StarWind Software
Technical Reference Series

StarWind iSCSI SAN Software: Using an existing SAN for configuring High Availability with VMWare vSphere and ESX server

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TRADEMARKS

CHANGES

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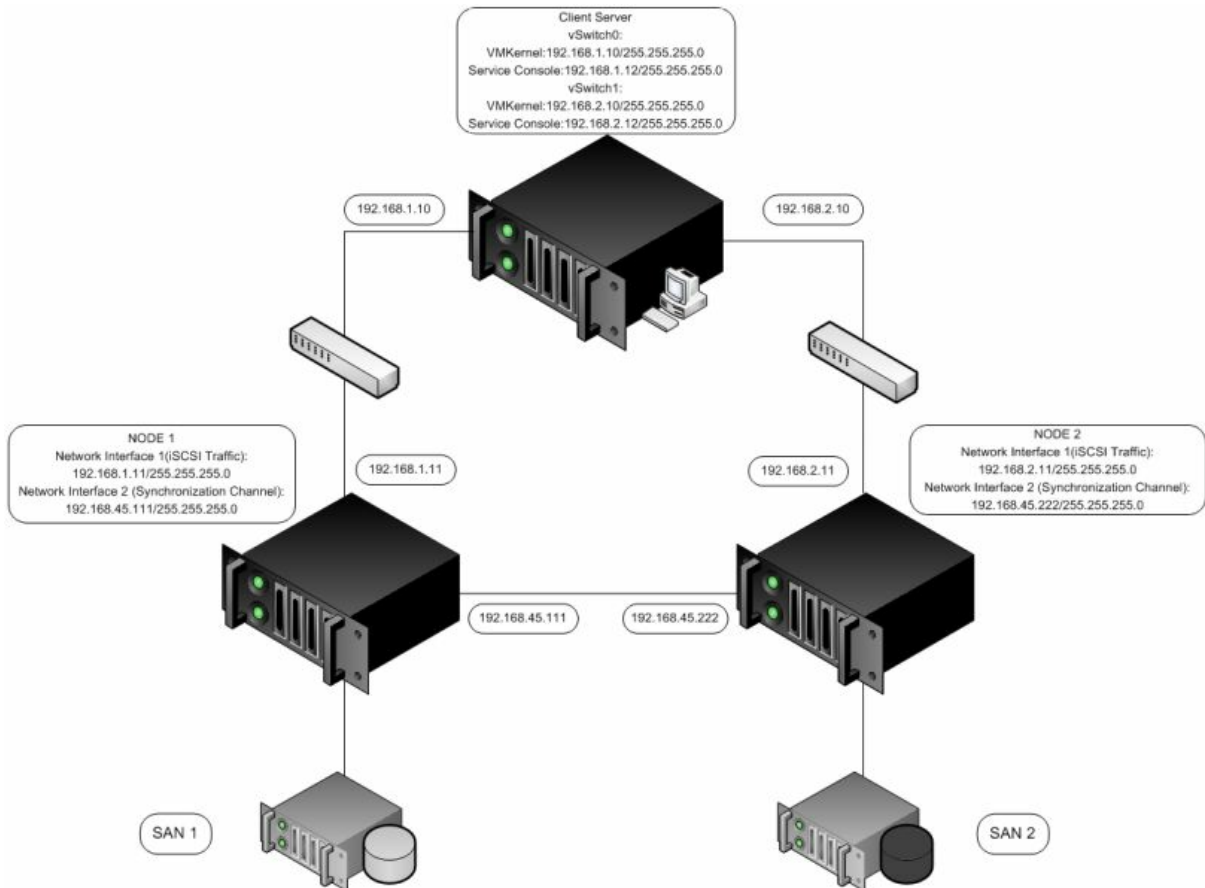
TECHNICAL SUPPORT AND SERVICES

If you have questions about installing or using this software, check this and other documents first - you will find answers to most of your questions here or there. If you need further assistance, please contact us.

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Guide

Introduction

Note: Data Synchronization Channel redundancy is required, use NIC teaming (link aggregation).

Both StarWind servers must have StarPort installed and registered.

Configuring StarWind Server

Preconfiguring and connecting storage

Using HA requires some minor modifications to the servers you will use as nodes for providing HA storage to the clients. You will have to configure iscsi initiator service to start before starwind service starts. This guarantees the fact that in the moment when starwind service is started, MS iSCSI Initiator is already up and have connected your storage where the virtual disk files are stored. The other thing is you need to bind volumes so that each time the initiator connects them to your server, they receive a constant drive letter.

To set StarWind service dependent go Start->Run, type "cmd" and click OK.
In the command line type "sc config starwindservice depend= msiscsi" and press enter button.

Now connect to your SAN using Microsoft iSCSI Initiator, initialize and format the disk you have connected, assign a drive letter to it.
In the MS Initiator window go to the **Volumes and Devices** tab and click **Auto Configure** button.
This will bind the volumes with the drive letters you have assigned to them.
The procedure described above has to be performed on both StarWind Servers.

Preparing Storage

Launch the StarWind Console: **Start -> All Programs -> StarWind Software -> StarWind**. Whenever the StarWind Console is running, its icon will appear in the system tray.

The StarWind Console may be accessed by double-clicking the icon using the left mouse button, or with a single click using the right mouse button and selecting Start Management from the pop-up menu.

From the Connections tree, select the computer you want to provision the iSCSI target device on.
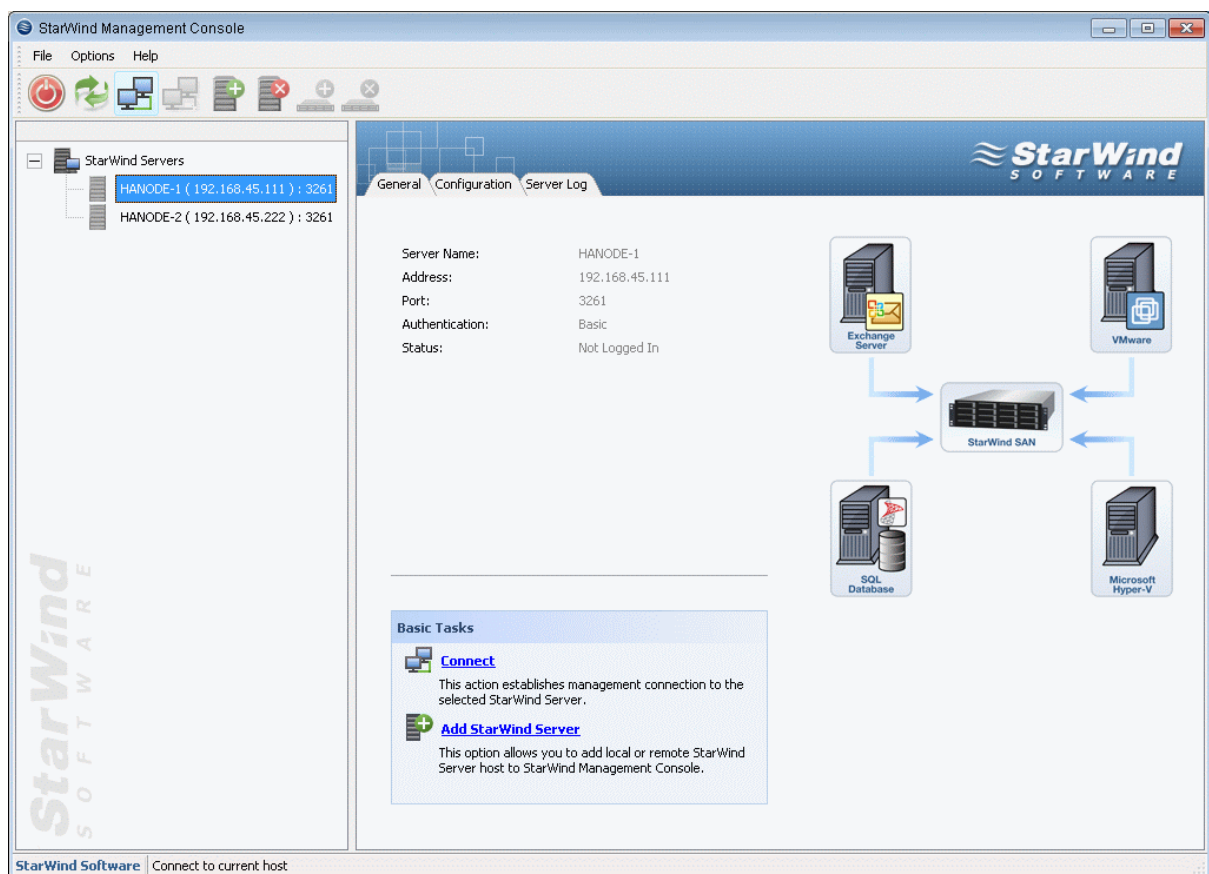
Double-click the host to connect.

