



SRI LANKA INSTITUTE OF INFORMATION TECHNOLOGY

## Enterprise Standards and Best Practices for IT Infrastructure

*4th Year 2nd Semester 2014*

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Name: Fernando W.W.S.D

SLIIT ID: IT13032616

Practical Session: WD Friday

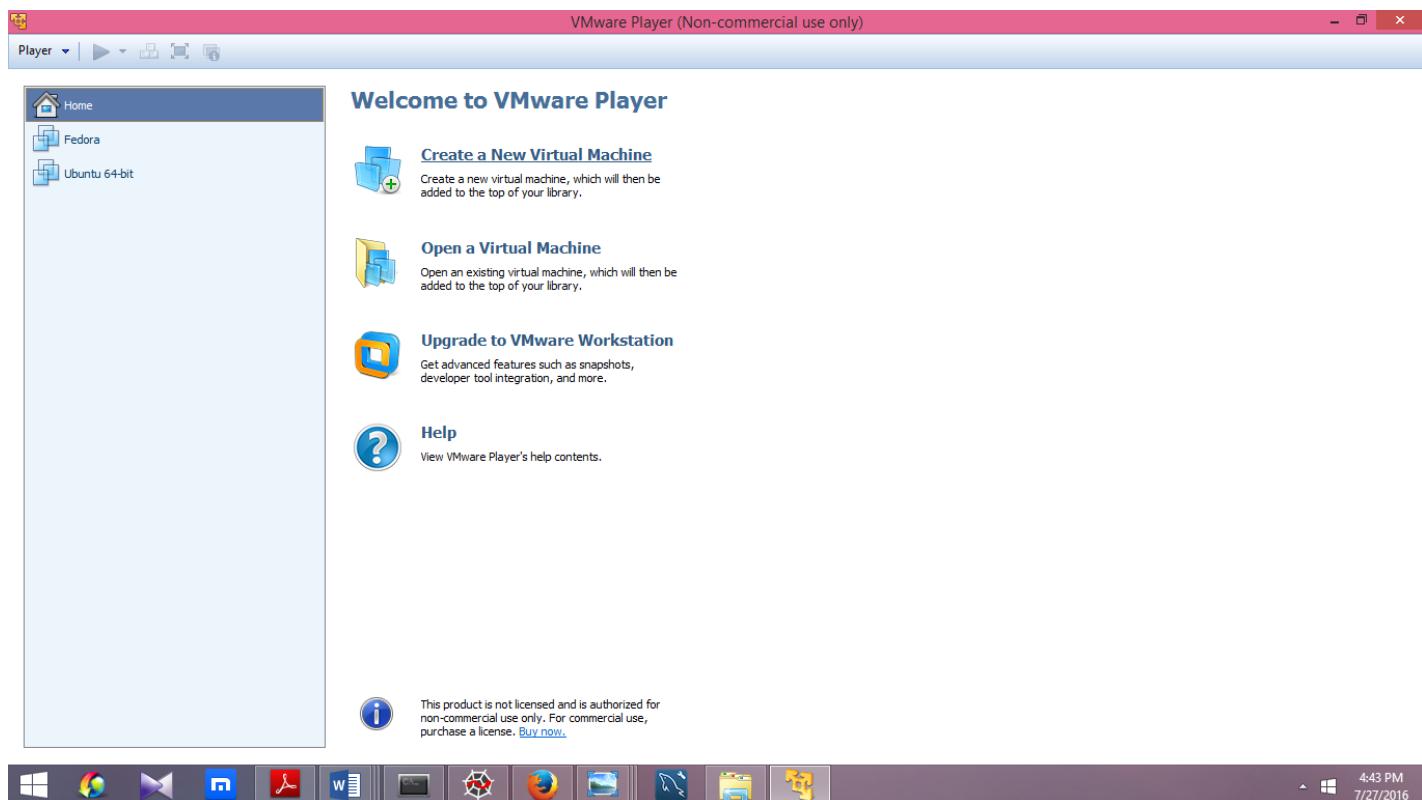
Practical Number: complete installation of ESXi 5 and the vSphere Client.(Lab-4)

Date of Submission: 17.08.2016

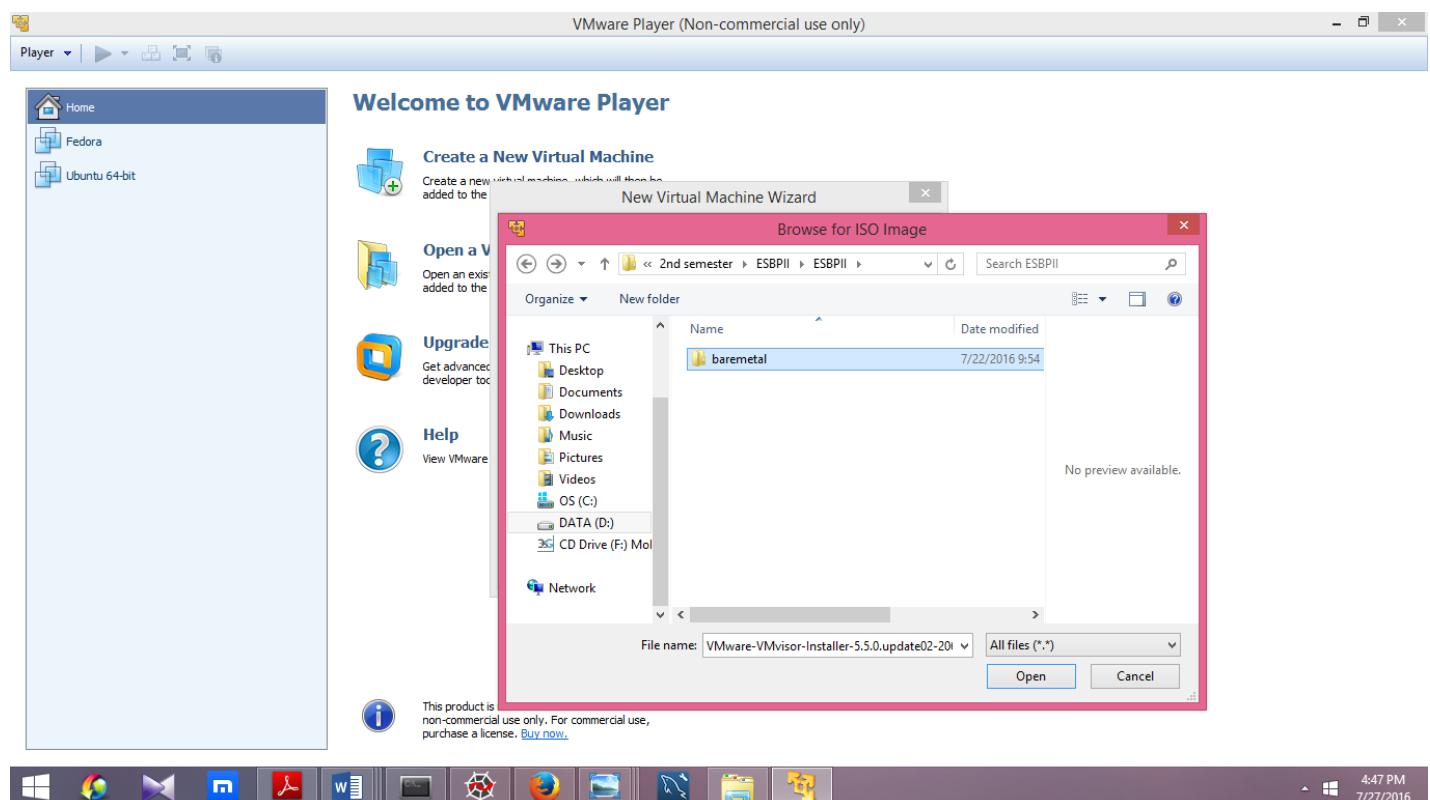
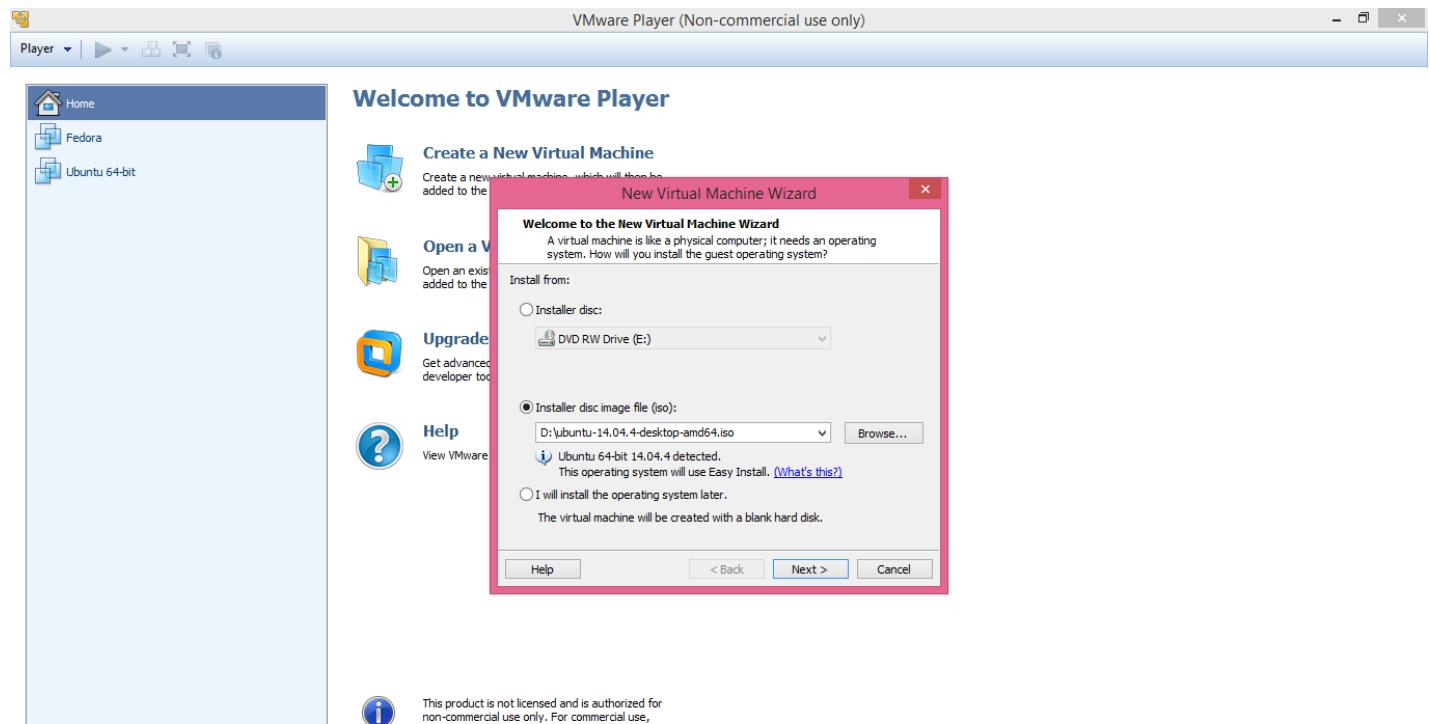
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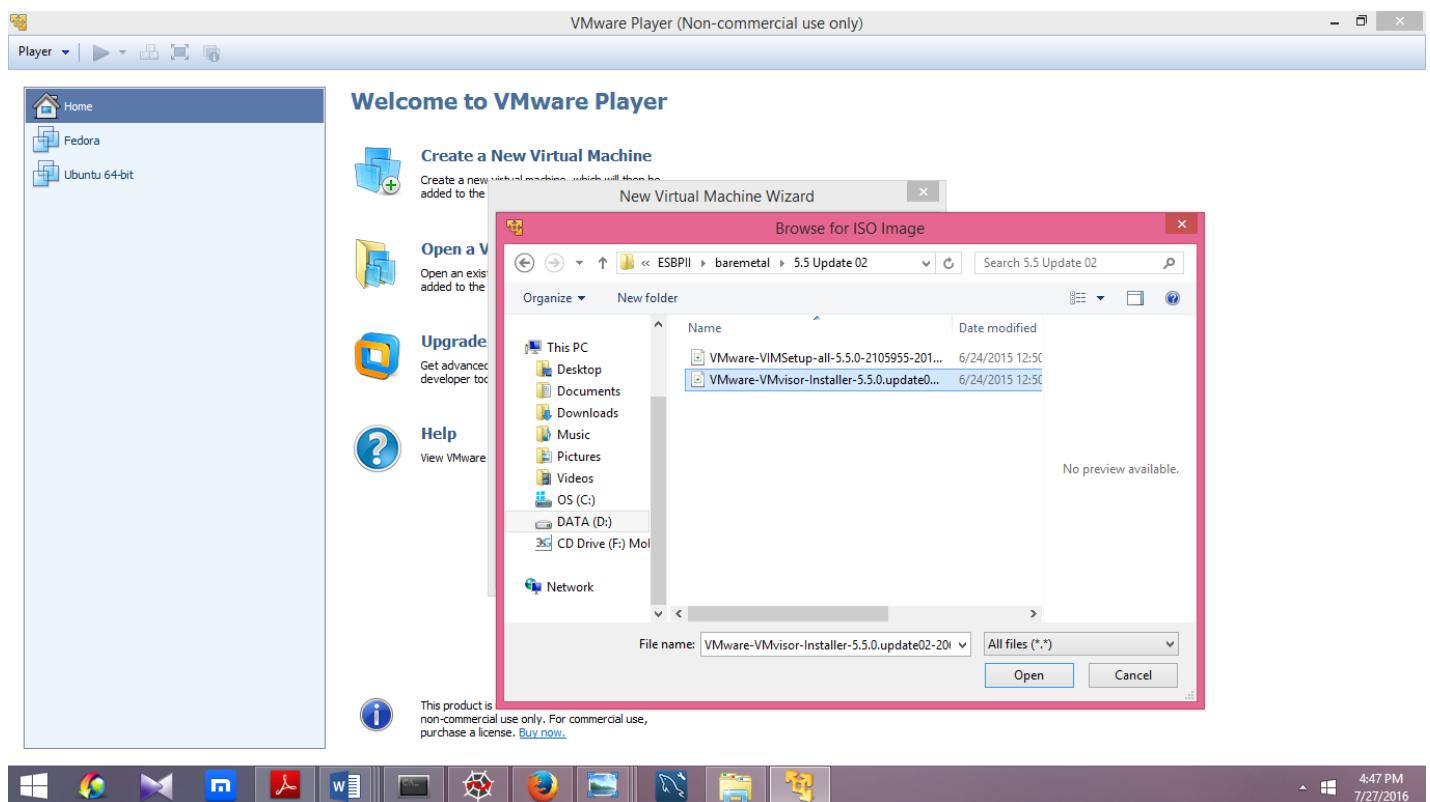
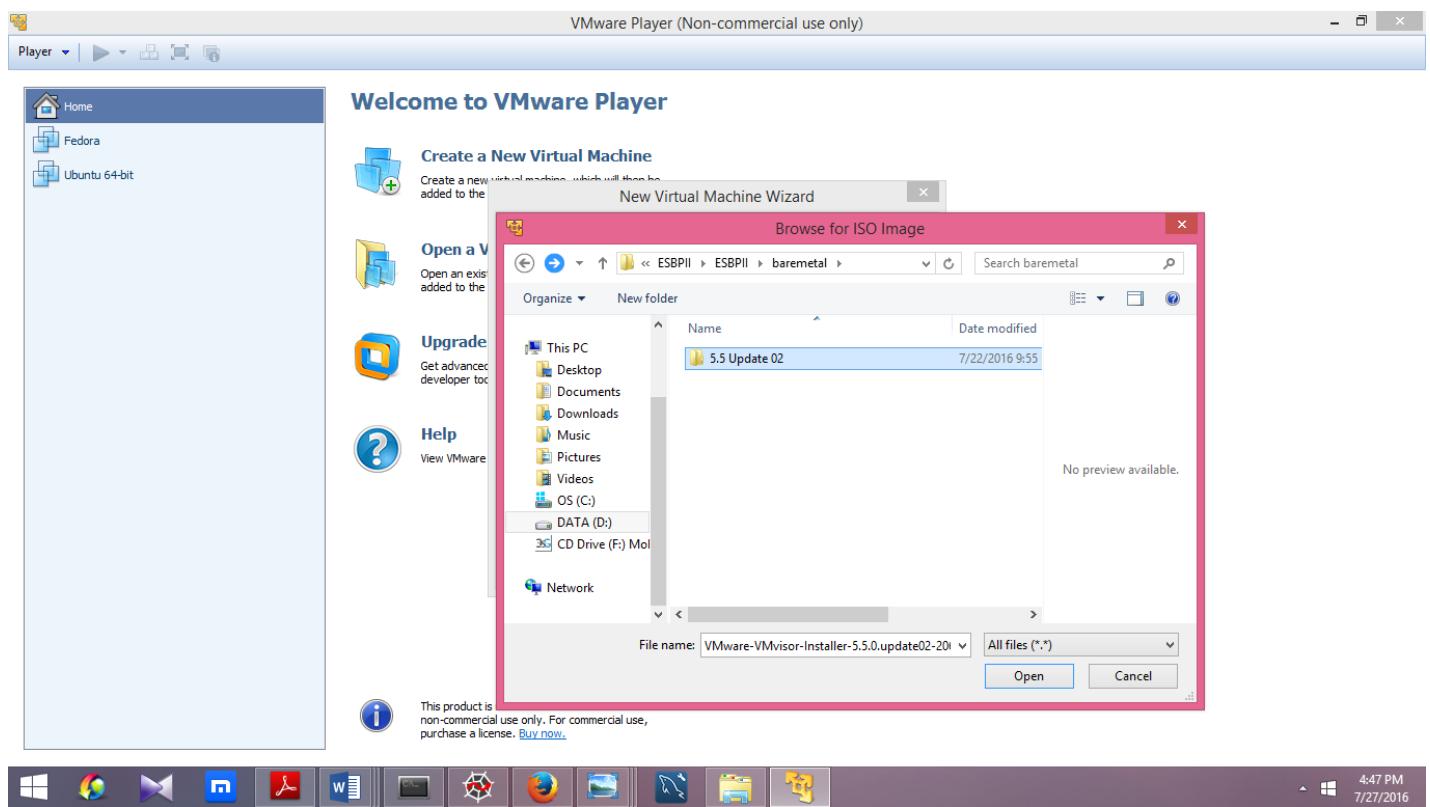
### Title :complete installation of ESXi 5 and the vSphere Client

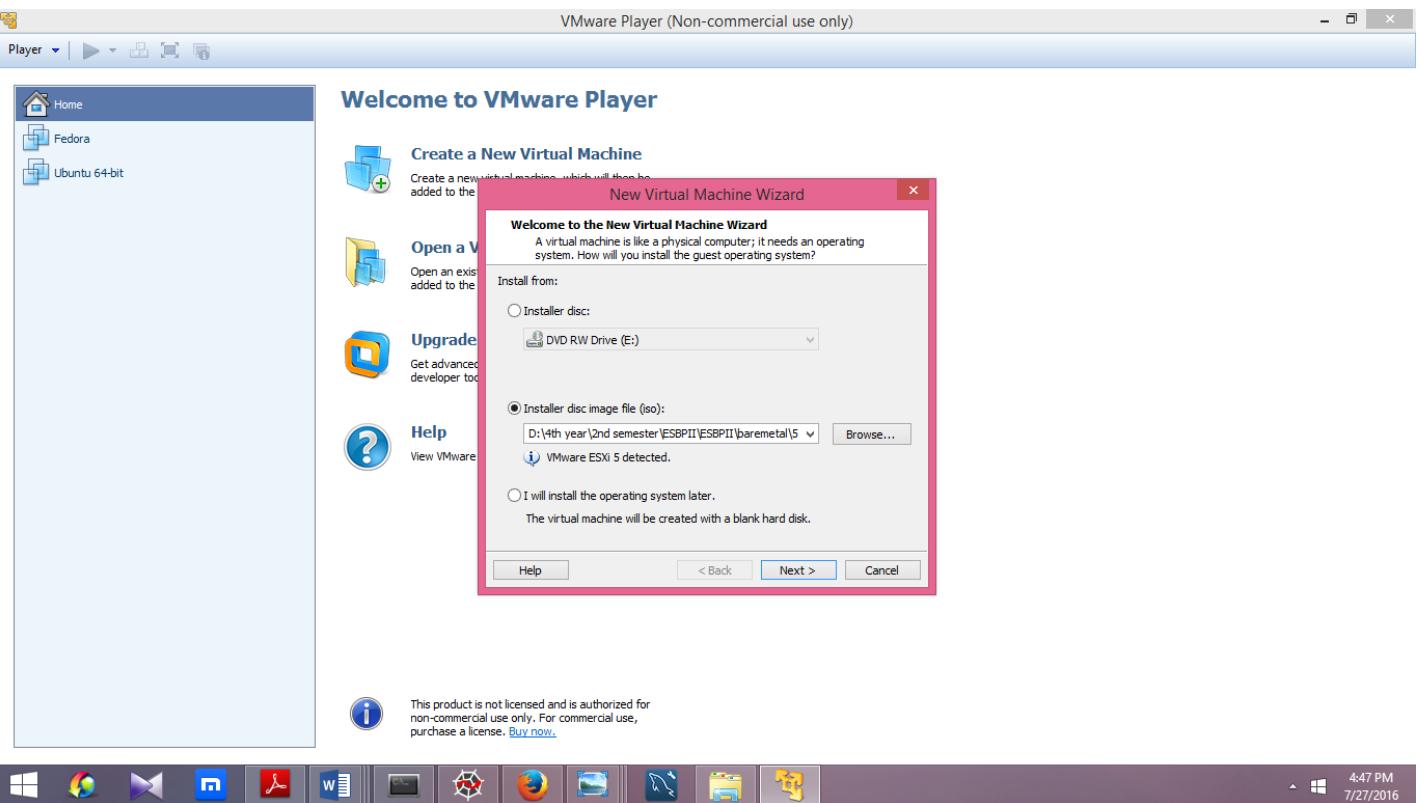
1) Need to add *new virtual machine on top of the current Operation System*.First open the VMware player.And click on **new virtual machine**.



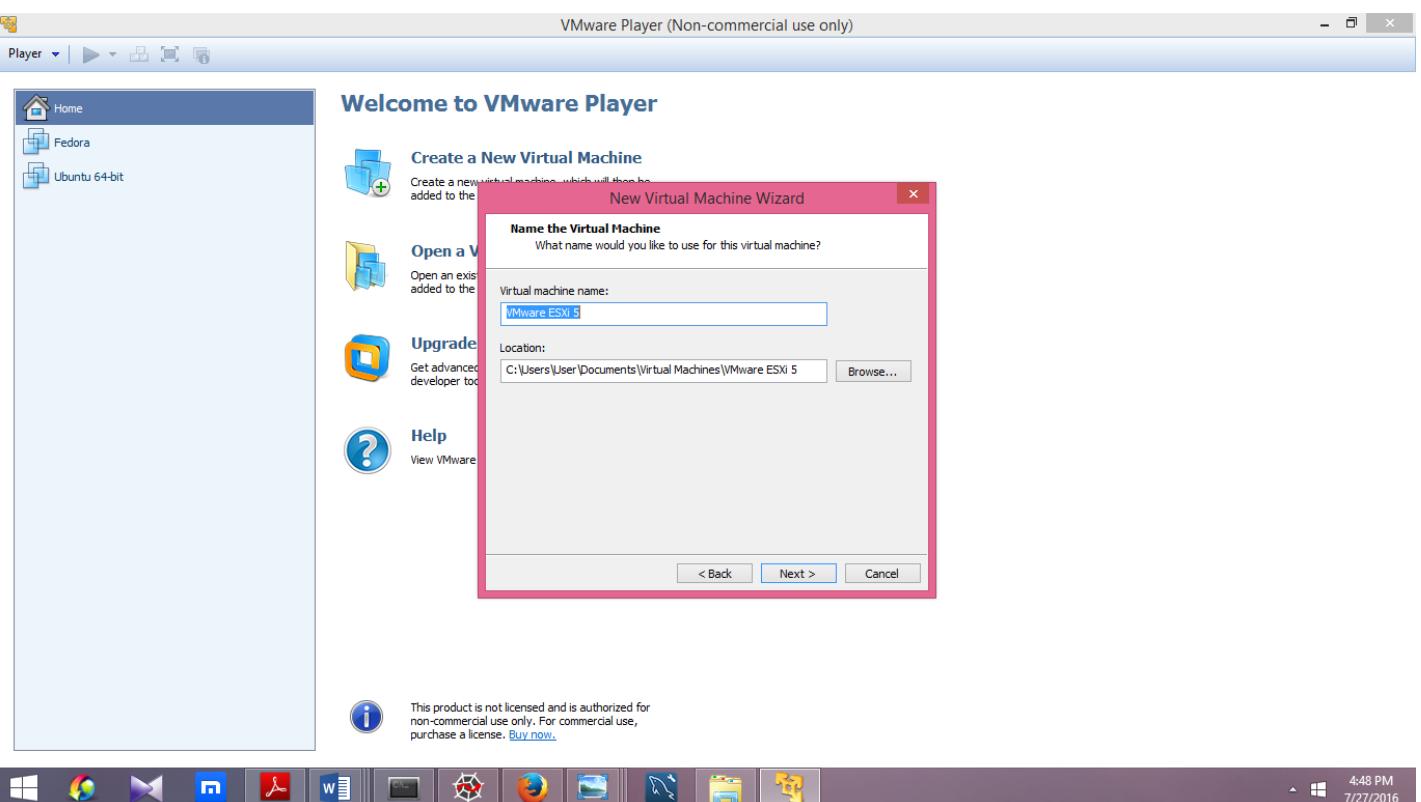
2) Then need to *install the baremetal* OS. Browse the baremetal installer to the **installer disk image file**.



