MURAL VMware Software Installation Guide for Rack Servers

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Installation Overview

This document describes how to install VMware system on Cisco Rack Servers.

Virtual Machines (VMs) created on VMware system using this document will be later used for MURAL installation.

Installation Package

The MURAL VMware installation package consists of the following components:

- VMware OS Media (.ISO file) - `VMware-VMvisor-Installer-5.5.0.update01-1623387.x86_64.iso`
- vSphere client software

Installing VMware

To install VMware, perform the following steps:

Note: Skipping a task or performing the tasks out of sequence may cause a mis-configuration and can result in installation failure.

1. Verify that the UCS hardware is correctly set up and configured for the MURAL system. For more information, refer *MURAL Rack Server Hardware Setup Guide*.

2. Prepare VMware host on UCS rack servers. For more information, see Installing VMware OS on Rack Servers.

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Installing VMware Operating System on Rack Servers

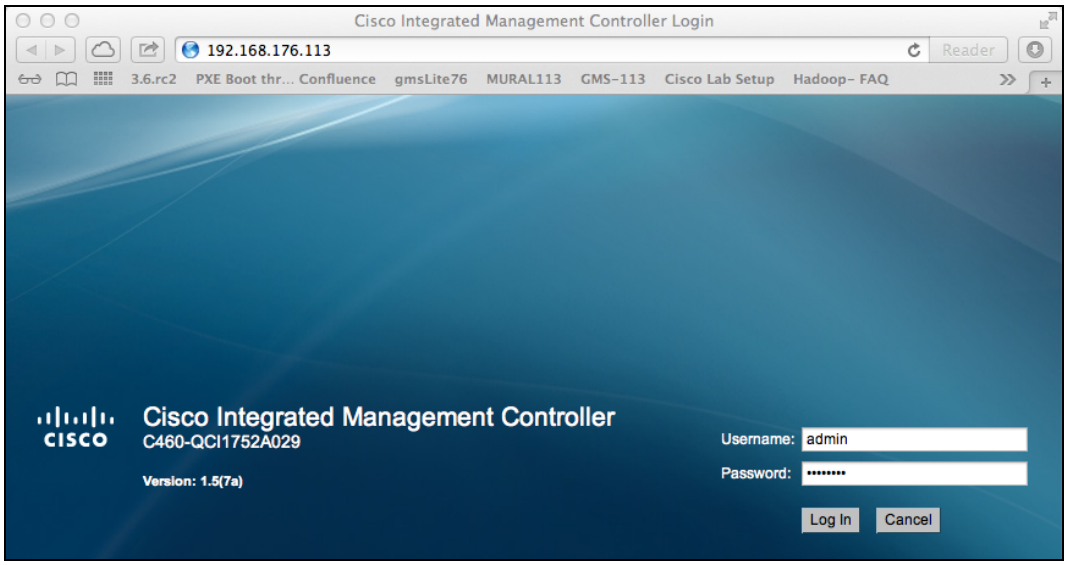
VMware ESXi 5.5.0 operating system software is required to be installed upon rack servers to configure them as VMware hosts.You need to configure the available hard disks under RAID-5 disk group and make this single virtual disk available to install the VMware ESXi OS. For more information refer *Rack Server Hardware Installation Guide*.

From Web browser, access rack servers through Cisco Integrated Management Controller (CIMC) web user interface to manage and configure server storage and to start KVM console.

Note: The process described in the following steps apply for installing VM for one rack server. Follow the same steps for other rack servers also, to create all the required VMs for installation of MURAL system in dual rack server topology.

1. Log in to CIMC user interface in the web browser using administrator credentials.

   The following image illustrates the CIMC interface to log in.



2. In order to enable vKVM properties, select **Server > Remote Presence > Virtual KVM** tab and check **Enabled** check box under vKVM Properties.

   The following image illustrates the options to be enabled.

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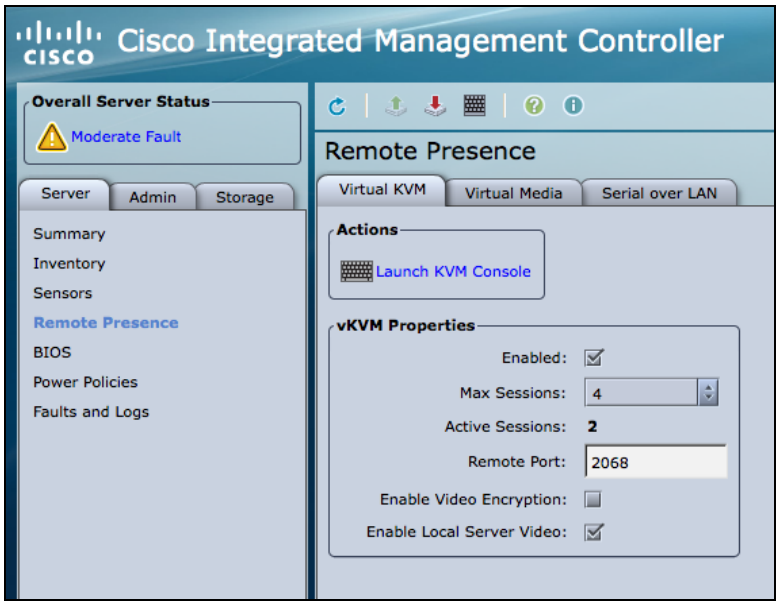
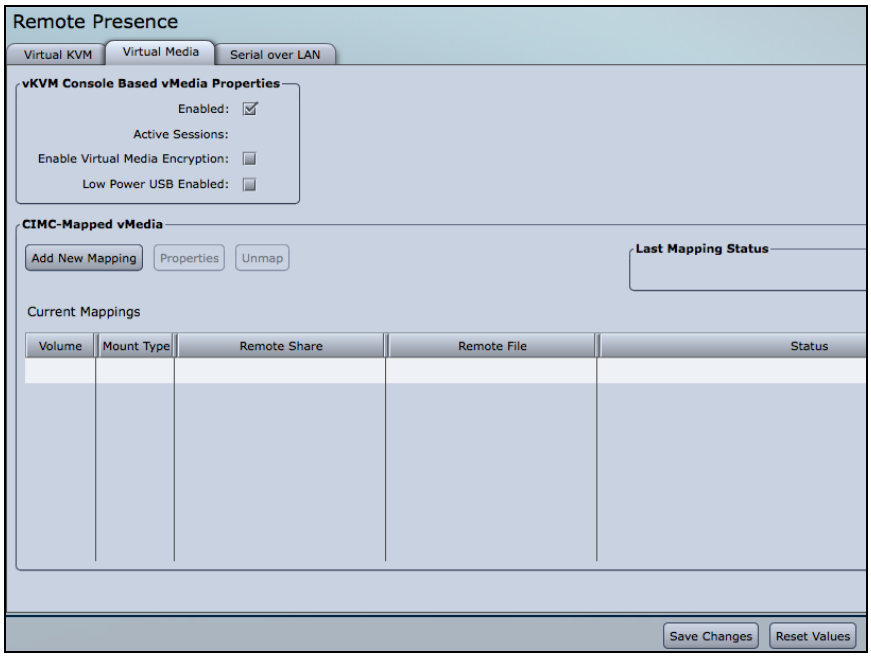


