Using SANDeploy iSCSI SAN for VMware ESX / ESXi Server

Friday, October 8, 2010

www.sandeploy.com

Table of Contents

Overview

SANDeploy Storage virtualization solution will bring low cost and more convenient in data protection, data replication, data backup and failover than the real-hardware.

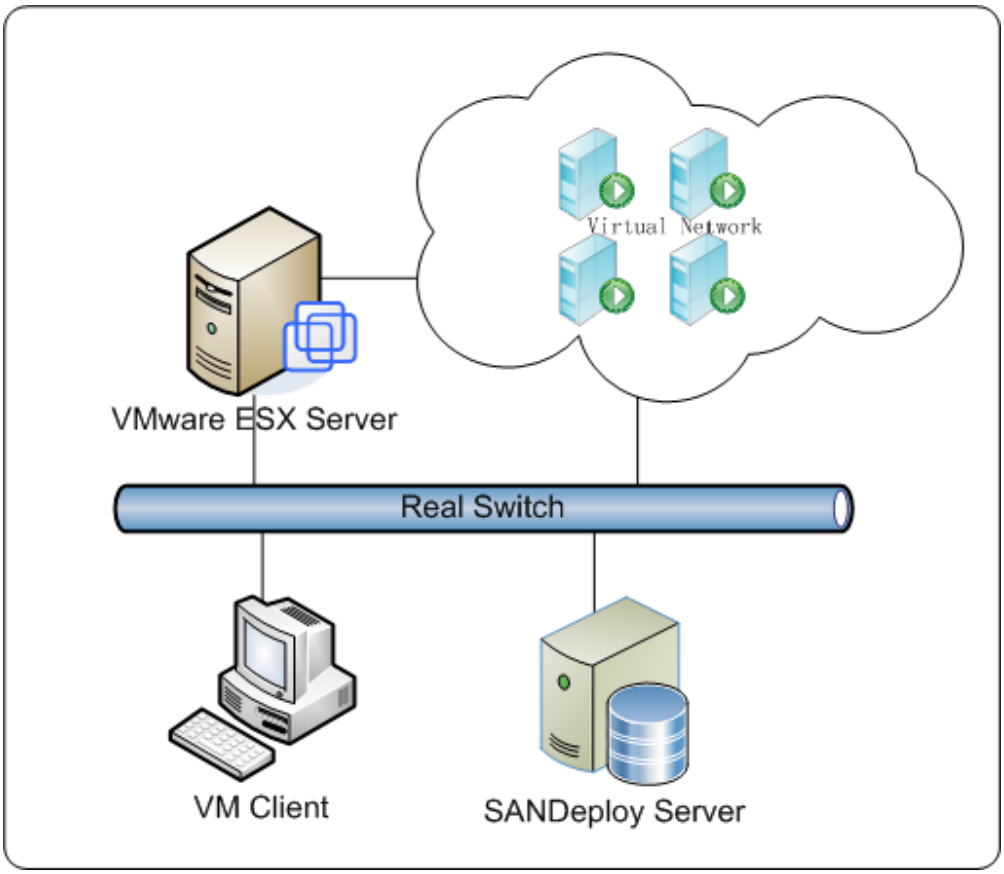


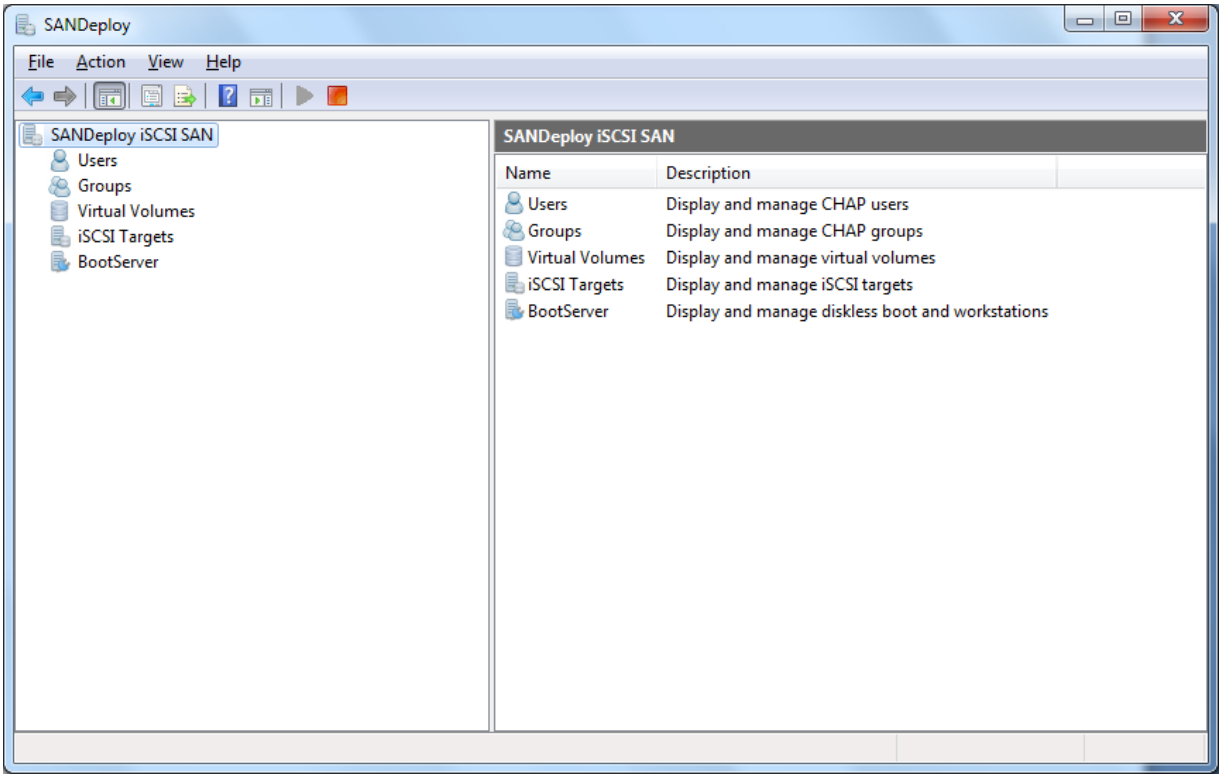
Figure 1, SANDeploy Offers shared-storage array for VMware ESX / ESXi Server

This document gives users detailed step-by-step instructions on configuring SANDeploy iSCSI SAN for VMware ESX Server or VMware ESXi server. Virtual Servers may need two or more computers use a few external storages such as iSCSI disks. With SANDeploy, you can quickly create a series of shared disks for virtualization servers.

Preparing SANDeploy Storage

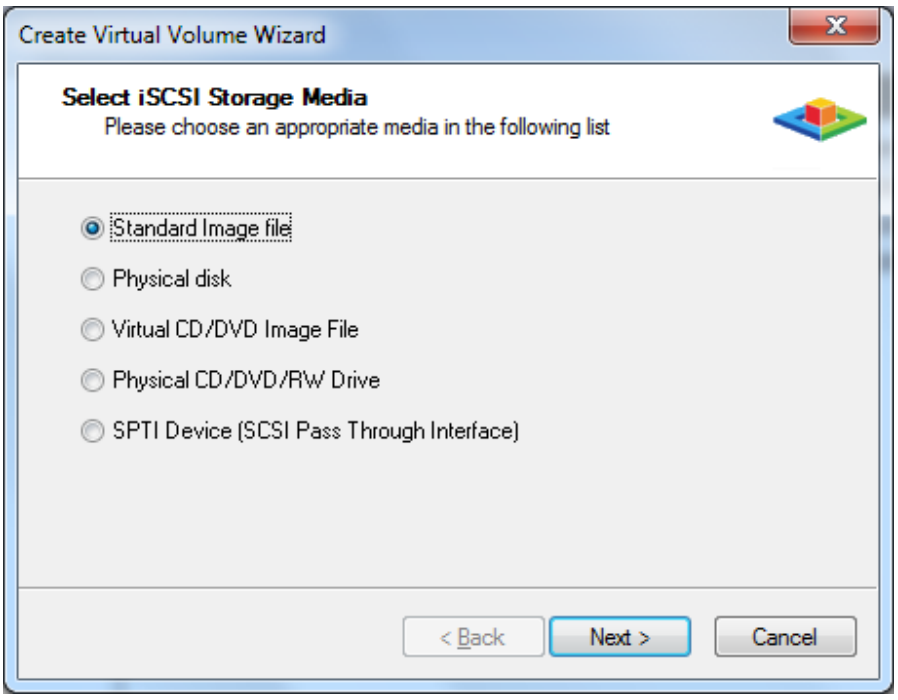
Create Virtual Volume

Click All Programs->**SANDeploy**->**SANDeploy Boot Server** (or **SANDeploy Server**) to launch **SANDeploy Management Console**.



Right click on the **Virtual Volumes** on the left tree of the main interface. Select **Create Virtual Volume...** from the pop-up menu. The **Create Virtual Volume Wizard** appears.

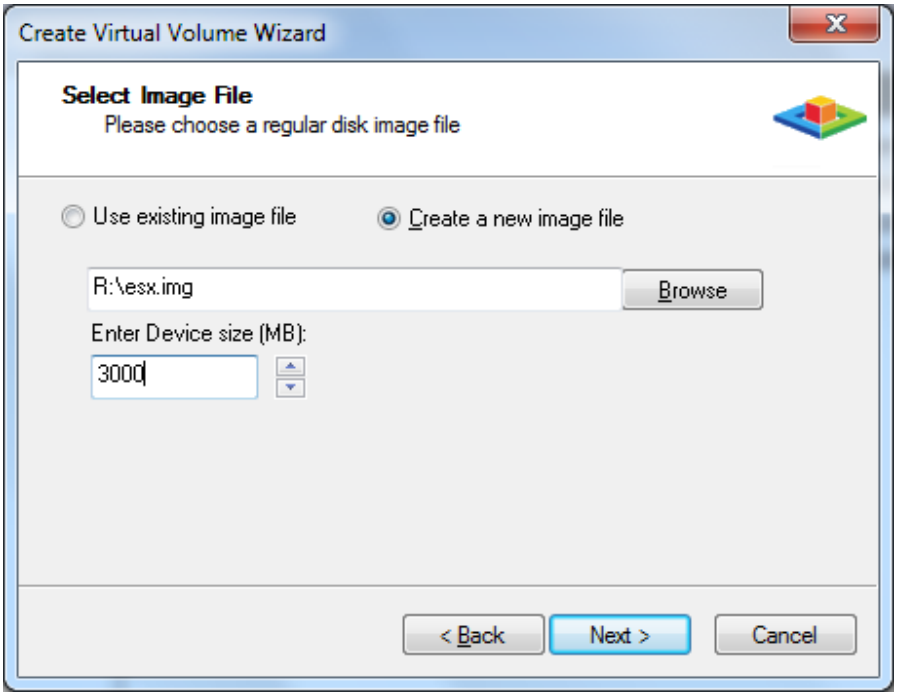
Select iSCSI media type



Select **Standard Image file**.

Press the **Next** button to continue.

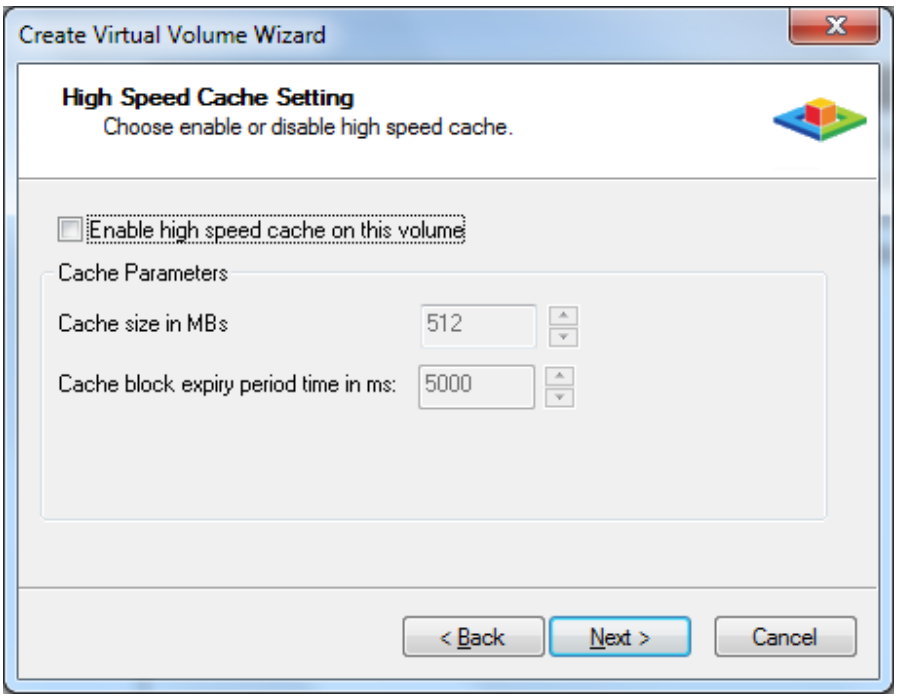
Specify image file



User can either select to open an existed image file or choose to create a new image file. To create new image file, please select the location of the file where user wants to create the file, specify the capacity of the image file.

Press the **Next** button to continue.

Cache Settings



User can choose whether use the cache by clicking the Enable high speed cache on this volume option button.

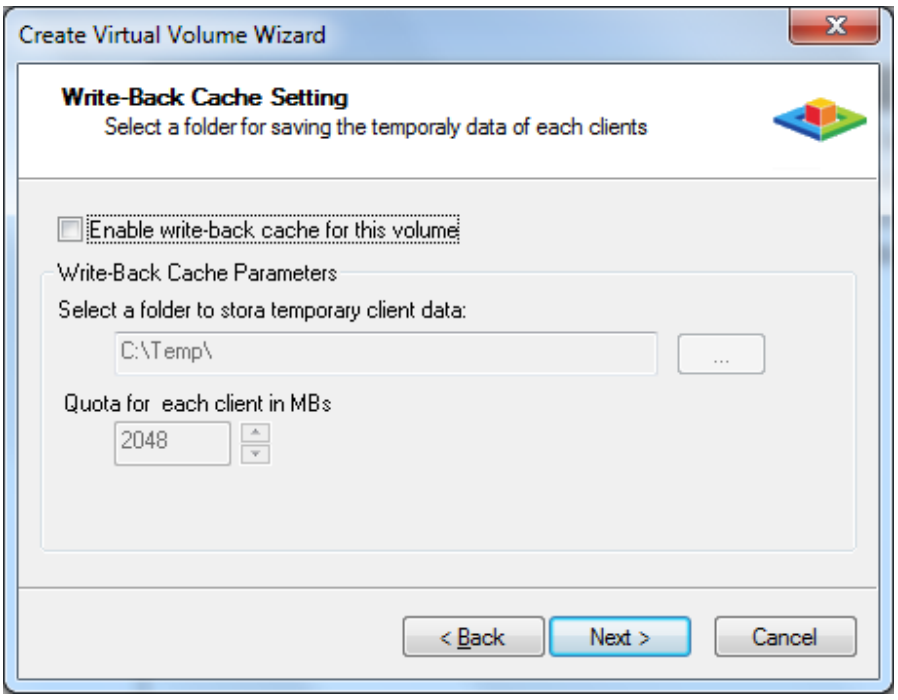
Specify Cache size.

Specify Cache block expiry period time.

Please note is that if you enable the cache, you will get more risk when power lost.

Press the **Next** button to continue.

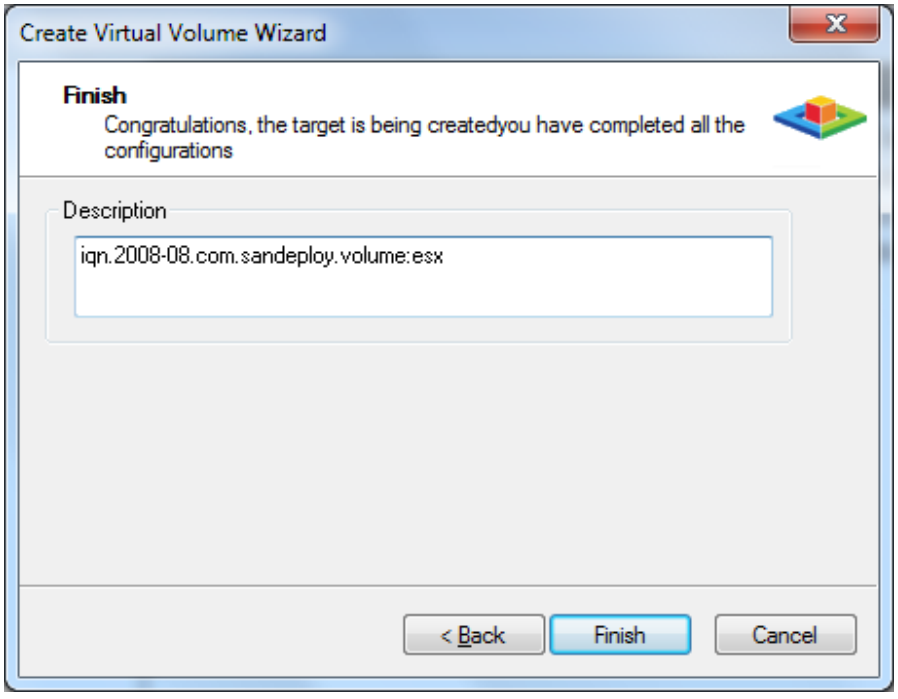
Write-Back cache settings



There is no sense for this type of solutions, so do not check **Enable write-back cache for this volume**.

Press the **Next** button to continue.

