



SRI LANKA INSTITUTE OF INFORMATION TECHNOLOGY

Enterprise Standards and Best Practices for IT Infrastructure

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GitHub Link : <https://github.com/chamath93/Baremetal-Virtual-Machine-Installation.git>

Practical Session : WE Tuesday

Practical Number : Lab 4

Date of Submission :

Date of Evaluation : _____

Evaluators Signature : _____

Contents

1. Introduction
2. Installing ESXi on a VM
3. Configuring basic settings of ESXi
4. Configuring ESXi through VMware vSphere Client
5. Installing Kali Linux

1. Introduction

i. Bare Metal Environment

A bare metal environment is a computer system or network in which a virtual machine is installed directly on hardware rather than within the host operating system (OS). The term "bare metal" refers to a hard disk, the usual medium on which a computer's OS is installed.

ii. Hypervisor

A hypervisor is an OS that can create virtual machines within a bare-metal server.

iii. VMware ESXi

VMware ESXi is an operating system-independent hypervisor based on the VMkernel operating system interfacing with agents that run atop it. ESXi is the exclusive hypervisor for VMware vSphere 5.x licenses. VMware describes an ESXi system as similar to a stateless compute node. State information can be uploaded from a saved configuration file. ESXi's VMkernel interfaces directly with VMware agents and approved third-party modules. Virtualization administrators can configure VMware ESXi through its console or the VMware vSphere Client and check VMware's Hardware Compatibility List for approved, supported hardware on which to install ESXi.

iv. VMware VSphere Client

Central control point for data center services such as access control, performance monitoring and alarm management. The ESXi installation uses about 5 GB of space. Any remaining space on the drive is automatically formatted as a Virtual Machine File System (VMFS) partition. The hypervisor needs roughly 32 MB; the additional space is used for VMware Tools as well as swap and core dump partitions.

If you already have existing licenses for ESX, you can also choose to deploy ESXi in place of ESX on a server. Simply download ESXi installable. Install it and then license it with vCenter Server, as you would a traditional ESX server. Follow the steps below to install and configure ESXi.