You will be prompted to enter the login and password.

The default login and password are "root" and "starwind." You can always change them later.
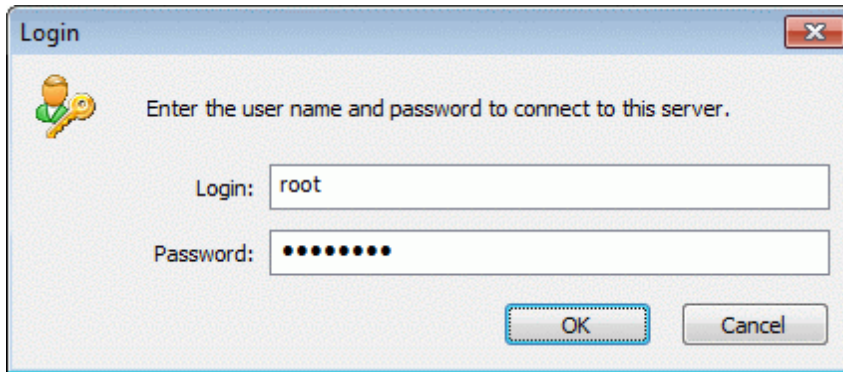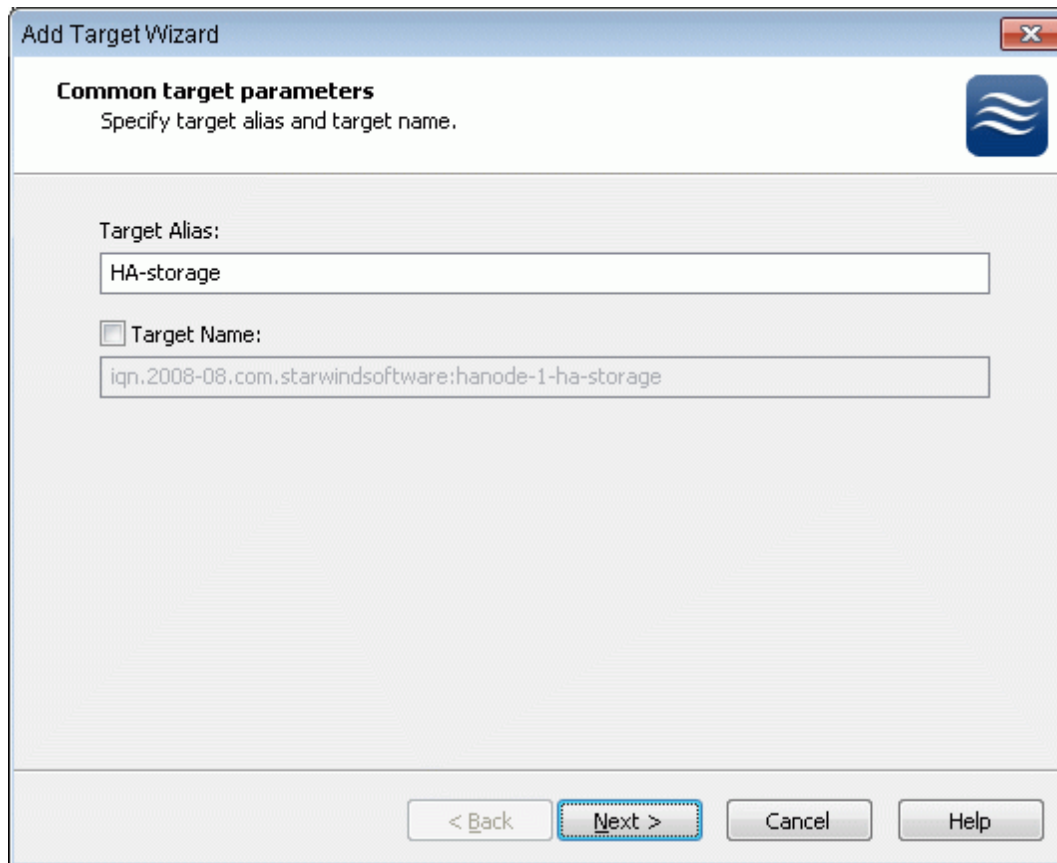

Click the **OK** button to continue.

Now when You are connected to the StarWind Service on the machine you can create targets on it.
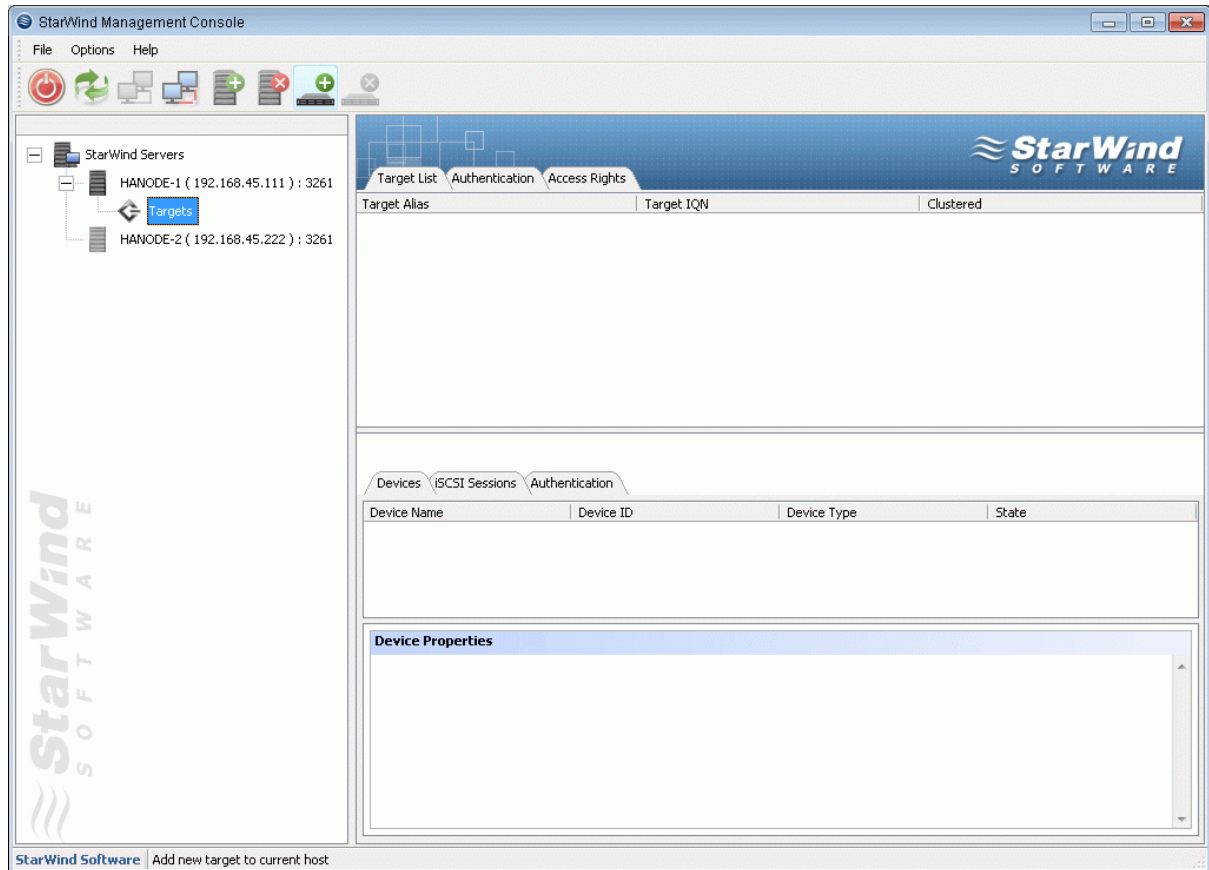
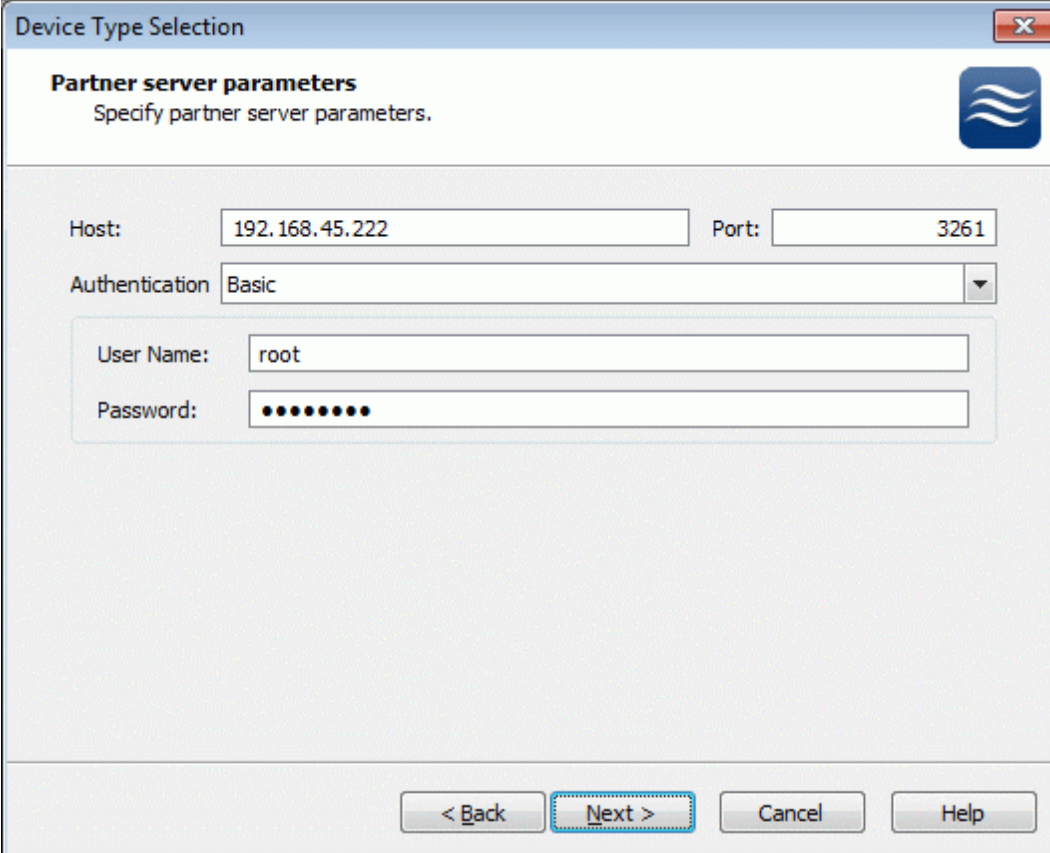Click **Add Target** button to continue.

