



SRI LANKA INSTITUTE OF INFORMATION TECHNOLOGY

## Enterprise Standards and Best Practices for IT Infrastructure

4th Year 2nd Semester 2016

Name: Madhushi Pabasara K.

SLIIT ID: IT13061180

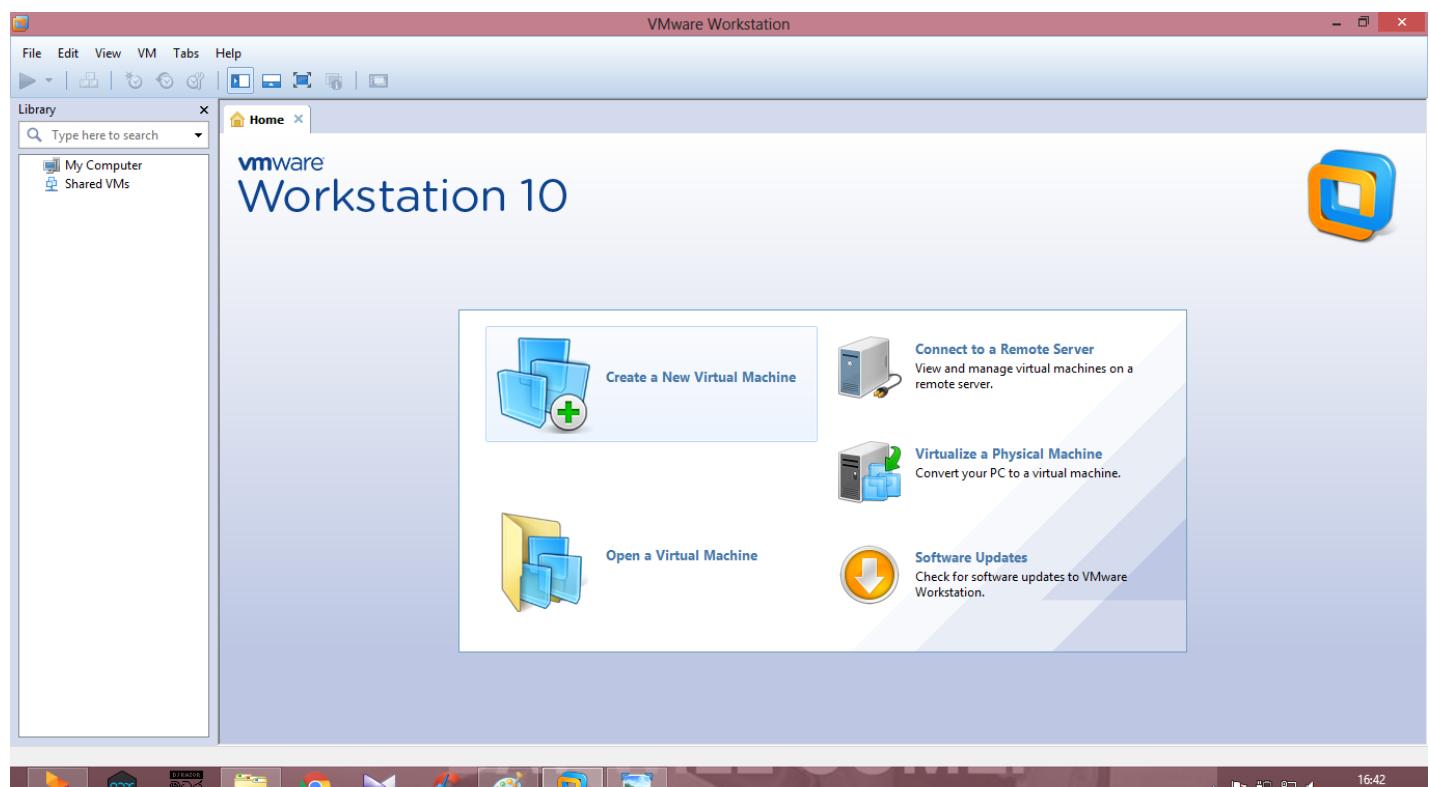
Practical Session: WD Friday

Practical Number: Lab 4

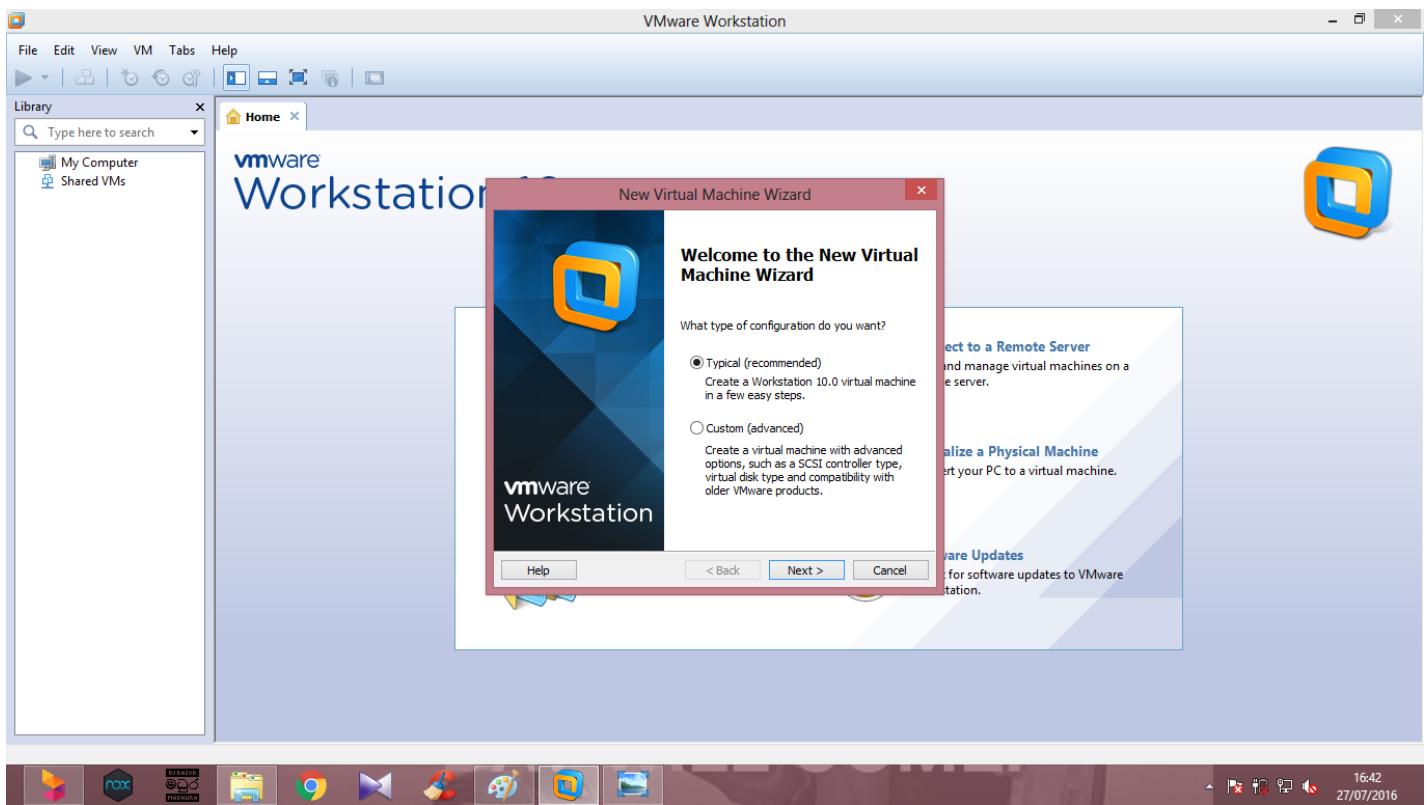
Date of Submission:

### Getting Started with ESXi 5

1st need to add new virtual machine on top of the current Operation System.  
for that get the VMware Workstation and **Create a new virtual machine**.

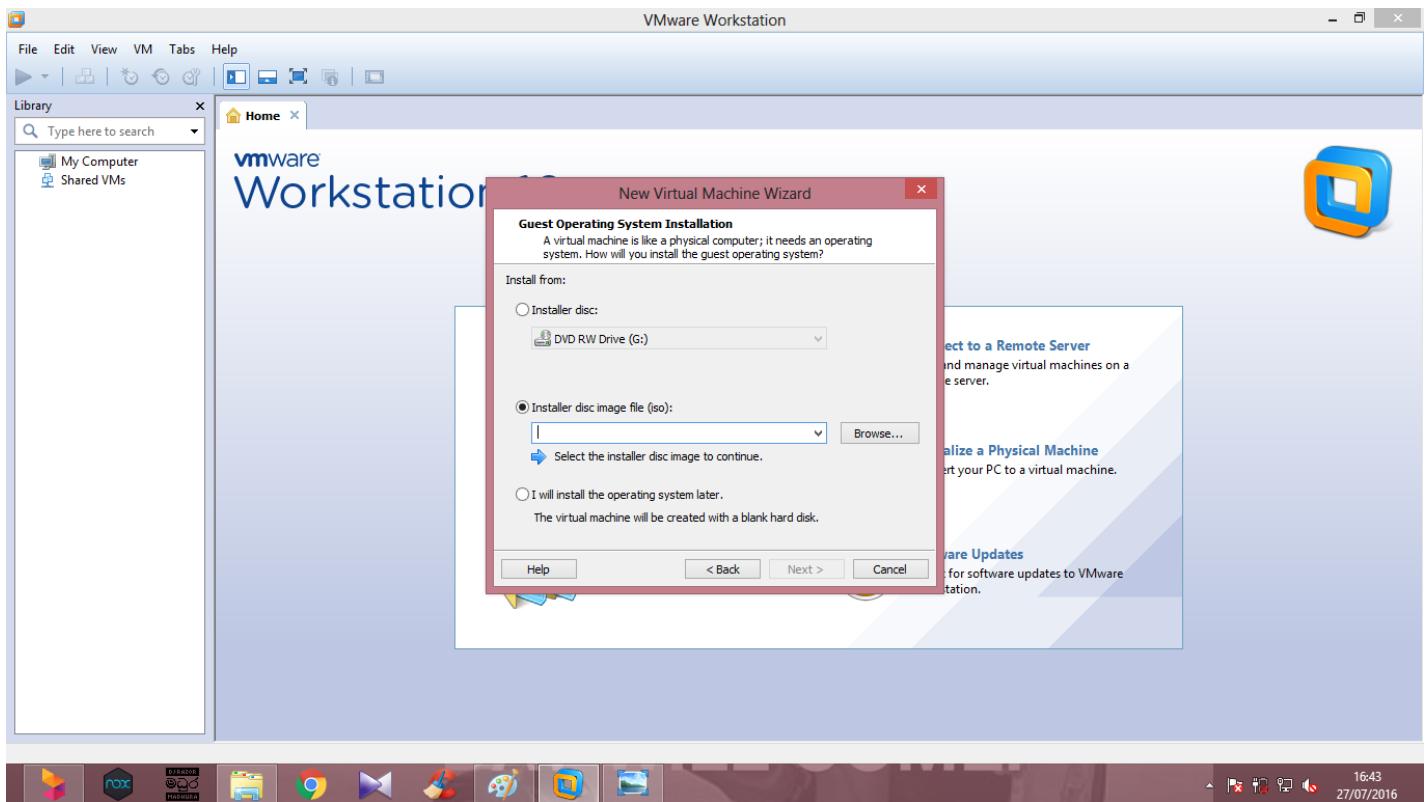


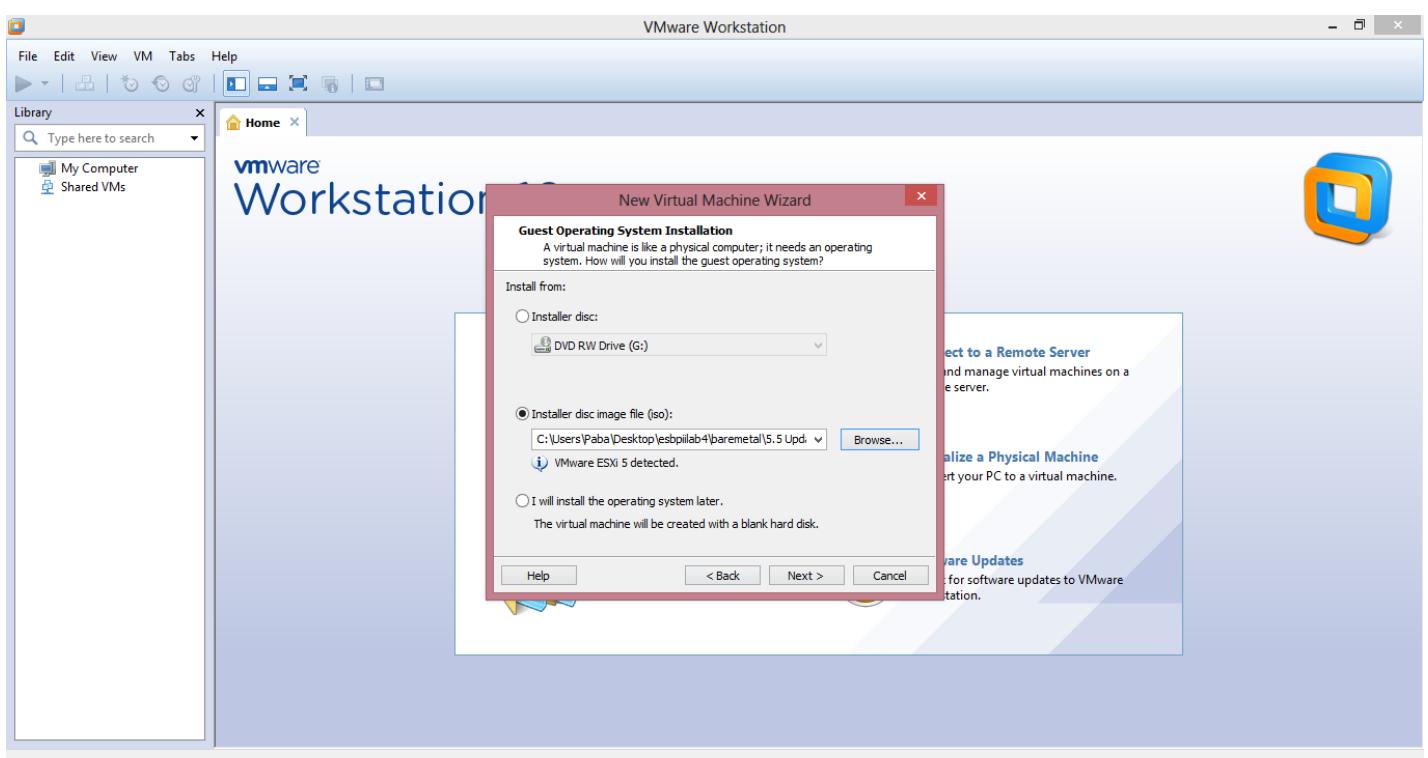
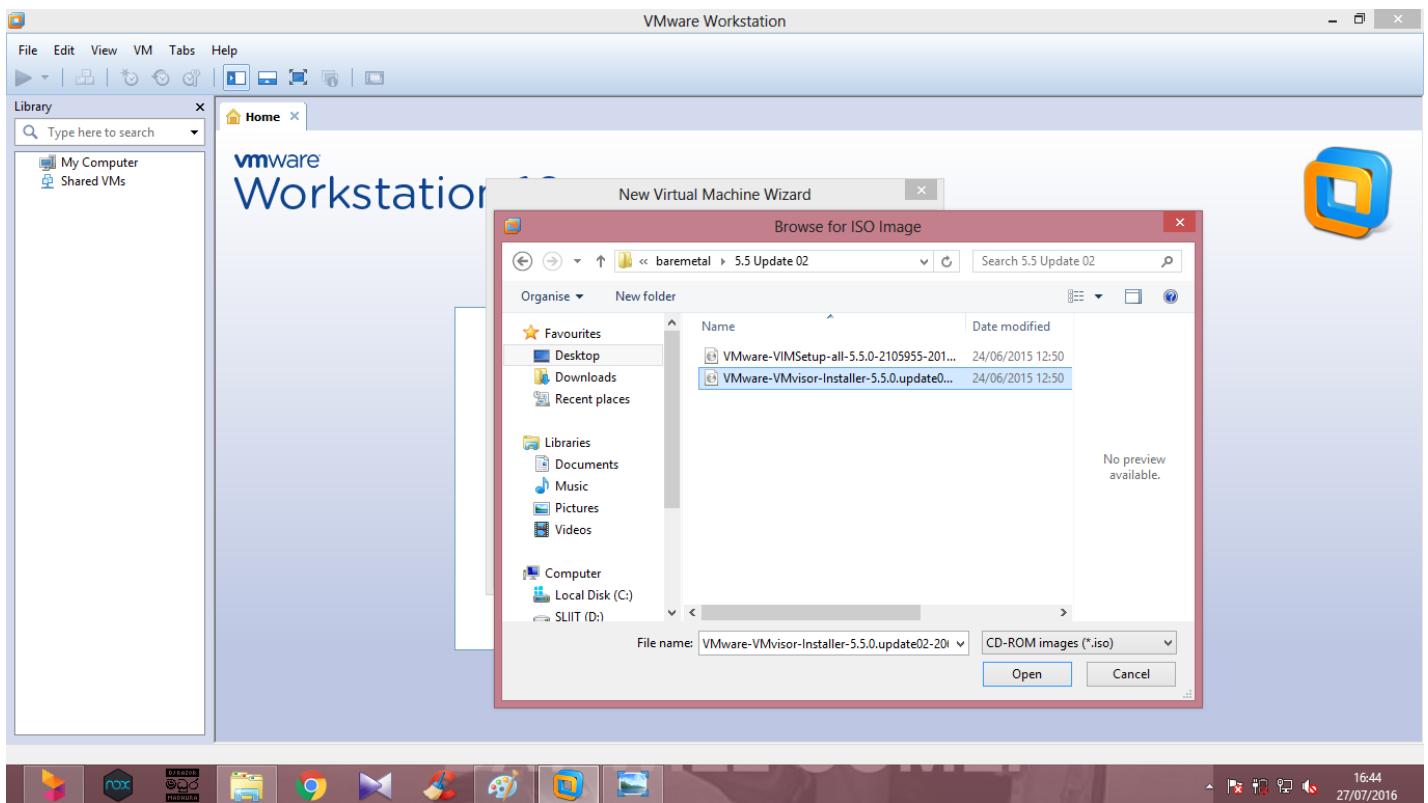
then tick the **Typical**. and go **next**.



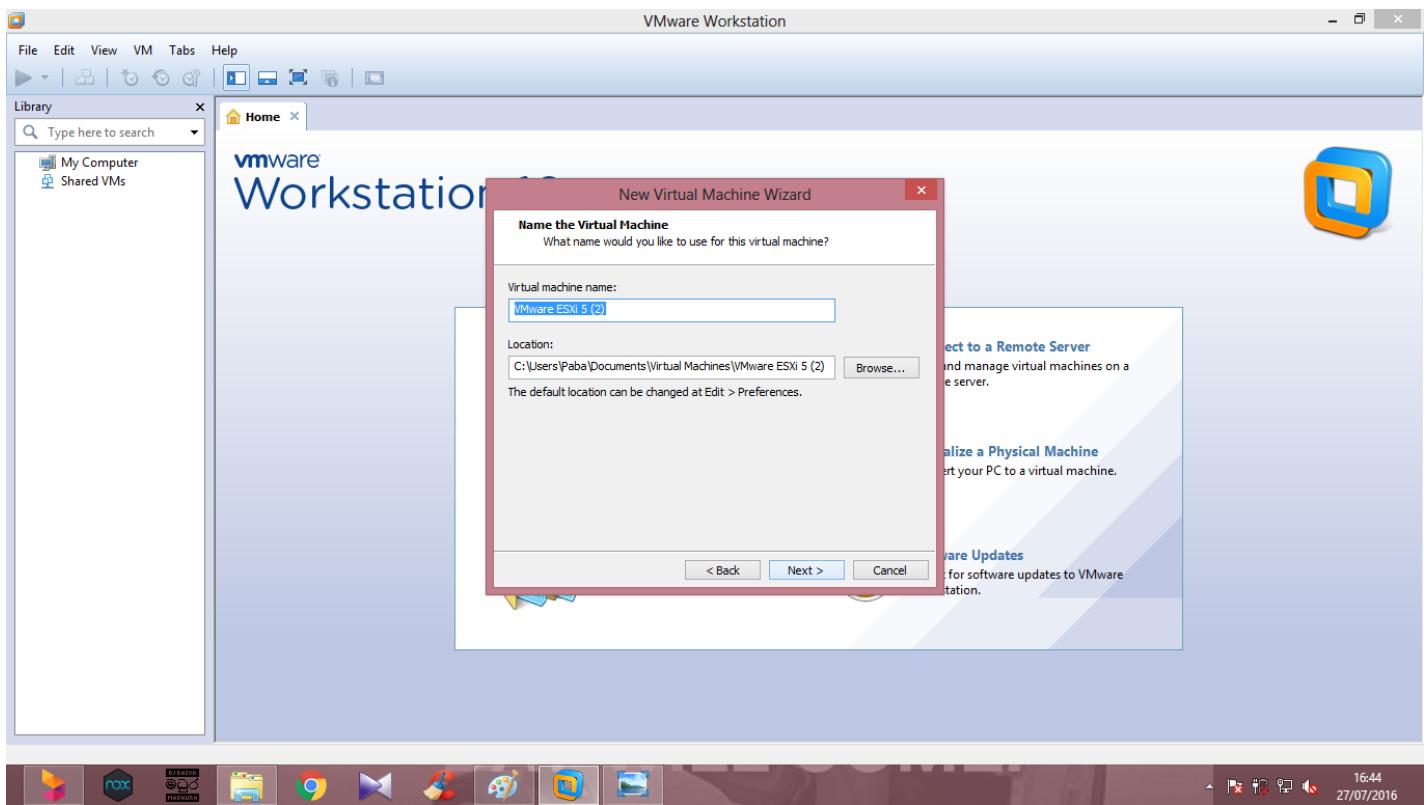
Then need to install the baremetal OS.