v. **Configuring ESXi from the console**

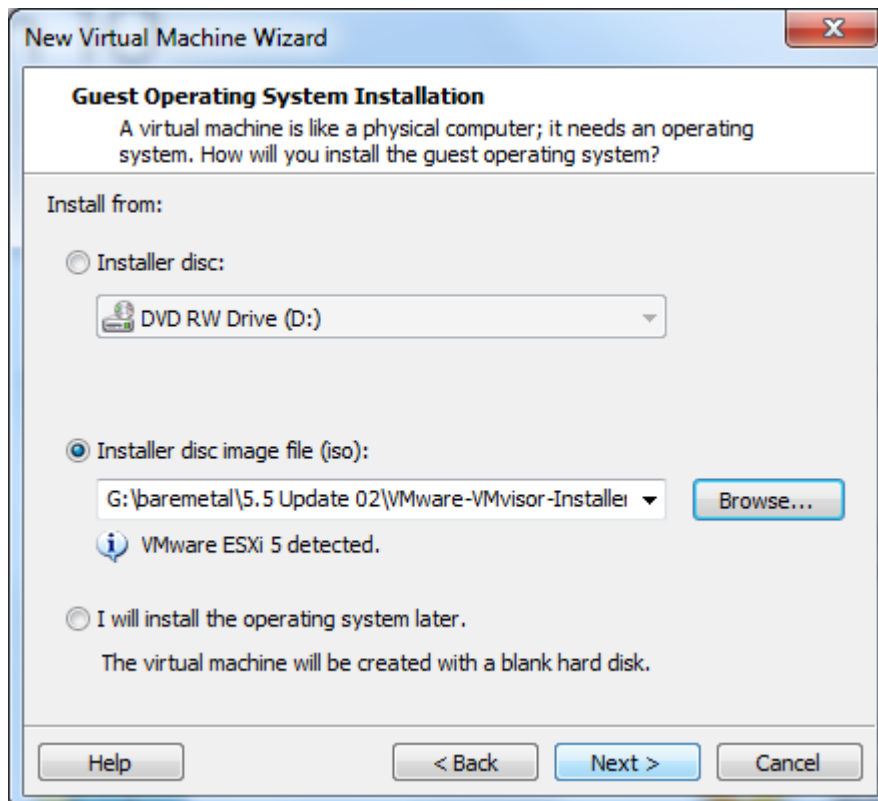
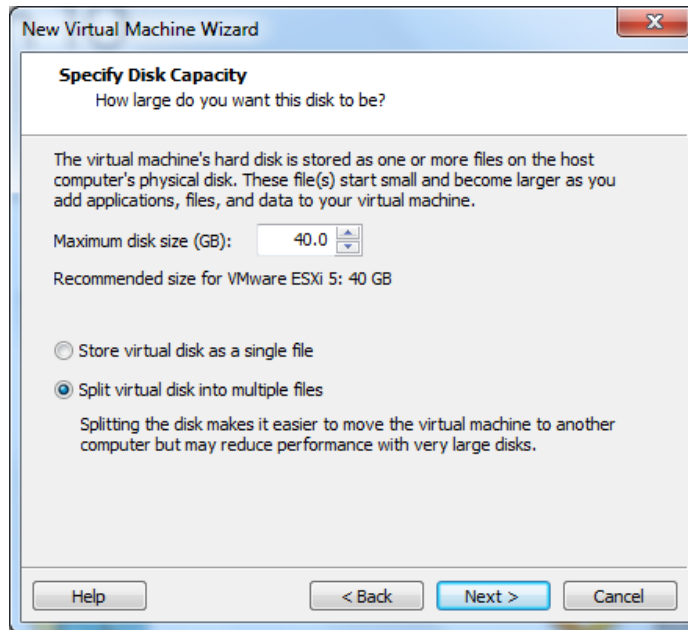
Once the server boots, it will attempt to use Dynamic Host Configuration Protocol (DHCP) to get an IP address for the management network. If you are not using DHCP, it will fail. But you can configure it manually by pressing F2. Next, select the Configure Management Network option. Then, choose Network Adapters and select the network interface card (NIC) that you will use. Next, select IP Configuration and choose the static IP address option. Set an IP address, net mask and gateway. Press Enter to save it. Finally, select the DNS Configuration option and set your domain name servers (DNS) and DNS host name. You can also restart and test the management network by using the menu options.