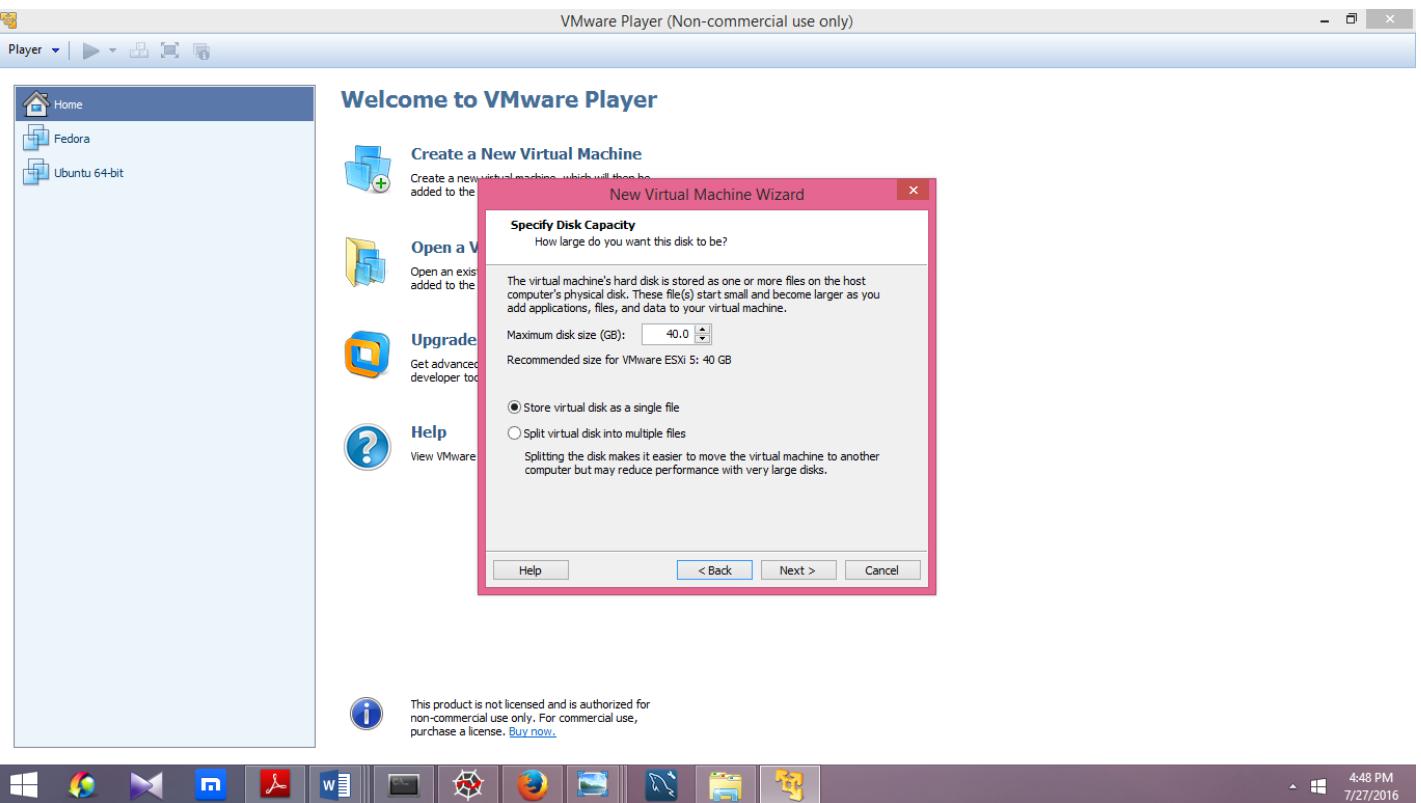




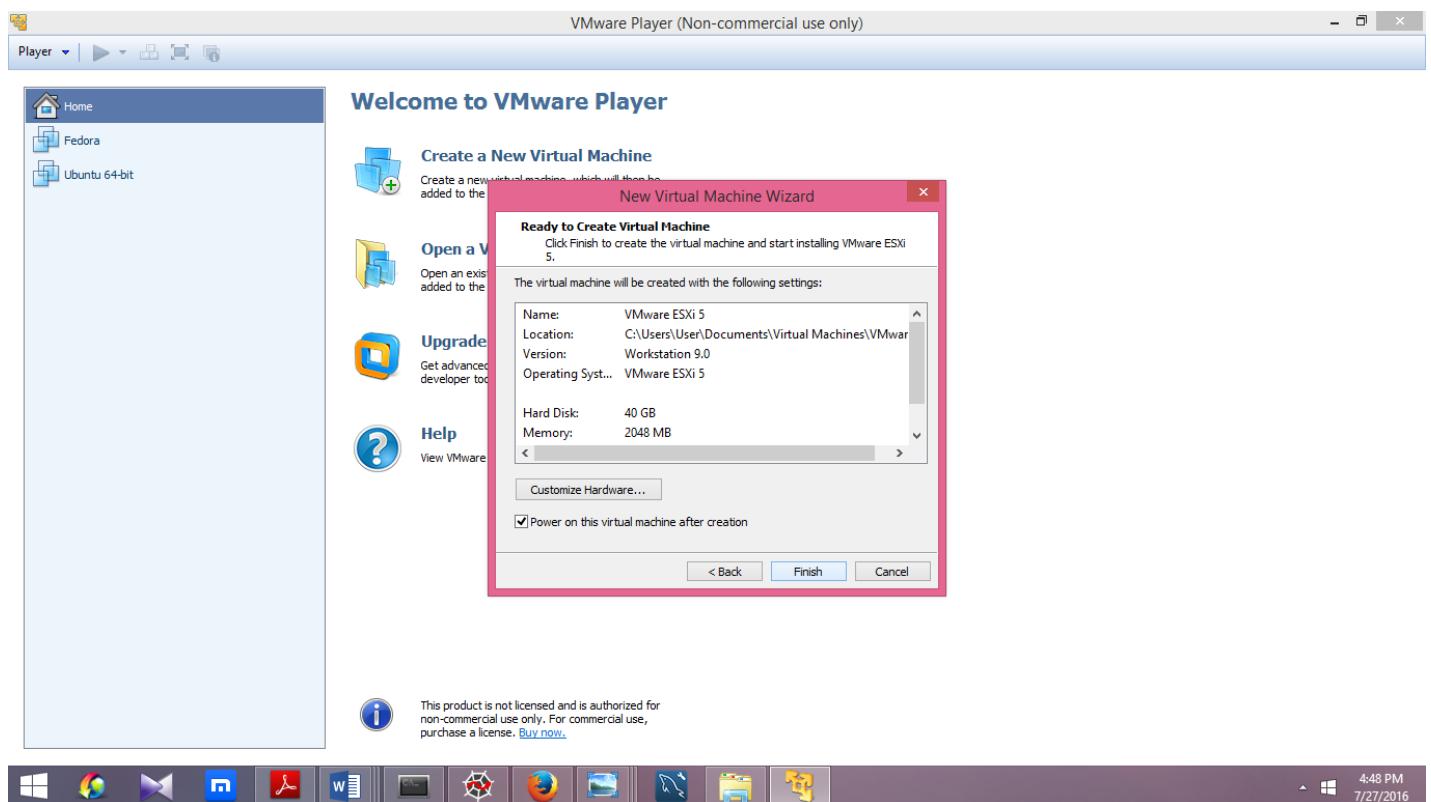
4) Then click on **next** button.



5) Choose Store virtual disk as a *single file*. go **next**



6) Then click on **finish**.

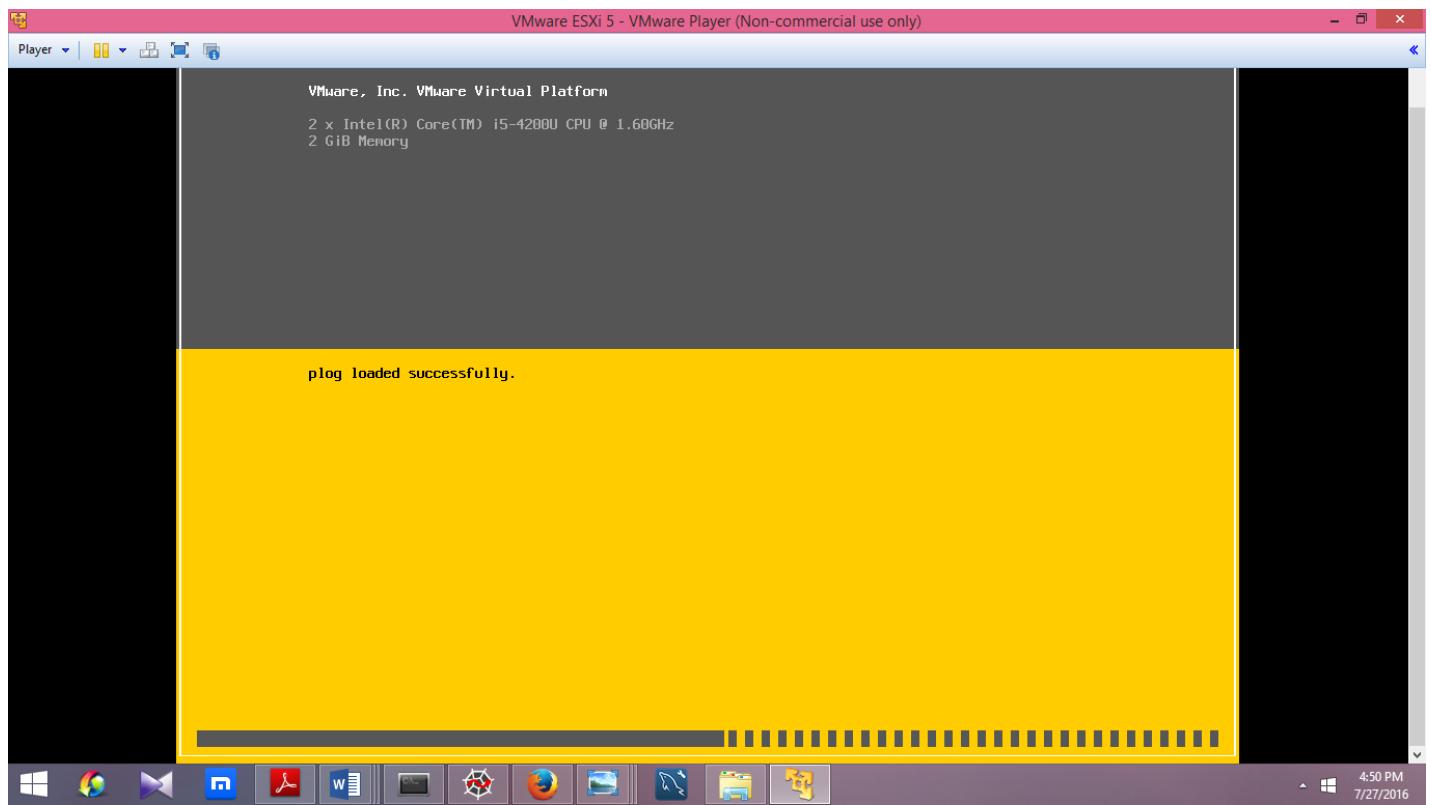


7) you start your server. From this menu, choose the *first option to start the ESXi 5 installer*.

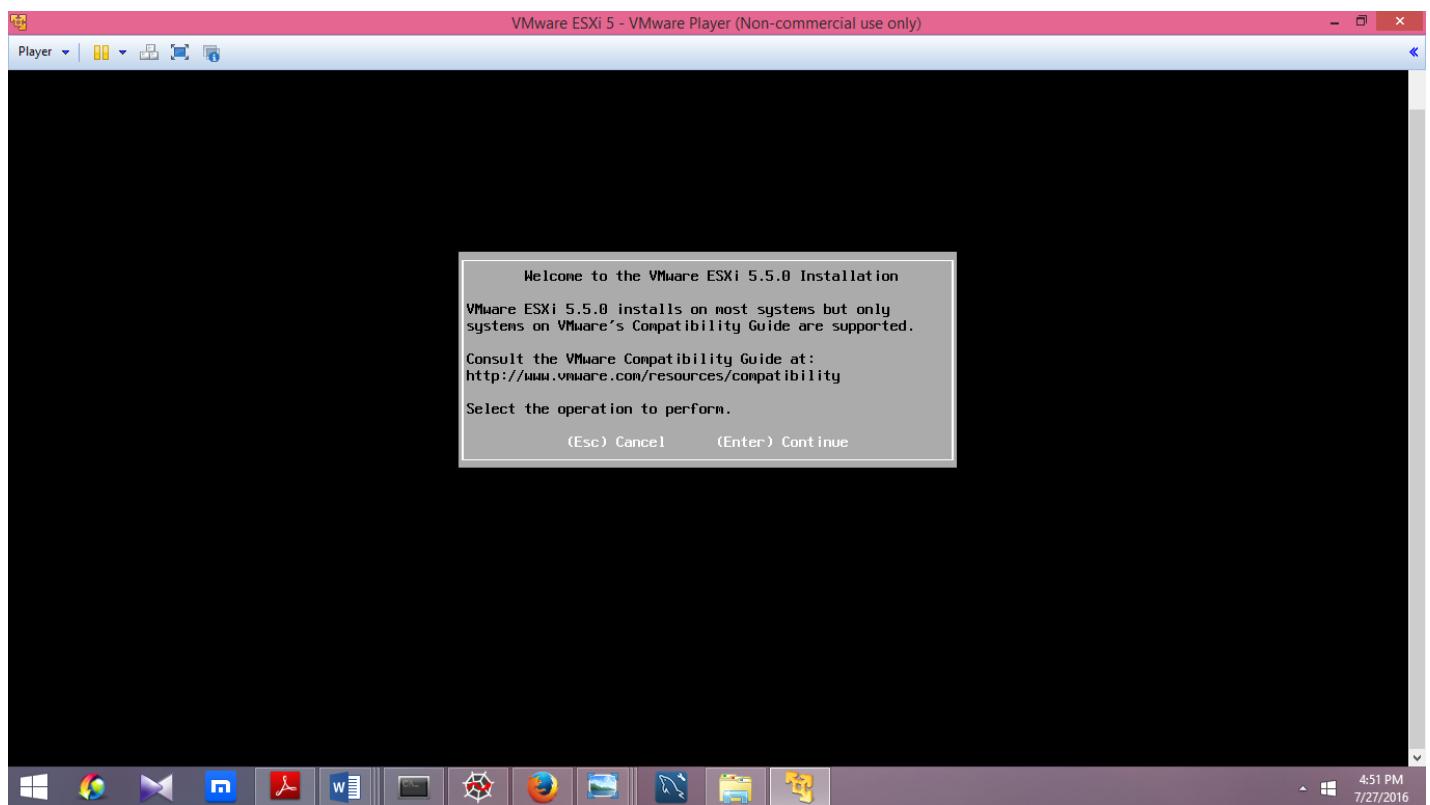
After you choose the installation option, the installer provides you with a window that details the **status of each file** that needs to be loaded.

```
Loading /net_mlx4.v01
Loading /net_nx_n.v00
Loading /net_tg3.v00
Loading /net_vmxn.v00
Loading /ohci_usb.v00
Loading /qlnative.v00
Loading /rste.v00
Loading /sata_ahc.v00
Loading /sata_ata.v00
Loading /sata_sat.v00
Loading /sata_sat.v01
Loading /sata_sat.v02
Loading /sata_sat.v03
Loading /sata_sat.v04
Loading /scsi_aac.v00
Loading /scsi_adp.v00
Loading /scsi_aic.v00
Loading /scsi_bnx.v00
Loading /scsi_bnx.v01
Loading /scsi_fni.v00
Loading /scsi_hps.v00
Loading /scsi_ips.v00
Loading /scsi_lpf.v00
Loading /scsi_meg.v00
Loading /scsi_meg.v01
Loading /scsi_meg.v02
Loading /scsi_mpt.v00
Loading /scsi_mpt.v01
Loading /scsi_mpt.v02
Loading /scsi_qla.v00
Loading /scsi_qla.v01
Loading /uhci_usb.v00
Loading /tools.t00
```

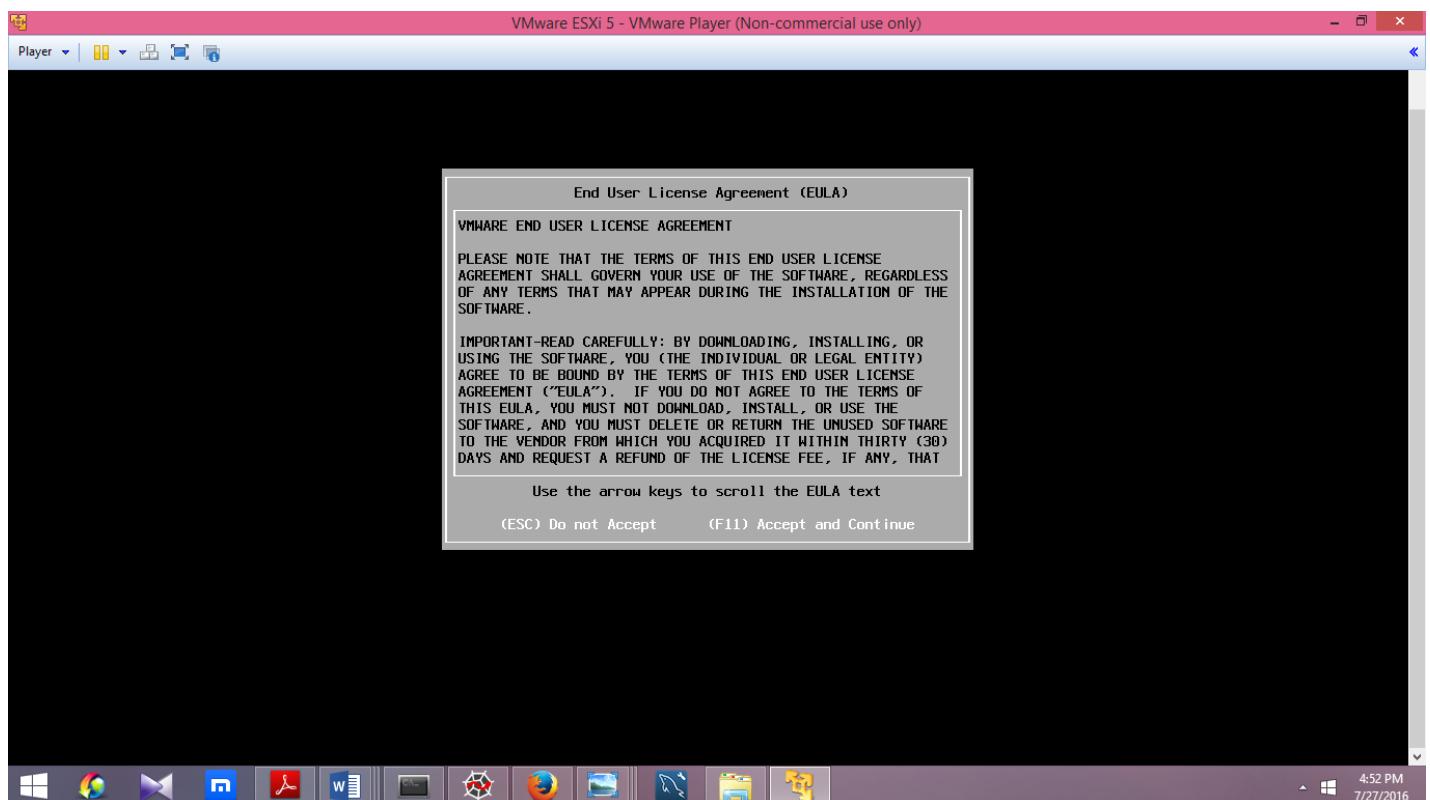
8) Below, you can see a screen that shows you some information *about your server*, including the **processor type** and **system RAM**.

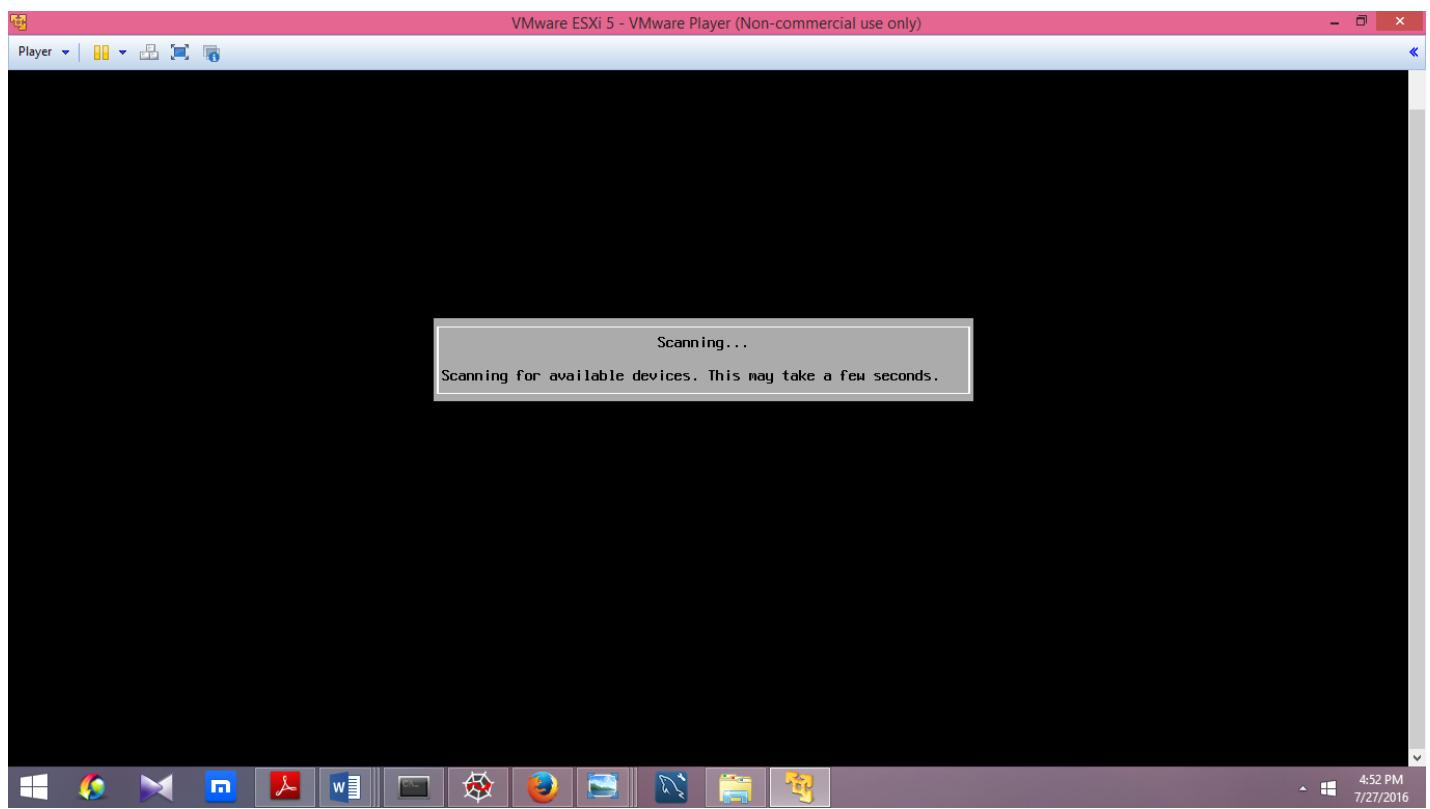


9) Then you can see a dialog *Welcome to the VMware ESXi Installation* and to continue with the installation, **press Enter** on your keyboard.

