



VIRTUALIZATION MANAGER™ SINGLE SERVER EDITION

GETTING STARTED GUIDE

This manual provides a quick introduction to Virtual Iron® software, and explains how to install and use Virtual Iron® Single Server Edition to configure and manage virtual servers.

Product: Virtual Iron® Virtualization Manager, Single Server Edition

Version: V4

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Installing Virtual Iron Single Server Edition

This quick start guide takes you through the process of installing Virtual Iron® Single Server Edition. For information on creating and configuring virtual servers after installation, refer to the Virtual Iron® Virtualization Manager™ Administrator Guide.

- ▶ *This chapter describes how to install the product and connect to the Virtual Iron® management server.*
- ▶ *Chapter Two describes how to create a virtual server.*

About the Single Server Edition

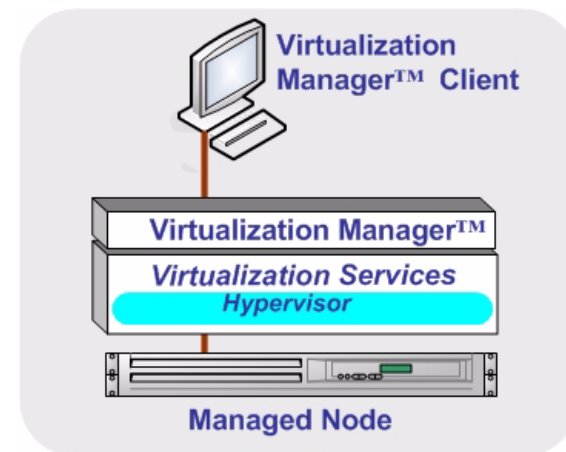
Virtual Iron® Single Server Edition (SSE) is a free, licensed product that allows you to create and manage virtual servers and virtual infrastructure on a single server.

The product consists of three components, which reside on the server it is managing:

- ▶ **Virtualization Manager**—A high-performance client/server management framework
- ▶ **Virtualization Services**—A software component that performs many functions ordinarily provided by standard operating systems
- ▶ **Hypervisor**—An abstraction layer that mediates between the physical hardware and the Virtualization Services component

The installation process identifies all local and remote disks associated with the server and selects a target disk for the product. Installing the product reformats and partitions this disk, wiping away any pre-existing data or applications. After installation, Virtualization Manager runs within the virtualization services component—a specialized component that performs many tasks associated with a standard operating system. In addition, Virtualization Manager communicates with underlying hardware resources through the hypervisor.

Virtual Iron SSE is designed for installation on a server's local drive. *Virtual Iron® strongly recommends that you disconnect the product from the SAN infrastructure prior to proceeding.*



1: Download the Product

Begin by downloading the product from Virtual Iron® web site:
(<http://www.virtualiron.com/Free>)

Enter your email address, and click [Download Now](#).

After downloading the product, burn the iso file onto a CD.

2: Choose a Server

Choose a server for the installation from the Virtual Iron® compatibility list at
<http://www.virtualiron.com/products/servers.cfm>

Note: You must install SSE on this machine's hard drive. Installing to a FibreChannel SAN storage disk is not supported.

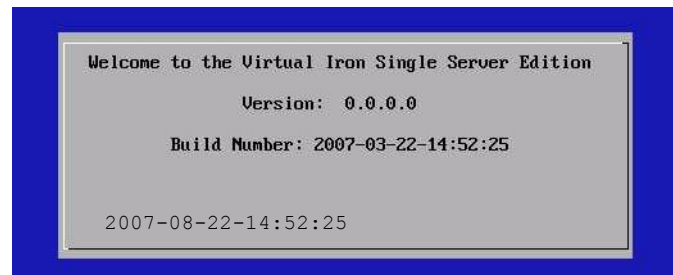
Your server must be Intel® or AMD® based and meet the following requirements:

- ▶ **Processor:** AMD or Intel®, VT-enabled
- ▶ **Networking:** One Ethernet card
- ▶ **Resources:** 2GB RAM; 36 GB storage
- ▶ **Hard drive:** Yes
- ▶ **CDROM drive:** Yes

3: Install the Single Server Edition

If the server on which you intend to install the product has a SAN connection, disconnect from the SAN prior to the installation.

Step 1. Insert the CD prepared from the product download into your system's local drive. The installation process begins with this welcome screen.

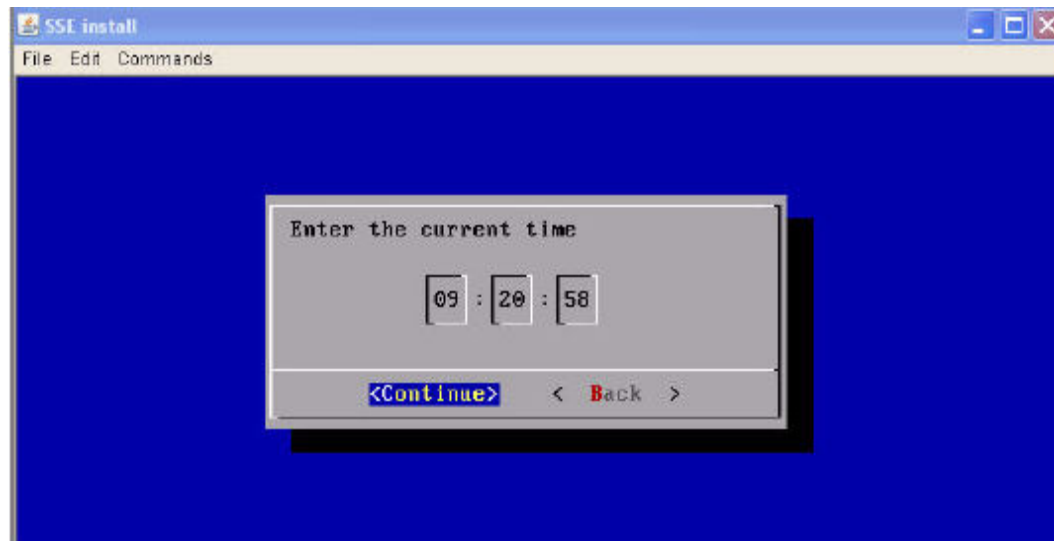
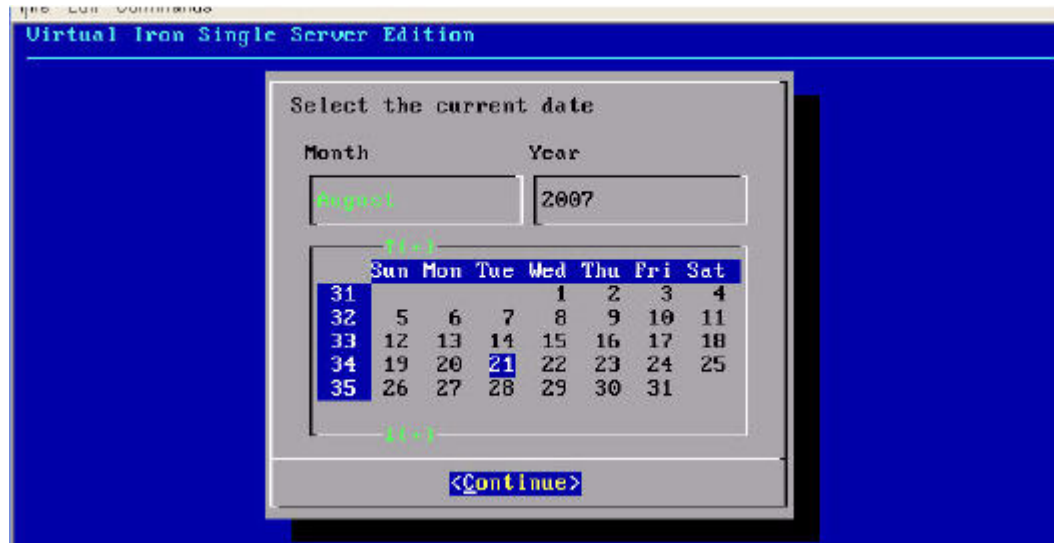


As the installation proceeds, you are prompted to read and accept an end-user license agreement. You must accept this agreement to continue. The installation also provides information on the underlying system, including the hard disks it discovers.

