SRI LANKA INSTITUTE OF INFORMATION TECHNOLOGY

Enterprise Standards and Best Practices for IT Infrastructure

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Group Number: -

Practical Session: WD

Practical Number : Lab 4

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Date of Evaluation : _____

Evaluators Signature : _____

Bare-Metal installation

Compute virtualization is a technology which is able of abstracting physical compute hardware and enabling multiple operating systems to run concurrently on a single or clustered machines. The hypervisor is the software which facilitates successful virtualization.

There are 2 types of hypervisors can be used for virtualization.

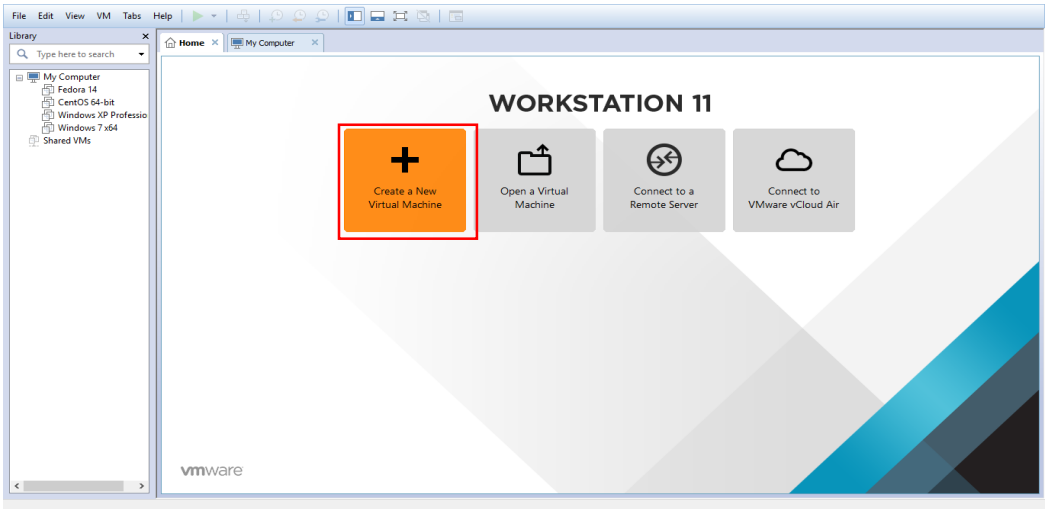
1. Bare-Metal hypervisor

2. Hosted hypervisor

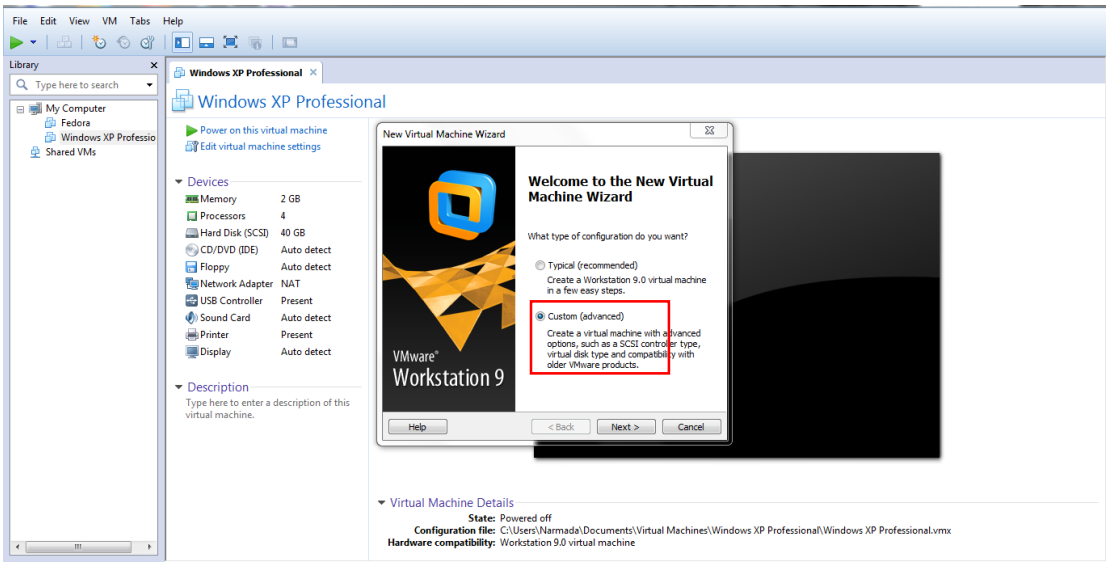
This lab session is for installing bare-metal hypervisor successfully.

Bare-Metal virtual machine installation (Server)

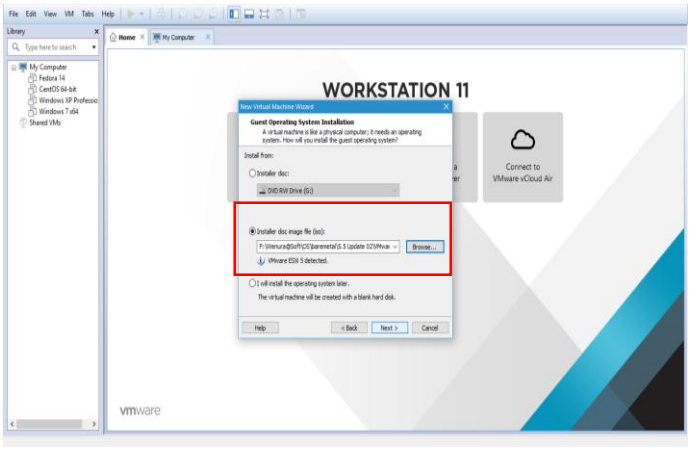
Step 1 – Open VMware and select “create a new virtual machine” option.

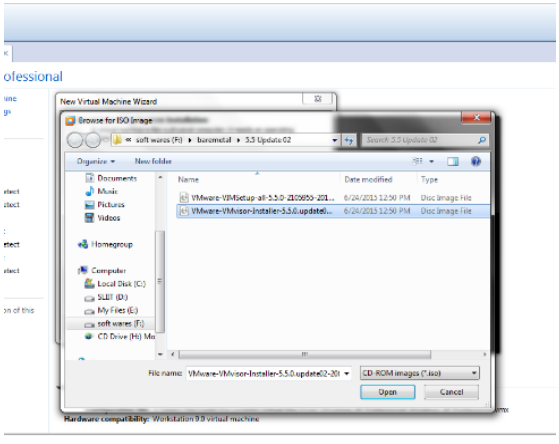


Step 2- Select “custom” as configuration type and click on next.