In the wizard that appears, specify a target name. The name must be a unique name by which the device will be declared to the iSCSI initiators connecting to StarWind over an IP network.

Click the **Next** button to continue.

Select the HA device type by going **Hard Disk->Advanced Virtual->High Availability device.**

Specify the partner server parameters. Enter the server's IP address or host, and specify the user name and password for the StarWind Service.
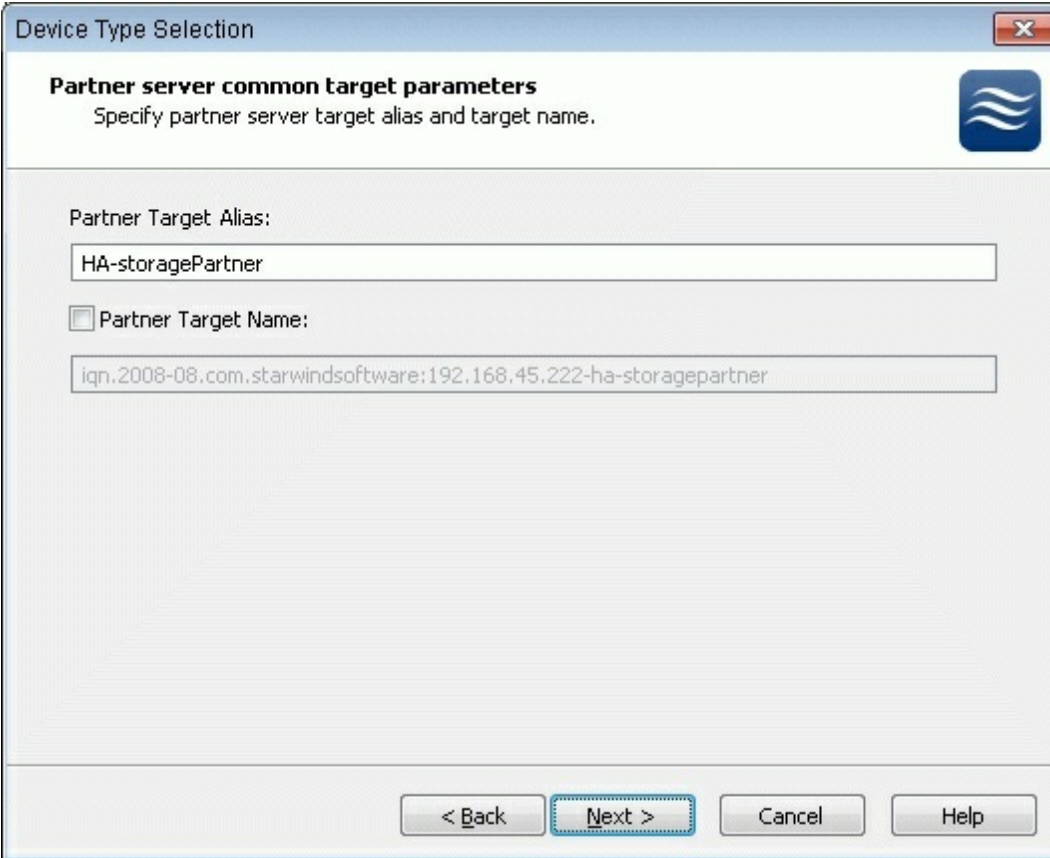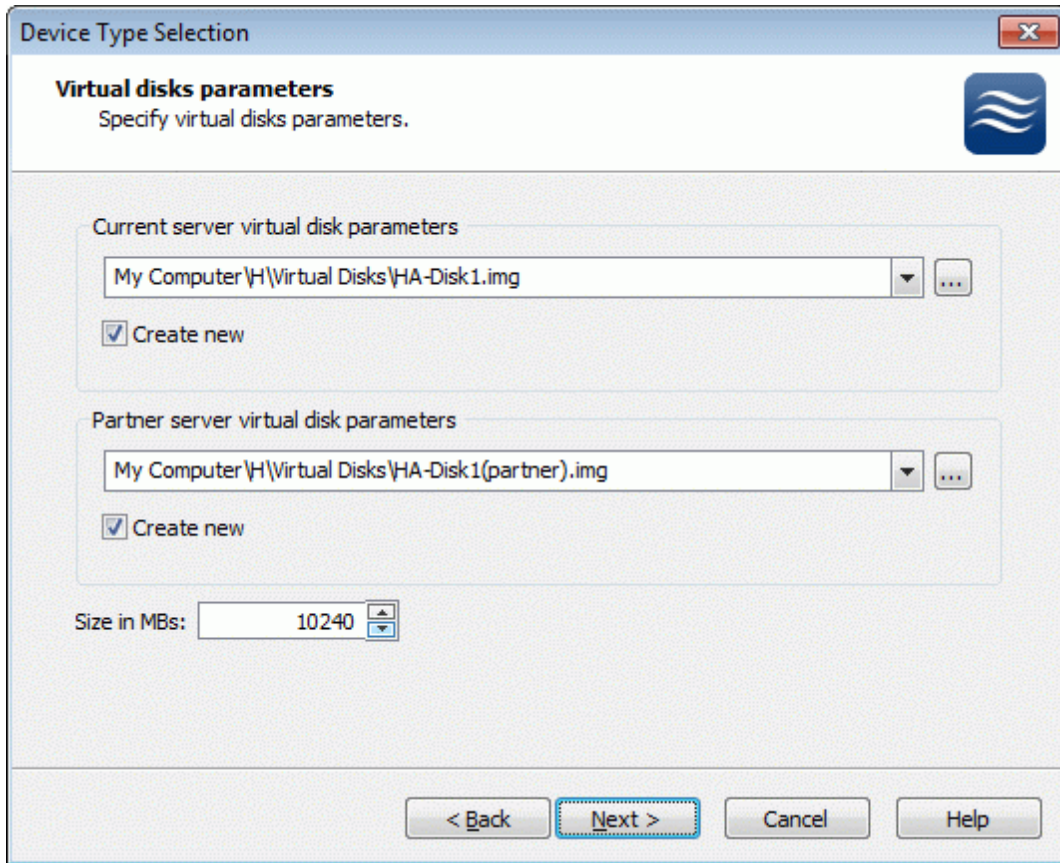

Click the **Next** button to continue.