Finish Virtual Volume Creating



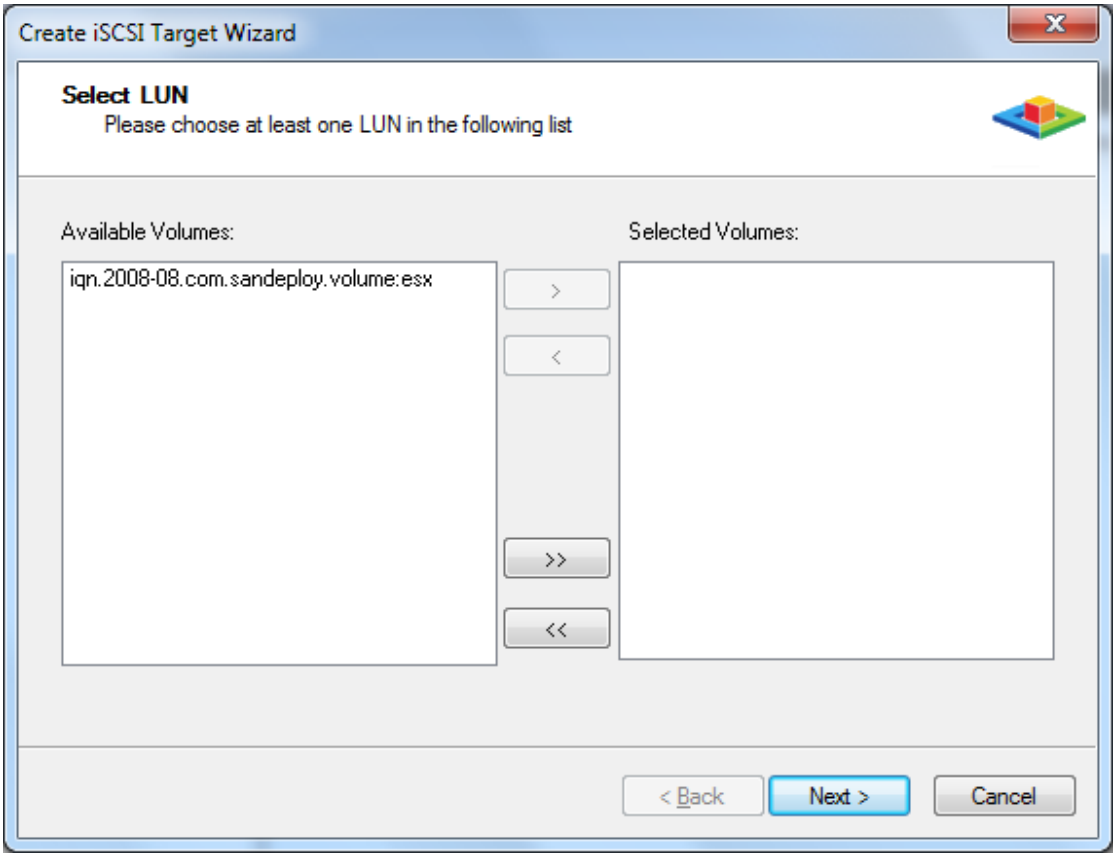
Type the volume description, the description will be used for helping user to remember.

Press the Finish button to complete the volume creation.

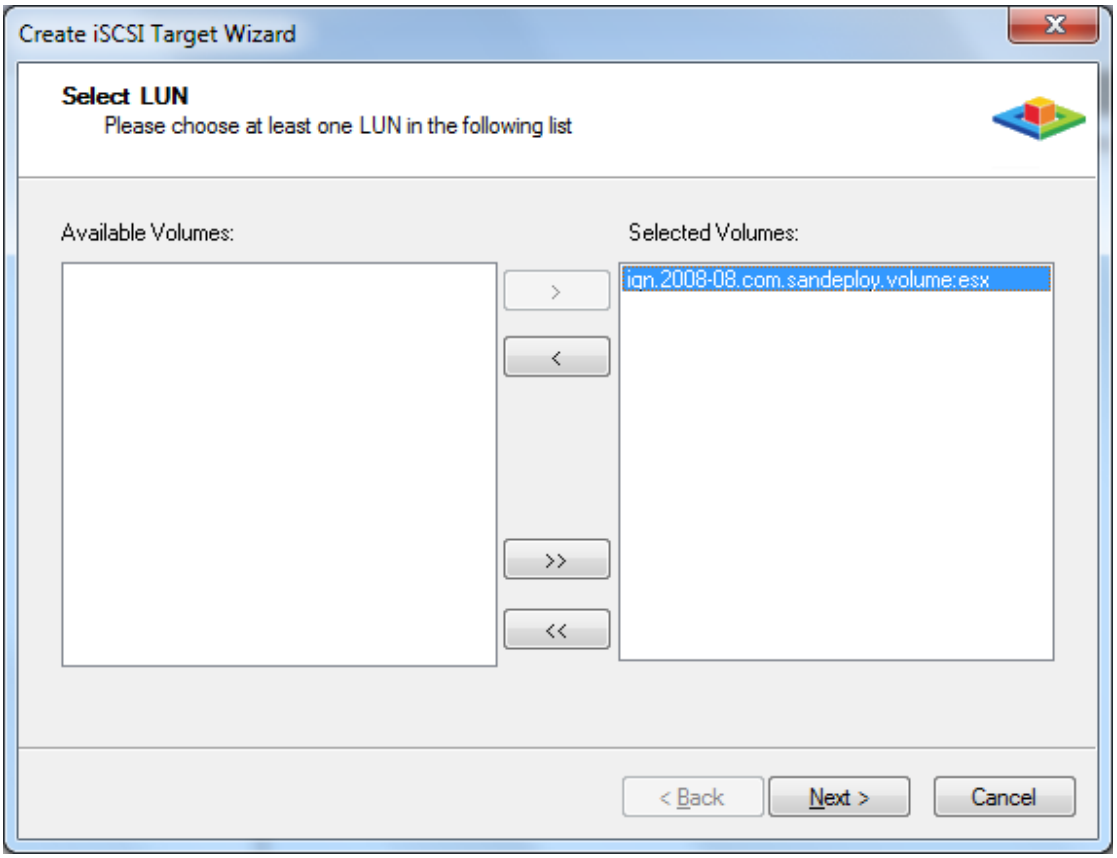
Create iSCSI Target

Right click on the **iSCSI Targets** node on the left tree of the main interface. Select **Create Target...** from the pop-up menu. The Create iSCSI Target Wizard appears.

Select Virtual Volumes.

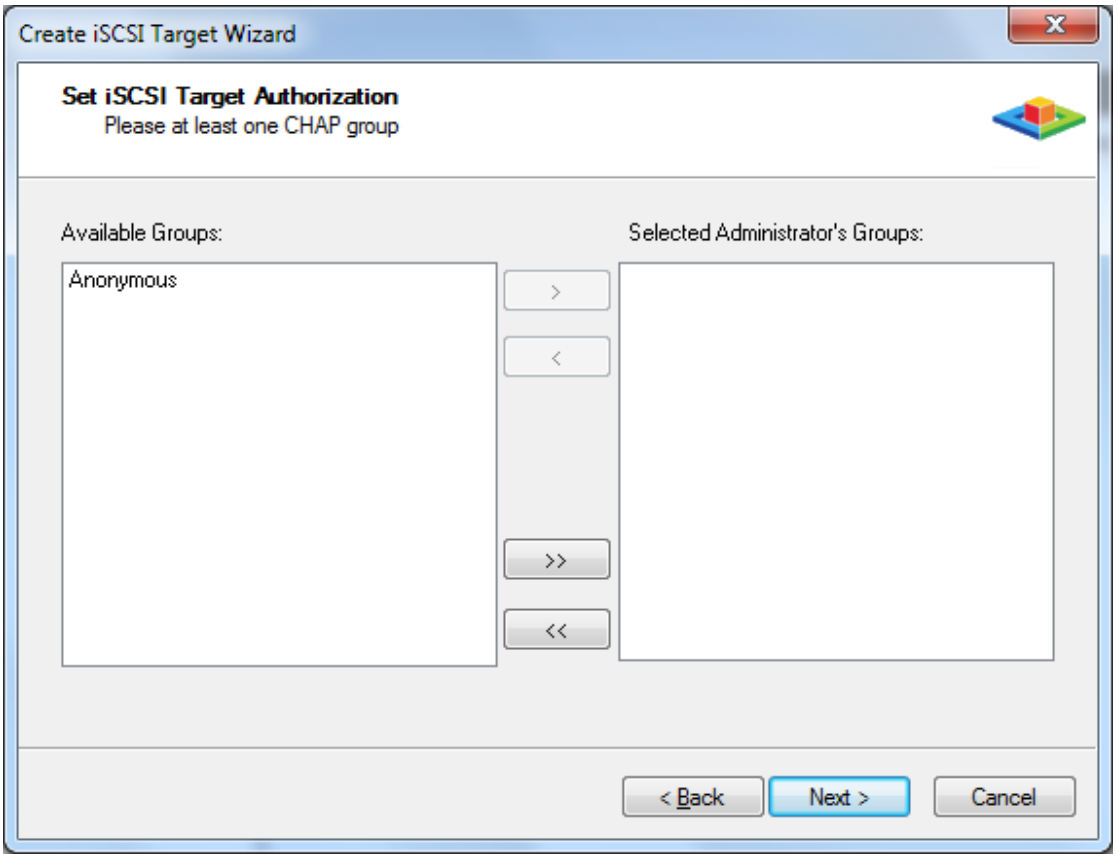


Here user can select one or more volumes by clicking the **>** button to add it to the **Selected Volumes** panel.



Press the **Next** button to continue.

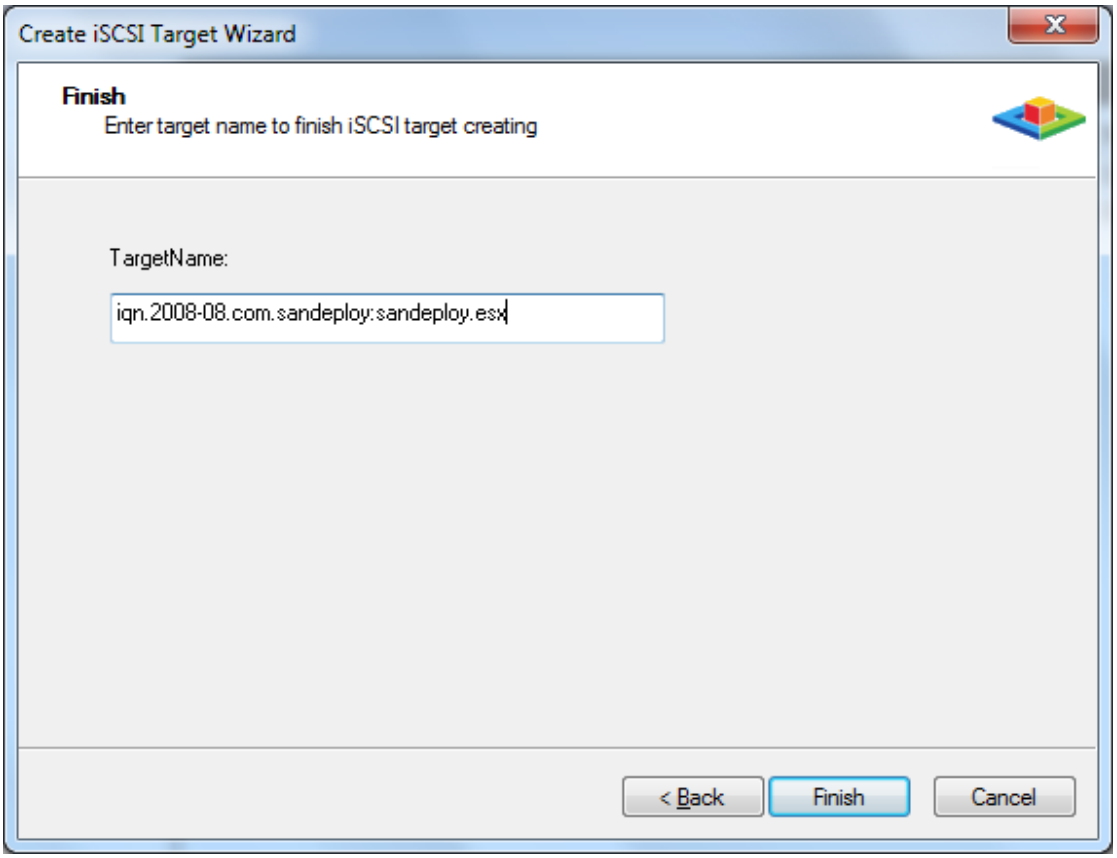
Authorization Settings



User can choose the CHAP group from the Available Groups, Anonymous represent no CHAP authorization needed.

Press the **>** button to add one or more groups to the **Selected Administrator's Groups.**

Press the **Next** button to continue.



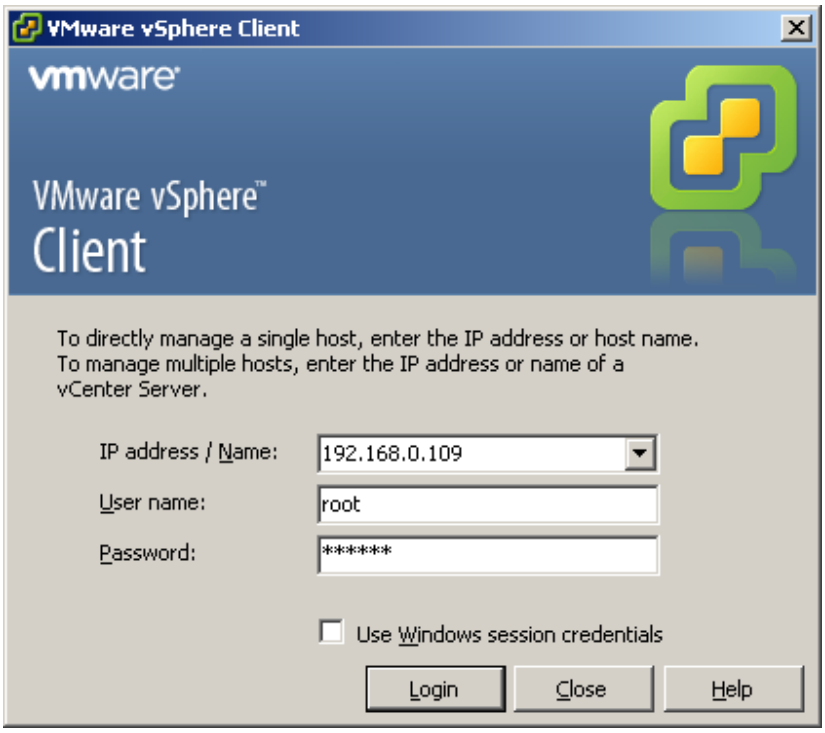
Input the target name or left the default.

Press the **Finish** button to exit.

Preparing VMware ESX / ESXi Server

Logon to ESX Server

Run VMware Infrastructure Client, VMware Infrastructure Client Log on dialog appears.



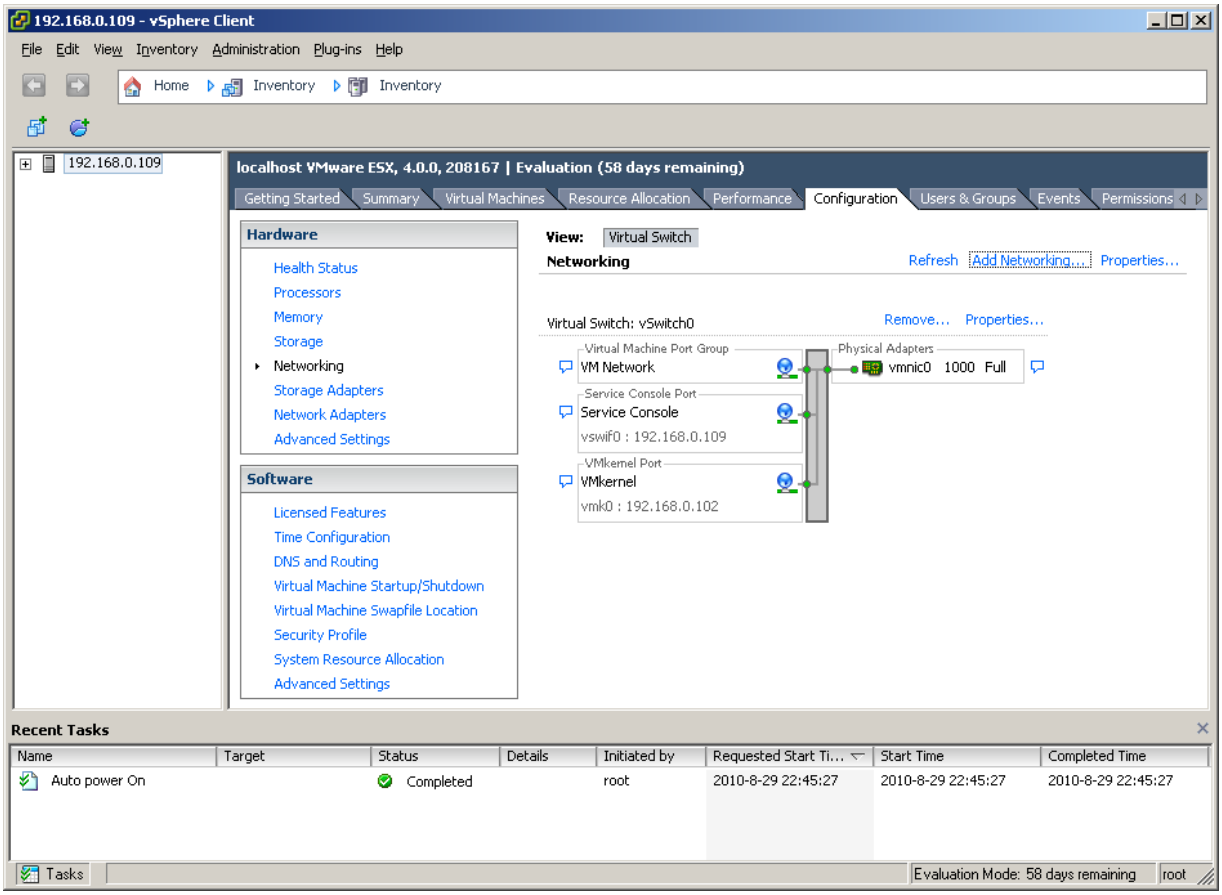
Type IP address / Name with which running ESX Server.