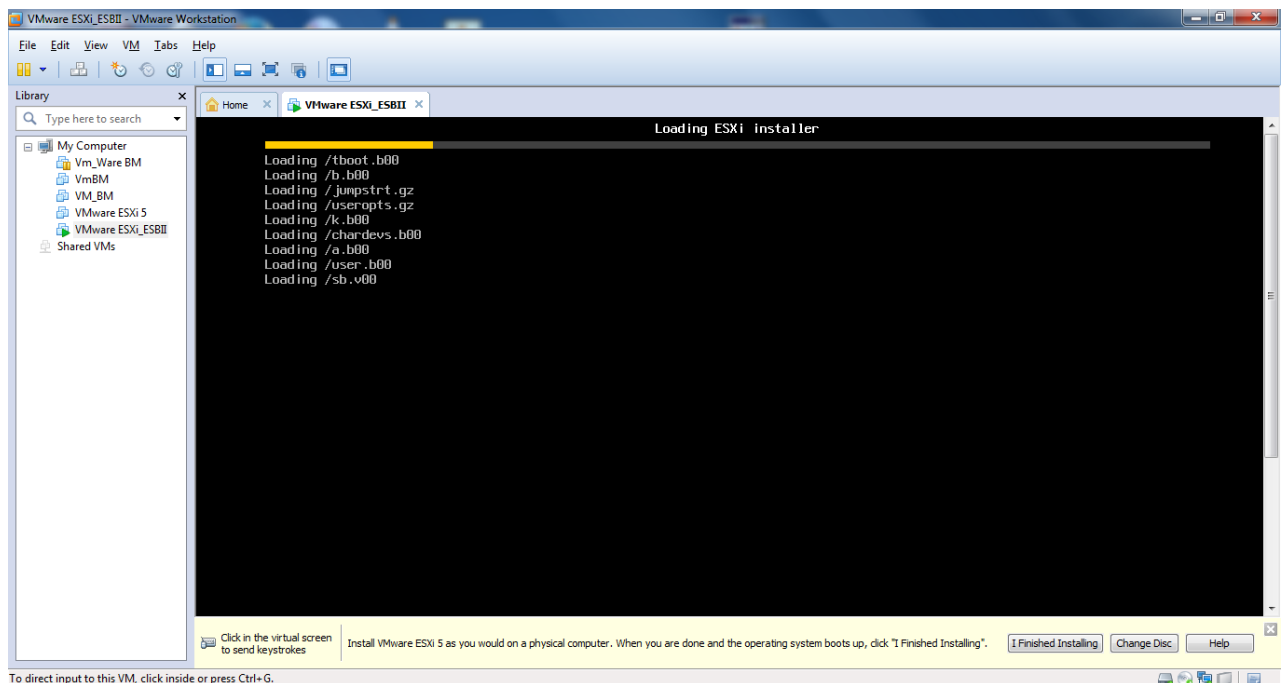
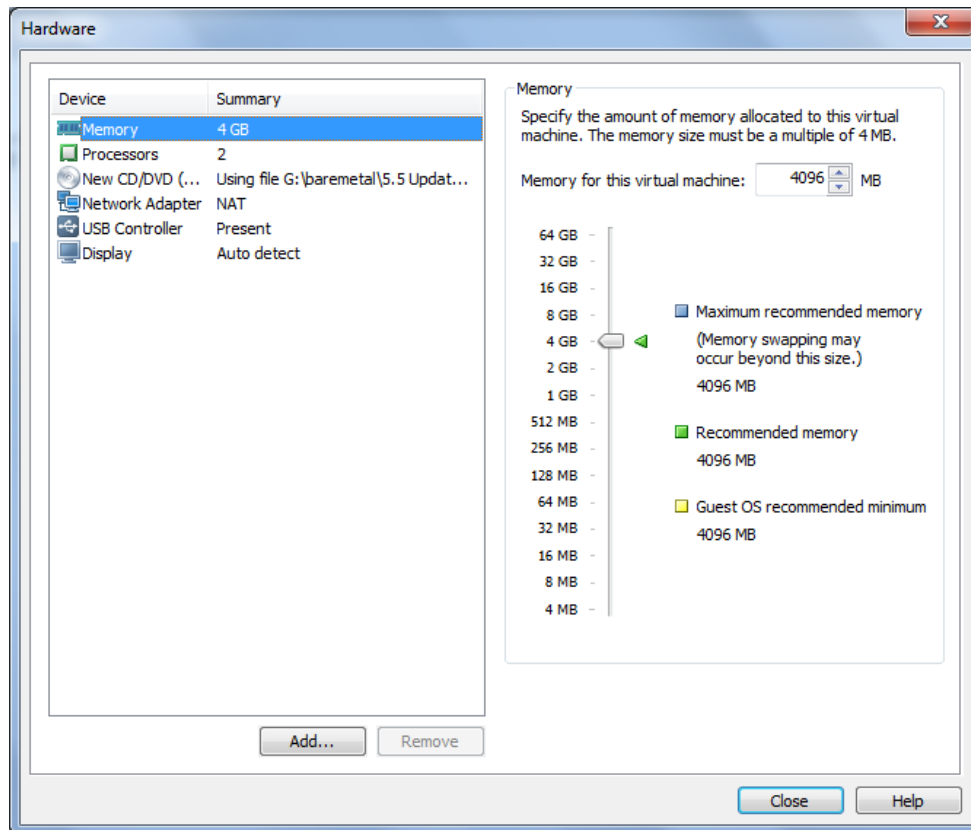
vi. **Configuring ESXi from the vSphere Client**

Once networking is configured, set a root password (if you haven't already). Connect to the host through the vSphere Client and log in, using the root account with no password. To set the password, click on the Local Users & Groups tab. Right-click on the root user. Select Edit, then Change Password.

