



Windows Server 2008 R2 and Hyper-V 2008 Host Configuration

Rapid EqualLogic Configuration Series
Implementation Guide

January 2015

Revisions

Date	Status
April 2012	Initial release
May 2012	Updated the Intel NIC driver version and EQL host installation kit for Windows version 4.0.0
December 2012	Combined part 1 and part 2 into single guide
March 2013	Added Hyper-V 2008 content
January 2015	Minor updates

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This document is one part of a complete installation guide series from the [Rapid EqualLogic Configuration Portal](#). Please make sure that you have the complete set for your configuration before proceeding.

Full link to document site:

<http://en.community.dell.com/techcenter/storage/w/wiki/3615.rapid-equallogic-configuration-portal-by-sis.aspx>

Note: For instructions on enabling the Hyper-V role for a Windows 2008 Server, go to:

[http://technet.microsoft.com/en-us/library/cc794929\(v=ws.10\).aspx](http://technet.microsoft.com/en-us/library/cc794929(v=ws.10).aspx)

Note: To enable Hyper-V to use volumes located on the EqualLogic iSCSI SAN, you must first complete the configuration instructions provided in this guide.



1 NIC device driver update and installation

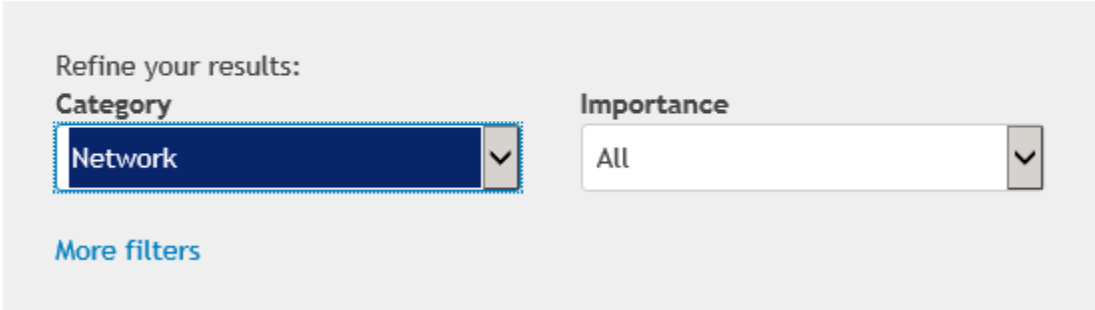
This configuration is for Windows Server® 2008 R2 hosts.

1.1 Download the latest driver update for the Intel NICs

Note: The following procedure is for an Intel 1G or 10G NIC. If you are using Broadcom® network adapters (NICs) for SAN connectivity, proceed to “Download the latest driver update for Broadcom NICs”.

1. Go to <http://support.dell.com> and click **Start Here** under **Support for Small Business**.
2. In the **Drivers and Downloads** menu, select **Drivers Home**.
If the support site has detected a product to support, click **Change Your Product**.
3. In the **Choose a Model** section, click **Select a Model**.
4. Select **Servers, Storage, Networking** from the **Select Your Product Family** list, and **PowerEdge Server** from the **Select Your Product Line** list.
5. Select your host server platform (i.e. Dell™ PowerEdge™ R610, etc.) from the **Select Your Product Model** list, and then click **Confirm**.
6. In the **Refine Your Results** window, select **Windows Server 2008 R2** for the **Operating System**, and **Network** as the **Category**.

Operating System: MS Windows 2008 R2 ▼ [Change OS](#)



Refine your results:

Category
Network ▼

Importance
All ▼

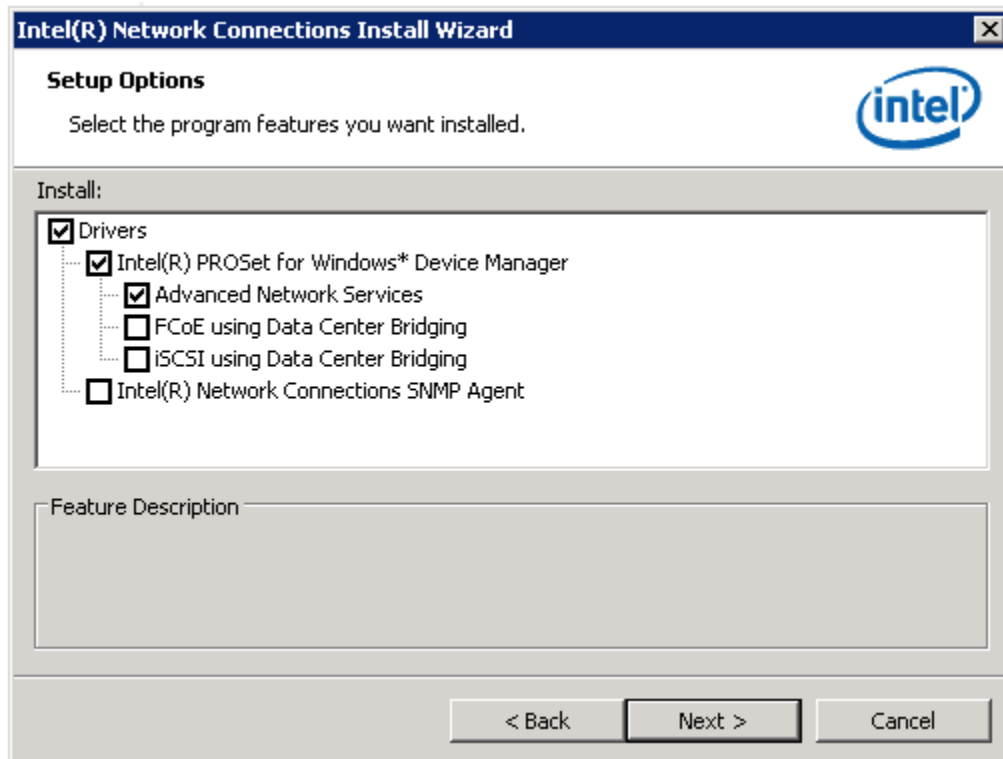
[More filters](#)

7. Download the recent version of the Intel driver package for **Intel NIC drivers for Windows Server 2008 x64, Windows Server 2012, Windows 7 x64, and Windows 8.1 x64 Intel NIC drivers for Windows Server 2008 x64, Windows Server 2012, Windows 7 x64, and Windows 8.1 x64**.
Download version 16.0.0 or later.



