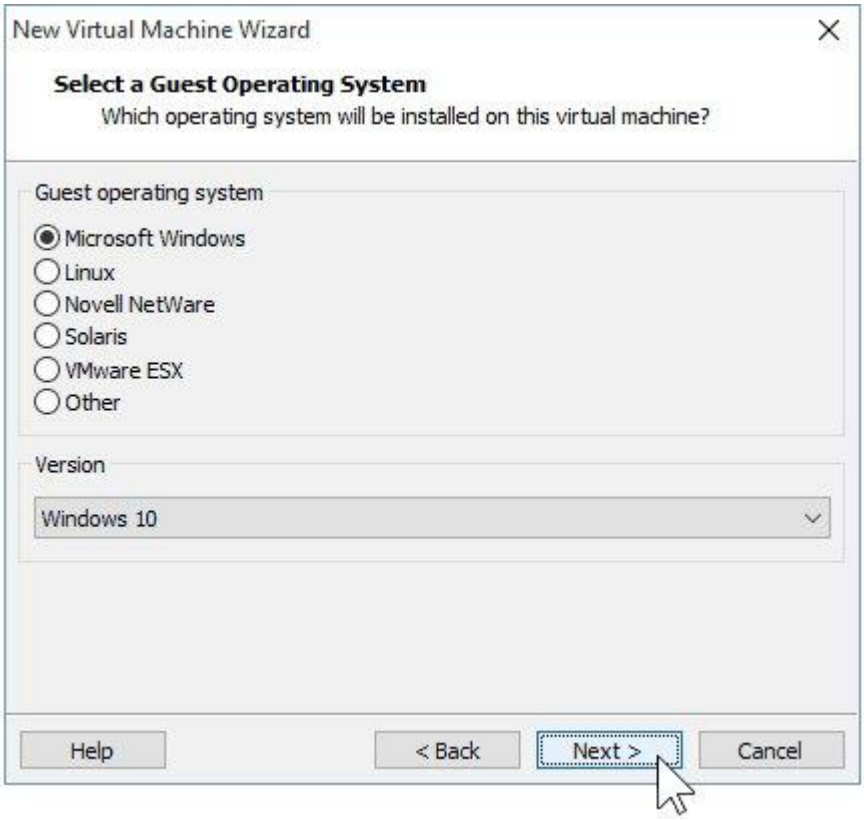
**Procedure:**

Step 1: Download vmware workstation from the official website and install it on your machine

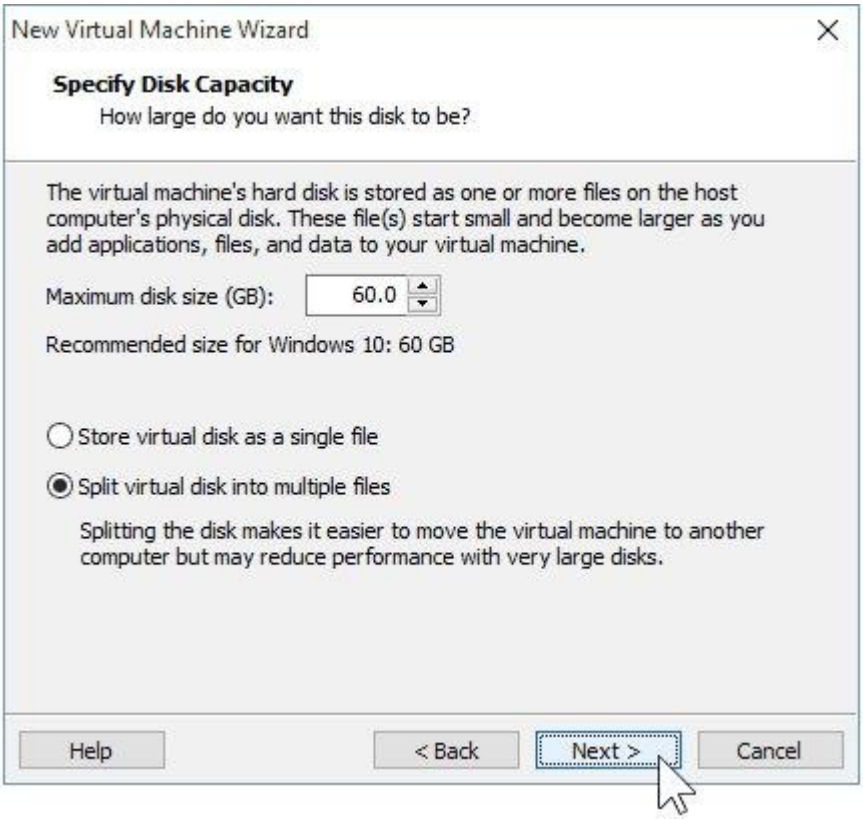
Step 2: Download windows 10 iso and ubuntu iso

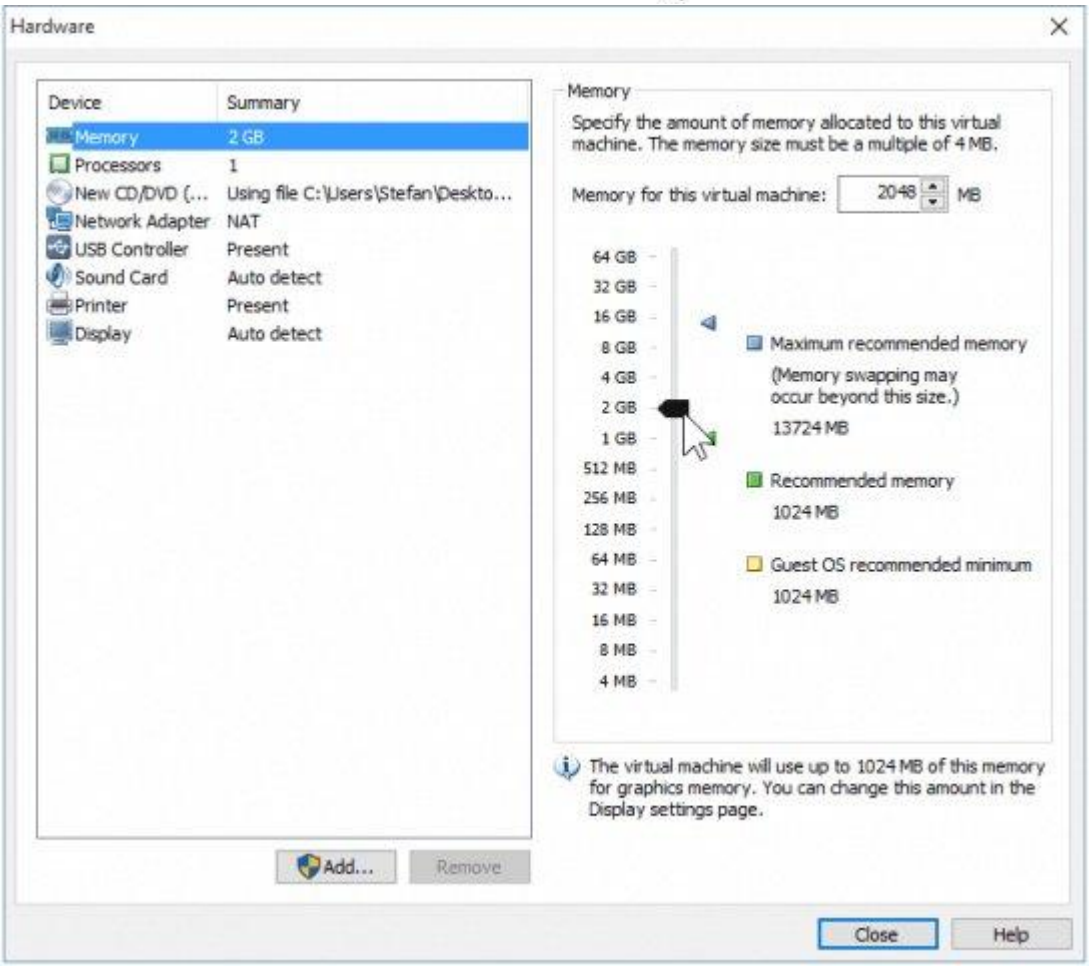
Step 3: Launch the vmware and follow these steps