Type user name and password.

Press the **login** button to continue.

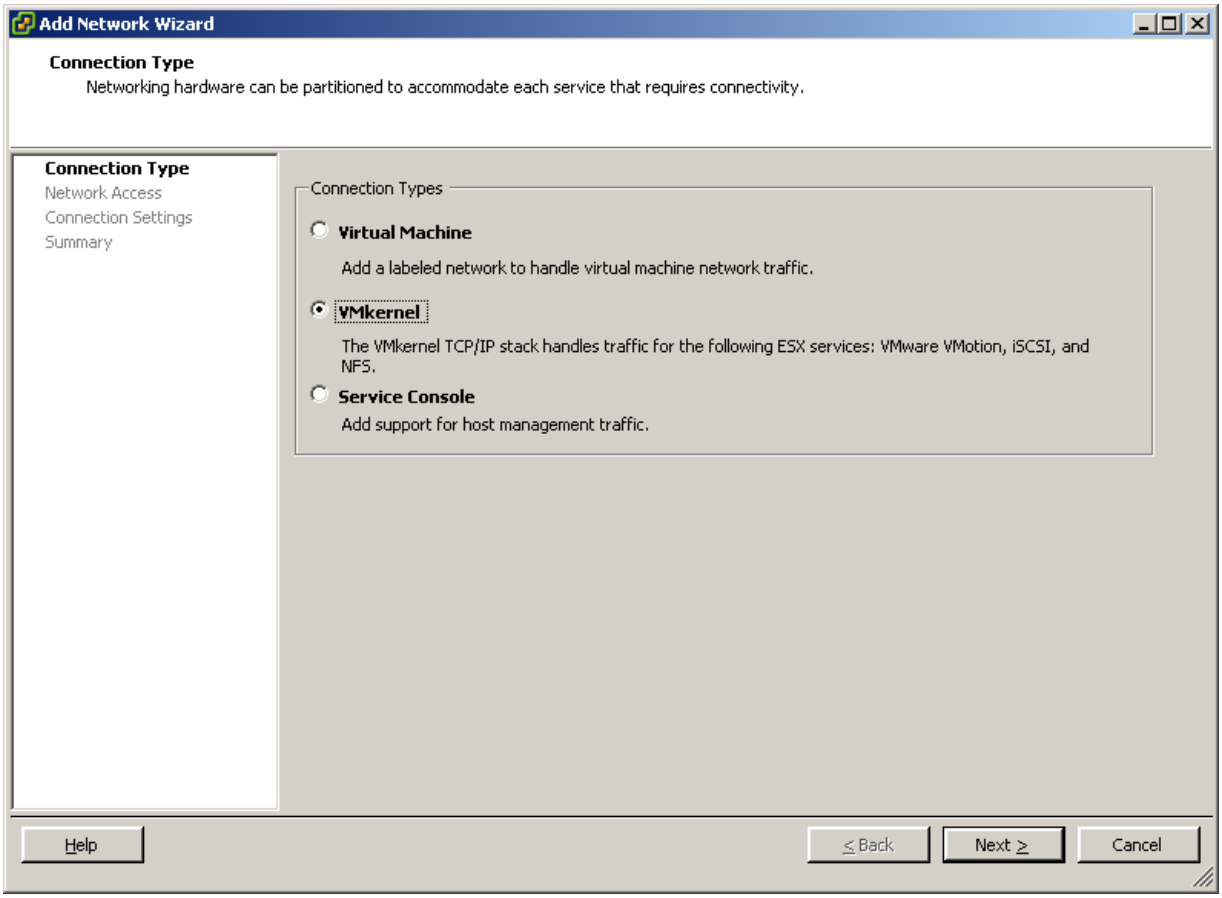
Configure ESX Server Networking Settings

Click **Networking** link in the **Hardware** group, the built-in Virtual Switch appears.



As we need using iSCSI, we need create a new Network, click **Add Networking** link, an **Add Network Wizard** appears.

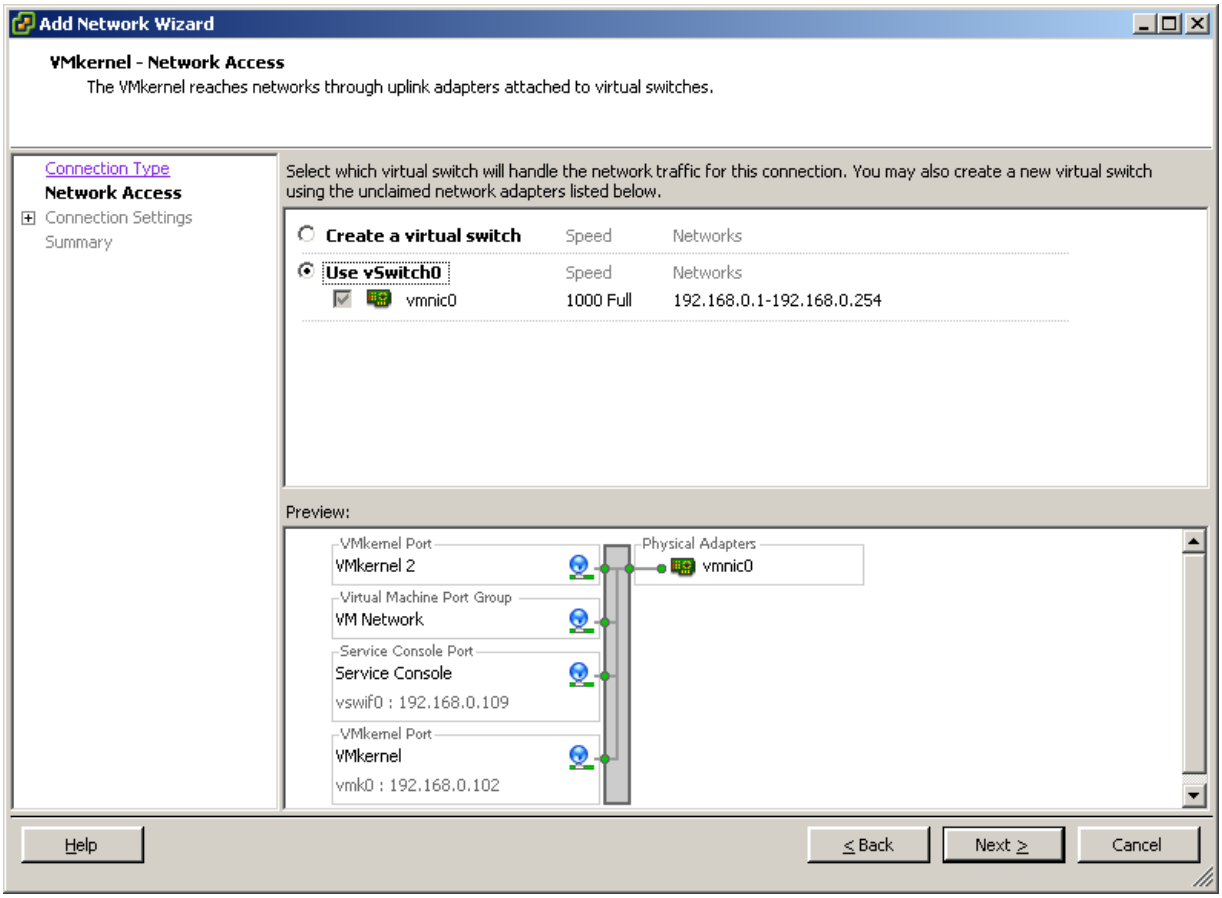
Note: We need not to create a new network if the networking is still exist, but if there is not one, you must add it as follows.



On the first page of this wizard, select **VmKernel** which allows your virtual machines can use the iSCSI.

Press the **Next** button to continue.

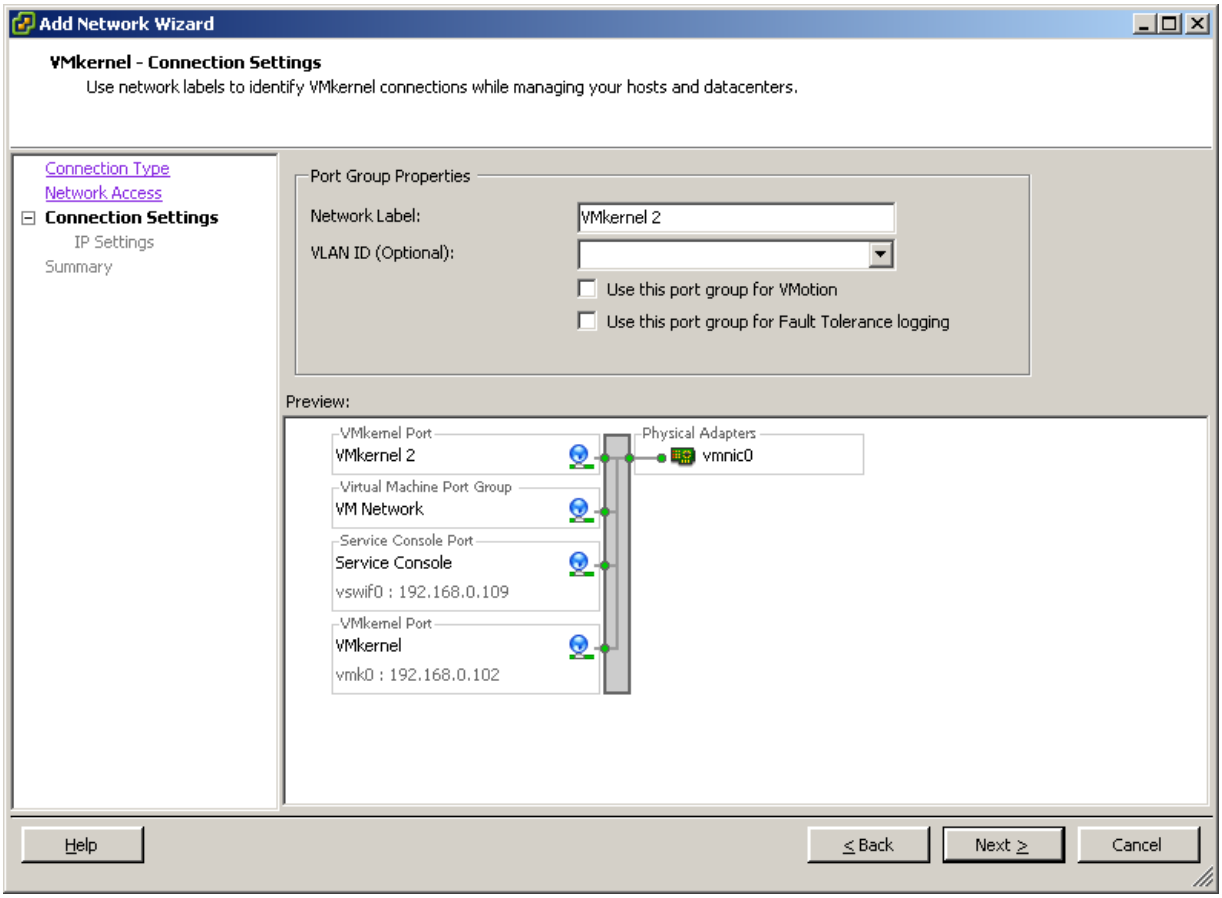
Select which virtual switch will handle the network traffic.



Select **User vSwitch0** option.

Press the **Next** button to continue.

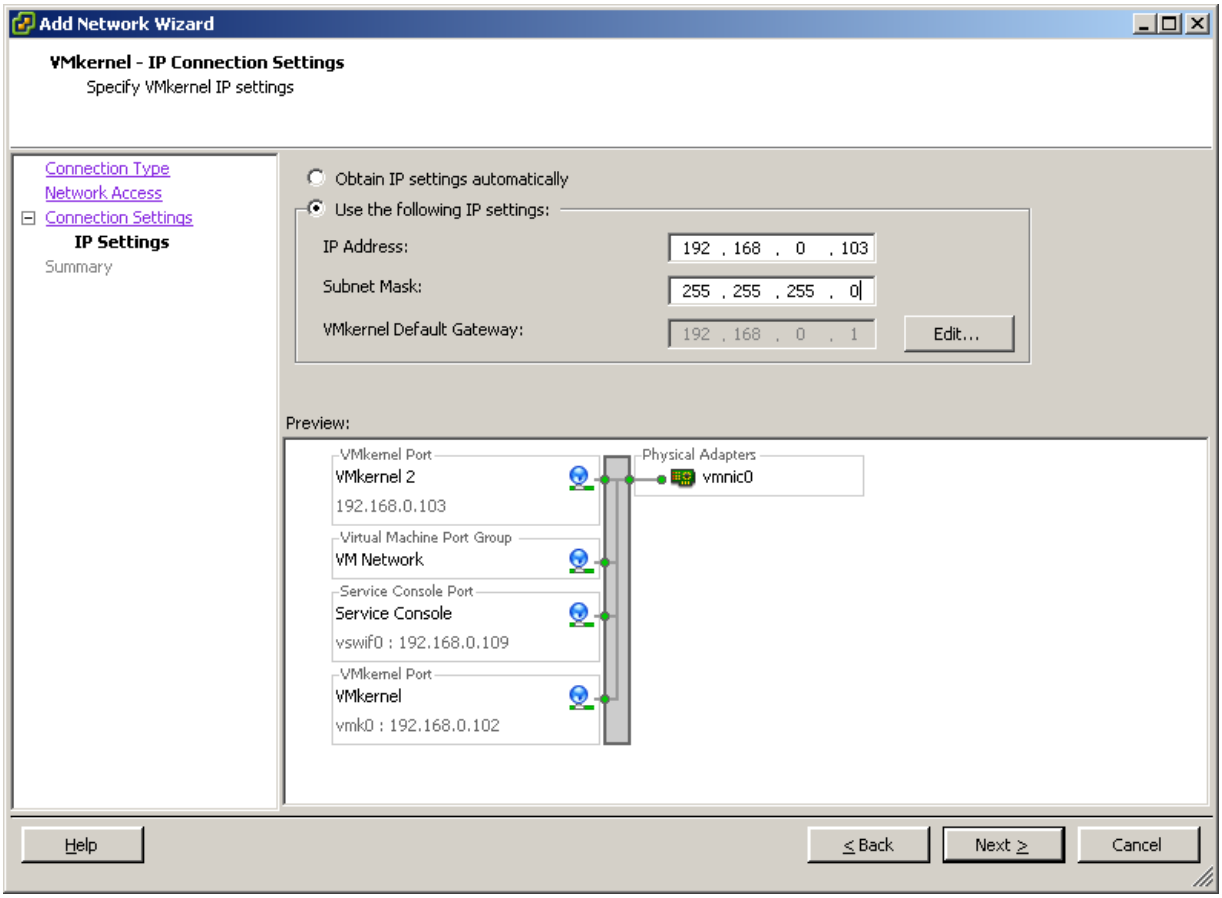
Type the identification of the network adapters.



Give the name of the new network.

Press the **Next** button to continue.

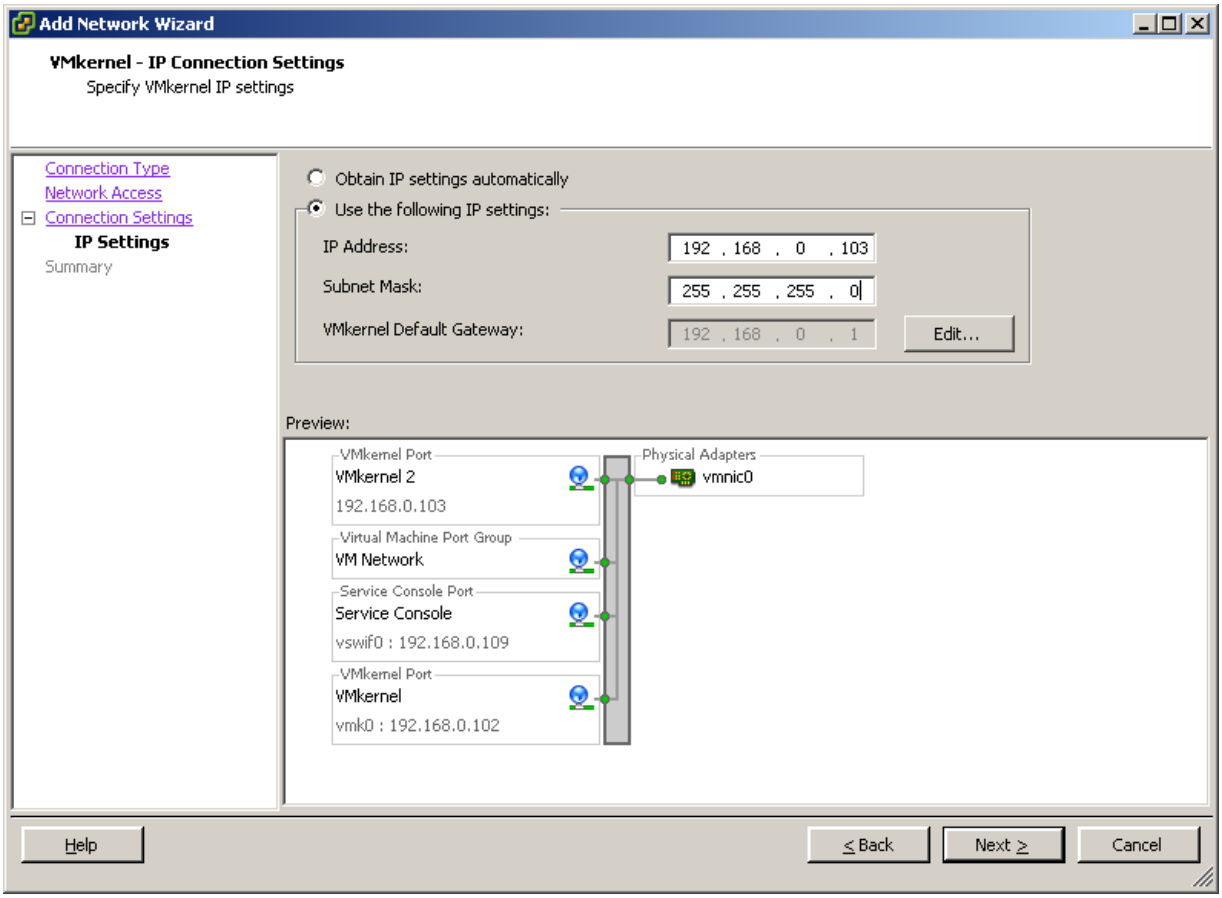
IP Settings



Input IP Address and Subnet mask, we take 192.168.0.103 and 255.255.255.0 as an example.