browse the baremetal installer to the **installer disk image file**,

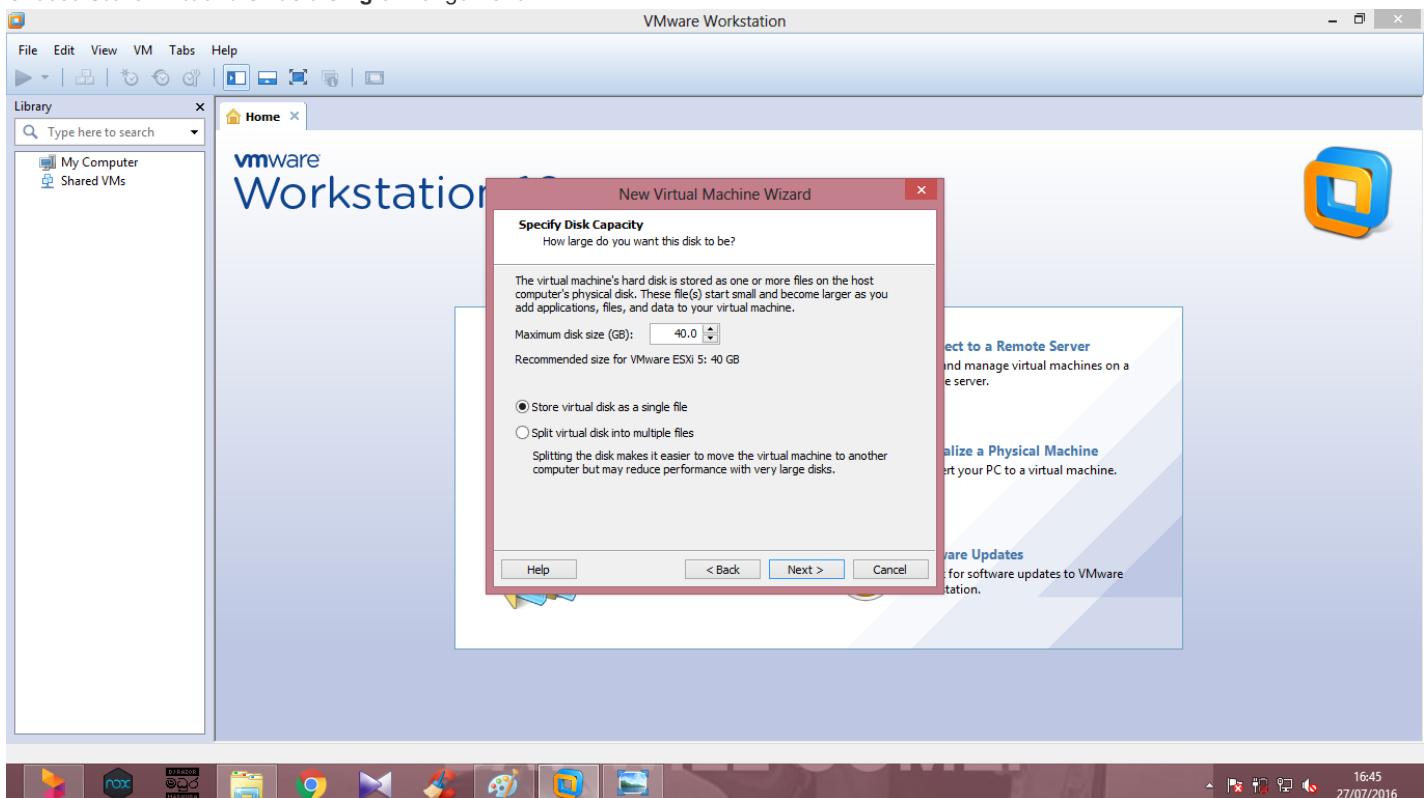




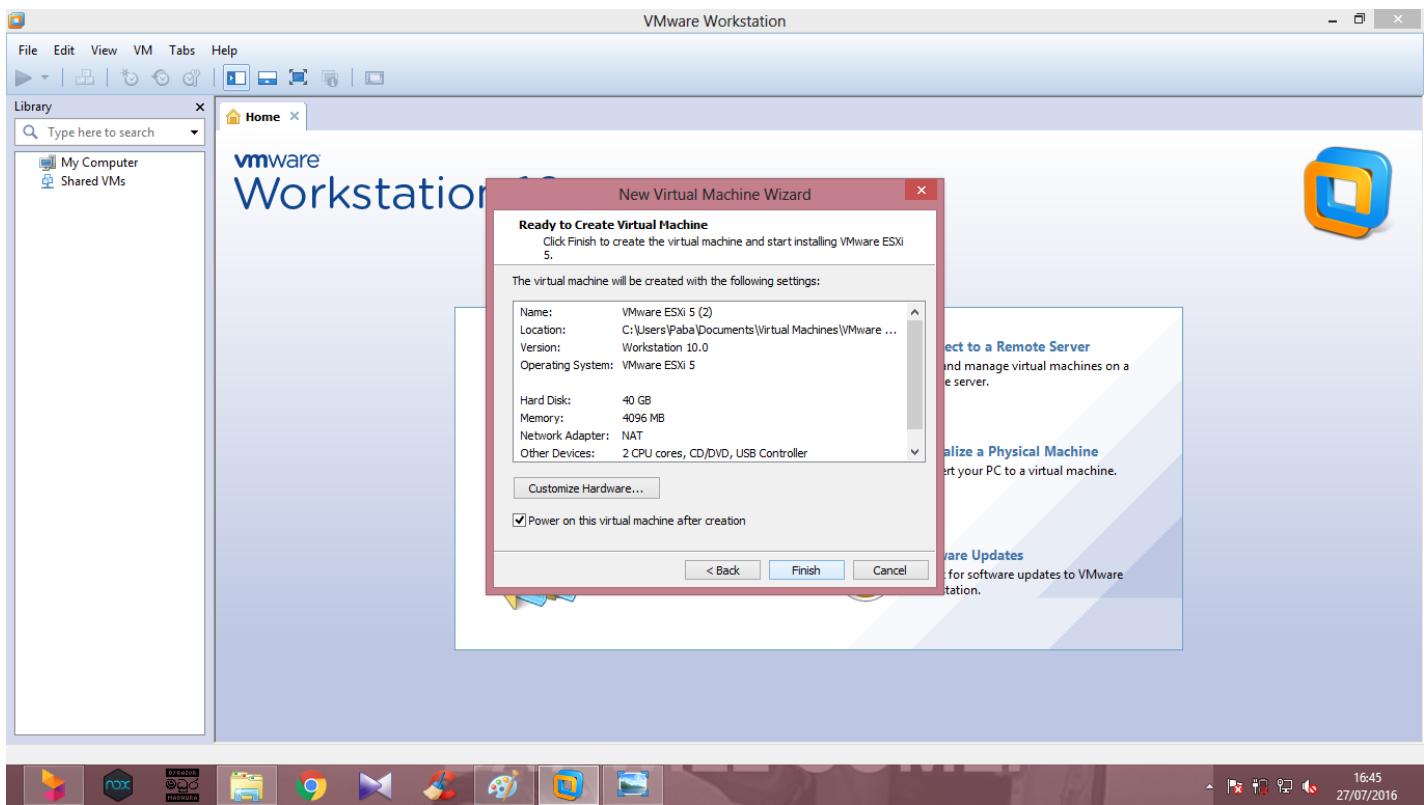
and go **next**.



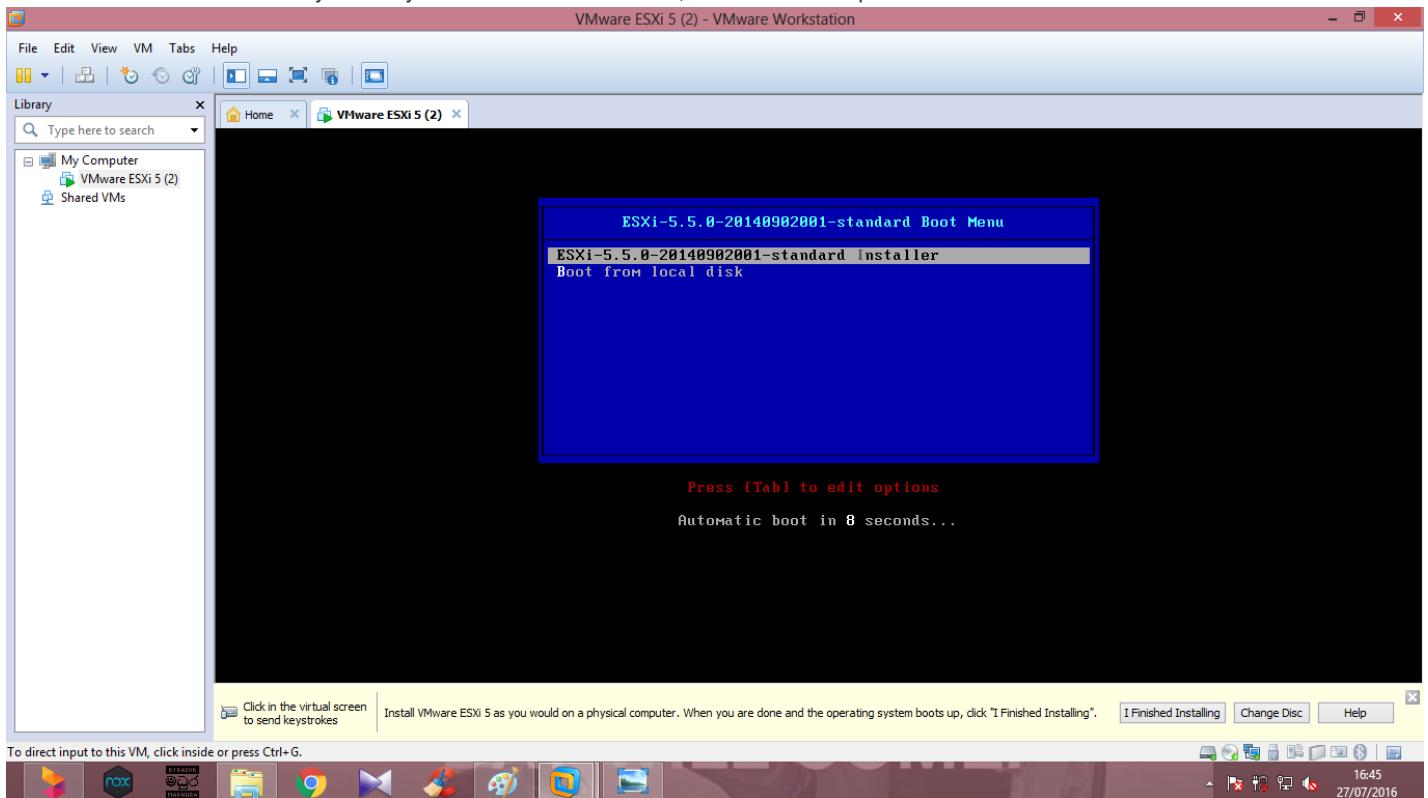
Choose **Store virtual disk as a single file**. go next.



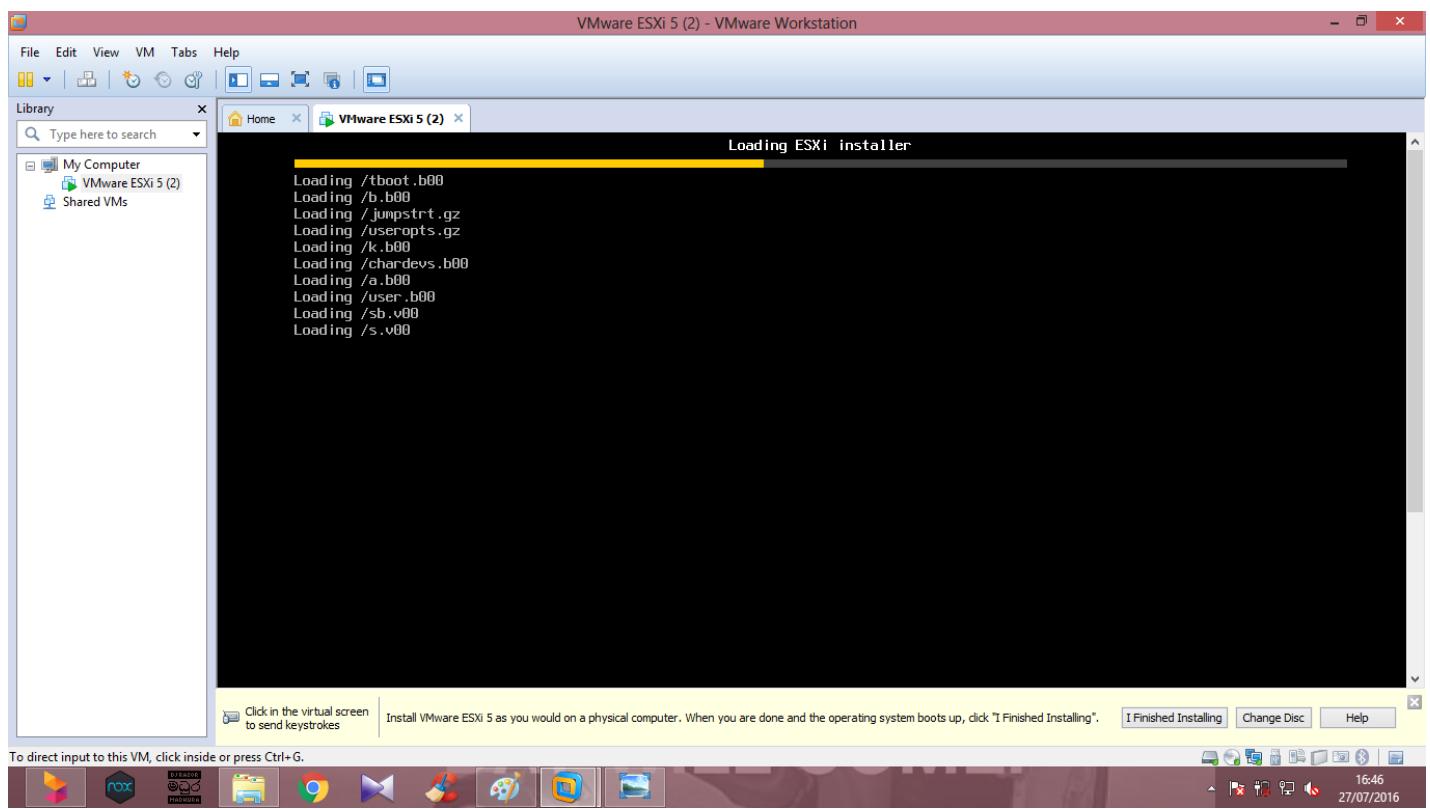
Then **Finish**.



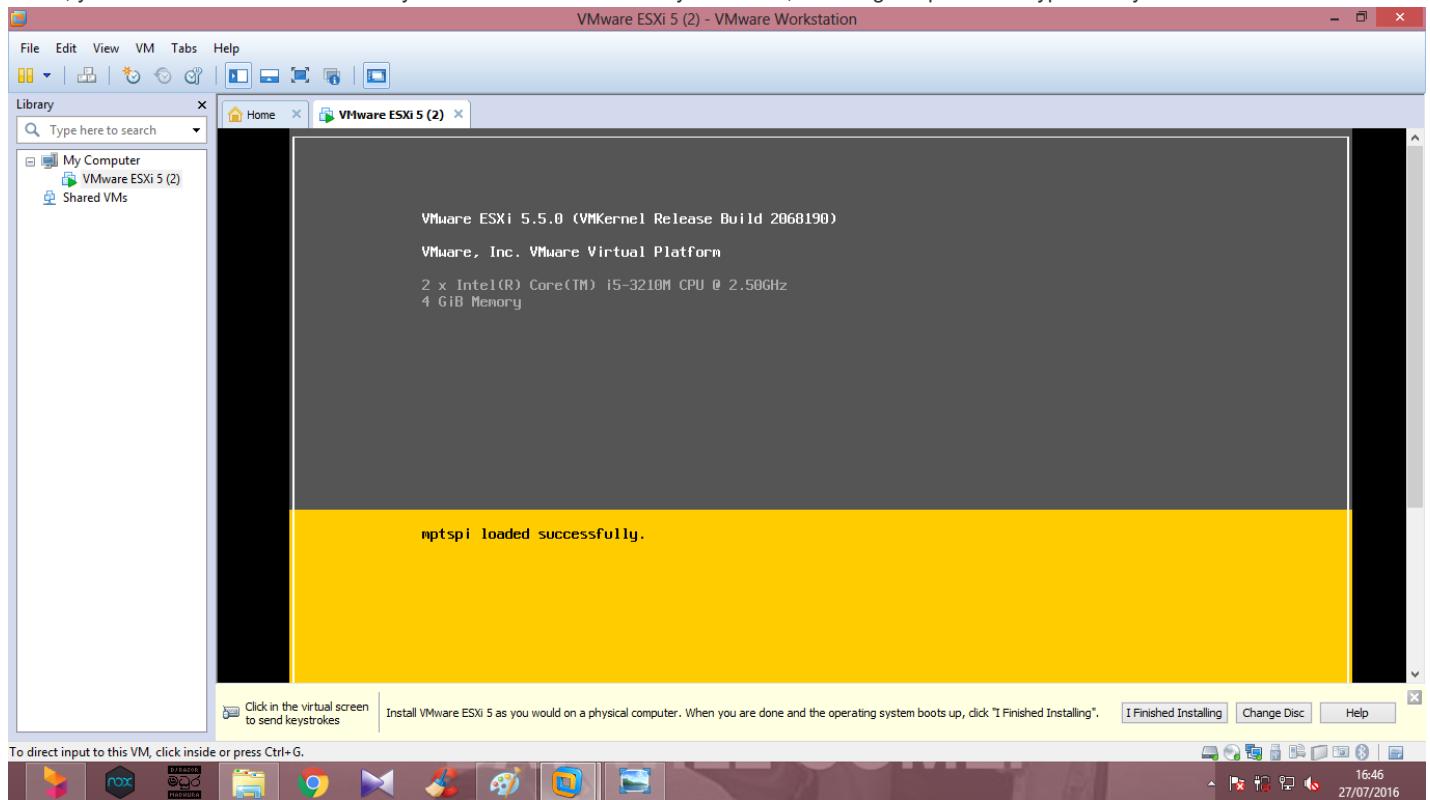
Below screen shot comes when you start your server. From this menu, choose the first option to start the ESXi 5 installer.



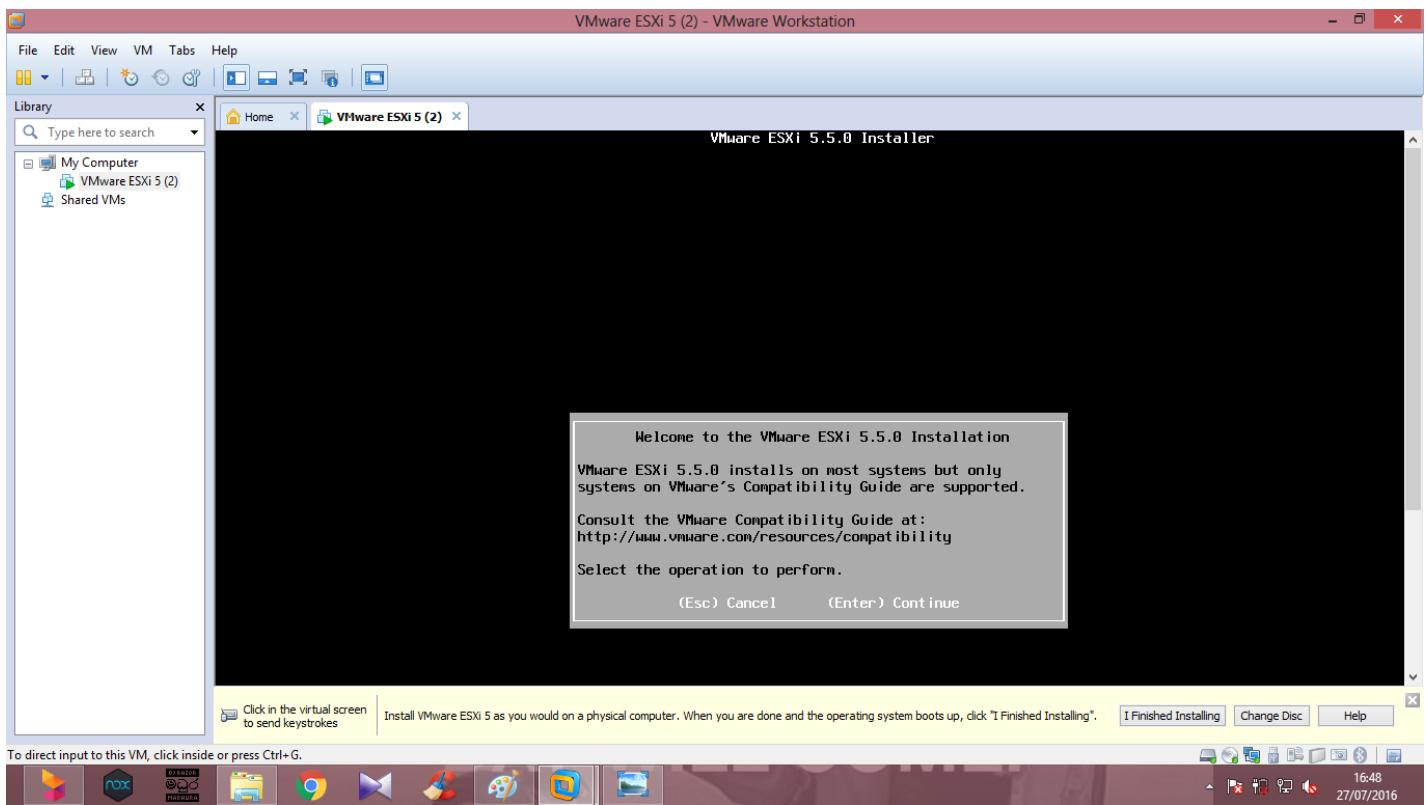
After you choose the installation option, the installer provides you with a window that details the status of each file that needs to be loaded.