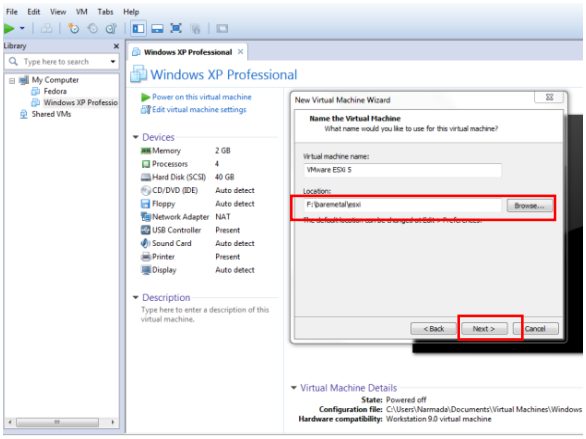


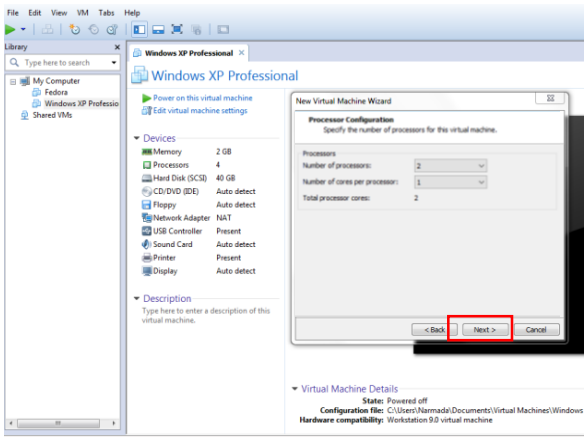
Step 3- If developer install bare-metal using installer image file click on radio button and browse to get the location of iso file.

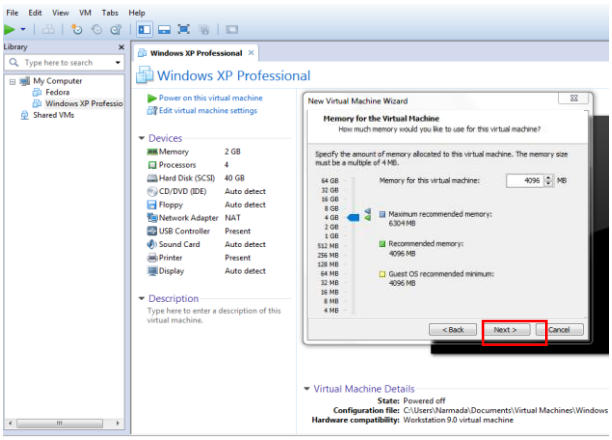


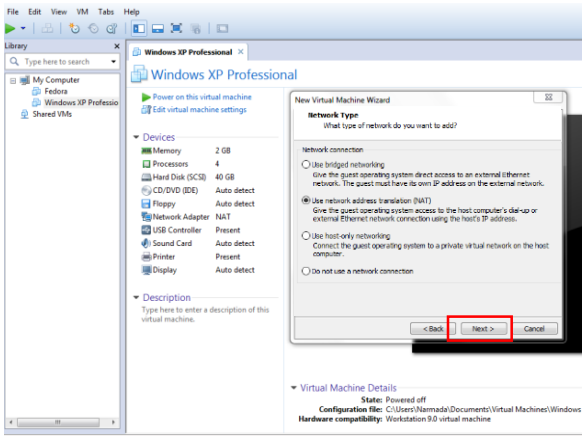


Step 4 – Without changing default settings developer can install the virtual machine