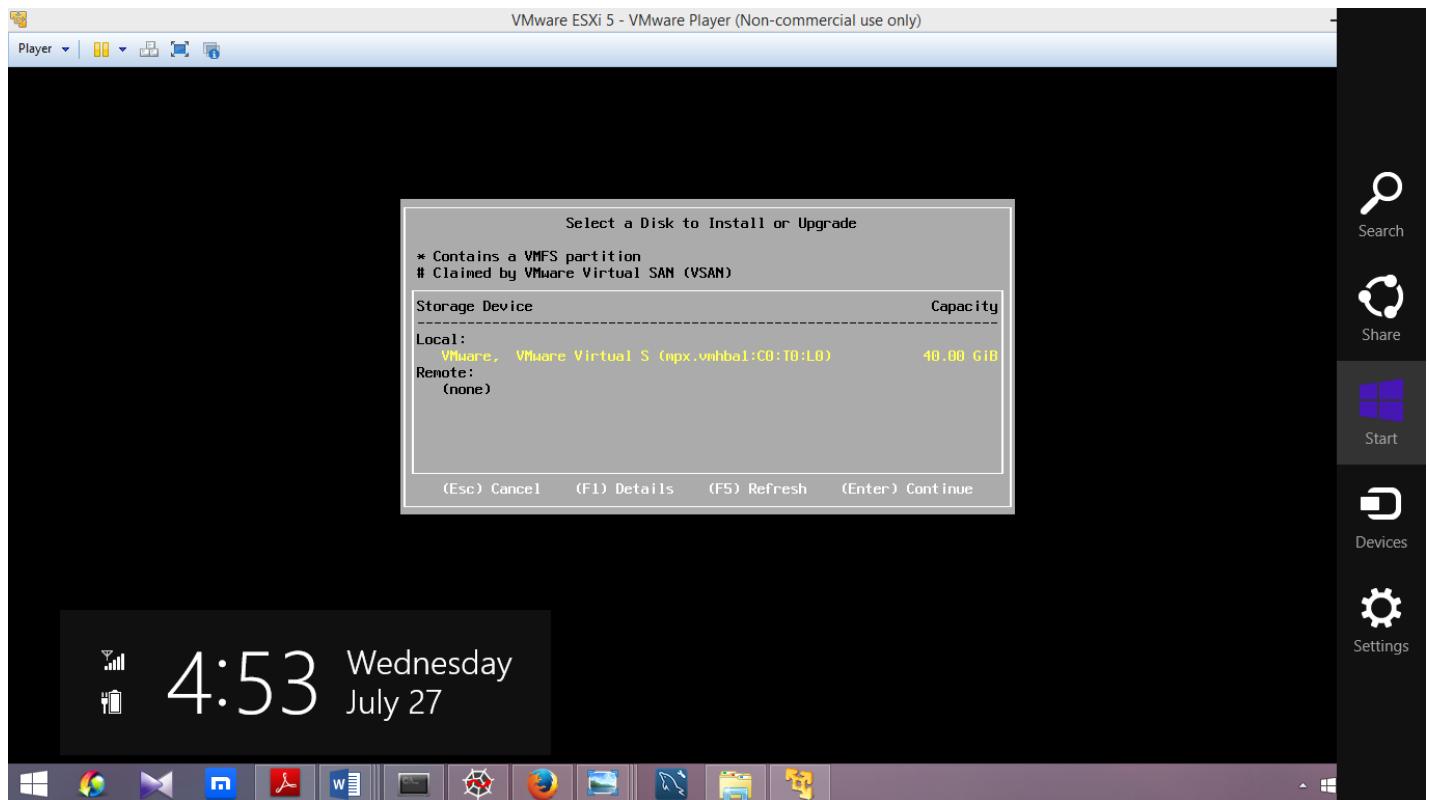


10) Then you can see the *End user license agreement* to accept the agreement **press F11**.

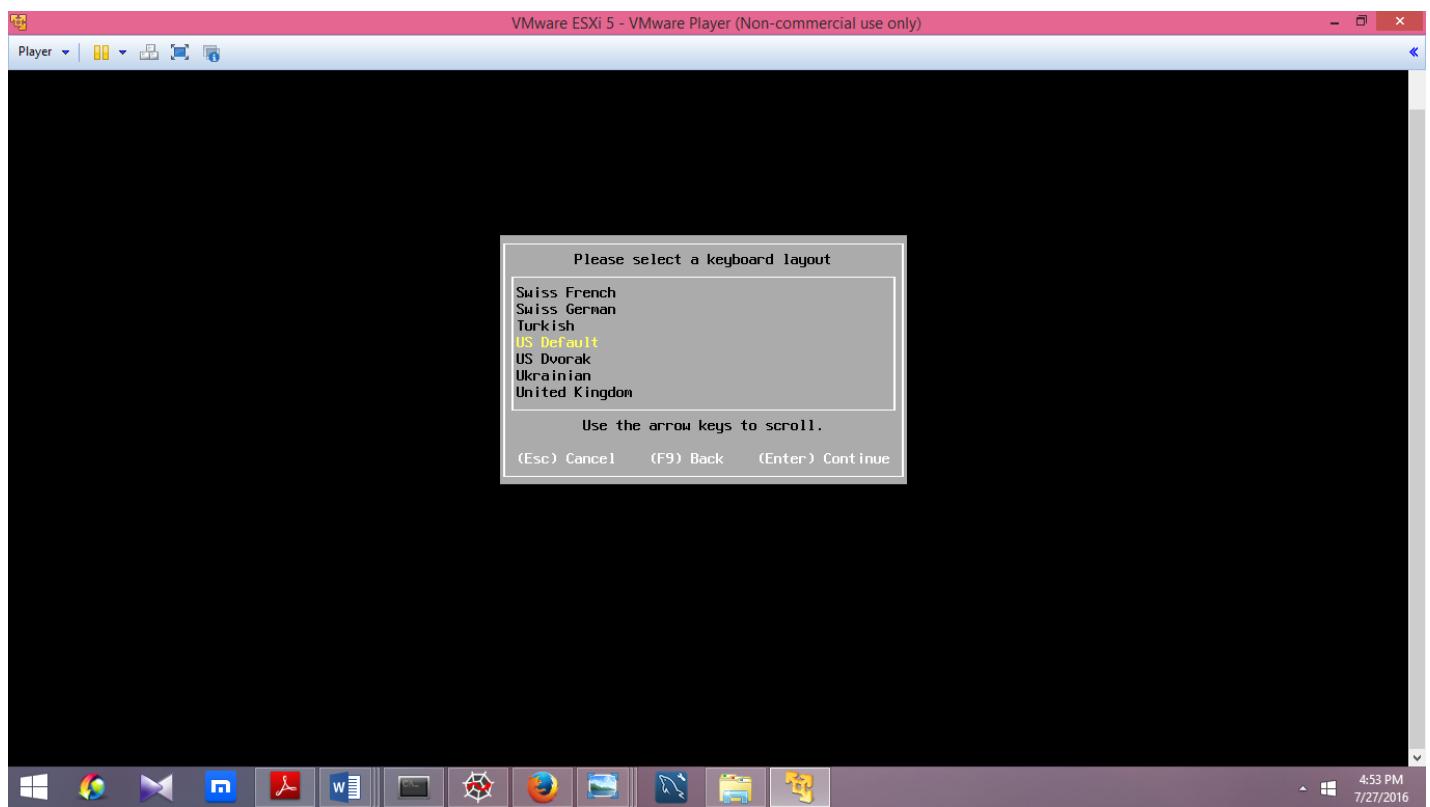




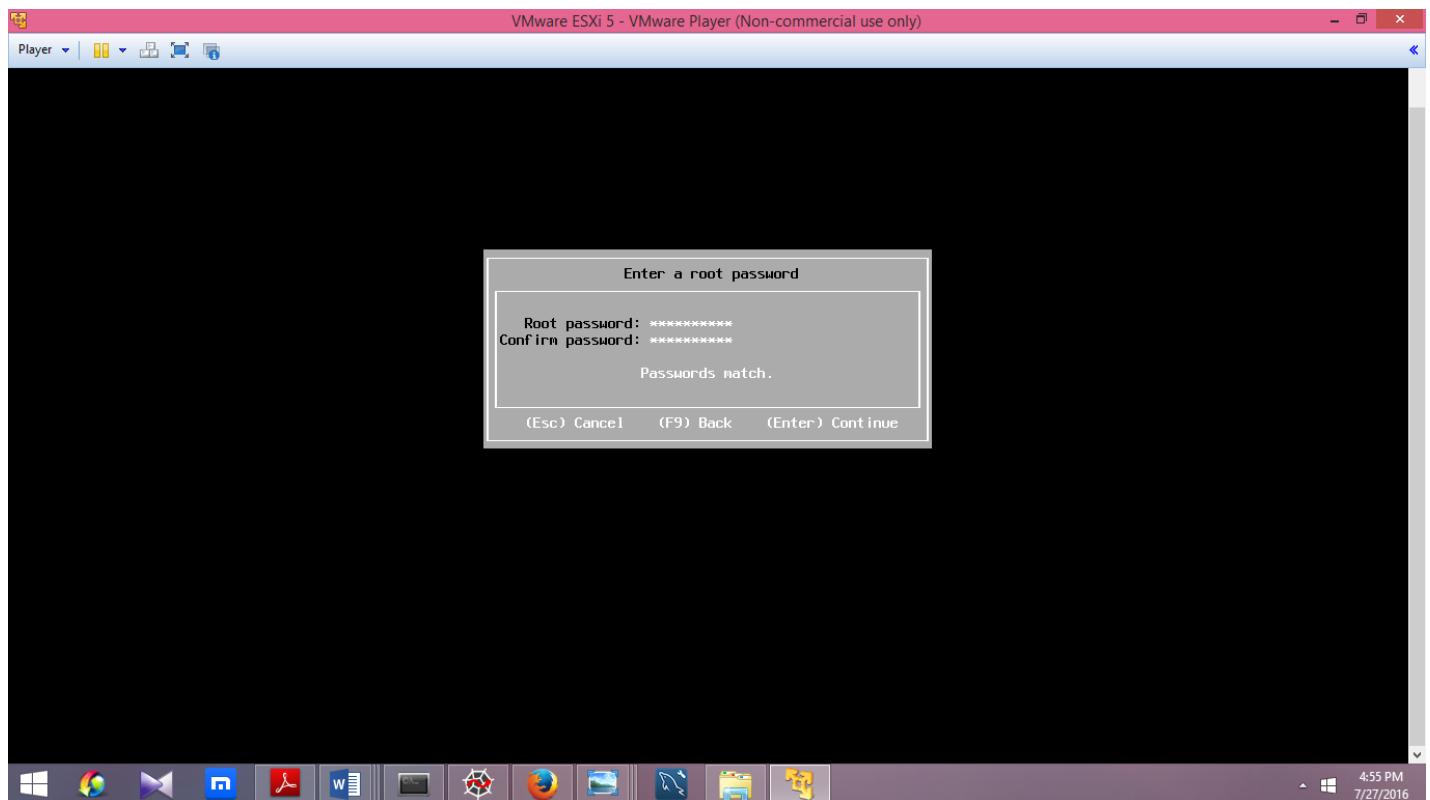
11) Then we have to choose a location to install ESXi 5. you can see that I have a single 40 GB volume from which to choose as an install location on my machine.Then press **Enter**.



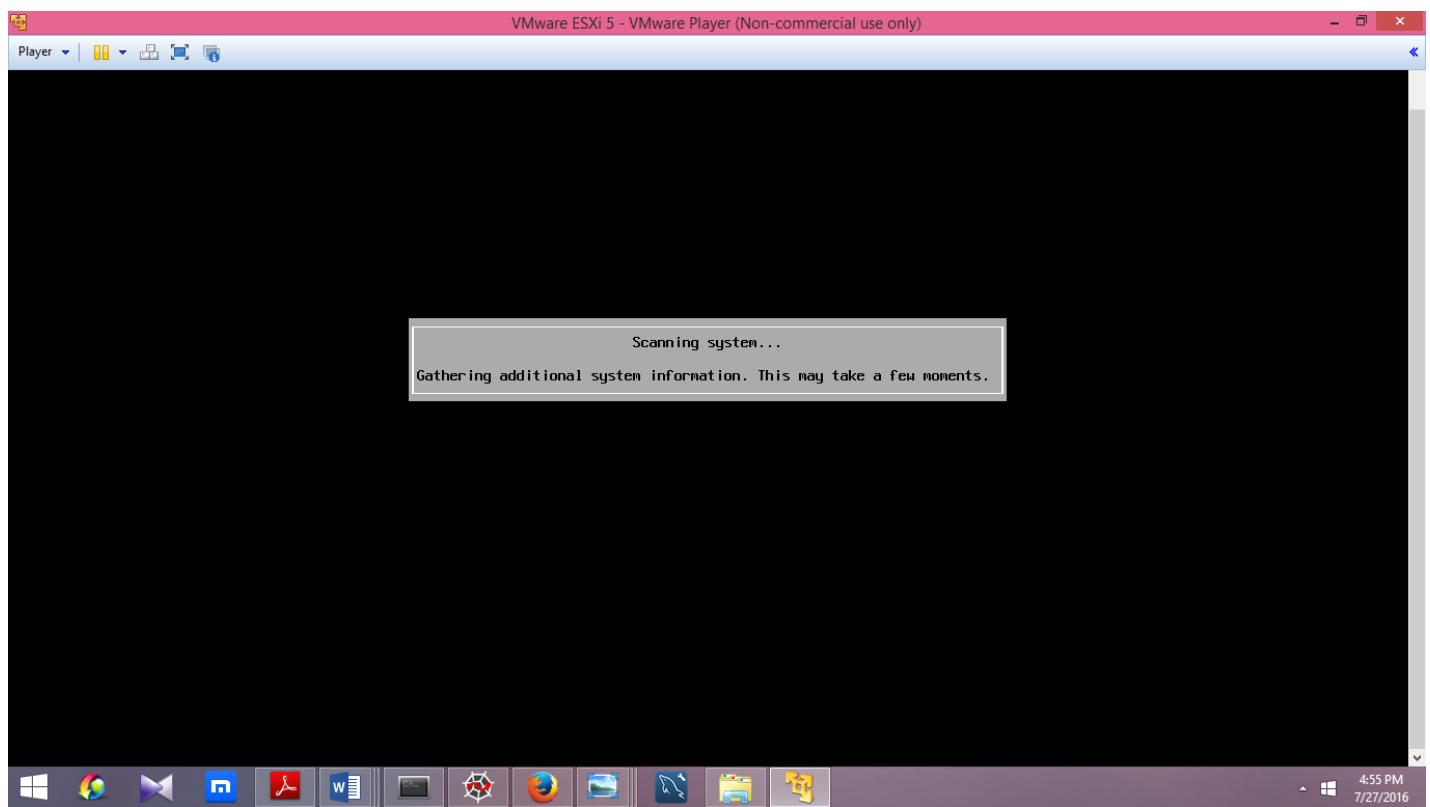
12) As the keyboard layout choose the US default option.press **Enter**.



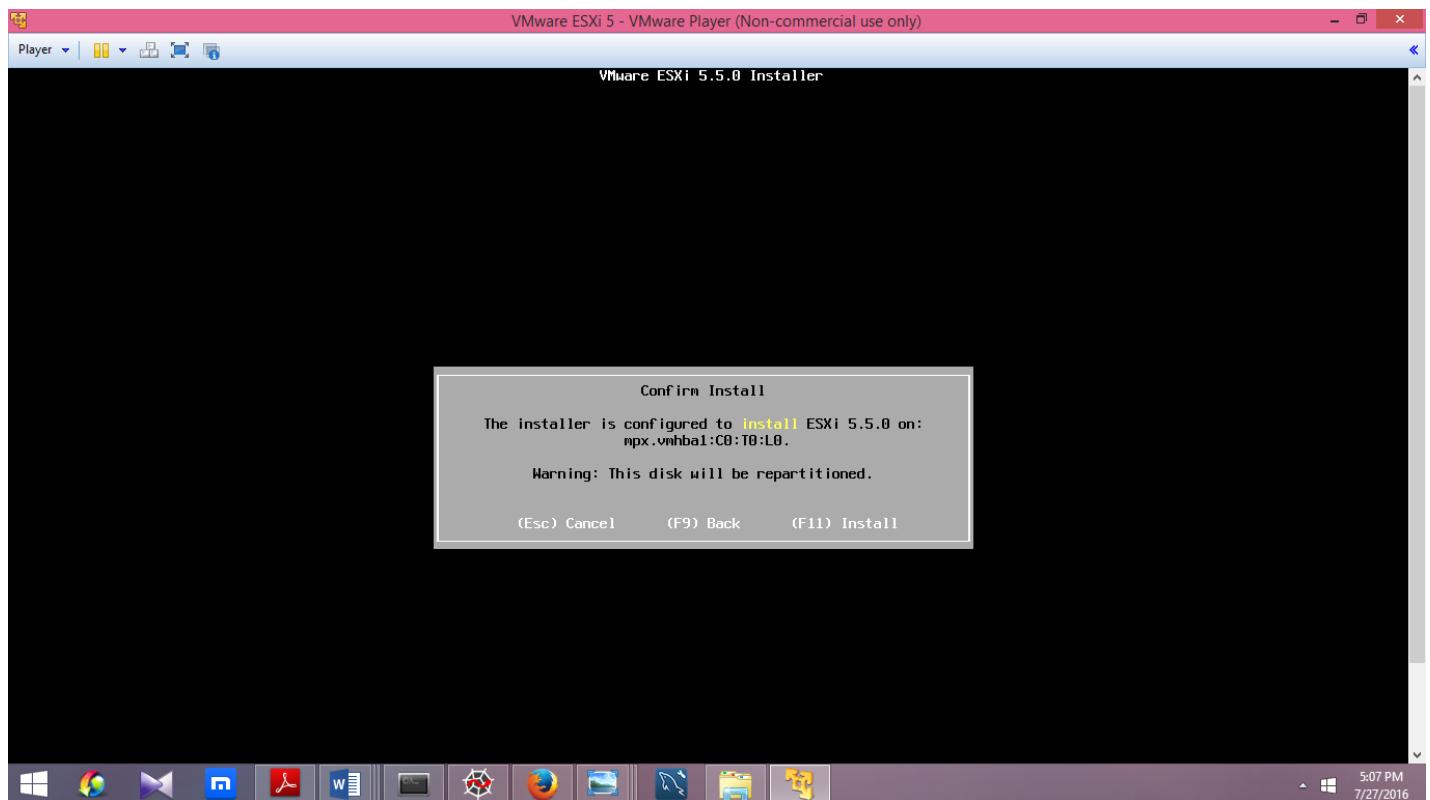
13) Then provide a *password* for the root user account.**press Enter**.



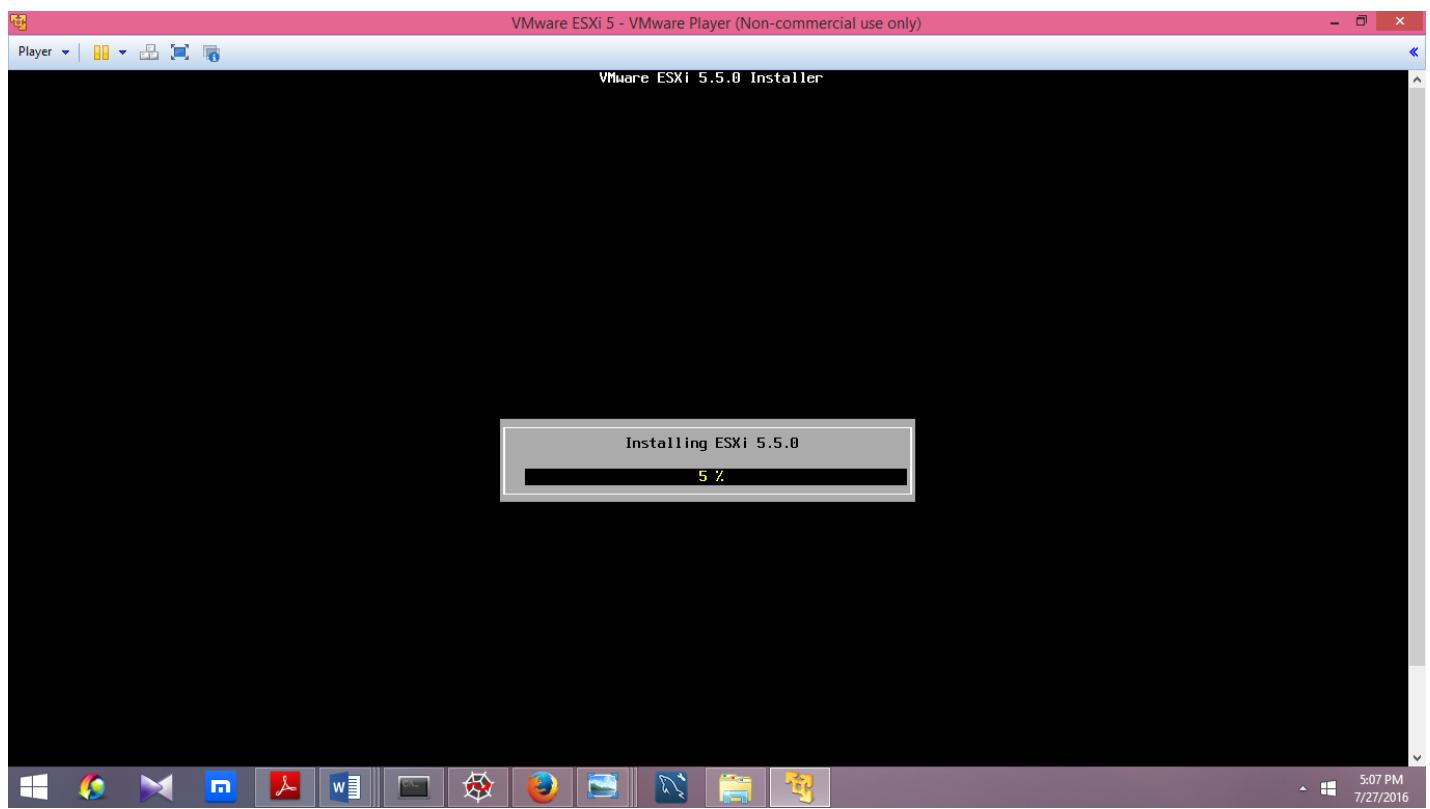
14) Then the *ESXi installer* scans the system to get additional information.



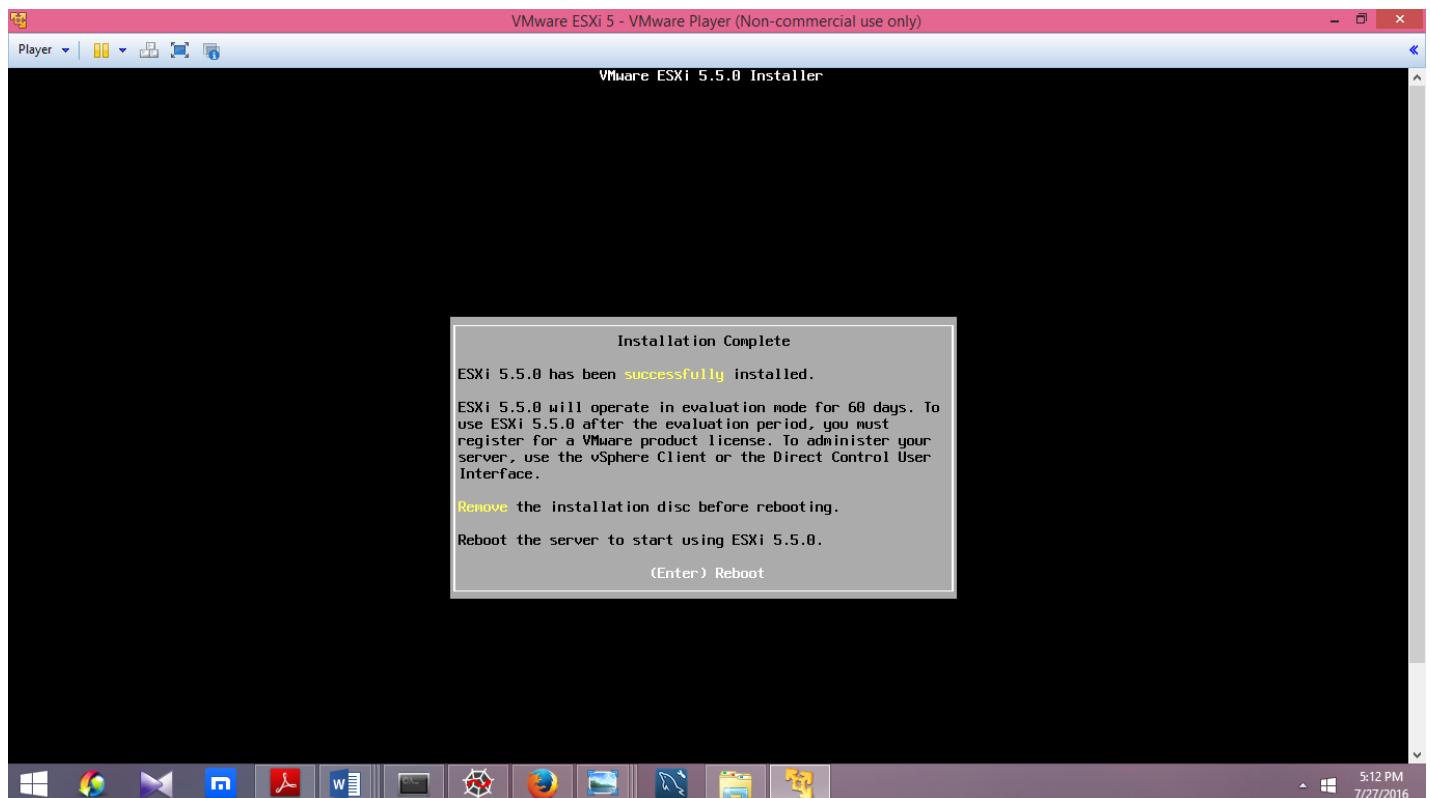
15) Then ask to confirm install. **Press F11 button** to install.