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



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

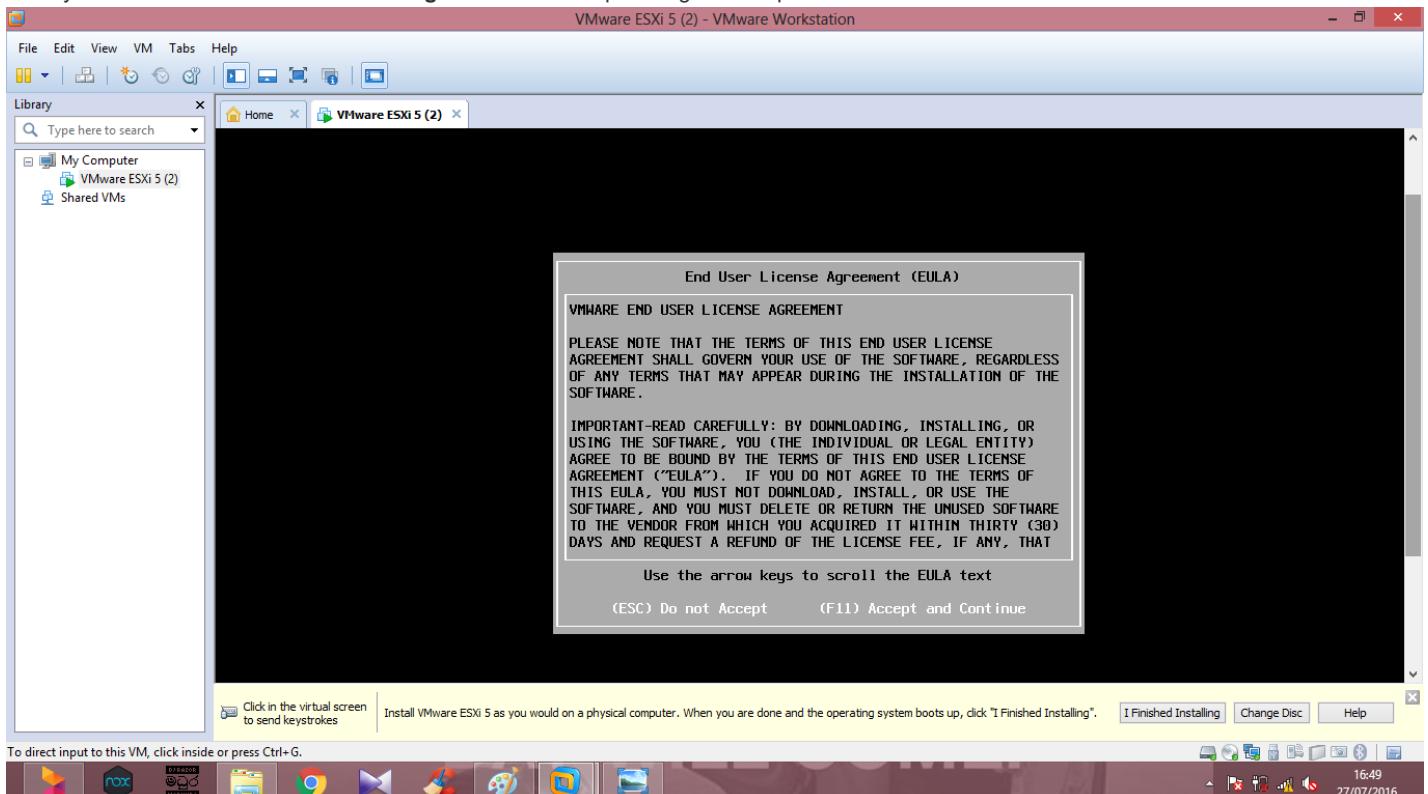


To direct input to this VM, click inside or press Ctrl+G.



16:48  
27/07/2016

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



To direct input to this VM, click inside or press Ctrl+G.

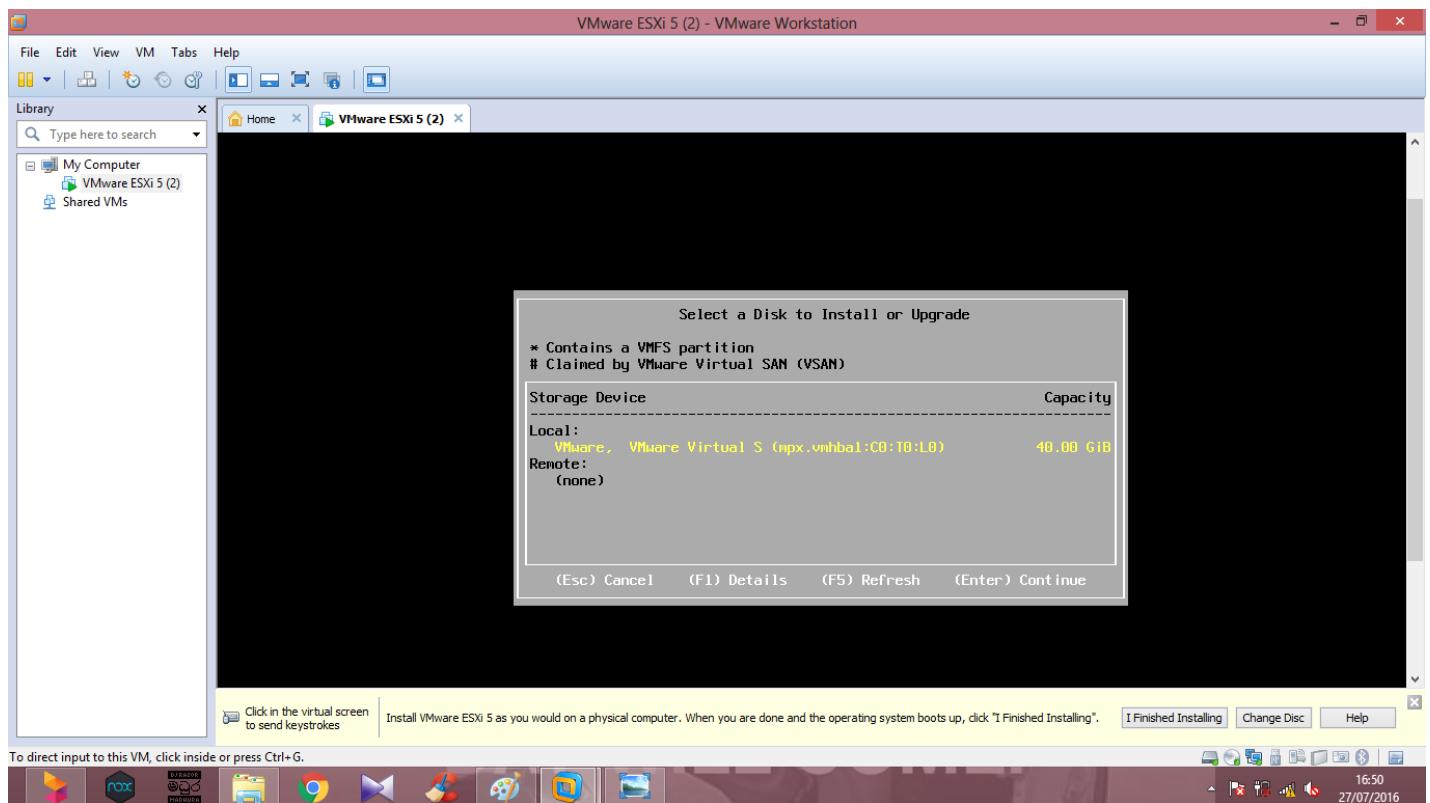


16:49  
27/07/2016

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**.

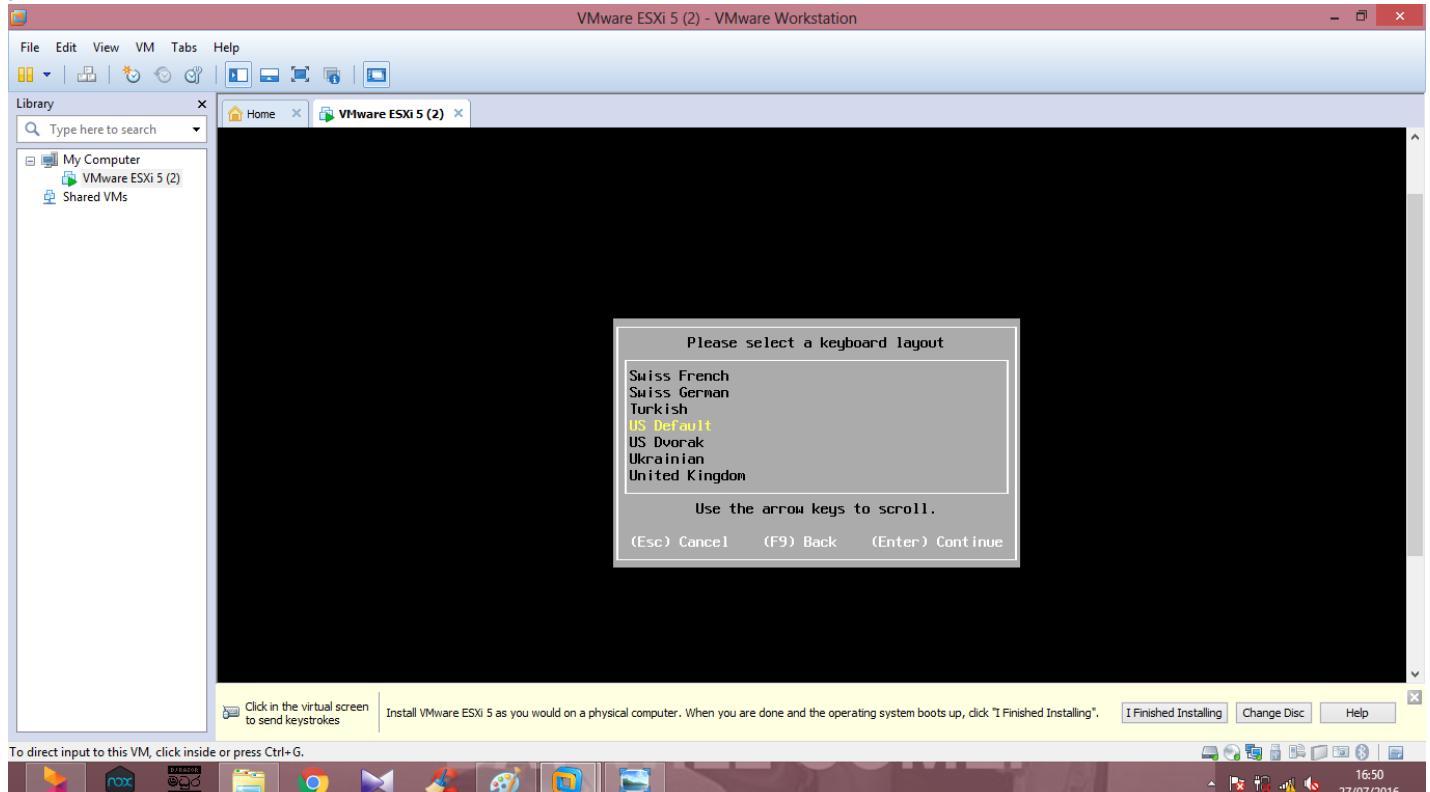


To direct input to this VM, click inside or press Ctrl+G.



As the keyboard layout choose the US default option.

press **Enter**.

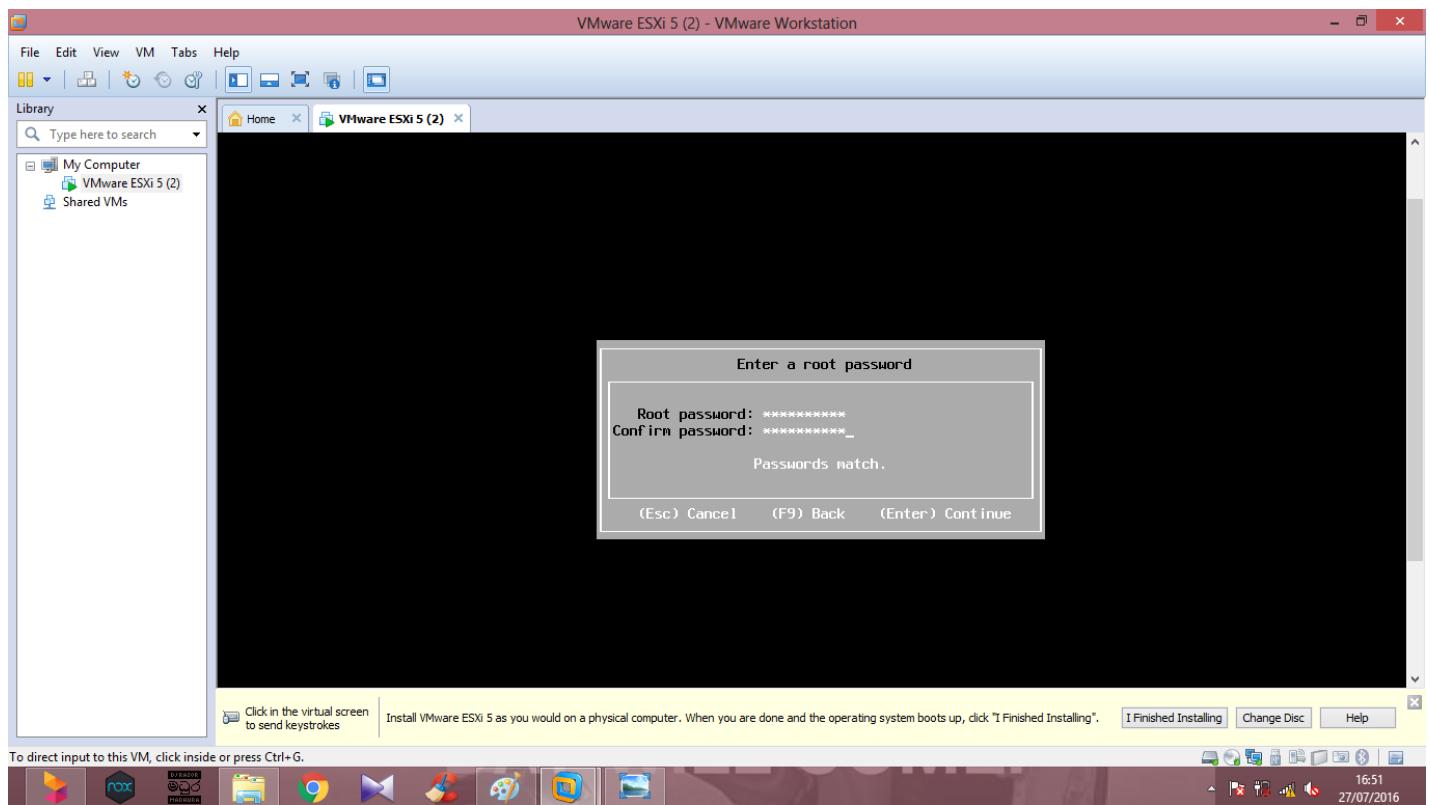


To direct input to this VM, click inside or press Ctrl+G.

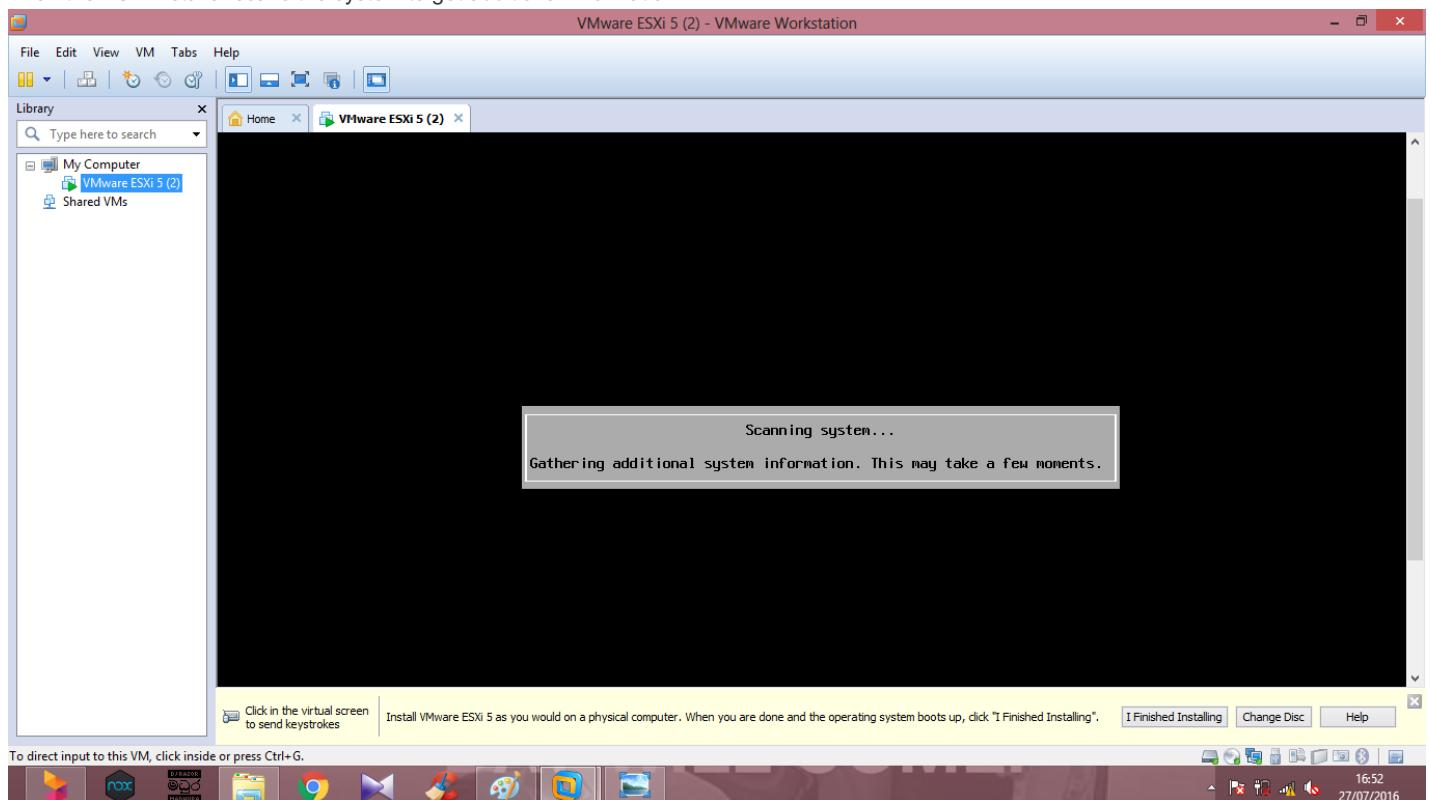


Then provide a password for the root user account.

press **Enter**.

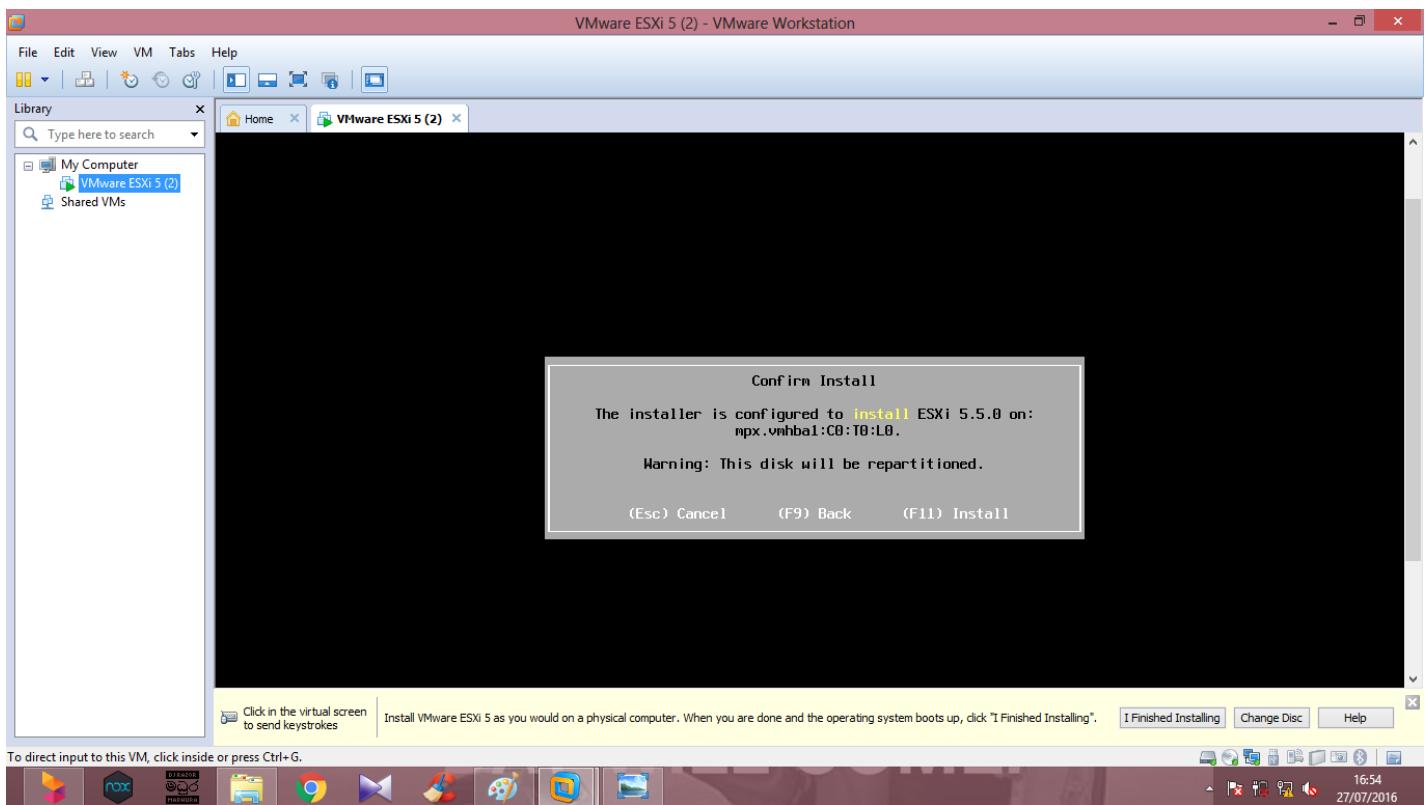


Then the ESXi installer scans the system to get additional information.