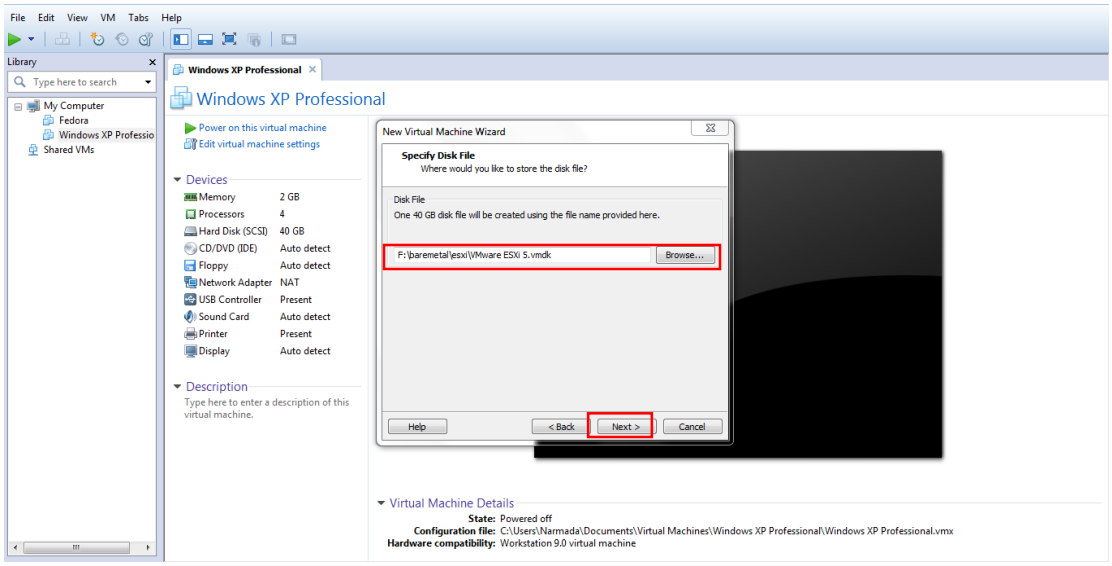




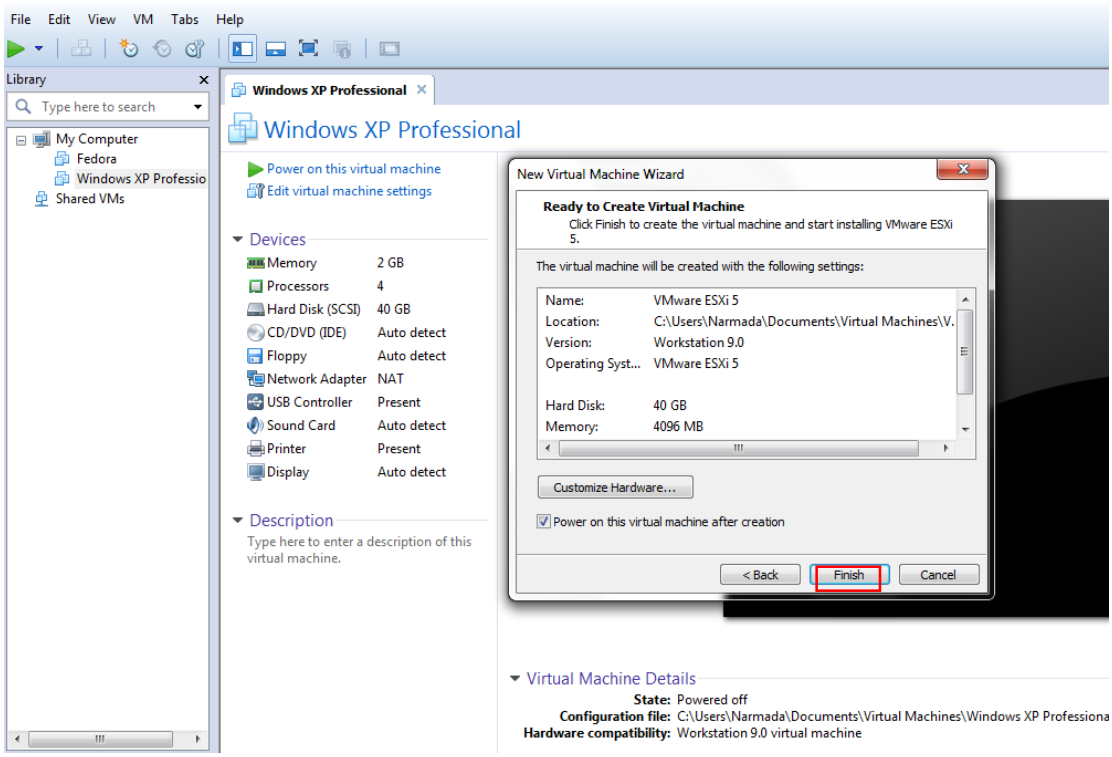
As same as above screens, user have to follow several dialog boxes and click on appropriate option as mentioned below

Dialog box	Default (recommended selection)
• Select I/O controller type	• LSI Logic(Recommended)
• Select disk type	• SCSI (recommended)
• Select a disk	• Create a new virtual disk
• Specific disk capacity	• Choose maximum disk size as 40 GB using dropdown menu • Click on radio button - “Store virtual Disks as a single file”

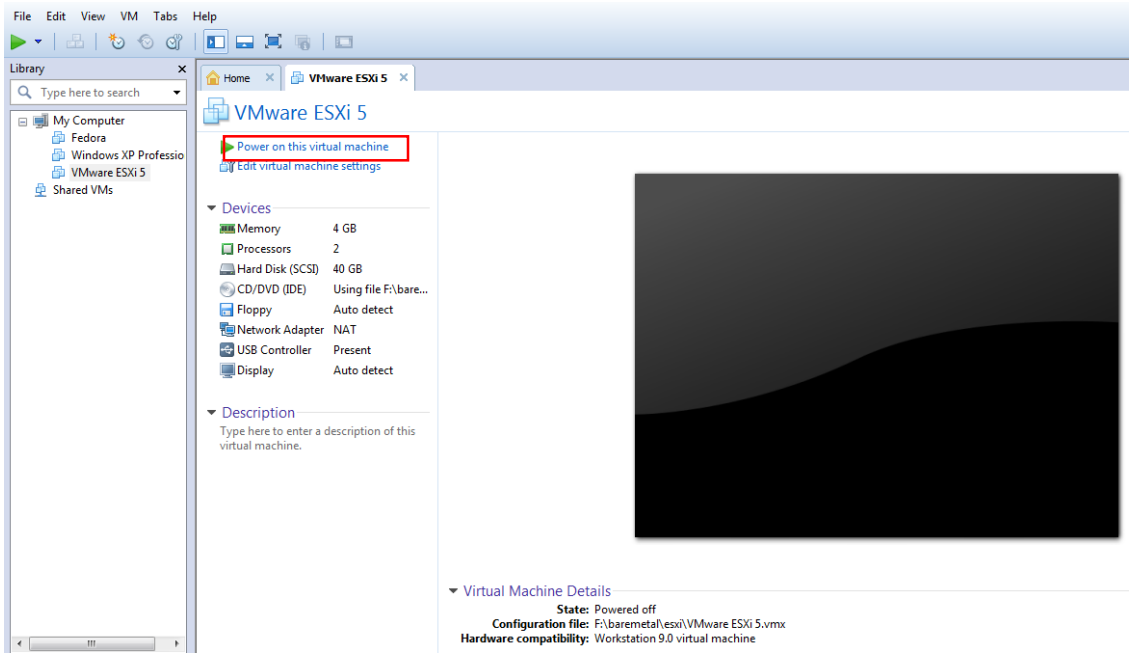
Step 5 -Then browse for find location to store the disk file after installation



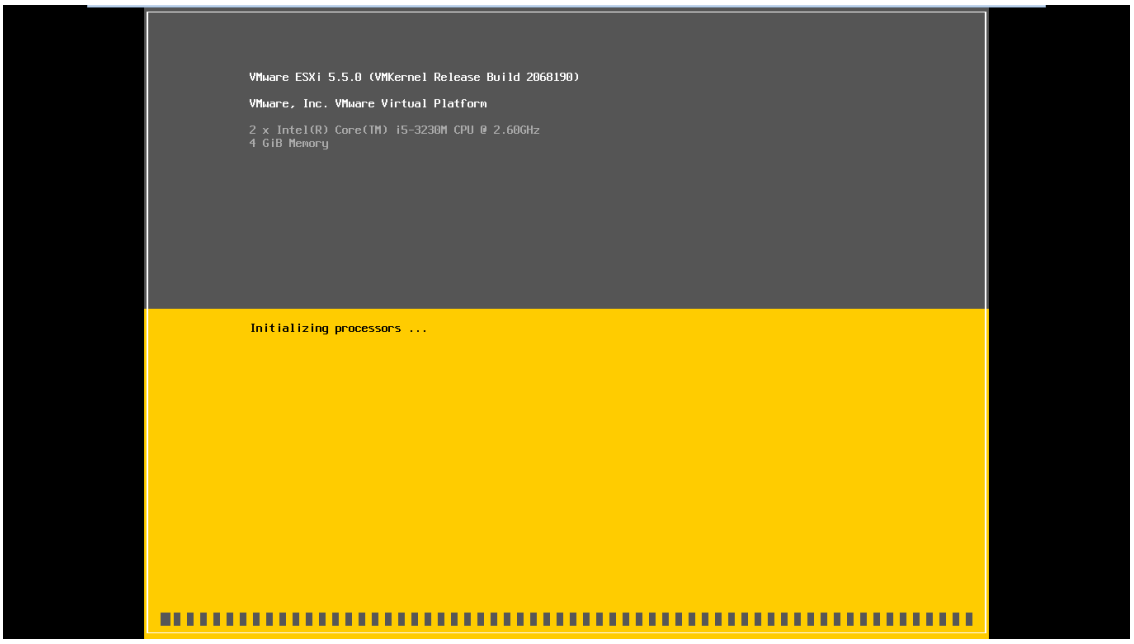
Step 6 – Click on “Finish” to create the virtual machine and start installing VMware ESXI