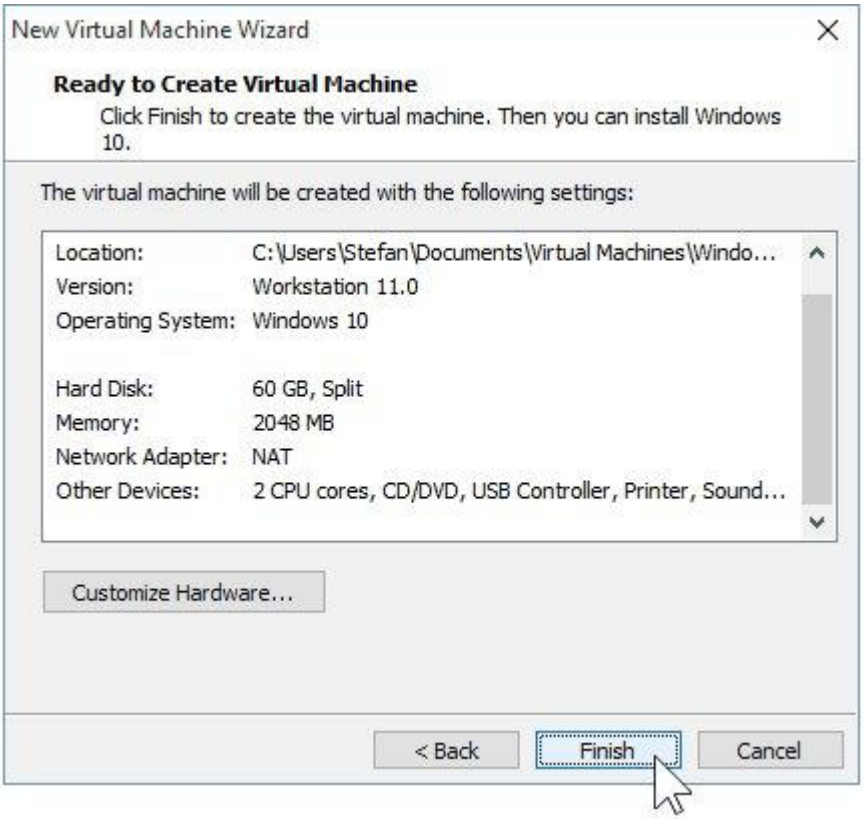


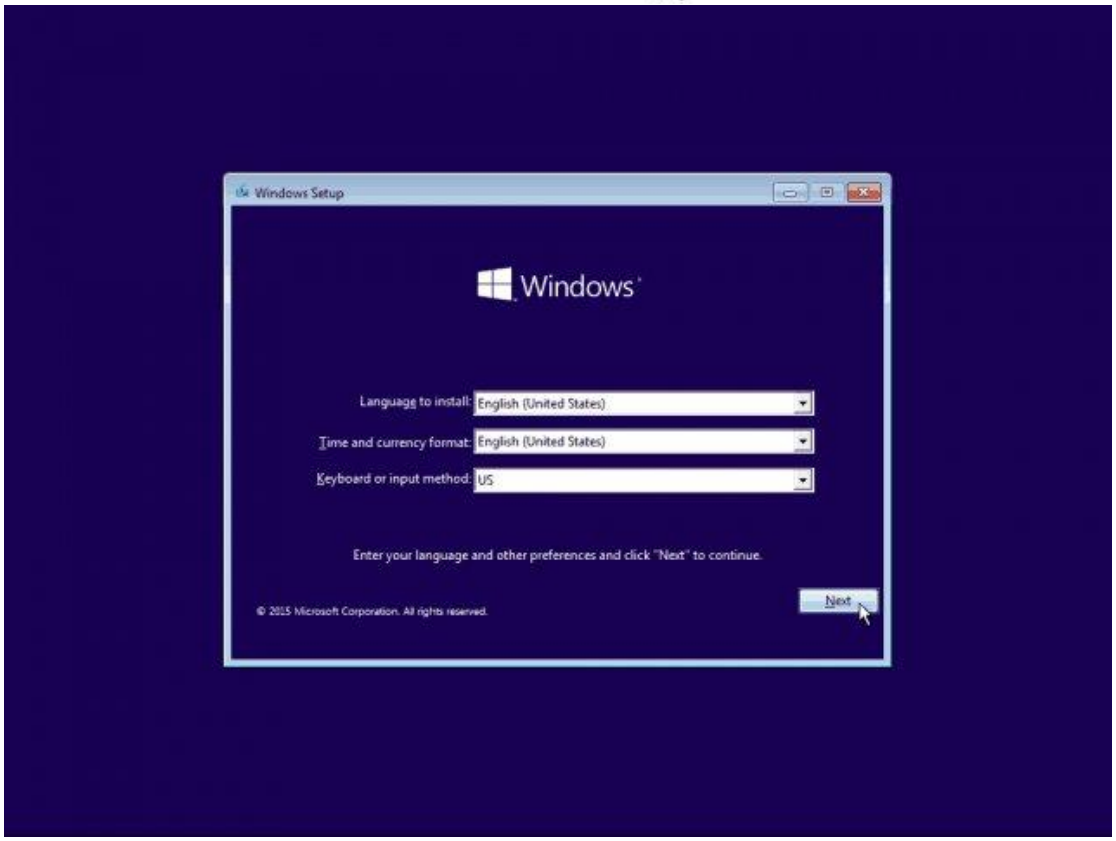

New Virtual Machine Wizard
Select a Guest Operating System
Which operating system will be installed on this virtual machine?
Guest operating system
Microsoft Windows
Linux
Novell NetWare
Solaris
VMware ESX
Other
Version
Windows 10
Help
< Back
Next >
Cancel

New Virtual Machine Wizard
vmware
VMWARE
WORKSTATION
Welcome to the New Virtual Machine Wizard
What type of configuration do you want?
Typical (recommended)
Create a Workstation 11.0 virtual machine in a few easy steps.
Custom (advanced)
Create a virtual machine with advanced options, such as a SCSI controller type, virtual disk type and compatibility with older VMware products.
Help
< Back
Next >
Cancel

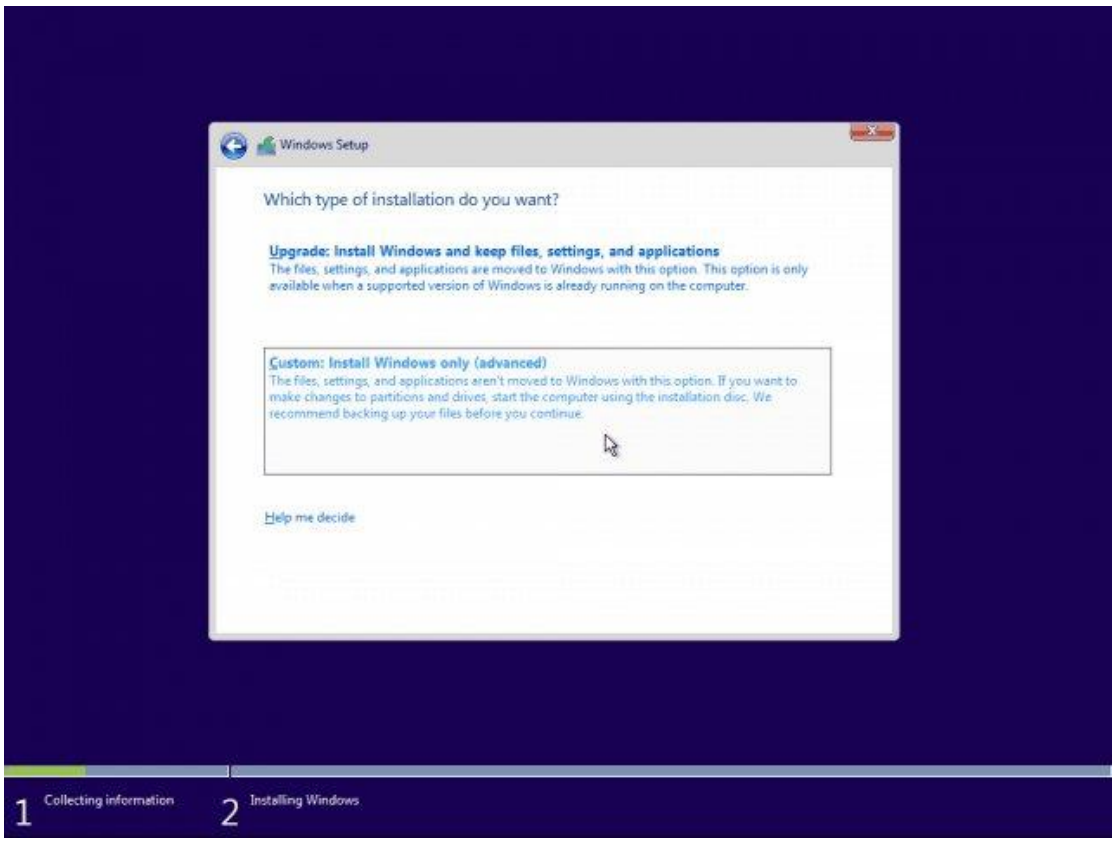

New Virtual Machine Wizard
Specify Disk Capacity
How large do you want this disk to be?
The virtual machine's hard disk is stored as one or more files on the host computer's physical disk. These file(s) start small and become larger as you add applications, files, and data to your virtual machine.
Maximum disk size (GB):
60.0
Recommended size for Windows 10: 60 GB
Store virtual disk as a single file
Split virtual disk into multiple files
Splitting the disk makes it easier to move the virtual machine to another computer but may reduce performance with very large disks.
Help
< Back
Next >
Cancel

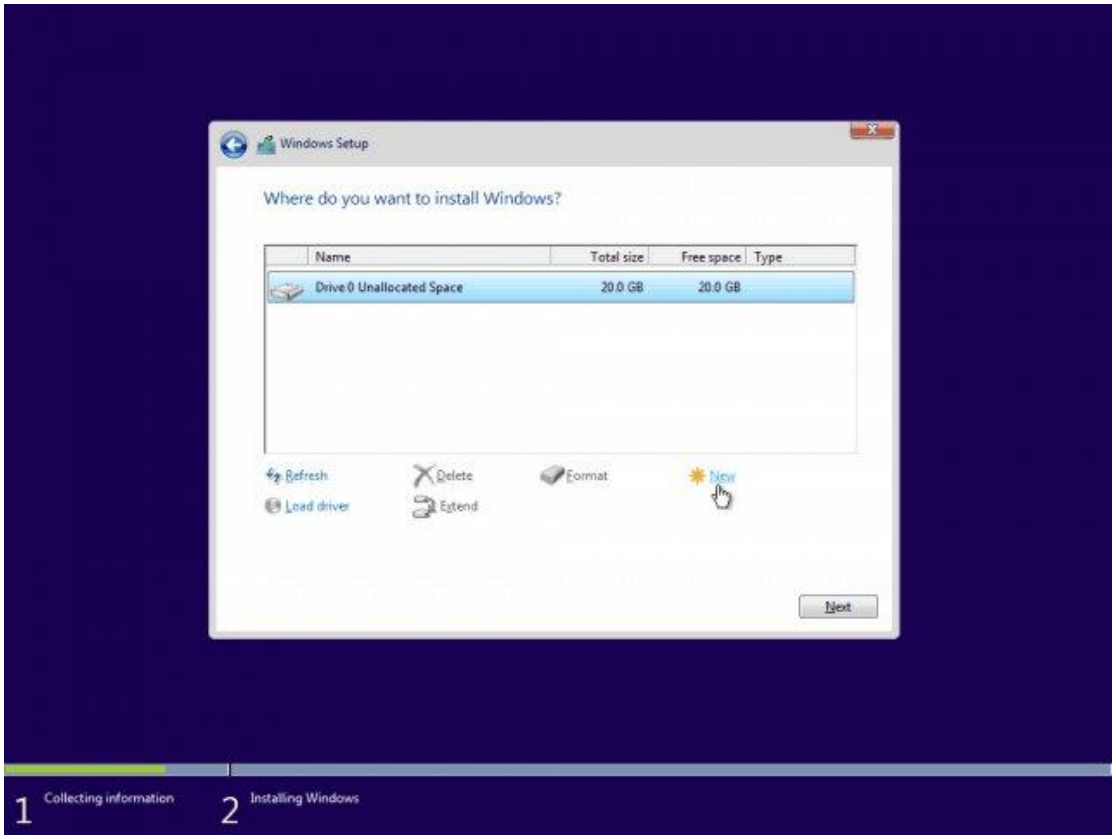

Hardware
Device
Summary
Memory
2 GB
Processors
1
New CD/DVD (...
Using file C:\Users\Stefan\Deskto...
Network Adapter
NAT
USB Controller
Present
Sound Card
Auto detect
Printer
Present
Display
Auto detect
Add...
Remove
Memory
Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.
Memory for this virtual machine:
2048
MB
64 GB
32 GB
16 GB
8 GB
4 GB
2 GB
1 GB
512 MB
256 MB
128 MB
64 MB
32 MB
16 MB
8 MB
4 MB
Maximum recommended memory
(Memory swapping may occur beyond this size.)
13724 MB
Recommended memory
1024 MB
Guest OS recommended minimum
1024 MB
The virtual machine will use up to 1024 MB of this memory for graphics memory. You can change this amount in the Display settings page.
Close
Help

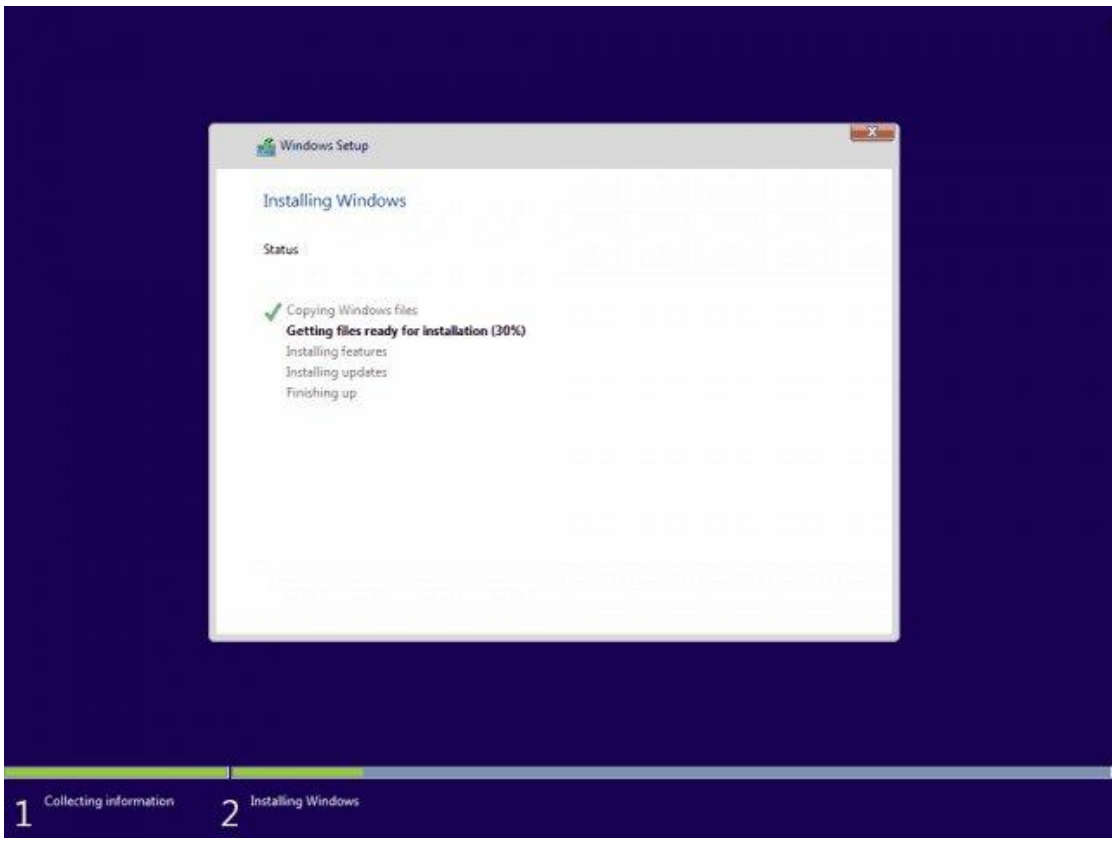

New Virtual Machine Wizard
Ready to Create Virtual Machine
Click Finish to create the virtual machine. Then you can install Windows 10.
The virtual machine will be created with the following settings:
Location: C:\Users\Stefan\Documents\Virtual Machines\Windo...
Version: Workstation 11.0
Operating System: Windows 10
Hard Disk: 60 GB, Split
Memory: 2048 MB
Network Adapter: NAT
Other Devices: 2 CPU cores, CD/DVD, USB Controller, Printer, Sound...
Customize Hardware...
< Back
Finish
Cancel