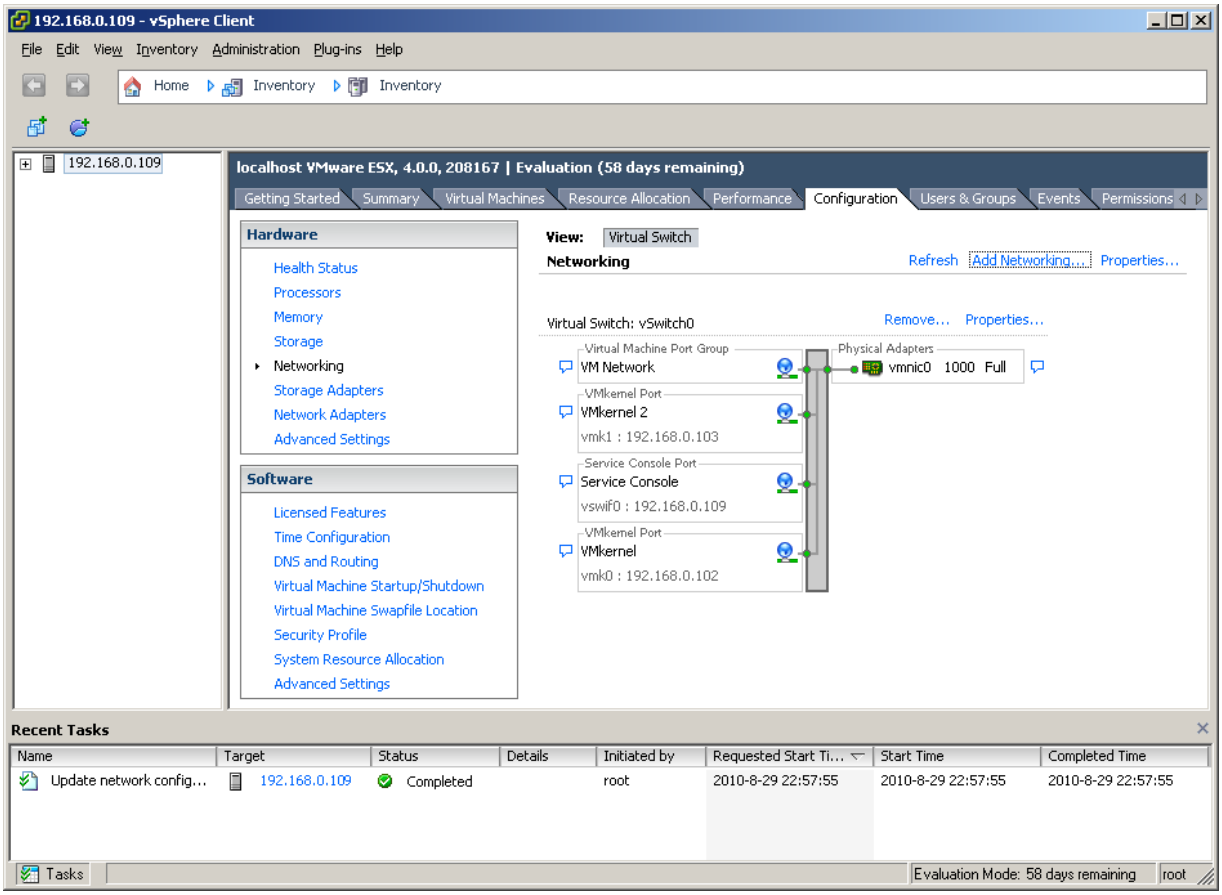
Press the **Next** button to continue.

Complete add networking



Check the parameters are correct and press the **Back** button if any changes are required.

Press the **Finish** button to complete creating adds networking.

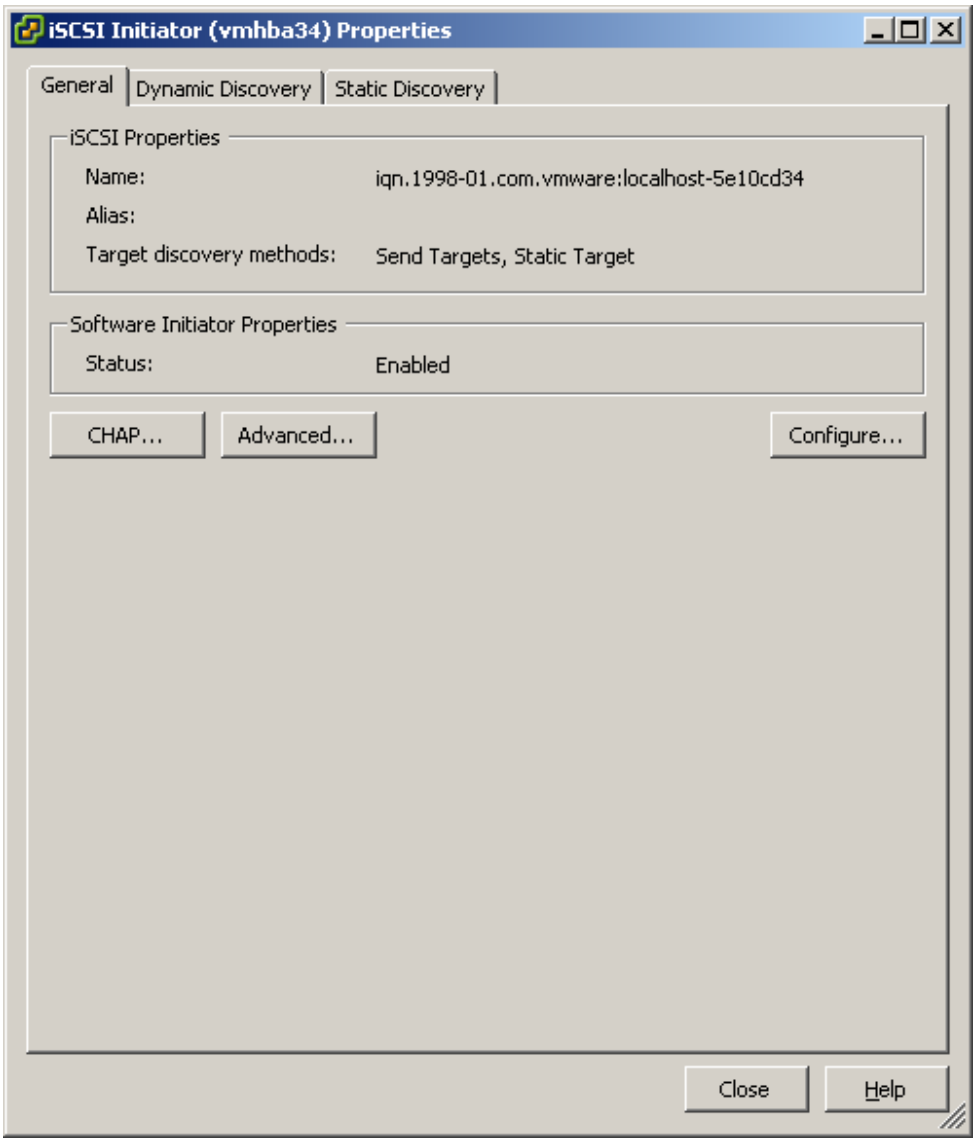


Configure iSCSI Storage

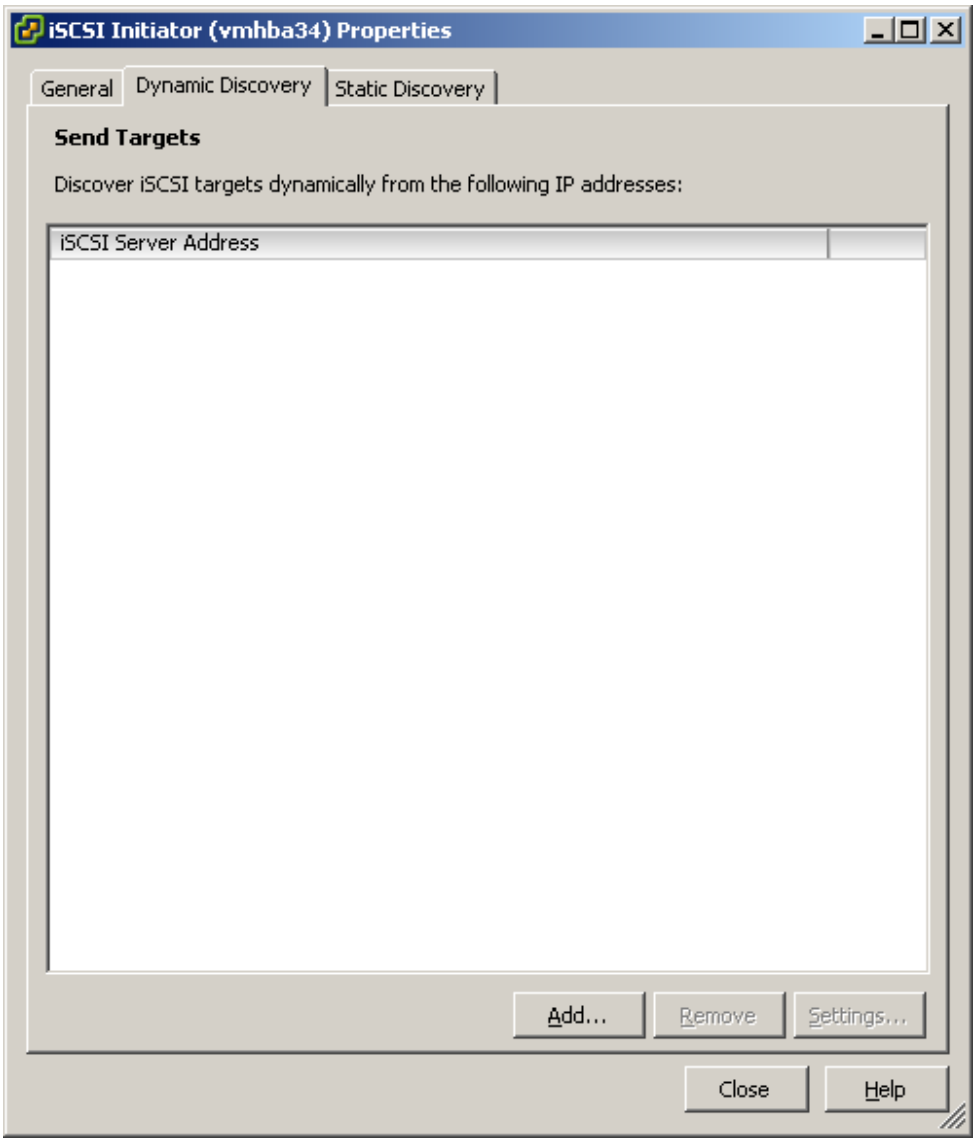
Click **Storage Adapters** link in the **Hardware** group.

Click **Properties** link.

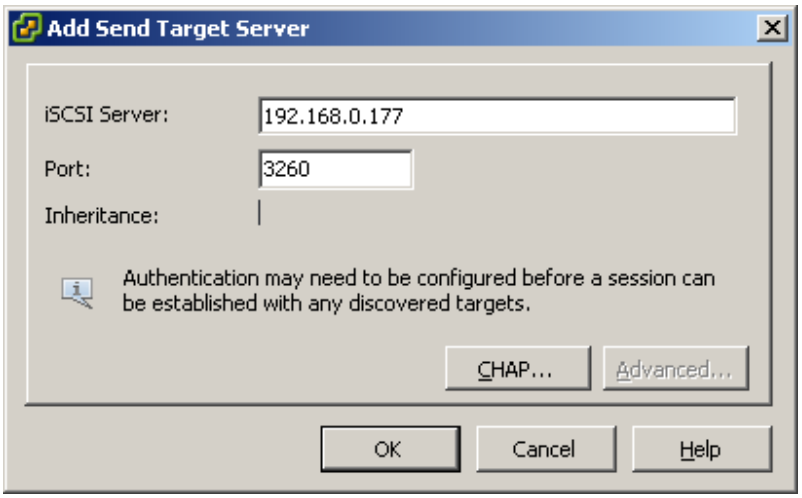
The **iSCSI Initiator (vmmhba34) Properties** Dialog appears.



Change to **Dynamic Discovery** page to add target


iSCSI Initiator (vmhba34) Properties
General
Dynamic Discovery
Static Discovery
Send Targets
Discover iSCSI targets dynamically from the following IP addresses:
iSCSI Server Address
Add...
Remove
Settings...
Close
Help

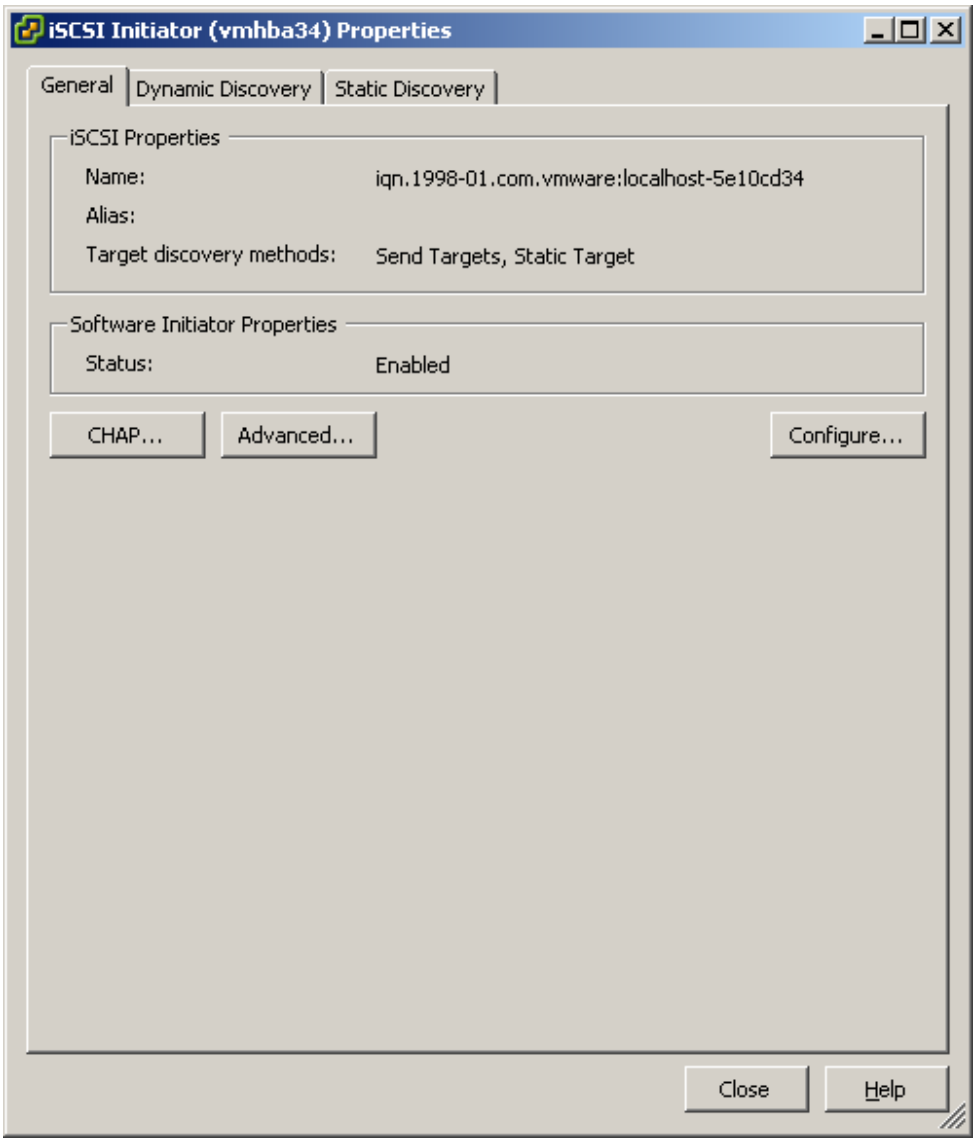
Press the **Add** button, the **Add Send Targets Server** dialog appears



Input iSCSI Server address and port with which is running the SANDeploy Server.