3. On the **Virtual Media** tab, check the **Enabled** check box under vKVM Console Based Virtual Media Properties.



4. Click **Save Changes** button at the right bottom of user interface page.
5. On the **Server** tab, click **Summary**. Under **Actions** in the Server Summary pane, click **Launch KVM Console**.

   The following image illustrates the options to be clicked.

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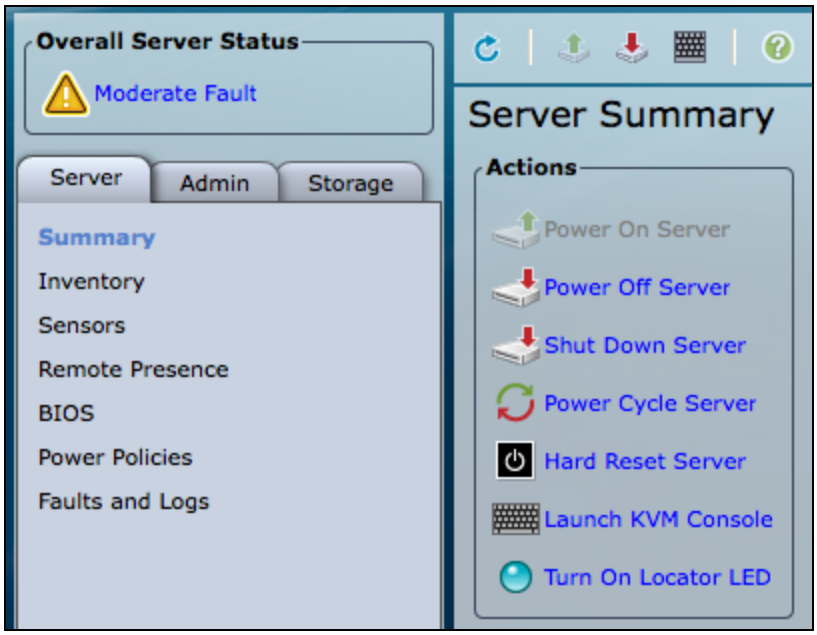
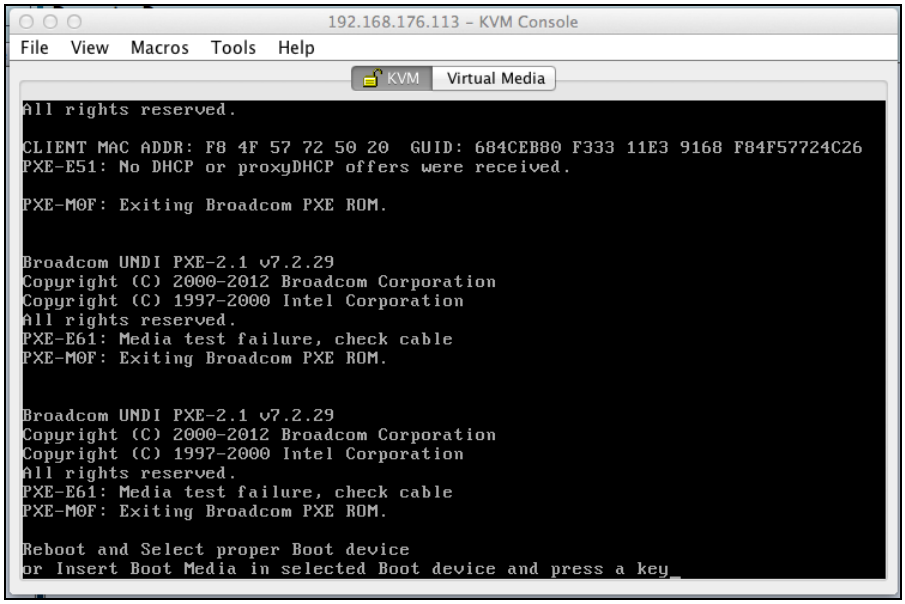


The console window is launched.



6. Select **Virtual Media** tab from KVM Console screen.
7. Click **Add Image**. Select ISO image from the displayed screen and click **Open**.

   The following image illustrates the flow.