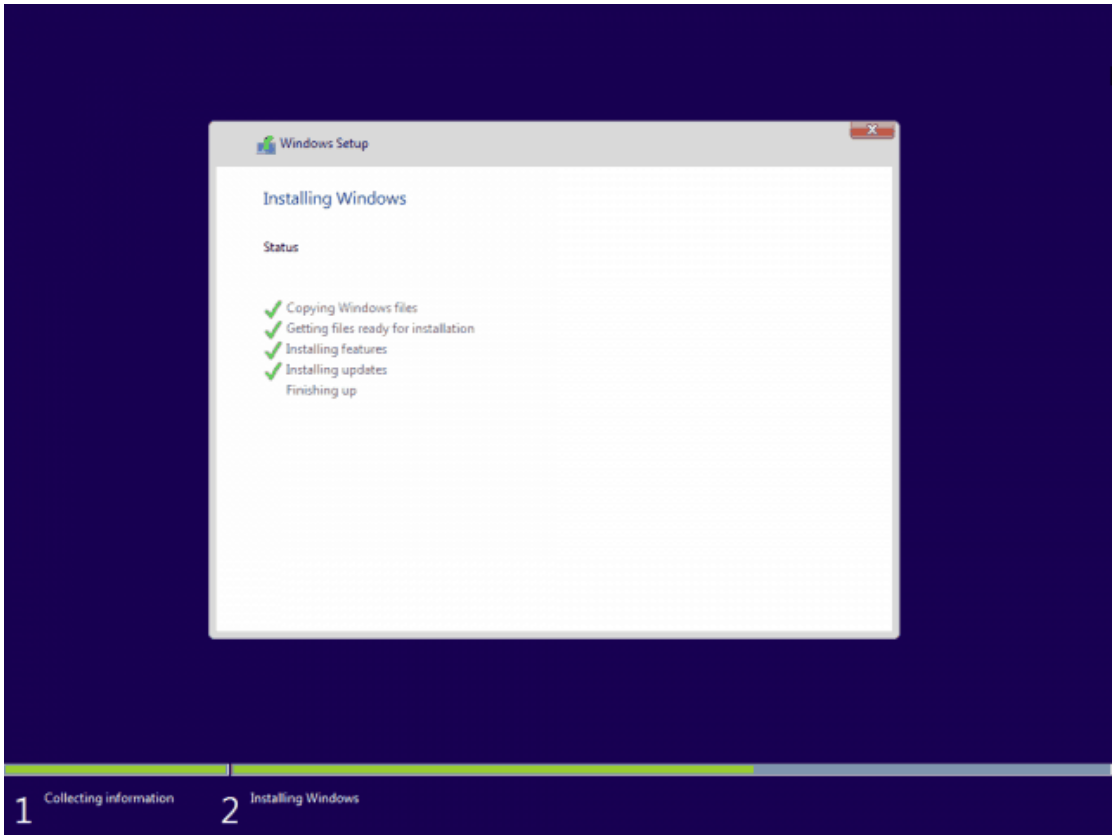

Windows Setup
Windows
Language to install: English (United States)
Time and currency format: English (United States)
Keyboard or input method: US
Enter your language and other preferences and click "Next" to continue.
© 2015 Microsoft Corporation. All rights reserved.
Next

Windows Setup
Windows
Install now
Repair your computer
© 2015 Microsoft Corporation. All rights reserved.


Windows Setup
Which type of installation do you want?
Upgrade: Install Windows and keep files, settings, and applications
The files, settings, and applications are moved to Windows with this option. This option is only available when a supported version of Windows is already running on the computer.
Custom: Install Windows only (advanced)
The files, settings, and applications aren't moved to Windows with this option. If you want to make changes to partitions and drives, start the computer using the installation disc. We recommend backing up your files before you continue.
Help me decide
1 Collecting information
2 Installing Windows

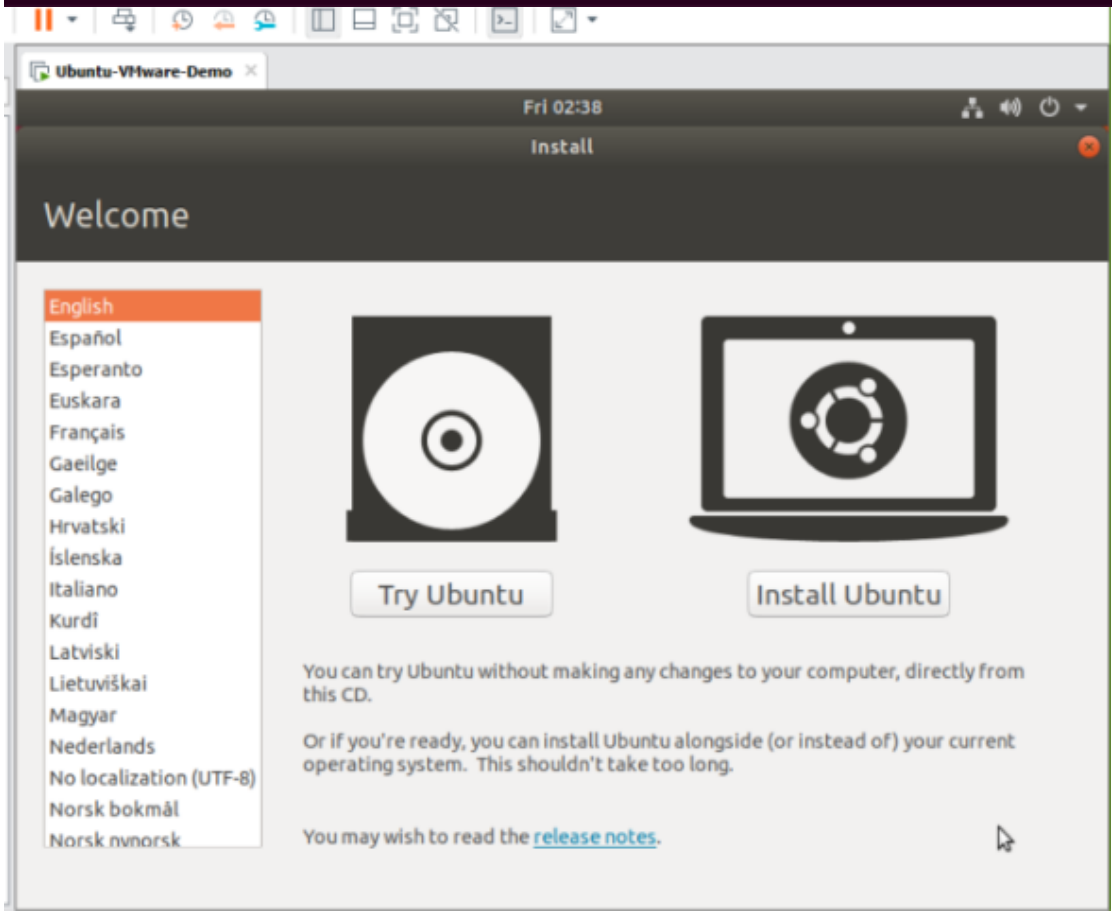

Windows Setup
Where do you want to install Windows?
Name
Total size
Free space
Type
Drive 0 Unallocated Space
20.0 GB
20.0 GB
Refresh
Delete
Format
New
Load driver
Extend
Next
1 Collecting information
2 Installing Windows

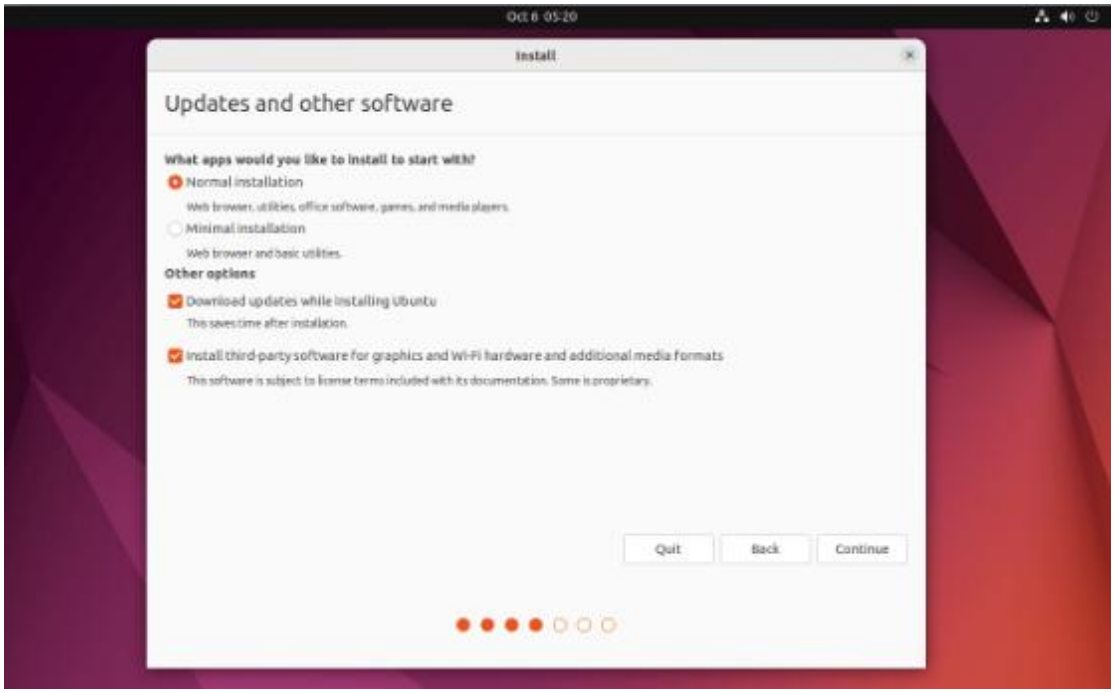

Windows Setup
Installing Windows
Status
Copying Windows files
Getting files ready for installation (30%)
Installing features
Installing updates
Finishing up
1 Collecting information
2 Installing Windows