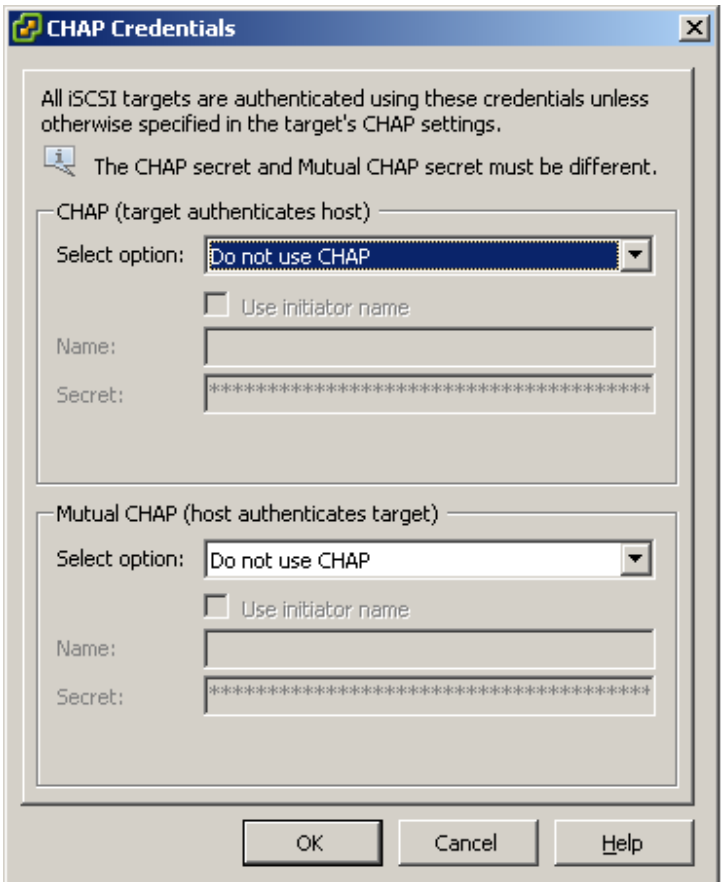
Press the **OK** button to proceed.

Specify CHAP authentication information.



If you choose CHAP user authorization mode in target of SANDeploy Server, this step cannot be by past.

Press the **CHAP** button, the **CHAP Credentials** dialog appears.



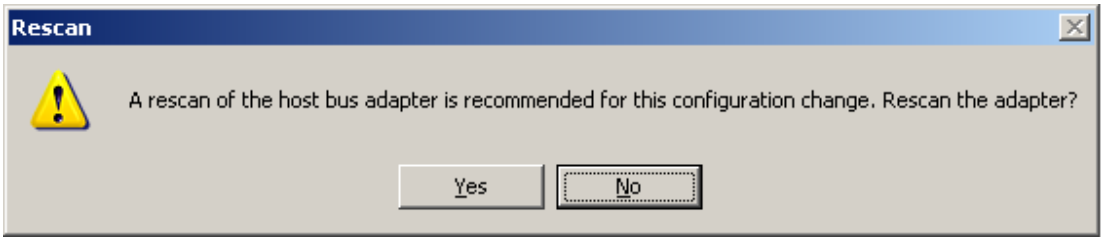
Type CHAP user name and secret in the CHAP (target authenticates host) group.

If you do not choose CHAP authentication, you should select **Do not Use CHAP**.

Press the **OK** button in this dialog.

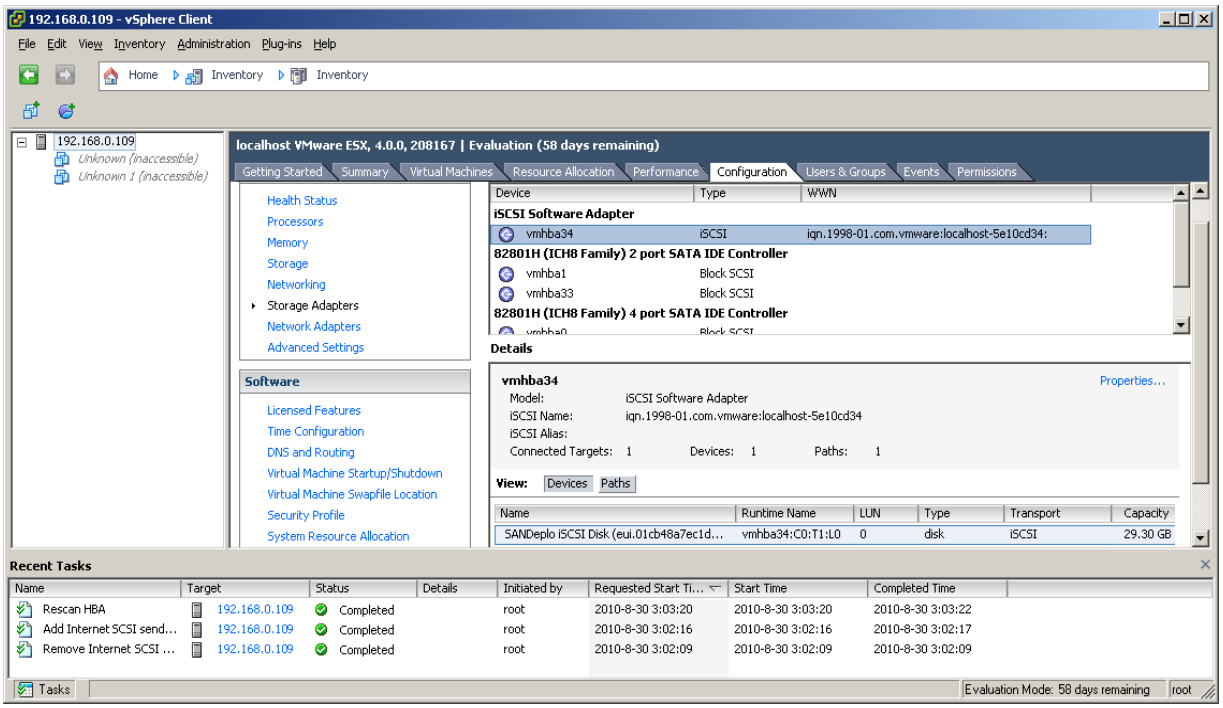
Press the **Close** button in the iSCSI Initiator (vmmhba34) Properties dialog to finish iSCSI Target configuration.

A prompt dialog is shown.



Press the **Yes** button to continue.

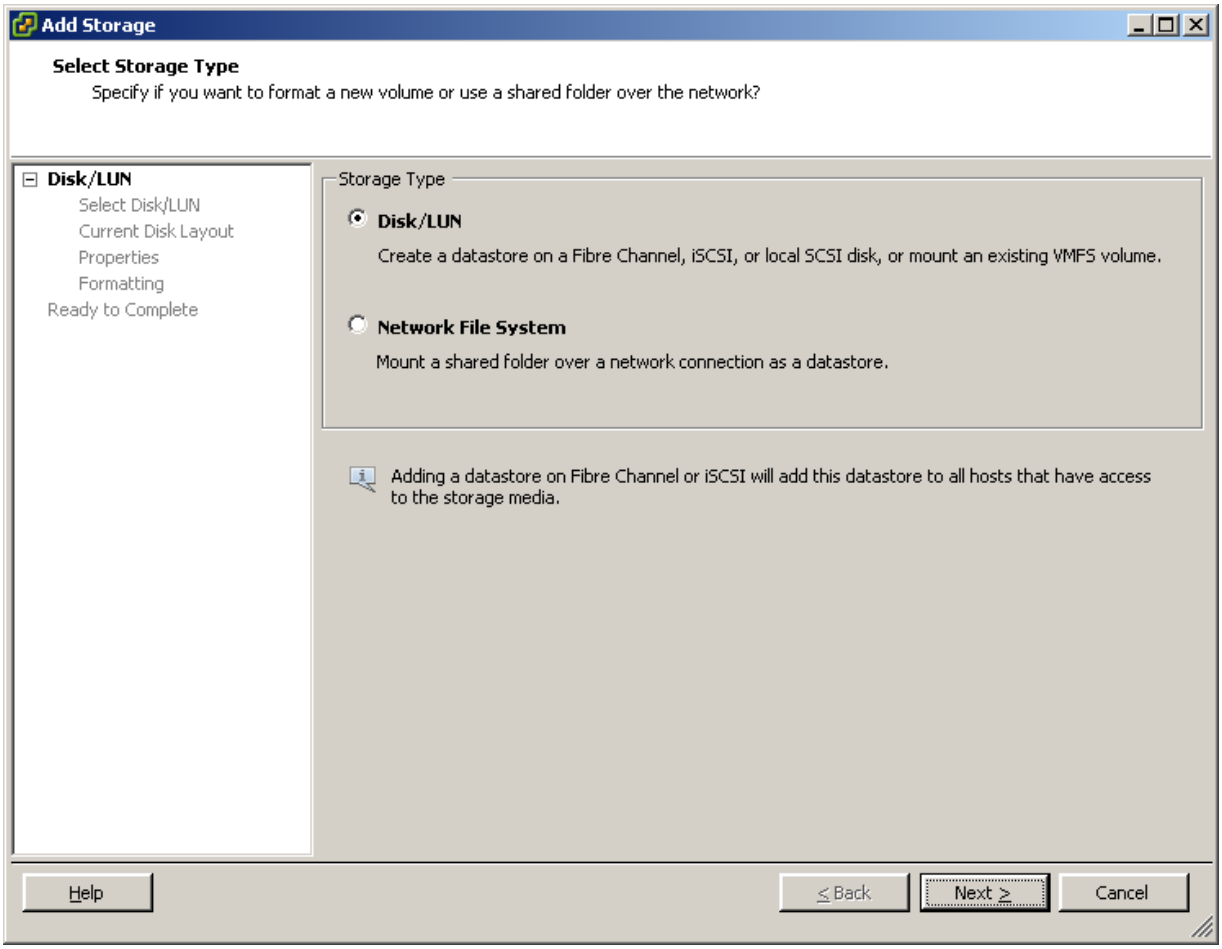
Please wait for a while, you will found an iSCSI device appears in the following interface.



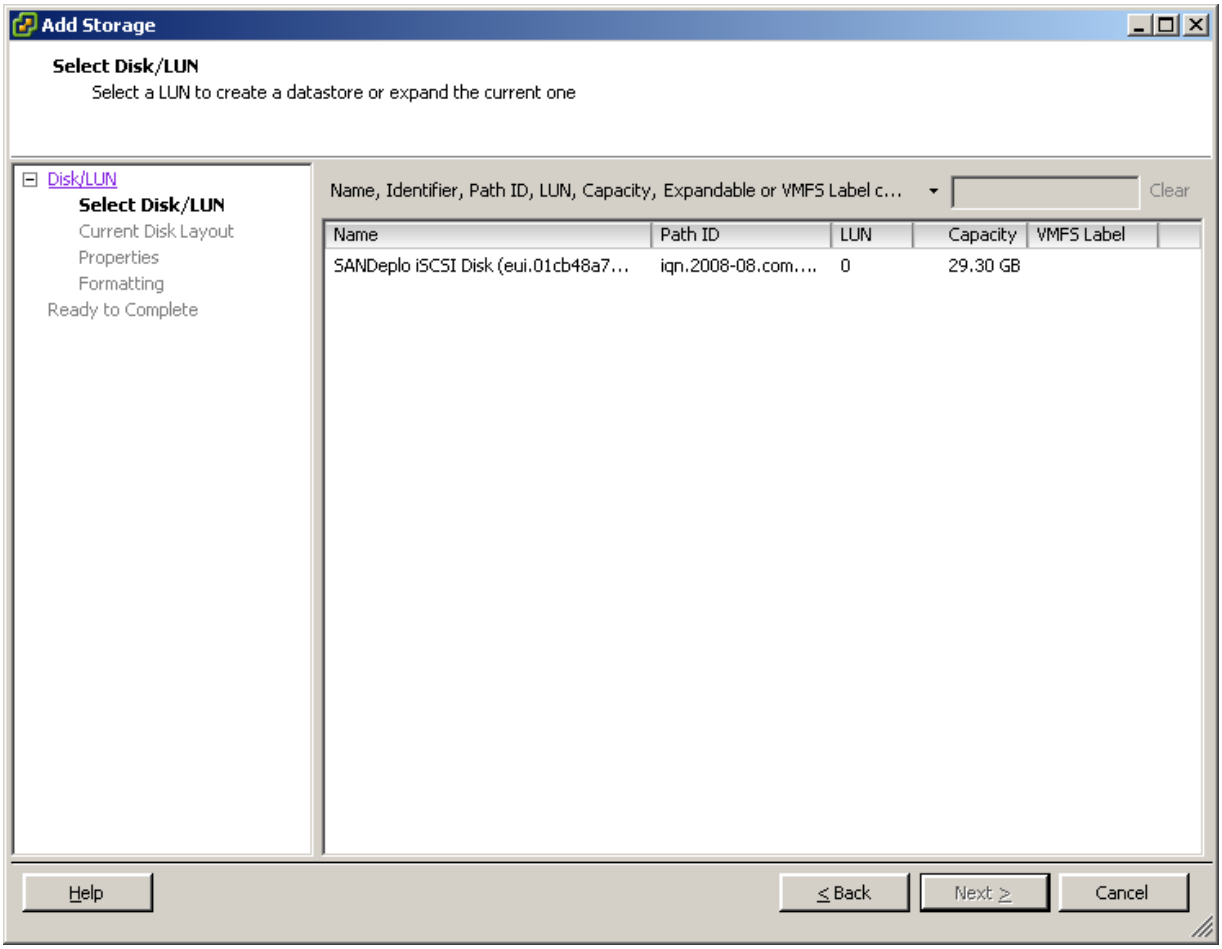
Now, the iSCSI configuration is completed.

Configure Storage Device

Click **Storage** link in the **Hardware** group. Click **Add Storage** link, the **Add Storage Wizard** appears.



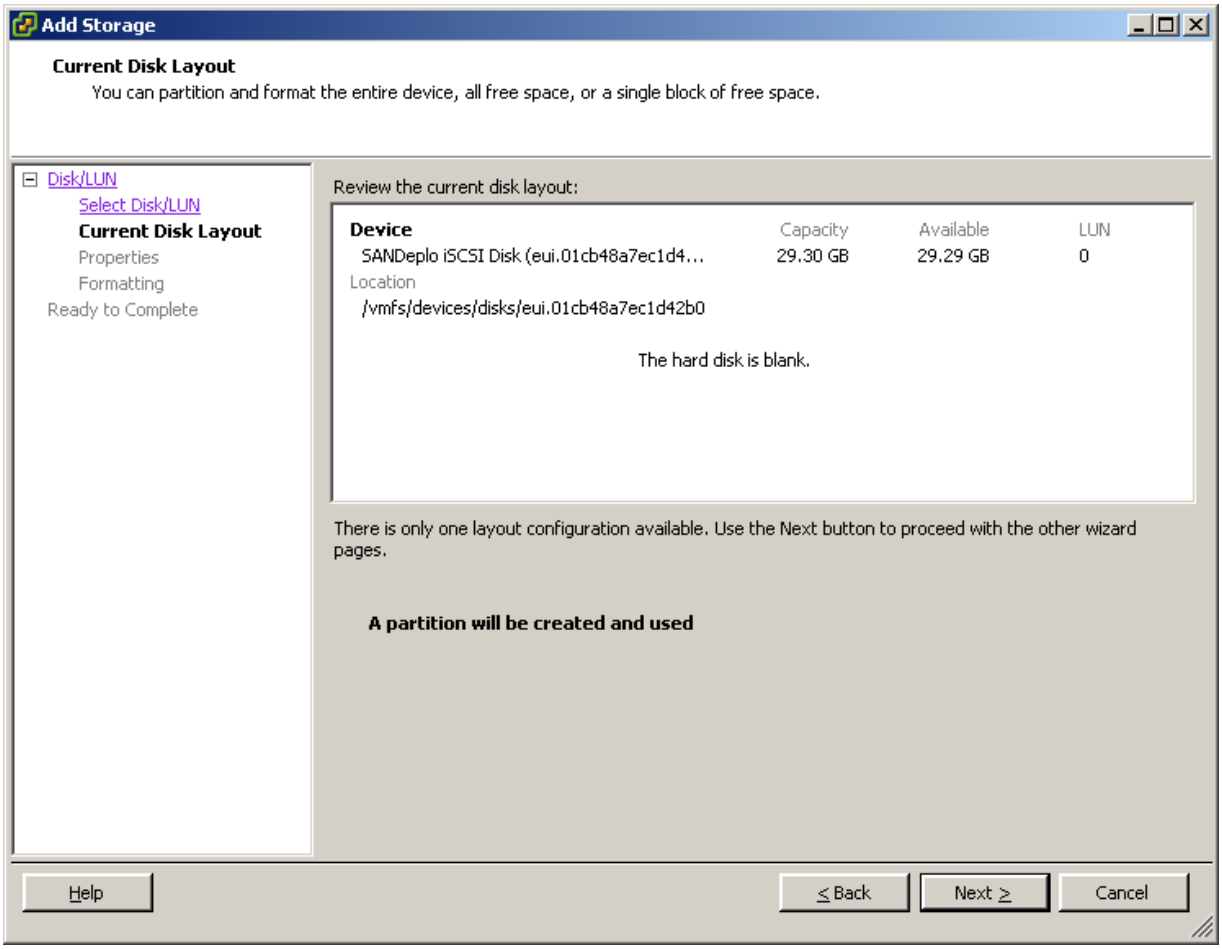
Select **Disk/LUN.**



Select SANDeplo iSCSI Disk device with the Identifier of **iqn.2008-08.com.....**