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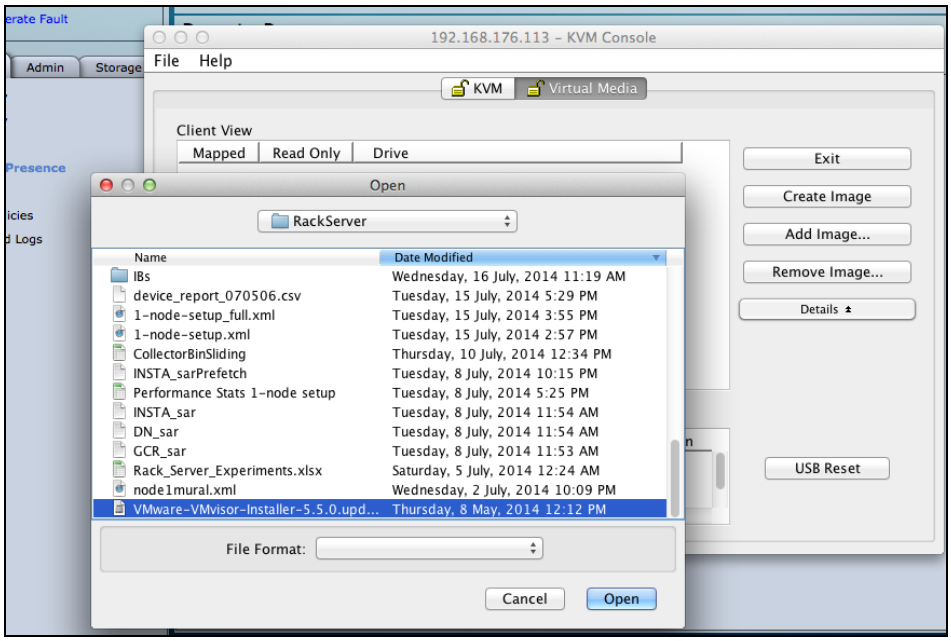
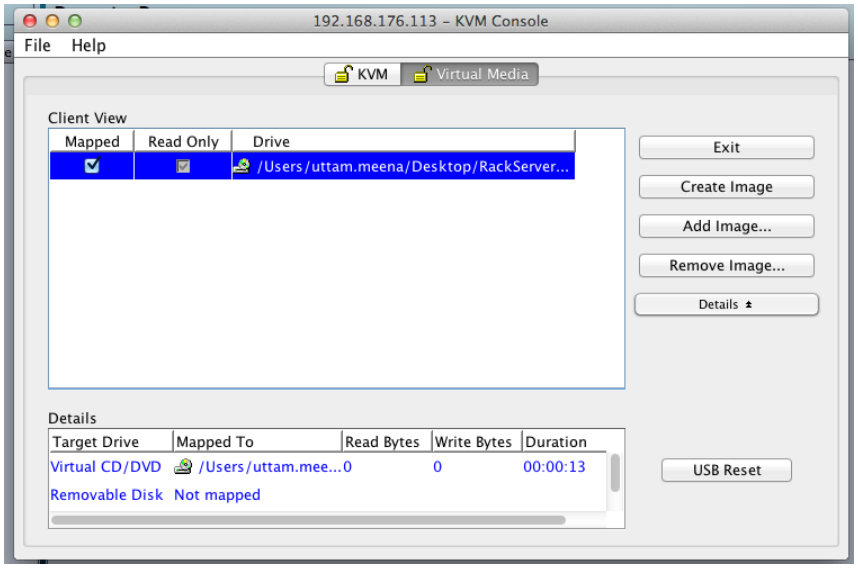


8. After successfully adding the image, check the **Mapped** check box.

   The following image illustrates the option to be checked.



9. On the **Server** tab, click **Summary**. From the Server Summary pane, click **Power Cycle Server** and click **OK** to reboot the server.

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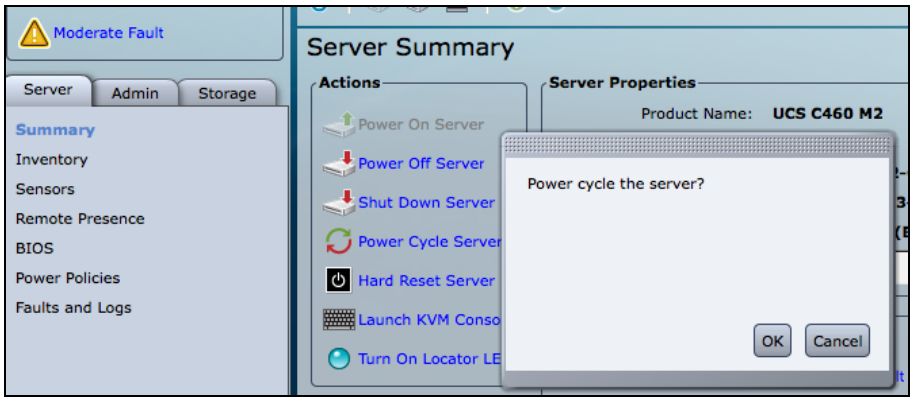

Rack Server power cycle starts. Wait for boot options.

10. During the "Power Cycle On" process, the following screen appears on the console.

11. Press **F6** key to go to the Boot Menu.
12. In the **Boot** Menu, select **Cisco vKVM-Mapped vDVD1.22** as boot device.

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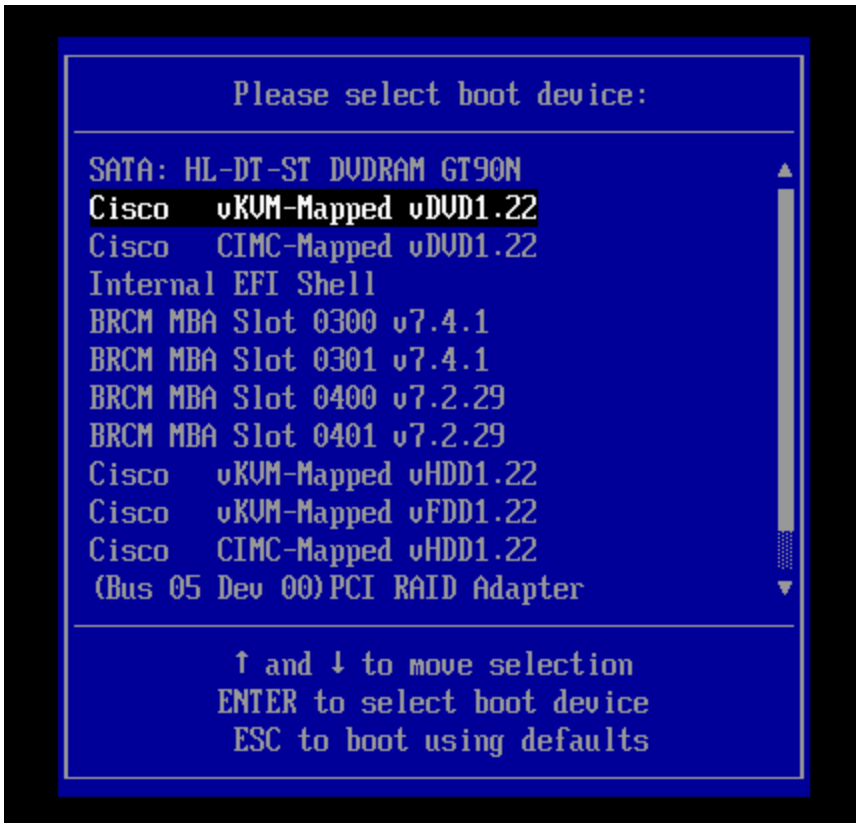
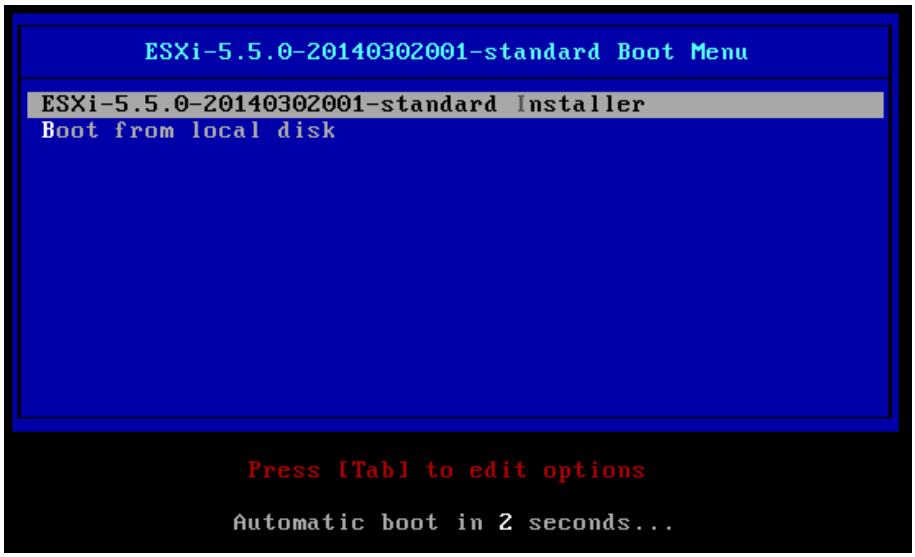