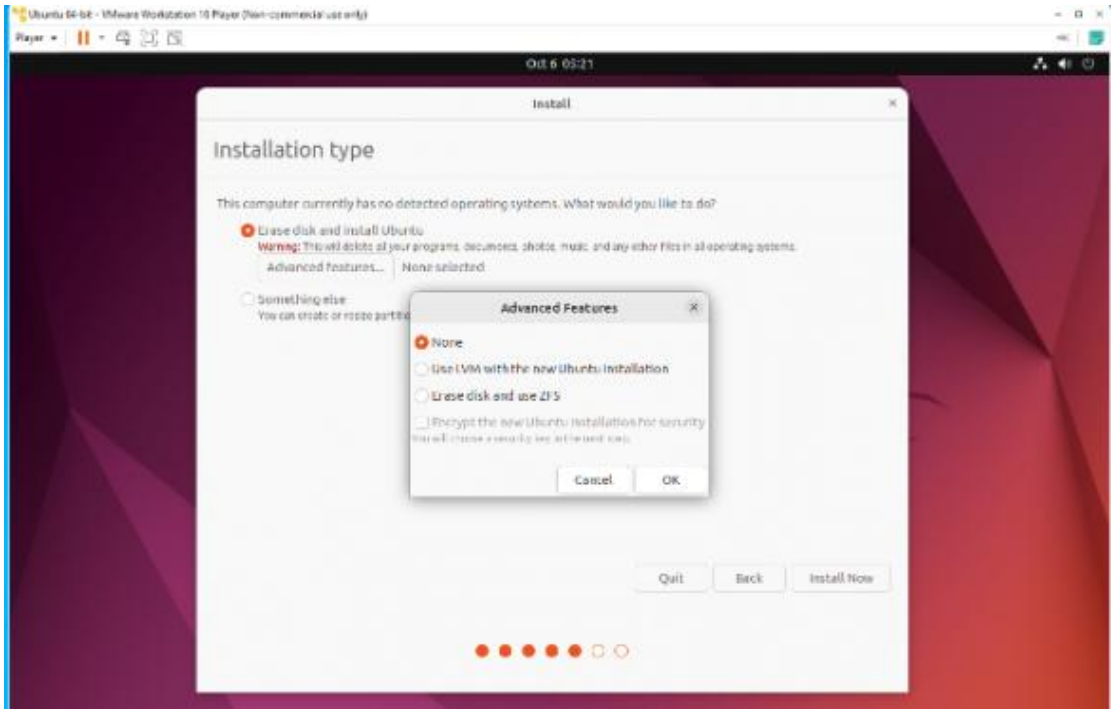

Windows Setup
Installing Windows
Status
Copying Windows files
Getting files ready for installation
Installing features
Installing updates
Finishing up
1 Collecting information
2 Installing Windows

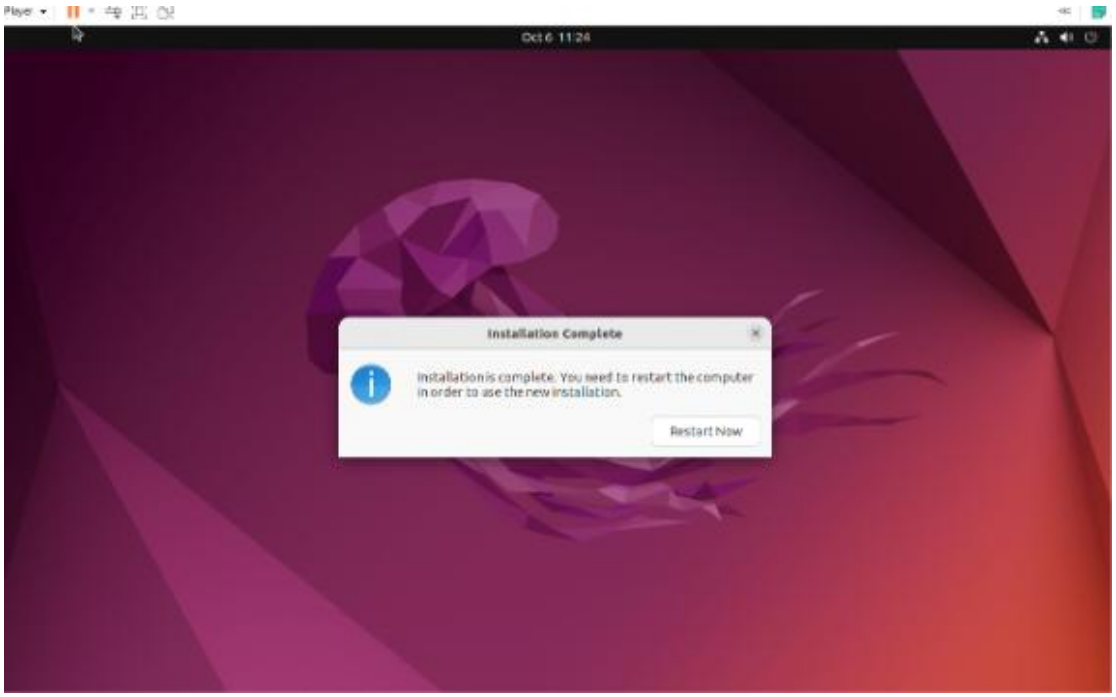
**For Ubuntu**

ubuntu


Ubuntu-VMware-Demo
Fri 02:38
Install
Welcome
English
Español
Esperanto
Euskara
Français
Gaeilge
Galego
Hrvatski
Íslenska
Italiano
Kurdî
Latviski
Lietuviškai
Magyar
Nederlands
No localization (UTF-8)
Norsk bokmål
Norsk nynorsk
Try Ubuntu
Install Ubuntu
You can try Ubuntu without making any changes to your computer, directly from this CD.
Or if you're ready, you can install Ubuntu alongside (or instead of) your current operating system. This shouldn't take too long.
You may wish to read the release notes.


Oct 6 05:20
Install
Updates and other software
What apps would you like to install to start with?
Normal installation
Web browser, utilities, office software, games, and media players.
Minimal installation
Web browser and basic utilities.
Other options
Download updates while installing Ubuntu
This saves time after installation.
Install third-party software for graphics and Wi-Fi hardware and additional media formats
This software is subject to license terms included with its documentation. Some is proprietary.
Quit
Back
Continue


Oct 6 05:21
Install
Installation type
This computer currently has no detected operating systems. What would you like to do?
Erase disk and install Ubuntu
Warning: This will delete all your programs, documents, photos, music, and any other files in all operating systems.
Advanced features...
None selected
Something else
Advanced Features
None
Use LVM with the new Ubuntu installation
Erase disk and use ZFS
Cancel
OK
Quit
Back
Install Now


Player
Oct 6 11:24
Installation Complete
Installation is complete. You need to restart the computer in order to use the new installation.
Restart Now

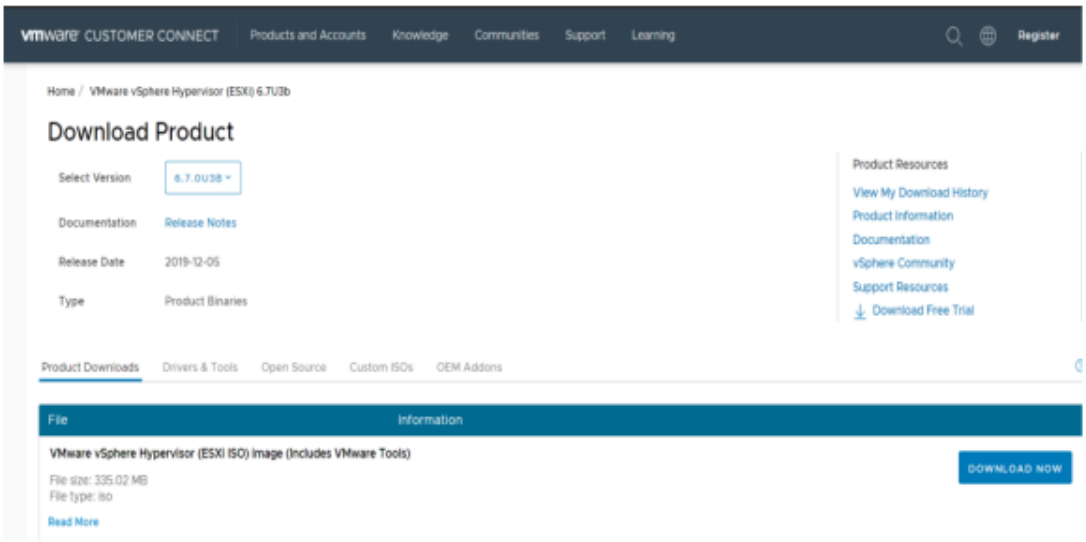
# Lab 2: Installation and configuration of esxi server

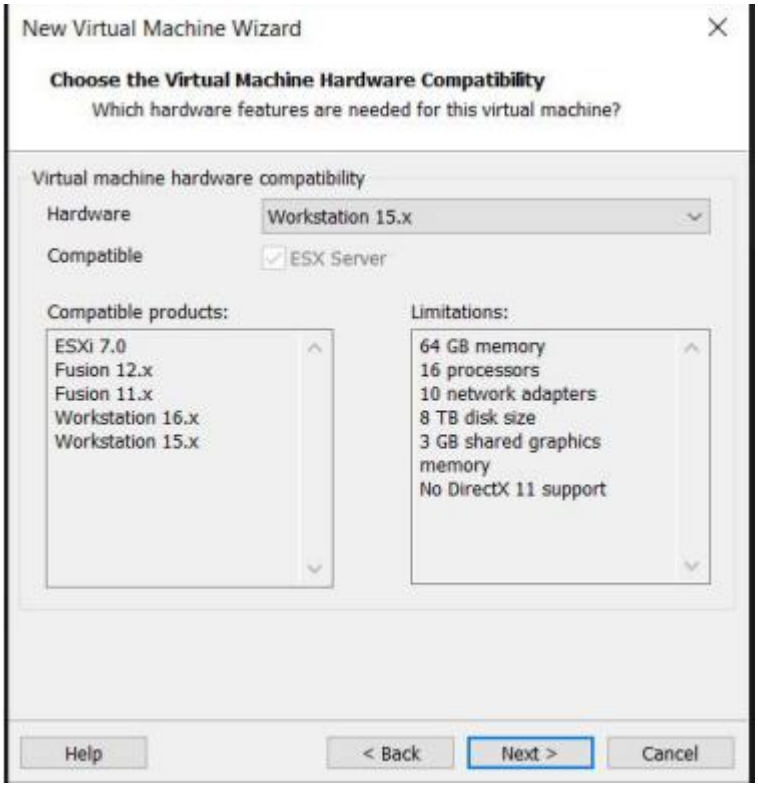
**Objective:** To install and configure esxi server