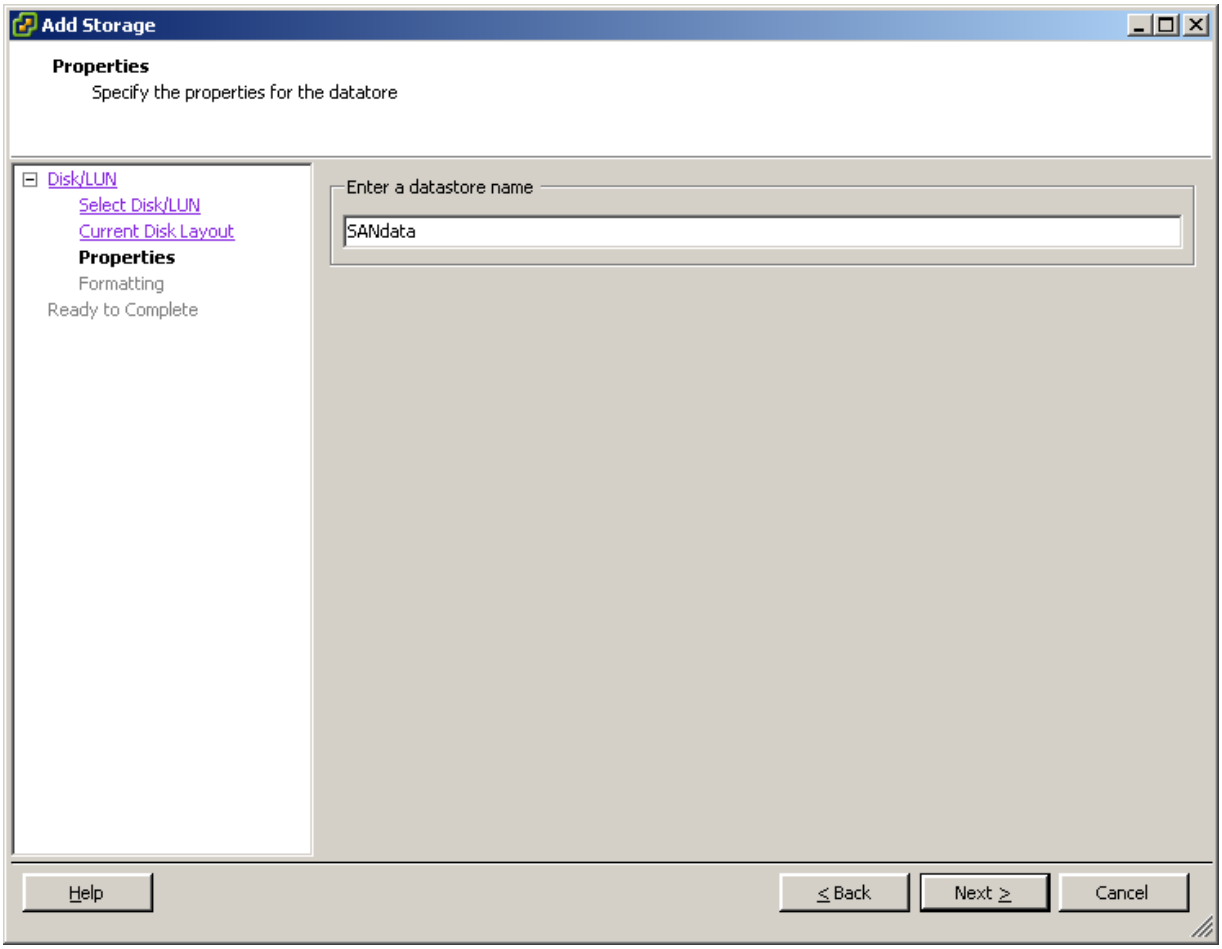
Press the **Next** button to continue.

Partition and format the entire device.



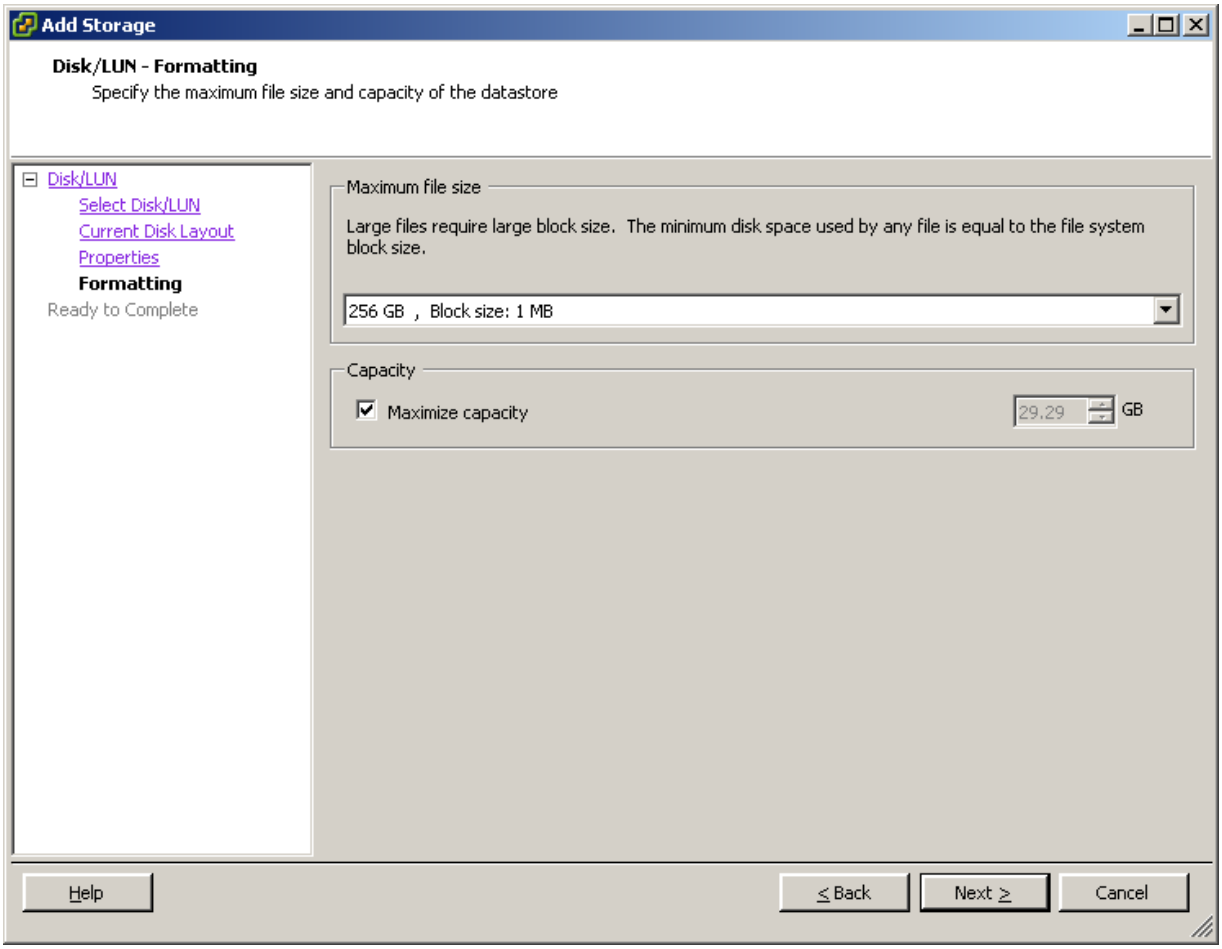
Just use the default.

Press the **Next** button to continue.



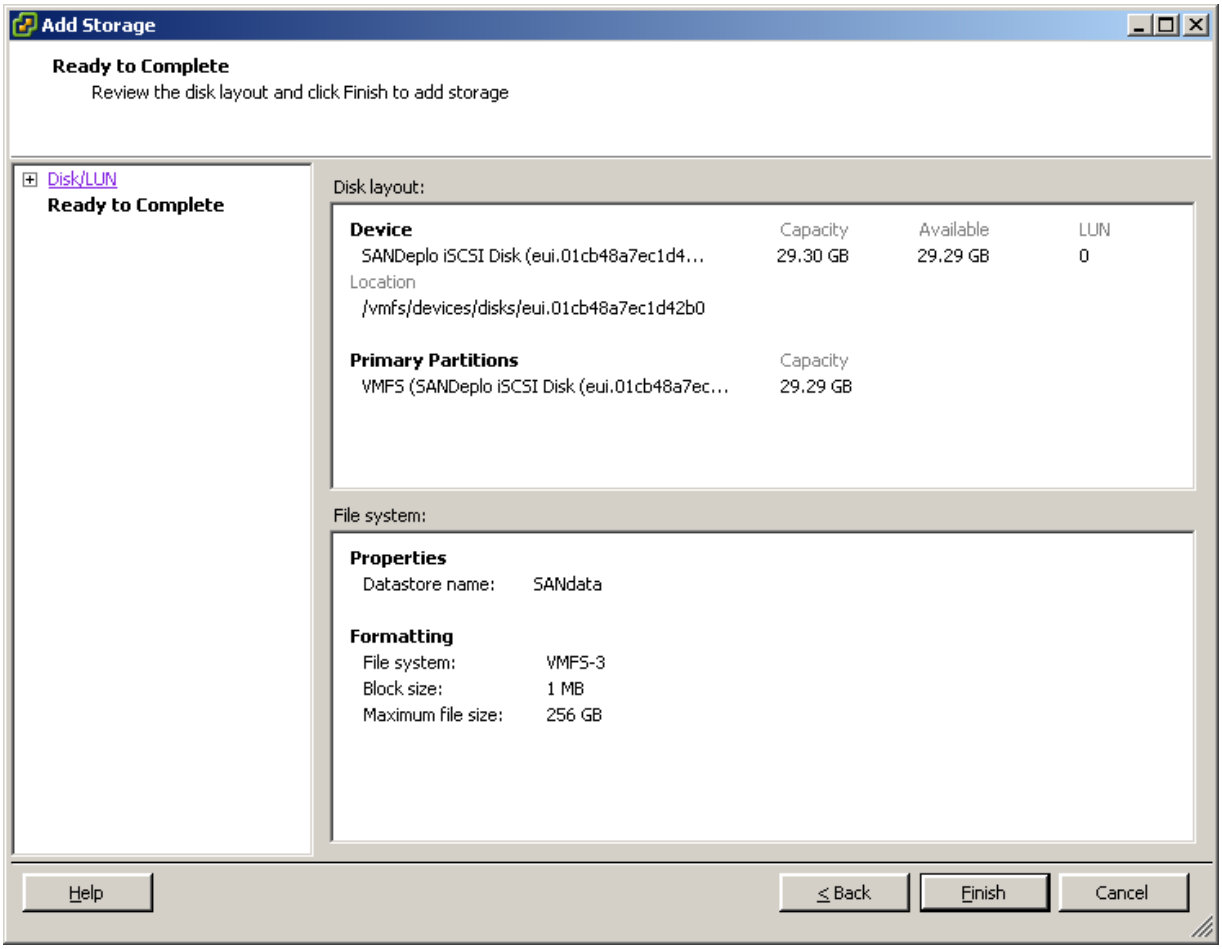
Type the data store name.

Press the **Next** button to continue.



Leave the default recommend settings.

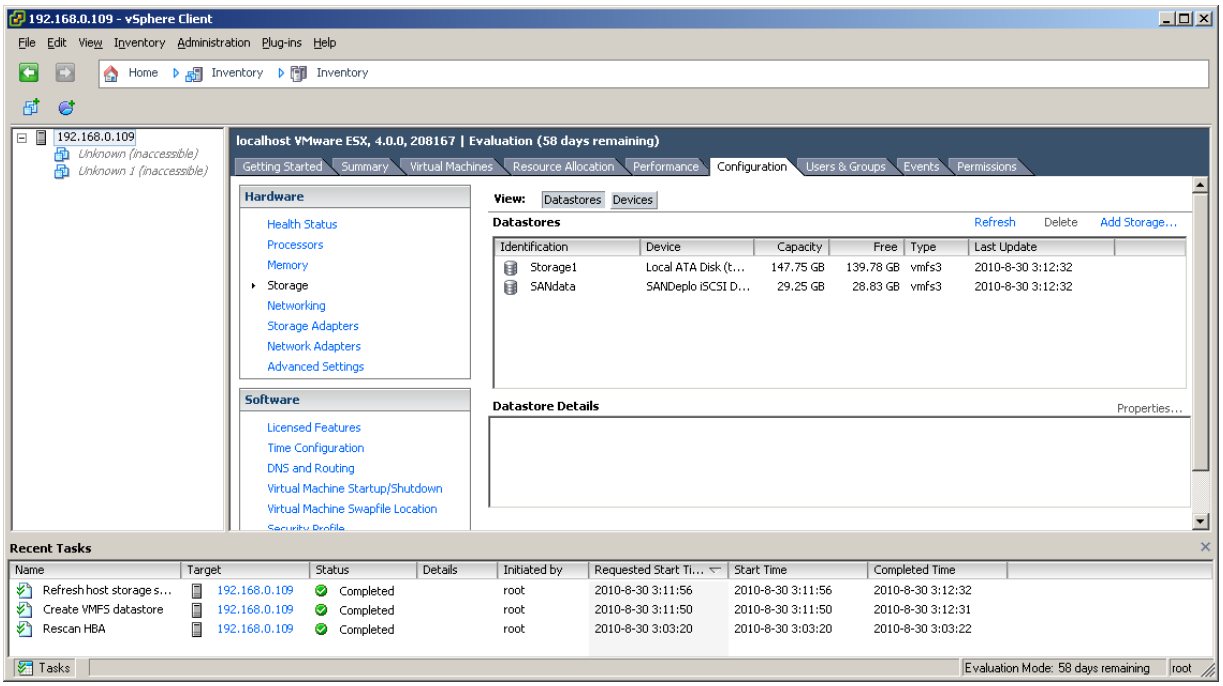
Press the **Next** button to continue.



Now, the storage is going to be created, press the **Finish** button to finish the wizard.

Press the **Yes** button in the following prompt dialog, so that the ESX Server can format the storage.

After this, you can see the storage device in the following interface.

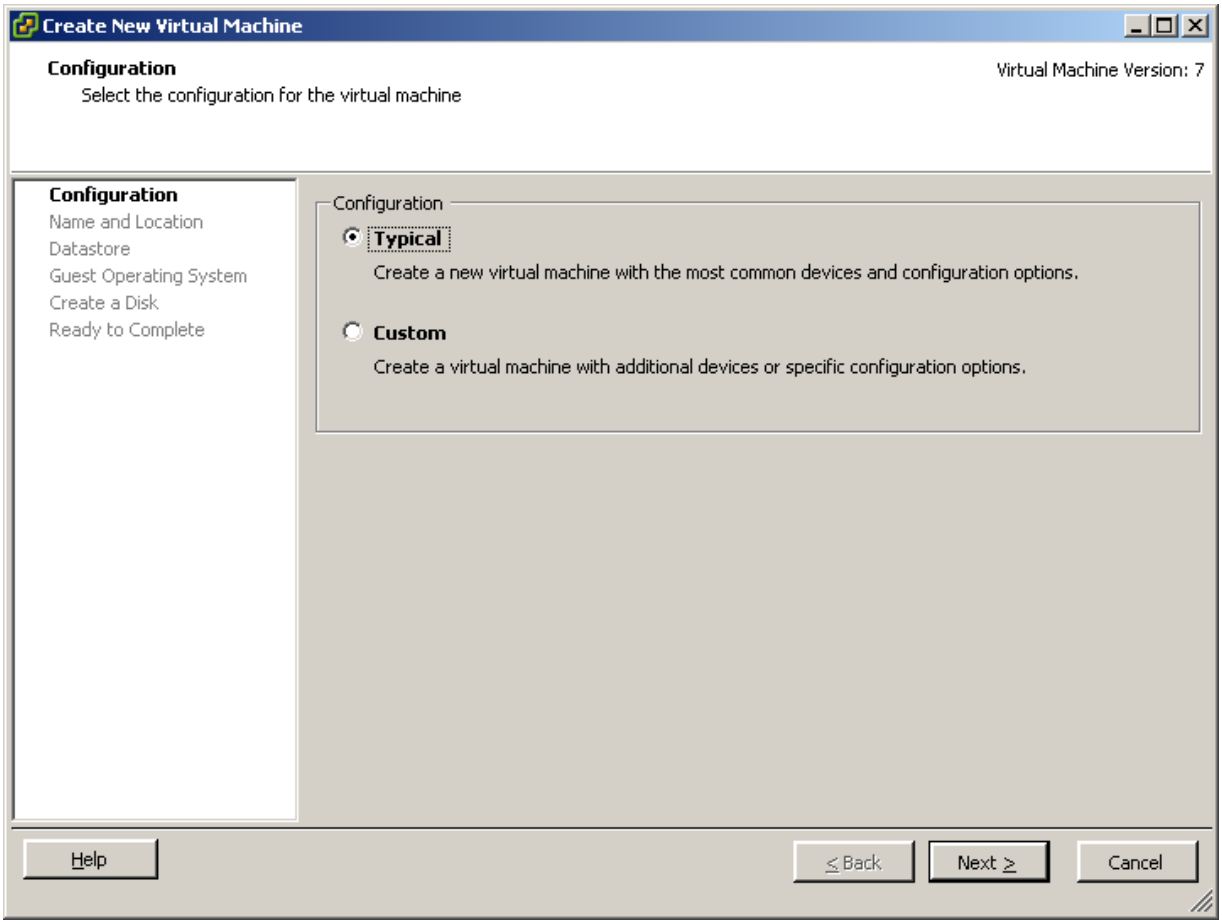


Now, we have the storage to store virtual machines.