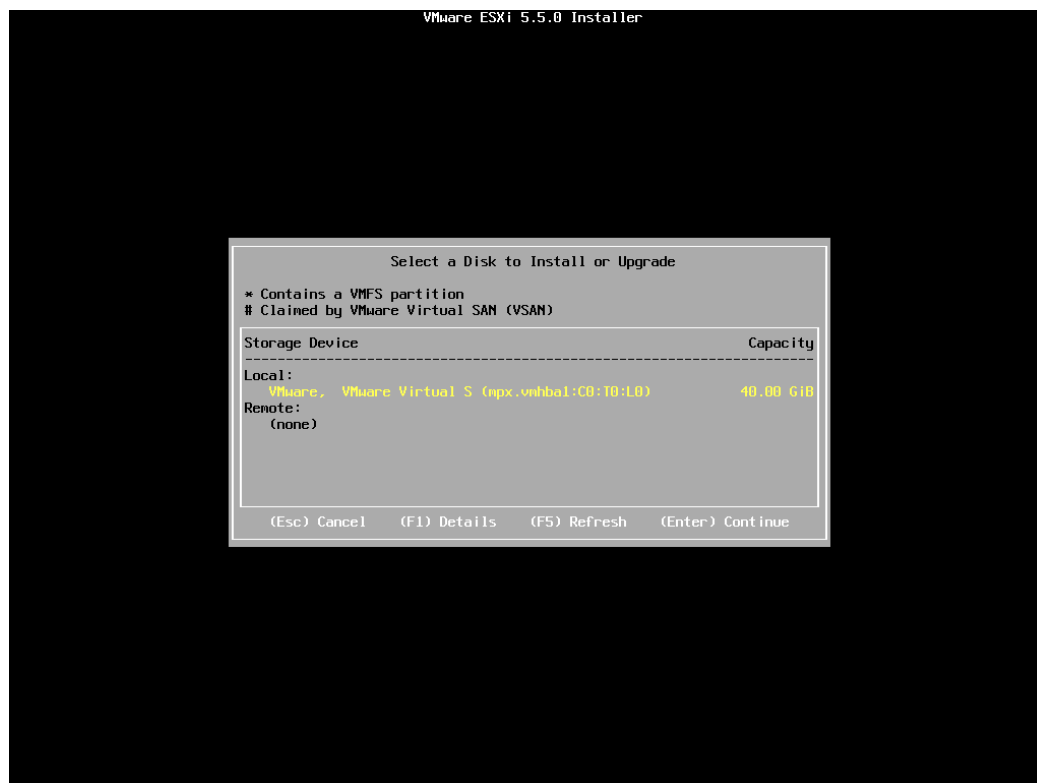
2. Installing ESXi on a VM

- Please not that in real environment we install the ESXi on a Real server. In order to do the practical we are using the VM to show like it's a real server.





3. Configuring Basic Settings of ESXi



VMware ESXi 5.5.0 Installer

Enter a root password

Root password: *****
Confirm password: *****

Passwords match.

(Esc) Cancel (F9) Back (Enter) Continue

VMware ESXi 5.5.0 Installer

Confirm Install

The installer is configured to **install** ESXi 5.5.0 on:
mpx.vmhba1:C0:T0:L0.

Warning: This disk will be repartitioned.

(Esc) Cancel (F9) Back (F11) Install

VMware ESXi 5.5.0 Installer

Installing ESXi 5.5.0

28 %

VMware ESXi 5.5.0 Installer

Installation Complete

ESXi 5.5.0 has been **successfully** installed.