1.2 Install the Intel driver update

1. Click **Install** to start, and then click **Next**.
2. After accepting the license, make sure that only **Drivers**, **Intel(R) PROSet**, and **Advanced Network Services** are selected as shown and click **Next**.

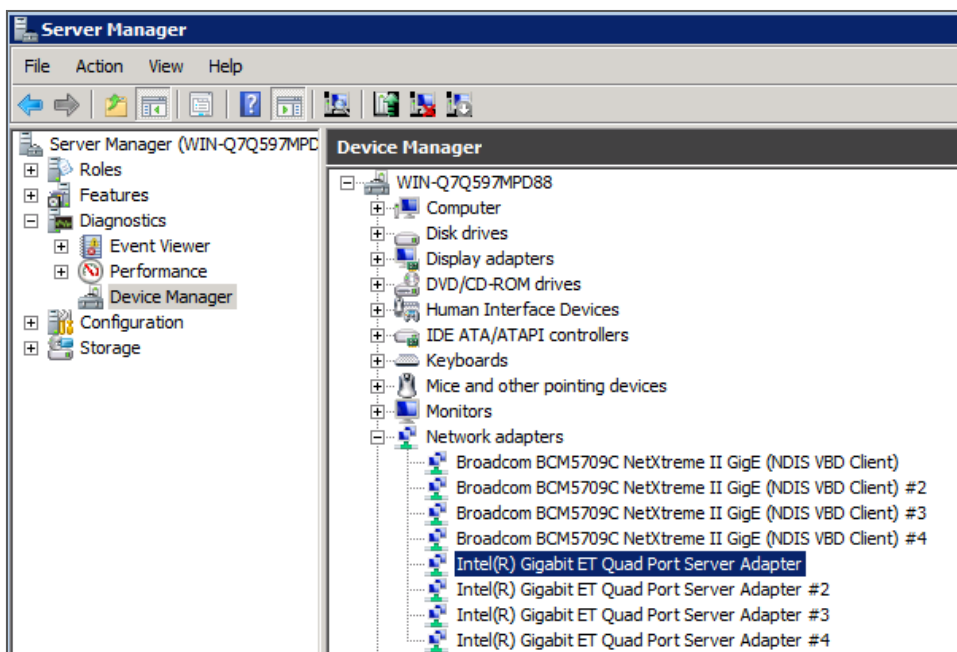


3. Click **Next** and then **Install** to complete the installation.



1.3 Configure the Intel network adapters (NICs)

After installation of the Intel driver, launch the Windows device manager and expand **Network adapters**. You should see the Intel NICs listed, as shown.



For each Intel NIC that will be connected to the SAN, you need to change the following settings:

1. In **Device Manager**, double click the Intel NIC used for SAN traffic.
2. In the **Properties** dialog box, click the **Advanced** tab to configure the NIC settings.
3. Set the Jumbo Packet value to **9014 Bytes** and click **OK**.
Repeat these steps for all the NICs used for SAN traffic.

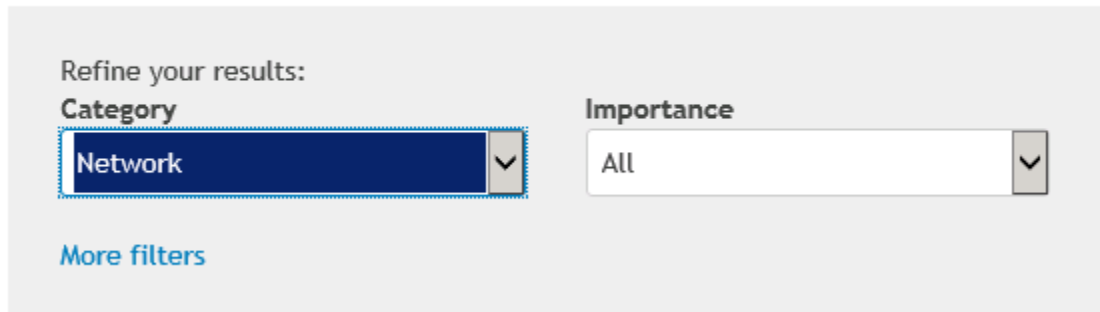
1.4 Download the latest driver update for Broadcom NICs

Note: The following procedure is for a Broadcom NIC. If you are using Intel Network Adapters (NICs), refer to the previous section titled, "Downloading the latest driver update for the Intel NICs".

1. Go to <http://support.dell.com> and click **Start Here** under **Support for Small Business**.
2. In the **Drivers and Downloads** menu, select **Drivers Home**.
If the support site has detected a product to support, click **Change Your Product**.
3. In the **Choose a Model** section, click **Select a Model**.
4. Select **Servers, Storage, Networking** from the **Select Your Product Family** list, and **PowerEdge Server** from the **Select Your Product Line** list.
5. Select your host server platform (i.e. Dell PowerEdge R610, etc.) from the **Select Your Product Model** list, and then click **Confirm**.

6. In the **Refine Your Results** window, select **Windows Server 2008 R2** for the **Operating System**, and **Network** as the **Category**.