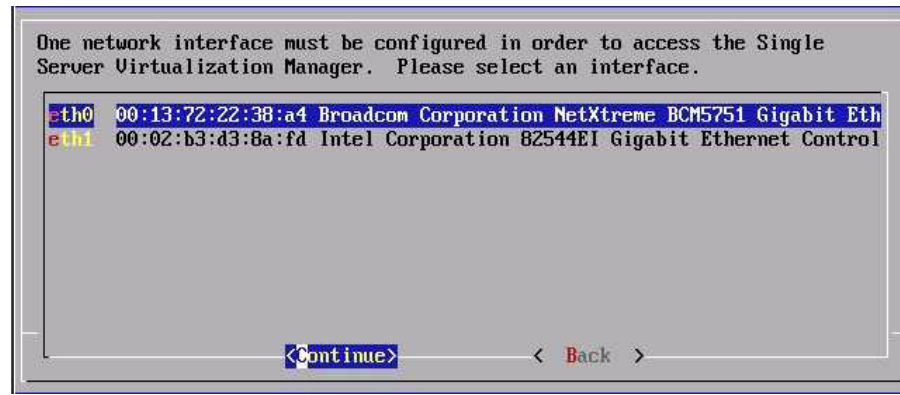
- Step 2.** The **Preserve Installed Guest** screen appears. If you had previously installed Virtual Iron SSE on one disk, you would have the option of reformatting that disk or allowing the default installation. Allow the default, **Install Normally**.
- Step 3.** After gathering information on all accessible disks, the installation determines which disk to use. The installer lists all disks as Local, iSCSI, or FC. You are presented with a window similar to this one, which shows which disk will be partitioned for the installation: Click **Continue**.



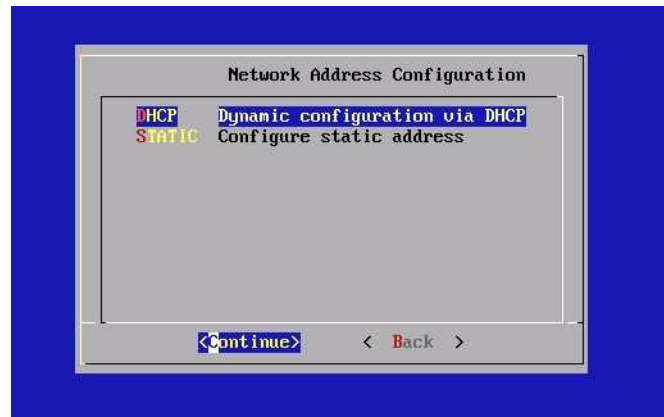
Step 4. The date and time are derived from the operating system in which SSE resides. In the next two dialog boxes, adjust the date and time, if necessary. To do so, press the **TAB** key so that the cursor skips from **Continue** to the field you want to adjust in the dialog box. Use your keyboard's **Up** and **Down** arrows to navigate through the calendar or to set the time..



Step 5. Select which Ethernet interface you will use to manage the product, as shown on this screen.

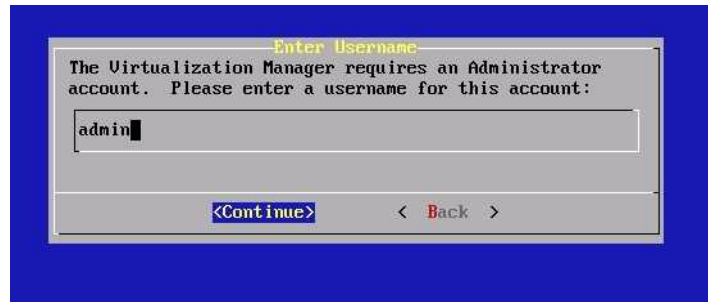


Step 6. Use DHCP to assign an IP address to the server, or assign a static IP address. *It is important that you do not change the management IP address after assigning it.* For this reason, Virtual Iron® strongly recommends that you either choose a static IP address, or a DHCP-assigned address with a long lease time. The installer prompts you to choose an IP address as follows:

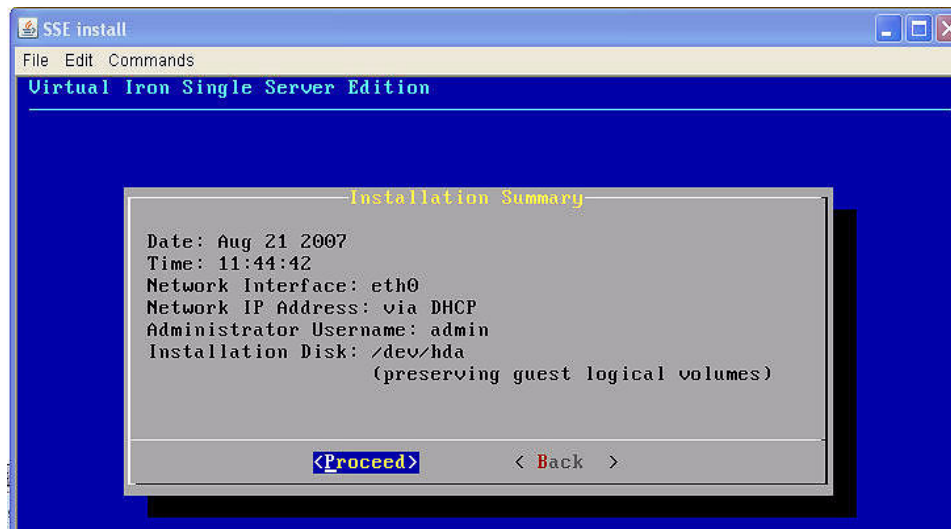


Choose DHCP if you want your network DHCP server to assign an address to the node, or choose STATIC. If you choose STATIC, you are prompted for an IP address, network mask, and default gateway. Make your choice, and click **OK**.

- Step 7.** At the prompt, enter an administrator account and password for the product. The default user name is *admin*. Accept this name or enter a new name and click **Continue**. Enter a password for the account.



- Step 8.** The **Installation Summary** screen appears, showing the SSE configuration options you have selected. If you need to make changes, tab to **Back**.



Step 9. Verify that the disk identified for the installation is the one you want to use. *The installation will partition the disk and wipe it clean.* You are issued this final warning.

When you click Proceed, a screen with a progress bar shows the percentage complete. The installation takes a few minutes.