Enter target alias and name to be assigned to the partner target.
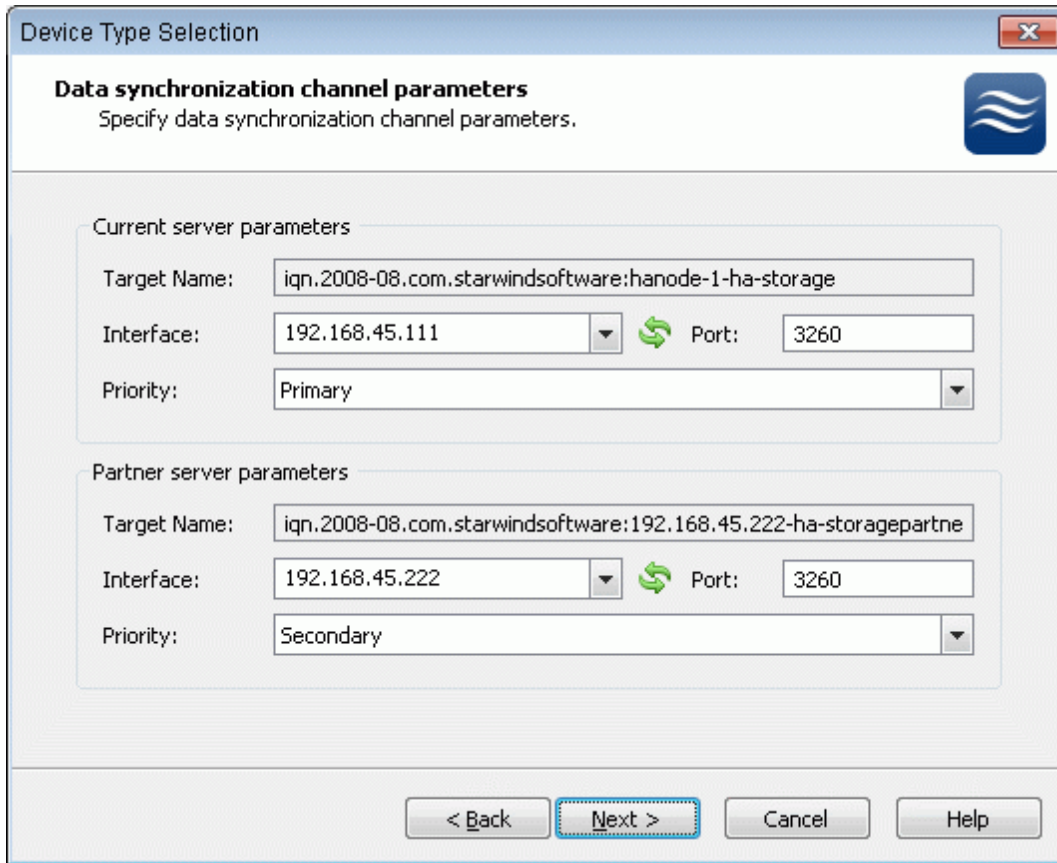

Click the **Next** button to continue.

Specify the location and name of your local virtual disks and your partner's virtual disks by clicking the "..." button. If you want to create new virtual disks, tick the Create New checkbox.

Click the **Next** button to continue.

Configure the data synchronization channel parameters by specifying the network interface for synchronization. You can also decide node priority by designating it as Primary or Secondary.

Click the **Next** button to continue.

Specify the method to initialize your HA device.

Click the **Next** button to continue.

Check that the device parameters are correct. Click the **Back** button should any changes be required.
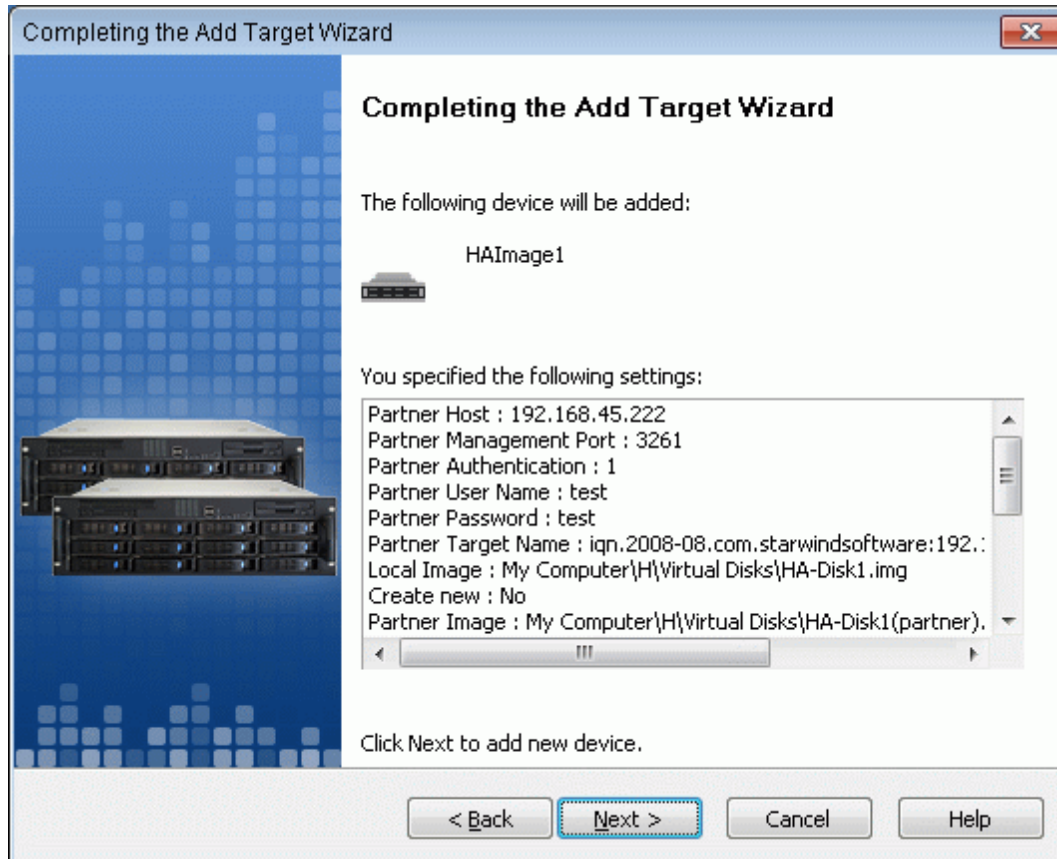
Click the **Next** button to continue.

A summary is displayed on the last wizard page.

Click the **Finish** button to close the wizard.

![StarWind Software logo]