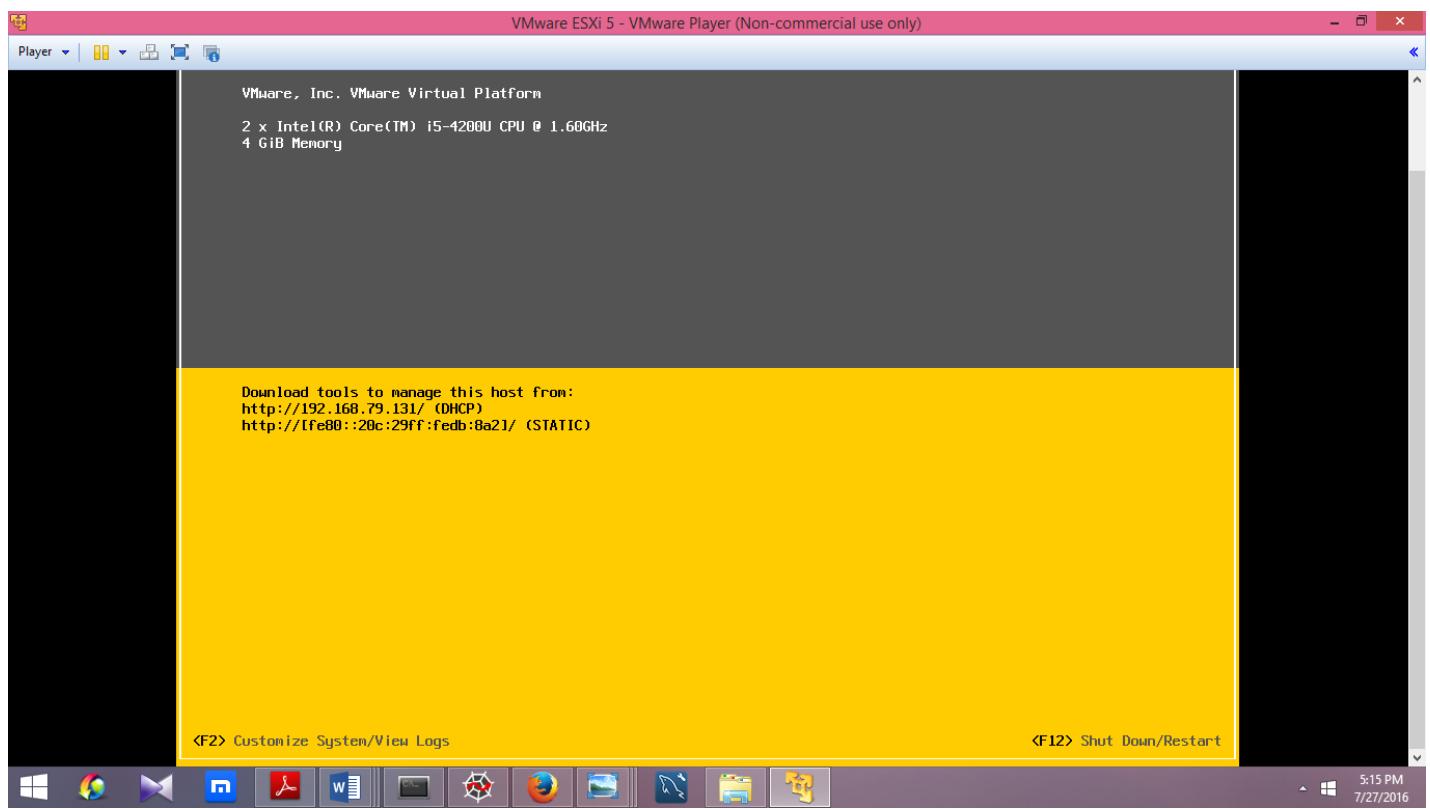
16) installation status will be shown next.



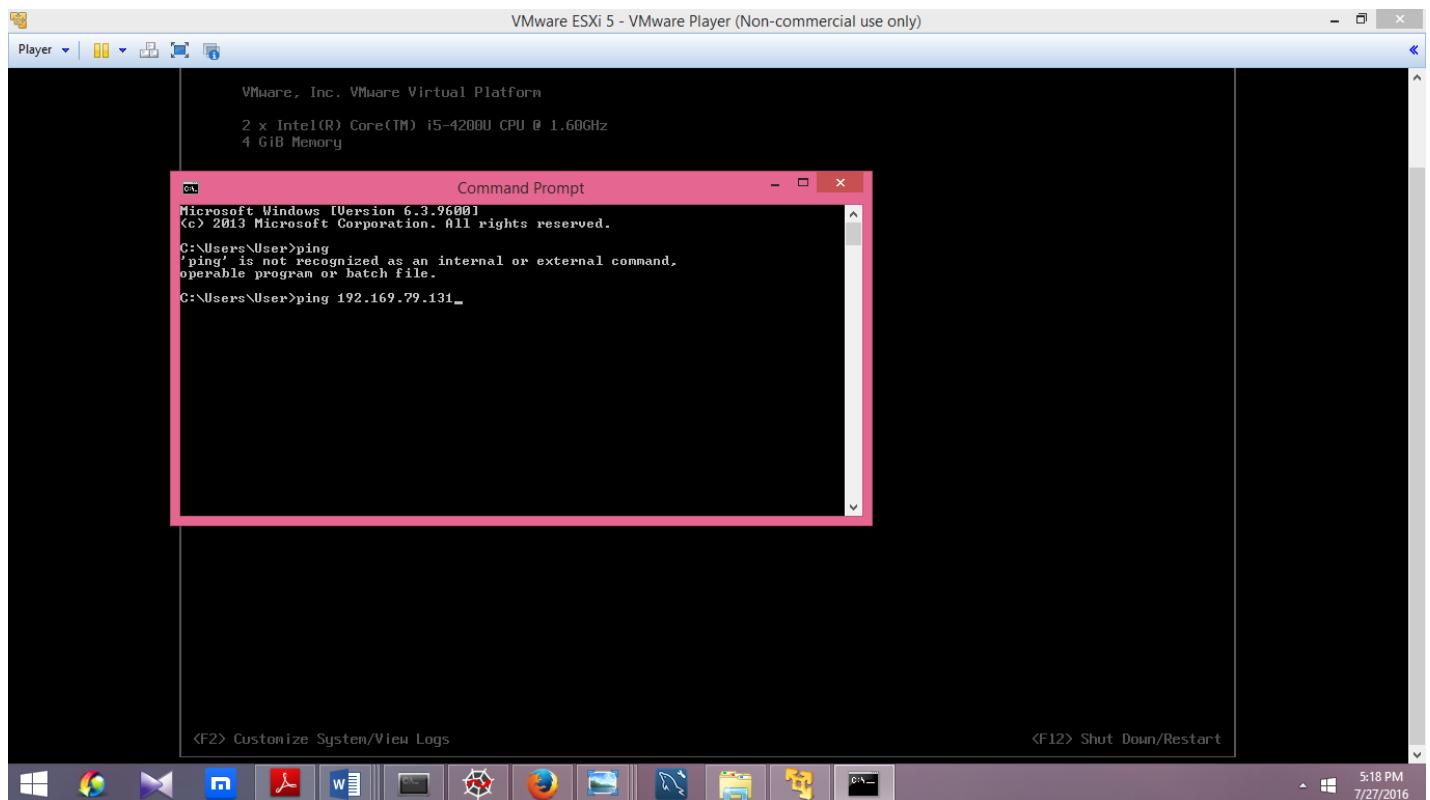
17) Then the installation complete dialog box will be shown to Reboot ,press Enter.



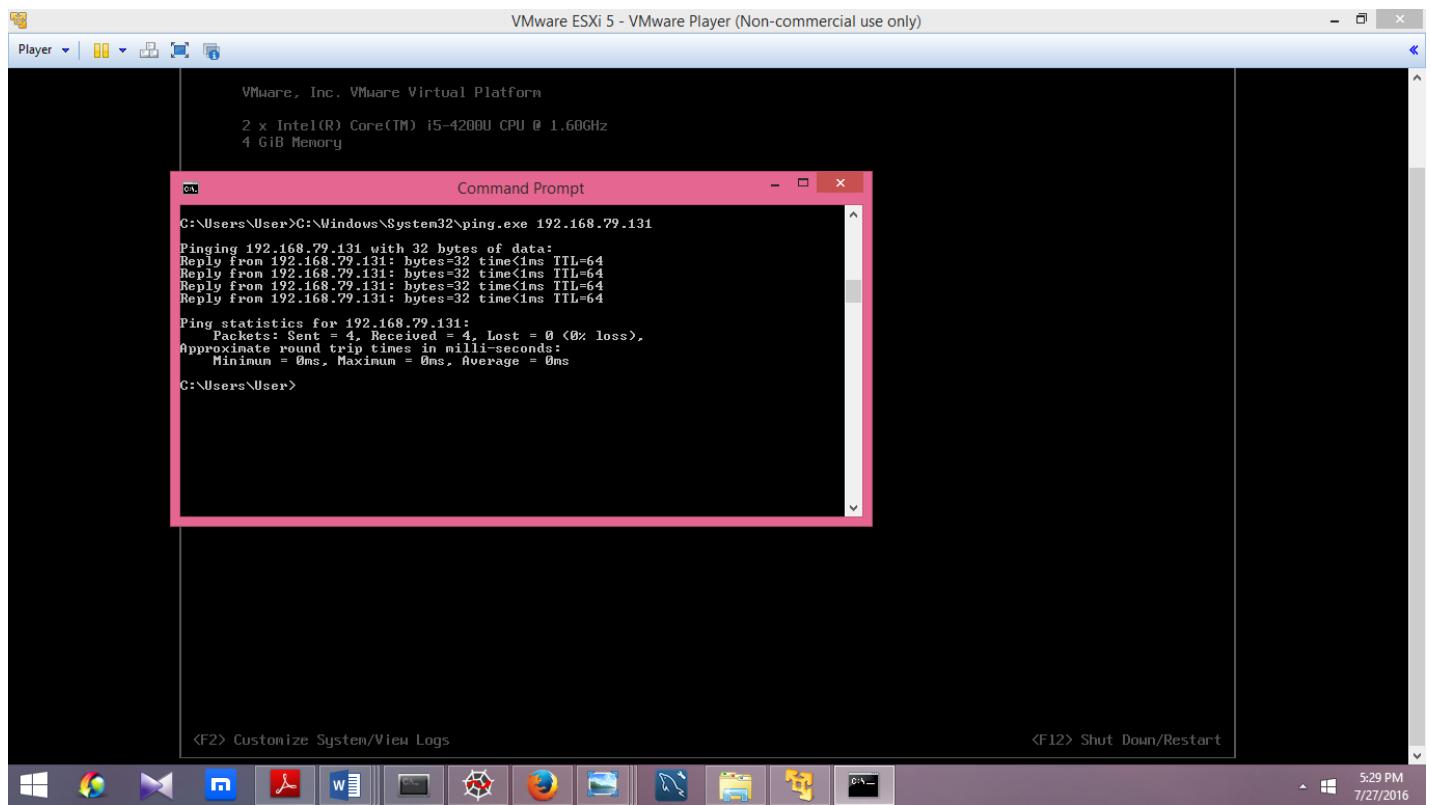
18) Get the IP address shown in below.



19) Get the *command prompt* and type ping 192.168.79.131.



20) then you can see the replies getting from the server.



## 21) Install the vSphere Client.

Get the IP address and search in a web browser. There you can download the vSphere client.

Google Search - 192.168.79.131

192.168.79 - United States - Internet Assigned Numbers  
https://db-ip.com/all/192.168.79

192.168.79.0 - 192.168.79.255 is an IP address range owned by Internet Assigned Numbers Authority and located in United States - select an address below for ...

Samba troubleshooting guide - MEPIS Documentation Wiki  
www.mepis.org/docs/en/index.php?title=Samba\_troubleshooting...

192.168.79.127, 10.0.0.10, 10.1.1. If your network addresses don't start with any of the listed numbers, you aren't going to be able to connect to the network shared ...

linux - Apache server on centos (by VMware) - Server Fault  
serverfault.com/questions/.../apache-server-on-centos-by-vmware

Jul 2, 2014 ... host (windows server) by using http://localhost:8888 ! but when i use Linux IP and port like 192.168.79.80 i can't see the Apache server page!

OmniSphere – SDN for Office Network – (Stratosphere)  
www.ieice.org/~nv/nvs2013/demo/nvs3e-5-stratosphere.pdf

File Format: PDF/Adobe Acrobat  
... for Sales or 192.168.79.0/24 for R&D. DHCP server. Authen\*ca\*on server. Segment-A (for Sales): 192.168.123.0/24. Segment--B (for R&D): 192.168.79.0/24

Welcome to VMware ESXi

https://192.168.79.131/

Maxthon Now Google Search Google Gmail Amazon eBay MX Games Image Recognition ... Shape Detection & T... Lecture 5.4 — Conv... Does any body know... Exam Gui >

## VMware ESXi Welcome

### Getting Started

If you need to access this host remotely, use the following program to install vSphere Client software. After running the installer, start the client and log in to this host.

Please note that the traditional vSphere Client does not support features added to vSphere in the 5.1 and 5.5 releases. The traditional vSphere Client is intended for use if you need to connect directly to an ESXi host, are performing certain vSphere Update Manager operations, or are running vCenter Plug-ins that support only the vSphere Client such as vCenter Site Recovery Manager or vCenter Multi-Hypervisor Manager.

You can take advantage of the fullest range of functionality introduced or updated in this release by using the vSphere Web Client.

- Download vSphere Client

To streamline your IT operations with vSphere, use the following program to install vCenter. vCenter will help you consolidate and optimize workload distribution across ESX hosts, reduce new system deployment time from weeks to seconds, monitor your virtual computing environment around the clock, avoid service disruptions due to planned hardware maintenance or unexpected failure, centralize access control, and automate system administration tasks.

For Administrators

#### vSphere Remote Command Line

The Remote Command Line allows you to use command line tools to manage vSphere from a client machine. These tools can be used in shell scripts to automate day-to-day operations.

- Download the Virtual Appliance
- Download the Windows Installer (exe)
- Download the Linux Installer (tar.gz)

#### Web-Based Datastore Browser

Use your web browser to find and download files (for example, virtual machine and virtual disk files).

- Browse datastores in this host's inventory

For Developers

#### vSphere Web Services SDK

Learn about our latest SDKs, Toolkits, and APIs for managing VMware ESX, ESXi, and VMware vCenter. Get sample code, reference documentation, participate in our Forum Discussions, and view our latest Sessions and Webinars.

http://vsphereclient.vmware.com/vsphereclient/1/9/3/0/7/2/VMware-viclient-all-5.5.0-1993072.exe

5:32 PM 7/27/2016

Welcome to VMware ESXi

https://192.168.79.131/

Maxthon Now Google Search Google Gmail Amazon eBay MX Games Image Recognition ... Shape Detection & T... Lecture 5.4 — Conv... Does any body know... Exam Gui >

## VMware ESXi Welcome

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Download File Info

URL: http://vsphereclient.vmware.com/vsphereclient/1/9/3/0/7/2/VMware-vic

Category: Programs

Save As: C:\Users\User\Desktop\VMware-viclient-all-5.5.0-1993072.exe

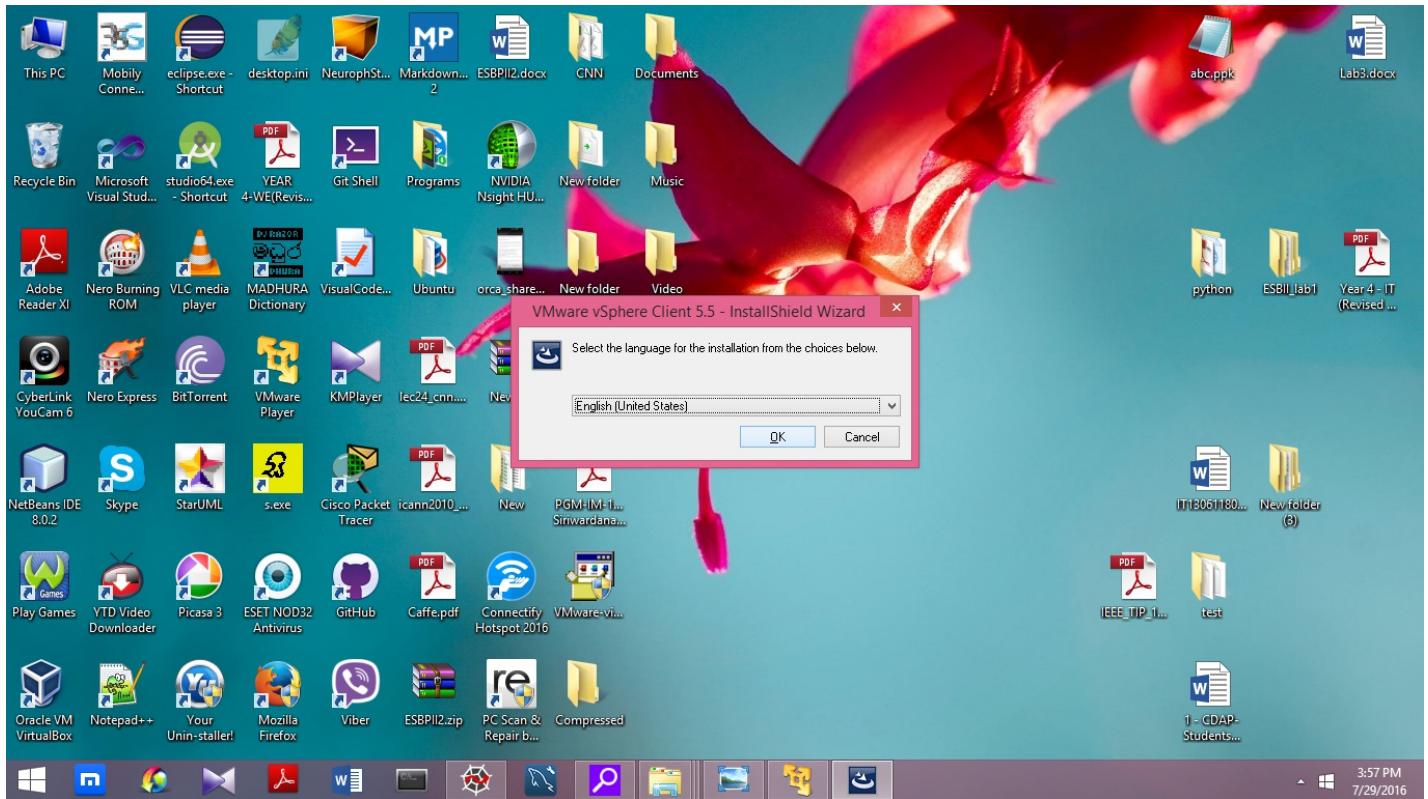
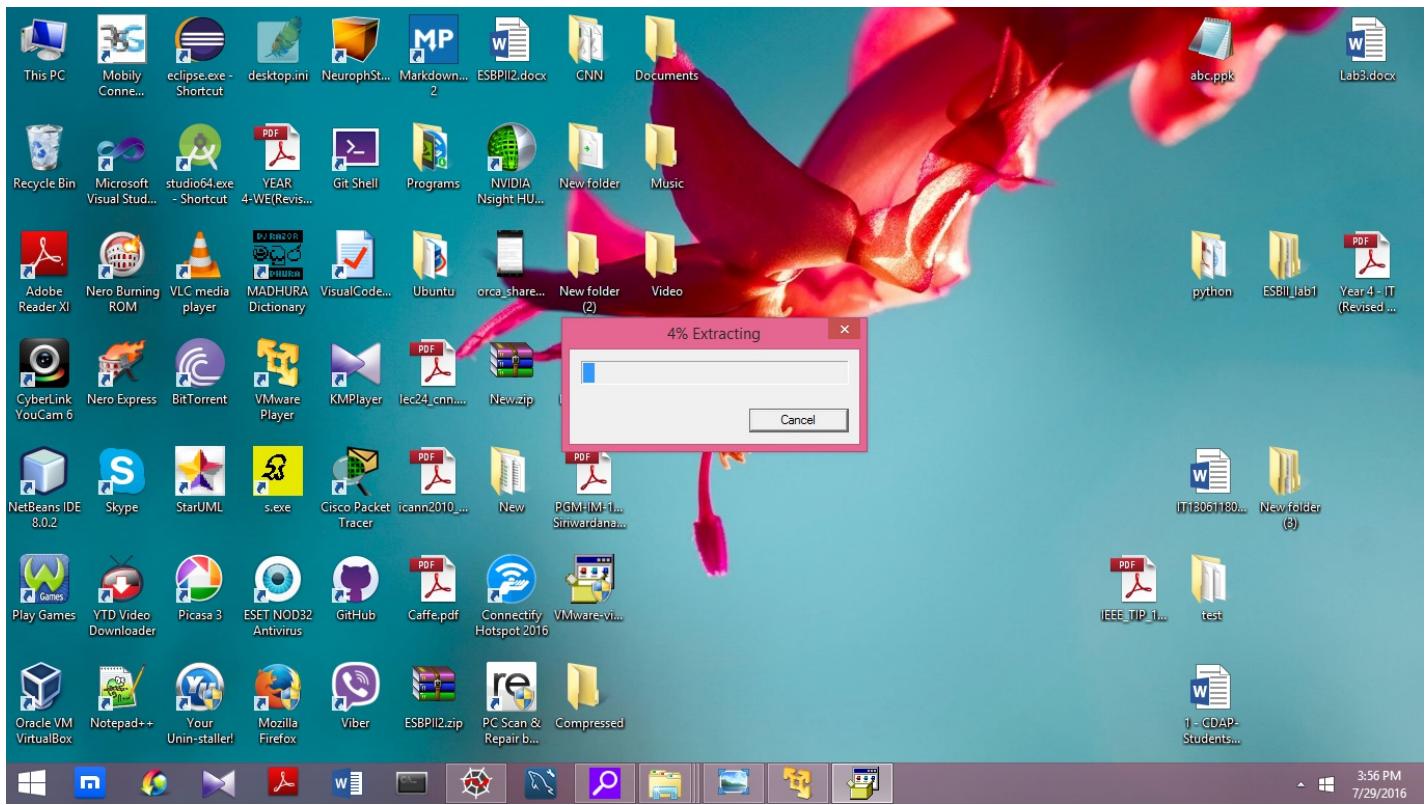
Description:

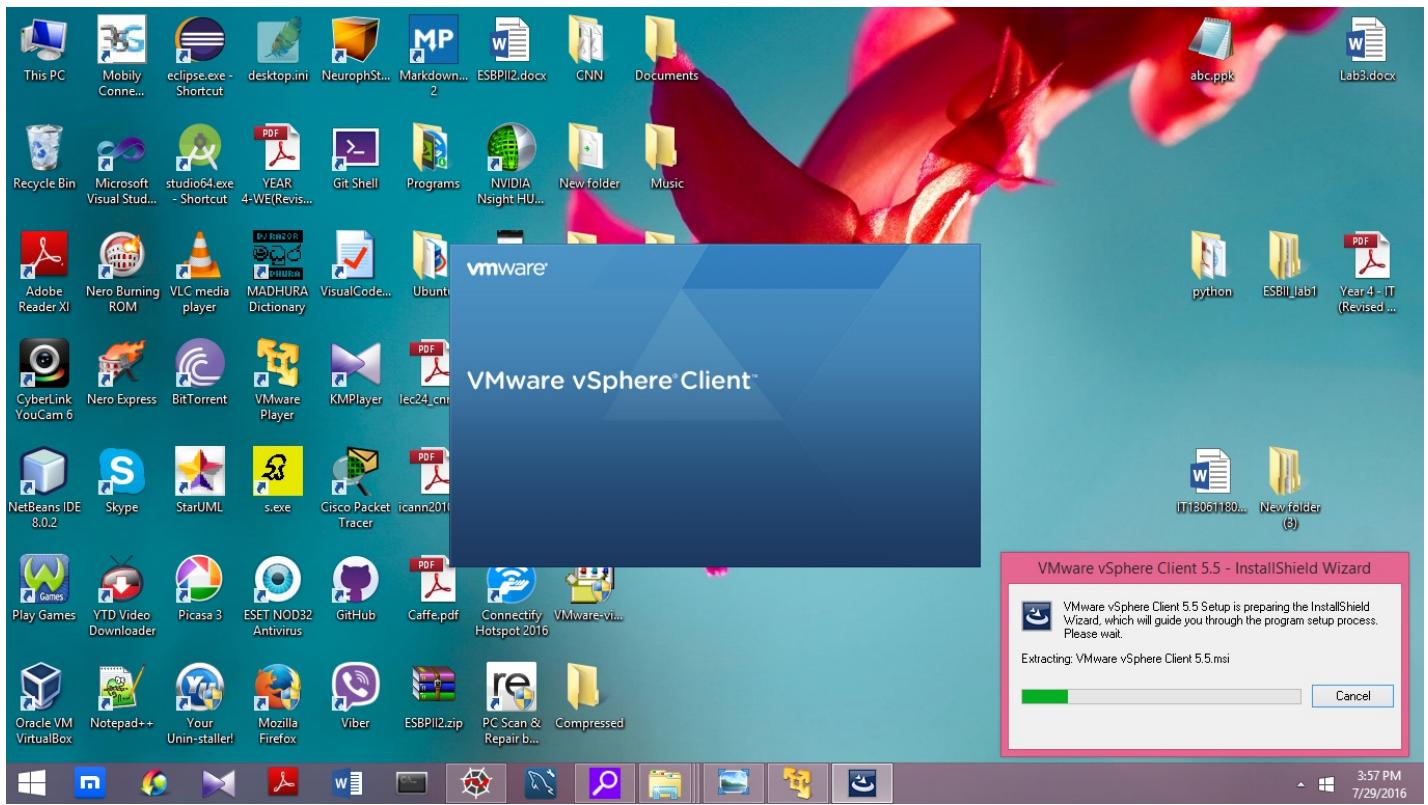
357.76 MB

Remember this path for "Programs" category

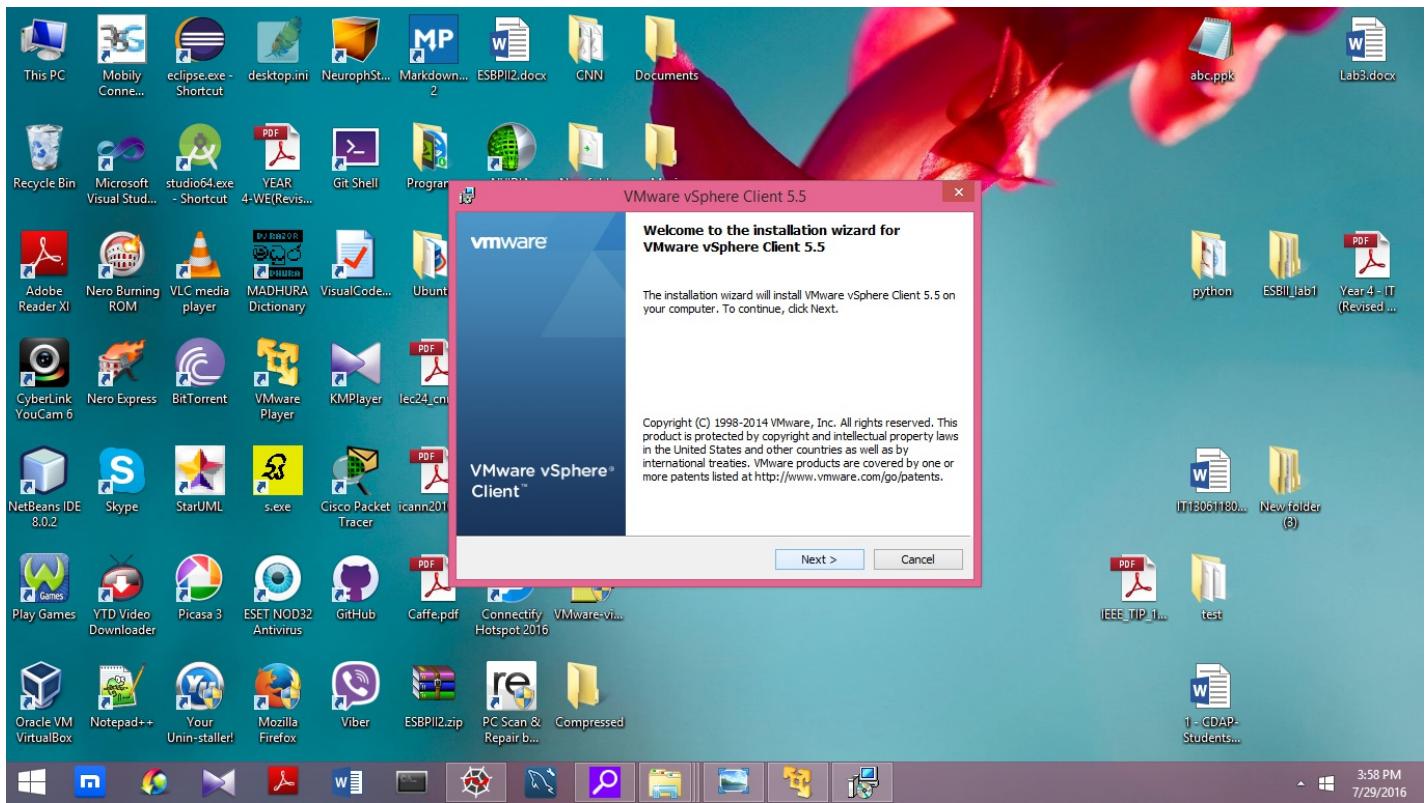
Download Later Start Download Cancel

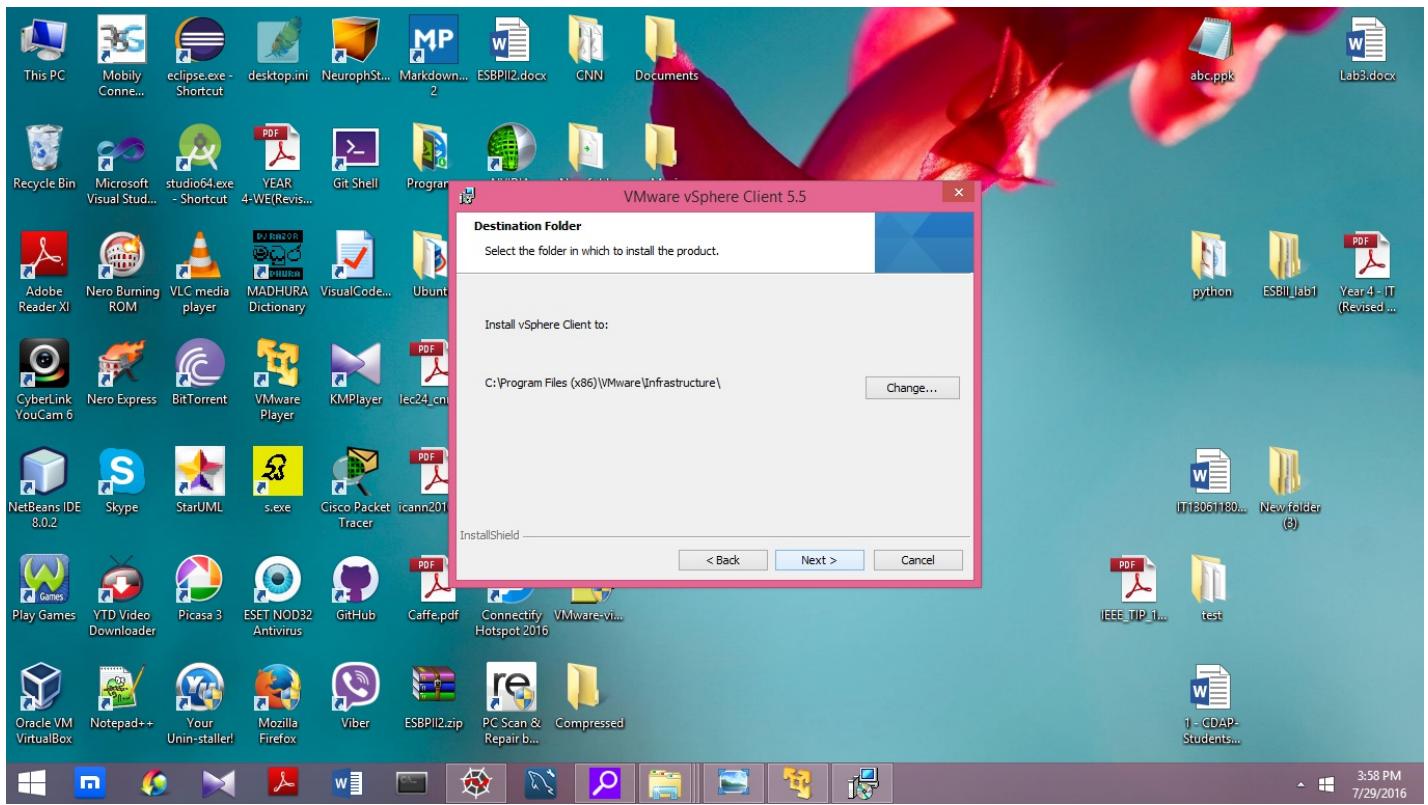
5:33 PM 7/27/2016



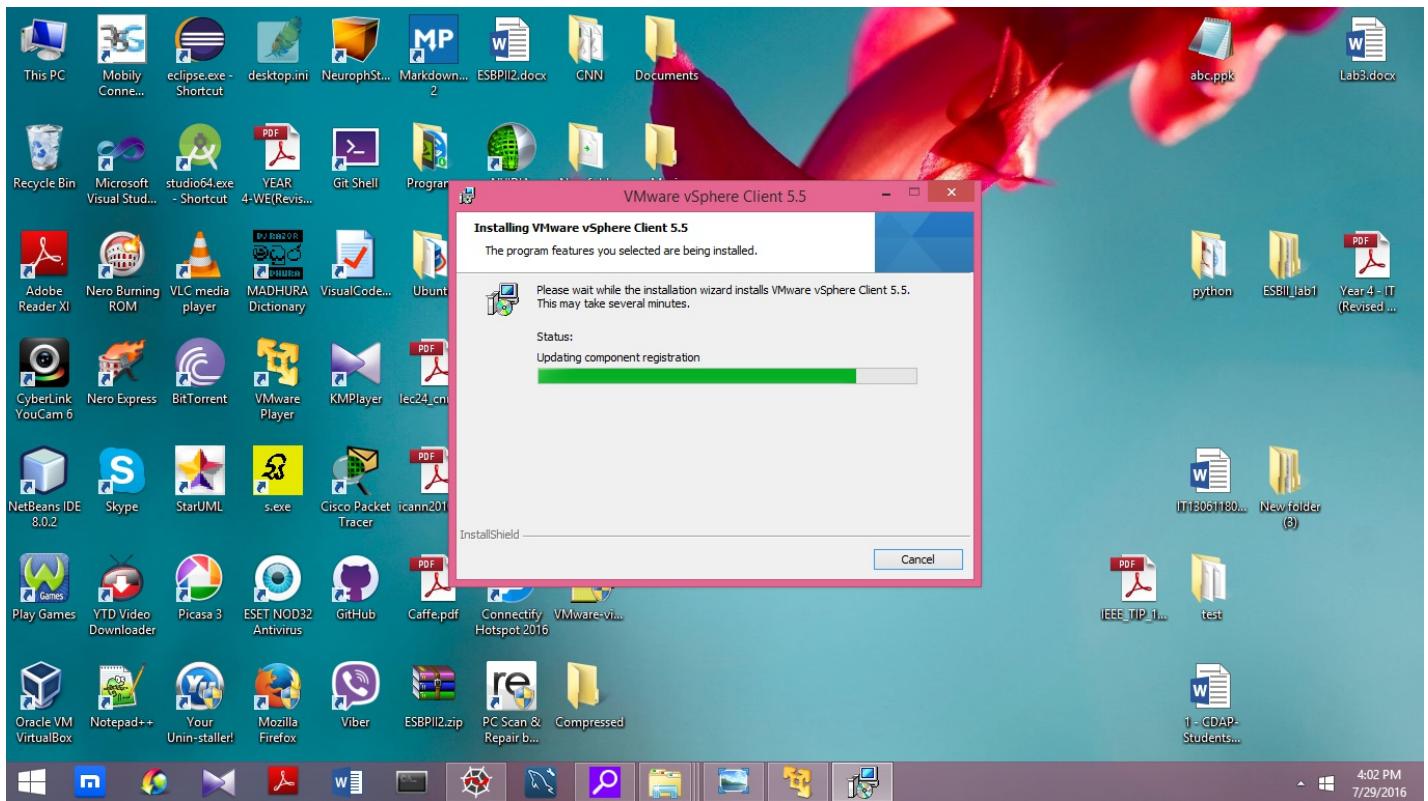


22) Execute the client software installation routine.

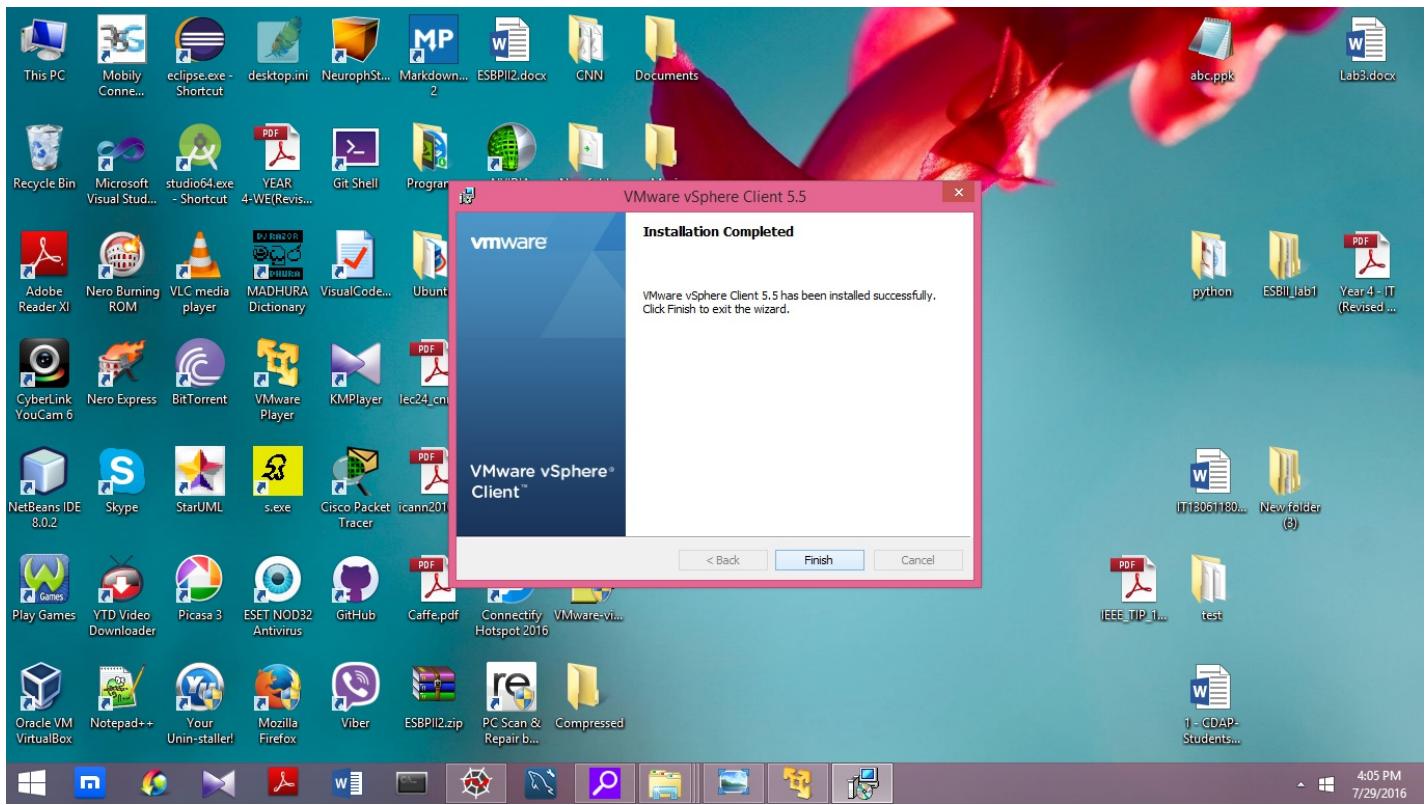




23) Then **VMware vSphere** client is installing.



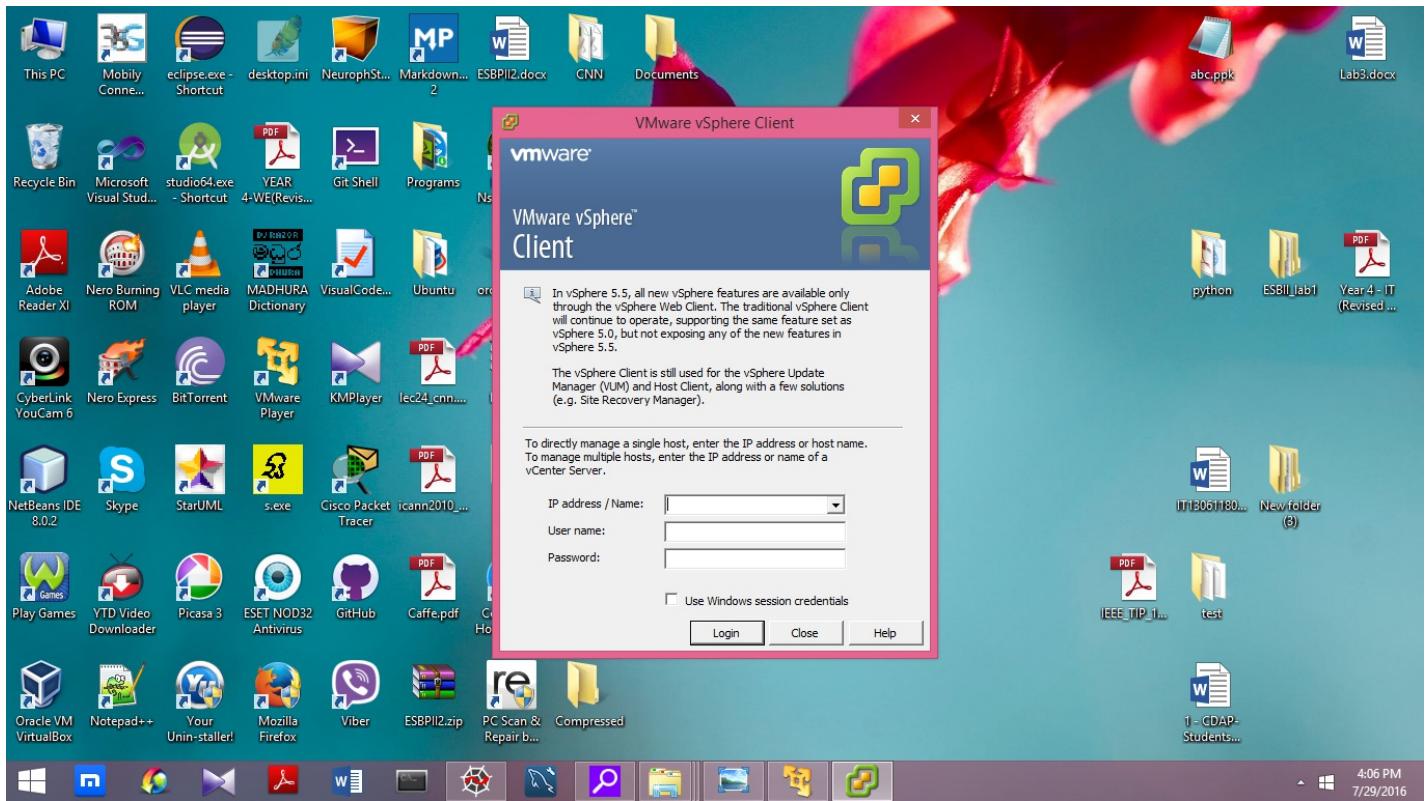
24) Then click on **finish** button.



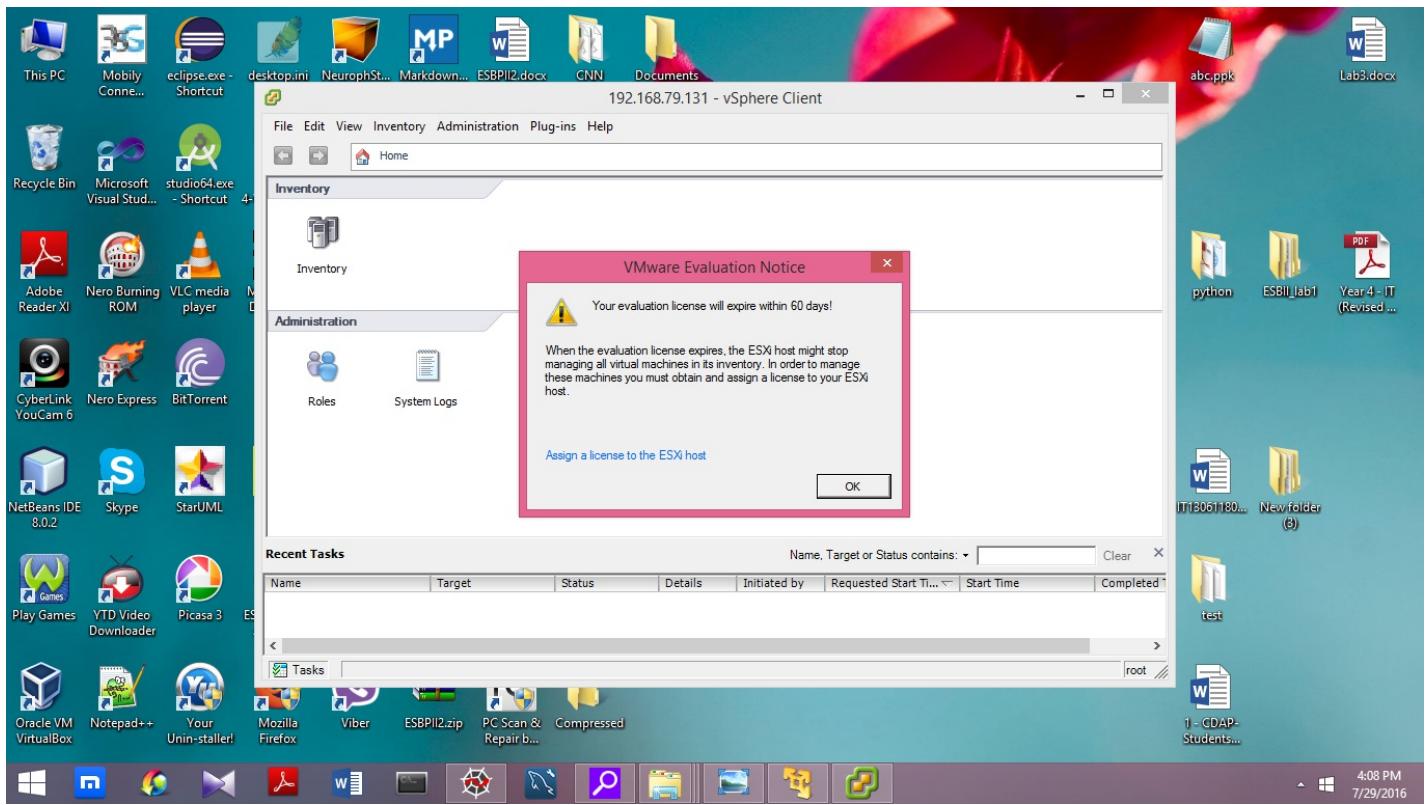
25) You've installed the hypervisor – ESXi5 and a management tool – vSphere Client.

Start the **vSphere** client.

Provide the **ip address** for your **ESXi5 host** and also provide the **root user name and password** that you specified during the setup of your server.

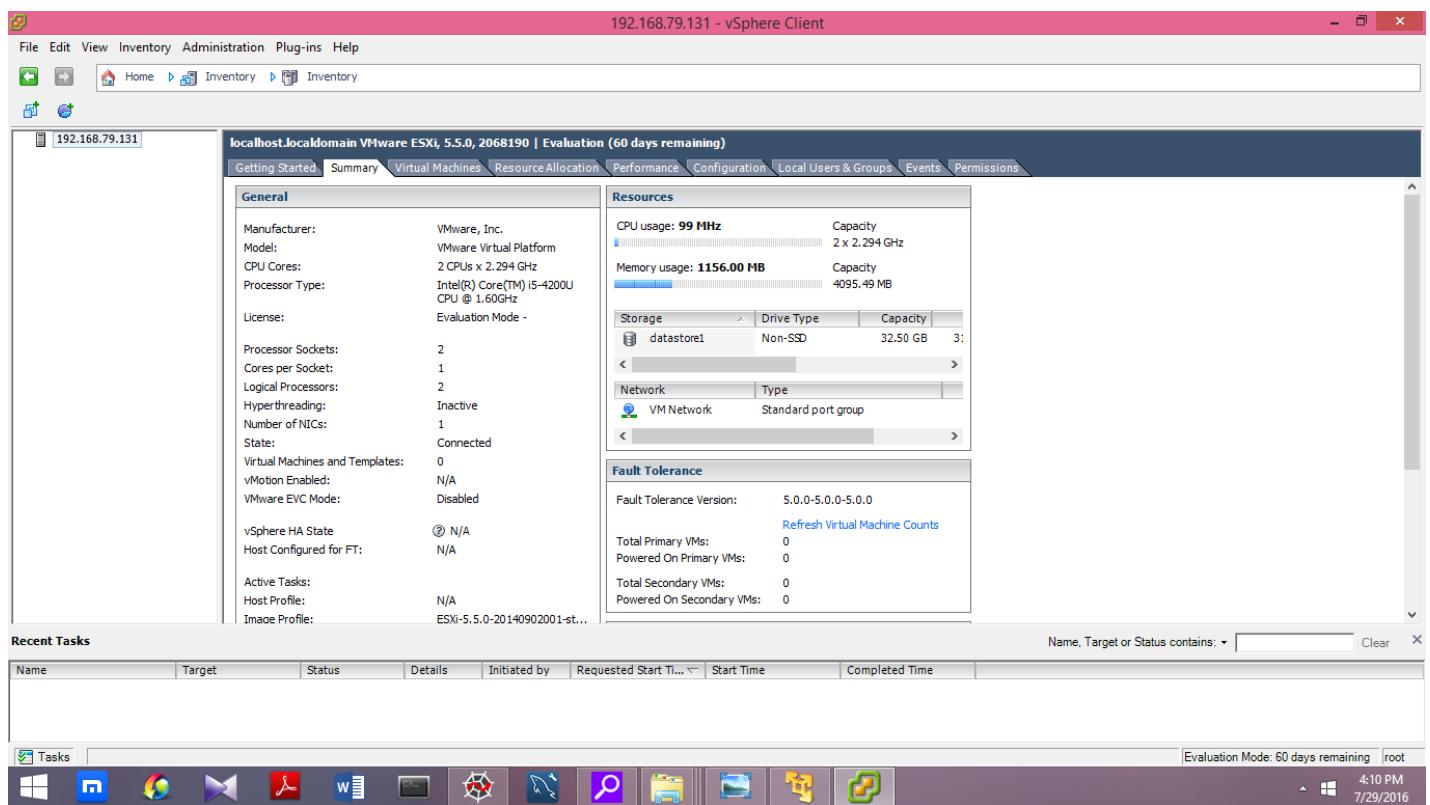


26) This is the *interface* after logging to the **VMware vSphere Client**.