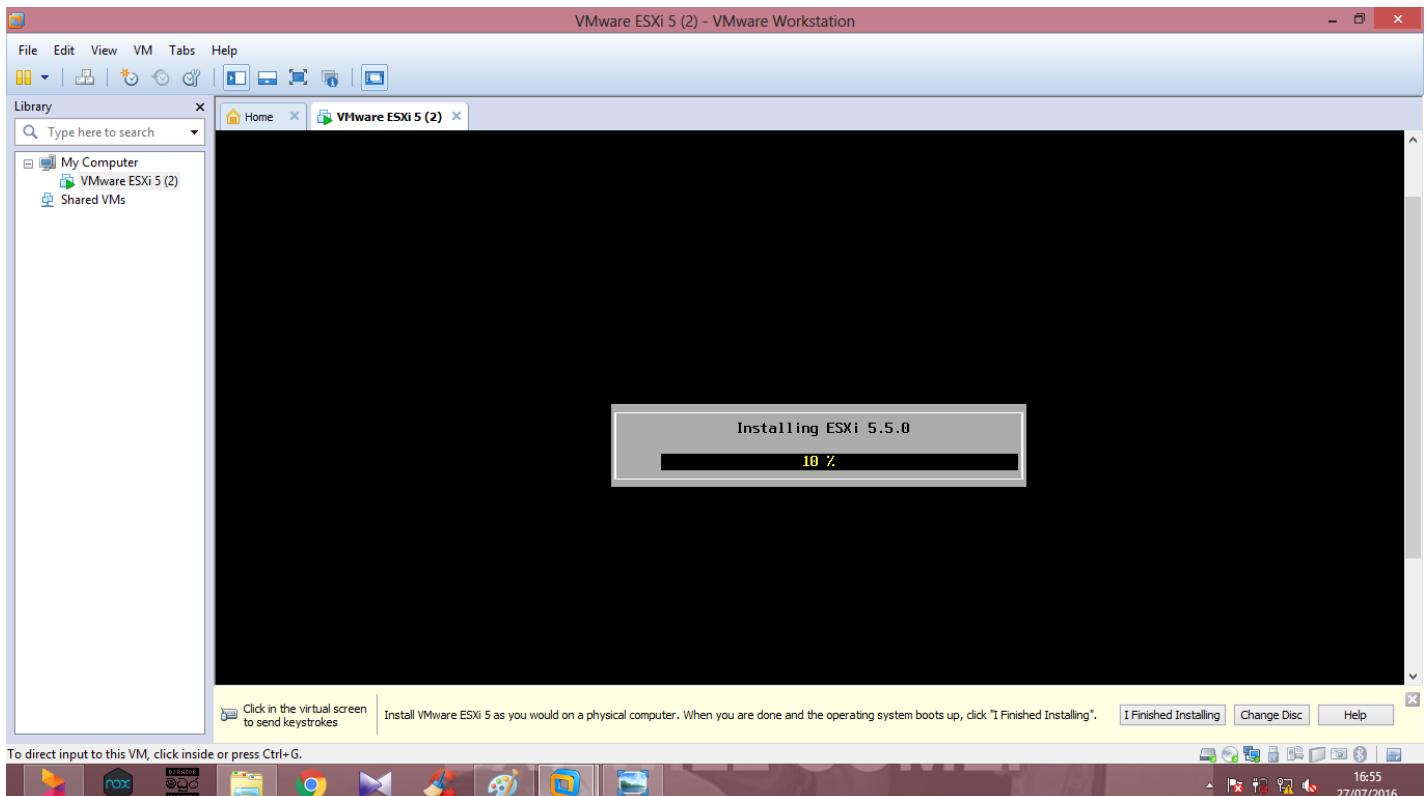


Then ask to confirm install.

Press **F11** button to install.

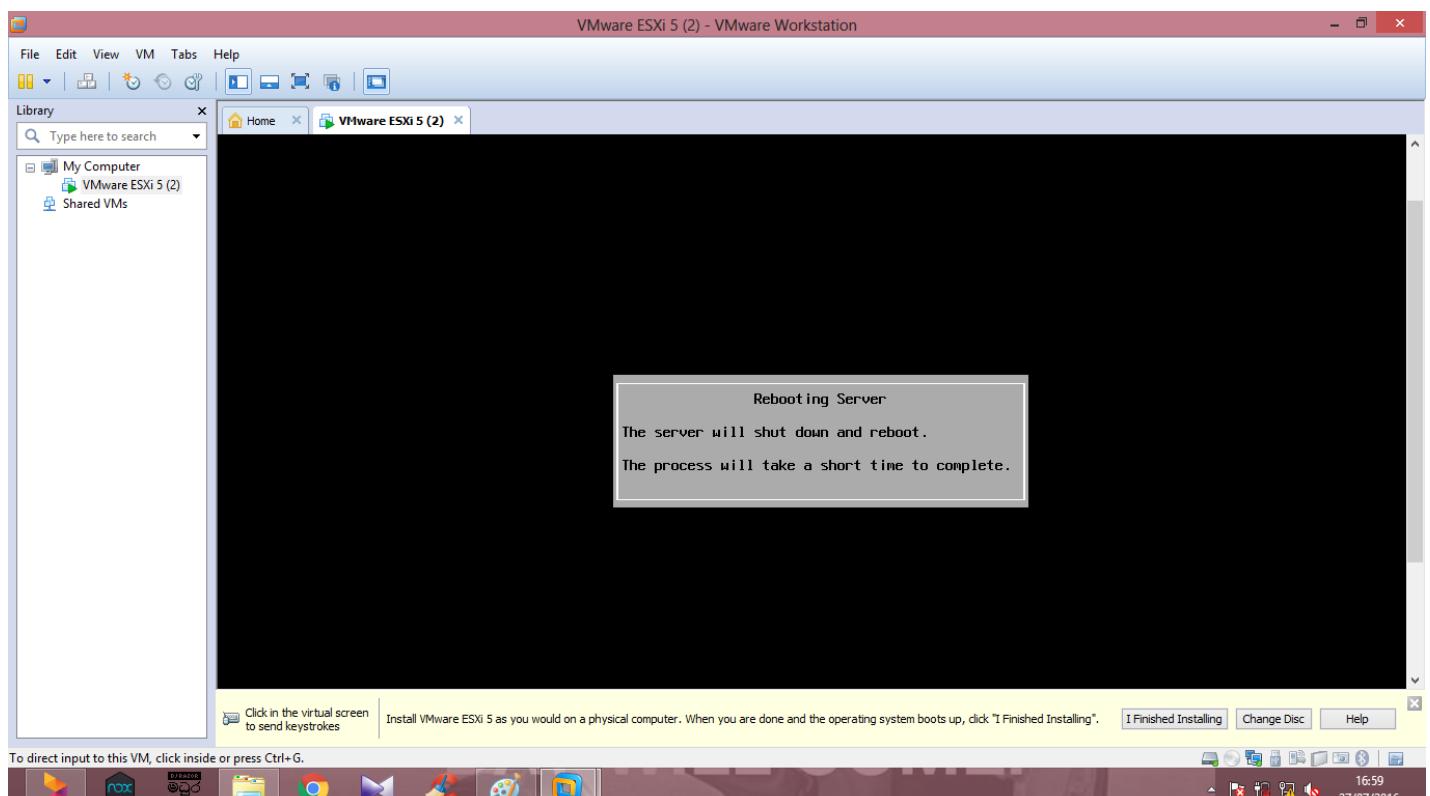
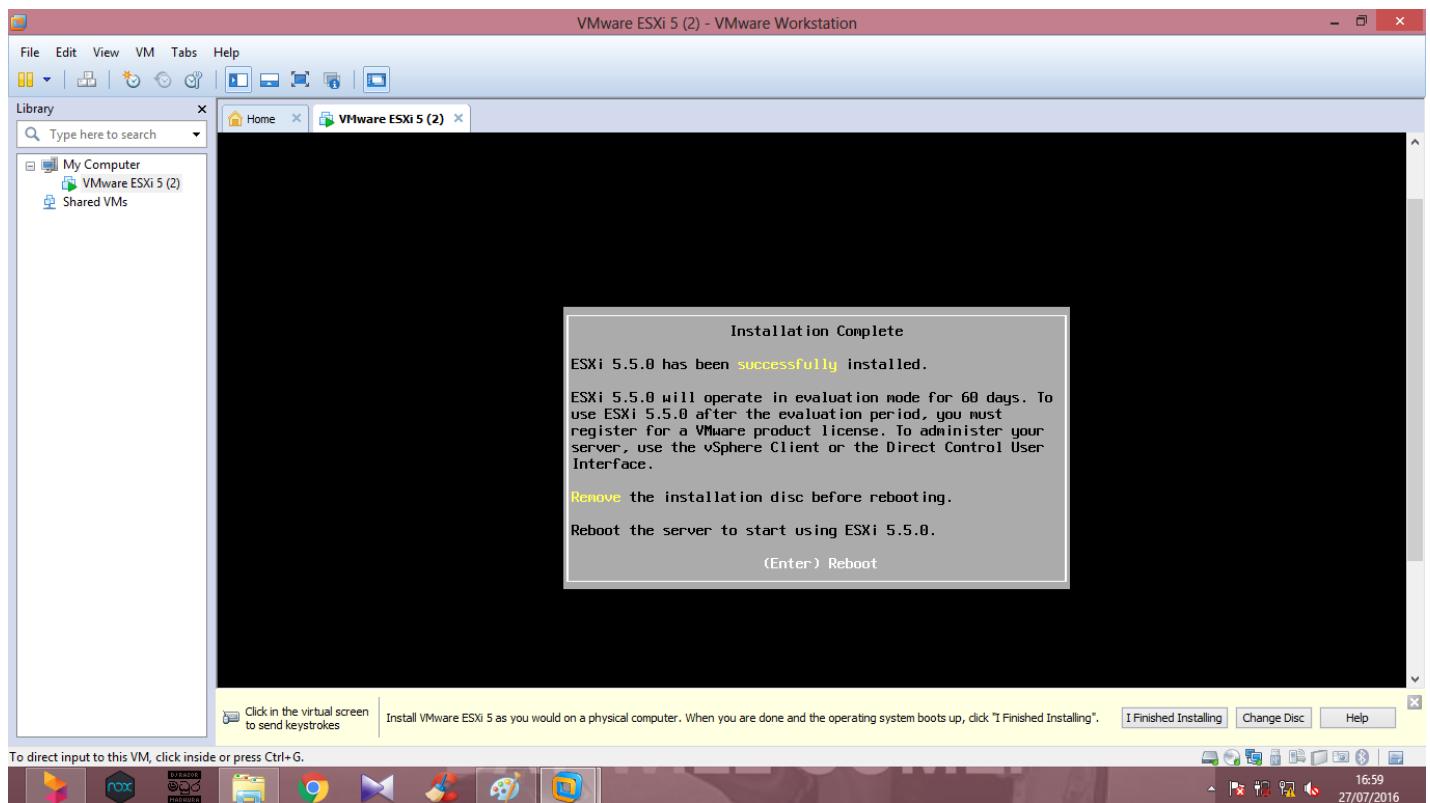


installation status will be shown next.

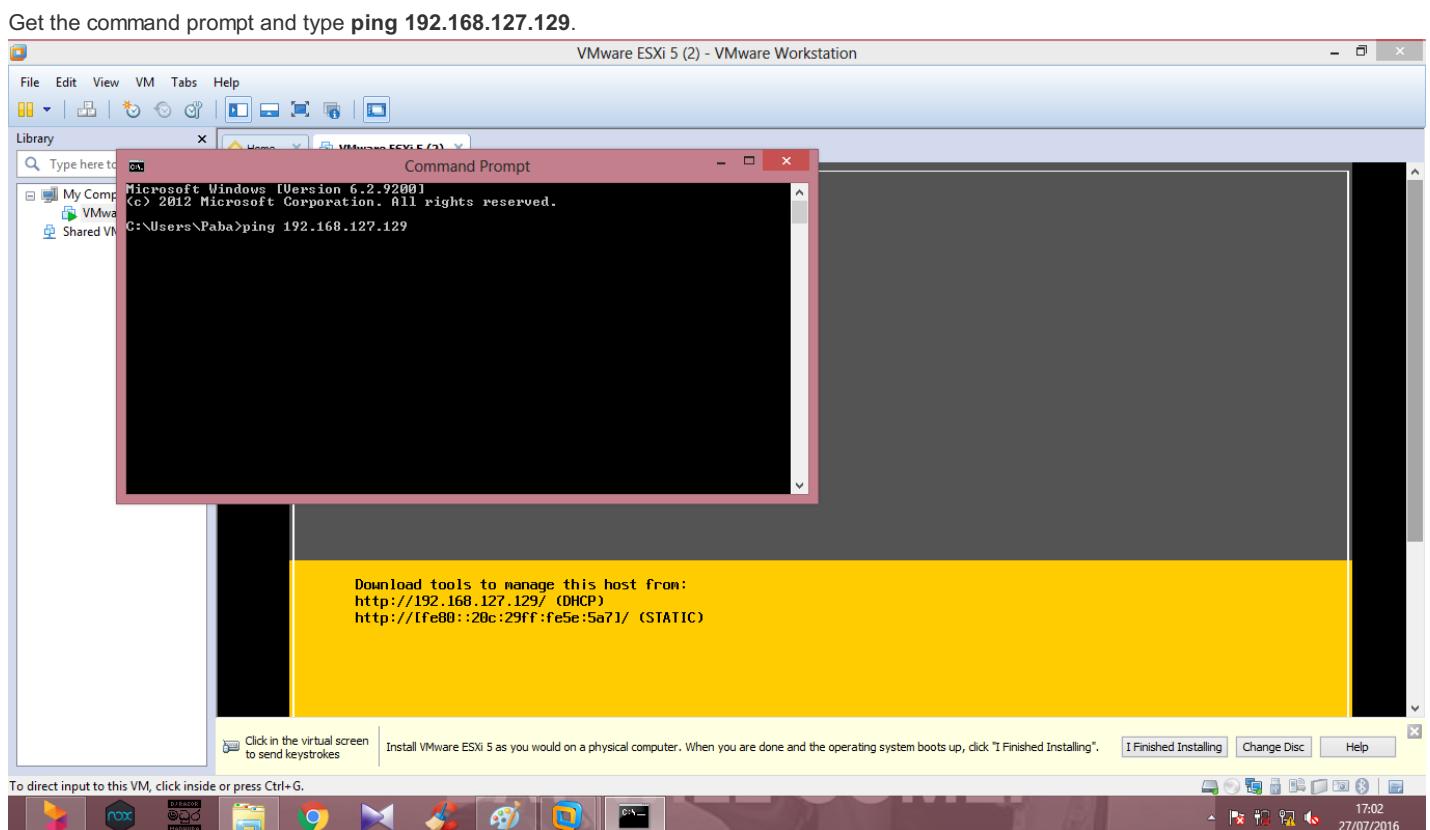
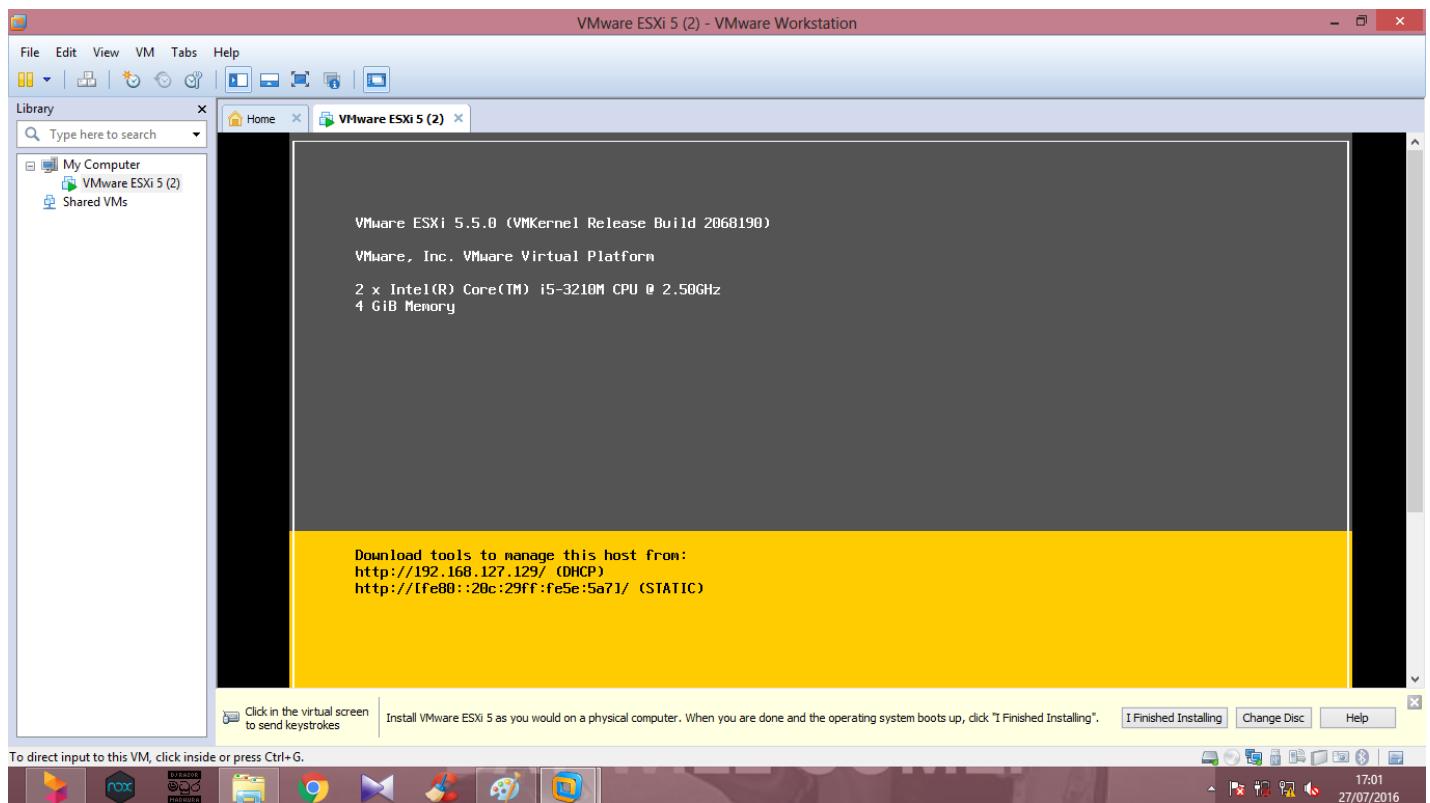


Then the **installation complete** dialog box will be shown.

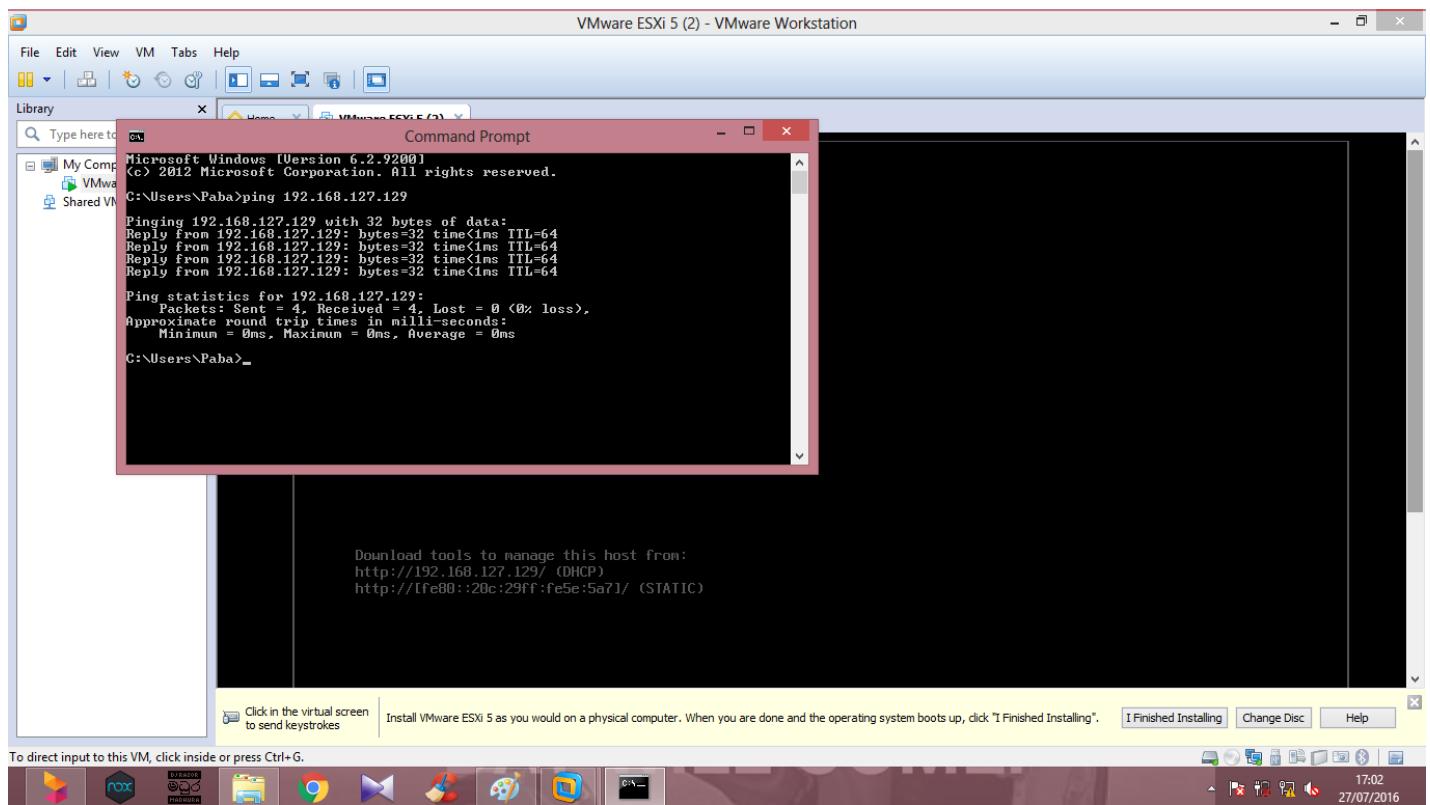
to **Reboot**, press **Enter**.