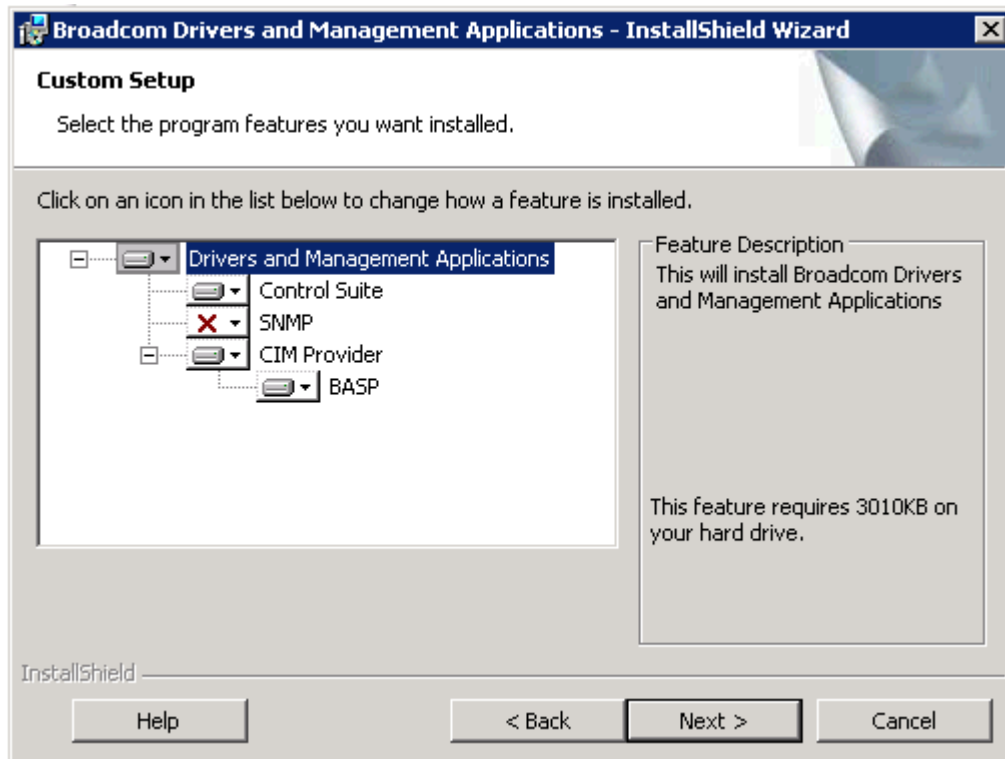
Operating System: MS Windows 2008 R2 ▼ [Change OS](#)



7. Download the most recent version of the Broadcom driver package for "NetXtreme II Family of Adapters". Download version 16.2.1 or later.

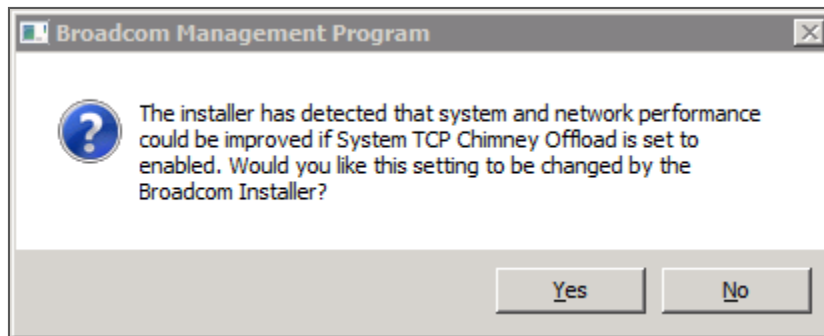
1.5 Install the Broadcom driver update

1. Launch the Broadcom driver installation update.
2. At the custom setup screen, select the **Control Suite** and **BASP** features as shown, and click **Next**.



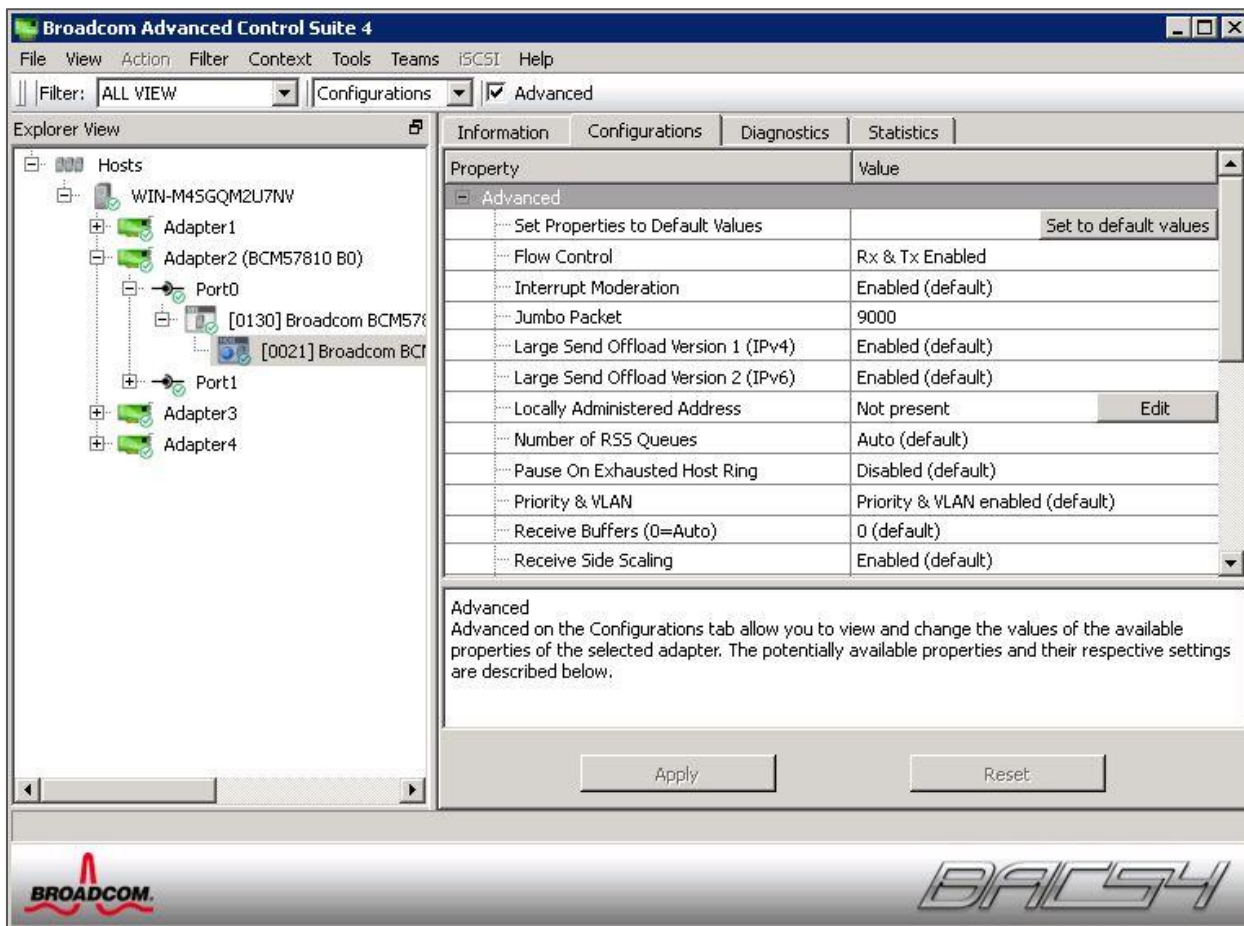
3. If the installation procedure prompts to enable System TCP Chimney Offload, select **No**.