The server starts booting from ESXi image. The following image illustrates the same.



The following image is displayed when the system is loading ESXi

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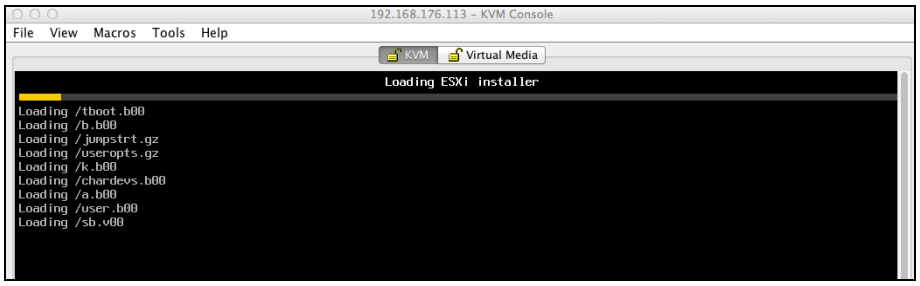
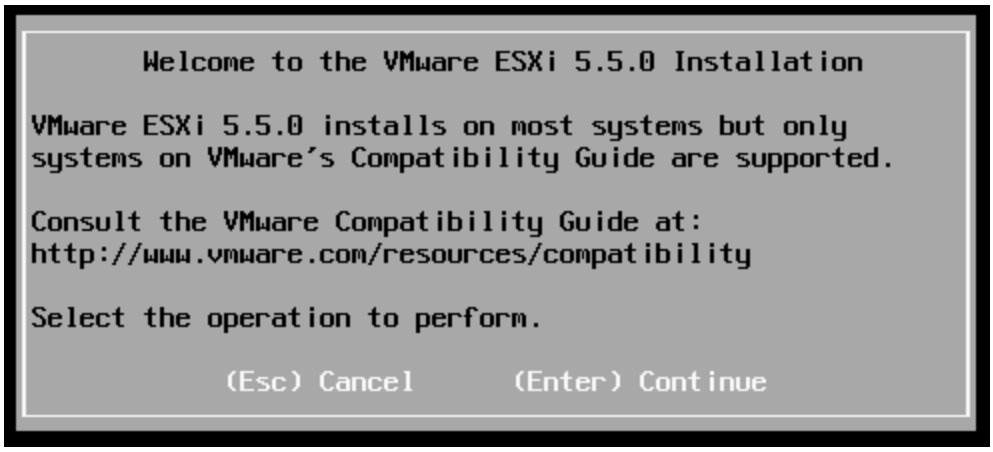
Installer packages.



The following image is displayed when the system is loading library packages.

13. The following message appears on the console after the installation package is loaded. Press the **Enter** key to Continue.



14. Press **F11** key to accept the license agreement and continue with the installation.

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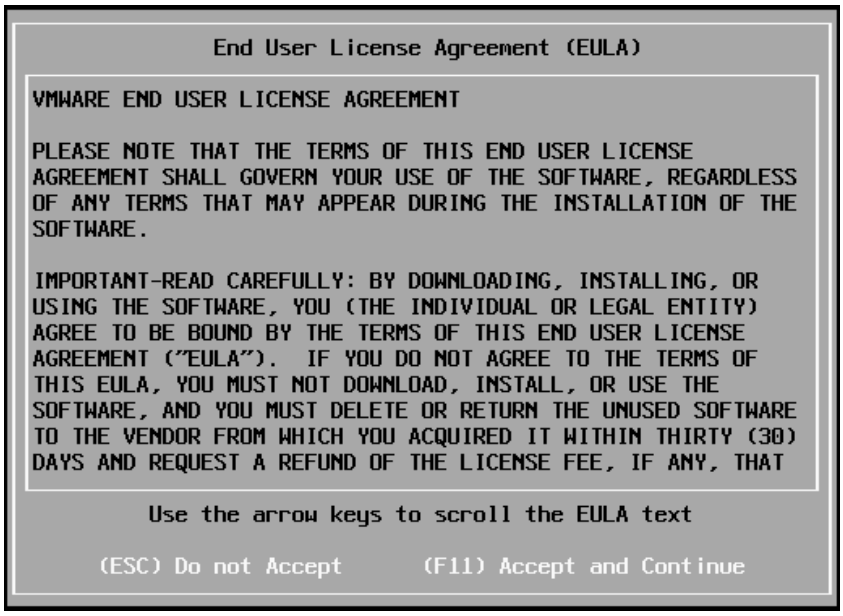
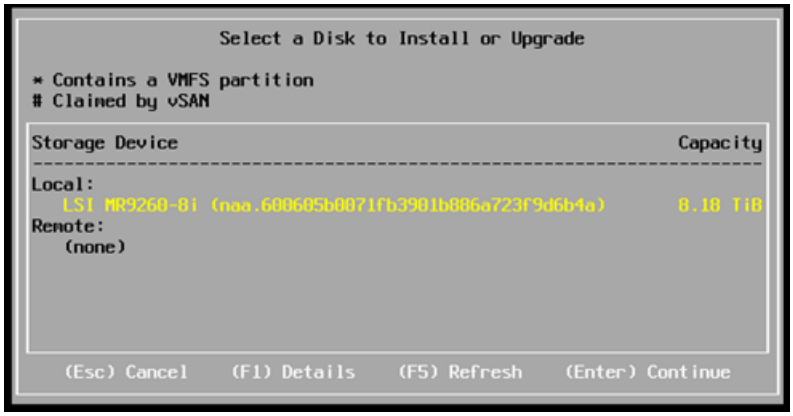