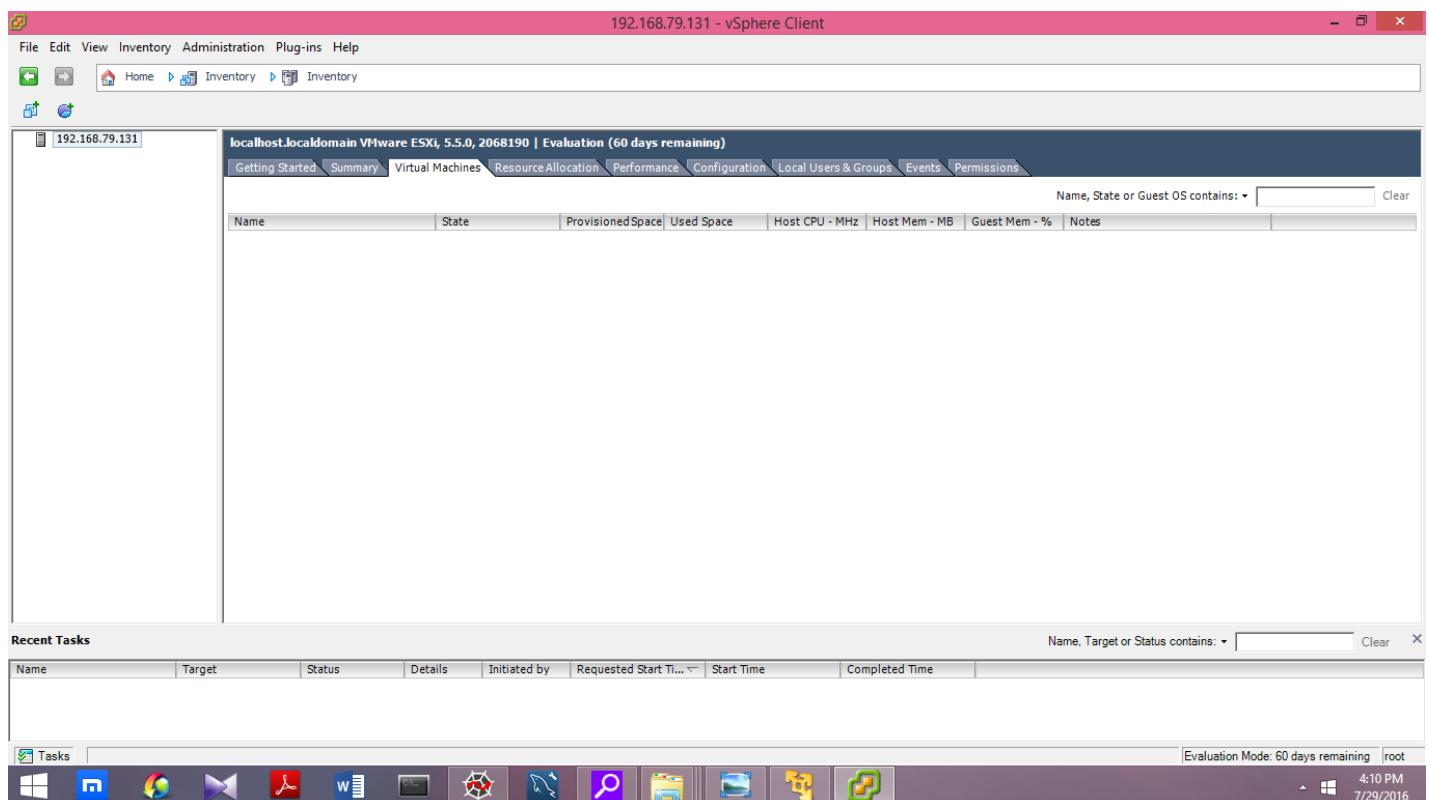


27) Then click on the **Inventory**. Then there are several tabs. Getting started tab is in this *interface*.

28) **Summary** tab.



29) Virtual machines tab.



30) Resource allocation tab.

192.168.79.131 - vSphere Client

File Edit View Inventory Administration Plug-ins Help

Home Inventory Inventory

localhost.localdomain VMware ESXi, 5.5.0, 2068190 | Evaluation (60 days remaining)

Getting Started Summary Virtual Machines Resource Allocation Performance Configuration Local Users & Groups Events Permissions

**CPU**

Total Capacity:	<b>2661 MHz</b>	Total Capacity:	<b>1331 MB</b>
Reserved Capacity:	<b>0 MHz</b>	Reserved Capacity:	<b>0 MB</b>
Available Capacity:	<b>2661 MHz</b>	Available Capacity:	<b>1331 MB</b>

**Memory**

Total Capacity:	<b>1331 MB</b>
Reserved Capacity:	<b>0 MB</b>
Available Capacity:	<b>1331 MB</b>

View: CPU Memory Storage

Name	Reservation - MHz	Limit - MHz	Shares	Shares Value	% Shares	Type

Recent Tasks

Name Target Status Details Initiated by Requested Start Ti... Start Time Completed Time

Tasks

Evaluation Mode: 60 days remaining root

### 31) Performance tab.

192.168.79.131 - vSphere Client

File Edit View Inventory Administration Plug-ins Help

Home Inventory Inventory

localhost.localdomain VMware ESXi, 5.5.0, 2068190 | Evaluation (60 days remaining)

Getting Started Summary Virtual Machines Resource Allocation Performance Configuration Local Users & Groups Events Permissions

CPU/Real-time, 7/27/2016 10:55:48 PM - 7/27/2016 11:55:48 PM Chart Options...

Graph refreshes every 20 seconds

Switch to:

Performance Chart Legend

Key	Object	Measurement	Rollup	Units	Latest	Maximum	Minimum	Average
localhost.locald...	Usage in MHz	Average	MHz	51	578	12	68.056	
localhost.locald...	Usage	Average	Percent	1.12	12.59	0.26	1.489	
1	Usage	Average	Percent	1.1	12.72	0.26	1.437	
0	Usage	Average	Percent	1.13	12.46	0.26	1.539	

Recent Tasks

Name Target Status Details Initiated by Requested Start Ti... Start Time Completed Time

Tasks

Evaluation Mode: 60 days remaining root

### 32) Configuration tab.

The screenshot shows the vSphere Client interface for a VMware ESXi host. The title bar reads "192.168.79.131 - vSphere Client". The main menu includes File, Edit, View, Inventory, Administration, Plug-ins, and Help. The navigation bar shows Home, Inventory, and a search field. The top navigation bar has tabs for Getting Started, Summary, Virtual Machines, Resource Allocation, Performance, Configuration, Local Users & Groups, Events, and Permissions. The Local Users & Groups tab is currently selected. On the left, there's a sidebar with sections for Hardware (Health Status, Processors, Memory, Storage, Networking, Storage Adapters, Network Adapters, Advanced Settings, Power Management) and Software (Licensed Features, Time Configuration, DNS and Routing, Authentication Services, Virtual Machine Startup/Shutdown, Virtual Machine Swapfile Location, Security Profile, Host Cache Configuration, System Resource Allocation). A "Recent Tasks" table is at the bottom. The status bar at the bottom right shows "Evaluation Mode: 60 days remaining" and "root".

33) Local users and groups tab.

This screenshot is similar to the previous one but focuses on the Local Users & Groups tab. The title bar and navigation bar are identical. The top navigation bar has tabs for Getting Started, Summary, Virtual Machines, Resource Allocation, Performance, Configuration, Local Users & Groups, Events, and Permissions. The Local Users & Groups tab is selected. The main content area shows a table of users:

UID	User	Name
0	root	Administrator
500	vpxuser	VMware VirtualCenter administration account
100	dcui	DCUIUser

A "Recent Tasks" table is at the bottom. The status bar at the bottom right shows "Evaluation Mode: 60 days remaining" and "root".

34) Events tab.

localhost.localdomain VMware ESXi, 5.5.0, 2068190 | Evaluation (60 days remaining)

Description	Type	Date Time	Task	Target	User
User root@192.168.79.1 logged in as VMware VI Client/4.0.0	info	7/27/2016 11:53:08 PM			root
Physical NIC vmnic0 linkstate is up.	info	7/27/2016 11:40:42 PM		localhost.localdomain	
Physical NIC vmnic0 linkstate is up.	info	7/27/2016 11:40:41 PM		localhost.localdomain	
The DCUI has been enabled.	info	7/27/2016 10:46:32 PM		localhost.localdomain	
At least one coredump target has been configured. Host core dumps will be saved.	info	7/27/2016 10:46:32 PM		localhost.localdomain	
Port vmk0 is now protected by Firewall.	info	7/27/2016 10:46:32 PM		localhost.localdomain	
Firewall configuration has changed. Operation 'enable' for rule set ipfam succeeded.	info	7/27/2016 10:46:32 PM		localhost.localdomain	
Firewall configuration has changed. Operation 'add' for rule set ipfam succeeded.	info	7/27/2016 10:46:32 PM		localhost.localdomain	

Event Details

Recent Tasks

Evaluation Mode: 60 days remaining Showing all entries root

### 35) Permissions tab.

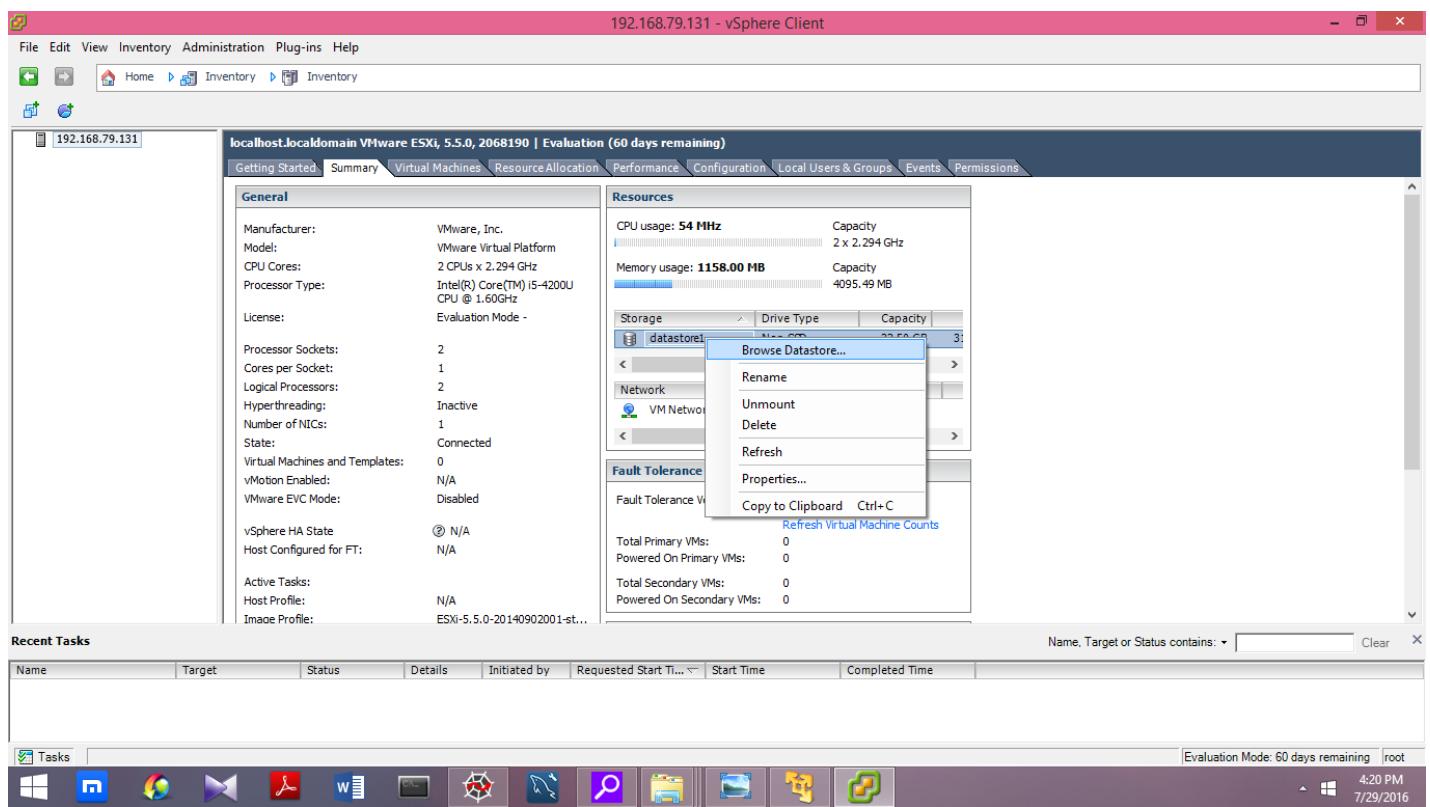
localhost.localdomain VMware ESXi, 5.5.0, 2068190 | Evaluation (60 days remaining)

User/Group	Role	Defined in
vpxuser	Administrator	This object
dcui	Administrator	This object
root	Administrator	This object

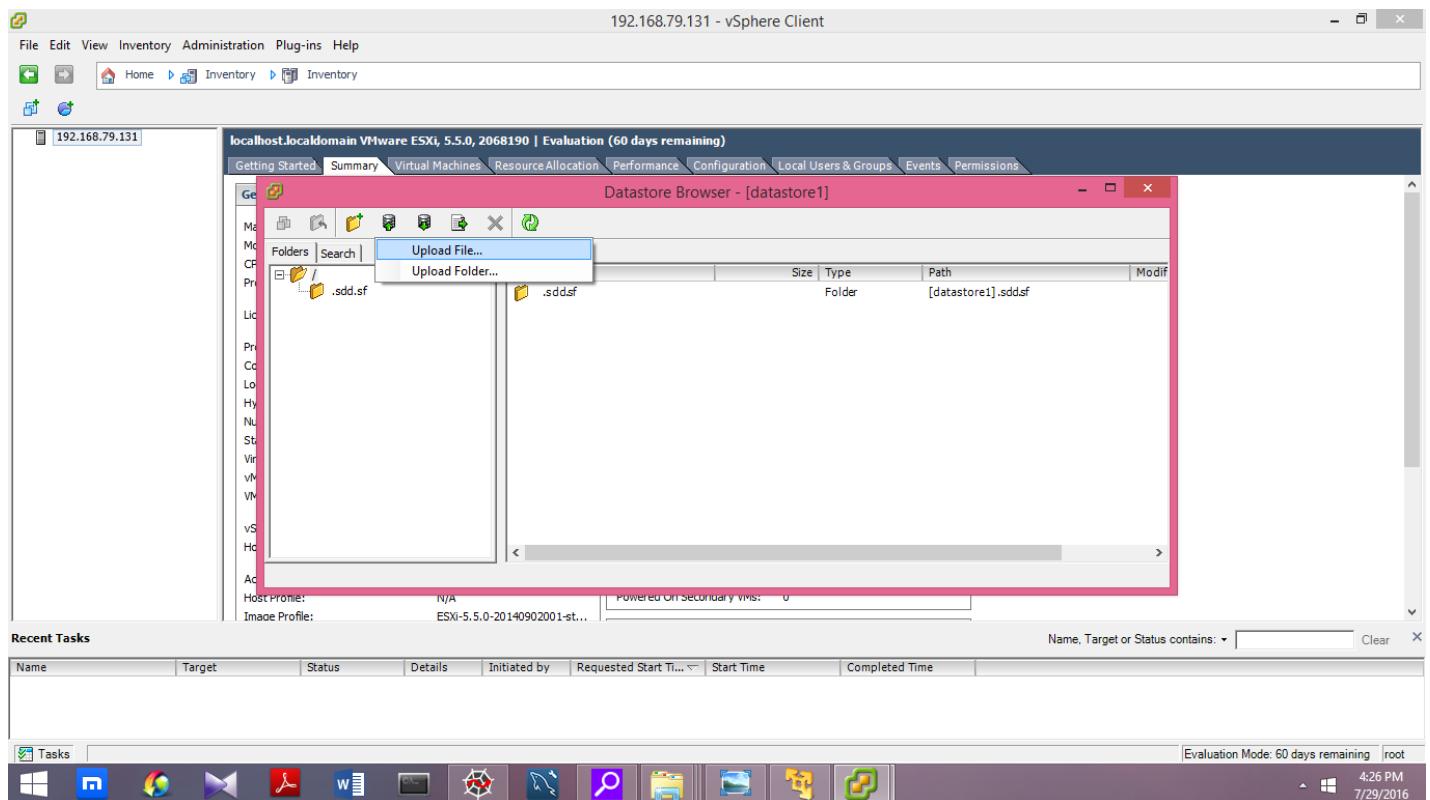
Recent Tasks

Evaluation Mode: 60 days remaining root

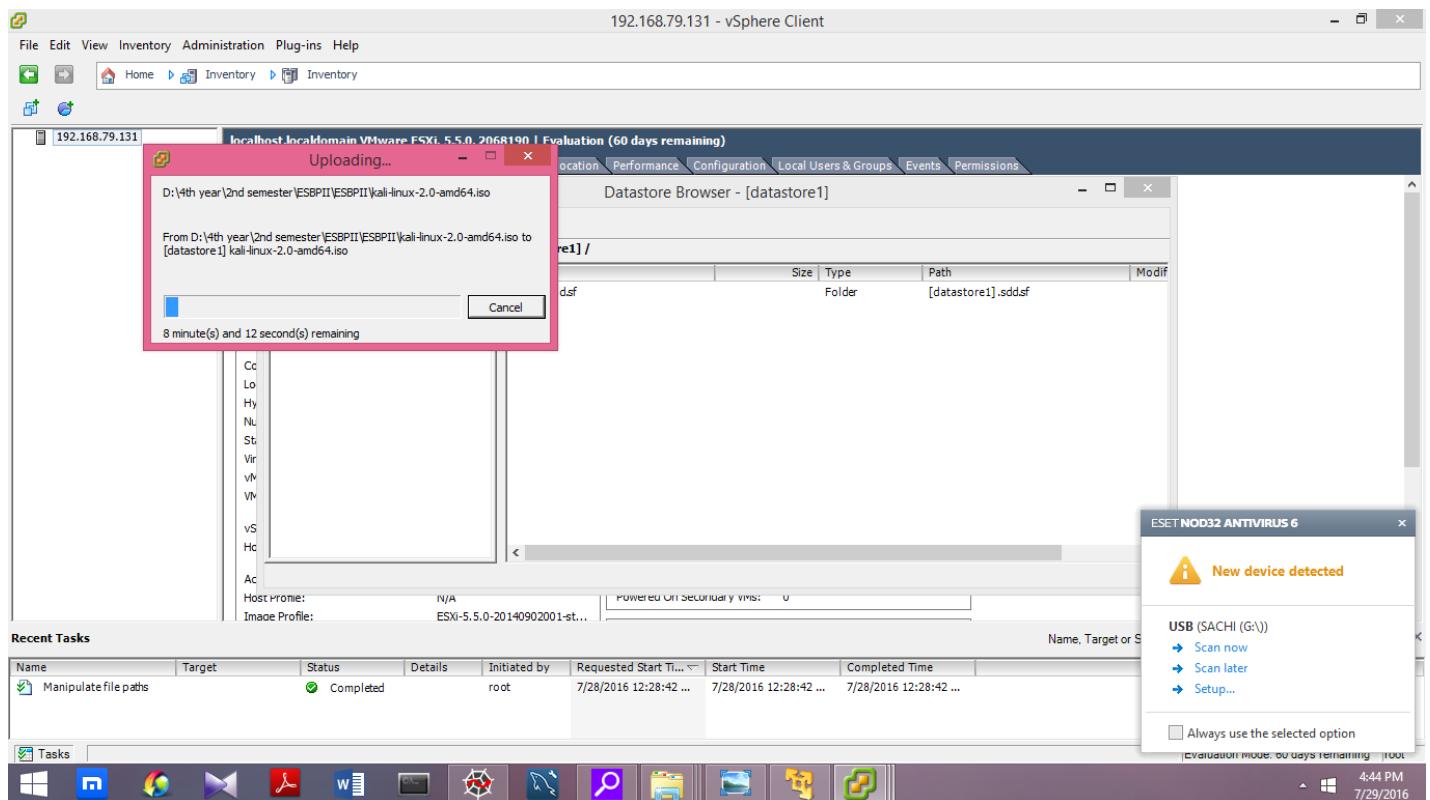
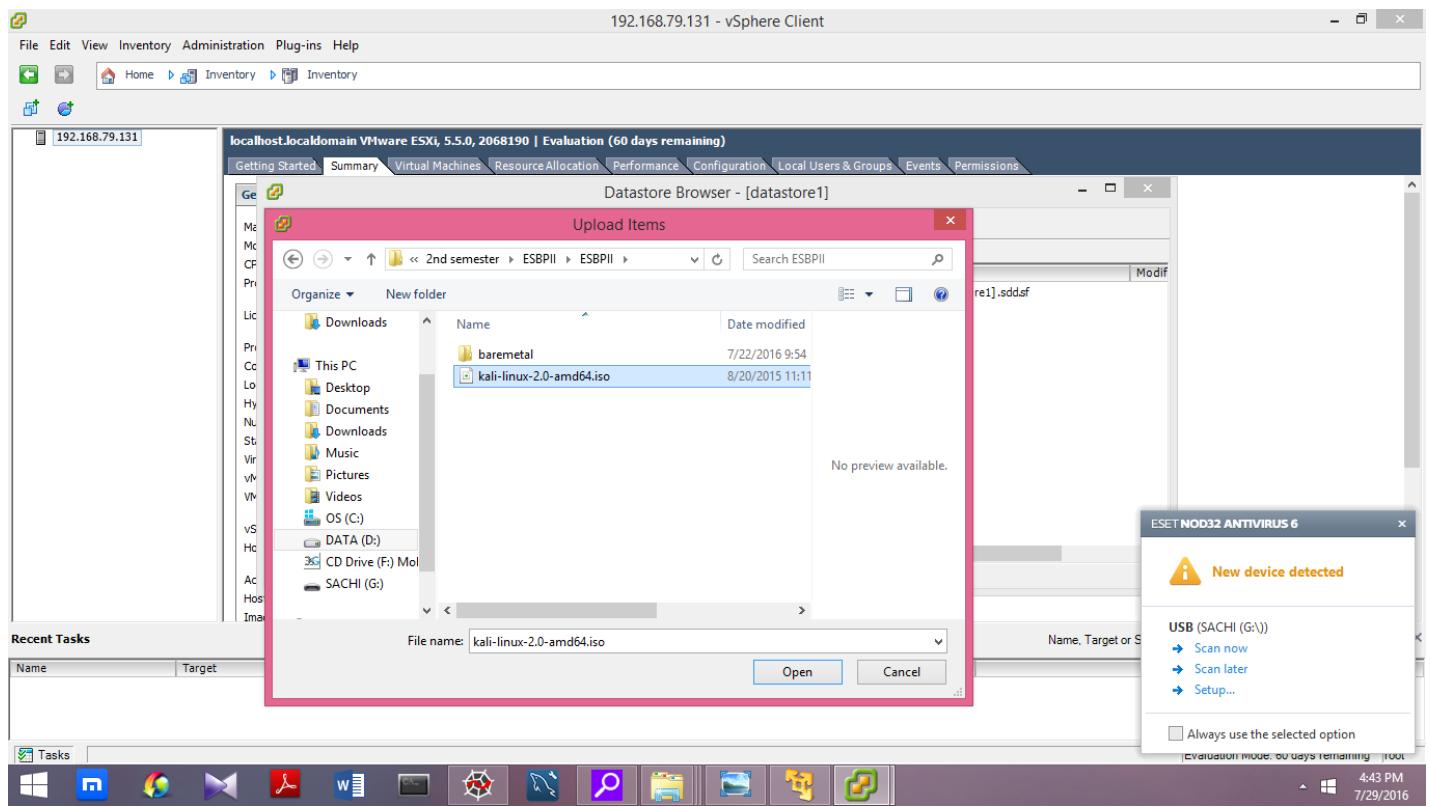
36) In summary tab, there is a resource called **storage**.right click on the **database** and select **Browse data store**.