1.6 Configure Broadcom NIC device settings using BACS

Launch the Broadcom Advanced Configuration Suite (BACS) tool by going to **Start > All Programs > Broadcom**.



1. On the left pane, click on the NIC port.
2. On the right pane, click the **Configurations** tab.
3. Perform the following steps on each NIC port connected to the SAN network.

a. Leave all values at default except for the following:

Option	Value
Flow control	Rx & Tx Enabled
Jumbo MTU	9014

b. Click **Apply** to save the changes.

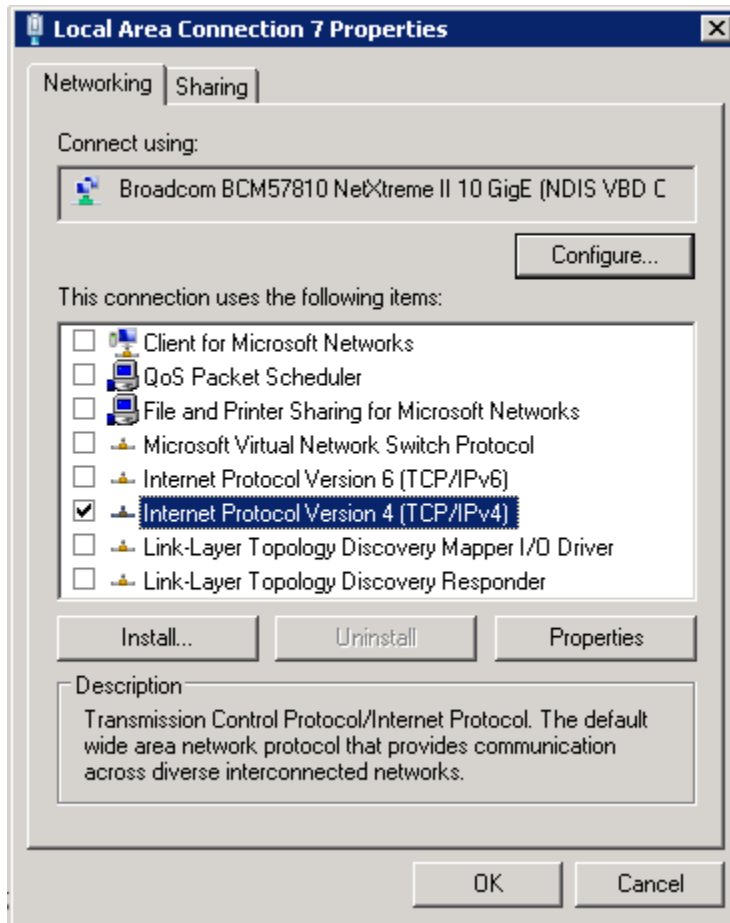
c. Exit Broadcom Advanced Control Suite.



2 Configure networking

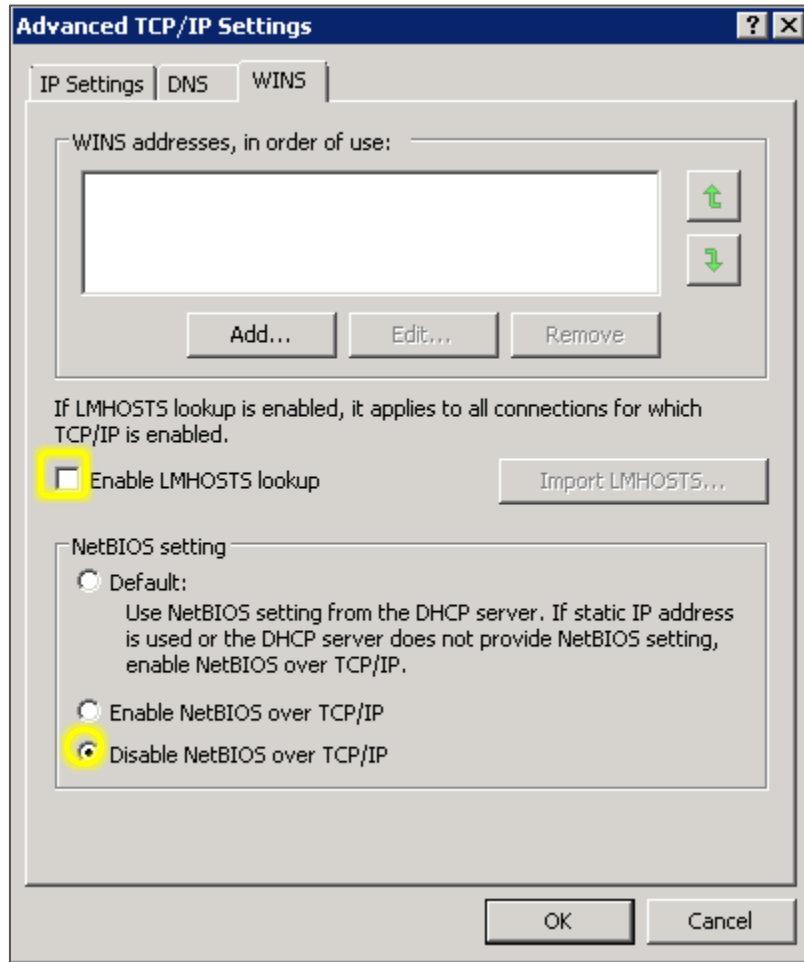
2.1 Configure and optimize the NIC ports to be used for SAN connectivity.

1. In the NIC properties, disable (uncheck) all protocols except **Internet protocol Version 4 (TCP/IPv4)**.



2. Double click **Internet Protocol Version 4 (TCP/IPv4)** to enter the appropriate IP address for each SAN connected port (refer to the Prerequisites Table in Preparation document selected from the [Rapid EqualLogic Configuration Portal](#)), and then click **Advanced Settings**.

3. In the advanced settings properties, open the **WINS** tab and uncheck **Enable LMHOSTS lookup** and choose **Disable NetBIOS over TCP/IP** as the NetBIOS setting.