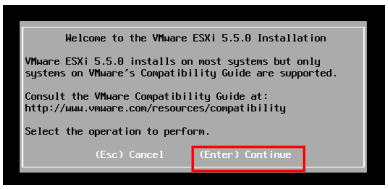
Step 7 –Run created VMware ESXI



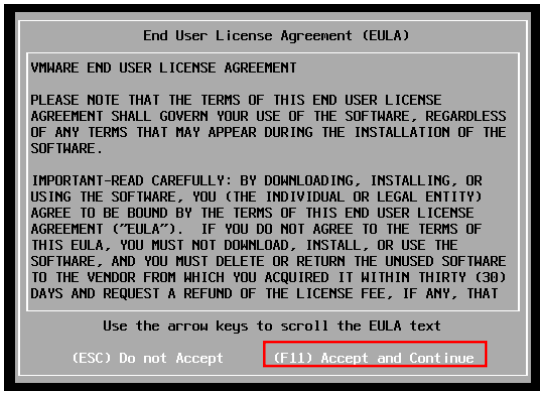
Step 8 –Installation process of created VMware ESXI



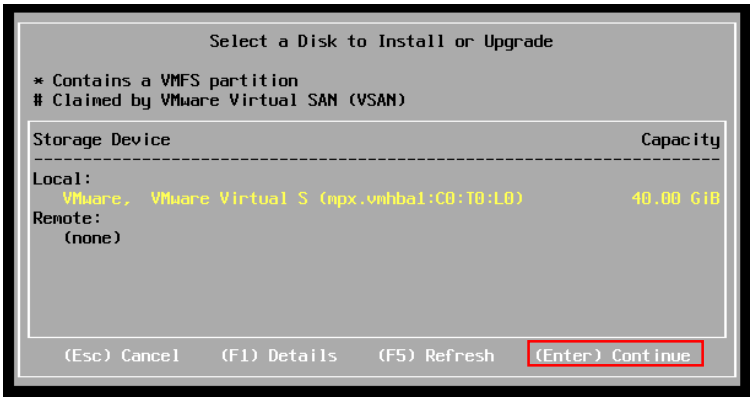
Press “Enter” to setup the Bare-metal



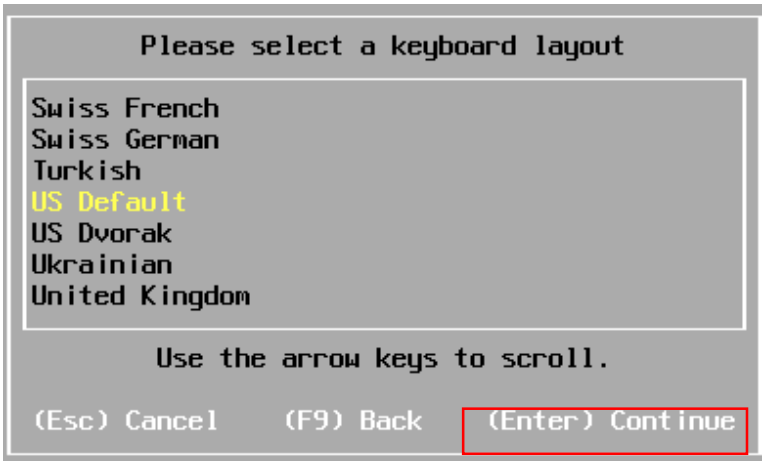
Press F11 to accept license



After successfully scanning for available hardware it will select disk to install Bare-metal. Press enter to continue.

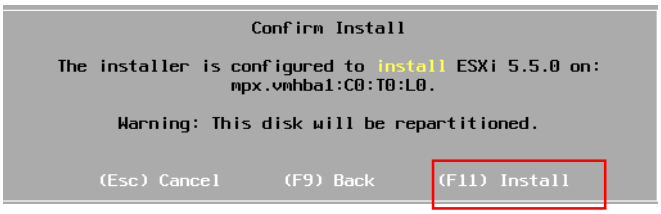


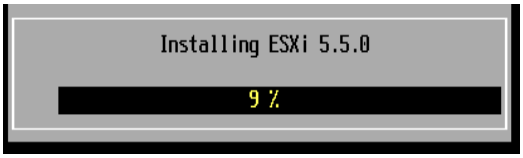
Select keyboard layout as “Us default” using arrow keys and press enter



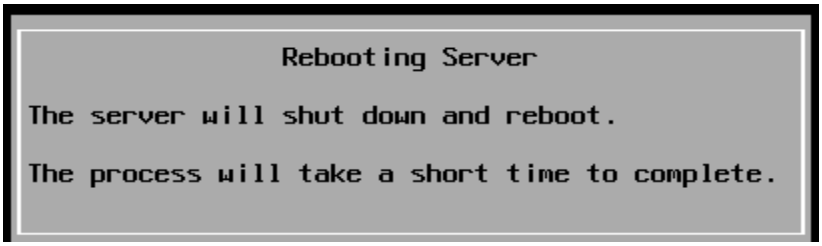
Set a root password for ESXI and press enter to continue the process (Password will be used in step 11