15. Select local drive for OS installation in the options and press **Enter** key to Continue.



16. Select **US Default** keyboard layout and press **Enter** key to continue.

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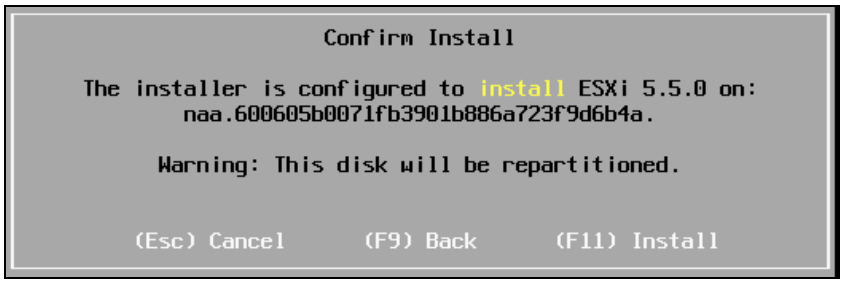
17. Type root password and retype the same to confirm, press **Enter** key to continue.

The Installation starts.

18. Press **F11** key to confirm the Installation. After the OS Installation starts, it takes about 20 to 30 minutes to complete the installation.



After the successful installation, the following message is displayed.

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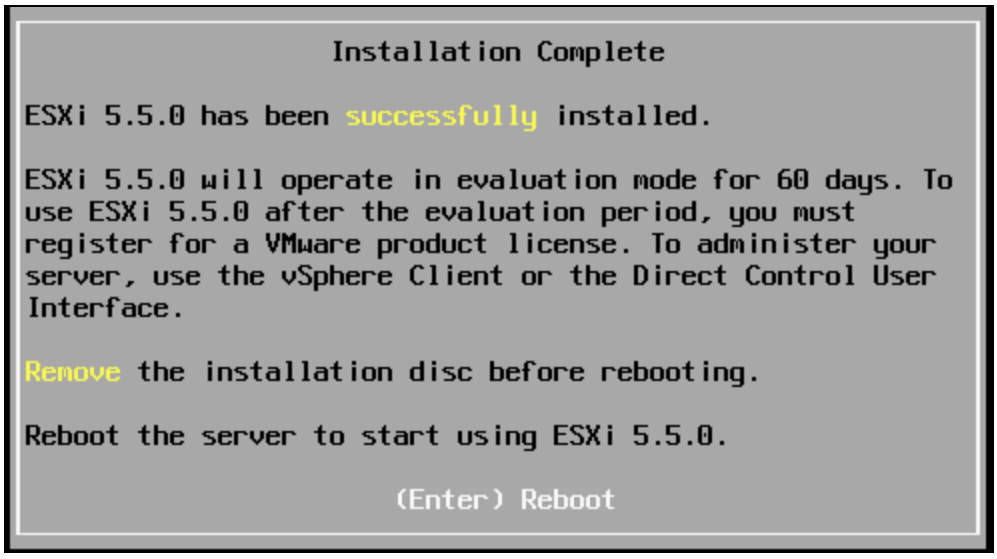
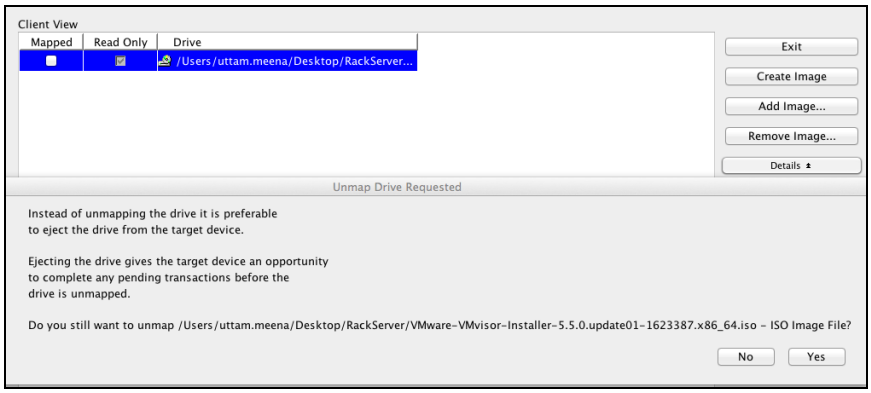


19. Remove the installation media from KVM before pressing **Enter** key to reboot.
20. Select **Virtual Media** tab from KVM console and uncheck **Mapped** box.

    The following image demonstrates the screen after removing the media.



21. Select the KVM Console tab and press **Enter** key to reboot the server. Server will start rebooting. Please wait until the following screen is displayed on the console after reboot. It takes about 3 to 5 minutes.

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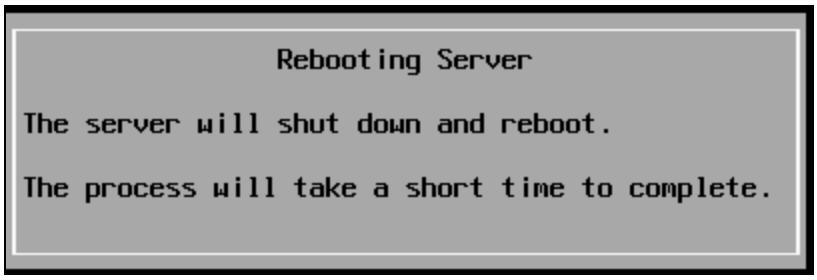
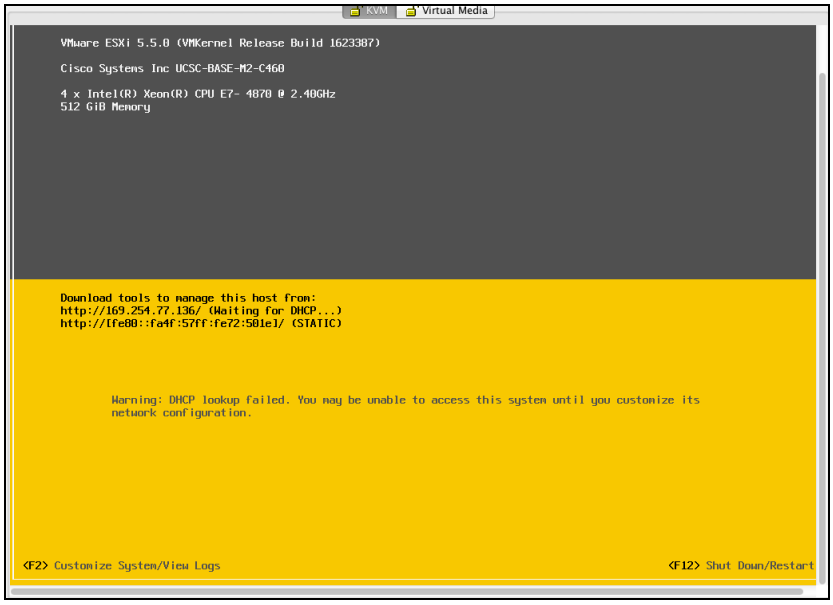


22. Once the reboot is complete, the following screen is displayed on the console.



23. Press **F2** key to set Host Management Configuration.
24. Enter root password to log in to Host Management Interface.