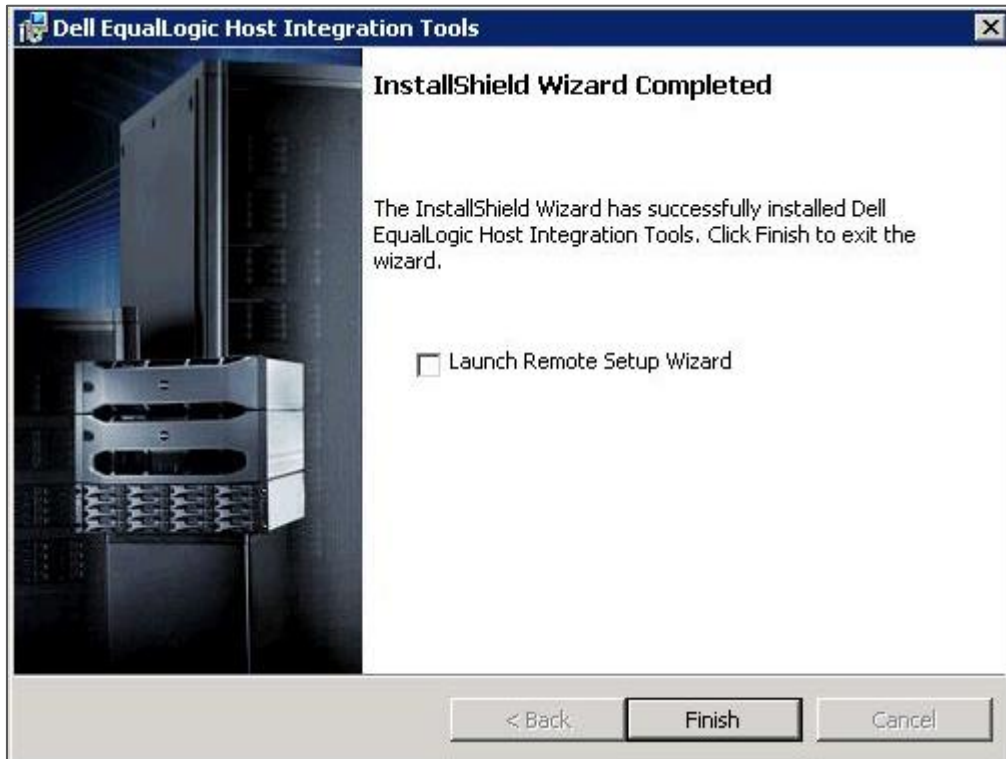
4. Repeat the steps above to configure and optimize each NIC port to be used for SAN connectivity.



3 Install EQL HIT kit

Download the latest Host Integration Tools kit from <https://support.equallogic.com/secure/login.aspx>. In Windows Explorer, double click the downloaded file to run the setup.

1. Select the complete installation option, and then click **Next**.
2. At the **Installation Complete** screen, uncheck the **Launch Remote Setup Wizard** checkbox and then click **Finish**.



3. When the following message is displayed, click **Yes** to restart the system.



4 Configure the SAN switch fabric

If you have already configured your SAN switches, continue to the next section. If not, refer to the specific instructions for configuring each switch model in the [Rapid EqualLogic Configuration Portal](#).

5 Configure the storage

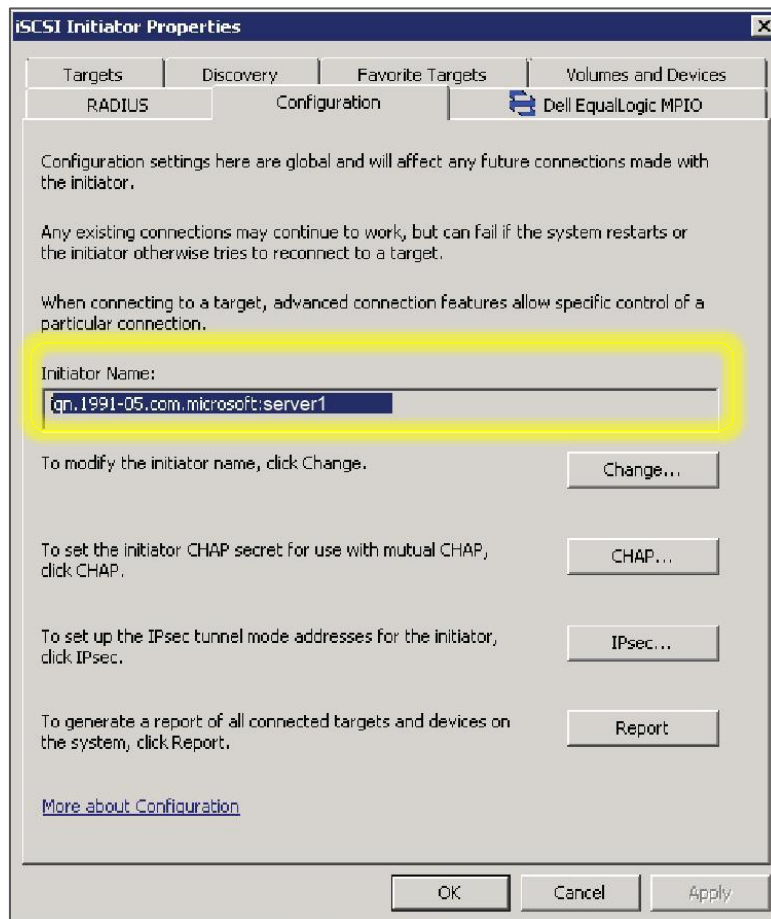
5.1 Configure the array

If you have already configured the storage array, continue to section 5.2. If you have not completed the array configuration, then complete the steps for array configuration using the instructions in the [Rapid EqualLogic Configuration Portal](#).