Create Virtual Machine

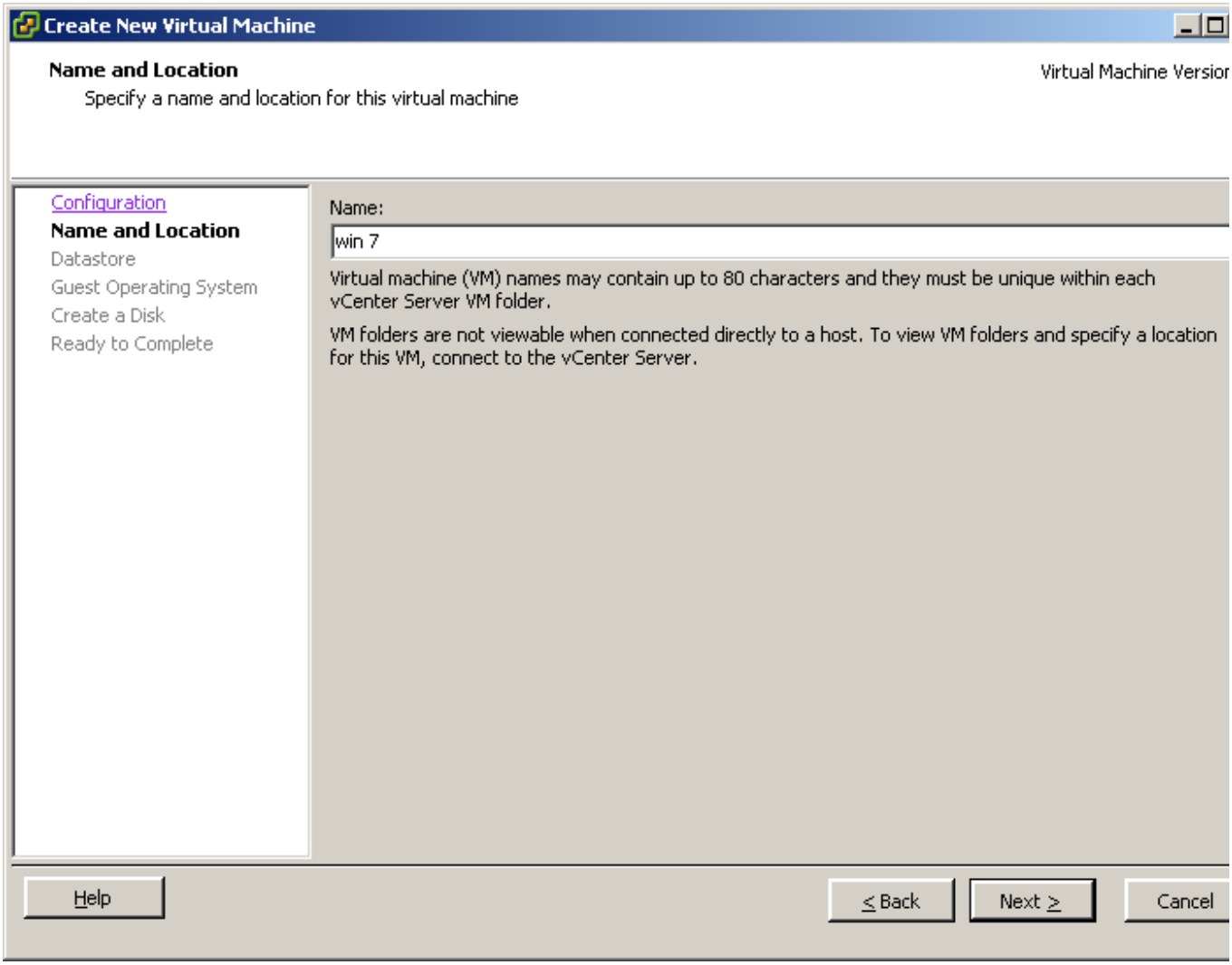
In the **Virtual Machine** tab page of VMware Infrastructure Client, right click on the black page, and then select **New Virtual Machine…**, the **New Virtual Machine Wizard** appears.

Select the appropriate configuration.



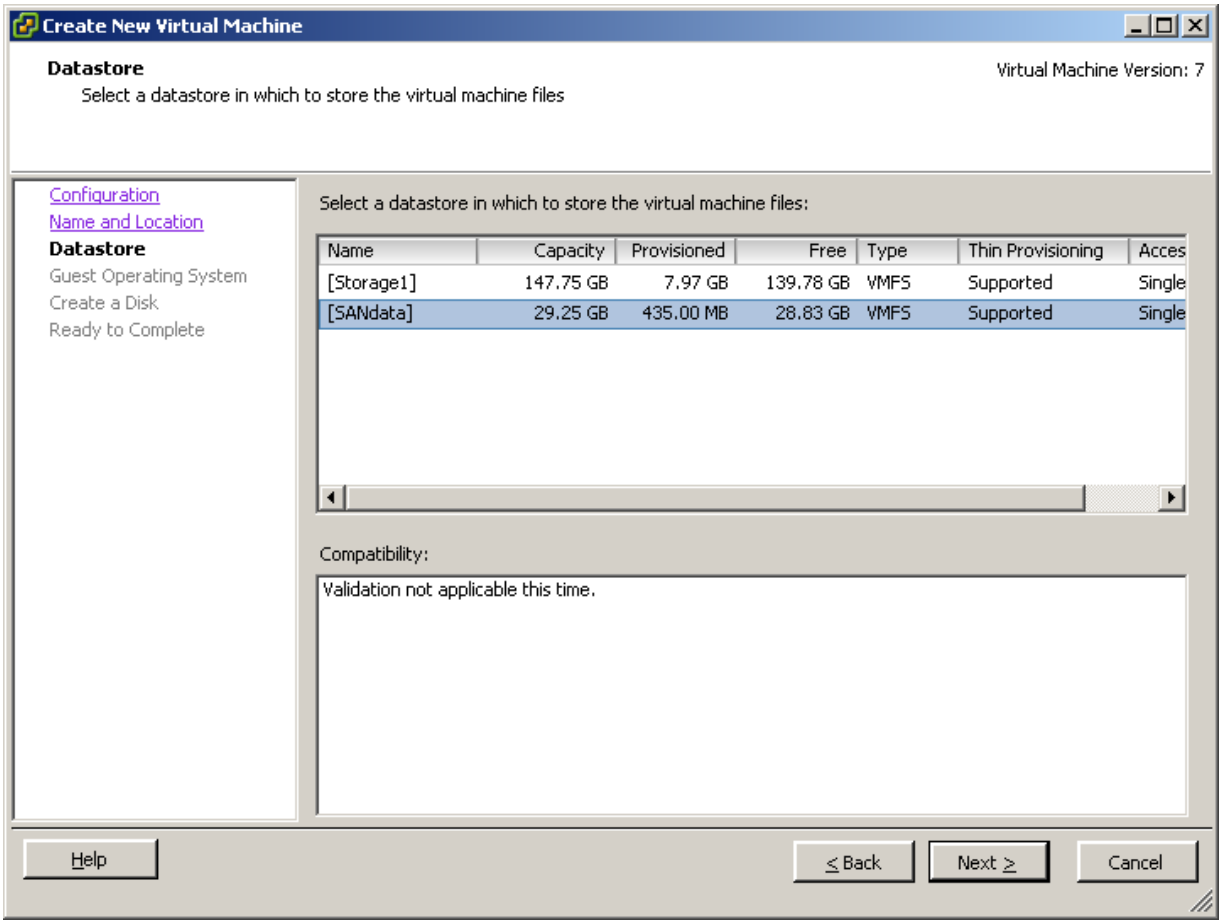
Select the **Typical option.**

Press the **Next** button to continue.



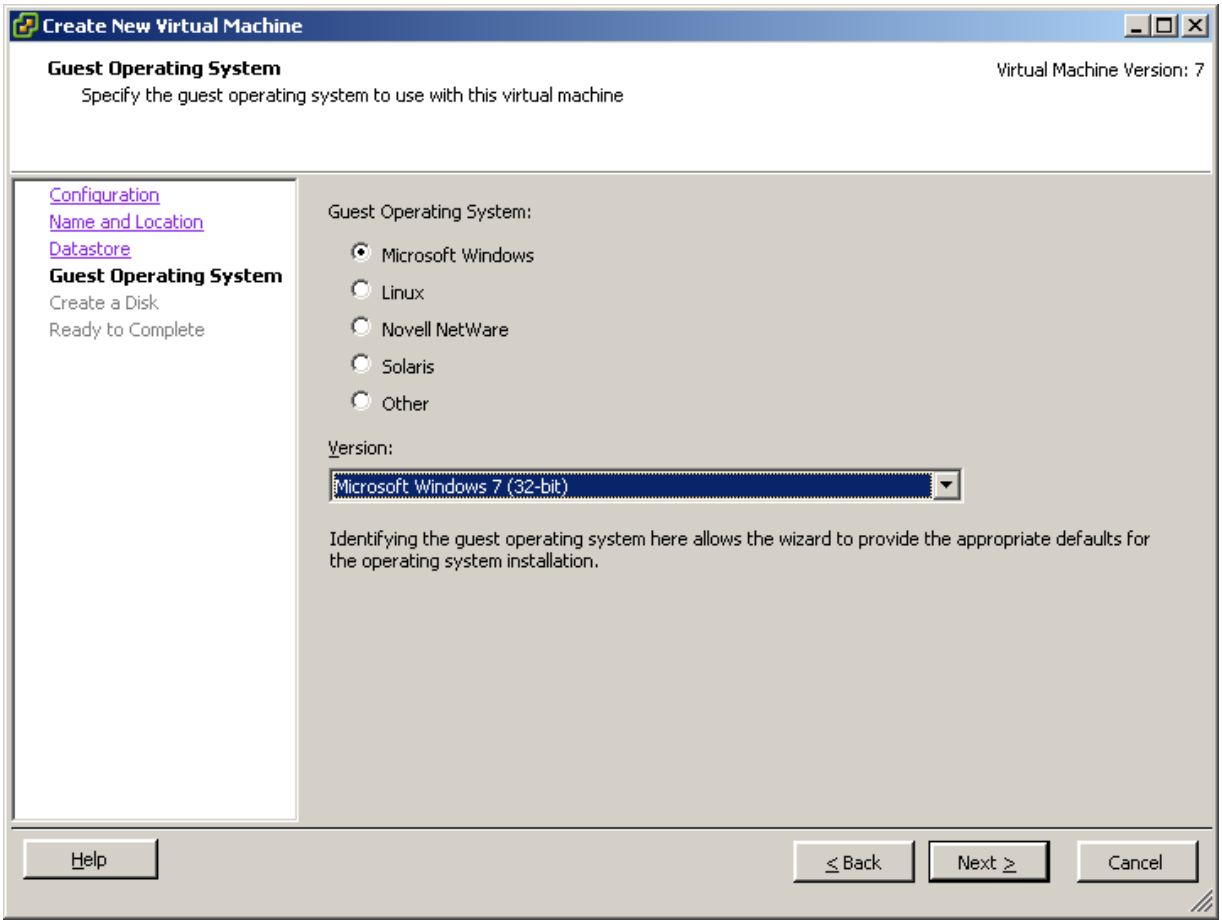
Type in the virtual machine name, we take the default.

Press the **Next** button to continue.



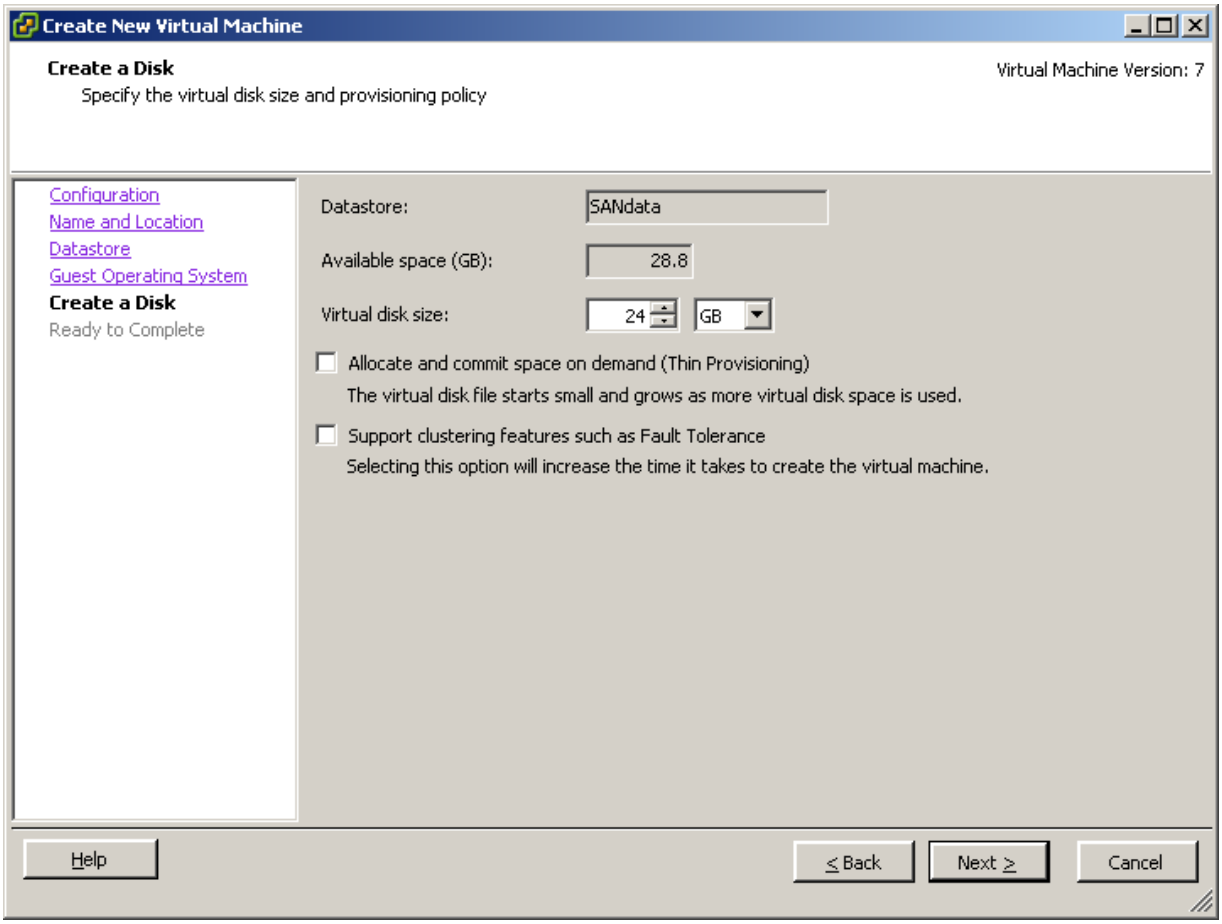
Choose a data store for storing files of the virtual machine.

Press the **Next** button to continue.



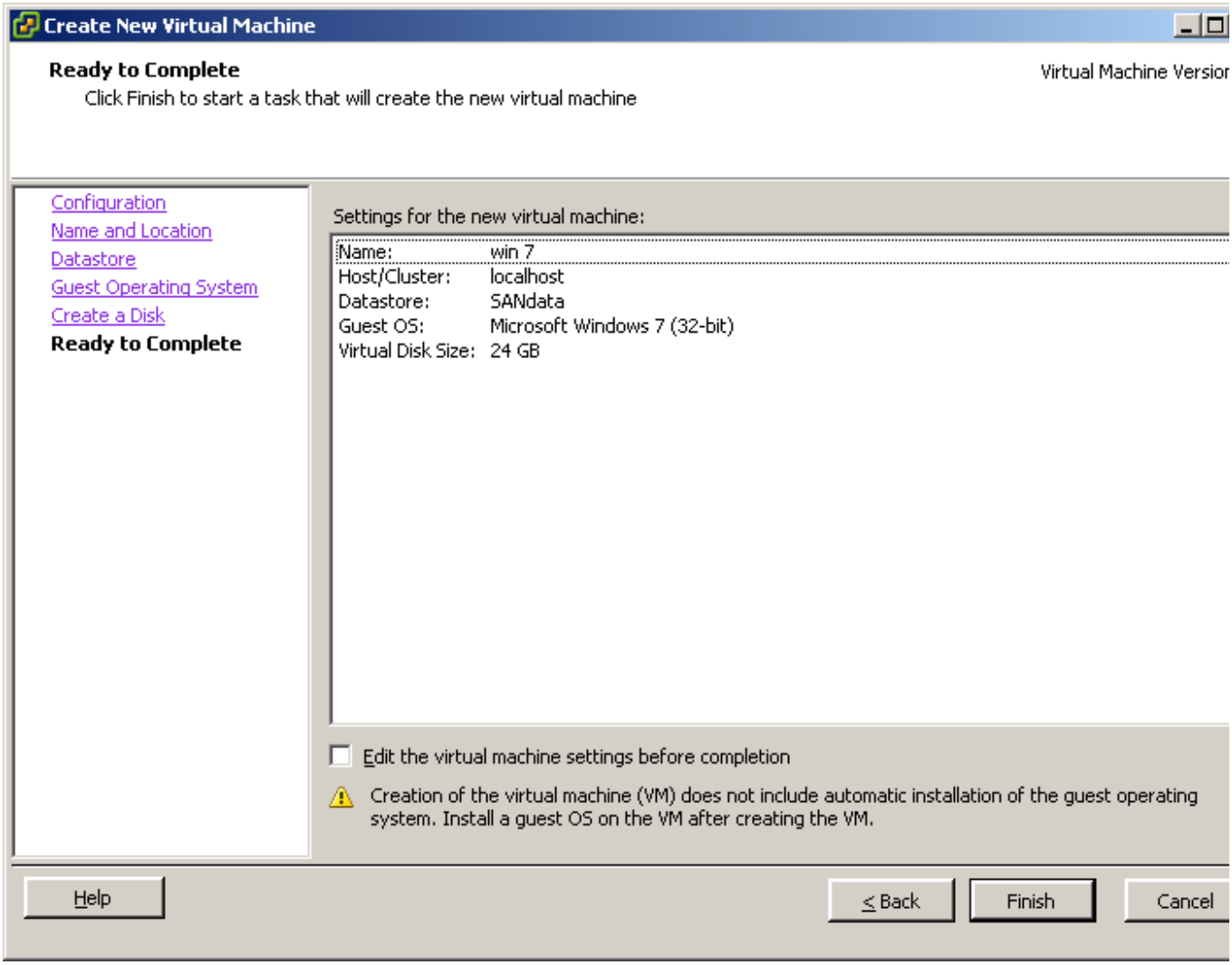
Select operation system, we select **Microsoft Windows 7(32-bit)** as an example.

Press the **Next** button to continue.



Specify the size of virtual disk that will be used by the guest machine.

Press the **Next** button to continue.