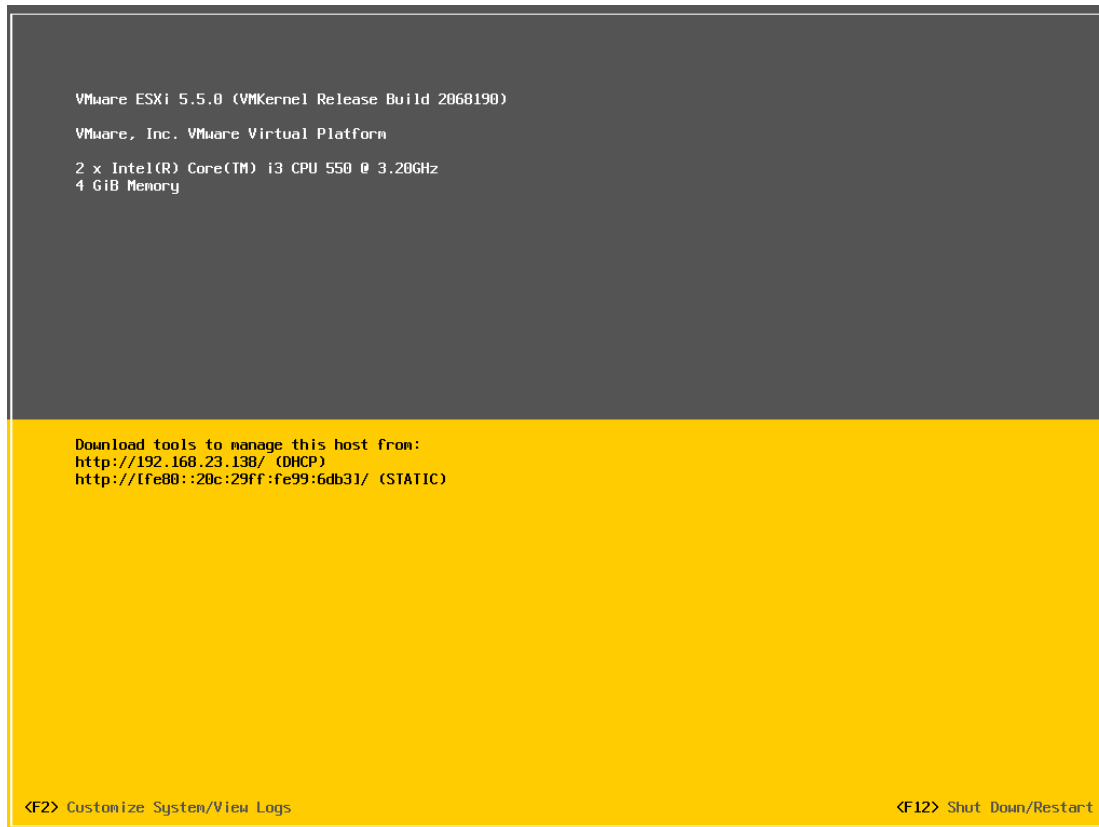
ESXi 5.5.0 will operate in evaluation mode for 60 days. To use ESXi 5.5.0 after the evaluation period, you must register for a VMware product license. To administer your server, use the vSphere Client or the Direct Control User Interface.

Remove the installation disc before rebooting.