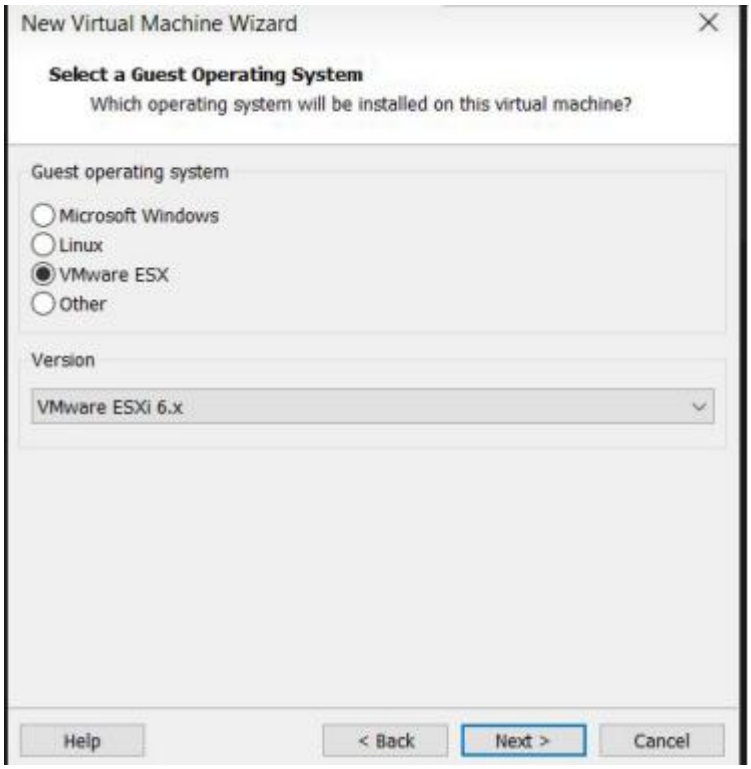
**Requirements:** 8GB Ram, 100 HDD, i5 Processor,

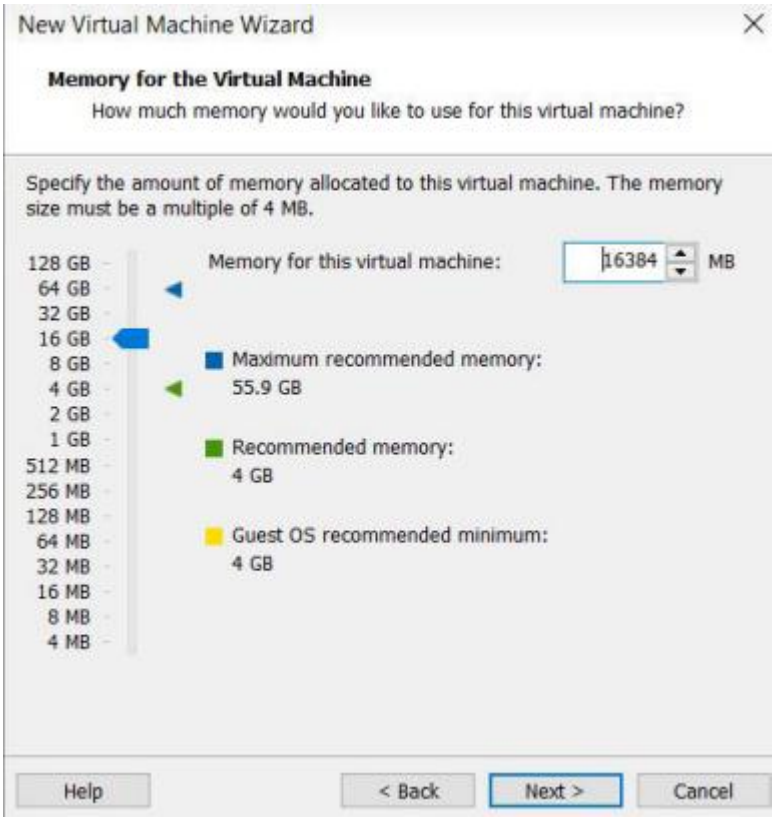
**Procedure:**

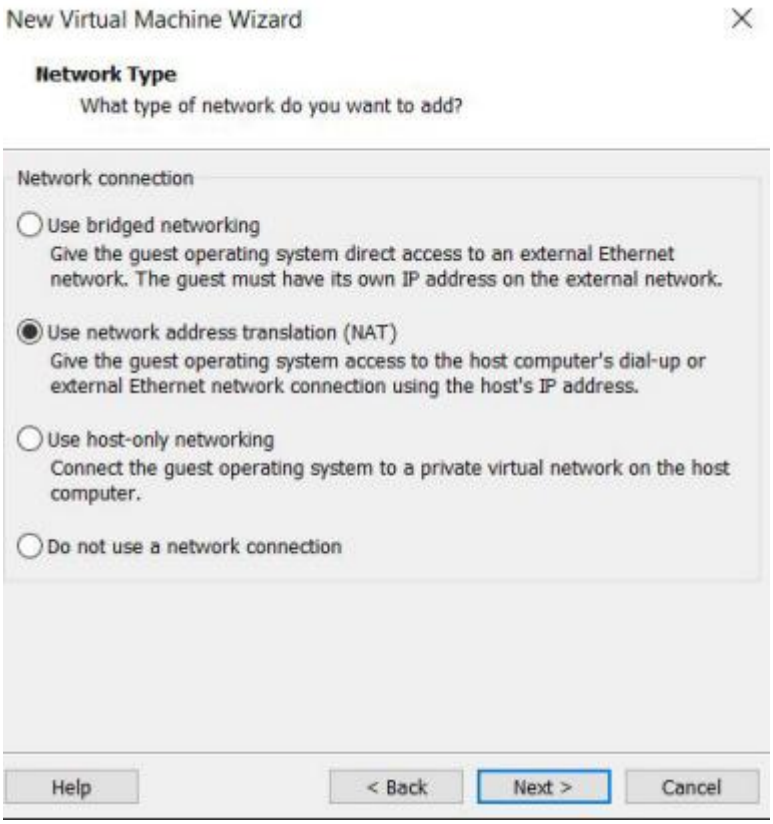
Step 1: Download the vmware sphere (esxi server)

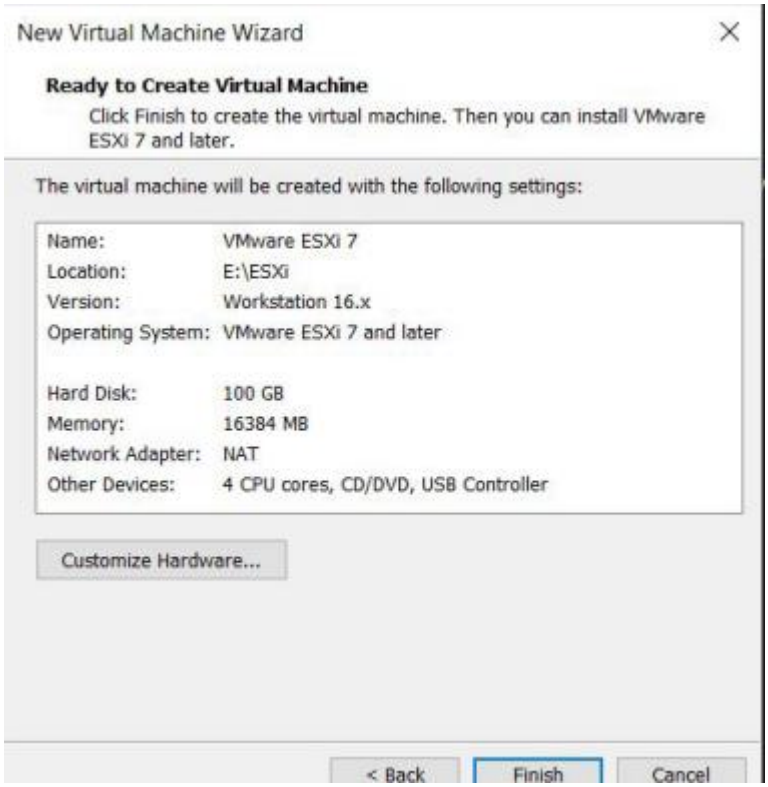



New Virtual Machine Wizard
Choose the Virtual Machine Hardware Compatibility
Which hardware features are needed for this virtual machine?
Virtual machine hardware compatibility
Hardware
Workstation 15.x
Compatible
ESX Server
Compatible products:
ESXi 7.0
Fusion 12.x
Fusion 11.x
Workstation 16.x
Workstation 15.x
Limitations:
64 GB memory
16 processors
10 network adapters
8 TB disk size
3 GB shared graphics memory
No DirectX 11 support
Help
< Back
Next >
Cancel


New Virtual Machine Wizard
Select a Guest Operating System
Which operating system will be installed on this virtual machine?
Guest operating system
Microsoft Windows
Linux
VMware ESX
Other
Version
VMware ESXi 6.x
Help
< Back
Next >
Cancel

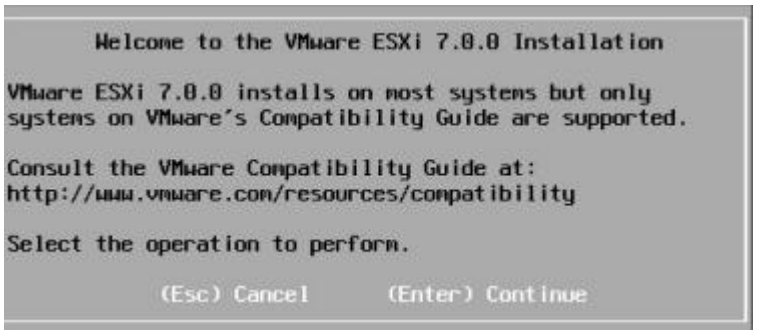

New Virtual Machine Wizard
Memory for the Virtual Machine
How much memory would you like to use for this virtual machine?
Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.
128 GB
64 GB
32 GB
16 GB
8 GB
4 GB
2 GB
1 GB
512 MB
256 MB
128 MB
64 MB
32 MB
16 MB
8 MB
4 MB
Memory for this virtual machine:
16384
MB
Maximum recommended memory:
55.9 GB
Recommended memory:
4 GB
Guest OS recommended minimum:
4 GB
Help
< Back
Next >
Cancel

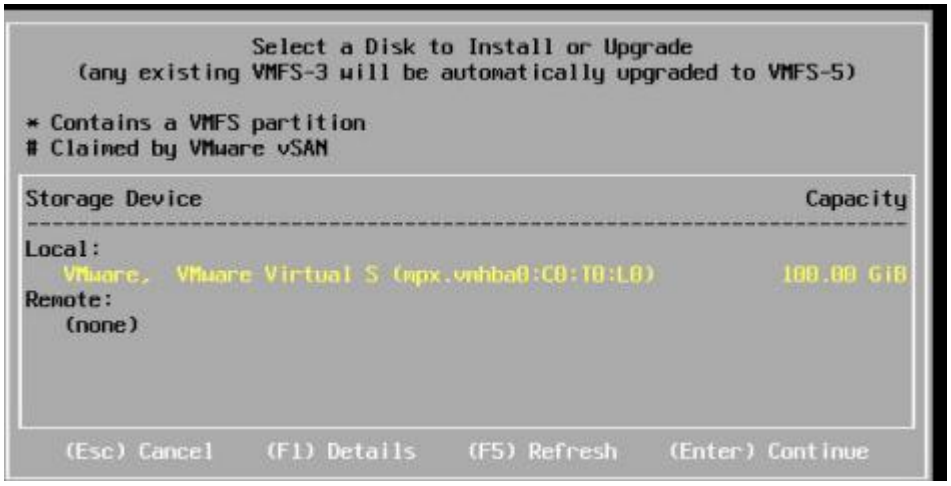

New Virtual Machine Wizard
Network Type
What type of network do you want to add?
Network connection
Use bridged networking
Give the guest operating system direct access to an external Ethernet network. The guest must have its own IP address on the external network.
Use network address translation (NAT)
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
Ready to Create Virtual Machine
Click Finish to create the virtual machine. Then you can install VMware ESXi 7 and later.
The virtual machine will be created with the following settings:
Name: VMware ESXi 7
Location: E:\ESXi
Version: Workstation 16.x
Operating System: VMware ESXi 7 and later
Hard Disk: 100 GB
Memory: 16384 MB
Network Adapter: NAT
Other Devices: 4 CPU cores, CD/DVD, USB Controller
Customize Hardware...
< Back
Finish
Cancel

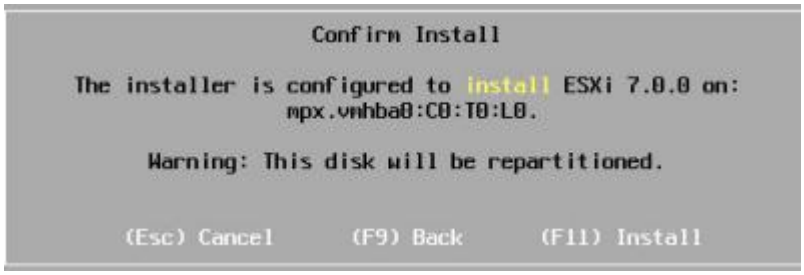
Loading ESXi installer
<ENTER: Boot>
Automatic boot in 2 seconds...
<SHIFT+O: Edit boot options>

VMware ESXi 7.0.0 (VMKernel Release Build 16324942)
VMware, Inc. VMware7,1
2 x Intel(R) Core(TM) i7-6820HK CPU @ 2.70GHz
16 GiB Memory
VMKernel loaded successfully.