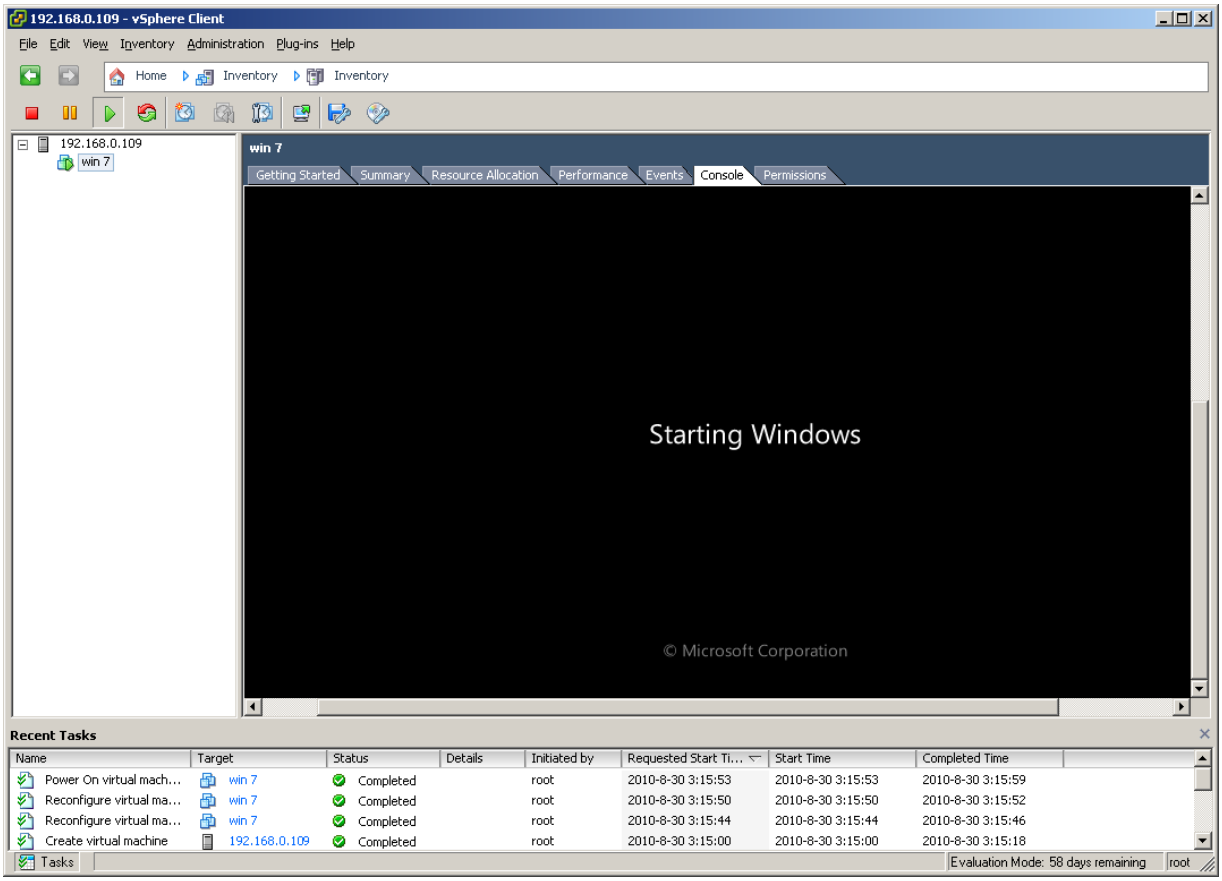


Check the parameters are correct and press the **Back** button if any changes are required.

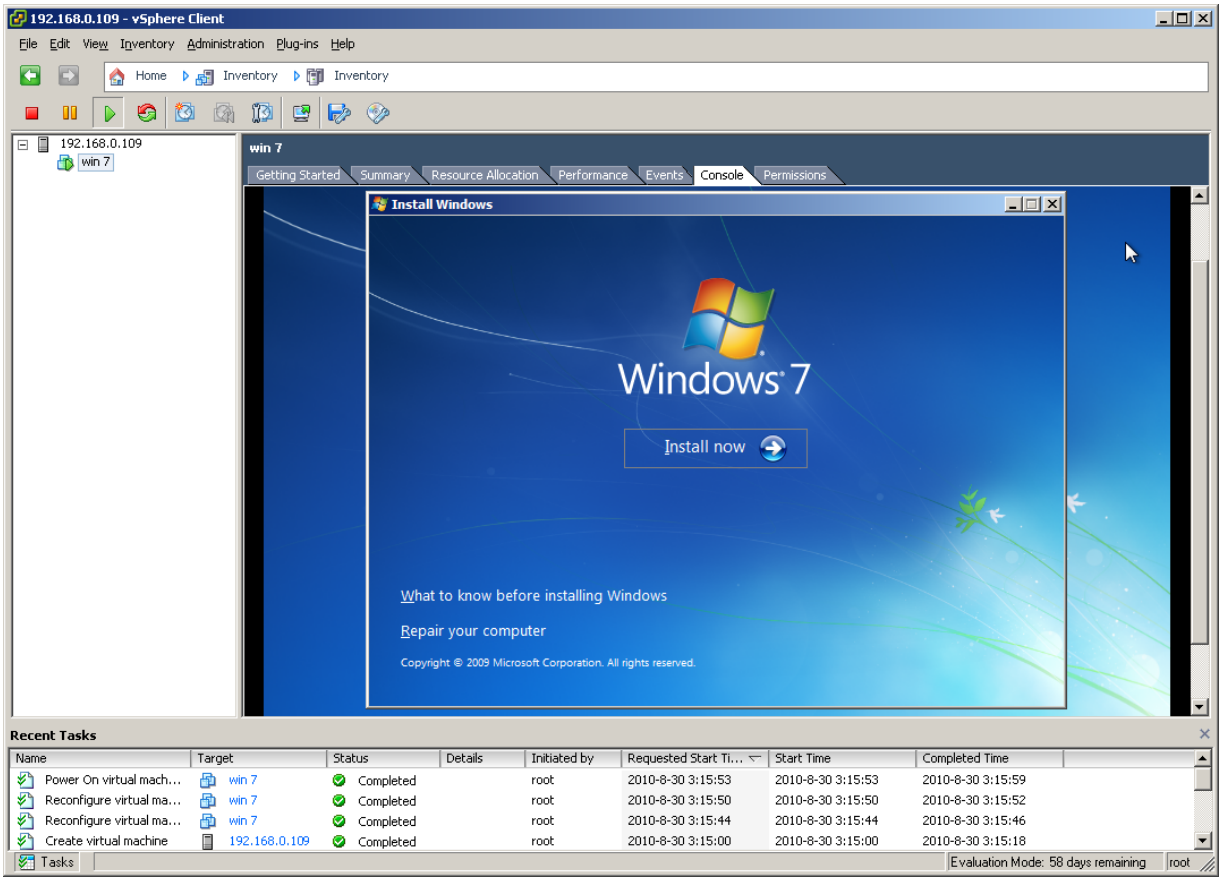
Install Operation System

Run the virtual machine and set up the operating system.

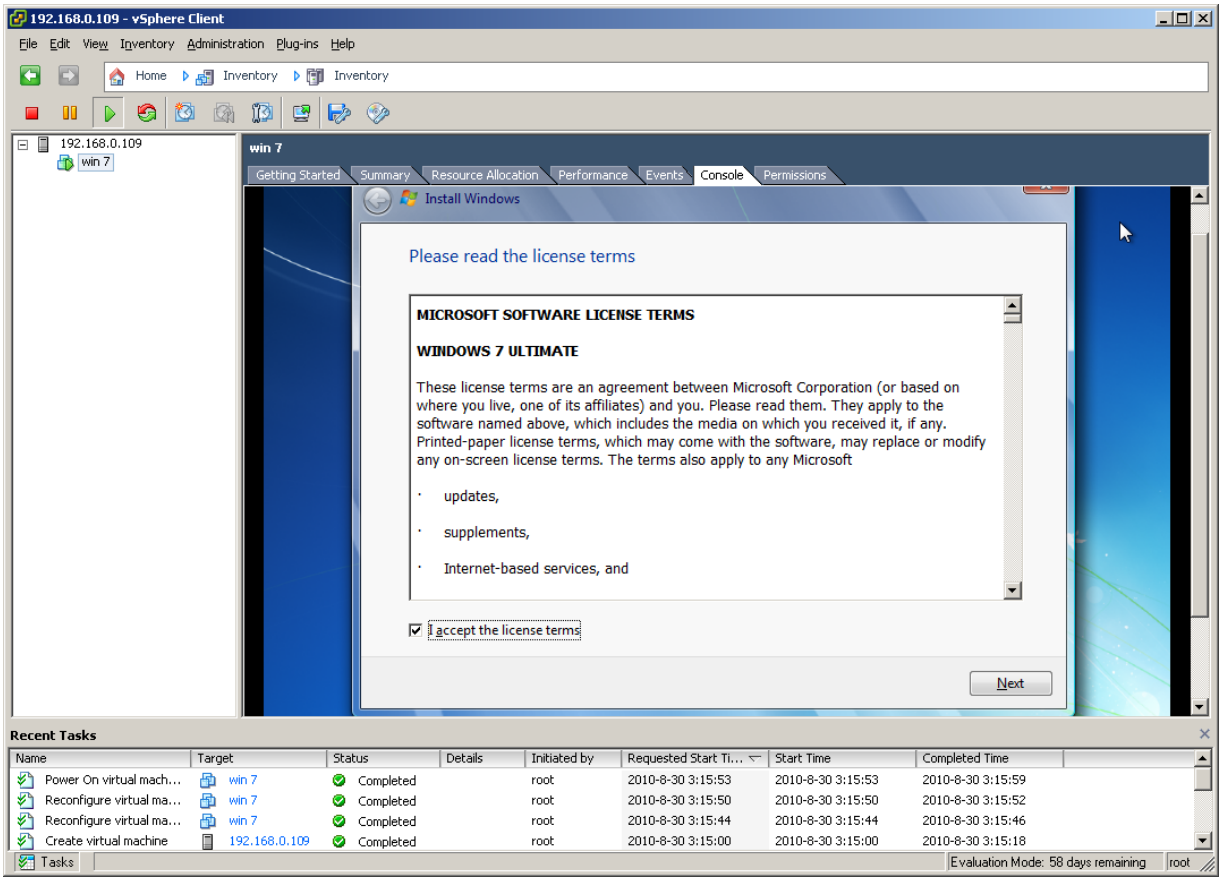
The process is just like that on real machine.



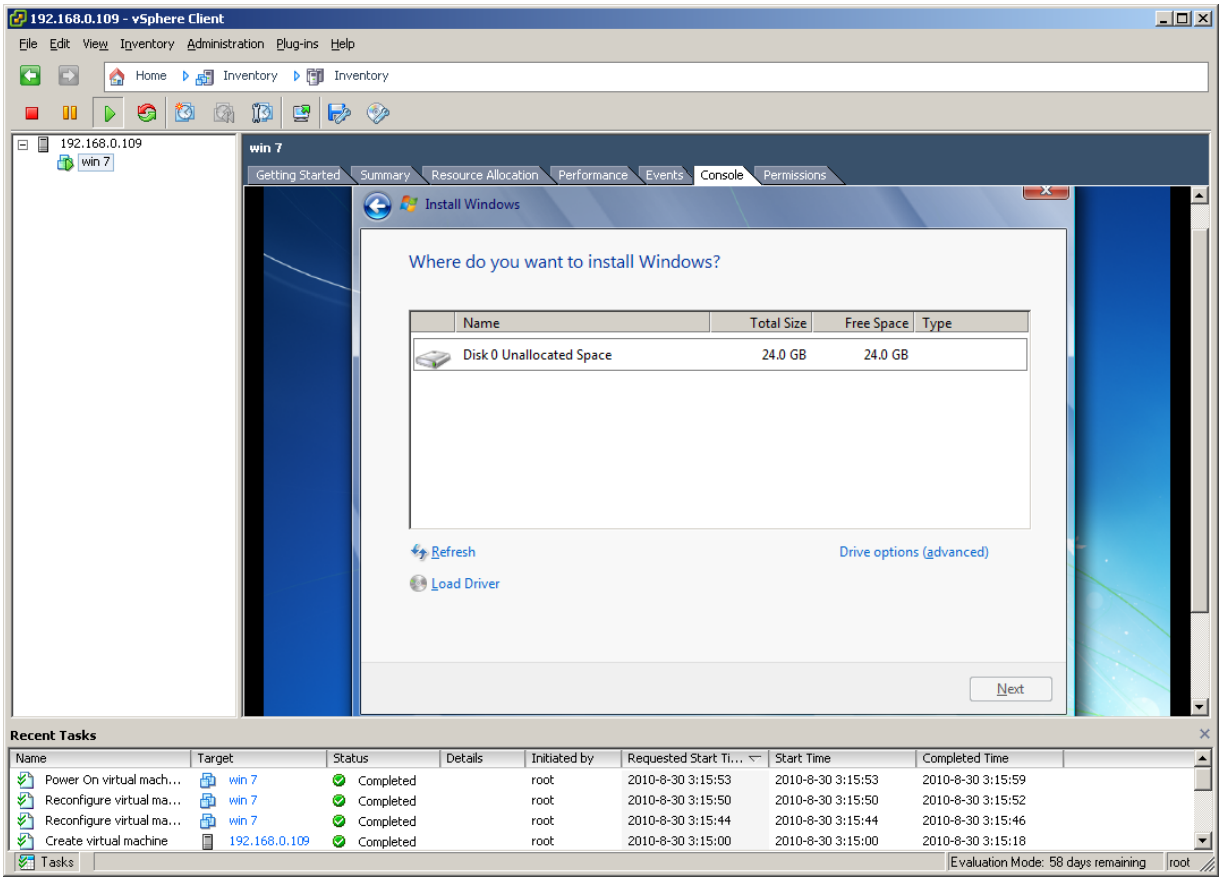
Press **Install now** to install system



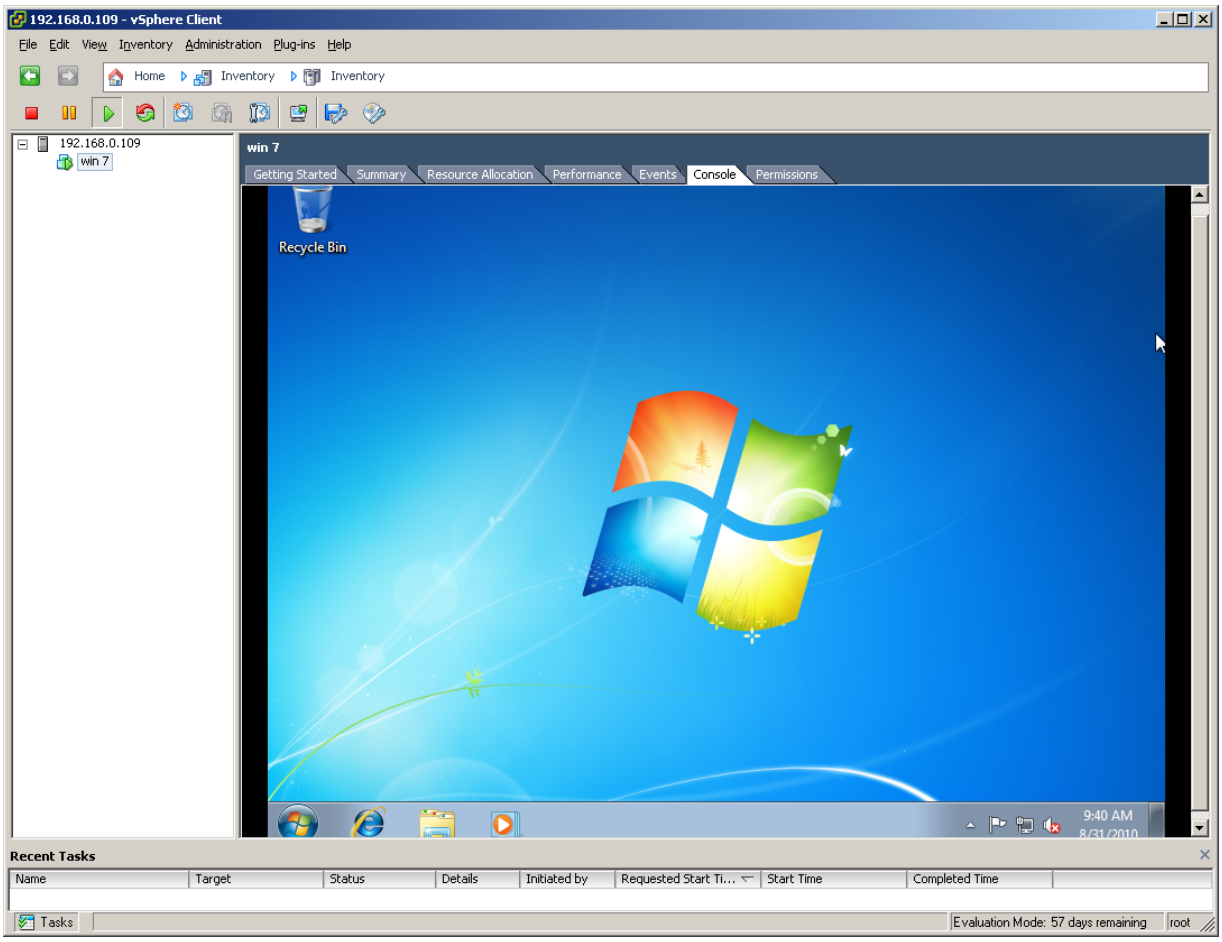
Check **I accept the license terms** and press **Next** to continue.



Choose the storage we create and press **Next** button to continue.



After copying files, the system is completely installed on the VM.



Likewise, you may install Windows Server 2003, Windows XP, Vista and Windows Server 2008, or even any version of Linux as you wish.

Contact

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