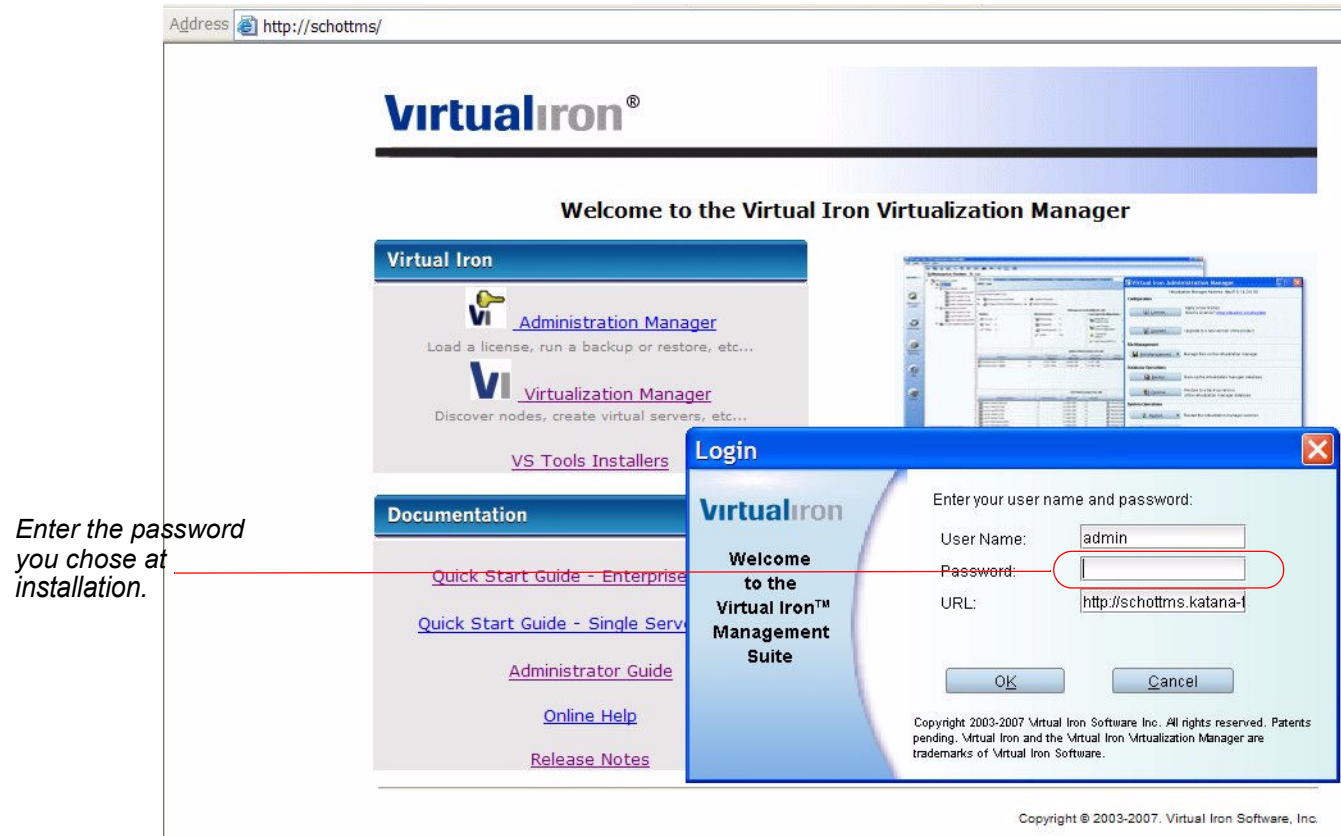
Step 10. When the installation is complete you are presented with this screen:



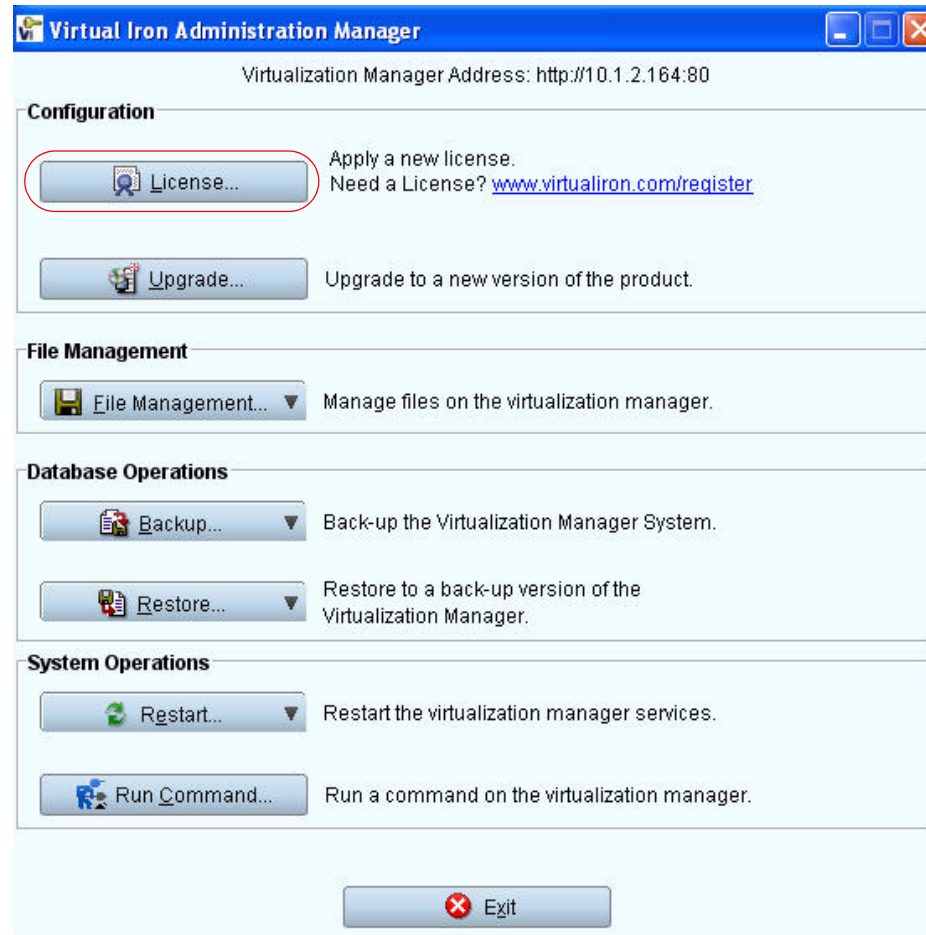
Remove the CD from the drive, and click **OK** to reboot the management server. When the server comes up, you are presented with its IP address, as in this example.

```
Welcome to the Virtual Iron Single Server Edition
VirtualIron Release 4.0.0.0 / 2007-08-21-18:24:14
IP address: 123.45.6.7
Please open a browser to the URL:
    http://123.45.6.7/
and follow the "Administration Manager" link to install your license.
```

Step 11. Browse to this server from another system on the network. Upon connection, this screen appears. Click **Administration Manager**. When the Welcome banner appears, enter the password you chose at installation time.