Then developer can confirm Bare-Metal installation

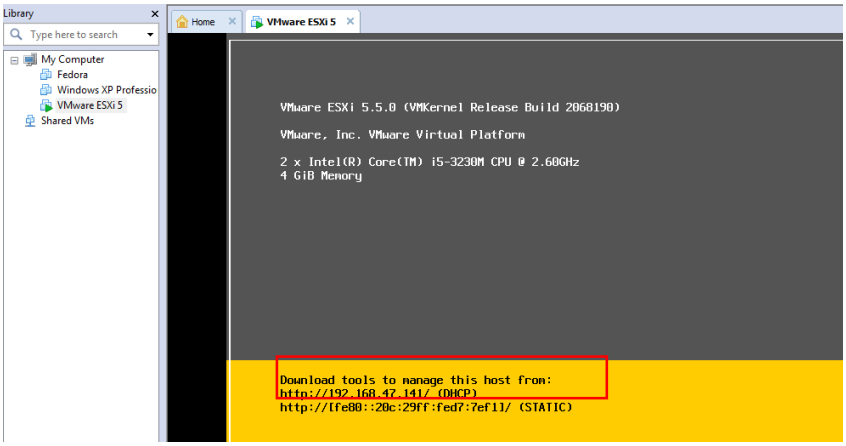




After successful installation virtual machines is shutdowns and reboot



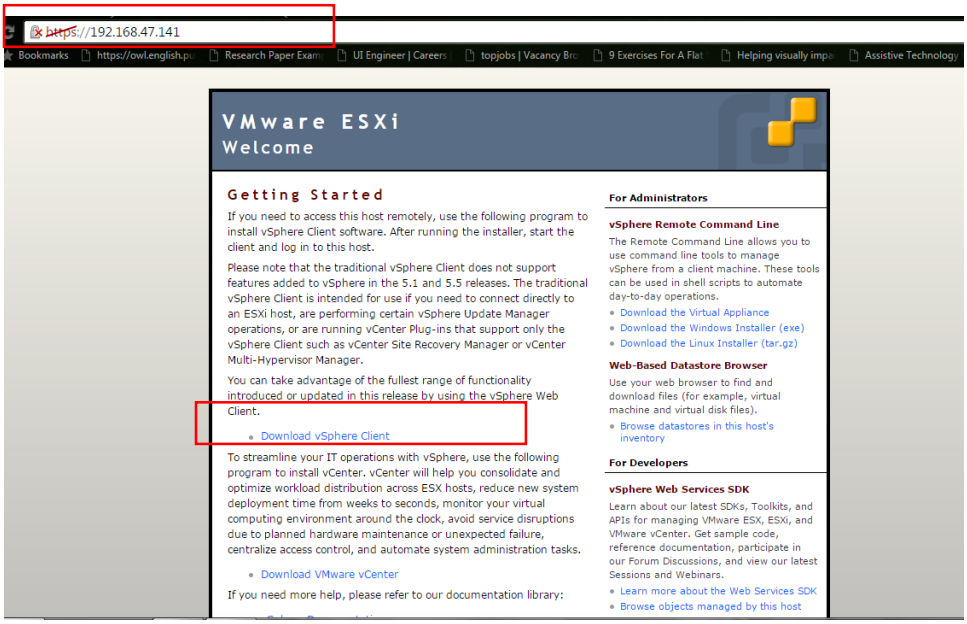
Now developer can see the below screen which includes IP address to download tool to manage installed server.



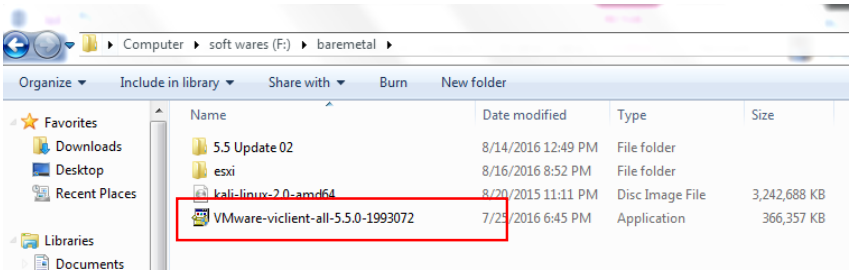
Install operating system for ESXI server via vSphere client

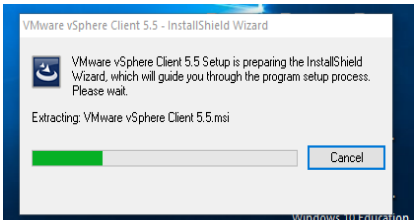
Esxi server was installed into virtual machine. To manage the server, it required virtual machine management client software. Developer can download relevant client from IP address obtain at the end of the step 8

Step 9 - Open the browser in different operating system (not inside virtual machine) and type the IP address obtain at the end of the step 8 to download vSphere client