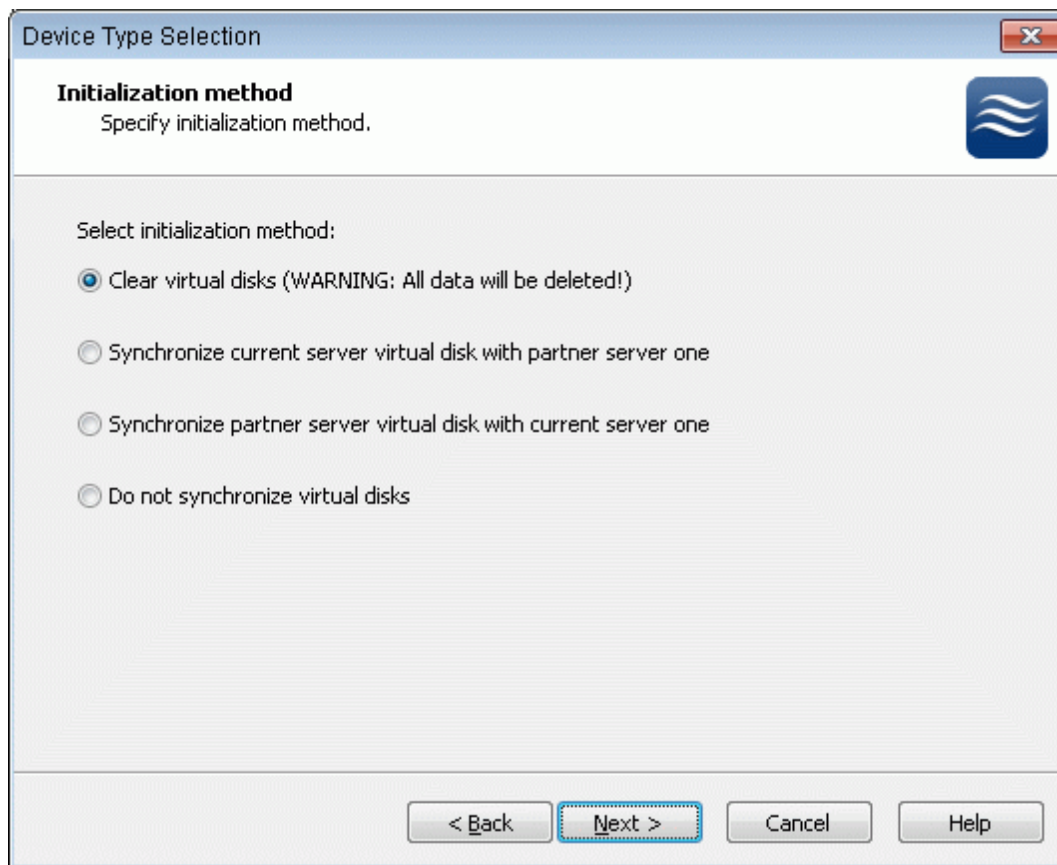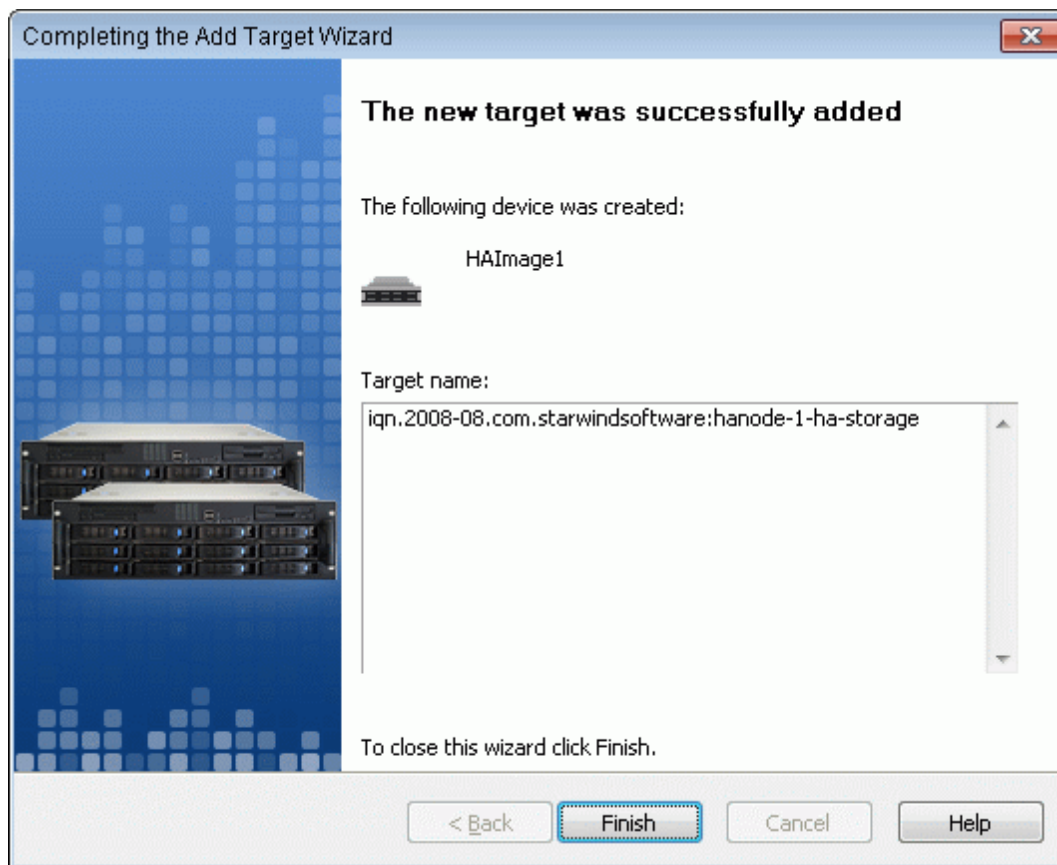## Configuring ESX Server

Configuring Advanced Settings

Set the following advanced Settings for the ESX/ESXi host:
Set Disk.UseDeviceReset to 0
Set Disk.UseLunReset to 1
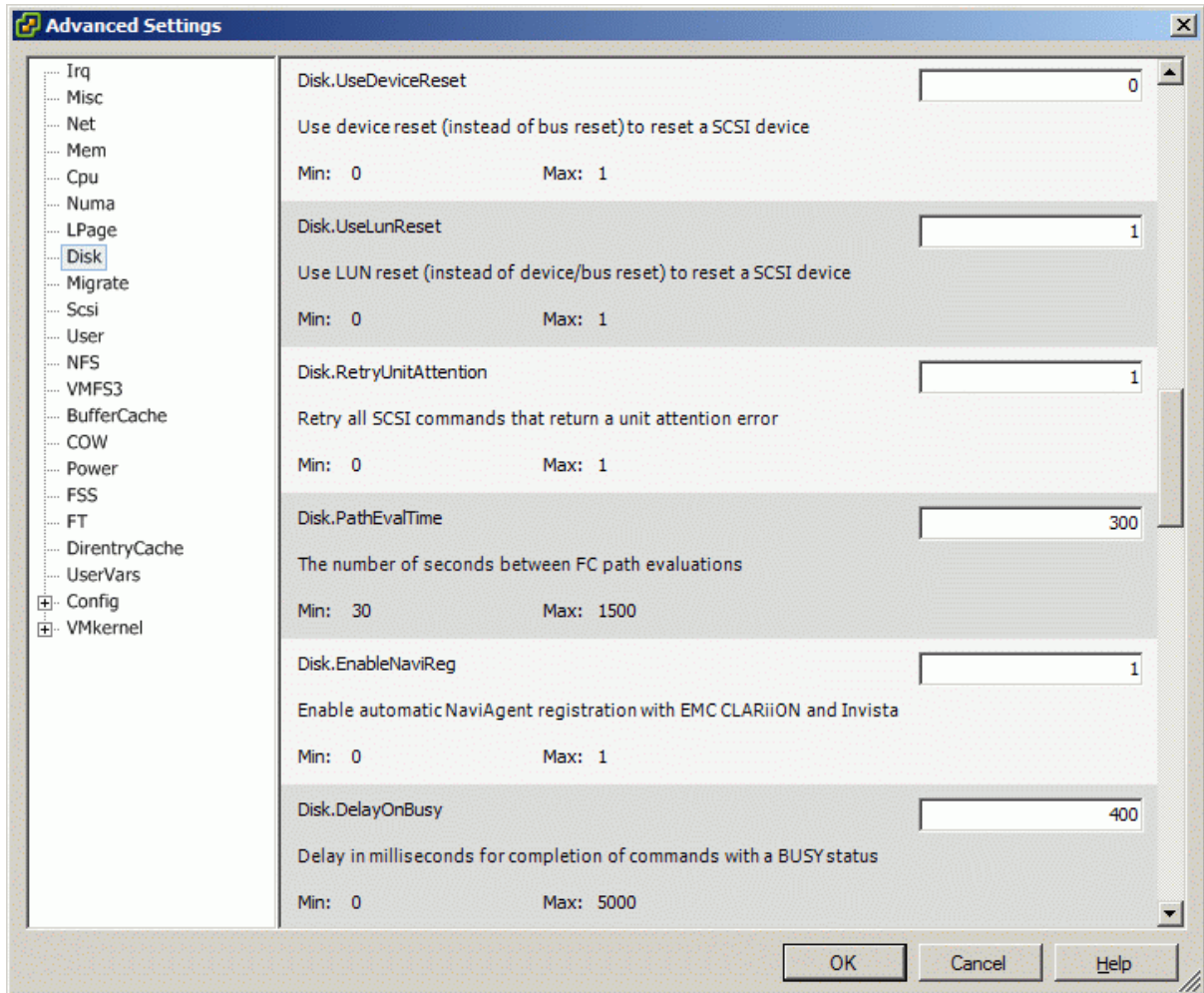
Configuring the Firewall

For working with iSCSI connections you need to permit them in the firewall settings.