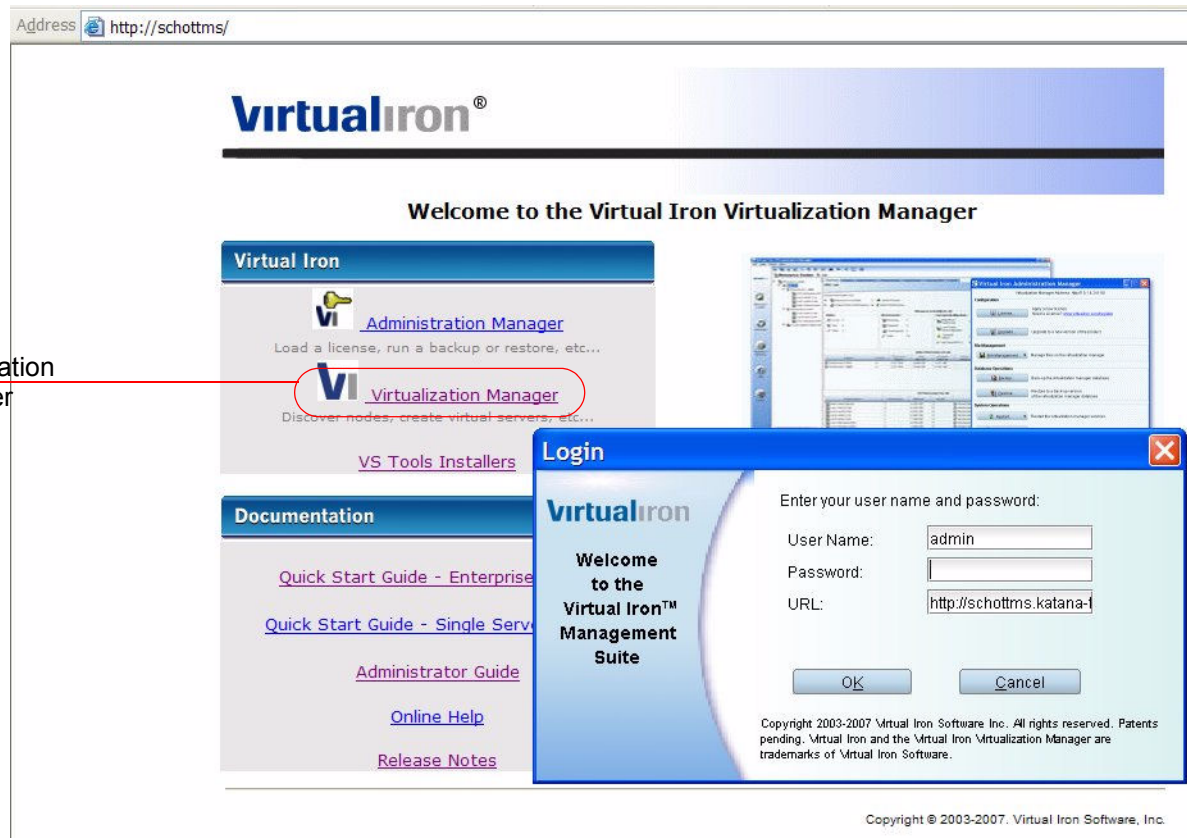


Step 12. If you do not already have a license, go to www.virtualiron.com/Register to get one. Click **License**, and browse to the license file emailed to you by Virtual Iron®.



Step 13. Click **OK** to return to the launcher page and select **Virtualization Manager** as shown. When the login screen appears, enter the password you provided during product installation. See the next section or the *Virtual Iron® Virtualization Manager Administrator Guide* for information on configuring and using the product.

Launch
Virtualization
Manager



Creating and Booting a Virtual Server

Virtual Servers (VSs) can be configured to access local disks and logical disks.

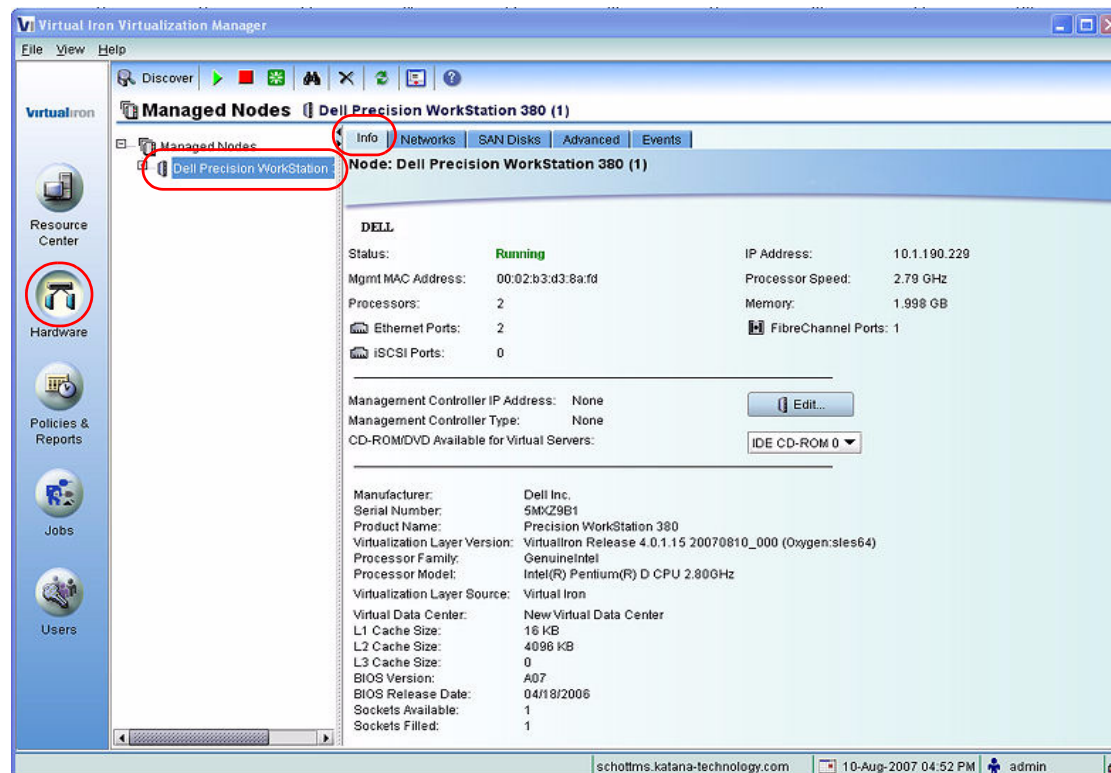
Managed storage on a local disk refers to disks used to configure and store *logical disks*. Virtual Iron supports the creation of logical disks that can be cloned and exported for use by virtual servers.

The succeeding example defines how to create a logical disk on a local drive. See the **Virtual Iron® Virtualization Manager™ Administrator Guide** for details.

Check Hardware Components

When you log in to Virtual Iron SSE, the Virtualization Manager does an inventory of node components. Before moving on, take a moment to check the components of all nodes

1. Click the **Hardware** button in the application toolbar.
2. Select the managed node and click the **Info** tab to get detailed information Virtualization Manager has discovered for the node. The components of each node are listed in the following categories:
 - Ethernet ports (for connection to external networks)
 - IDE drive (CD-ROM)
 - Fibre channel ports (For connection to SAN)
 - SCSI/SATA (local hard drives)/USB
 - iSCSI (Internal SCSI adapters, for SAM connection. Set the Networks tab,)