Welcome to the VMware ESXi 7.0.0 Installation
VMware ESXi 7.0.0 installs on most systems but only
systems on VMware's Compatibility Guide are supported.
Consult the VMware Compatibility Guide at:
http://www.vmware.com/resources/compatibility
Select the operation to perform.
(Esc) Cancel
(Enter) Continue

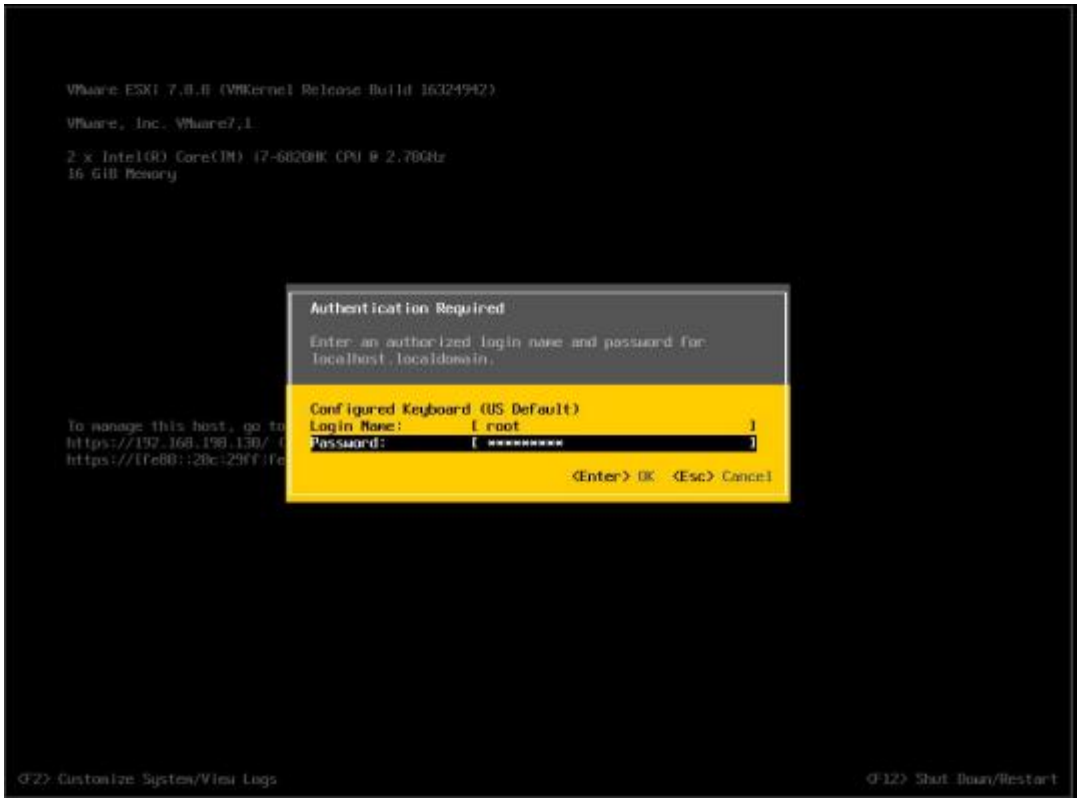

Select a Disk to Install or Upgrade
(any existing VMFS-3 will be automatically upgraded to VMFS-5)
* Contains a VMFS partition
# Claimed by VMware vSAN
Storage Device
Capacity
Local:
VMware, VMware Virtual S (mpx.vmhba0:C0:T0:L0)
100.00 GiB
Remote:
(none)
(Esc) Cancel
(F1) Details
(F5) Refresh
(Enter) Continue

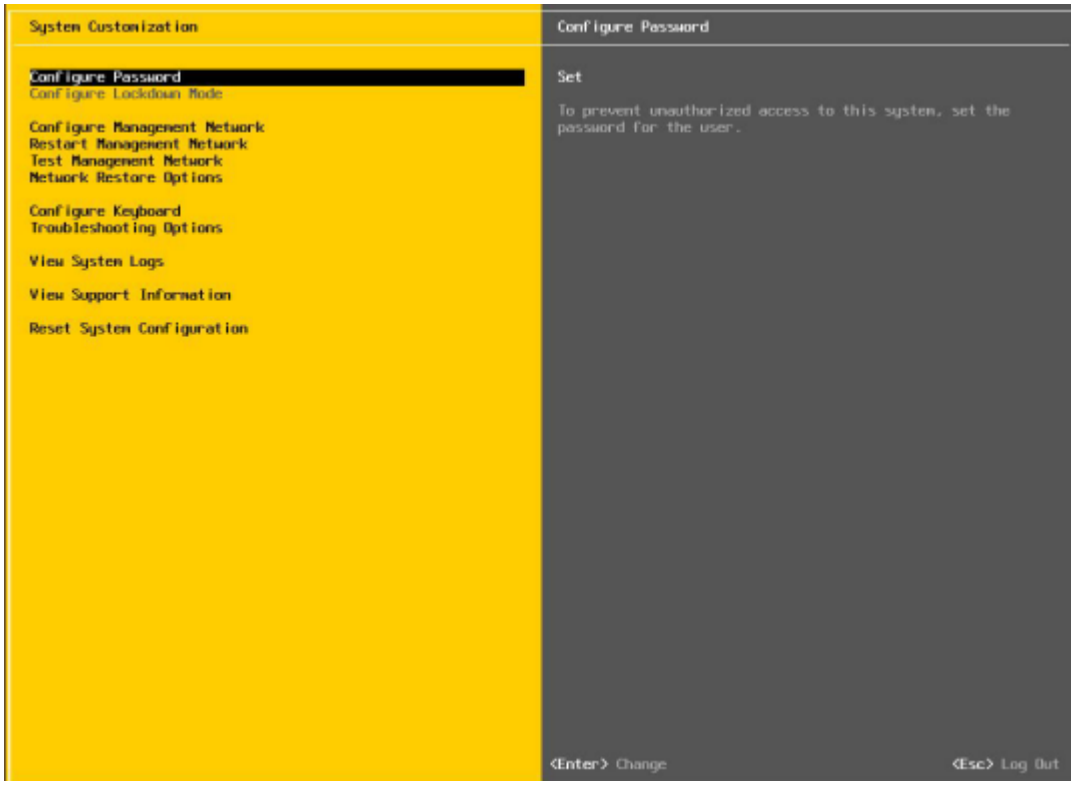
Enter a root password
Root password: *********
Confirm password: *********_
Passwords match.
(Esc) Cancel (F9) Back (Enter) Continue

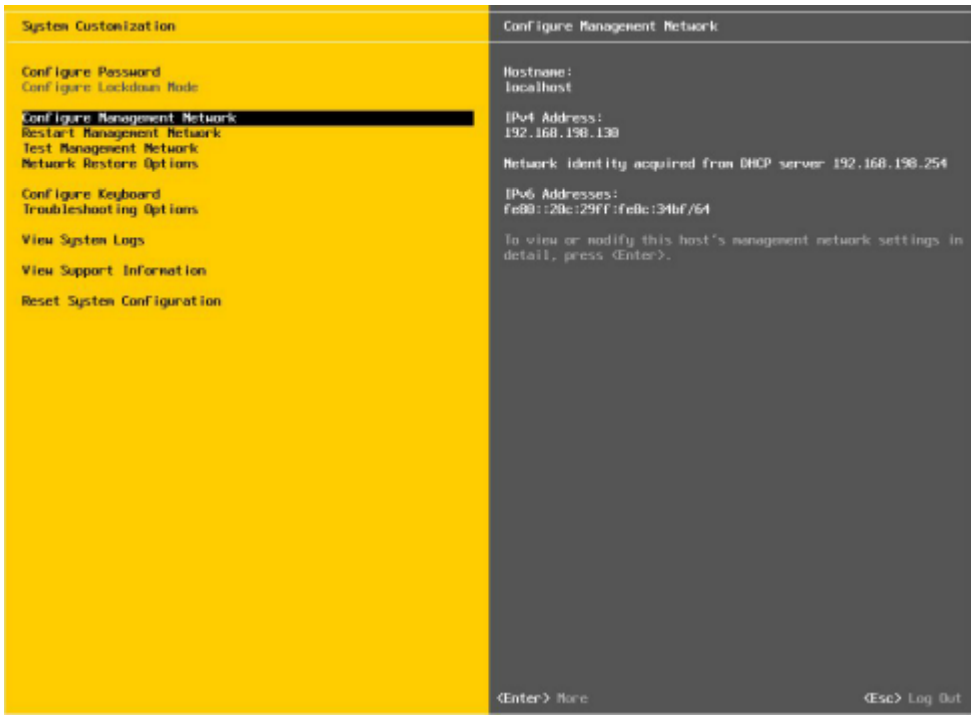

Confirm Install
The installer is configured to install ESXi 7.0.0 on:
mpx.vmhba0:C0:T0:L0.
Warning: This disk will be repartitioned.
(Esc) Cancel (F9) Back (F11) Install

Installation Complete
ESXi 7.0.0 has been installed successfully.
ESXi 7.0.0 will operate in evaluation mode for 60 days.
To use ESXi 7.0.0 after the evaluation period, you must
register for a VMware product license.
To administer your server, navigate to the server's
hostname or IP address from your web browser or use the
Direct Control User Interface.
Remove the installation media before rebooting.
Reboot the server to start using ESXi 7.0.0.
(Enter) Reboot

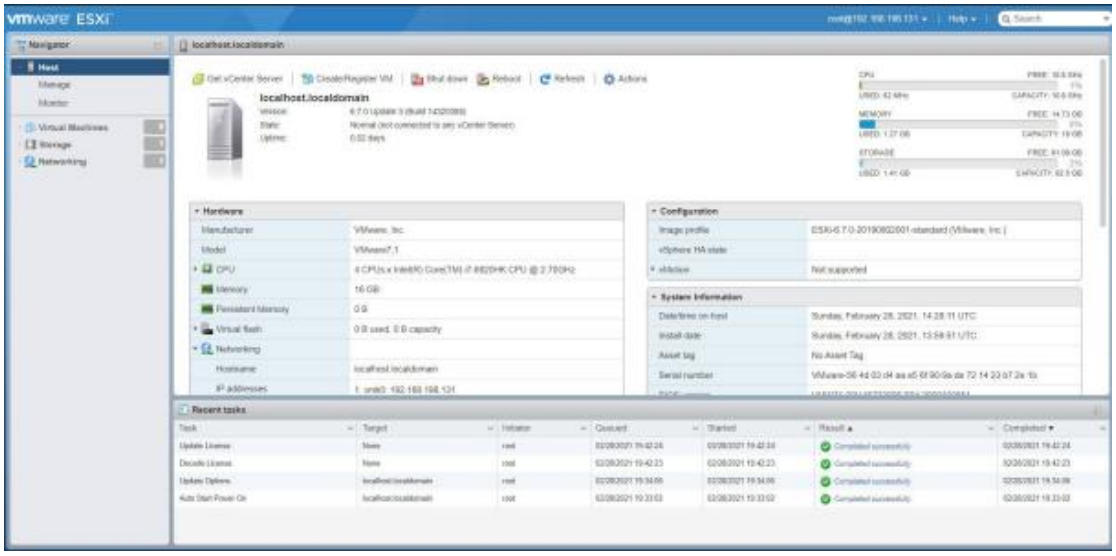
VMware ESXi 7.0.0 (VMKernel Release Build 16324942)
VMware, Inc. VMware7,1
2 x Intel(R) Core(TM) i7-6820HK CPU @ 2.70GHz
16 GiB Memory
To manage this host, go to:
https://192.168.198.130/ (DHCP)
https://[fe80::20c:29ff:fe0c:34bf]/ (STATIC)
<F2> Customize System/View Logs
<F12> Shut Down/Restart