Click the **Configuration** tab. Then click **Security Profile**.

The **vSphere Client** displays a list of currently active incoming and outgoing connections with the corresponding firewall ports. Click the **Properties** link.

The **Firewall Properties** dialog box will appear. Find **Software iSCSI Client** in the list Tick the option (set checkbox) to allow outgoing connection on the port shown (3260).
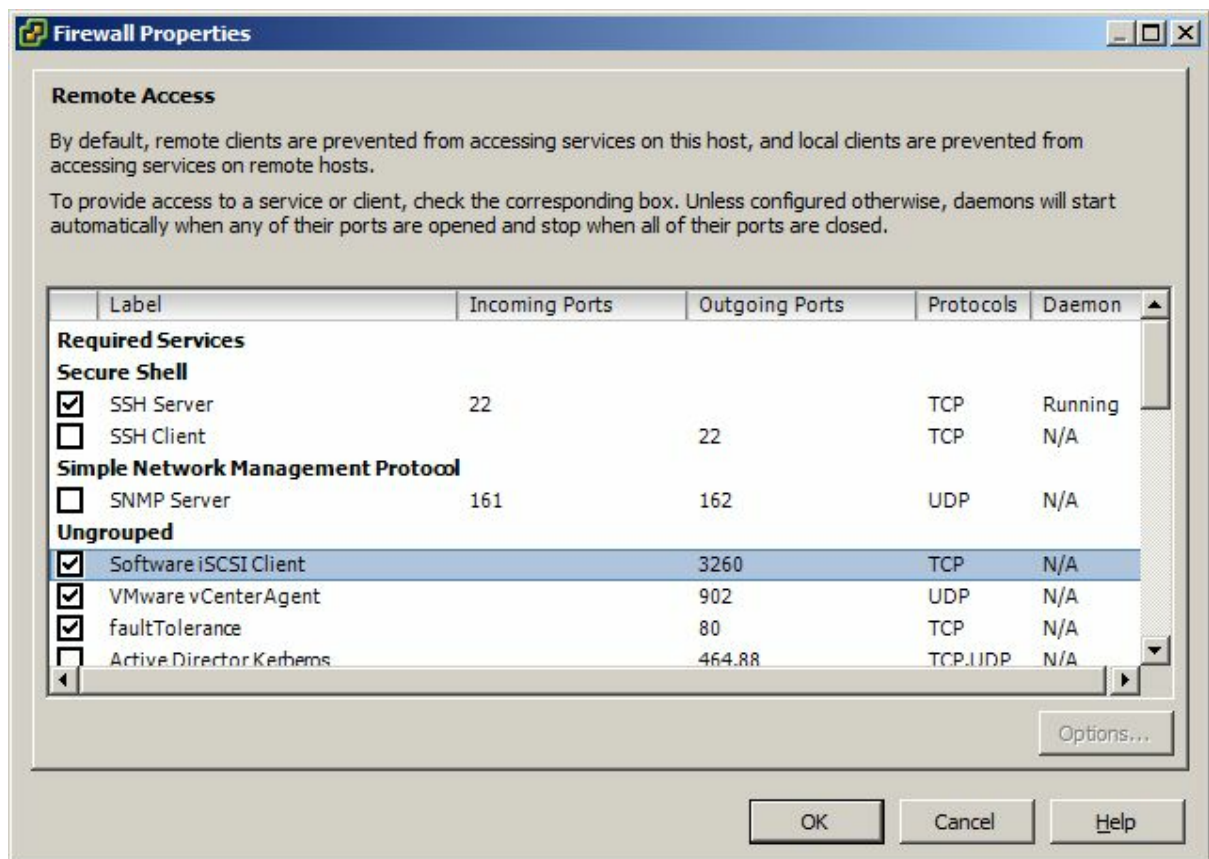
Press the **OK** button to continue.

Configuring the Networking

Configuring First NIC
VMkernel1

Click the **Configuration** tab. Then click **Networking**. Click the **Properties** link of the first Virtual Switch. Click the **Add…** button. Select the **VMkernel** option. Click the **Next** button to continue. Under IP Settings, set the IP address to 192.168.1.10 and the Subnet Mask to 255.255.255.0. Click the **Next** button to continue. Click the **Finish** button to close the wizard. Click **Yes** at the default gateway warning dialog box.

In the **DNS** and routing configuration box, type the same default gateway as Service Console default gateway and press the **OK** button.

Press the **Close** button to exit vSwitch properties editor.

Configuring Second NIC
VMkernel2

Click the **Configuration** tab. Then click **Networking.** Click **Add Networking…** Select the **VMkernel** option. Press the **Next** button to continue.

Choose Create a virtual switch, select the second network card and click the Next button to continue.

In IP Settings set the IP address to 192.168.2.10 and Subnet Mask to 255.255.255.0, click the **Next** button. Click the **Finish** button to close the wizard.

Click the properties of the recently created virtual switch. Click the **Add…** button. Select the **Service Console** option. Press the **Next** button to continue.

In IP Settings set the IP Address to 192.168.2.12 and Subnet Mask to 255.255.255.0, click the **Next** button.

Press the **Finish** button to close the wizard. Press the **Close** button to exit vSwitch properties editor.

If successful, the **vSphere Client** window should look like the sample image provided below.

≋ **StarWind**
S O F T W A R E
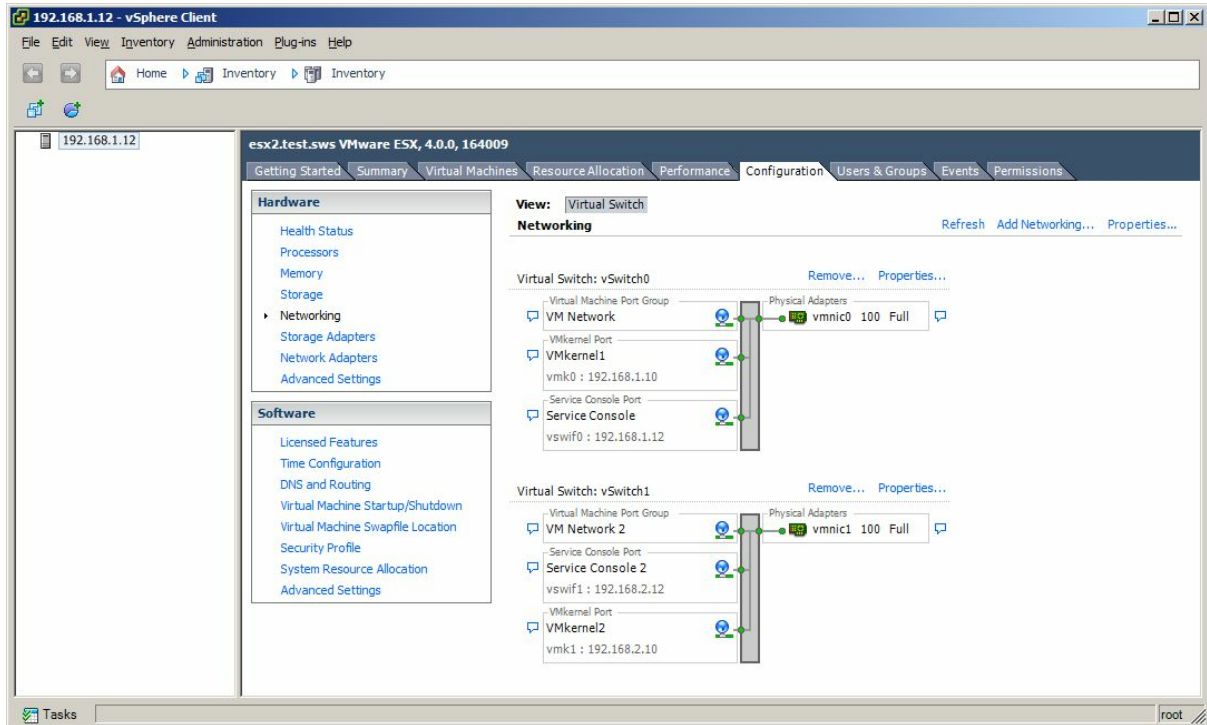
Configuring the iSCSI Initiator

Click the **Configuration** tab. Then click **Storage Adapters.**

The list of available storage adapters appears. Select iSCSI Software Adapter.

Click **Properties**. click the **Configure** button in the iSCSI Initiator Properties dialog which appears. To enable the initiator feature tick the **Enabled** check box. Click the **OK** button to close the **General Properties** dialog and return to the **iSCSI Initiator Properties** dialog.