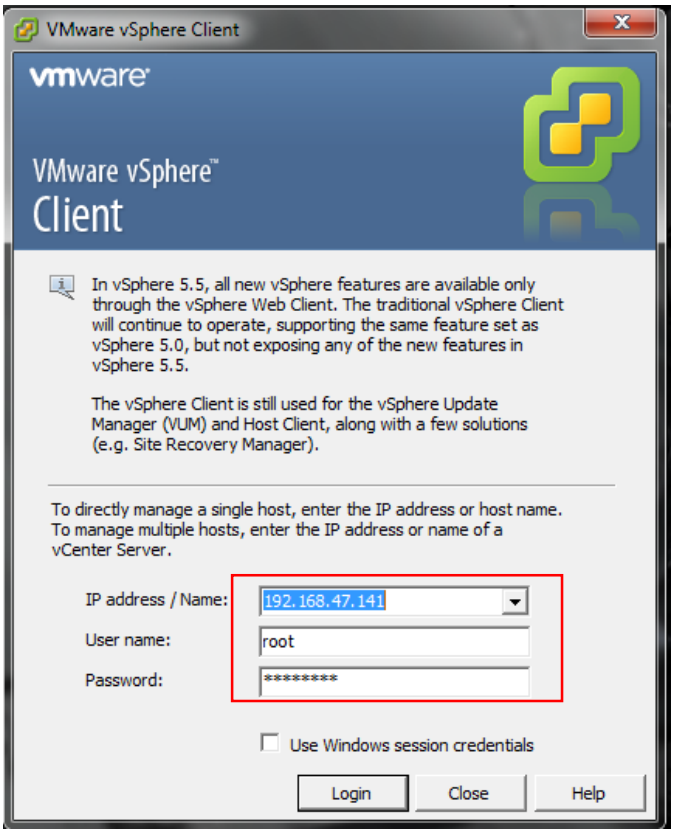


Step 10 –Install downloaded vSphere client in to machine



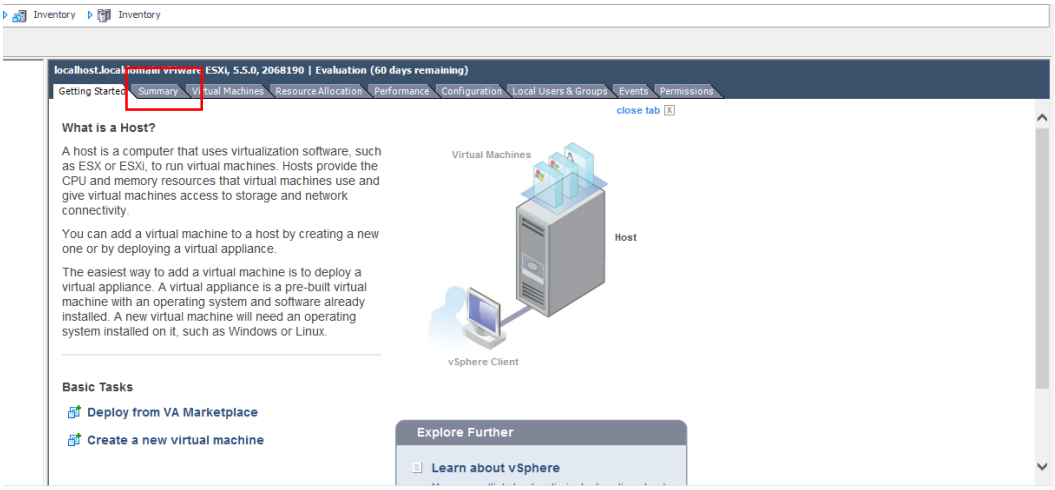


Step 11 – Run the vSphere and provide IP address, user name, and the root password which entered in installing Esxi server at the middle of step 8

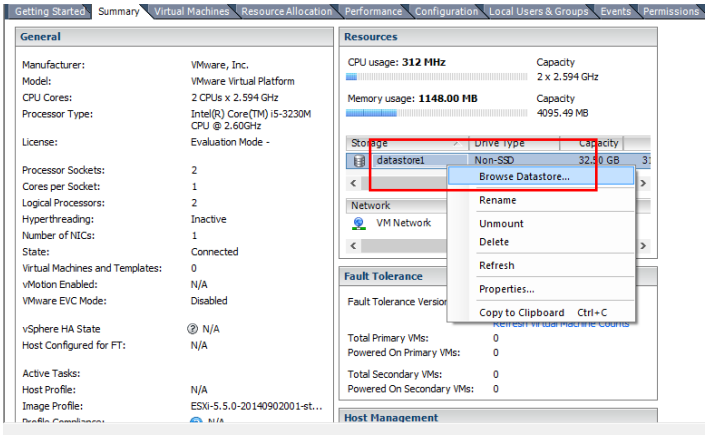


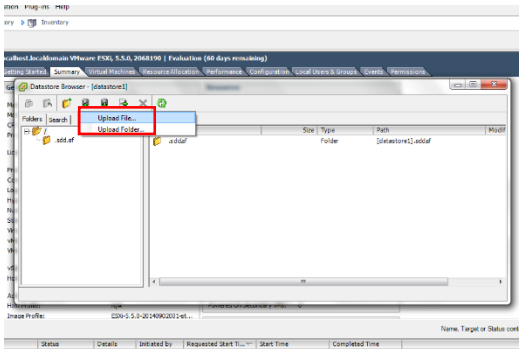
Ignore the security warning on certificate warnings to run client successfully

Step 12 - After successful installation of vSphere client, developer can view below screen.To install operating system on created Esxi server select “summery” tab

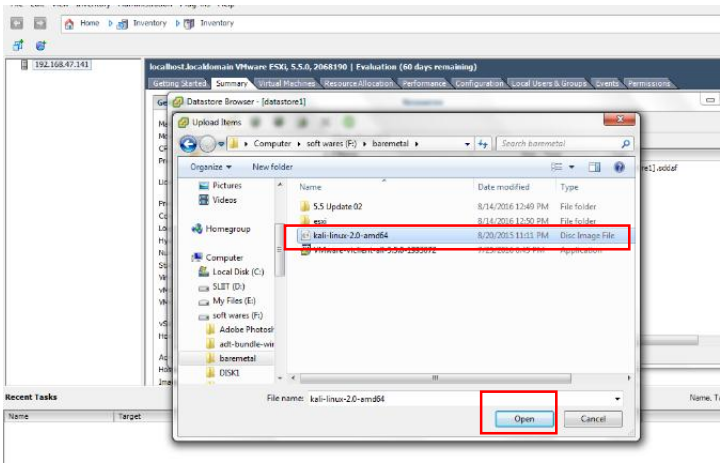


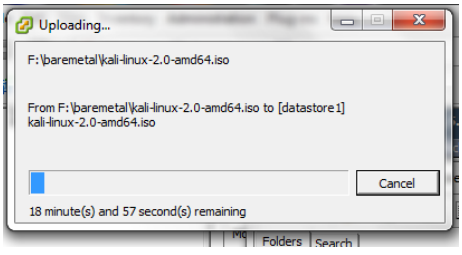
Step 13 – Double click on storage tab to upload image of operating system into the server database