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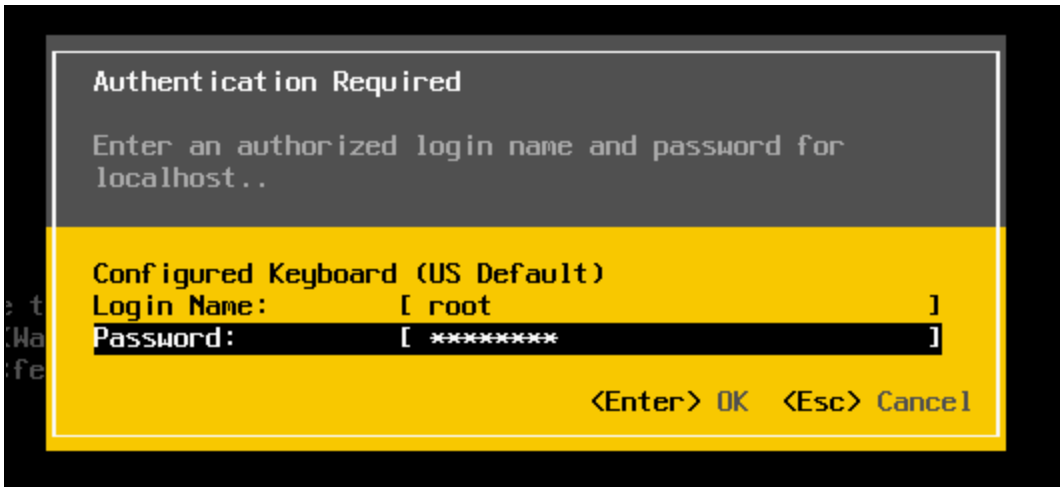
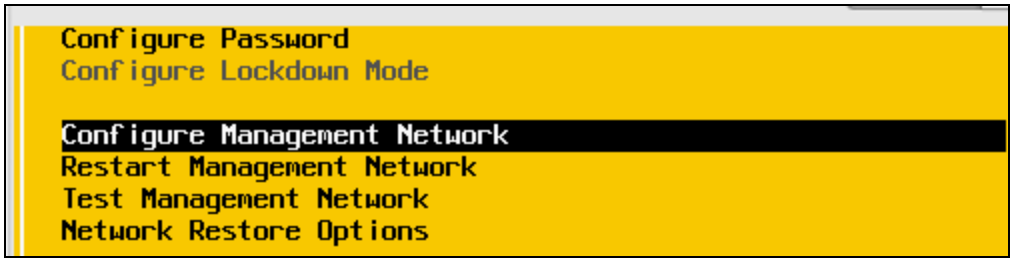


The following image shows the Host Management Interface.

25. Select **Configure Management Network** and press **Enter** key.



26. Select **Network Adapter** and press **Enter** key.

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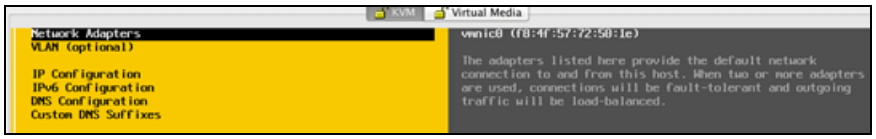
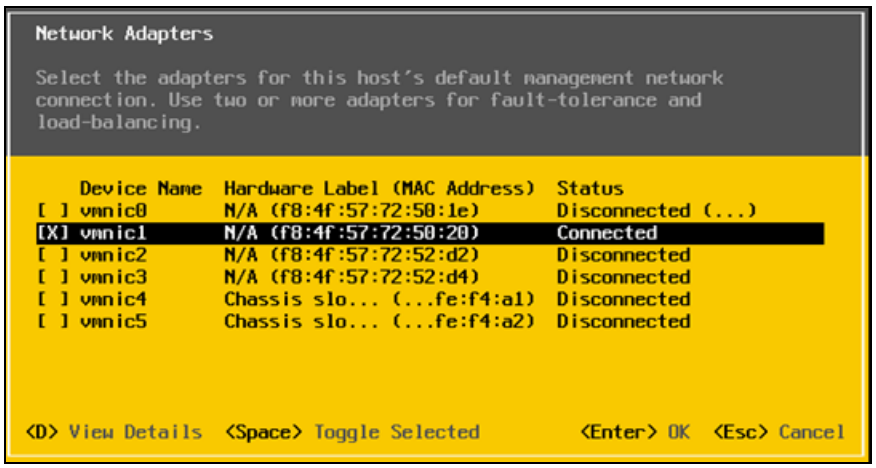
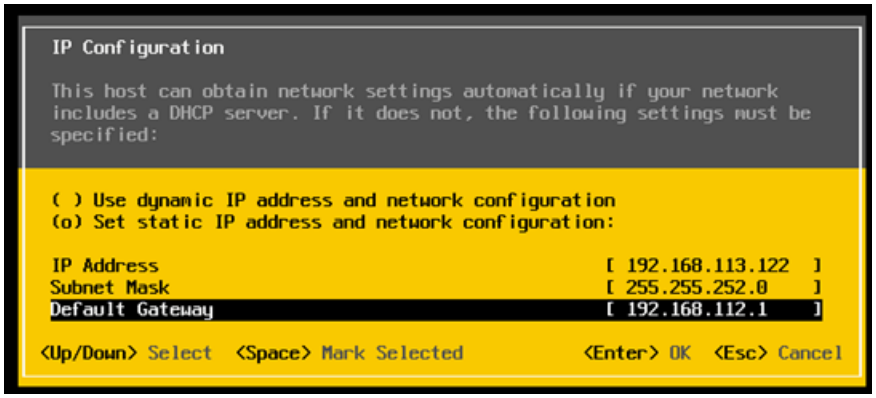


27. Select appropriate NIC port to connect host server with network, press **Spacebar** key to toggle between the selection. Press **Enter** key.