Switch to the **Dynamic Discovery** tab.

Add each of the StarWind servers by clicking the **Add…** button and specifying servers IP address.
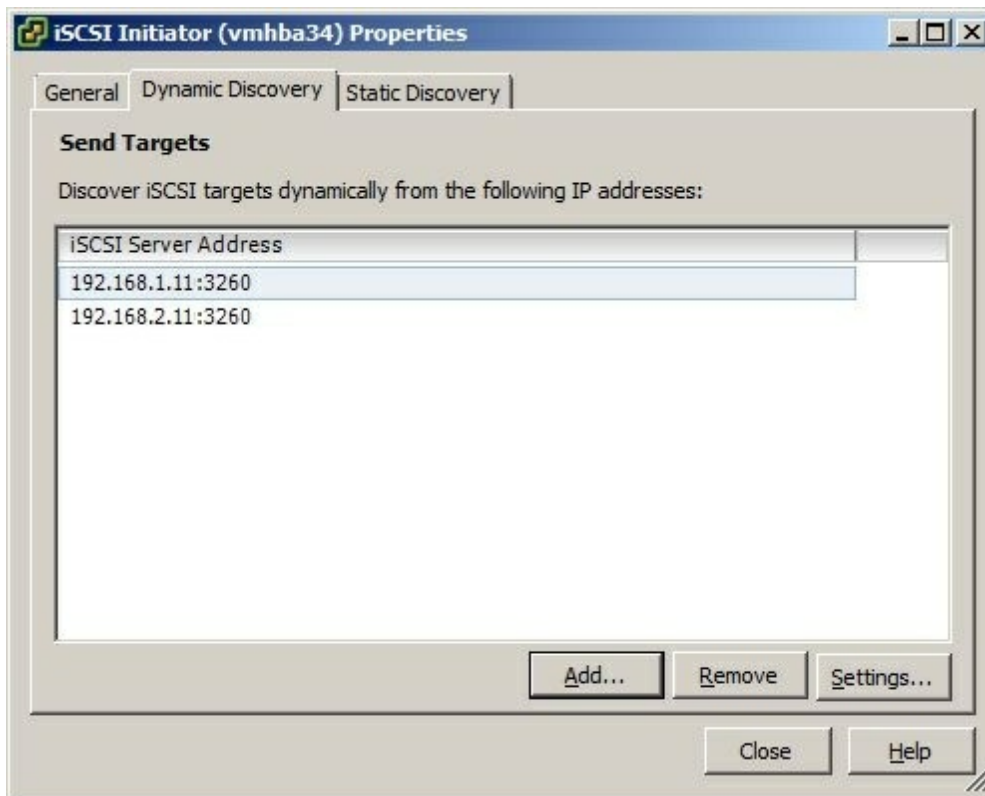

Click the **Close** button. Infrastructure client will prompt you to rescan for new iSCSI LUNs. Leave the default values and click the **Yes** button.

If successful, the **vSphere Client** window should look like the sample picture provided below.
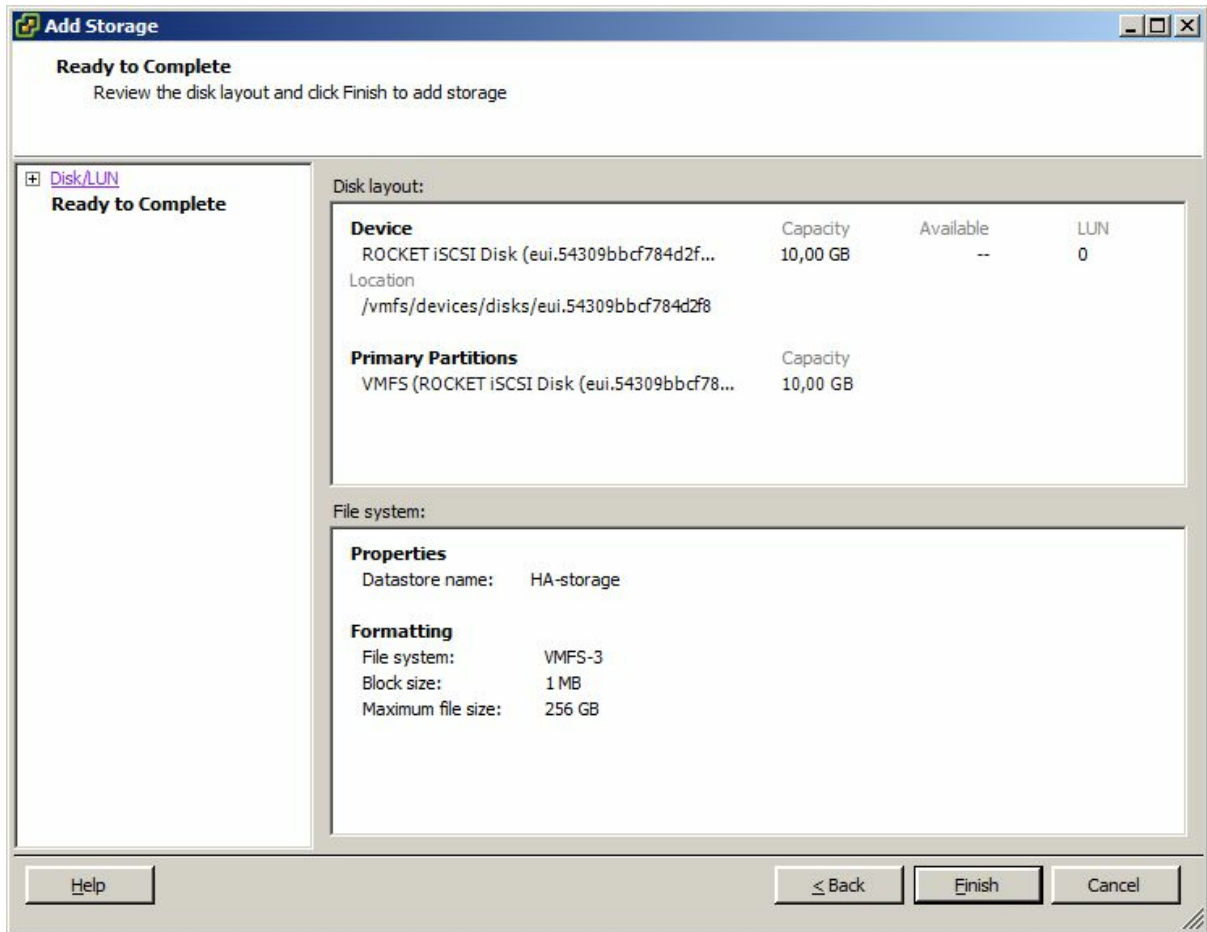
≋ **StarWind**
S O F T W A R E
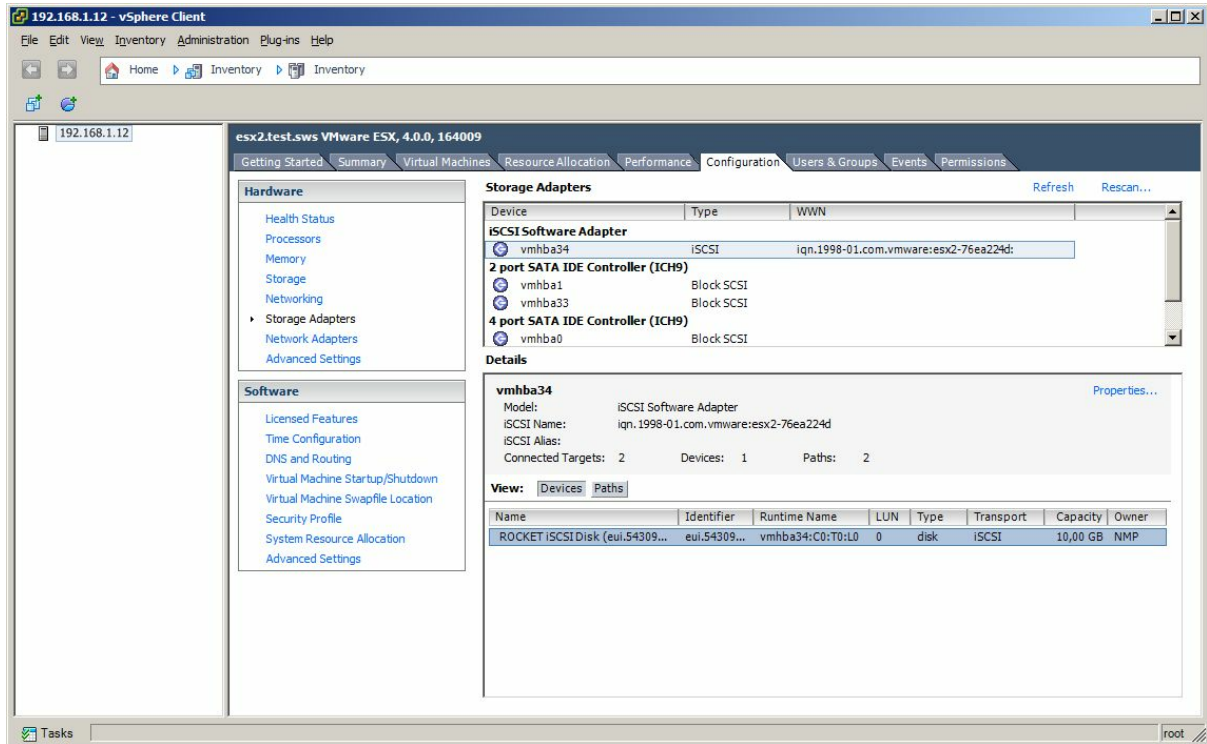
Setting Up the Datastore