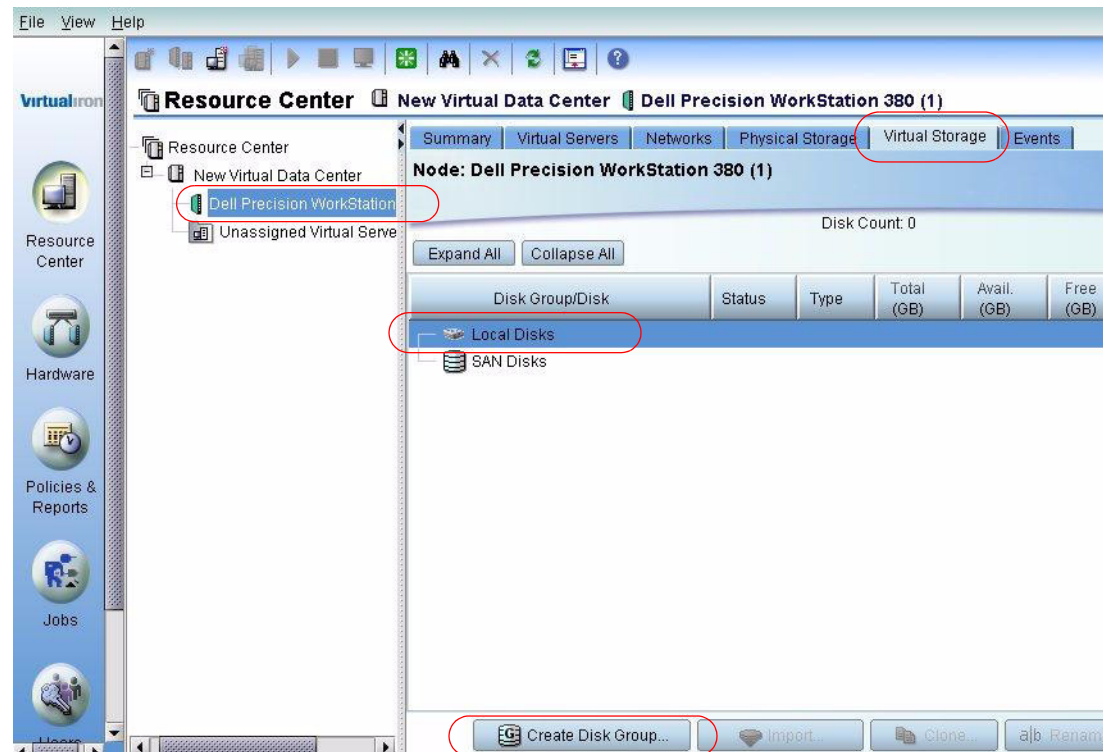
Create a Virtual Server

To create and run a VS, you need to create the VS, configure the boot and runtime options, assign a network to it, and define its storage. This process is covered in these steps:

- [Create a Logical Disk](#)
- [Create a Virtual Server](#)
- [Configure the Network Adapters](#)
- [Specify Virtual Server Boot Options](#)
- [Configure Virtual Server Processors, Memory, and Priority](#)
- [Start the VS Installation](#)
- [Install VS Tools for Windows® Guests](#)

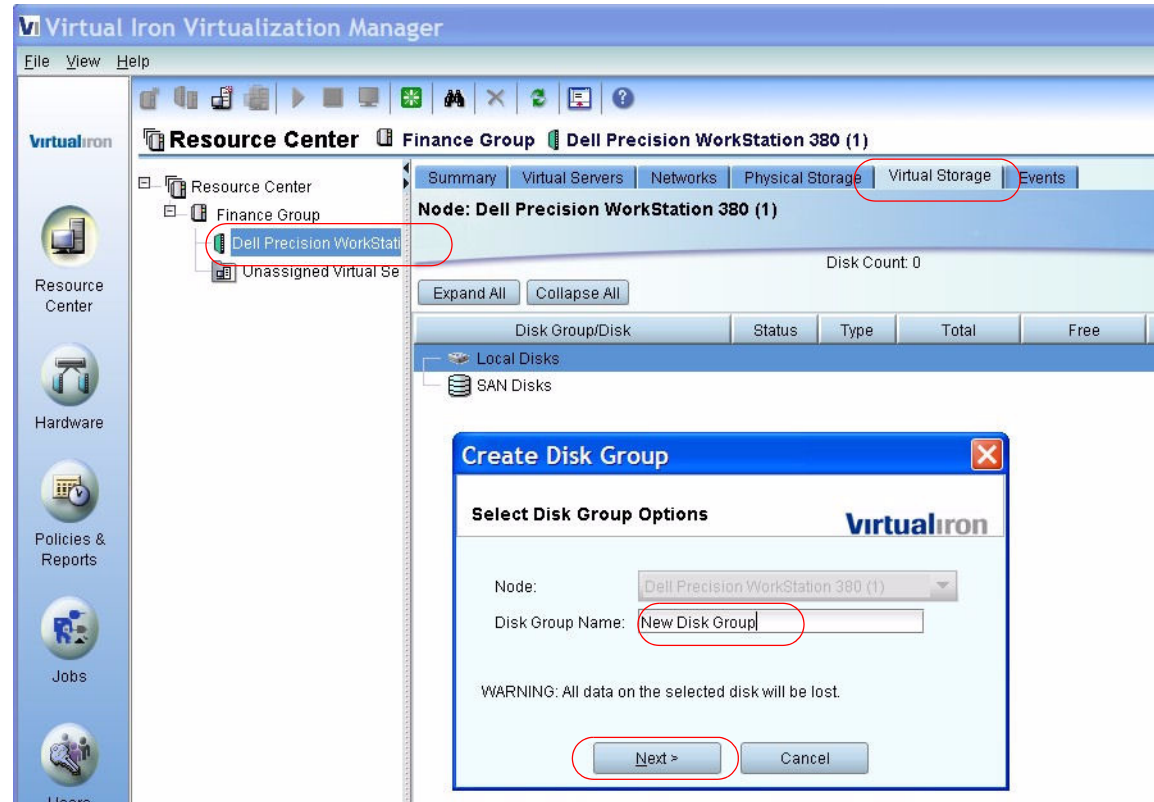
Create a Logical Disk

1. In the Resource Center, select your node and then select the **Virtual Storage** tab.
2. Select **Local Disks**, and click **Create Disk Group...**



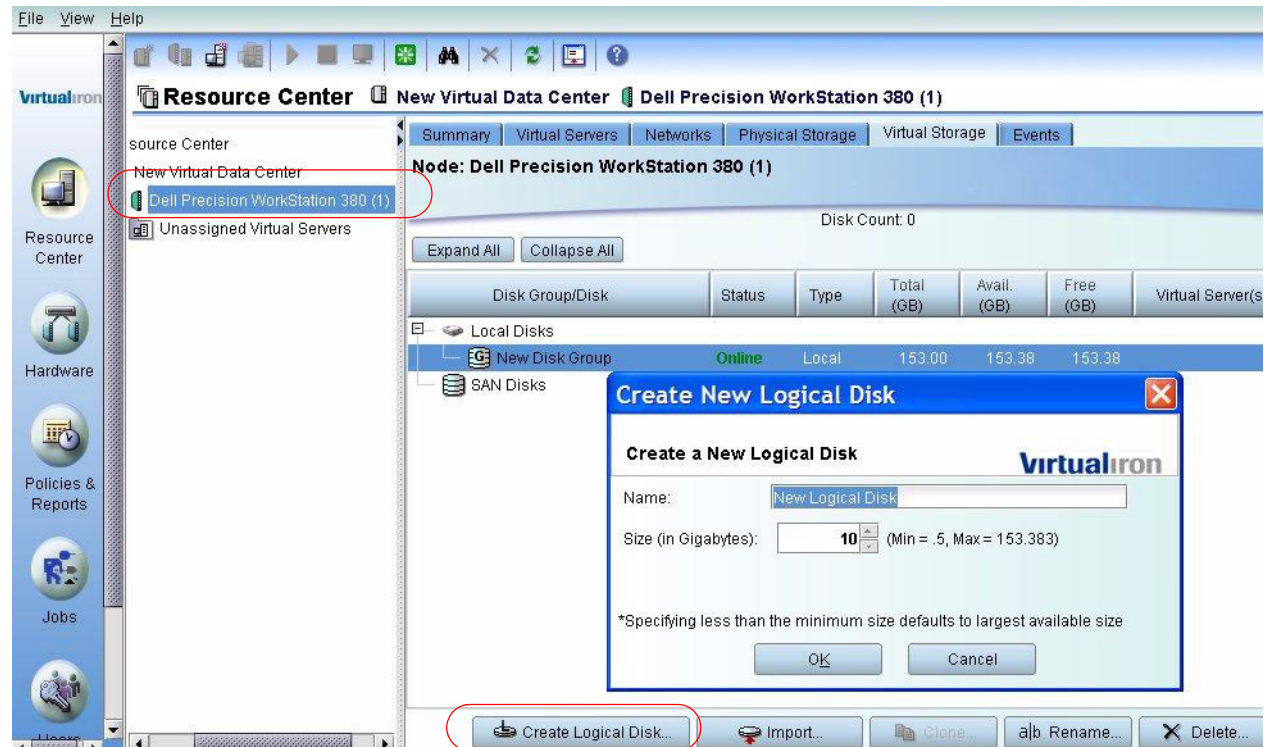
3. In the dialog window that appears, give the Disk Group a name, or keep the default name. Click **Next>>**.