Get the IP address shown in below.



then you can see the replies getting from the server.



## Install the vSphere Client

Get the IP address and search in a web browser.

There you can download the vSphere client.

Welcome to VMware ESXi

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.

- [Download VMware vCenter](#)

If you need more help, please refer to our documentation library:

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 machines and virtual disk files).

- [Browse datastores in this host's inventory](#)

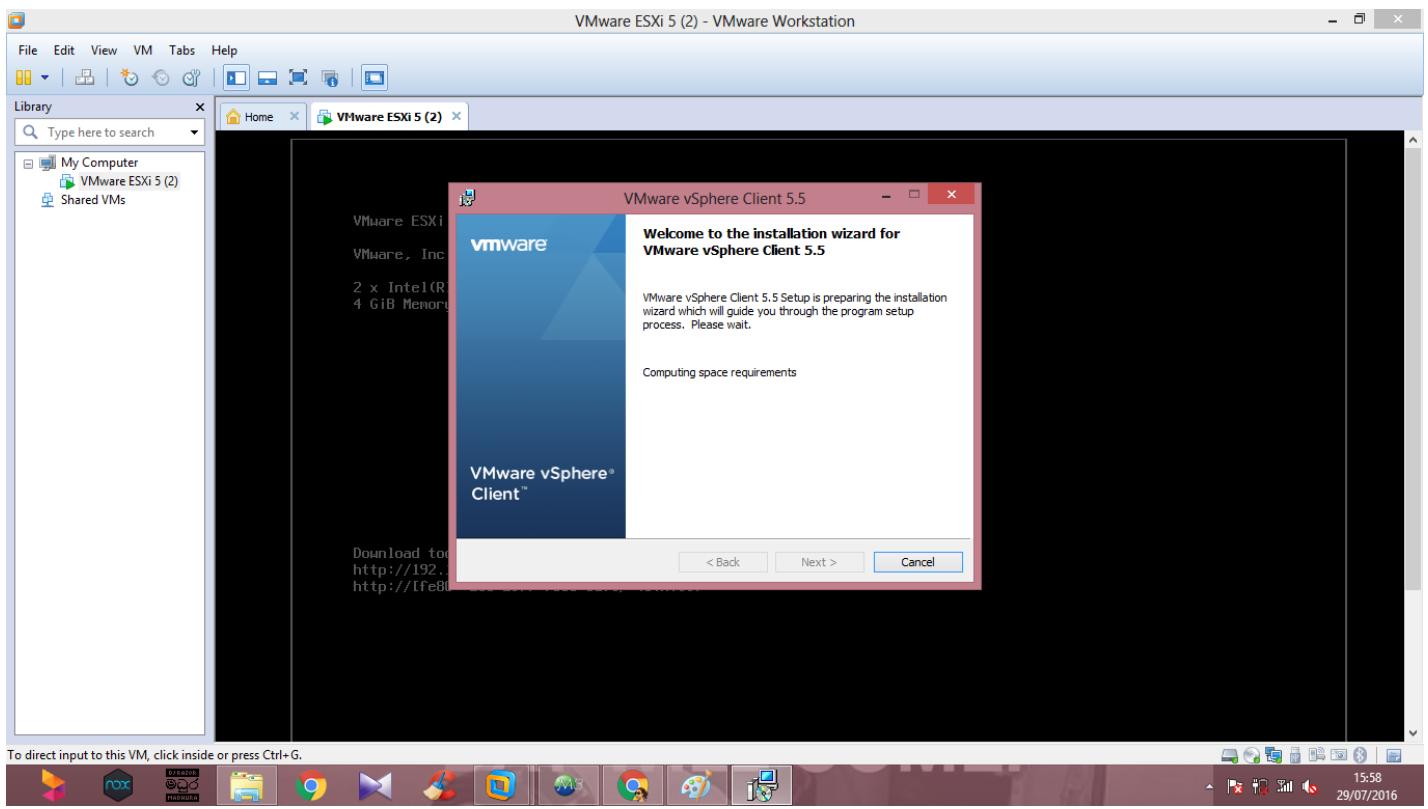
**For Developers**

**vSphere Web Services SDK**

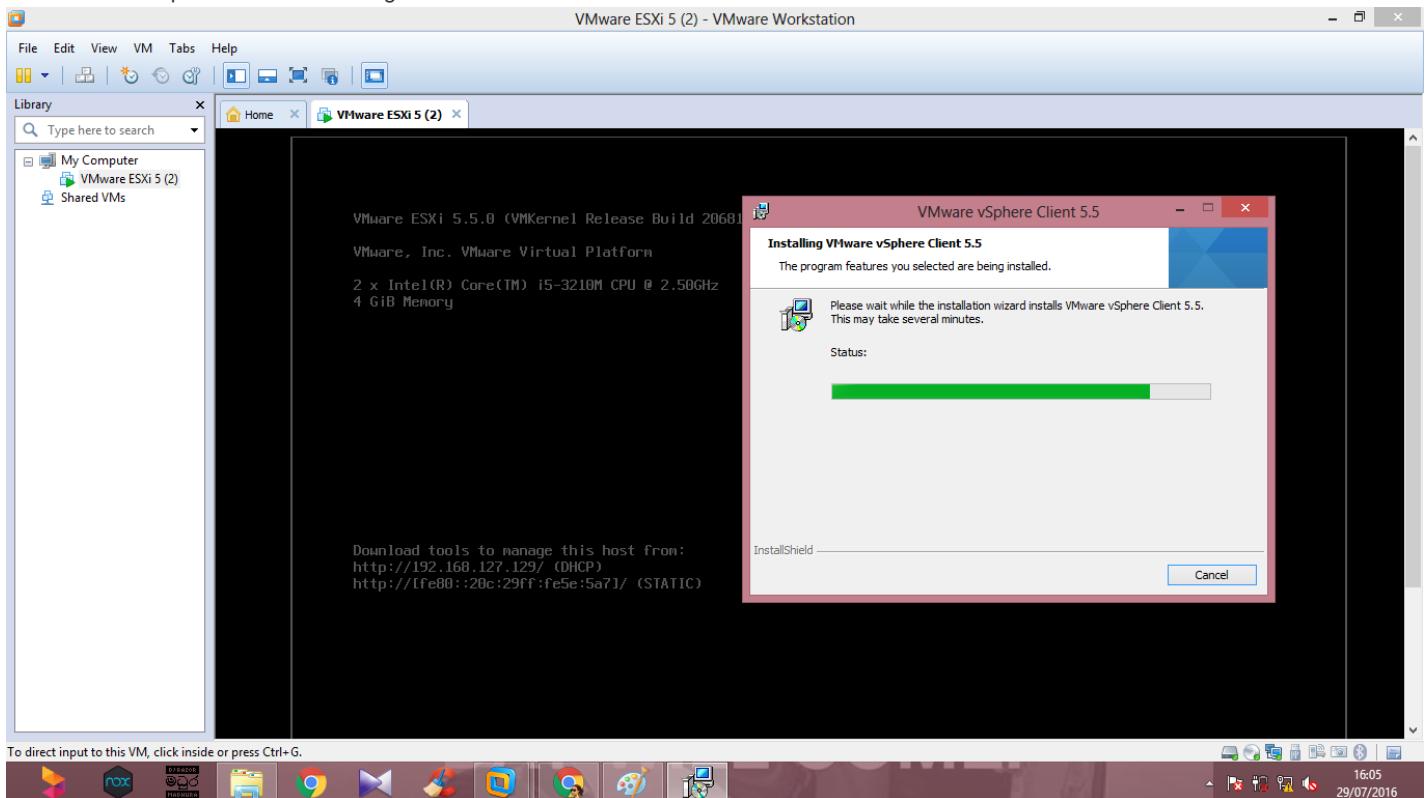
Learn about our latest SDKs, Toolkits, and APIs for managing VMware ESX, ESXi, and VMware vCenter. Get sample code, reference documentation, participate in our Forum Discussions, and view our latest Sessions and Webinars.

- [Learn more about the Web Services SDK](#)
- [Browse objects managed by this host](#)

Execute the client software installation routine.



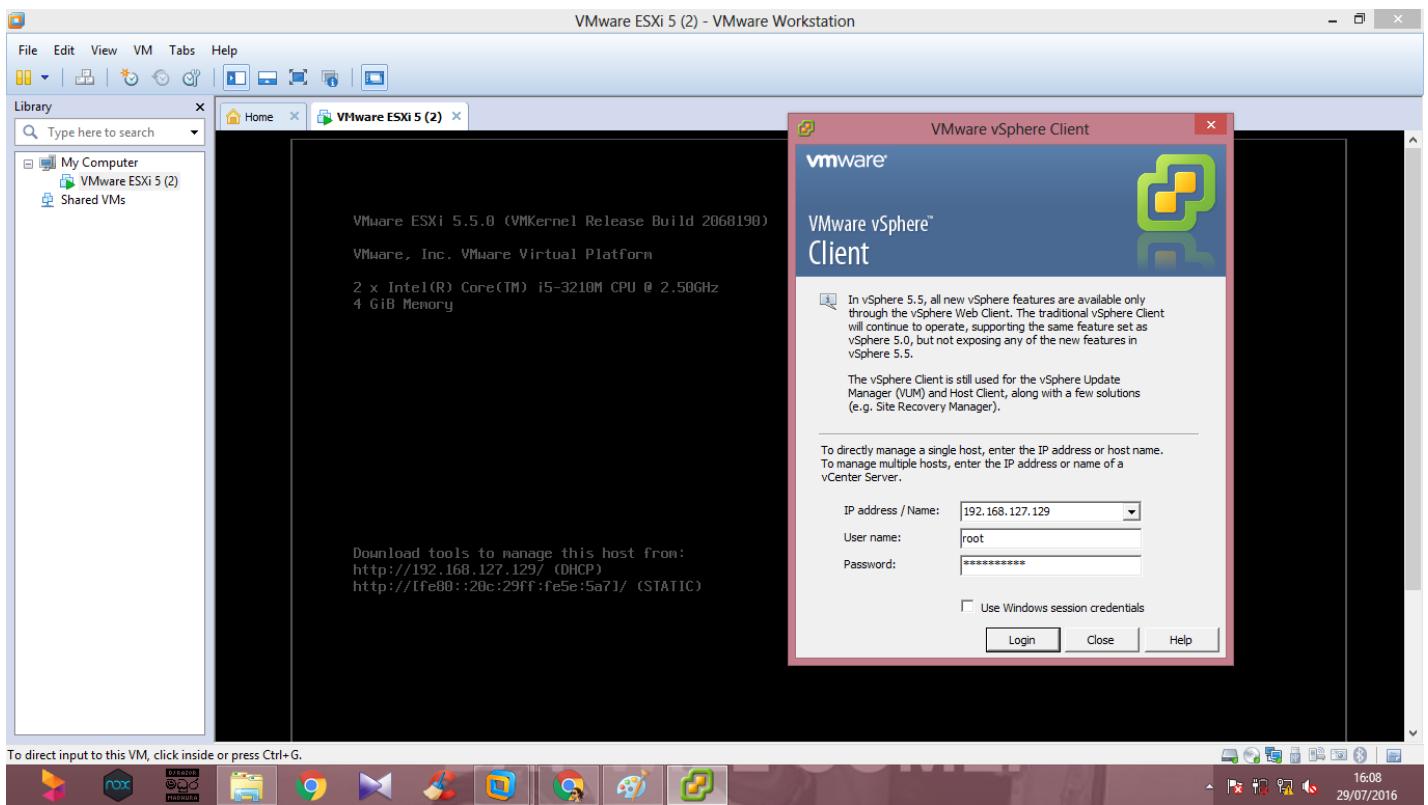
Then VMware vSphere client is installing.



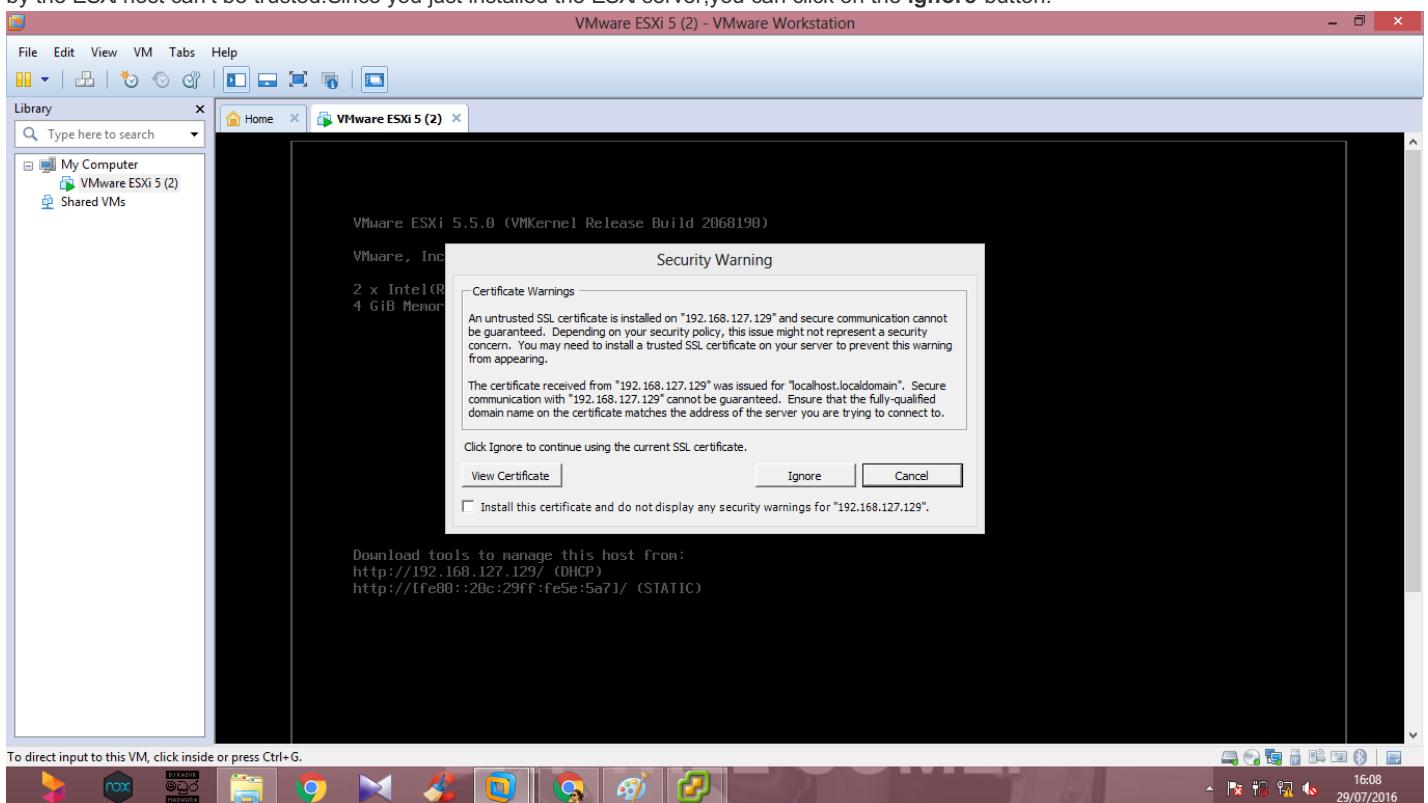
You've installed the hypervisor – ESXi5 and a management tool – vSphere Client.

Start the vSphere client.

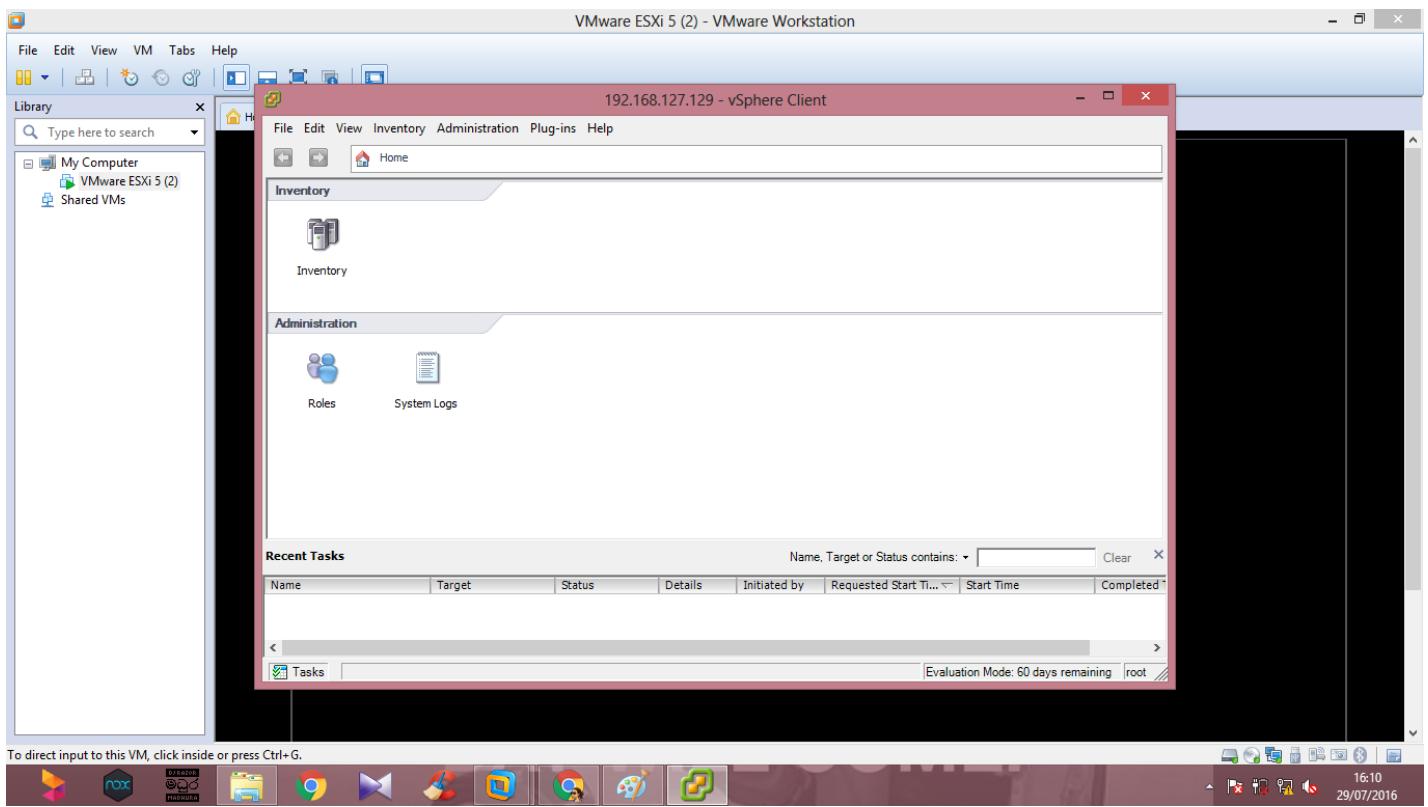
Provide the **ip** address for your ESXi5 host and also provide the **root** user name and password that you specified during the setup of your server.



After login to the VMware vSphere client you can get a security warning like below. This is basically telling you that the SSL certificate being used by the ESXi host can't be trusted. Since you just installed the ESXi server, you can click on the **ignore** button.