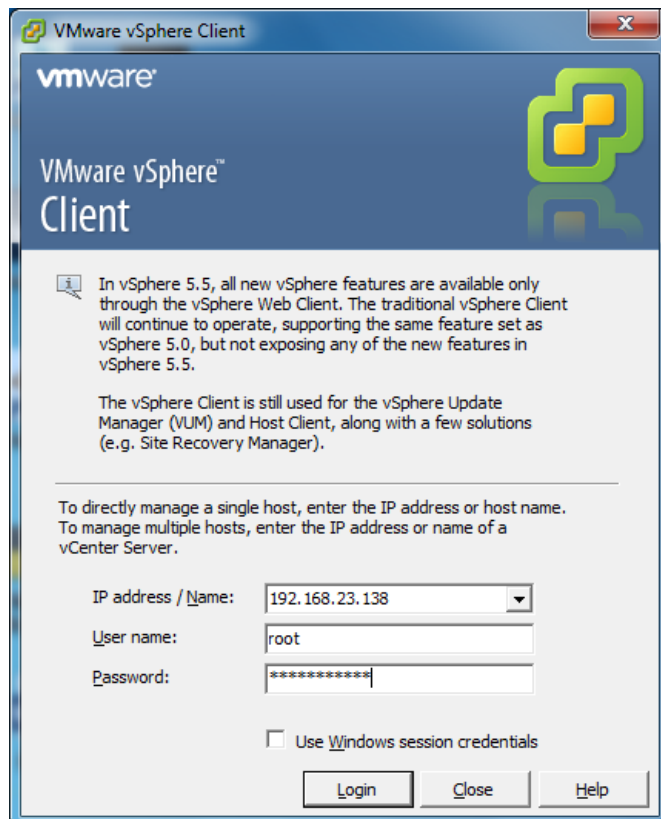
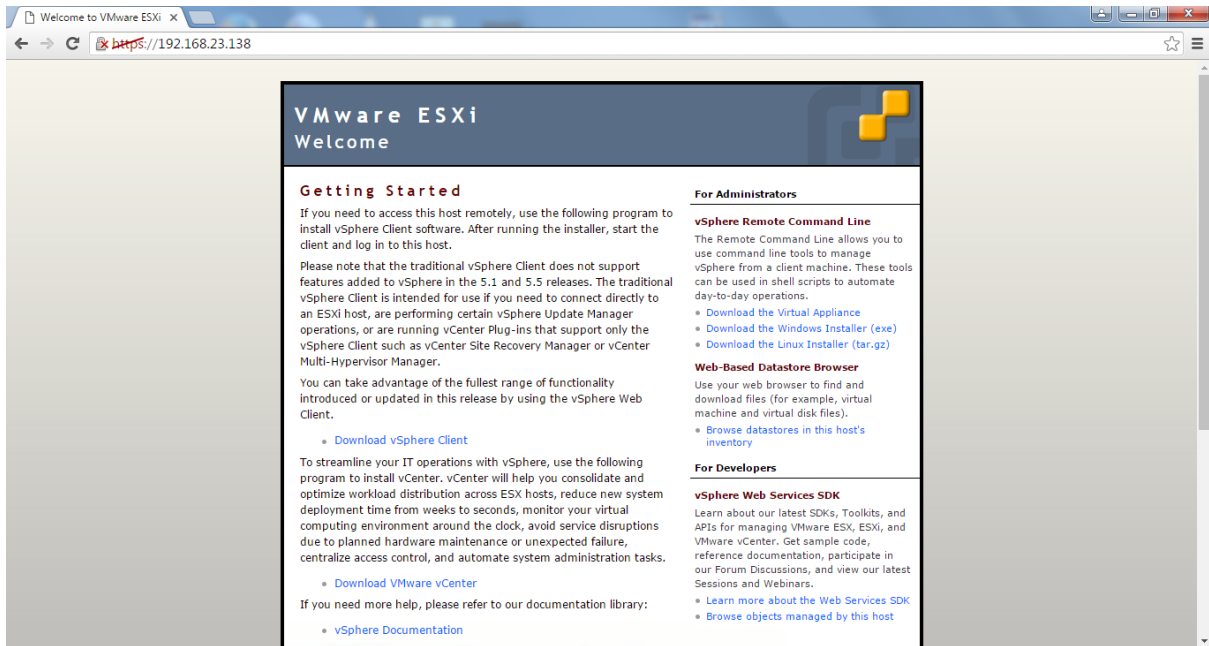
Reboot the server to start using ESXi 5.5.0.