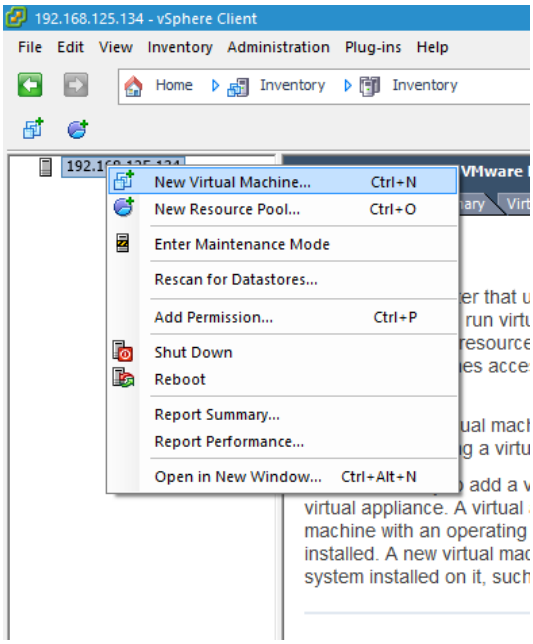


Select “Kali ” as operating system image for upload into Esxi server database

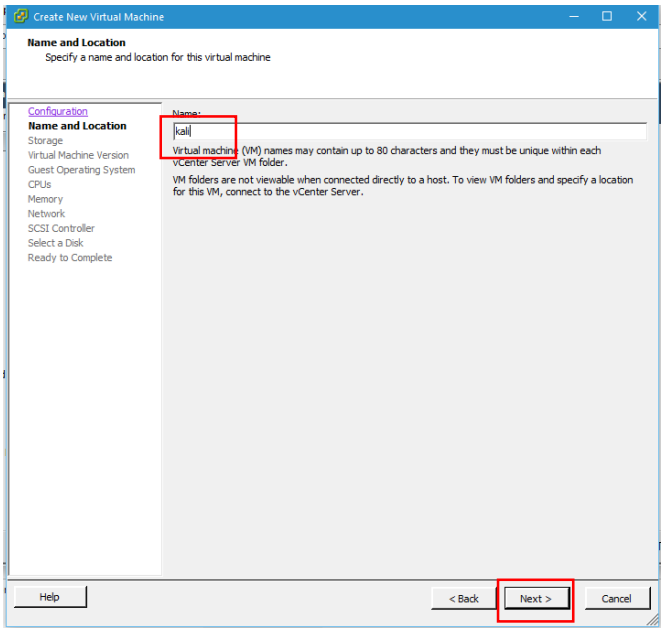




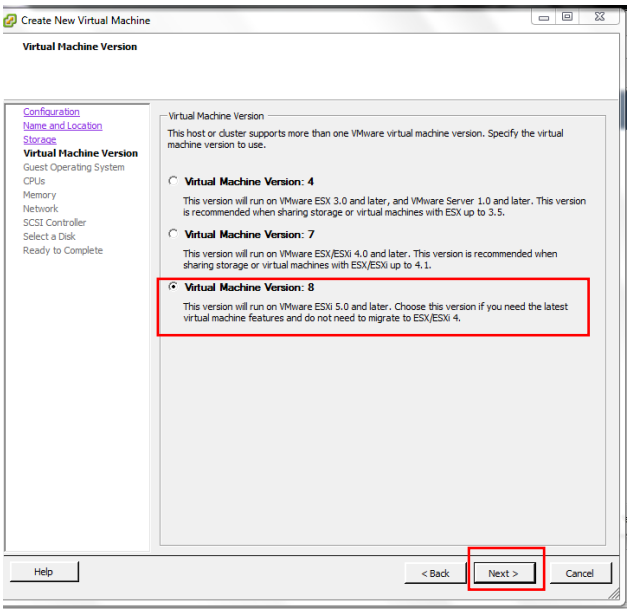
Step 14 – For installation of uploaded image of operating system into Esxi server located in virtual machine right click on Ip address and select “New virtual machine” option

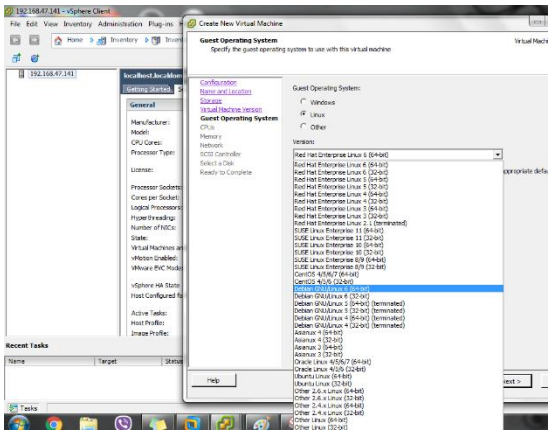


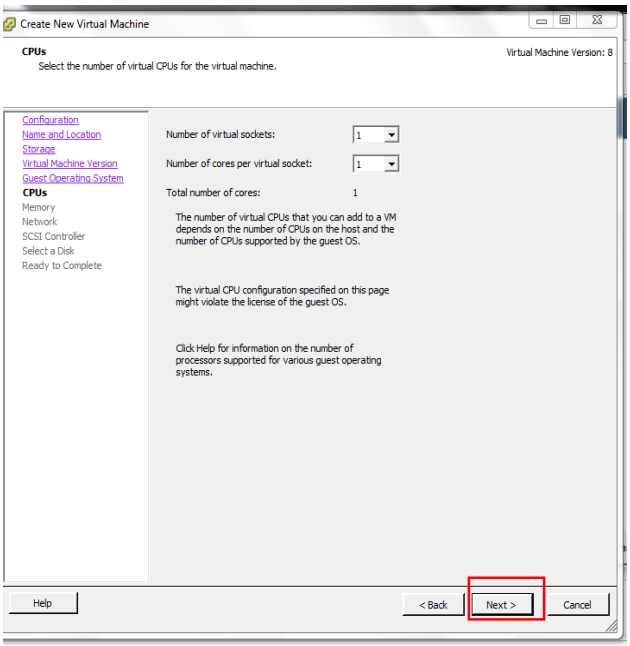
Step 15 – Set virtual machine name for new operating system and click next

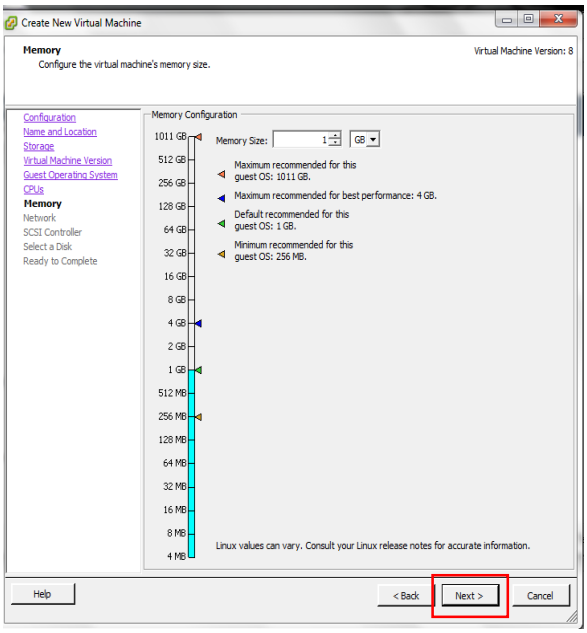


Step 16 – For the configuration of new virtual machine developer can follow below steps. If Developer needs any changes they can change default setting as they wish