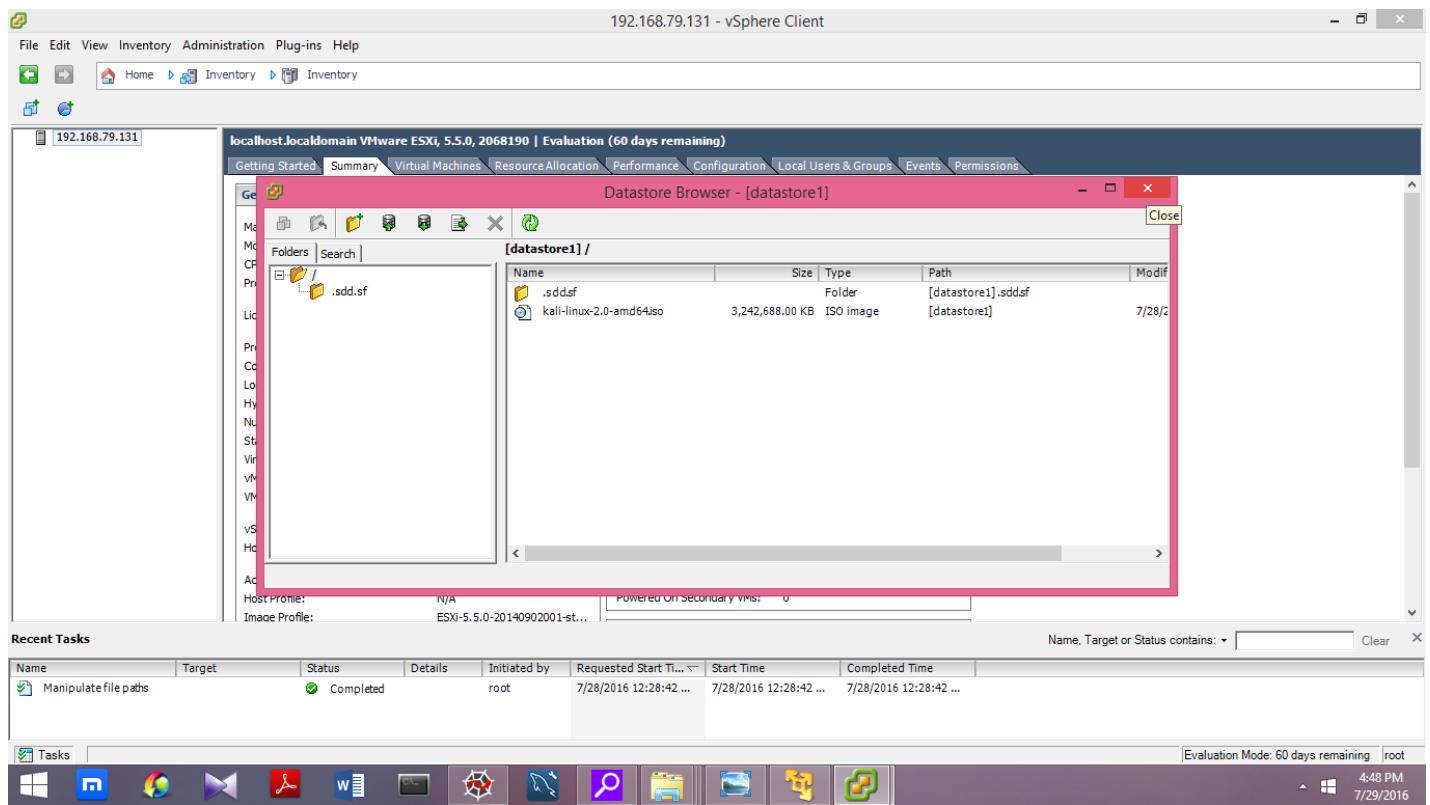


37) In data store browser, there is an icon in navigation pane.(4th icon). click on that icon and select Upload File.

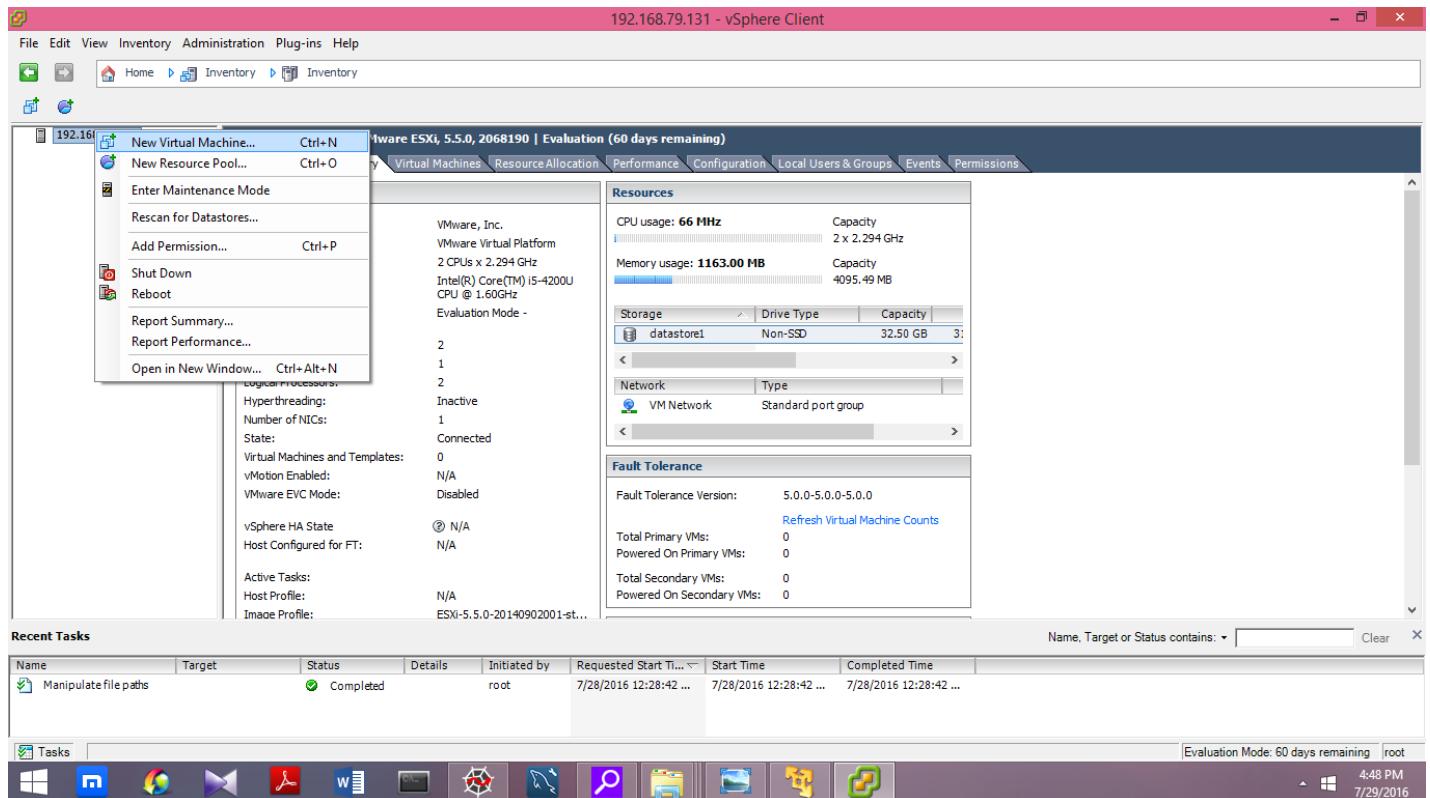


38) select the available linux/windows image file. Here I was uploaded the kali linux image file to the data store.

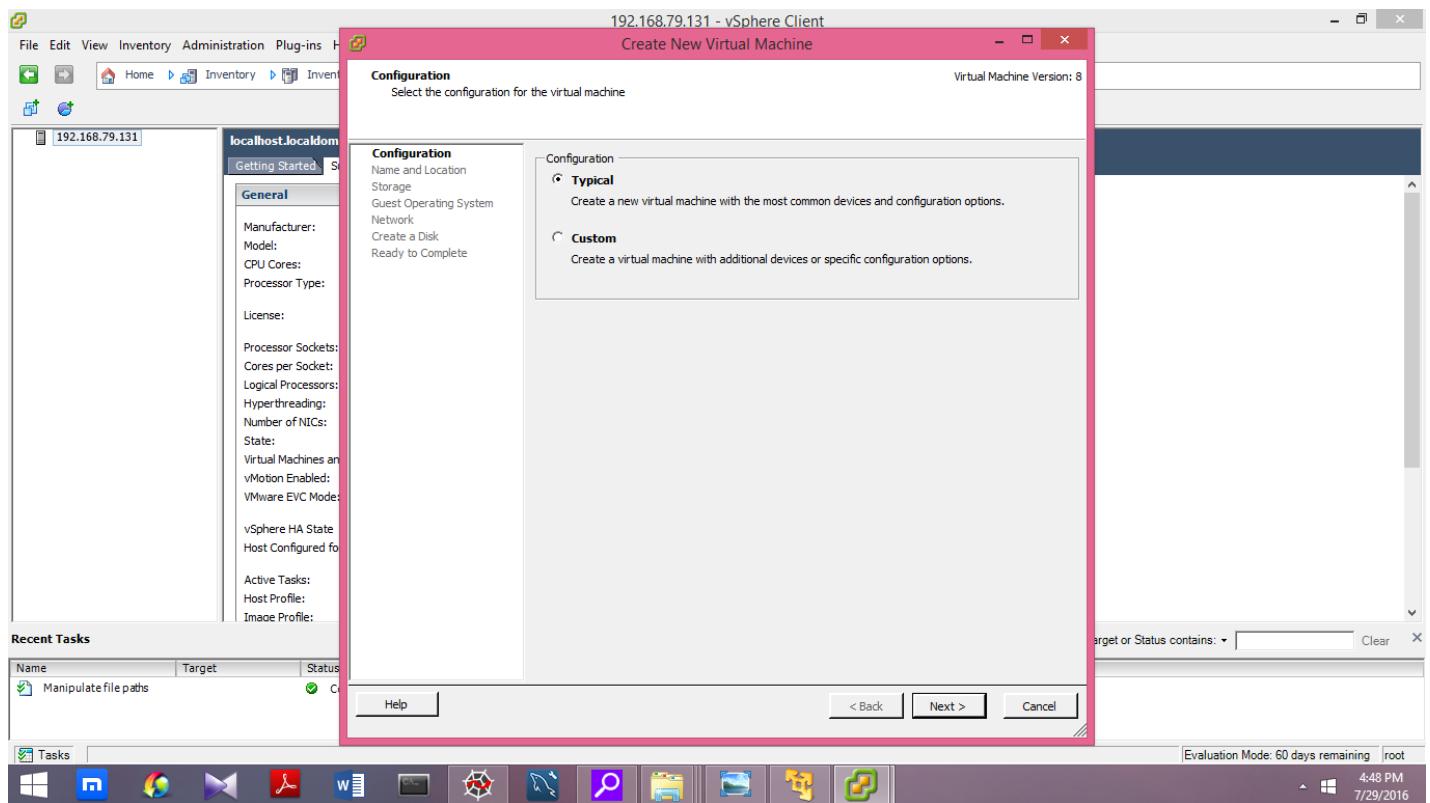




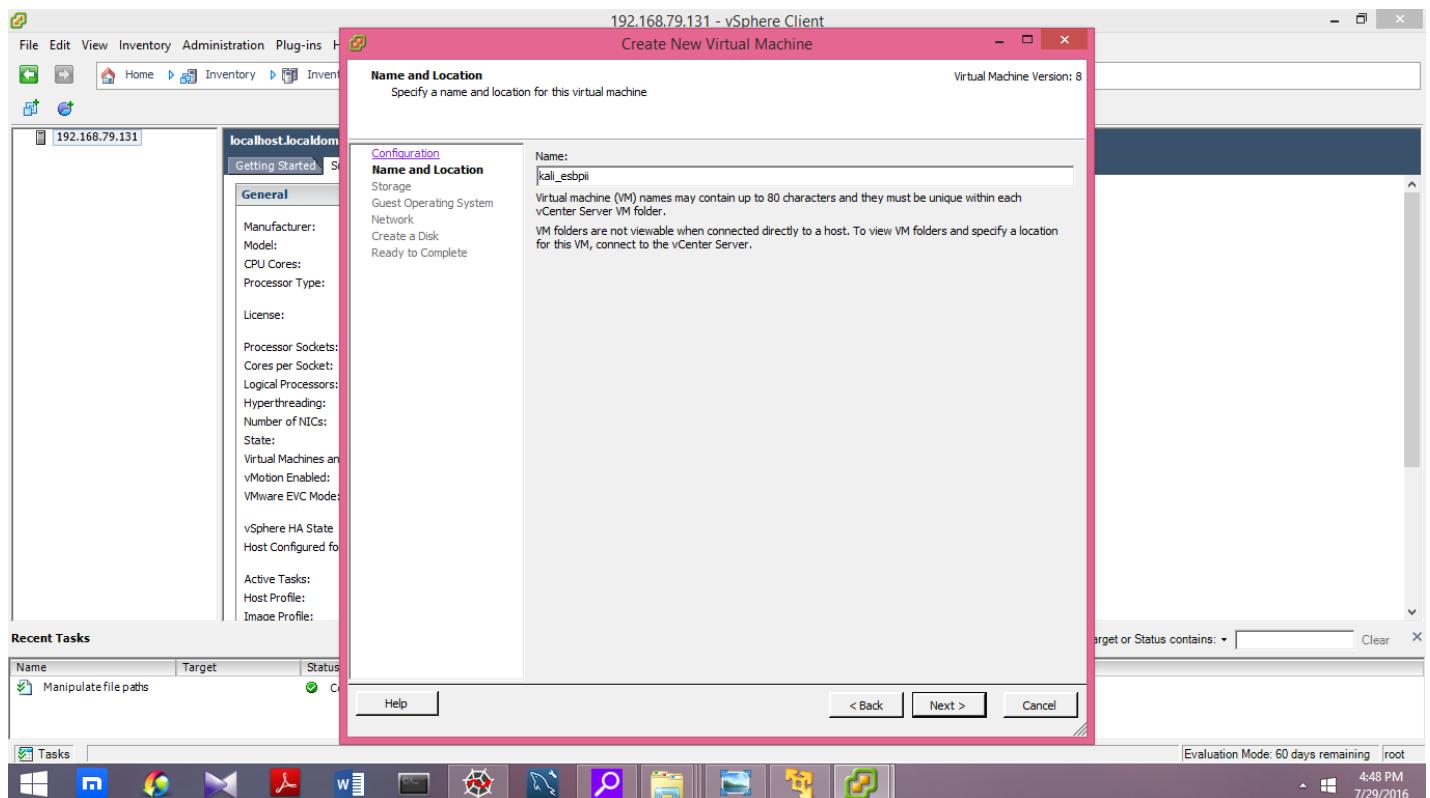
39) Then right click on the ip address shown in the top left corner. Select New virtual Machine.



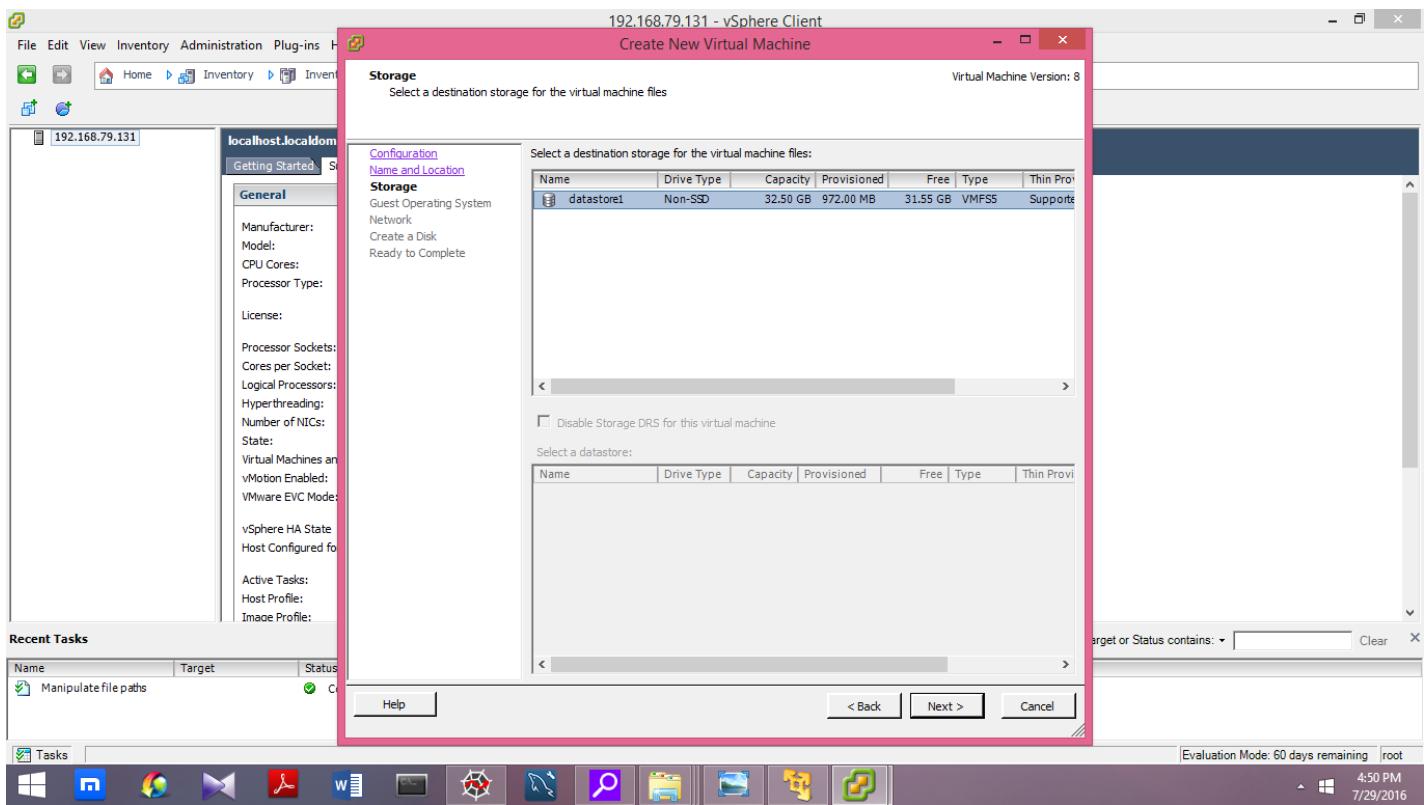
40) Then we create a new virtual machine using usual steps. Choose **Typical**. Then click on next.



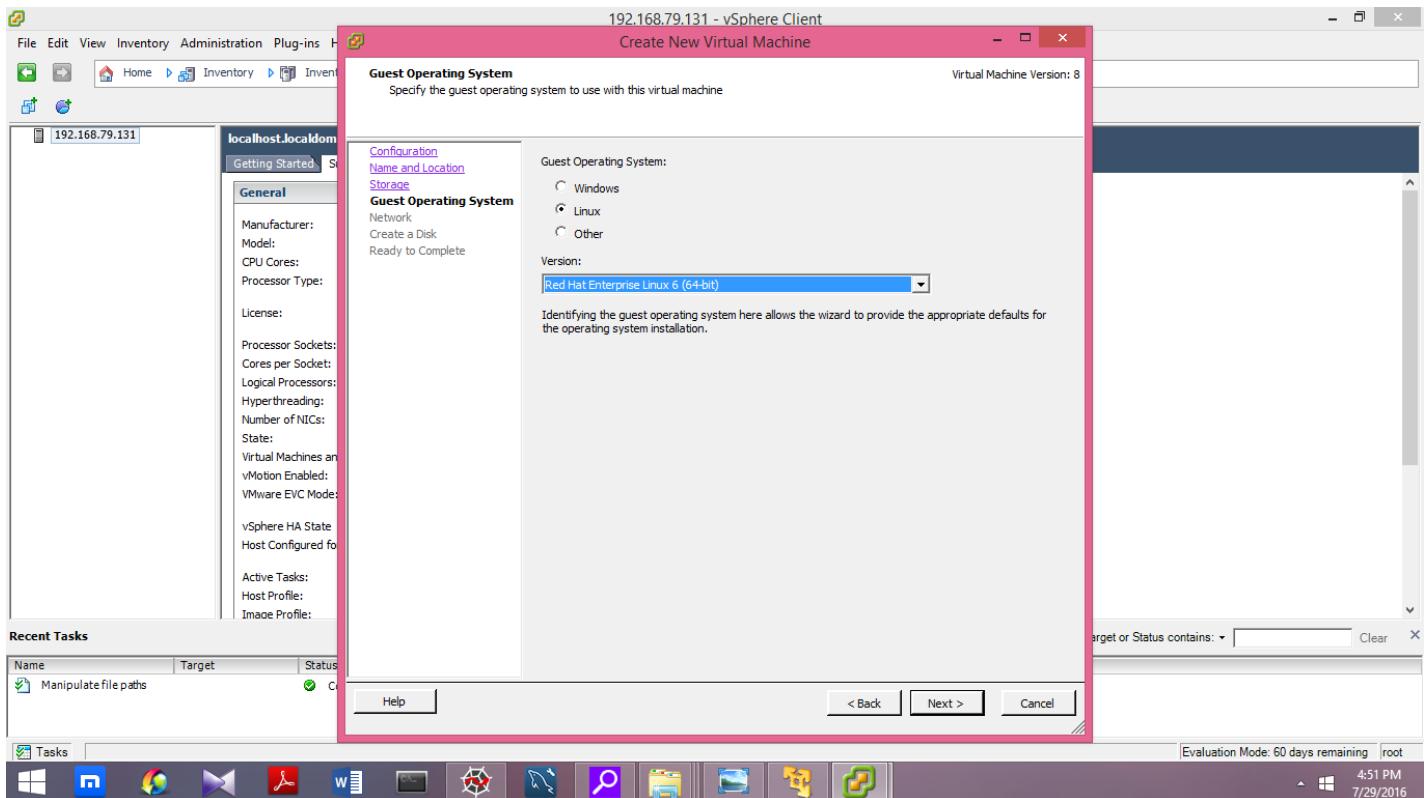
41) Give a specific name for this virtual machine.



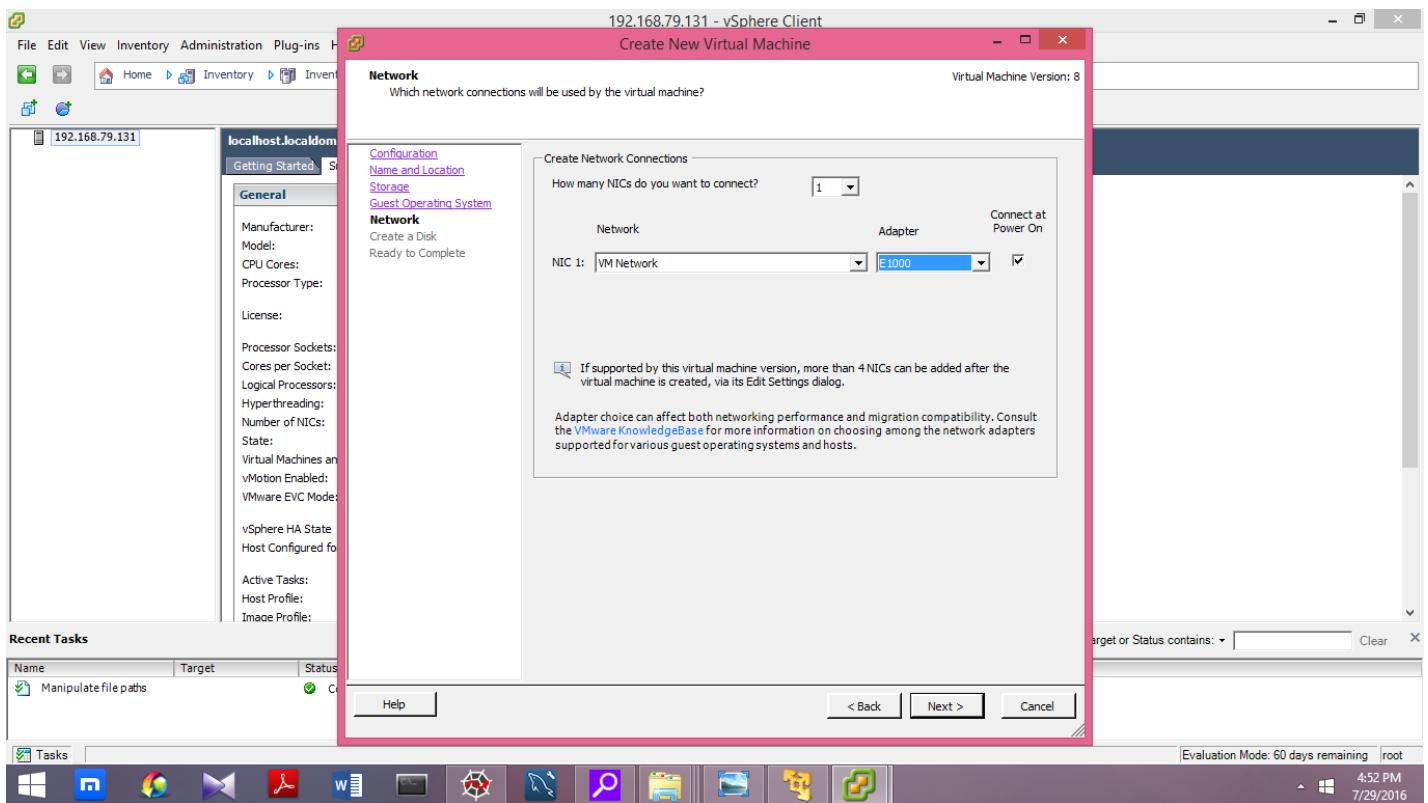
42) Then choose the data store. Then click on next.