5.2 Edit volume access permissions for Windows host

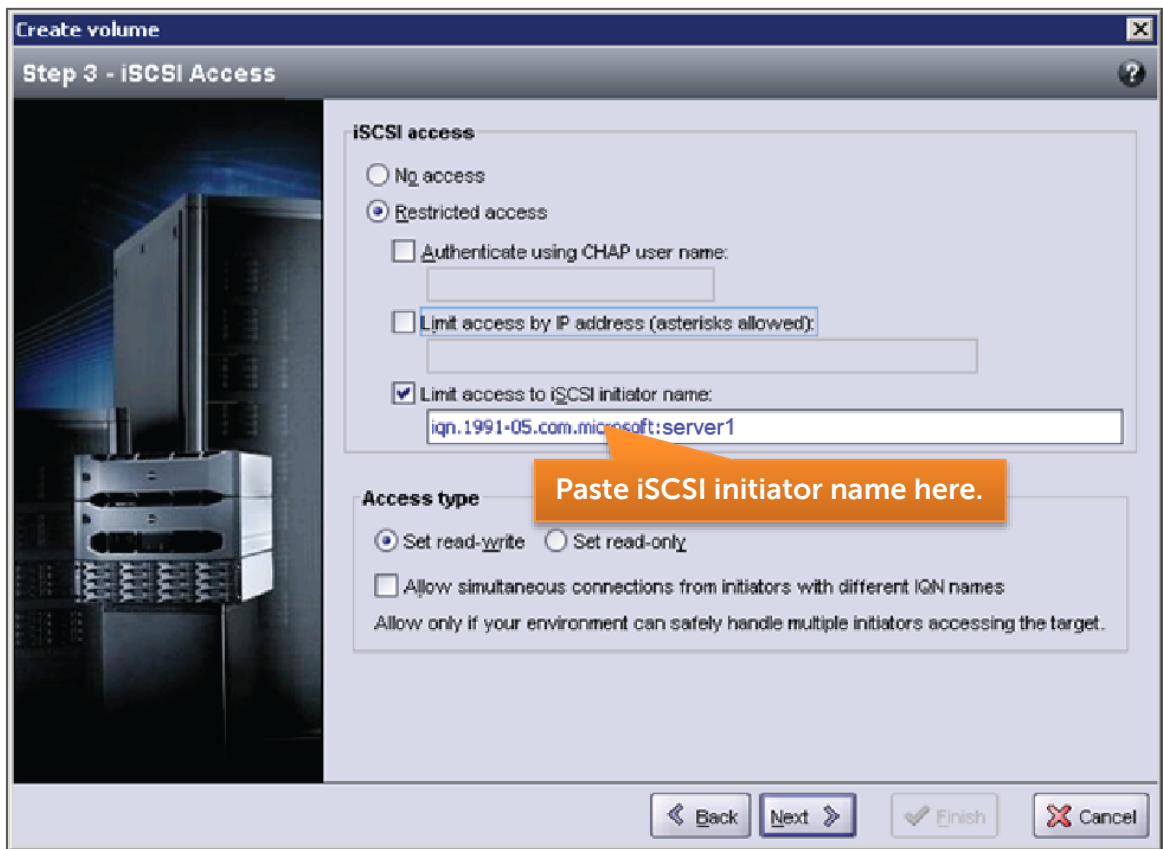
The following steps will be performed at the Windows host that will access a volume on the storage.

1. On the **Start** menu click **Administrative Tools > iSCSI Initiator**.
2. In the **configuration** tab, locate the **Initiator name** field and copy the contents.



3. The next screen image illustrates how to use the iSCSI initiator name to limit iSCSI access.

Tip: Use this screen to edit initiator names for existing volumes.



4. If you need to allow simultaneous connections from initiators with different IQN names, check the box in **Access type**.

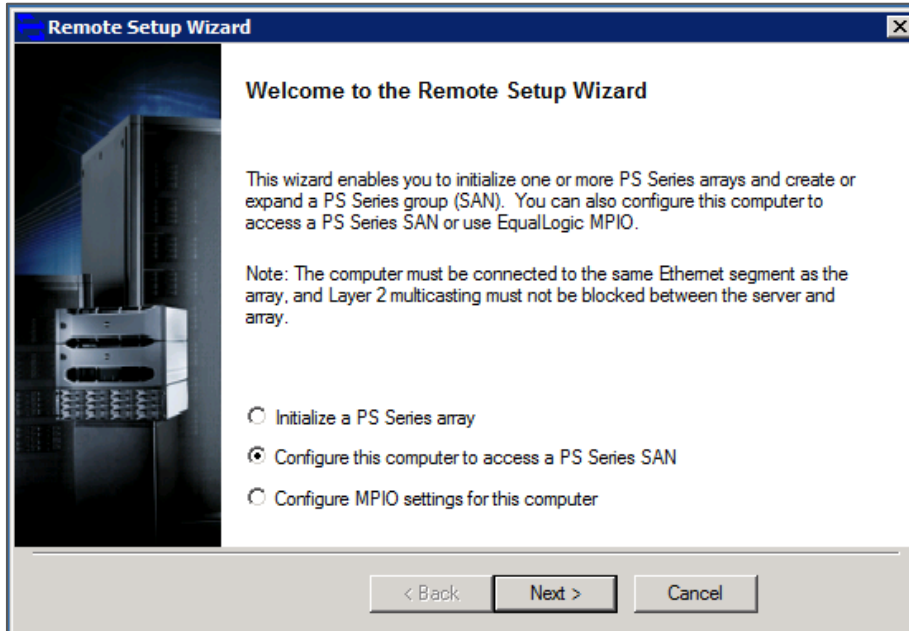
Note: This is usually only necessary if the Windows node will be part of a failover cluster.



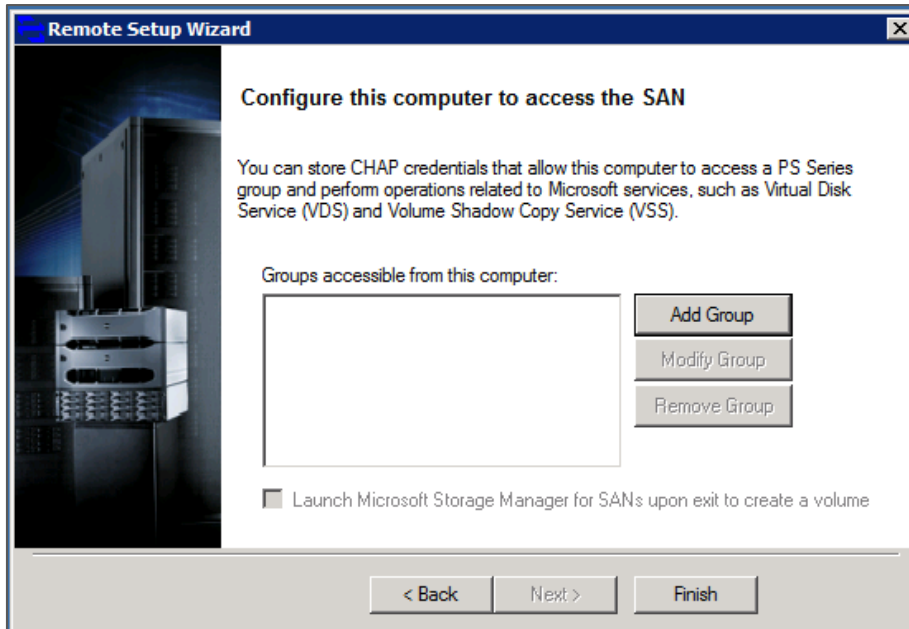
6 Configure iSCSI – target discovery

To configure the host for iSCSI and target discovery, use the remote setup wizard as described in this section.