(Enter) Reboot

- Installation successful, A DHCP IP is taken by ESXi through the VM



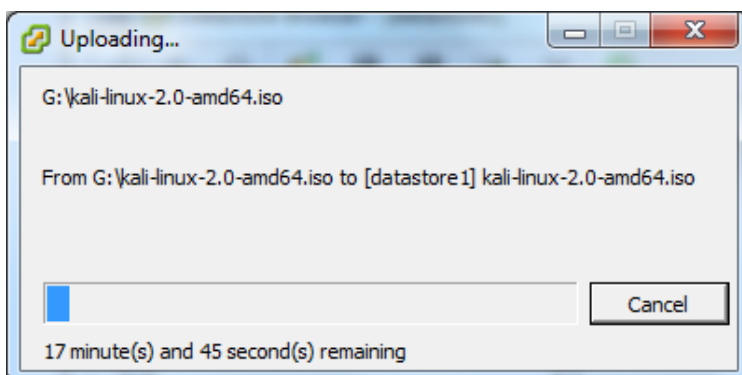
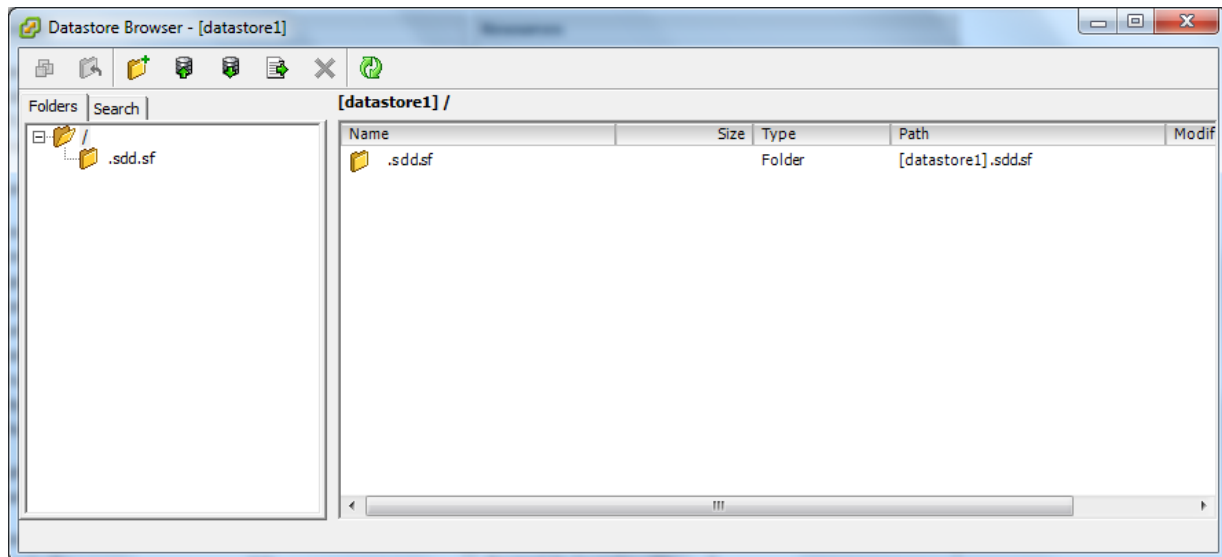
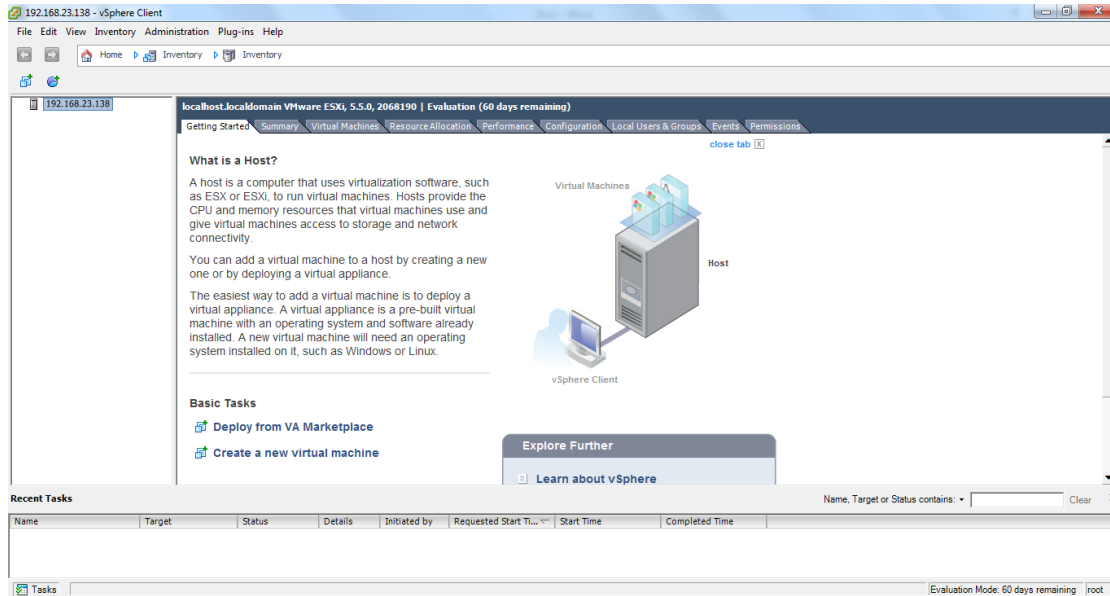
4. Configuring ESXi through VMware vSphere Client