VMware ESXi 7.0.0 (VMKernel Release Build 16324942)
VMware, Inc. VMware7,1
2 x Intel(R) Core(TM) i7-6820HK CPU @ 2.70GHz
16 GiB Memory
Authentication Required
Enter an authorized login name and password for
localhost.localdomain.
Configured Keyboard (US Default)
Login Name: [ root ]
Password: [ ********** ]
<Enter> OK <Esc> Cancel
<F2> Customize System/View Logs
<F12> Shut Down/Restart


System Customization
Configure Password
Configure Lockdown Mode
Configure Management Network
Restart Management Network
Test Management Network
Network Restore Options
Configure Keyboard
Troubleshooting Options
View System Logs
View Support Information
Reset System Configuration
Configure Password
Set
To prevent unauthorized access to this system, set the password for the user.
<Enter> Change
<Esc> Log Out


System Customization
Configure Password
Configure Lockdown Mode
Configure Management Network
Restart Management Network
Test Management Network
Network Restore Options
Configure Keyboard
Troubleshooting Options
View System Logs
View Support Information
Reset System Configuration
Configure Management Network
Hostname:
localhost
IPv4 Address:
192.168.198.130
Network identity acquired from DHCP server 192.168.198.254
IPv6 Addresses:
fe80::20c:29ff:fe0c:34bf/64
To view or modify this host's management network settings in detail, press <Enter>.
<Enter> More
<Esc> Log Out

192.168.198.130/ui/#/login
vmware
User name
root
Password
Log in
vmware ESXi

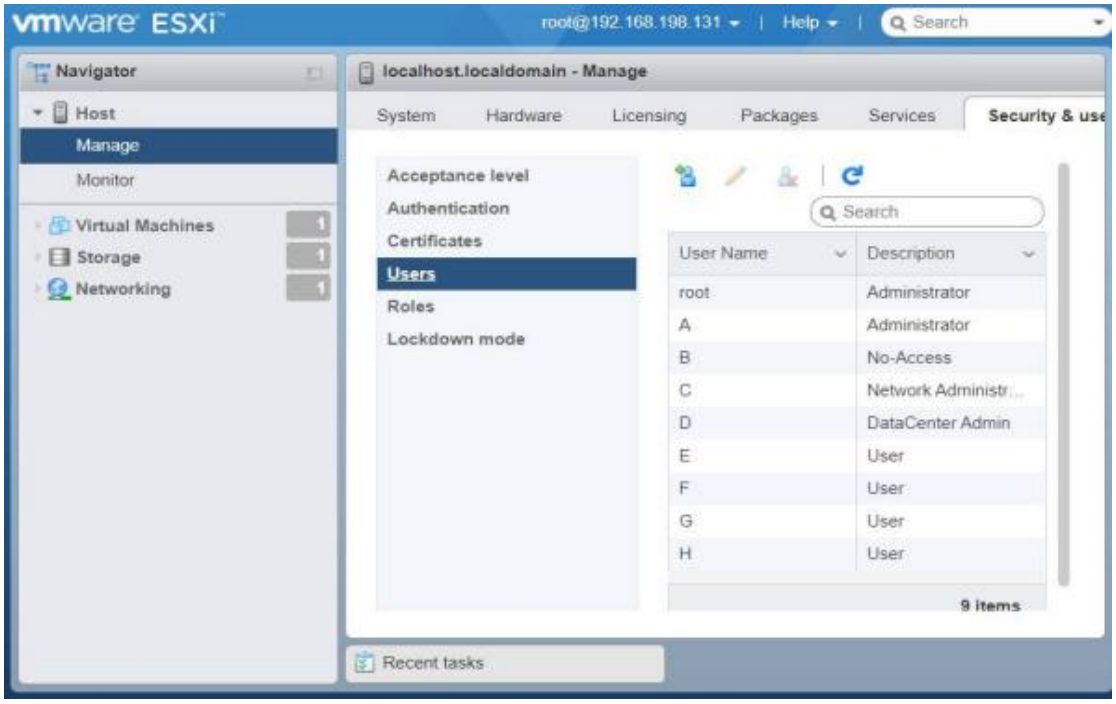

vmware ESXi
Navigator
Host
Manage
Monitor
Virtual Machines
Storage
Networking
localhost.localdomain
Get vCenter Server
Create/Register VM
Shut down
Reboot
Refresh
Actions
localhost.localdomain
Hardware
Manufacturer
VMware, Inc.
Model
VMware7,1
CPU
Memory
Persistent Memory
Virtual flash
Networking
Hostname
IP addresses
Configuration
Image profile
vSphere HA state
vMotion
Not supported
System Information
Date/time on host
Install date
Asset tag
No Asset Tag
Serial number
Recent tasks
Task
Target
Initiator
Queued
Started
Result
Completed

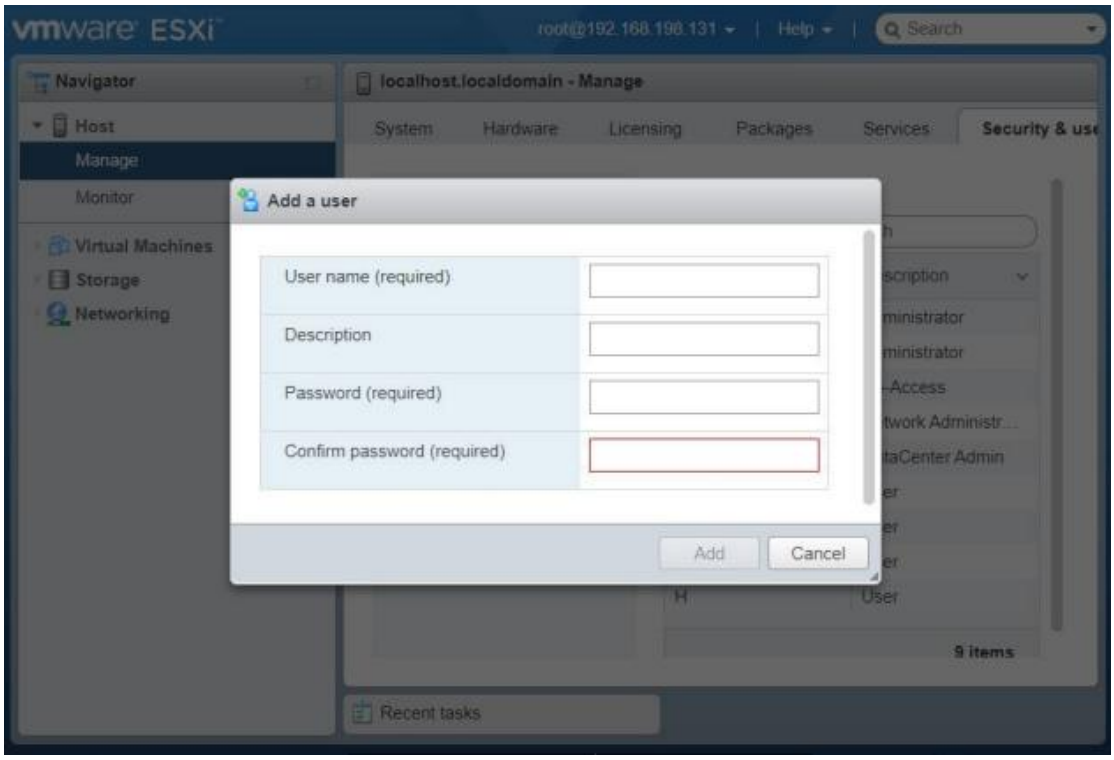
# Lab 3: Configuring security policies and roles in vsphere/esxi

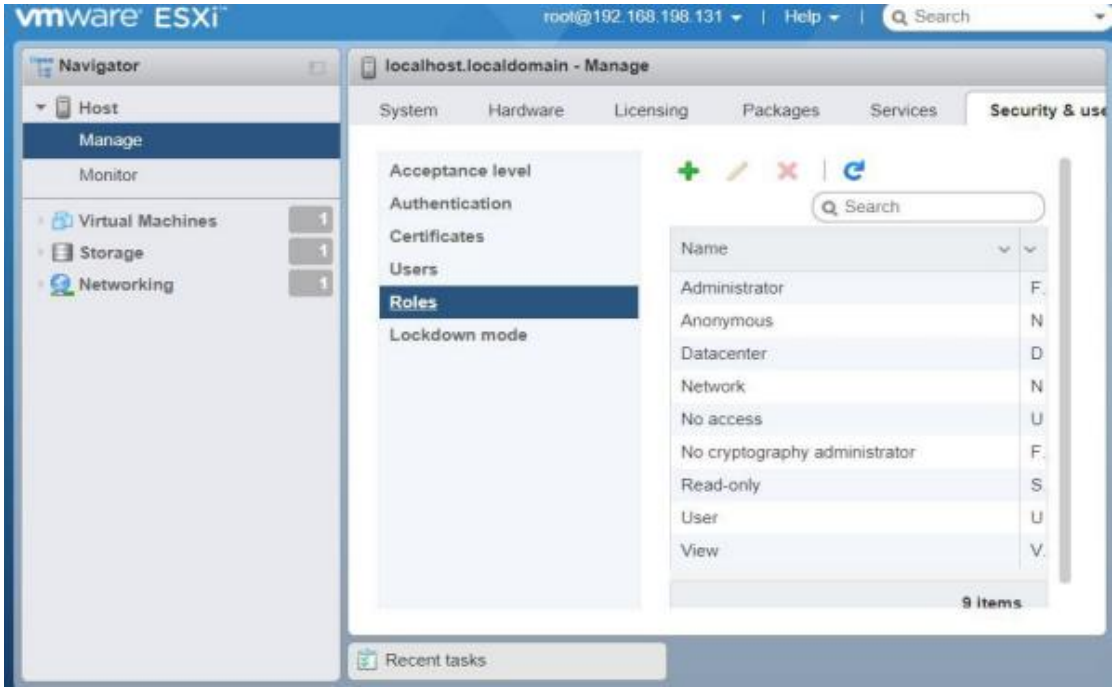
**Objective:** To configure security policies and roles in esxi server