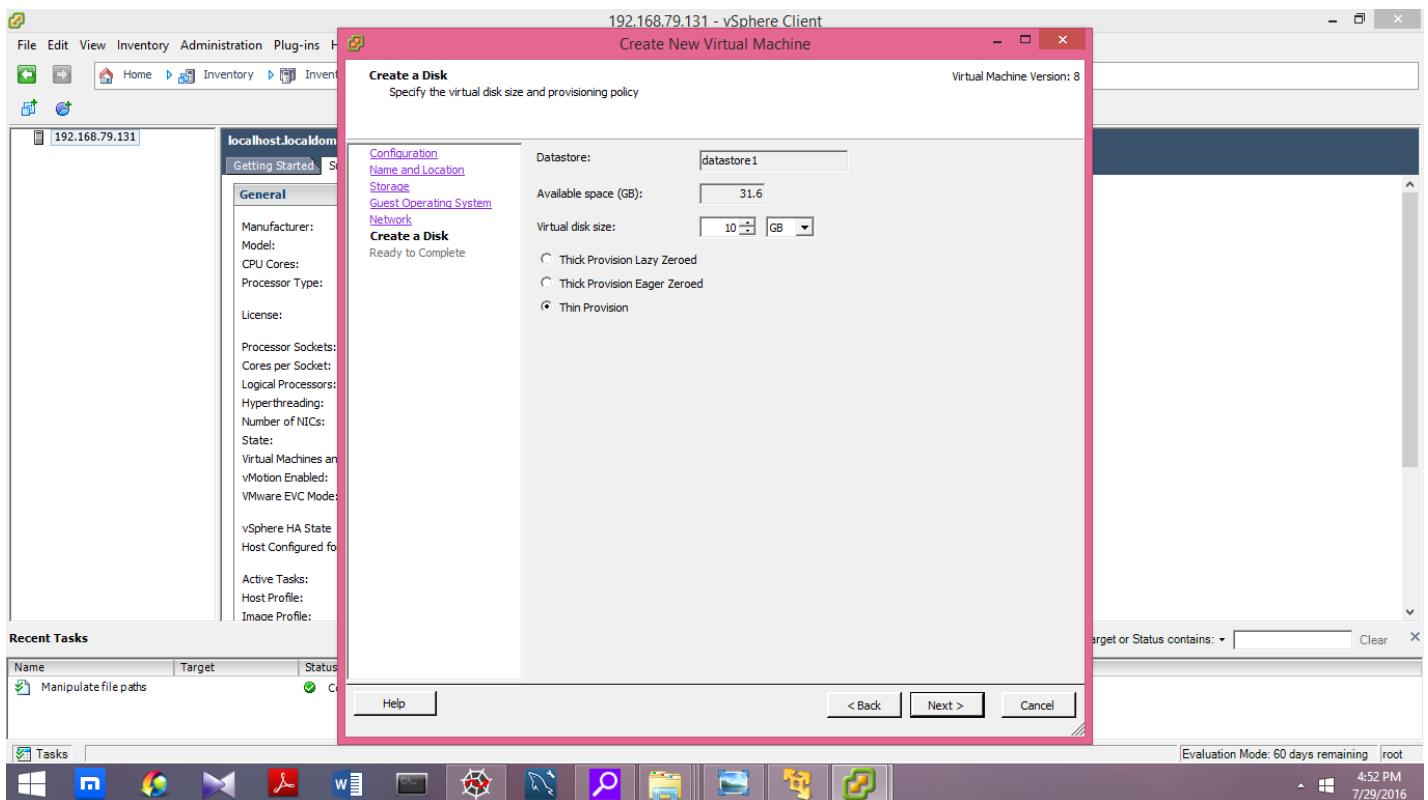
43) Specify the **guest operating system** to use with this virtual machine. I choose the **Linux** because I chose the **kali linux image file**. Click **next**.



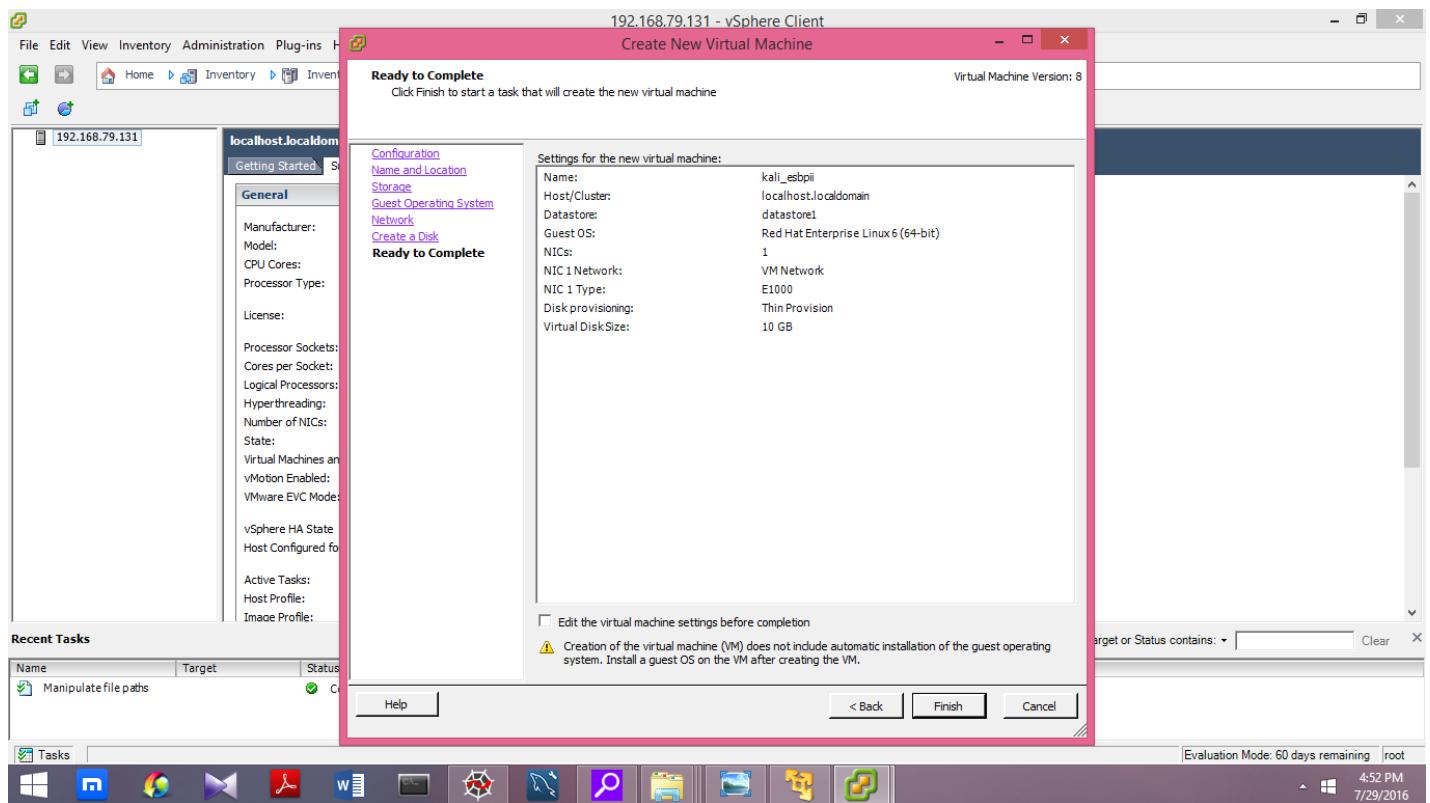
44) Specify the Adapter as **E1000** and **tick the Connect at power on**. The E1000 is an emulated version of the Intel 82545EM Gigabit Ethernet adapter. Not all guest operating systems include support for this adapter.



45) Specify the **virtual disk size** and **provisioning policy**. As the Provision I selected the *Thin provision*. Then **next**.

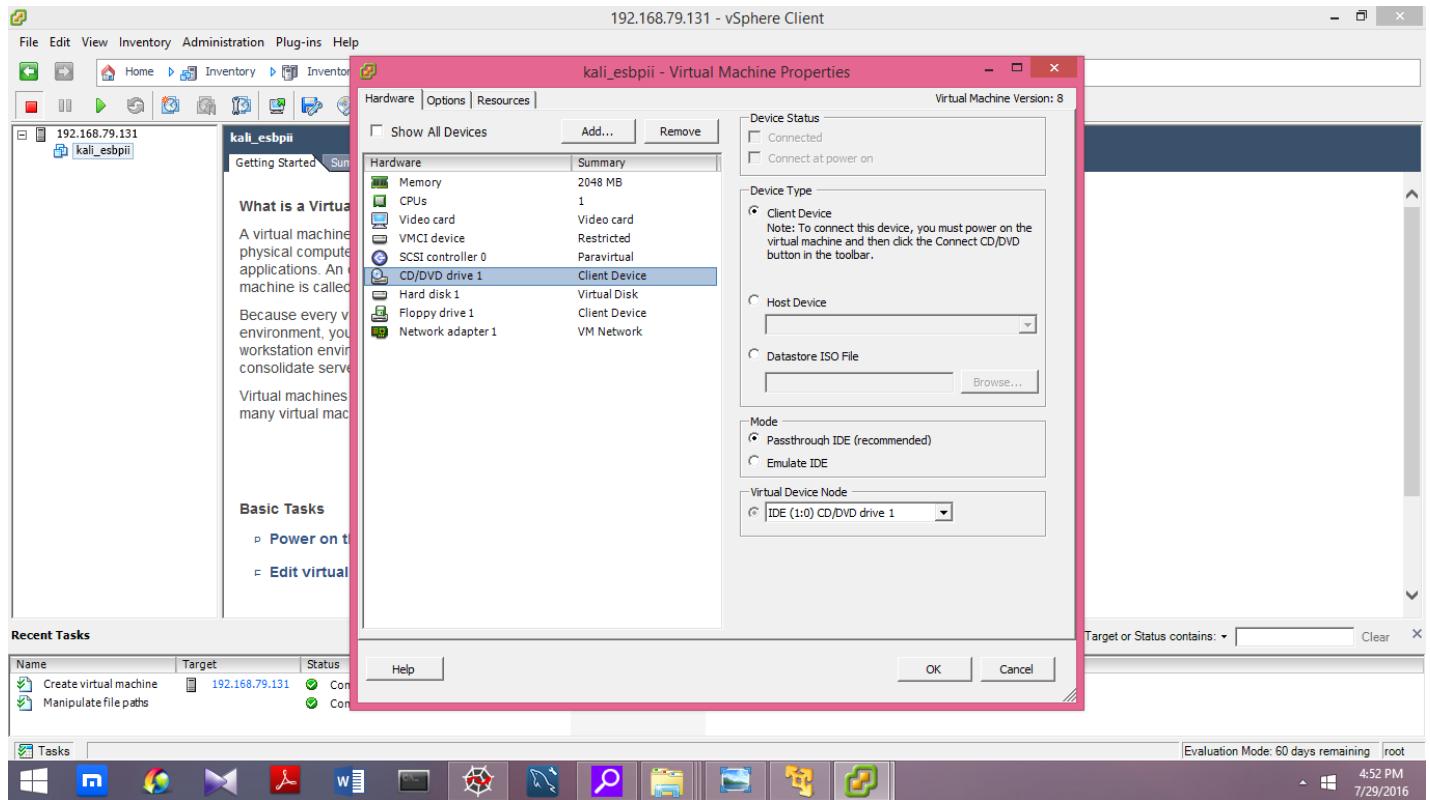


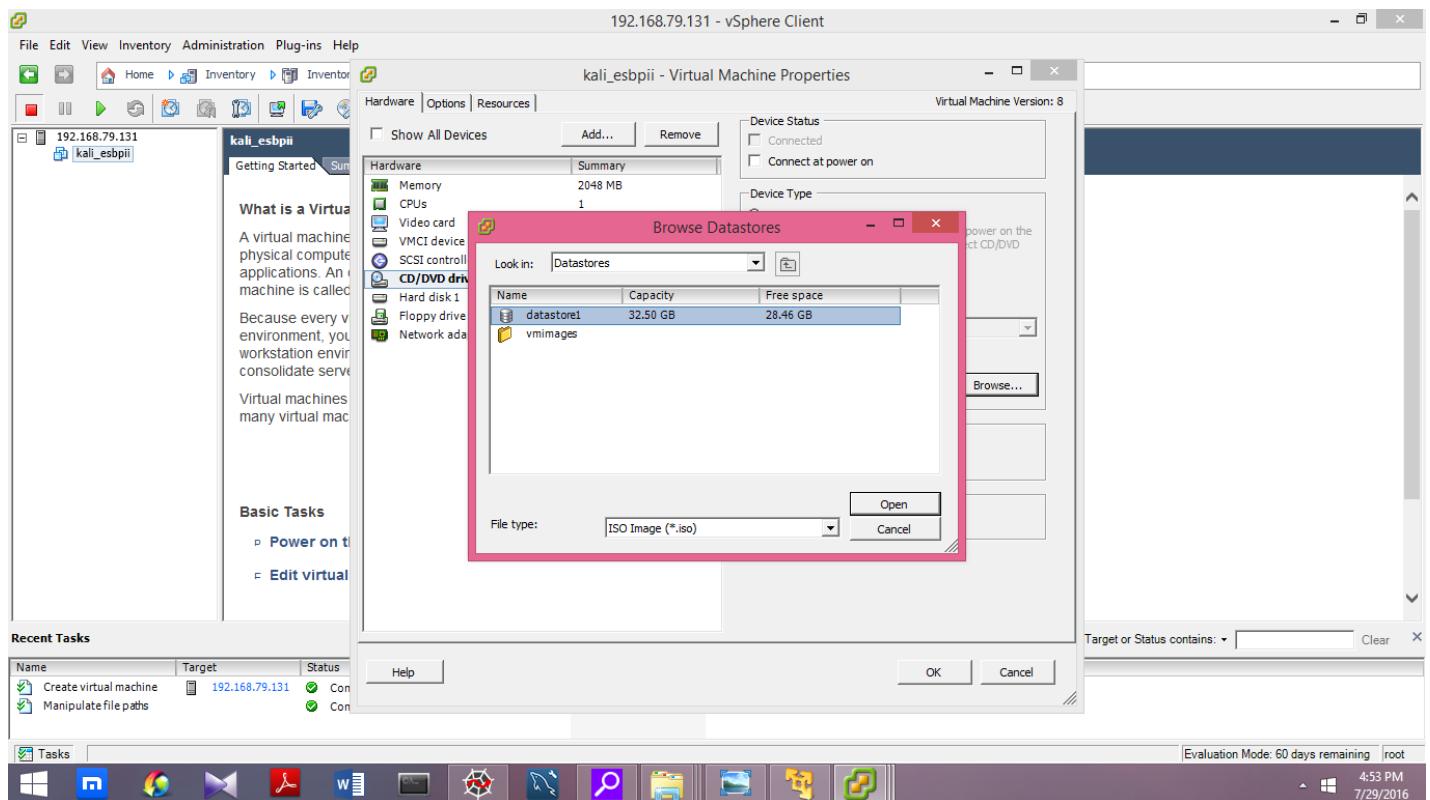
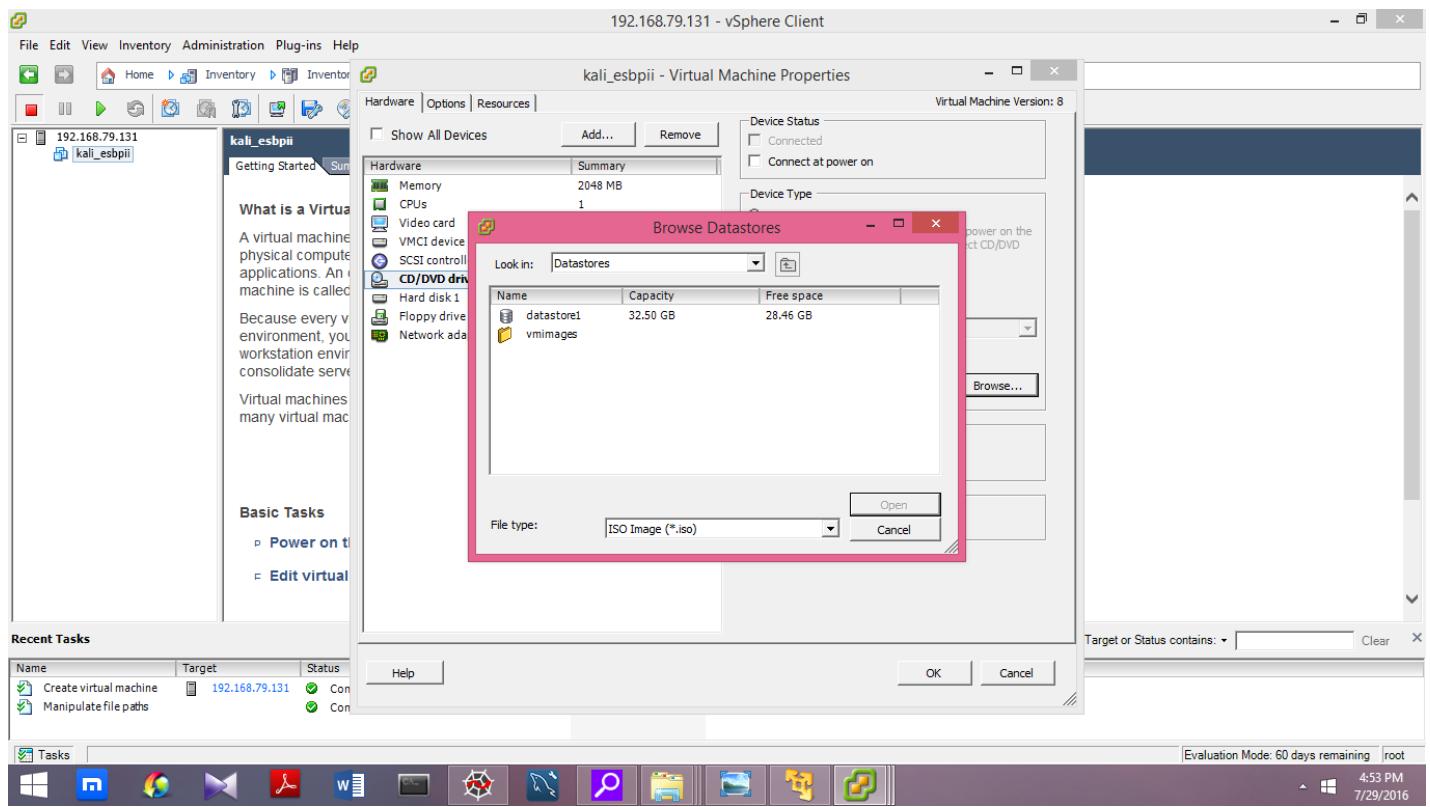
46) Then **click next**.

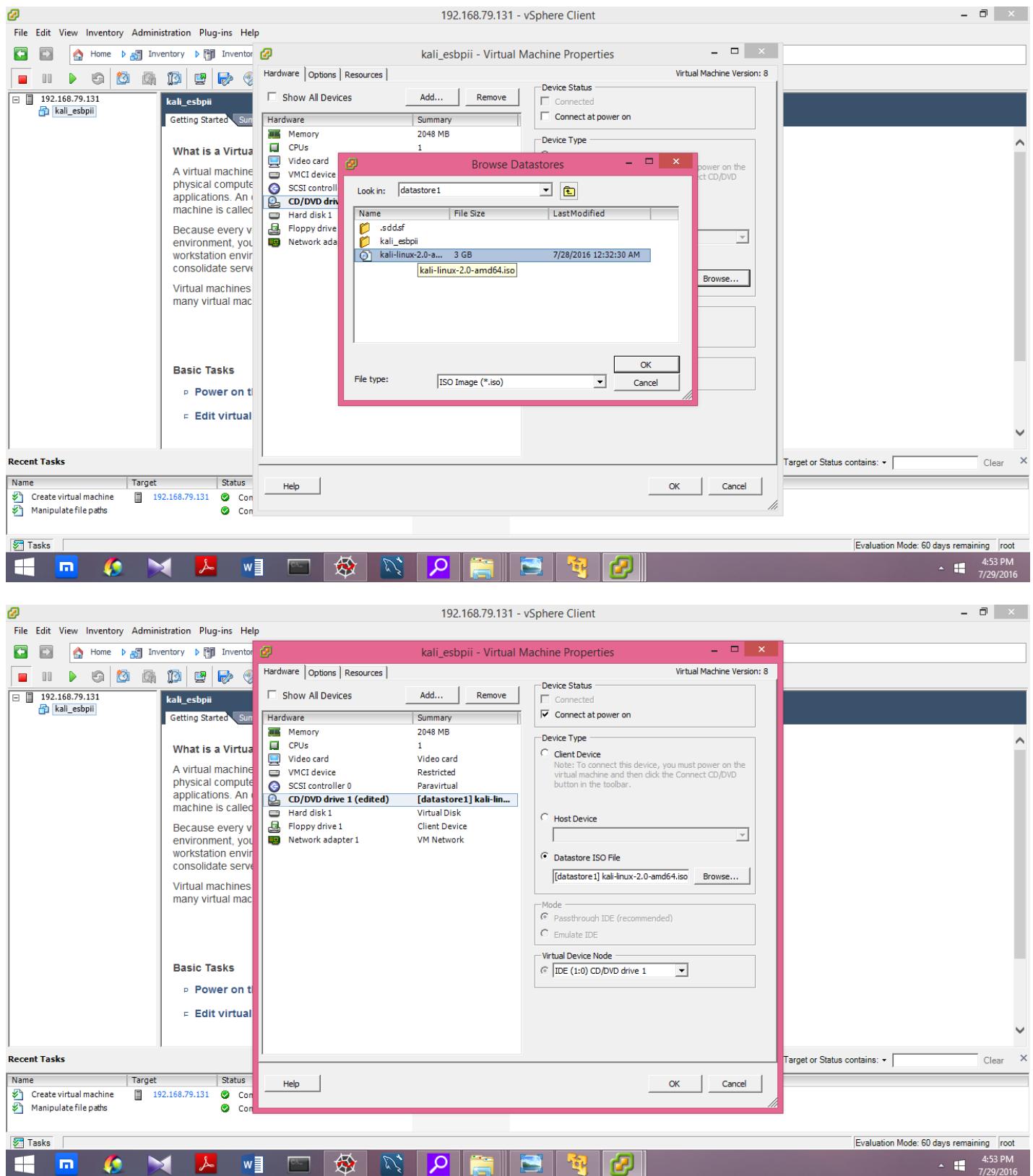


47) Then you can see the *kali*linux instance has been created under the IP address top left corner\_. Right click on that instance and **go to Edit Settings**.

Then click on the **CD/DVD drive 1**. In the right side you can see the Datastore /ISO file. Tick on that and browse the kali linux image file inside the datastore1.







48) After that click on power on the Virtual machine.

192.168.79.131 - vSphere Client

File Edit View Inventory Administration Plug-ins Help

Home Inventory Inventory

192.168.79.131 kali\_espbpi

Getting Started Summary Resource Allocation Performance Events Console Permissions

Main Diagram Virtual Machines Host

**What is a Virtual Machine?**

A virtual machine is a software computer that, like a physical computer, runs an operating system and applications. An operating system installed on a virtual machine is called a guest operating system.

Because every virtual machine is an isolated computing environment, you can use virtual machines as desktop or workstation environments, as testing environments, or to consolidate server applications.

Virtual machines run on hosts. The same host can run many virtual machines.

**Basic Tasks**

- Power on the virtual machine
- Edit virtual machine settings

Recent Tasks

Name	Target	Status	Details	Initiated by	Requested Start Ti...	Start Time	Completed Time
Reconfigure virtual ma...	kali_espbpi	Completed		root	7/28/2016 12:38:12 ...	7/28/2016 12:38:12 ...	7/28/2016 12:38:12 ...
Create virtual machine	192.168.79.131	Completed		root	7/28/2016 12:37:14 ...	7/28/2016 12:37:14 ...	7/28/2016 12:37:16 ...
Manipulate file paths		Completed		root	7/28/2016 12:28:42 ...	7/28/2016 12:28:42 ...	7/28/2016 12:28:42 ...

Evaluation Mode: 60 days remaining root

4:53 PM 7/29/2016

49) Then go to **Getting started tab** and Start the virtual machine. Then go to **Console tab**. Then you can see the **kali\_linux** virtual machine is getting started to work.

192.168.79.131 - vSphere Client

File Edit View Inventory Administration Plug-ins Help

Home Inventory Inventory

192.168.79.131 kali\_espbpi

Getting Started Summary Resource Allocation Performance Events Console Permissions

"the quieter you become, the more you are able to hear"

Boot menu

- Live (amd64)
- Live (amd64 failsafe)
- Live (forensic mode)
- Live USB Persistence
- Live USB Encrypted Persistence
- (check kali.org/prst)
- Install
- Graphical install
- Install with speech synthesis
- Advanced options

Recent Tasks

Name	Target	Status	Details	Initiated by	Requested Start Ti...	Start Time	Completed Time
Power On virtual mach...	kali_espbpi	Completed		root	7/28/2016 12:38:23 ...	7/28/2016 12:38:23 ...	7/28/2016 12:38:25 ...
Reconfigure virtual ma...	kali_espbpi	Completed		root	7/28/2016 12:38:12 ...	7/28/2016 12:38:12 ...	7/28/2016 12:38:12 ...
Create virtual machine	192.168.79.131	Completed		root	7/28/2016 12:37:14 ...	7/28/2016 12:37:14 ...	7/28/2016 12:37:16 ...

Evaluation Mode: 60 days remaining root

4:54 PM 7/29/2016