4. In the **Create Disk Group/Options** window, rename the Disk Group, or keep the default name. Click **Next**.



5. Click **Commit**.

6. Select the Disk Group, and click **Create Logical Disk...** Rename the logical disk if desired. Click **OK**.

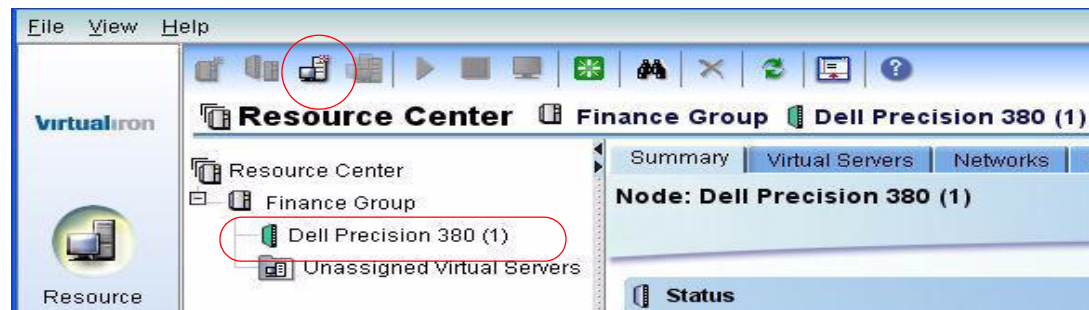


- A logical disk can only be assigned to a virtual server.
- Choose a size for the logical disk that is just large enough to accommodate the virtual server. You can use the remaining space for other VSs.

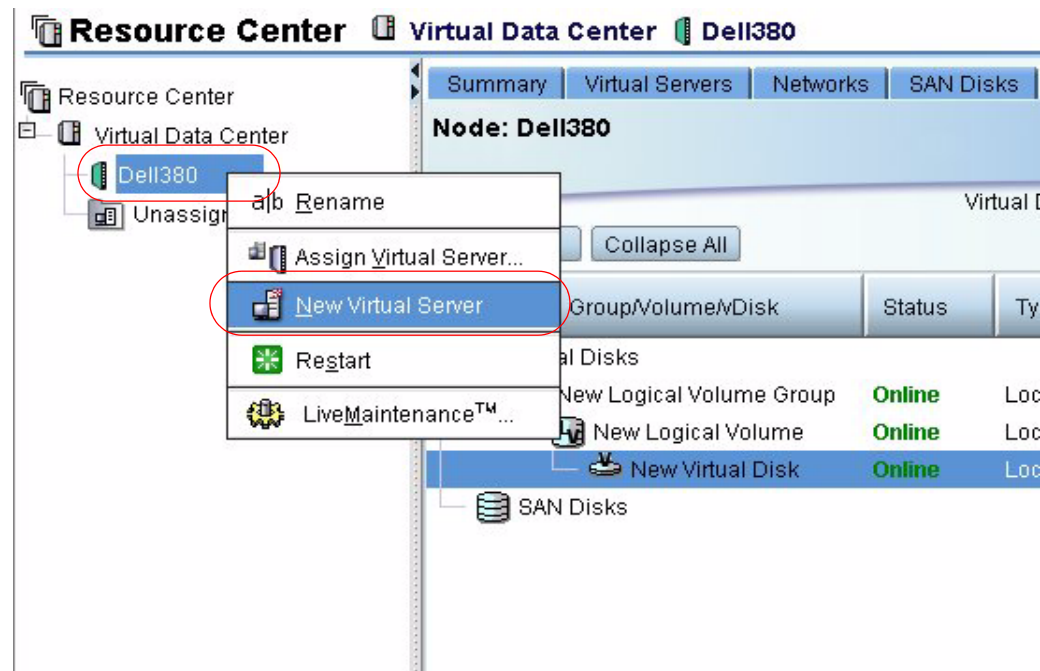
Create a Virtual Server

1. To access the Virtual Server Wizard, use one of the following methods:

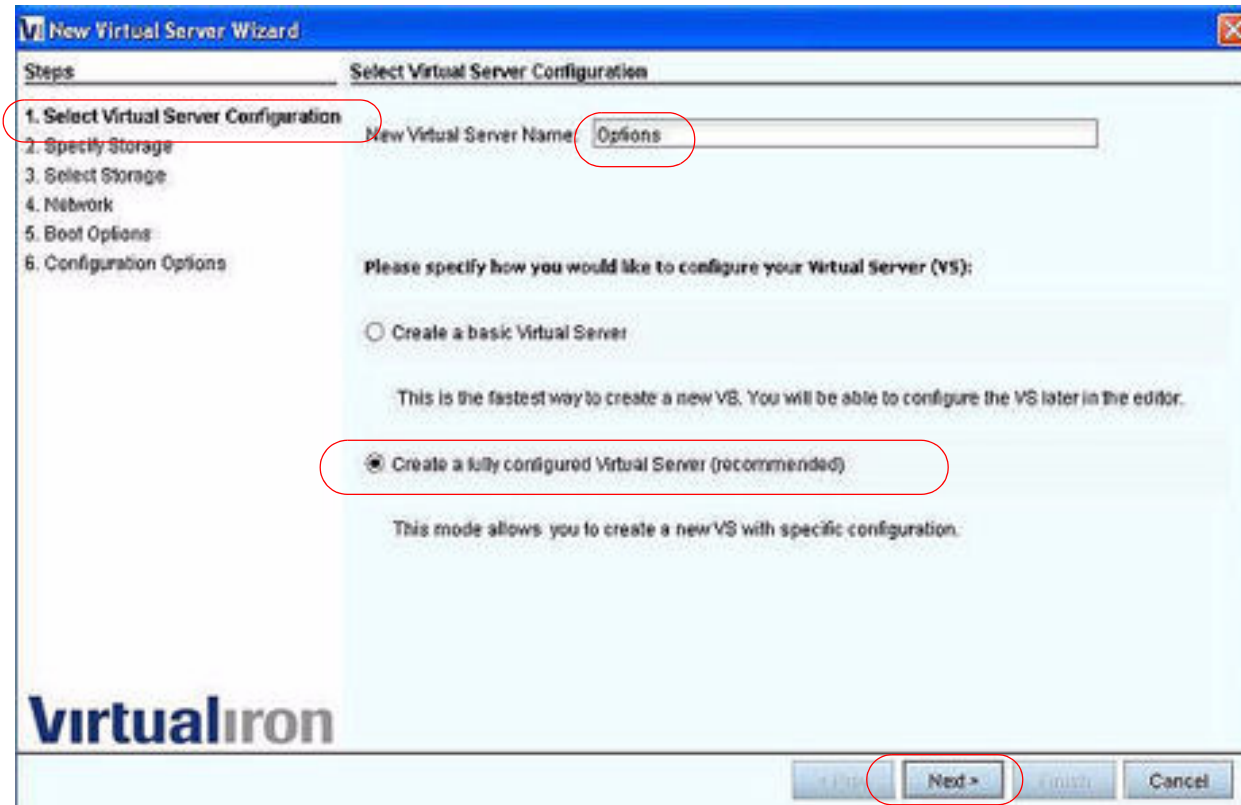
- Select the node you added earlier, then click the **Create New Virtual Server** icon on the application tool bar.