After successful configuration, correct NIC port appears as below.

28. Set IP Configuration and press **Enter** key.



29. Set DNS Configuration and press **Enter** key.

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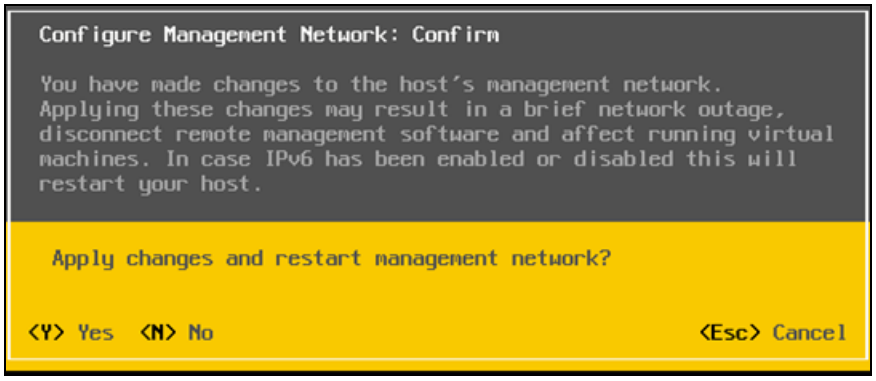
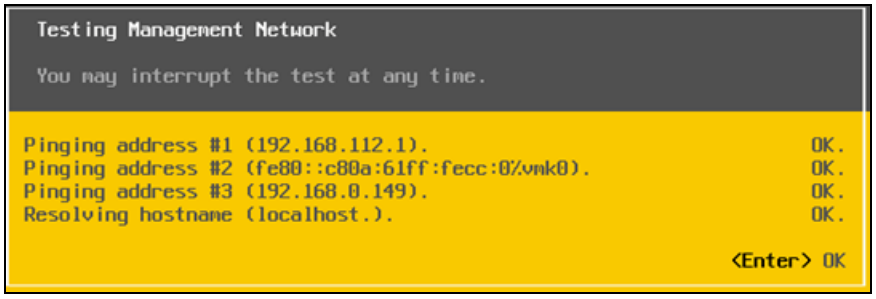
30. Press **Y** to save the configuration changes. You can also press **ESC** to exit the Host Management Network configuration.



31. Enable ESXi shell and SSH login, as shown in the following image.

32. Select **Test Management Network** and press **Enter** key.



33. Press **Enter** to test the connectivity and return to main screen. Press **ESC** key to log out from Host management screen.

VMware host is now ready to use for VM creation.

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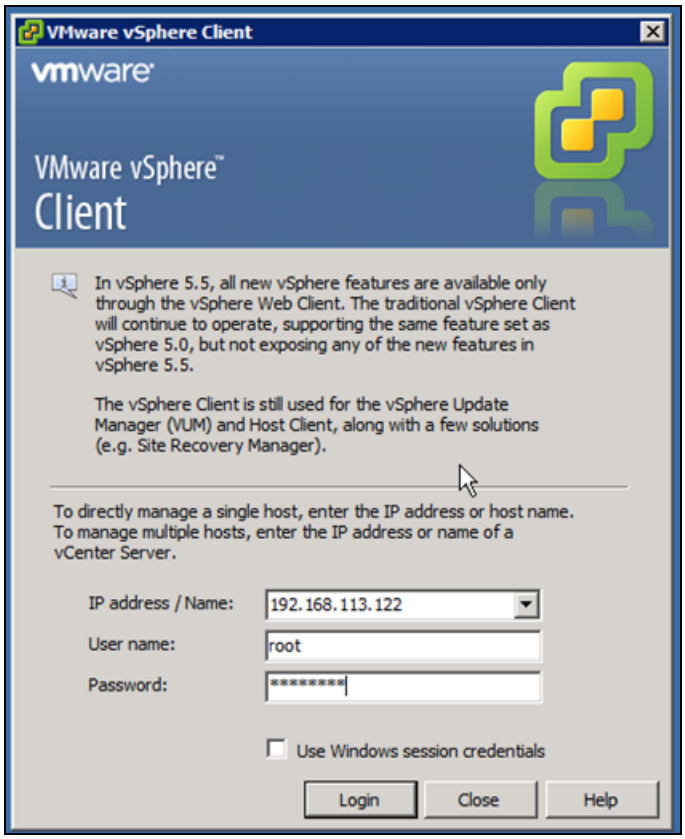
VMware Host Management

All the required Virtual Machines (VM) will be created using the master OVF file and two VMDK image files provided with MURAL release deliverables.

1. Start **VMware vSphere** client application from your machine and open VMware Management Interface to configure host (Bare Metal node) and guest (VM) servers.

   The following image illustrates the client interface.



2. Enter rack server IP address and user password to open VM management interface, as shown in the following image.

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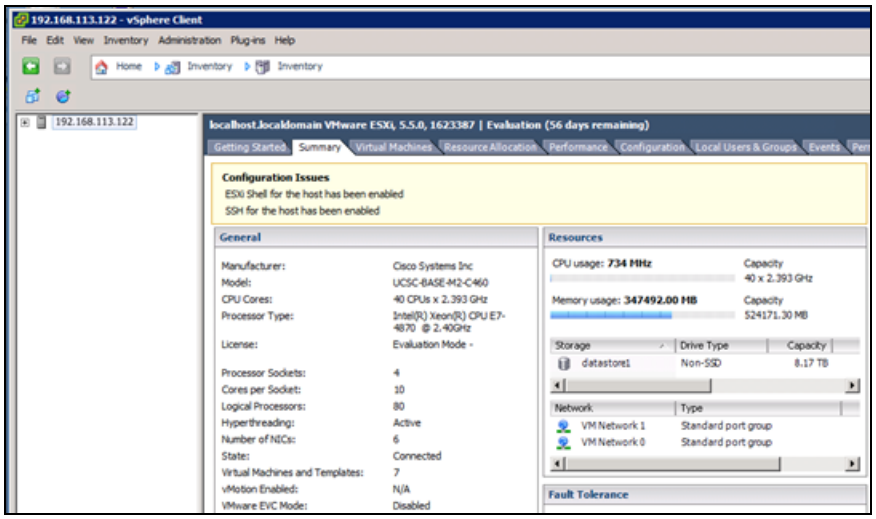
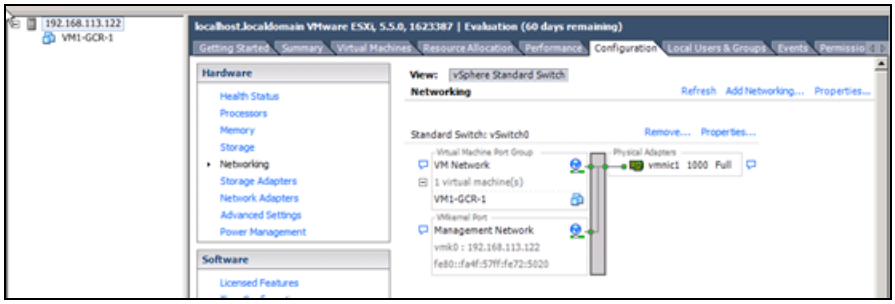


3. Set up **Network Management** as per the options given below.

   From the left pane, select the Host > Configuration > Hardware > Networking

   Click **Add Networking** link to add **vnic0** interface, as per the following image.