1. Open the remote setup wizard by clicking **Start > All Programs > EqualLogic > Remote Setup Wizard**.
2. Chose **Configure this computer to access a PS Series SAN**, as shown, and then click **Next**.



3. Click **Add Group**.



4. Enter the group name and in-band group IP address. Click **Save** and then **Finish**.

Add or Modify Group Info [X]

Group name:

Group IP address:

CHAP credentials for VDS/VSS access to group

User name:

Password:

Use CHAP credentials for iSCSI discovery

[More Information](#)

CHAP credentials for access to Smart Copies

User name:

Password:

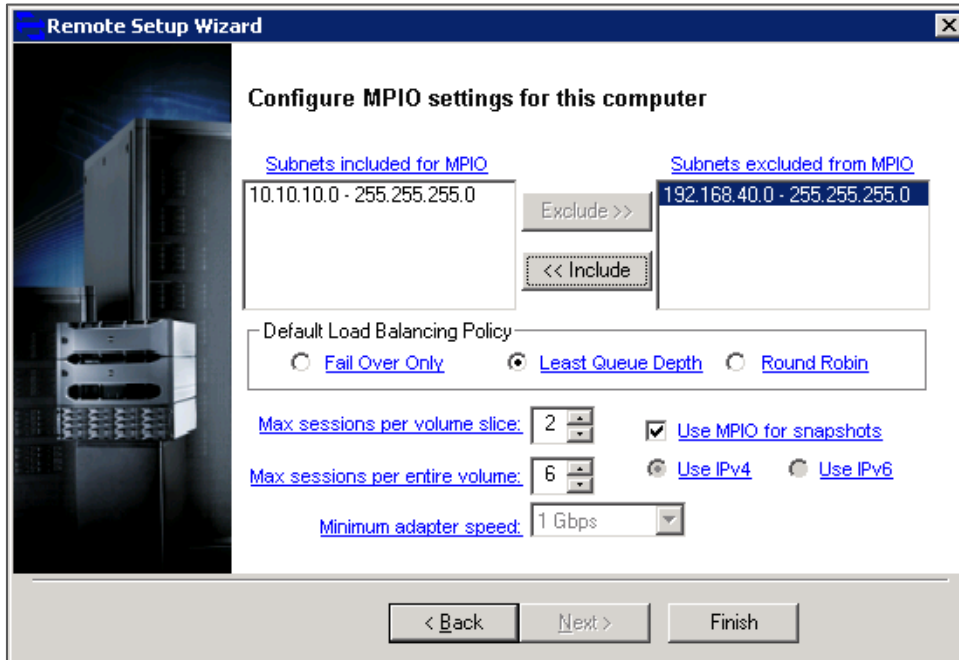


7 Remote setup wizard to configure host MPIO settings

1. Open the remote Setup wizard by clicking **Start > All Programs > EqualLogic > Remote Setup Wizard**.
2. Select the radio button for **Configure MPIO settings for this computer** and click **Next**.