Click the Configuration tab. Then click Storage. Click the **Add Storage...** link.
The Add Storage dialog appears. Select **Disk/LUN** storage type.
Click the **Next** button to continue. Select the device.
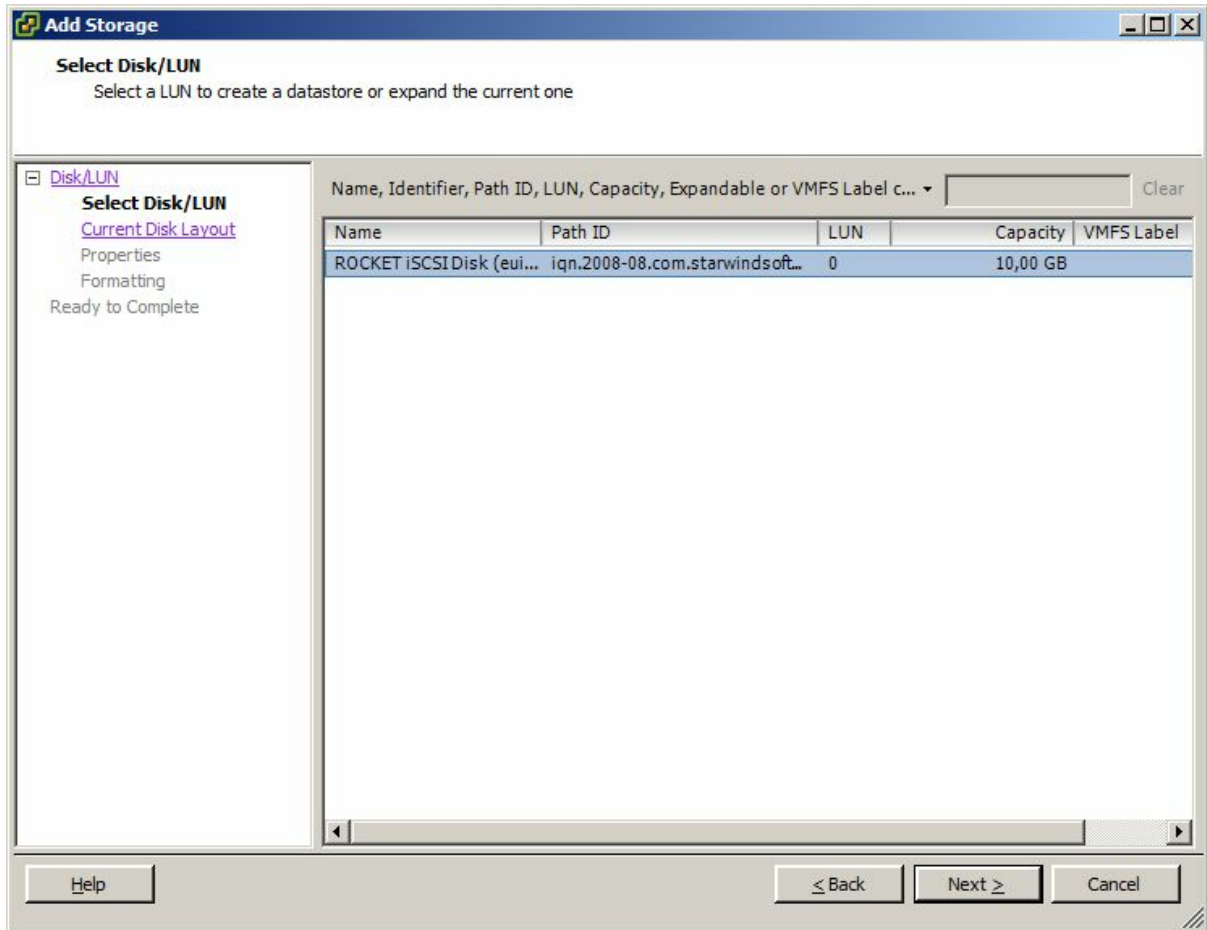
Click the **Next** button to continue.

Review the disk layout,. Type in the Datastore Name, set the Disk/LUN formatting options. Confirm that the device parameters are correct and click the **Back** button should any changes be required.

Click the **Finish** button to close the wizard.

If everything has been entered correctly, the **vSphere Client** window should look like the sample picture provided below.
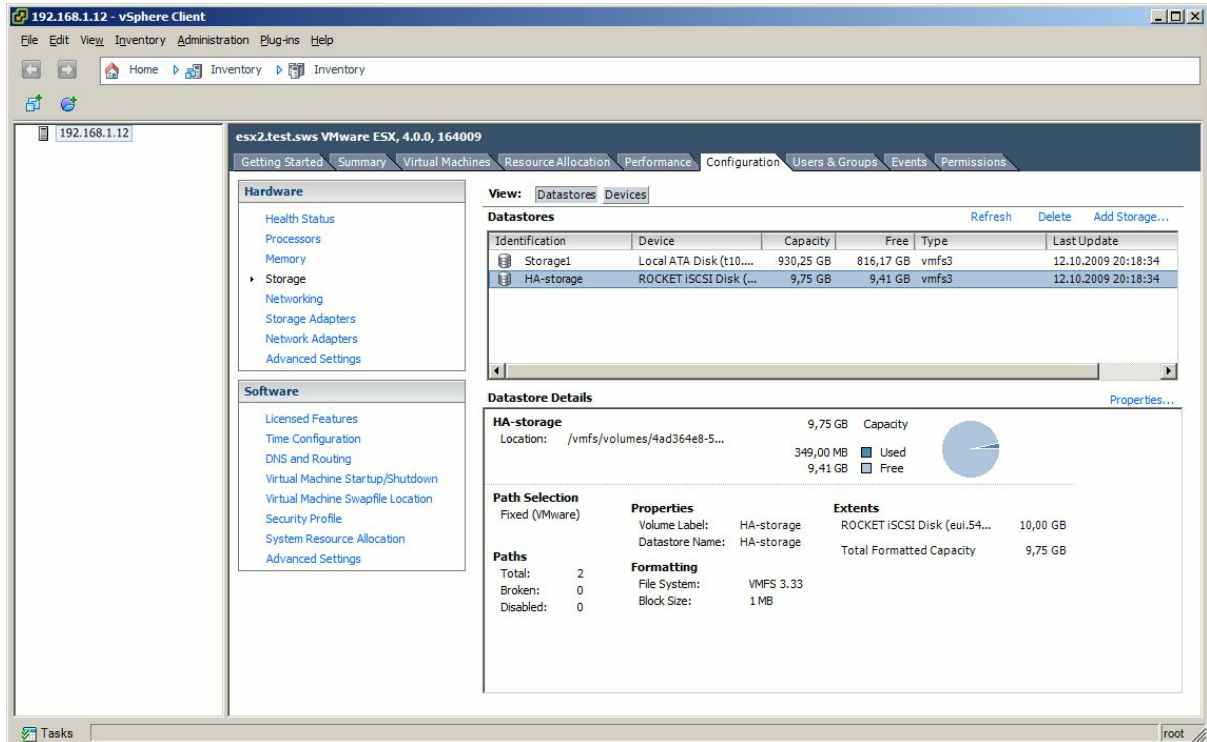
Conclusion

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