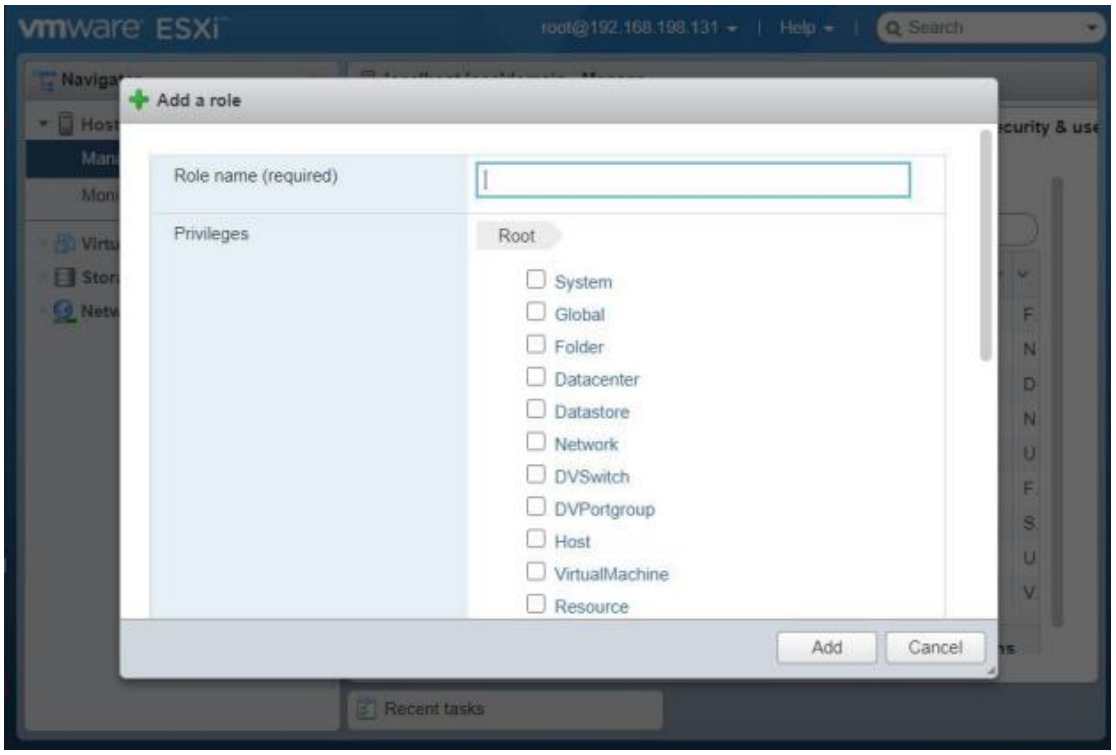
**Requirements:** 8GB Ram, 100 HDD, i5 Processor,

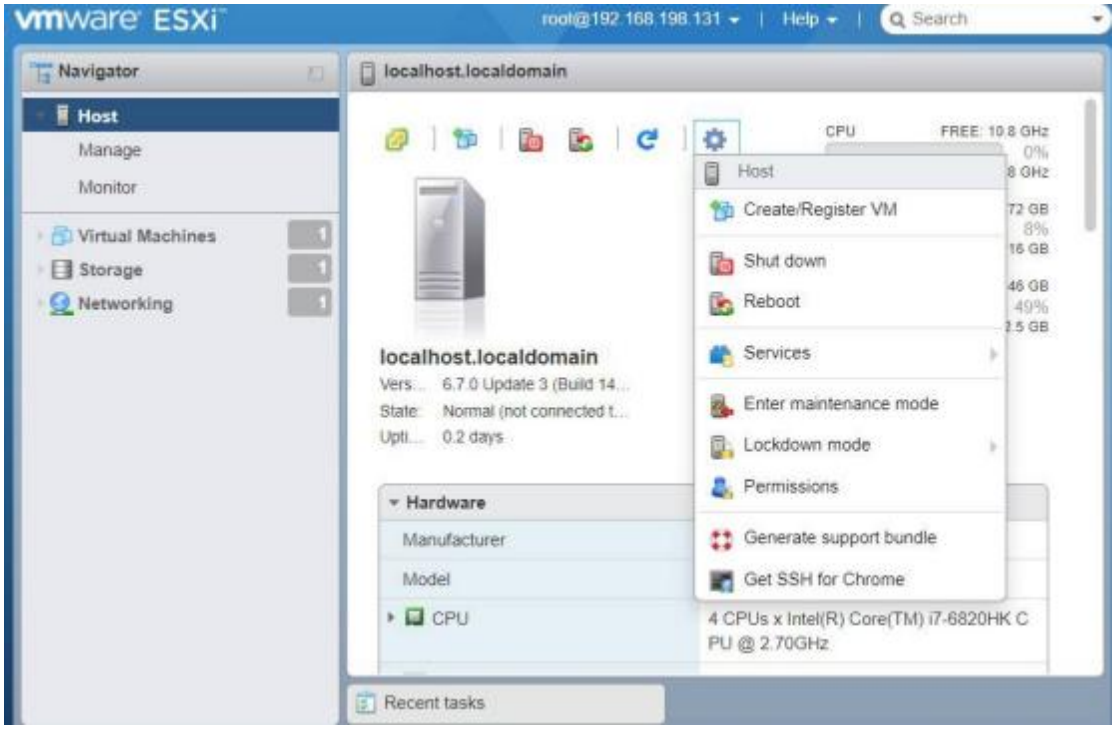
**Procedure:**

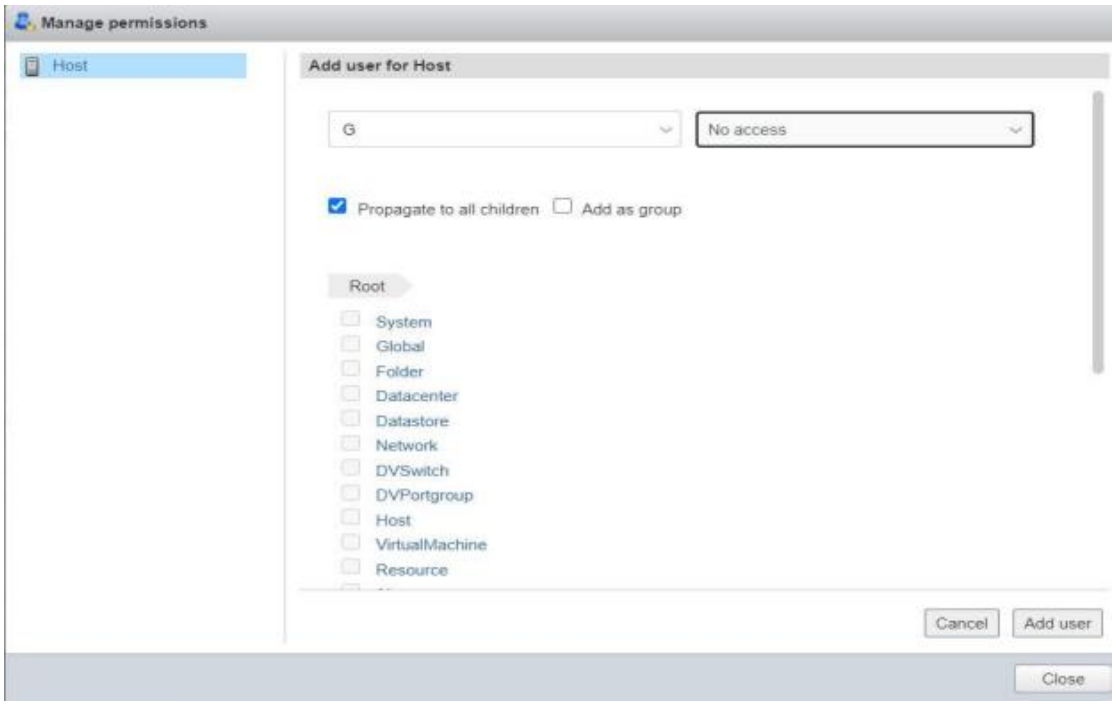


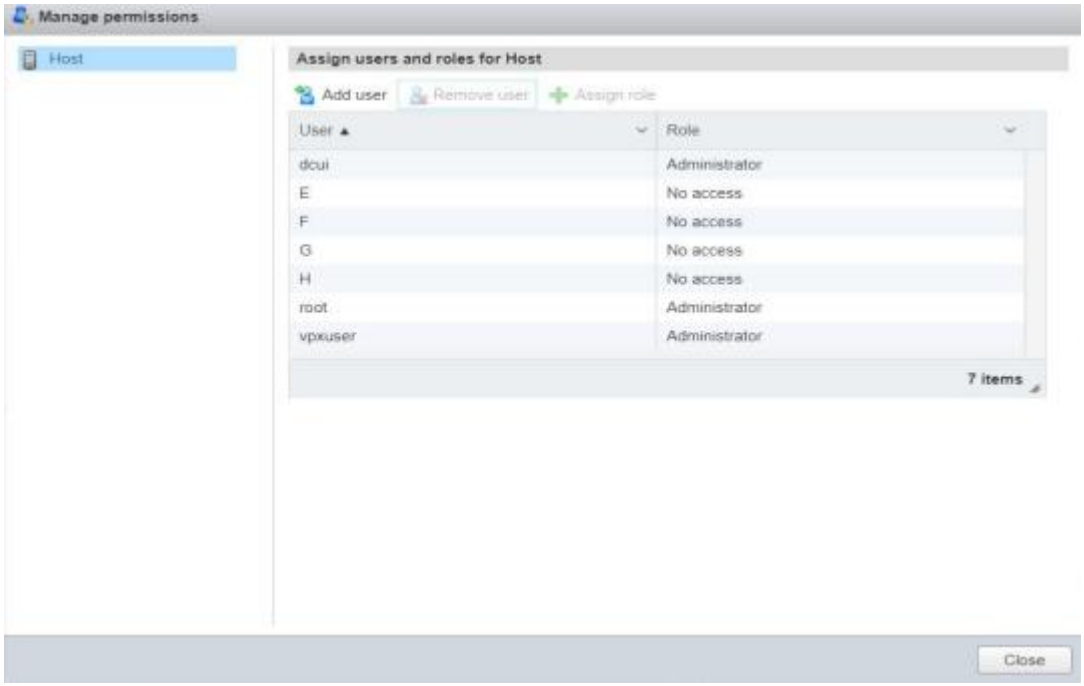




vmware ESXi
root@192.168.198.131
Help
Search
Navigator
Host
Manage
Monitor
Virtual Machines
Storage
Networking
localhost.localdomain - Manage
System
Hardware
Licensing
Packages
Services
Security & use
Acceptance level
Authentication
Certificates
Users
Roles
Lockdown mode
Search
Name
Administrator
Anonymous
Datacenter
Network
No access
No cryptography administrator
Read-only
User
View
9 items
Recent tasks


vmware ESXi
root@192.168.198.131
Help
Search
Add a role
Role name (required)
Privileges
Root
System
Global
Folder
Datacenter
Datastore
Network
DVSwitch
DVPortgroup
Host
VirtualMachine
Resource
Add
Cancel
Recent tasks


vmware ESXi
root@192.168.198.131
Help
Search
Navigator
Host
Manage
Monitor
Virtual Machines
Storage
Networking
localhost.localdomain
CPU
FREE: 10.8 GHz
Host
Create/Register VM
Shut down
Reboot
Services
Enter maintenance mode
Lockdown mode
Permissions
Generate support bundle
Get SSH for Chrome
localhost.localdomain
Vers... 6.7.0 Update 3 (Build 14...
State: Normal (not connected t...
Upti... 0.2 days
Hardware
Manufacturer
Model
CPU
4 CPUs x Intel(R) Core(TM) i7-6820HK C
PU @ 2.70GHz
Recent tasks


Manage permissions
Host
Add user for Host
G
No access
Propagate to all children
Add as group
Root
System
Global
Folder
Datacenter
Datastore
Network
DVSwitch
DVPortgroup
Host
VirtualMachine
Resource
Cancel
Add user
Close


Manage permissions
Host
Assign users and roles for Host
Add user
Remove user
Assign role
User
Role
dcui
Administrator
E
No access
F
No access
G
No access
H
No access
root
Administrator
vpxuser
Administrator
7 items
Close