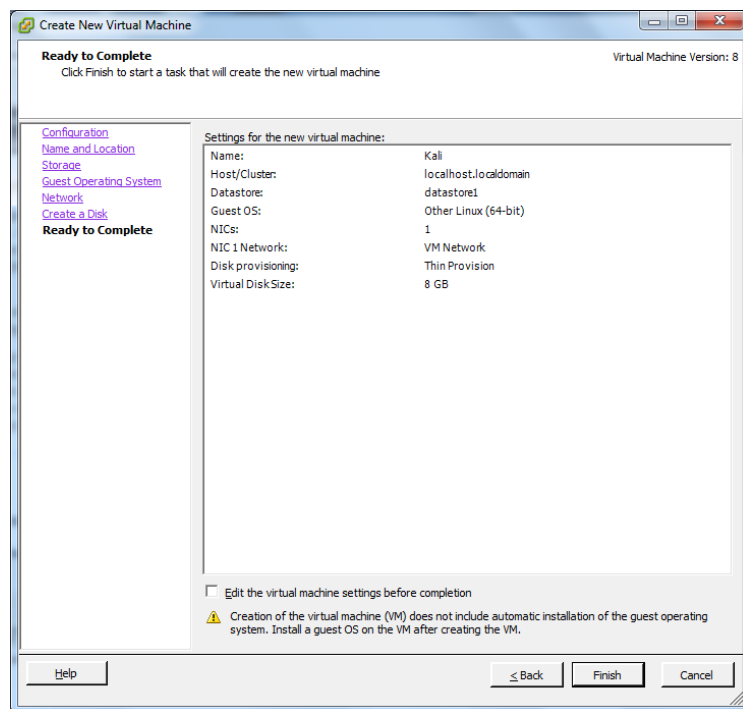


- Connect through the DHCP IP taken earlier by the ESXi and root password configured earlier.

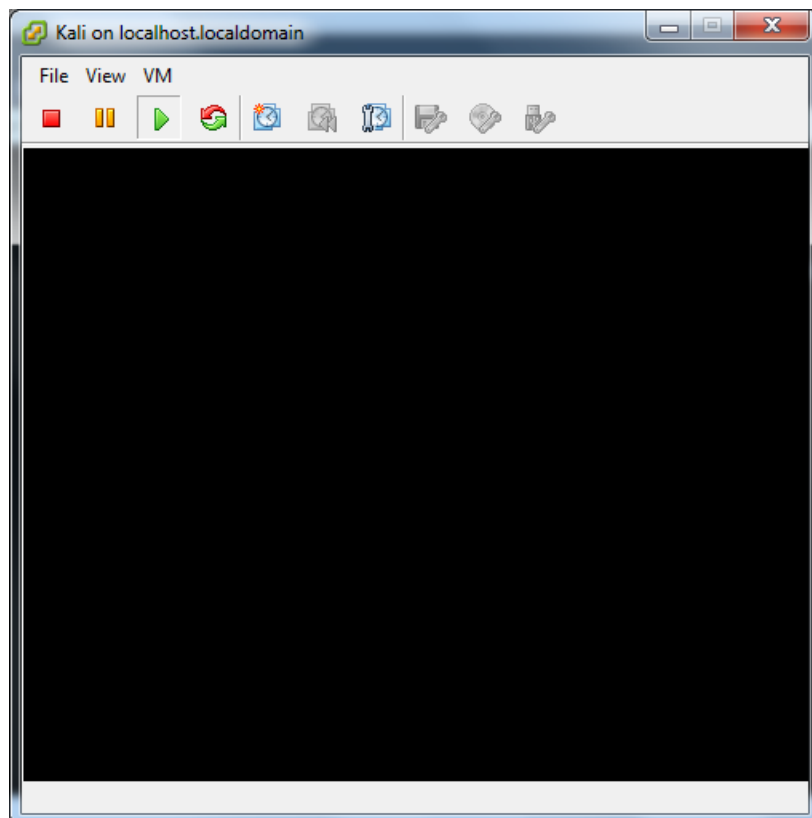
5. Installing Kali Linux

- Upload the Kali Linux OS iso image to the DataStore





- Kali Linux installation and booting up



- Installed Kali Linux