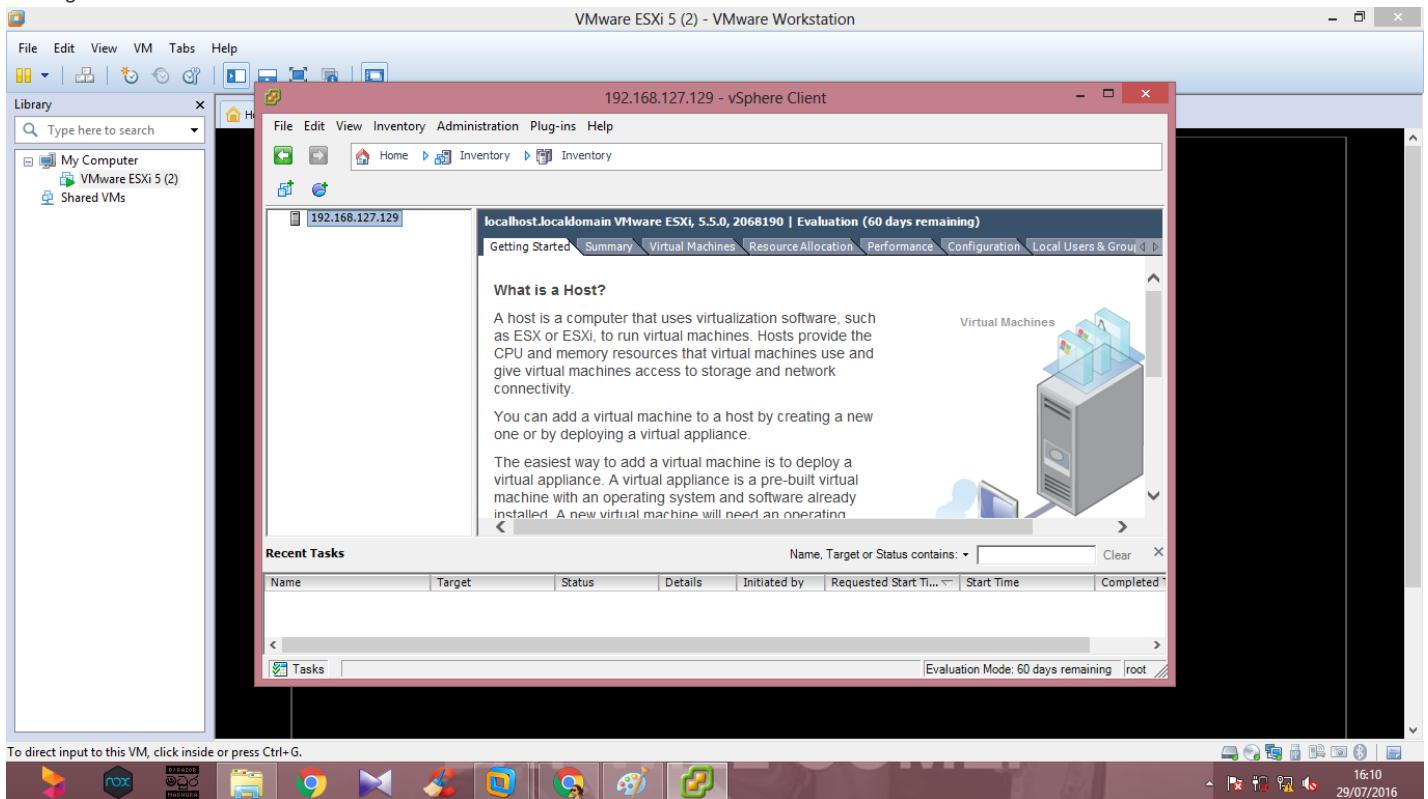
this is the interface after clicking the **ignore** button.



Then click on the **Inventory**.

Then there are several tabs.

Getting started tab is in this interface.



Summary tab

192.168.127.129 - 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

**General**

Manufacturer:	VMware, Inc.
Model:	VMware Virtual Platform
CPU Cores:	2 CPUs x 2,494 GHz
Processor Type:	Intel(R) Core(TM) i5-3210M CPU @ 2.50GHz
License:	Evaluation Mode -
Processor Sockets:	2
Cores per Socket:	1
Logical Processors:	2
Hypertreading:	Inactive
Number of NICs:	1
State:	Connected
Virtual Machines and Templates:	0
vMotion Enabled:	N/A
VMware EVC Mode:	Disabled
vSphere HA State	② N/A
Host Configured for FT:	N/A
Active Tasks:	
Host Profile:	N/A
Image Profile:	ESXi-5.5.0-20140902001-st...

**Resources**

CPU usage: 126 MHz	Capacity 2 x 2,494 GHz
Memory usage: 1152.00 MB	Capacity 4095.49 MB
Storage	Drive Type Capacity
datastore1	Non-SSD 32.50 GB
Network	Type
VM Network	Standard port group

**Fault Tolerance**

Fault Tolerance Version:	5.0.0-5.0.0-5.0.0
Total Primary VMs:	0
Powered On Primary VMs:	0
Total Secondary VMs:	0
Powered On Secondary VMs:	0

Recent Tasks

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

Name, Target or Status contains: ▾ Clear ×

Tasks Evaluation Mode: 60 days remaining root 16:12 29/07/2016

Virtual machines tab

192.168.127.129 - 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

Name, State or Guest OS contains: ▾ Clear

Name	State	Provisioned Space	Used Space	Host CPU - MHz	Host Mem - MB	Guest Mem - %	Notes

Recent Tasks

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

Name, Target or Status contains: ▾ Clear ×

Tasks Evaluation Mode: 60 days remaining root 16:12 29/07/2016

Resource allocation tab

192.168.127.129 - 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>2892 MHz</b>	Total Capacity:	<b>1336 MB</b>
Reserved Capacity:	<b>0 MHz</b>	Reserved Capacity:	<b>0 MB</b>
Available Capacity:	<b>2892 MHz</b>	Available Capacity:	<b>1336 MB</b>

**Memory**

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 16:12 29/07/2016

Performance tab

192.168.127.129 - 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, 27/07/2016 21:49:35 - 27/07/2016 22:49:35 Chart Options...

Graph refreshes every 20 seconds

Time

MHz

Percent

Performance Chart Legend

Key	Object	Measurement	Rollup	Units	Latest	Maximum	Minimum	Average
localhost.locald...	Usage in MHz	Average	MHz	85	588	0	85.016	
localhost.locald...	Usage	Average	Percent	1.71	11.8	0	1.711	
1	Usage	Average	Percent	1.79	12.65	0	1.733	
0	Usage	Average	Percent	1.62	10.94	0	1.686	

Recent Tasks

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

Tasks

Evaluation Mode: 60 days remaining root 16:14 29/07/2016

Configuration tab

192.168.127.129 - 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

Hardware

- Health Status
- Processors
- Memory
- Storage
- Networking
- Storage Adapters
- Network Adapters
- Advanced Settings
- Power Management

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

Sensor Status Reading

Sensor	Status	Reading
VMware, Inc. VMware Virtual Platform	Normal	

Reset Sensors Refresh

Recent Tasks

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

Tasks Evaluation Mode: 60 days remaining root

16:14 29/07/2016

Local users and groups tab

192.168.127.129 - 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

View: Users Groups

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

Refresh

Recent Tasks

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

Tasks Evaluation Mode: 60 days remaining root

16:15 29/07/2016

Events tab

192.168.127.129 - 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

Show all entries ▾ Description, Type or Target contains: ▾ Clear

Description	Type	Date Time	Task	Target	User
User root@192.168.127.1 logged in as VMware VI Client/4.0.0	info	27/07/2016 22:48:09			root
Network connectivity restored on virtual switch "vswitch0", portgroups: "Management Network". Physical NIC vmnic0 is up.	info	27/07/2016 22:43:11		localhost.l...	
Lost network connectivity on virtual switch "vswitch0", Physical NIC vmnic0 is down. Affected portgroups:"Management Network".	error	27/07/2016 22:43:06		localhost.l...	
Network connectivity restored on virtual switch "vswitch0", portgroups: "Management Network". Physical NIC vmnic0 is up.	info	27/07/2016 22:42:06		localhost.l...	
Lost network connectivity on virtual switch	error	27/07/2016 22:42:01		localhost.l...	

Event Details

Recent Tasks Name, Target or Status contains: ▾ Clear ×

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

Tasks Evaluation Mode: 60 days remaining Showing all entries root

16:15 29/07/2016

### Permissions tab

192.168.127.129 - 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

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

Recent Tasks Name, Target or Status contains: ▾ Clear ×

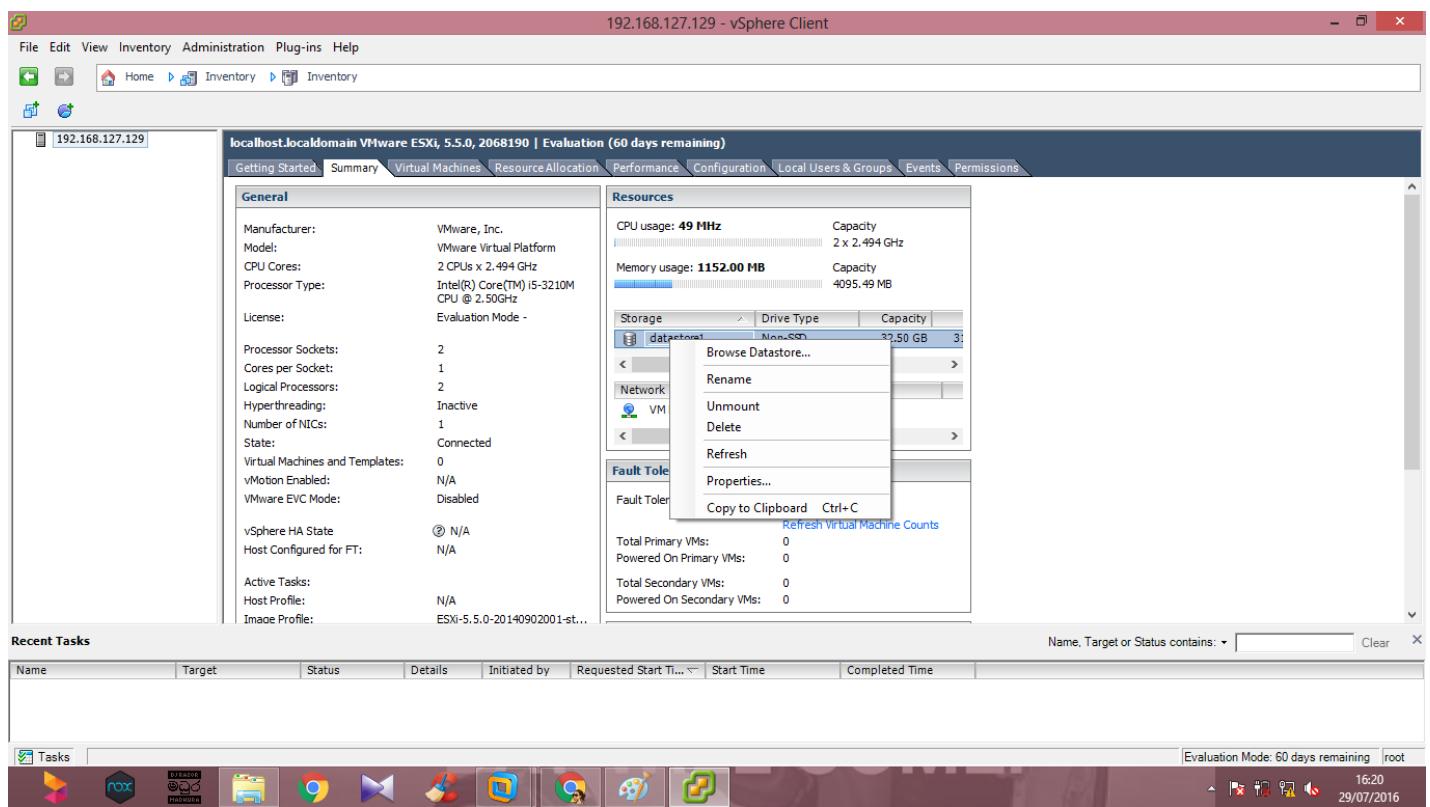
Name	Target	Status	Details	Initiated by	Requested Start Ti... ▾	Start Time	Completed Time

Tasks Evaluation Mode: 60 days remaining root

16:15 29/07/2016

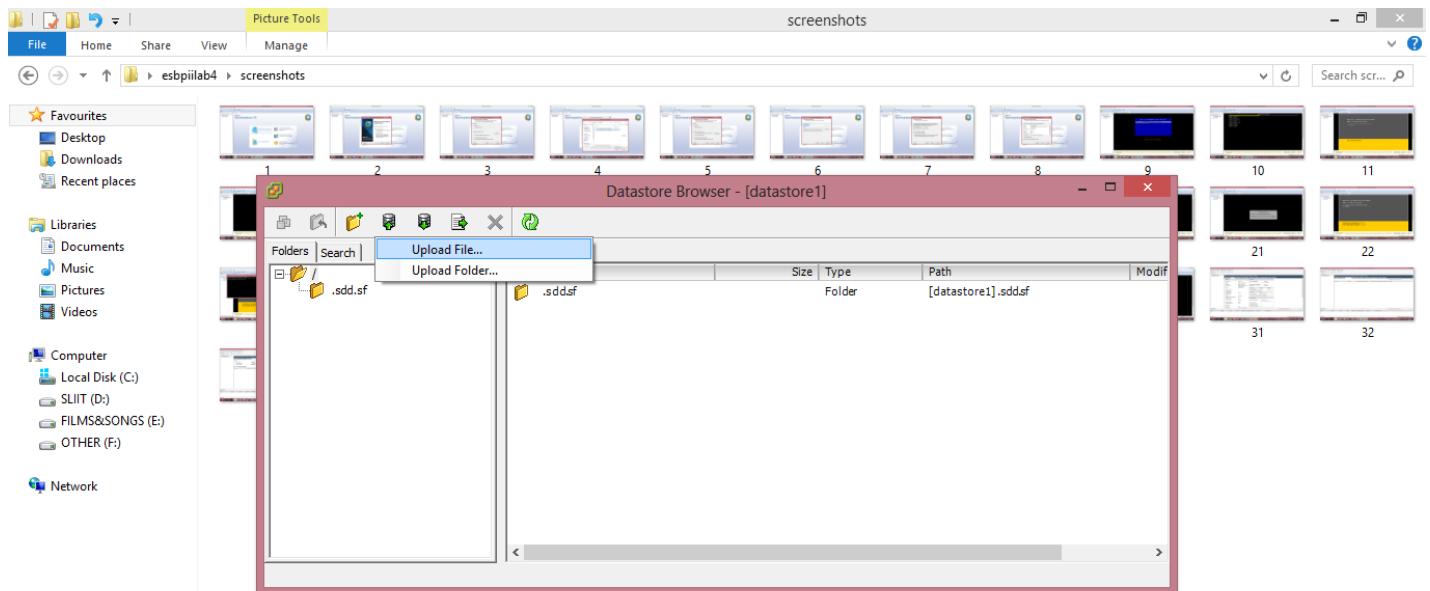
In summary tab, there is a resource called **storage**.

right click on the **database** and select **Browse datastore**.



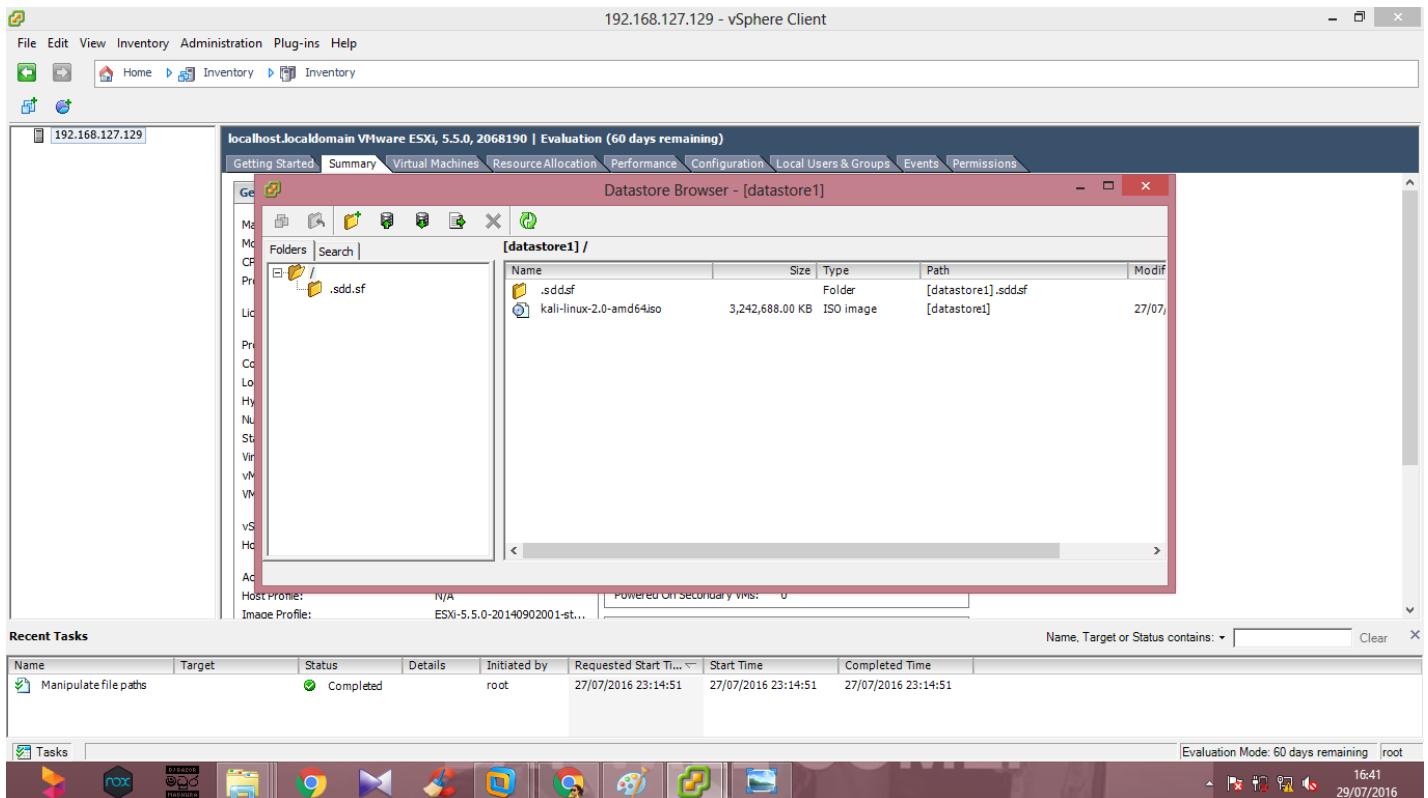
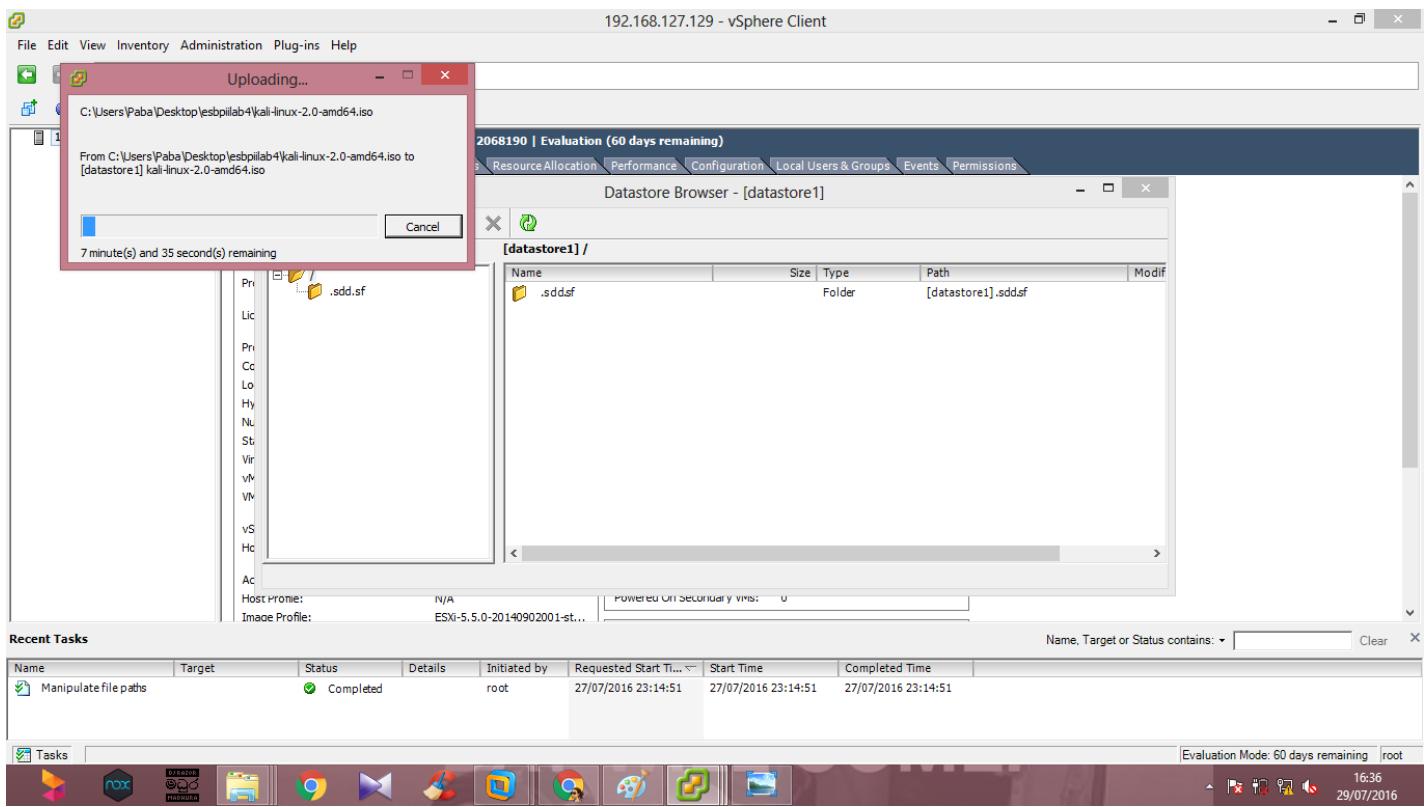
In **datastore browser**, there is an icon in navigation pane.(4th icon).

click on that icon and select **Upload File**.