- Or, right click the node you added earlier, and select **New Virtual Server** from the pop-up list.



2. Name the virtual server. In this example, the virtual server has been named **Options**.



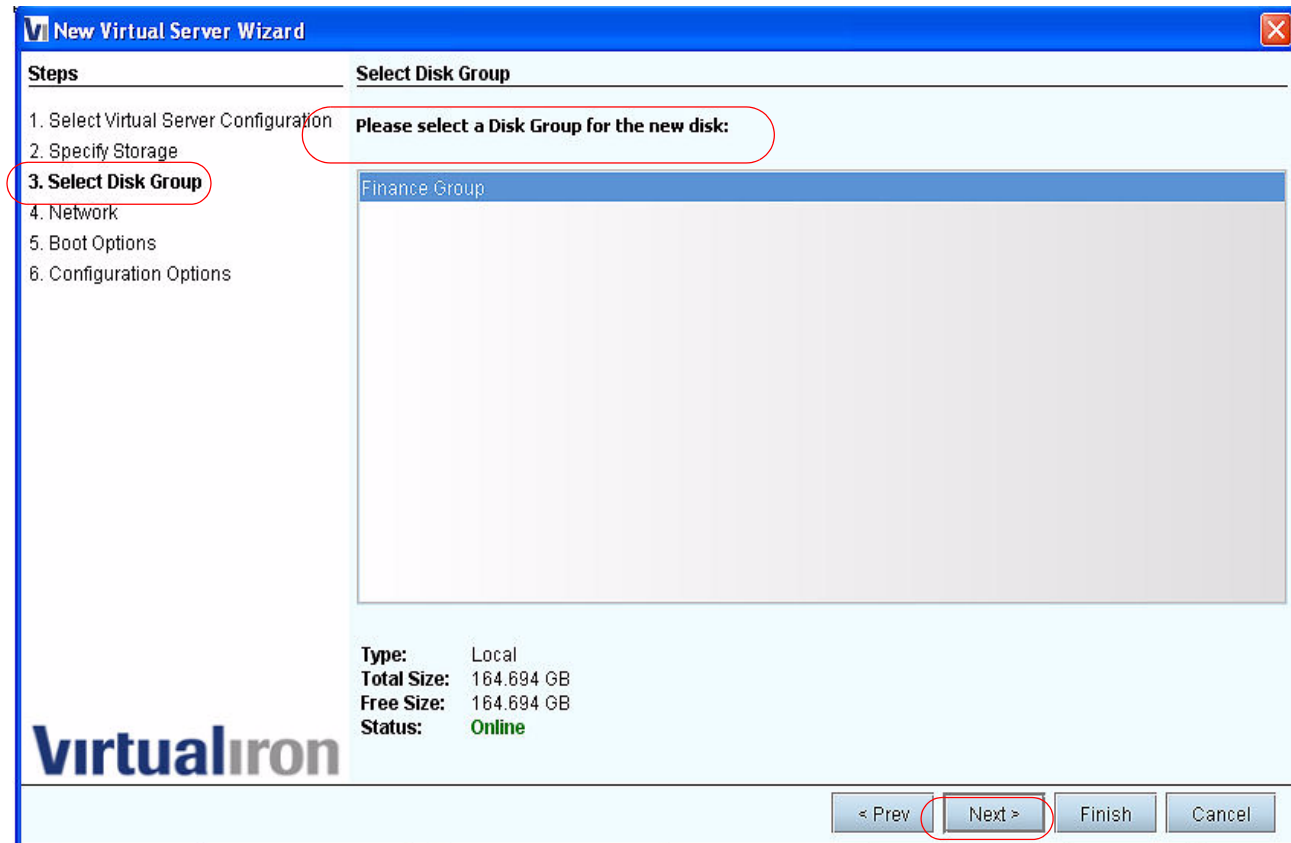
3. Select how you want to configure your virtual server from one of the two options. This example shows the default setting, **Create a fully configured Virtual Server**.
4. Click **Next**.

5. Specify the type of storage you want to use. If you choose **Create New Disk**, as in the example, enter a name for the new logical disk.
6. Select a disk size for the logical disk. **10 Gigabytes** is the default.

The screenshot shows the 'New Virtual Server Wizard' window, specifically the 'Specify Storage' step. On the left, a 'Steps' list shows six steps: 1. Select Virtual Server Configuration, 2. Specify Storage (highlighted with a red circle), 3. Select Disk Group, 4. Network, 5. Boot Options, and 6. Configuration Options. The main area is titled 'Specify Storage' and contains the instruction 'Please specify storage:'. There are three radio button options: 'Use existing Disk' (unselected), 'Create New Disk' (selected and circled in red), and 'Do not specify storage' (unselected). Below the 'Create New Disk' option, there is a text field for 'Disk Name' containing 'New Logical Disk'. Below that is a 'Disk Size' section with a spinner box set to '10' (circled in red) and the text 'Gigabytes (Max = 164GB)'. At the bottom right, there are four buttons: '< Prev', 'Next >' (circled in red), 'Finish', and 'Cancel'. The VirtualIron logo is visible in the bottom left corner of the window.