4. Select Virtual Machine and click the **Next** button.

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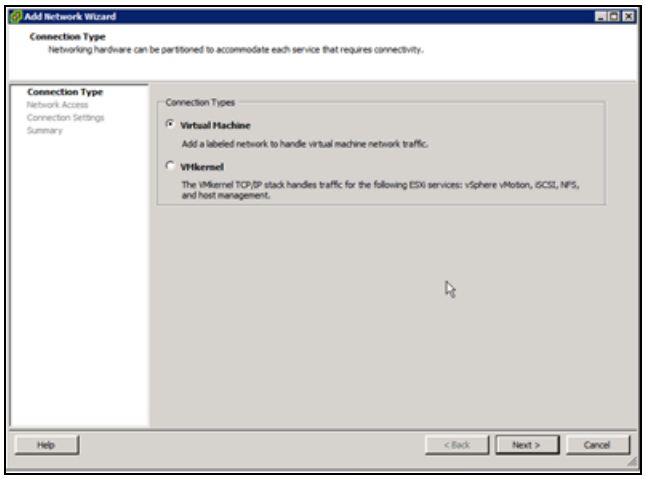
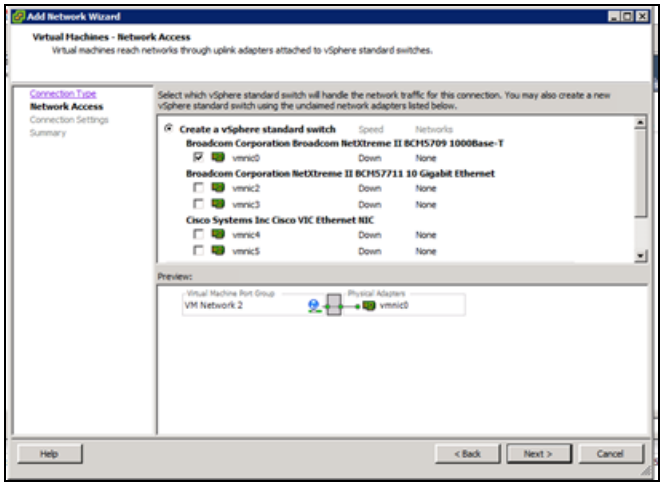


5. Select **vmnic0** box and click the **Next** button.



6. Enter Network Label as “VM Network 0” and click the **Next** button.

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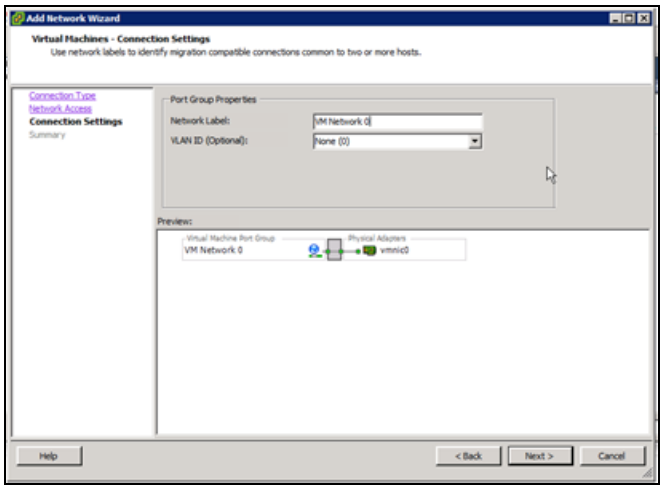
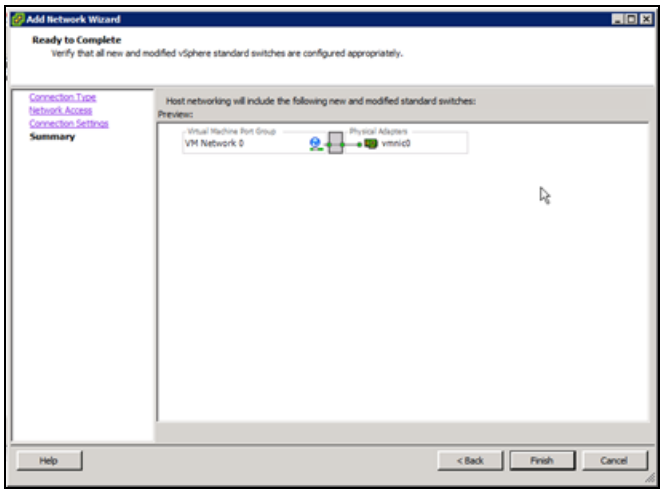


7. Click the **Finish** button on Summary page to finish the network port creation.



8. Network Interfaces will appear after successful creation.

   The following image illustrates the configuration of Network Interfaces.

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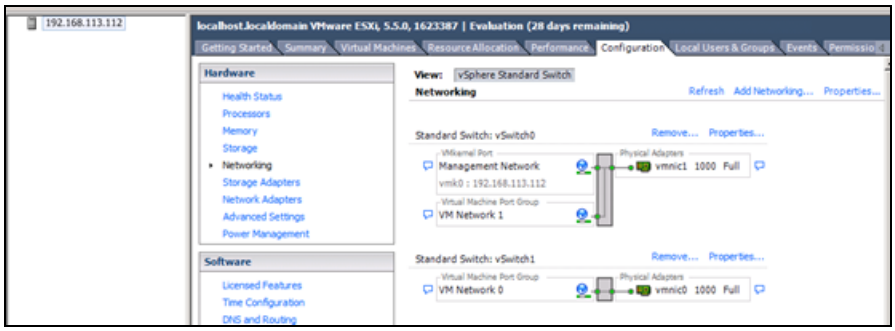

VMware is successfully installed and setup.

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