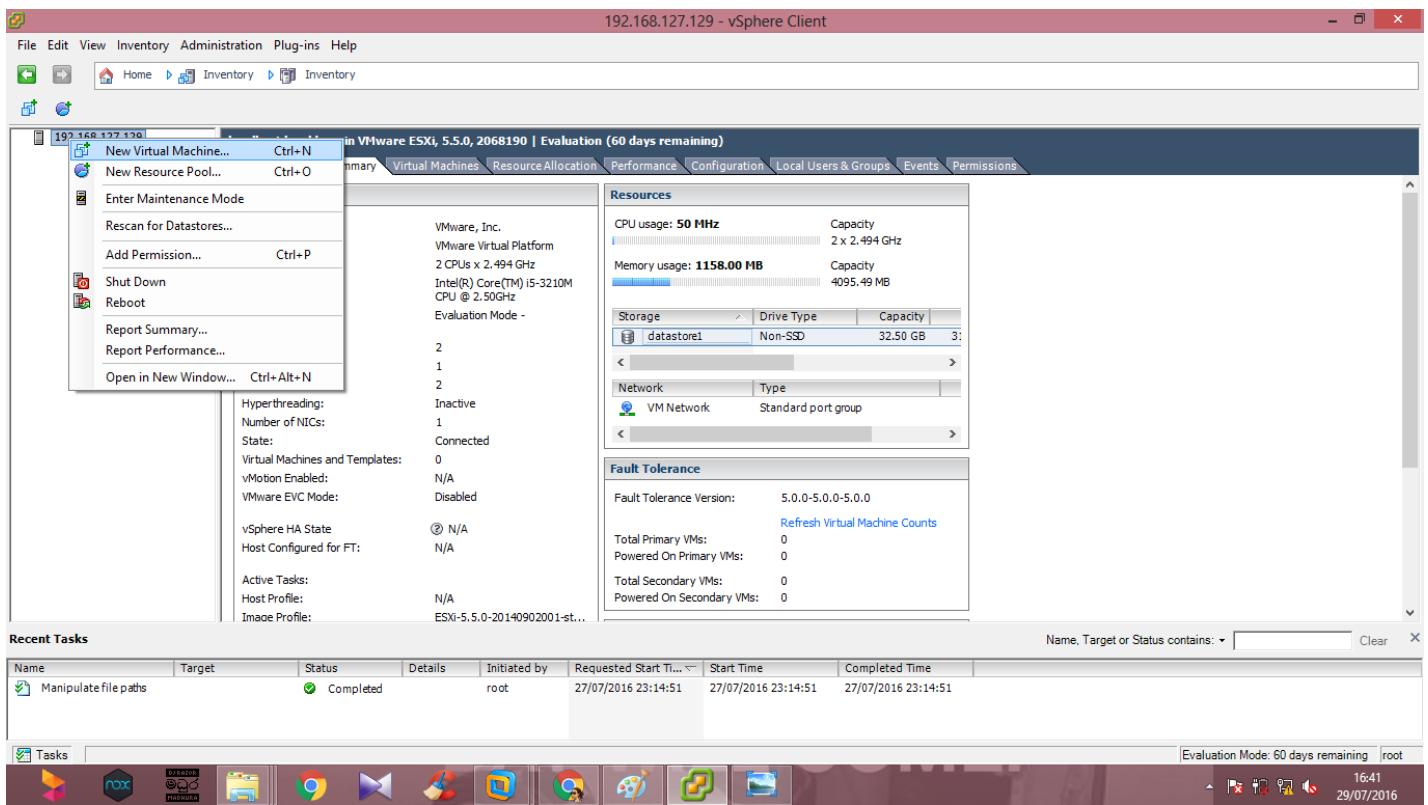
select the available linux/windows image file.

Here I was uploaded the kali linux image file to the data store.



Then right click on the ip address shown in the top left corner.

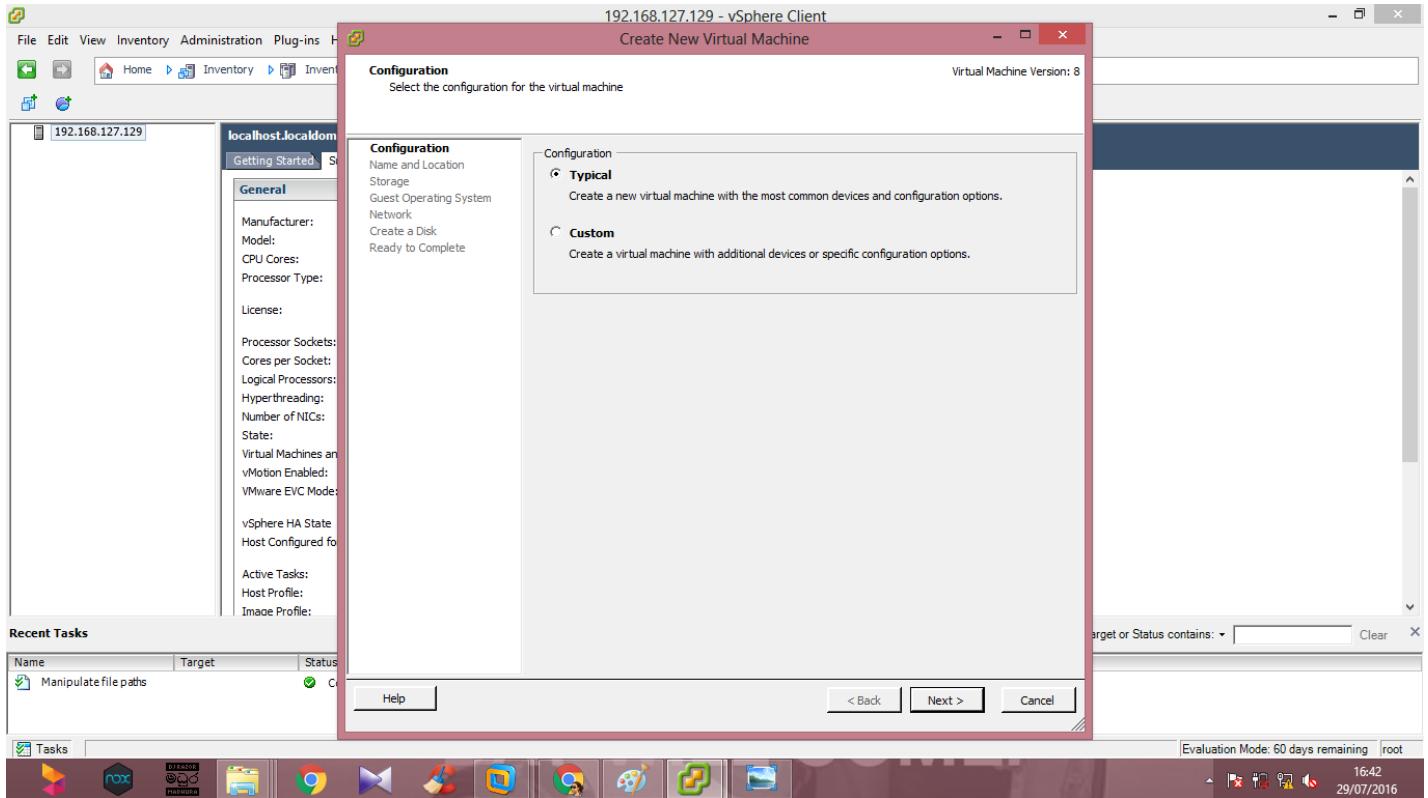
Select **New virtual Machine**.



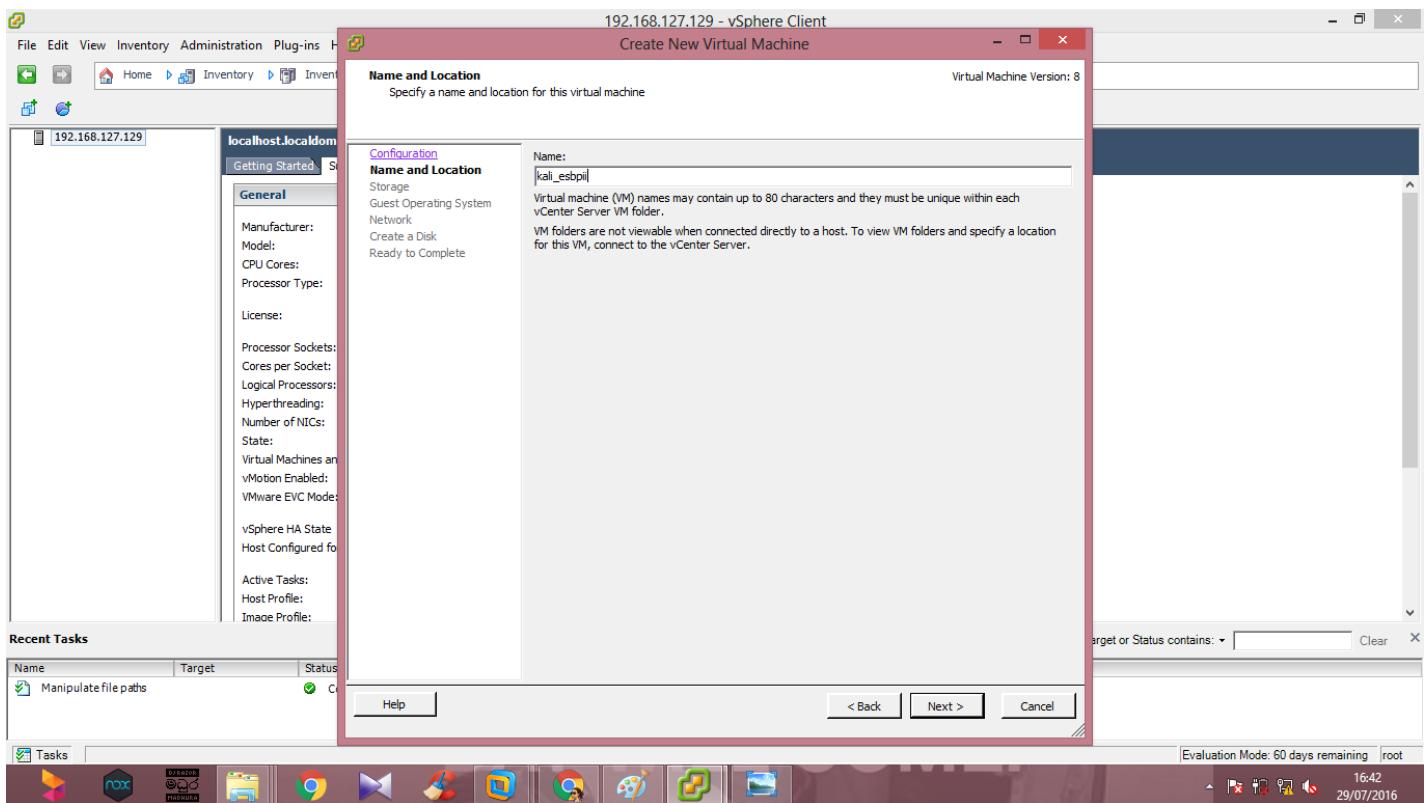
Then we create a new virtual machine using usual steps.

Choose **Typical**.

Click **next**.

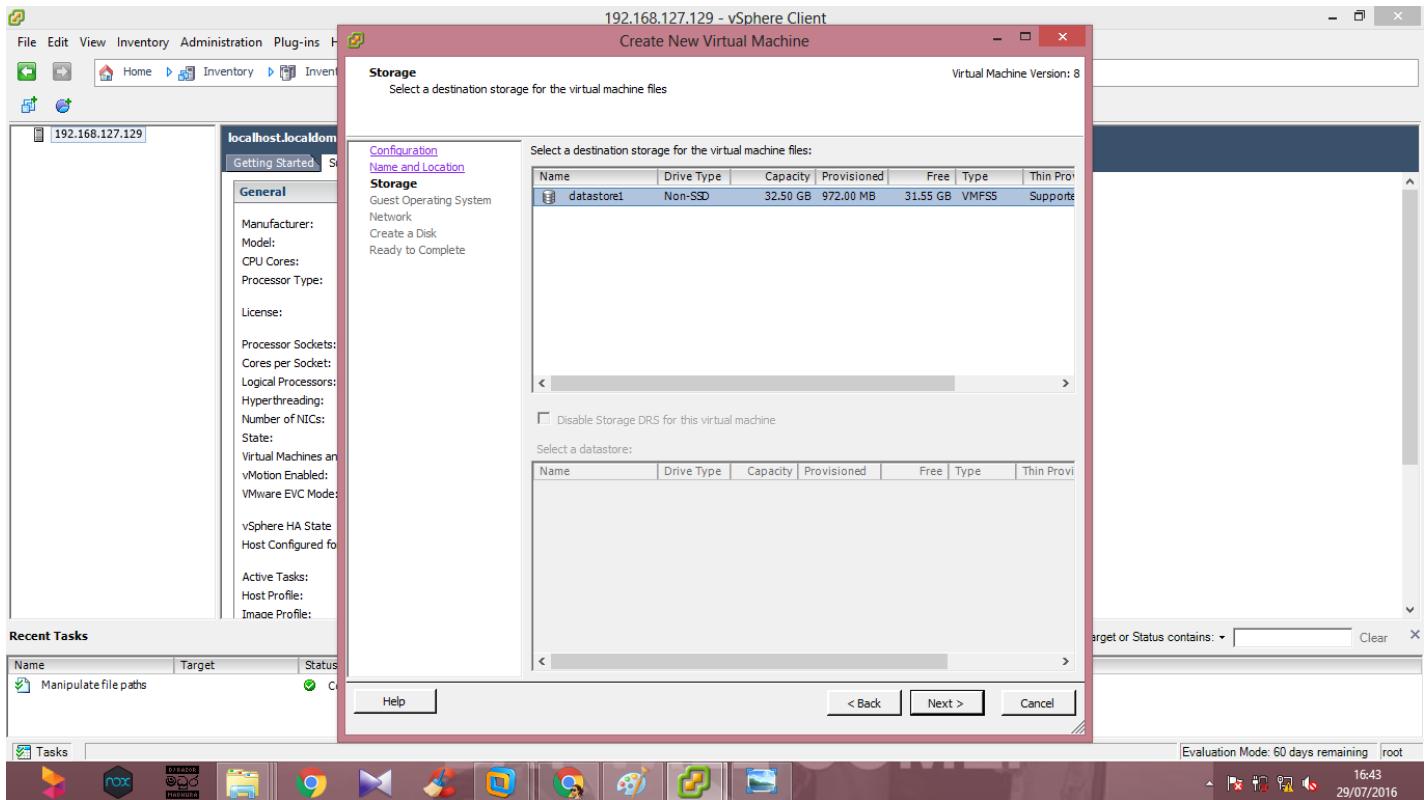


Give a specific name for this virtual machine.



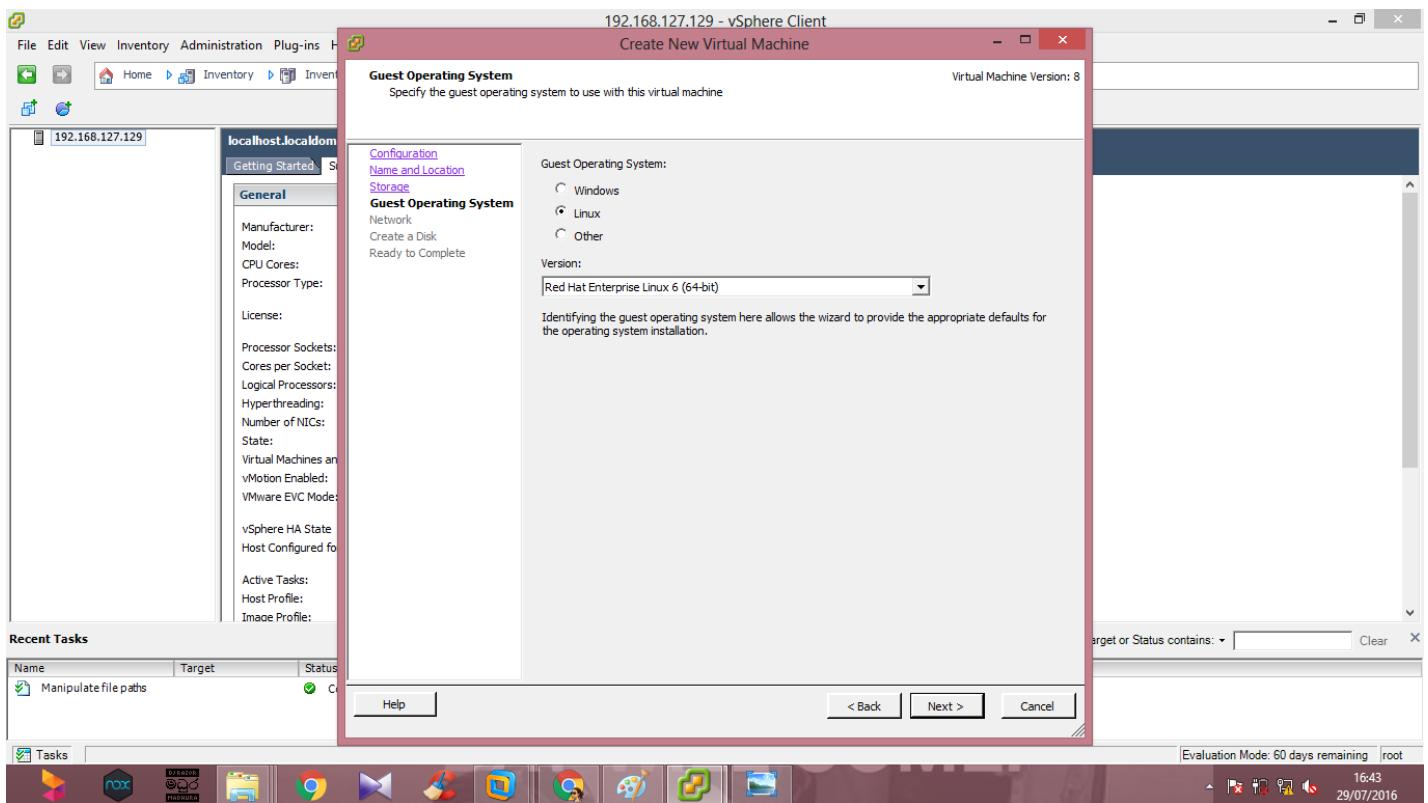
Then choose the data store.

Click **next**.



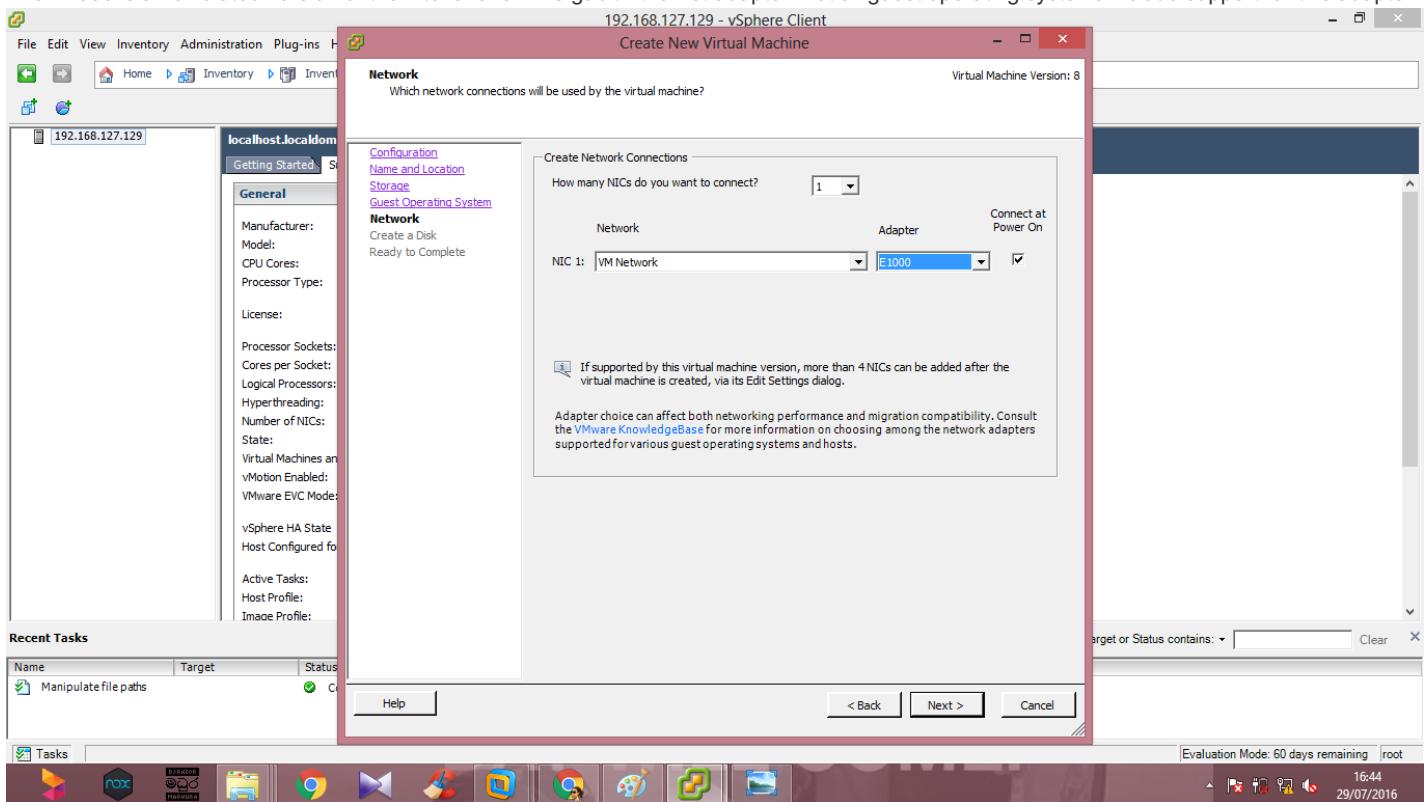
Specify the guest operating system to use with this virtual machine. I choose the **Linux** because i chose the kali linux image file.

Click **next**.



Specify the Adapter as **E1000** and tick the **Connect at power on**.