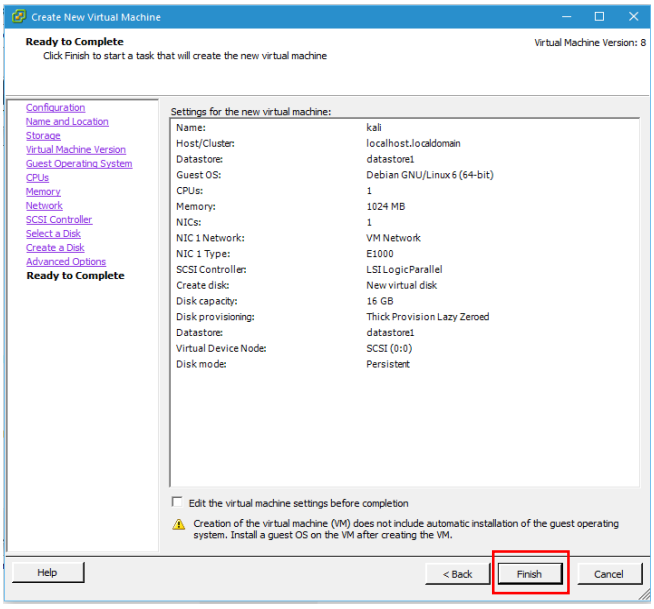




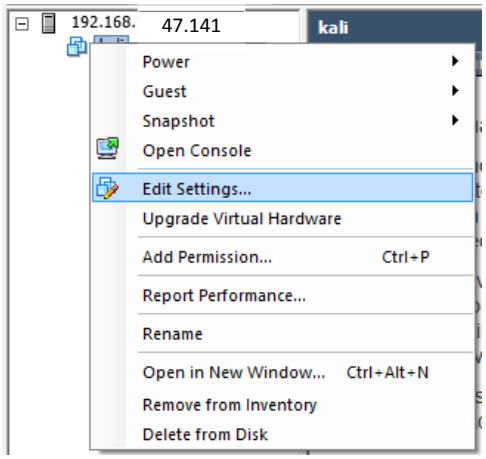
As same as above screens, user have to follow several dialog boxes and click on appropriate option as mentioned below

Dialog box	Default (recommended selection)
• Network	• How many NICs do you want to Connect - 1 • Network NIC – VM Network • Adapter – E1000
• SCSI controller	• LSI Logic Parallel
• Select a disk	• Create a new virtual disk
• Create a disk	• Capacity - Disk size 16GB • Disk provisioning – Click on "Thick Provision lazy zeroed • Location – click on " Store with the virtual machine"
• Advanced options	• Virtual device node – click on "SCSI(0:0)"

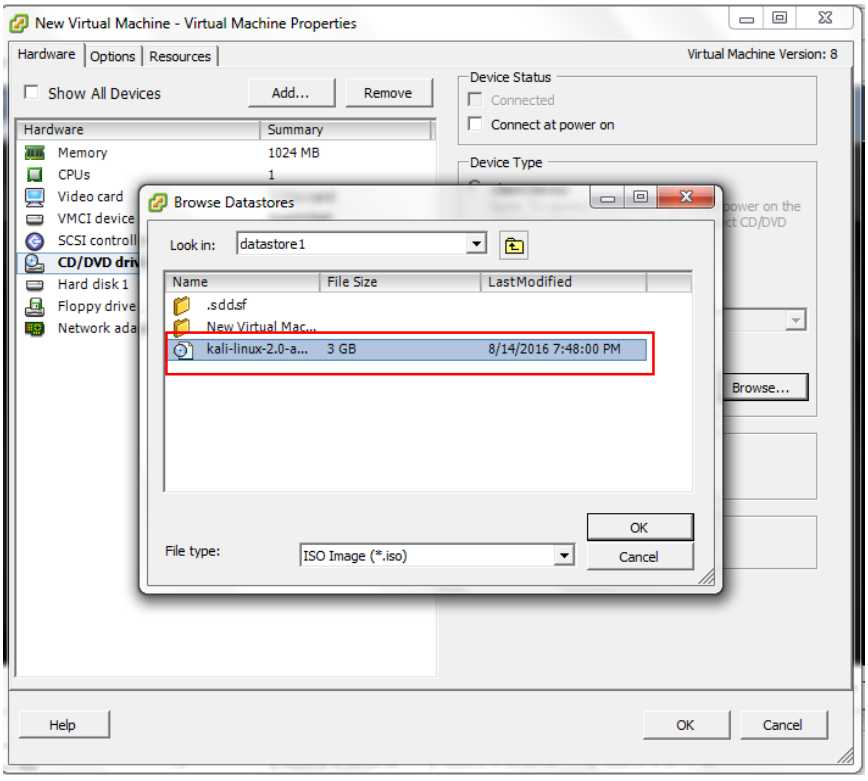
All the configurations are visible on screen shown below. Press "Finish" to complete configuration



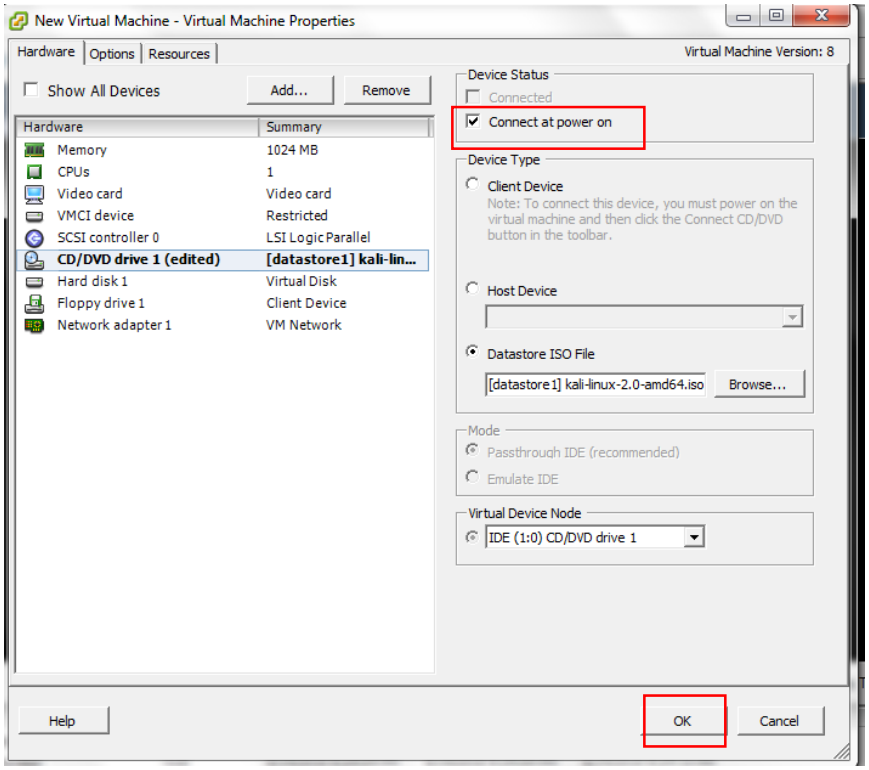
Step 17 – Right click on installed operating system name and go to “Edit settings”



Step 18 – Go to hardware tab and select DC/DVD drive hardware and select data store ISO file which copied in to server



Step 19 – Put a tick on “Connect at power on”



Step 20 – Run the virtual machine with Kali operating system