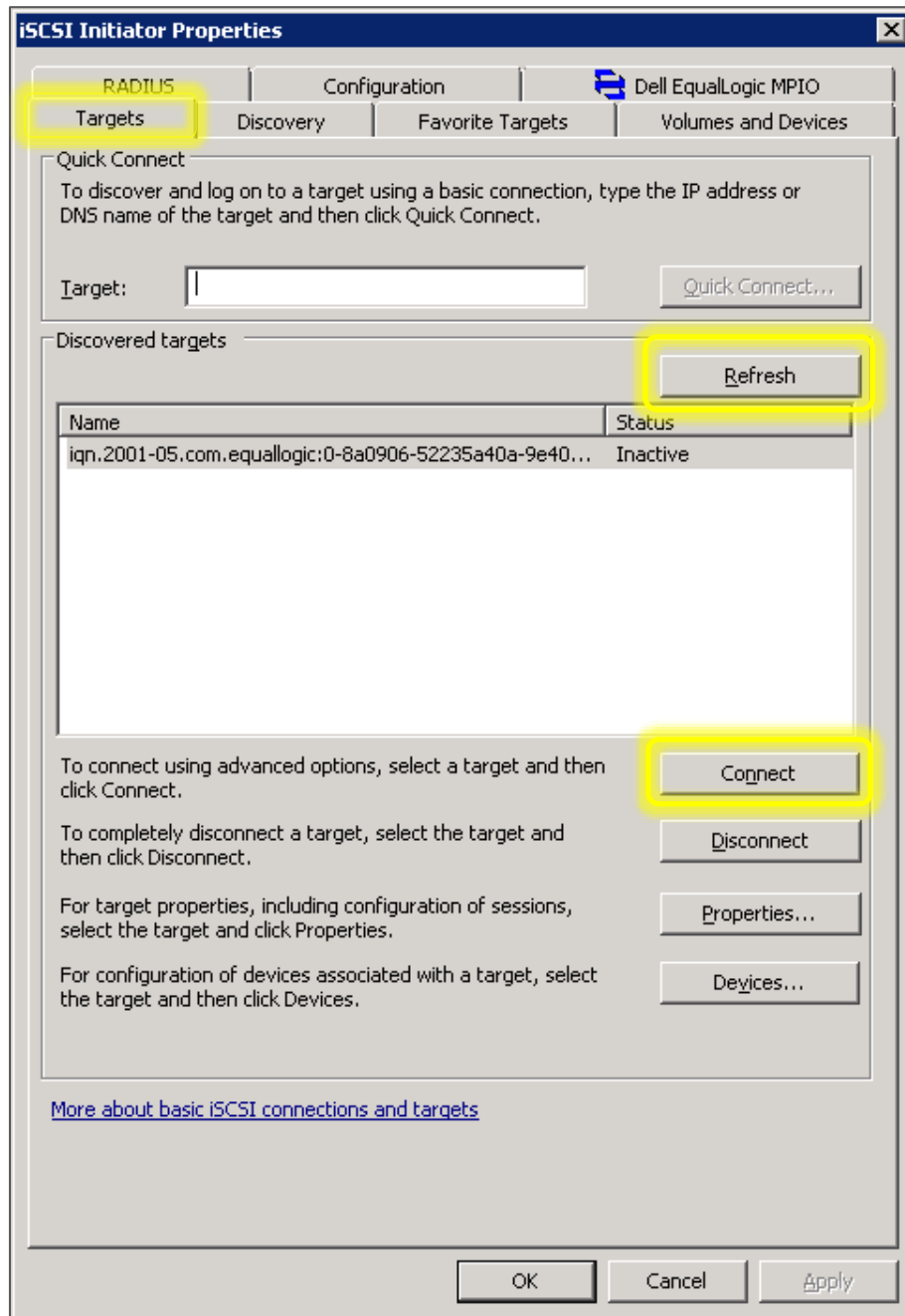


3. In the **Configure MPIO settings for this computer** screen, exclude any network not used for iSCSI SAN traffic (for example, the client LAN or management network). Click **Finish**.

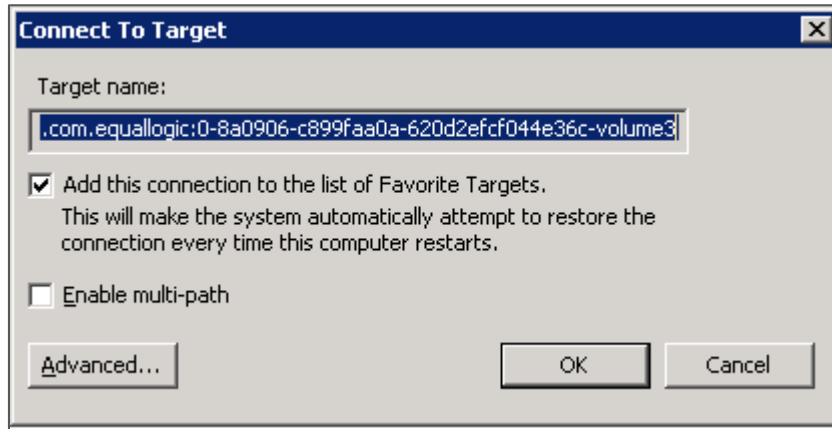


8 Volume access

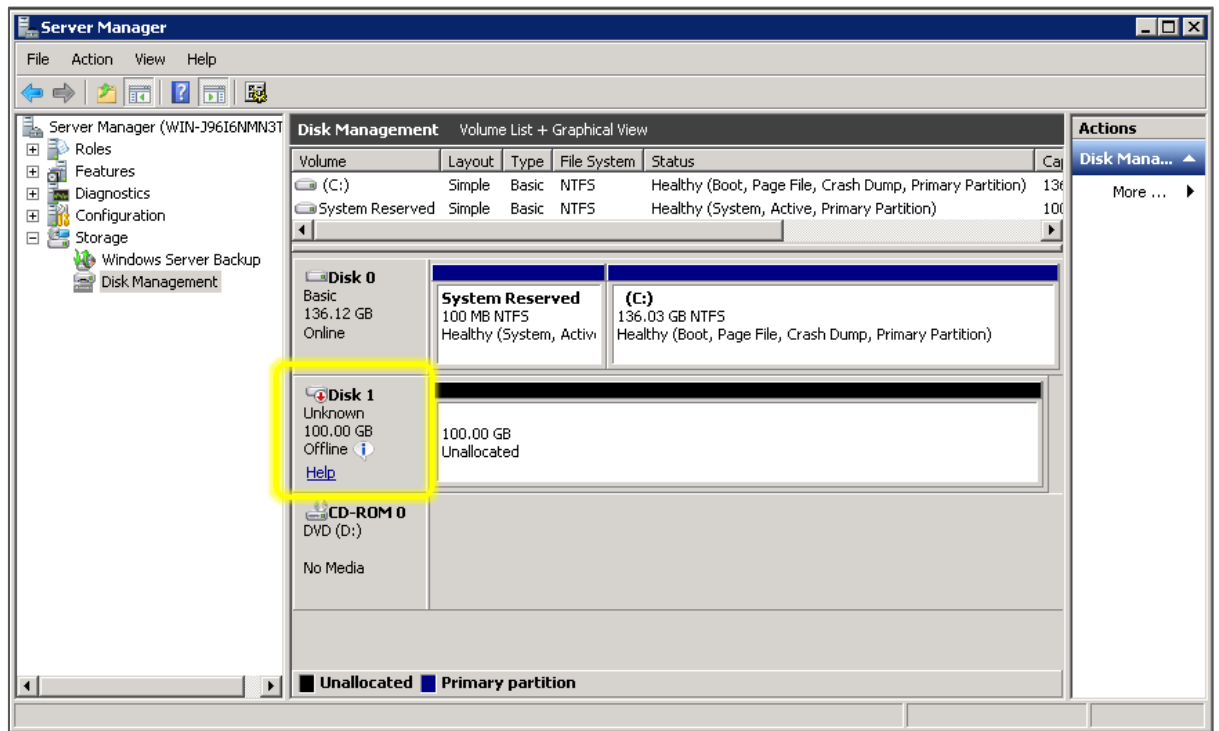
1. Open the iSCSI Initiator on a Windows host machine by clicking **Start > Administrative Tools > iSCSI Initiator**.
2. Click the **Targets** tab to view the iSCSI target for the volume created on the array member.
3. Click **Refresh** to rescan the iSCSI targets.
4. Select a target to connect to and click **Connect**.



- Click **OK** to confirm the connection.
Repeat steps 4 and 5 of "Volume access" for the remaining volumes.



- Click **OK** to close the iSCSI initiator properties.
- Open **Start > Administrative Tools > Server Manager**.
- Click **Storage > disk management**.
- Right click the new (unknown) disk and choose **online**.



10. Right click the new (uninitialized) disk and choose **Initialize Disk**.
 11. Choose MBR or GPT (for volumes greater than 2TB in size) and then click **OK**.
 12. Right click on the unallocated volume and choose **Simple Volume**.
- Follow the steps in the wizard to create a partition and format the volume for Windows.