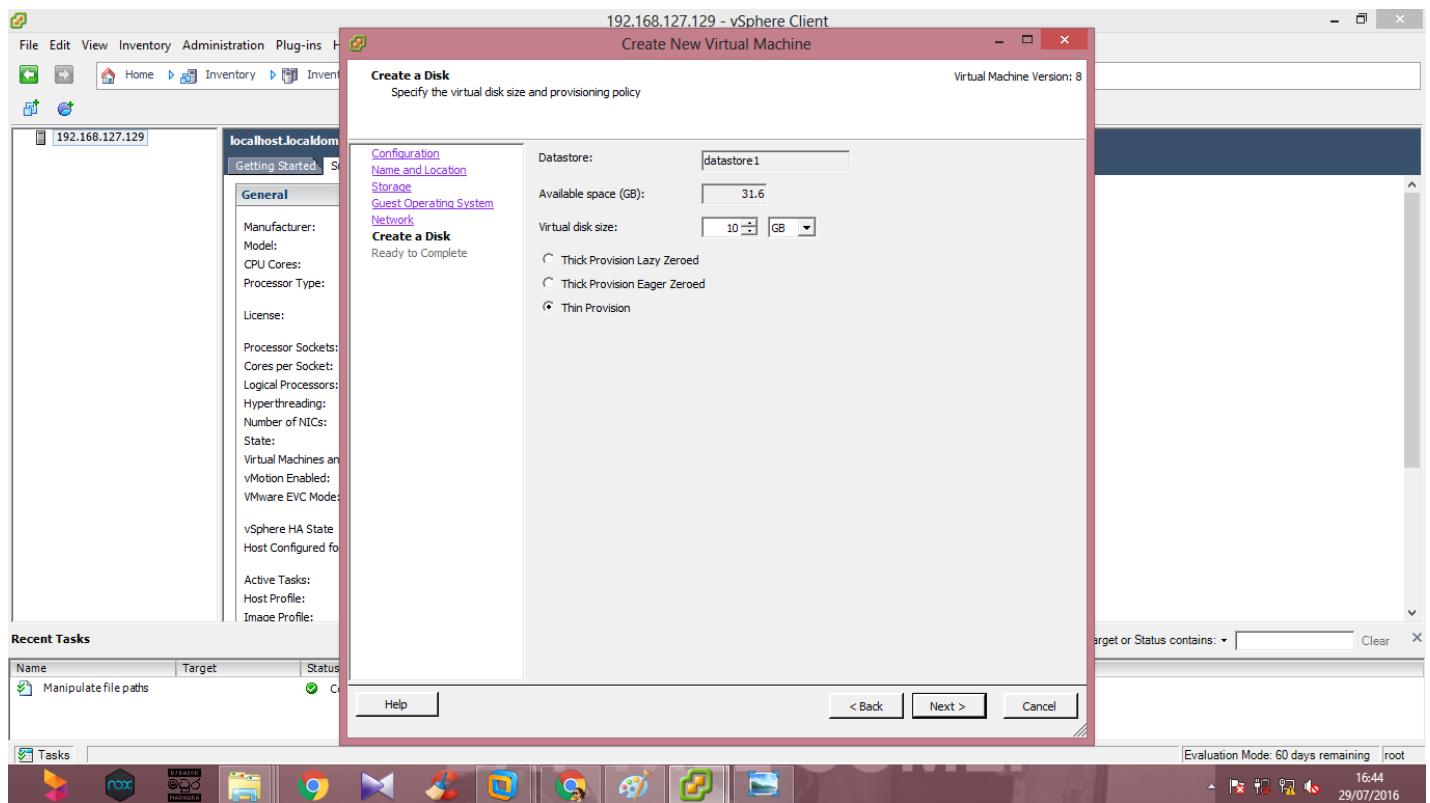
The **E1000** is an emulated version of the Intel 82545EM Gigabit Ethernet adapter. Not all guest operating systems include support for this adapter.



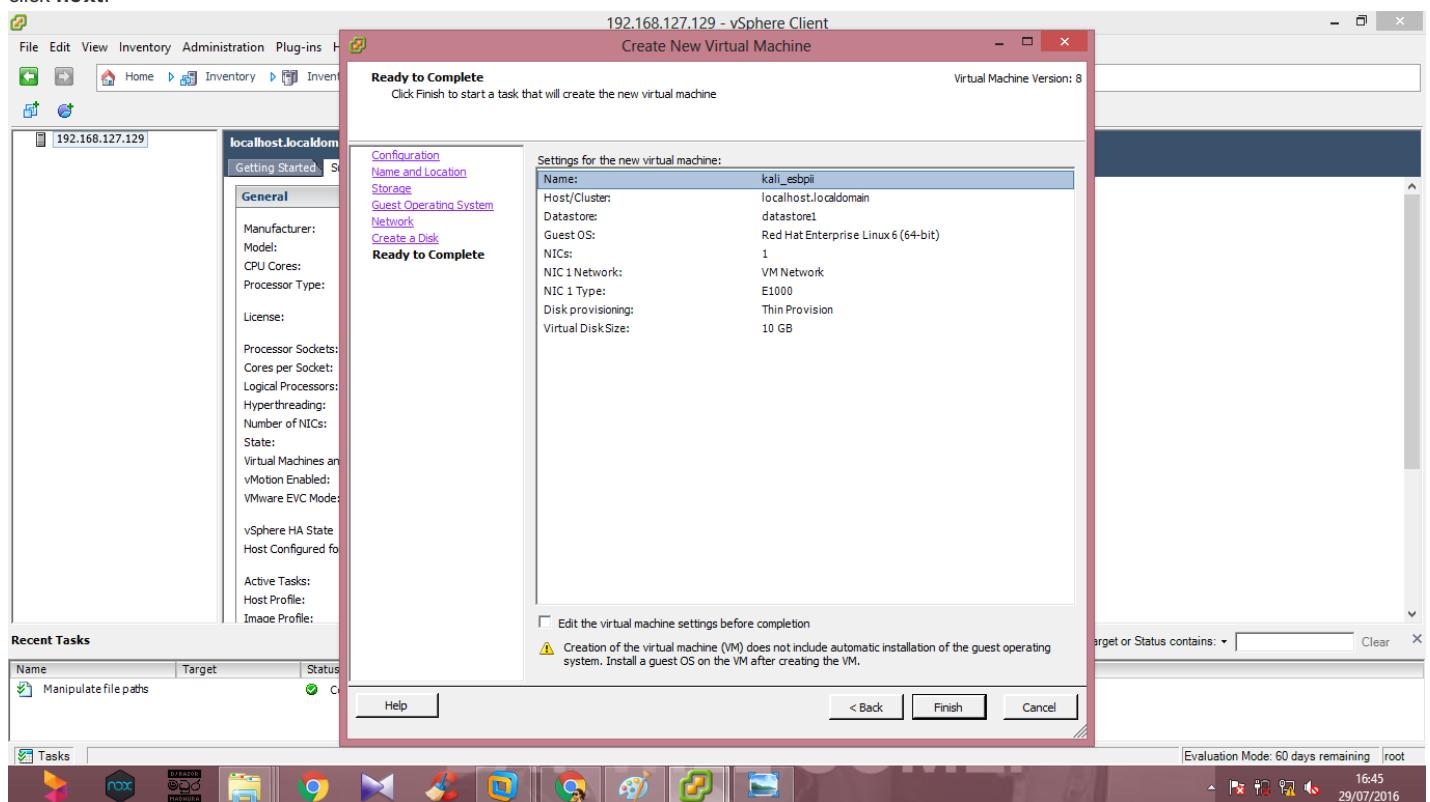
Specify the virtual disk size and provisioning policy.

As the Provision I selected the **Thin provision**.

Then **next**.

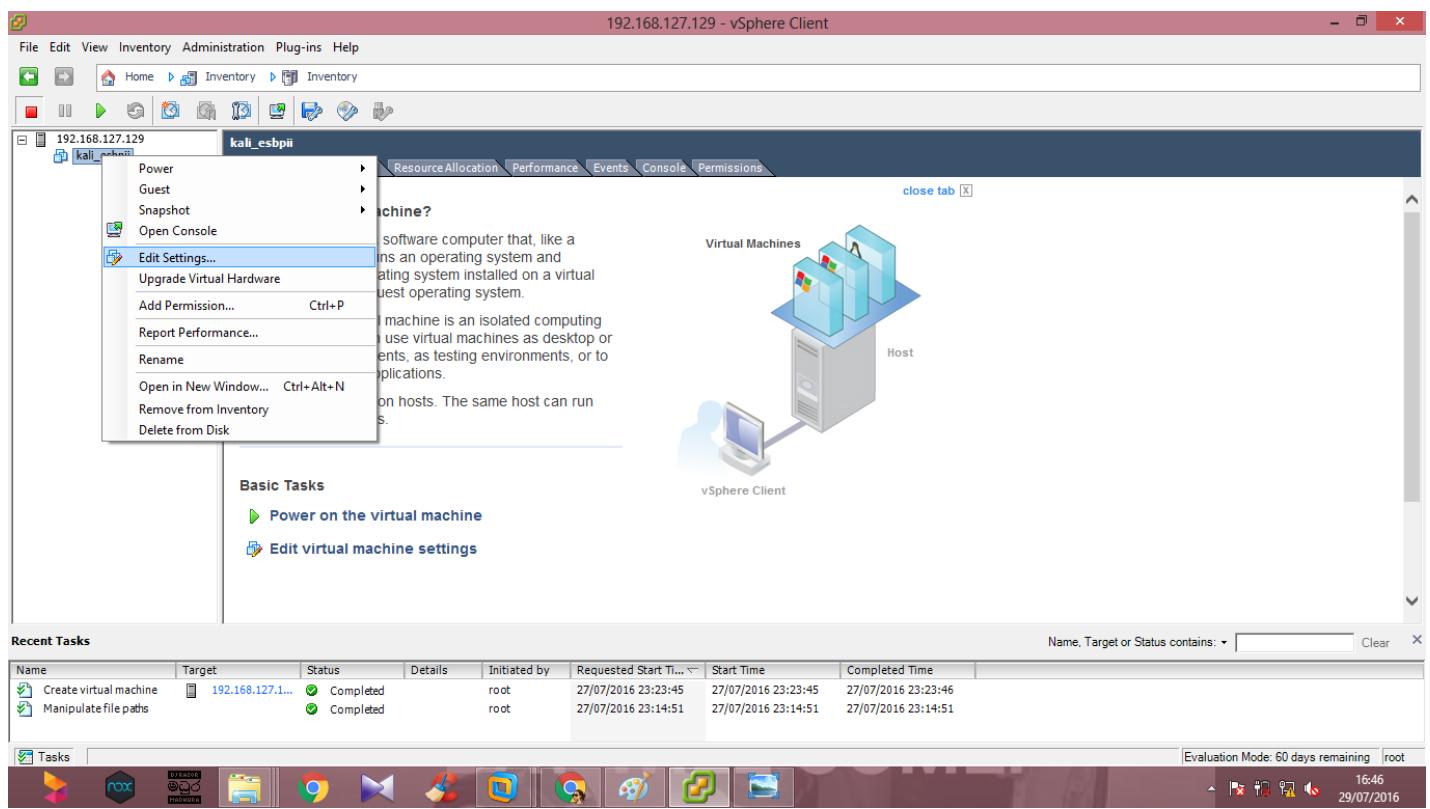


click next.



Then you can see the kali\_linux instance has been created under the ip address top left corner.

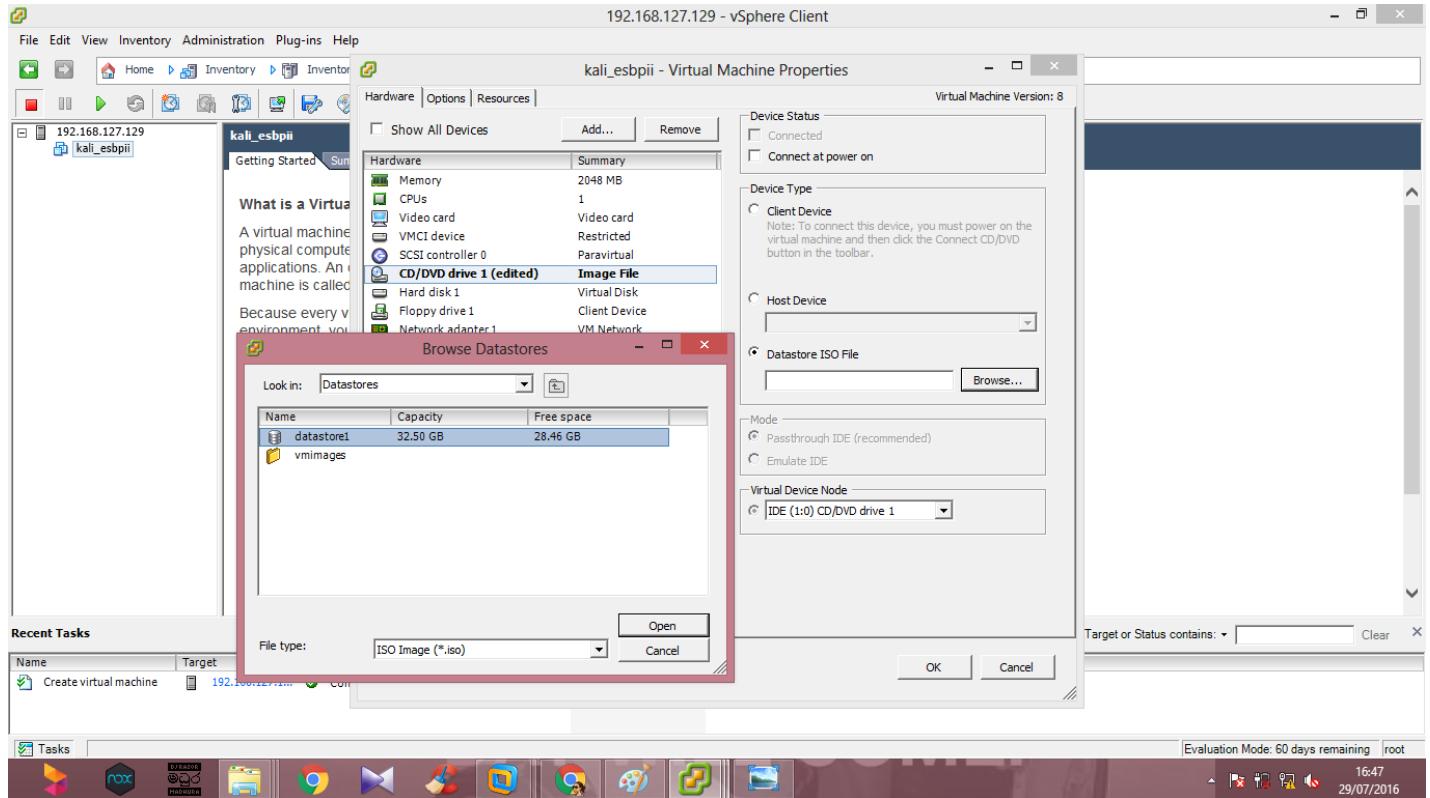
Right click on that instance and go to **Edit Settings**.

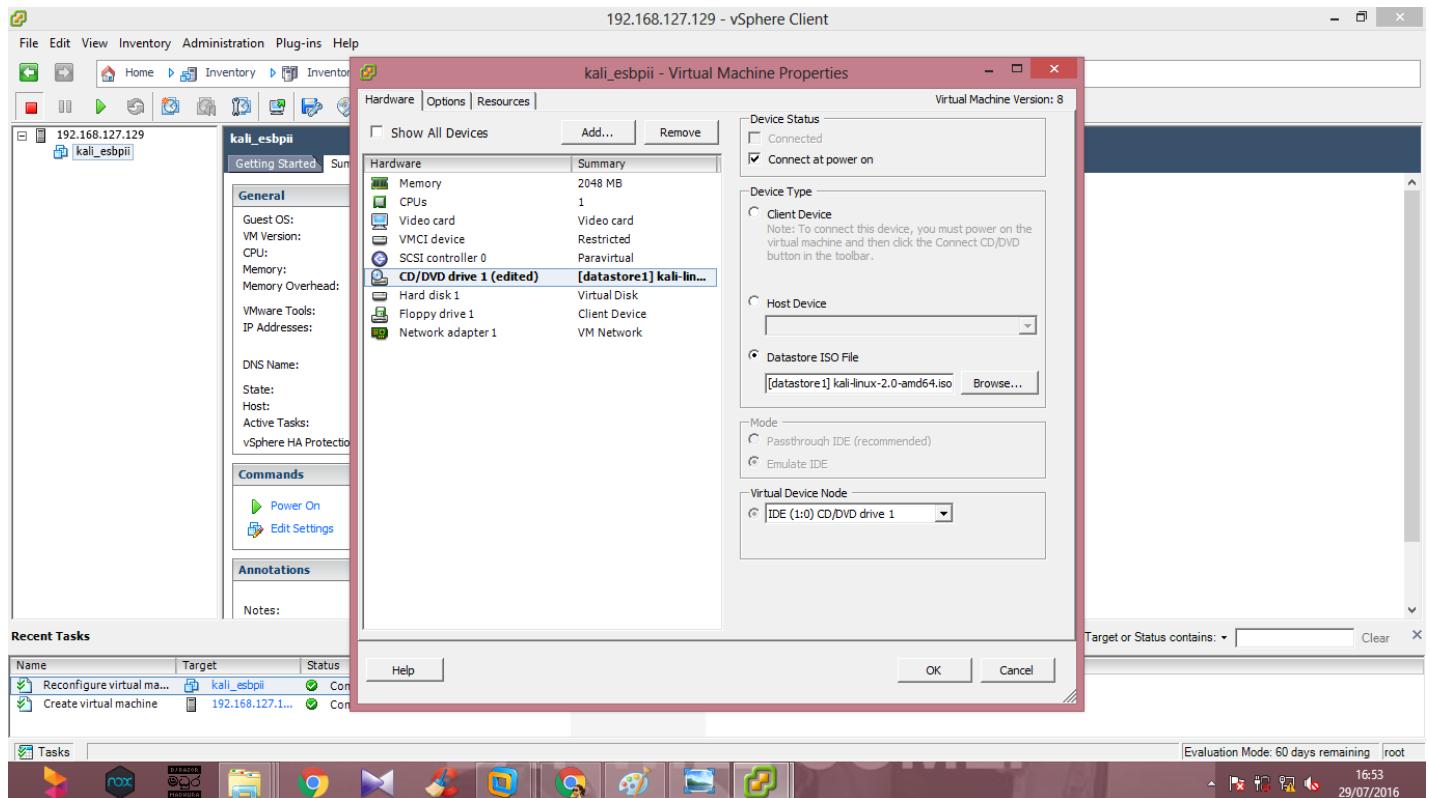
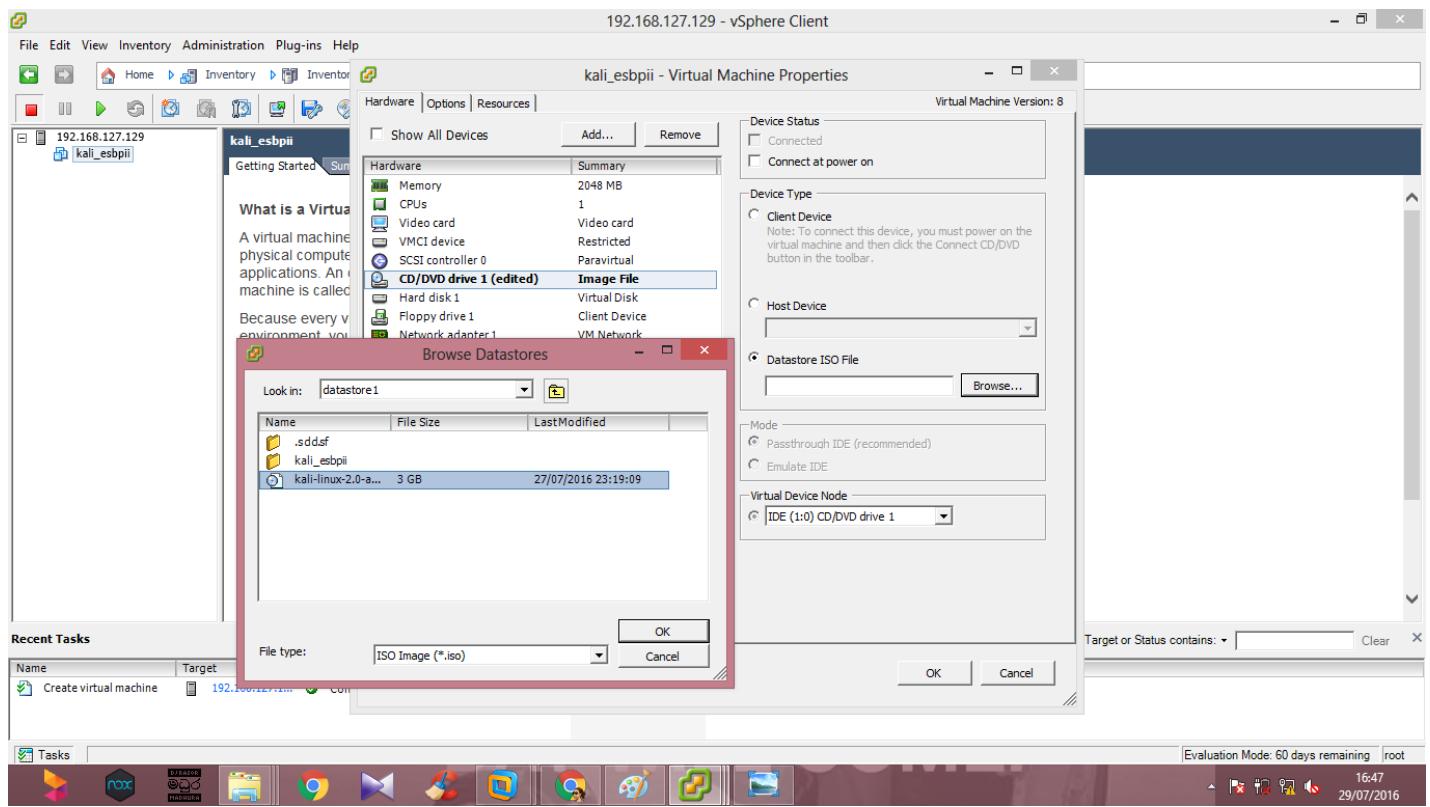


Then click on the **CD/DVD drive 1**.

In the right side you can see the **Datastore ISO file**.

Tick on that and browse the **kali linux image file** inside the **datastore1**.





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.