7. Click **Next**.

8. Select the Disk Group in which the newly created logical disk will be placed.
9. Click **Next**.



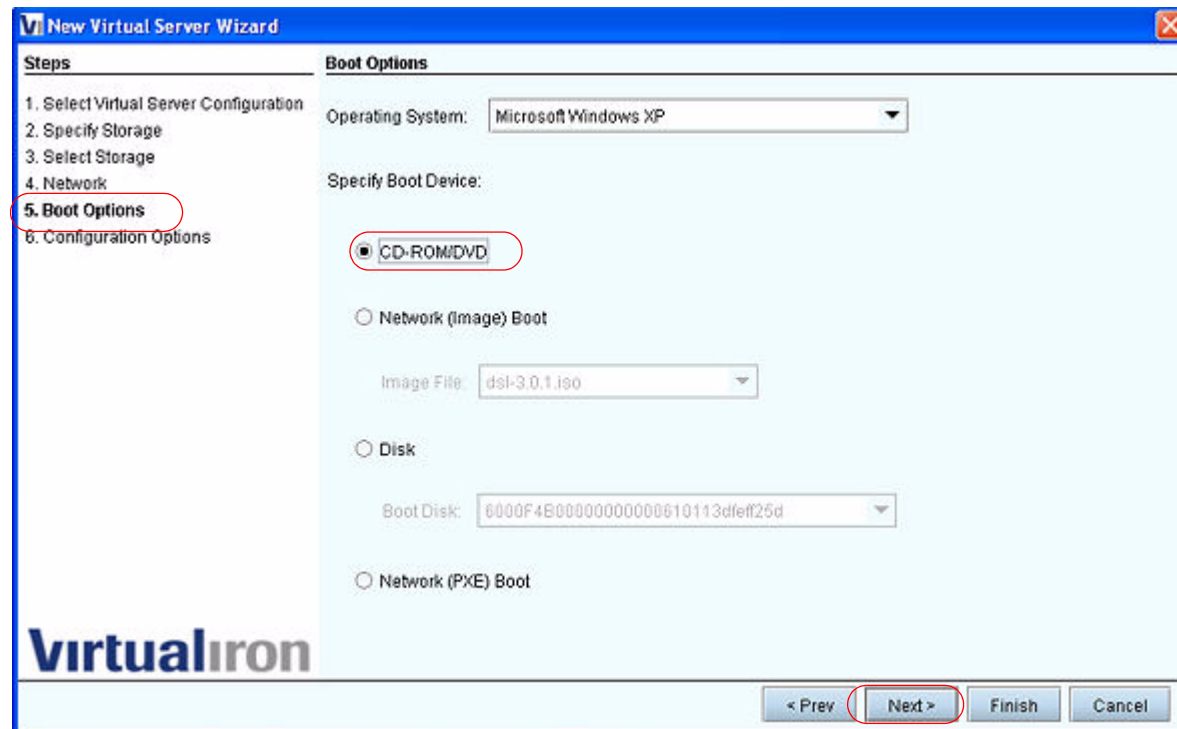
Configure the Network Adapters

1. Select an Ethernet network from the pulldown menu.
2. Select a VNIC from the **Network Adapter** pulldown menu to choose a specific VNIC from the drop-down list.
3. Click **Next**.

The screenshot shows the 'New Virtual Server Wizard' window, specifically the 'Network' step. The 'Steps' pane on the left lists six steps: 1. Select Virtual Server Configuration, 2. Specify Storage, 3. Select Disk Group, 4. Network (highlighted with a red circle), 5. Boot Options, and 6. Configuration Options. The main area is titled 'Network' and contains the instruction 'Please specify a network:'. There are two radio buttons: 'Specify a network' (selected and circled in red) and 'Do not specify network'. Below the selected radio button, there are three dropdown menus: 'Ethernet Network' (set to 'FinanceNet'), 'Network Adapter', and 'VNIC' (set to '00:0f:4b:00:00:18'). At the bottom right, there are four buttons: '< Prev', 'Next >' (circled in red), 'Finish', and 'Cancel'. The VirtualIron logo is visible in the bottom left corner of the window.

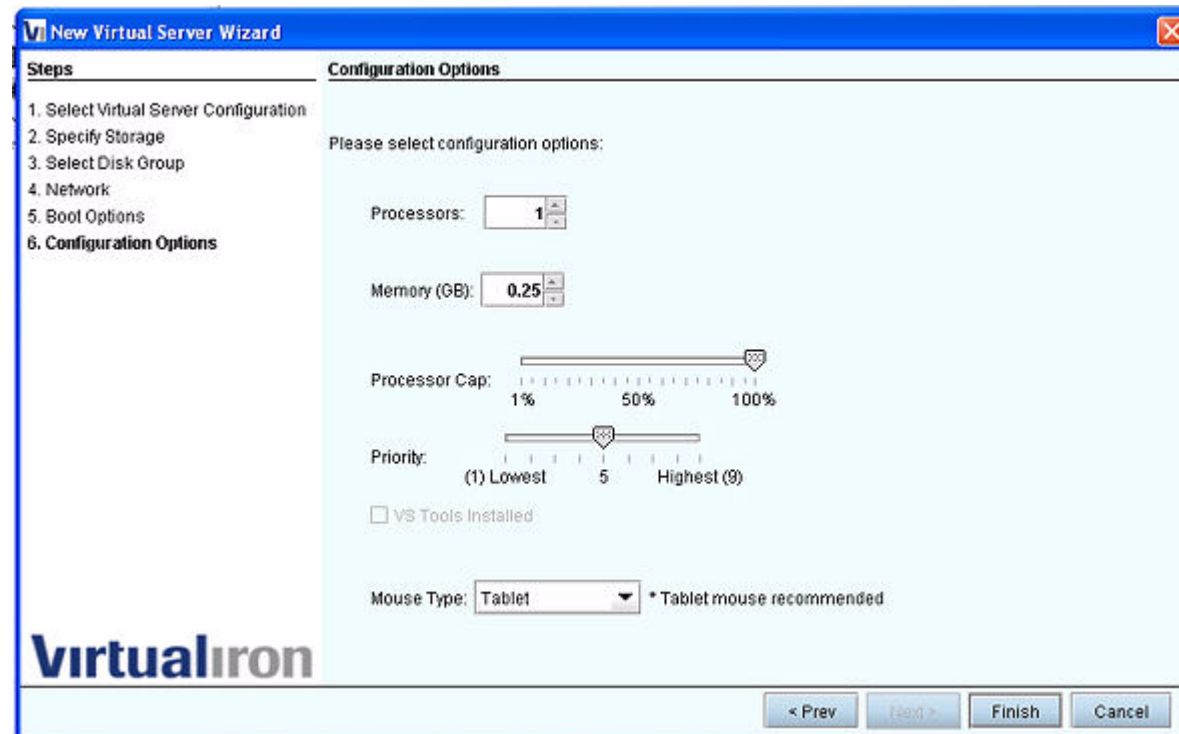
Specify Virtual Server Boot Options

1. In the **Boot Options** pane, select **Microsoft Windows XP** for Operating System. For this example, you will need a Microsoft Windows XP CD and license key later on.
2. Select **CD-ROM/DVD**. This selection tells the VS to boot from the CD ROM device on the node where the VS is located. Later you will install Windows onto a Logical Disk that you specify
3. Place the Windows installation CD into the node on which the virtual server will reside.
4. Click **Next**.



Configure Virtual Server Processors, Memory, and Priority

1. Accept the default values or specify new values for the processors, memory, and priority. For information on these settings, see the *Virtualization Manager Administrators Guide*.
2. Select a setting for **Mouse Type**.
3. Click **Finish** and wait for the operation to complete.

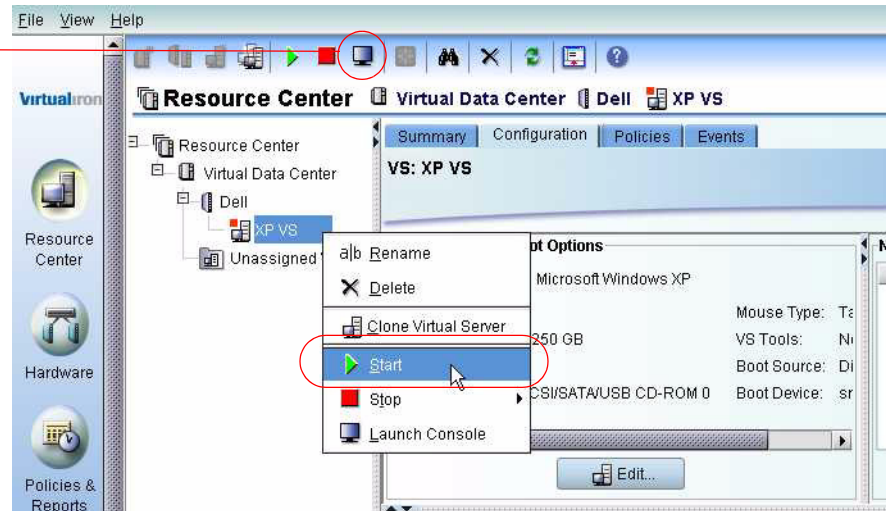


4. Click **Add**.
5. Click **OK**.
6. This brings up the Network Adaptor Configuration dialog box. Click **Add** to add any available VNIC to the virtual server, or use the pull-down menu (as shown) to choose a specific VNIC from the drop-down list. Configure Network

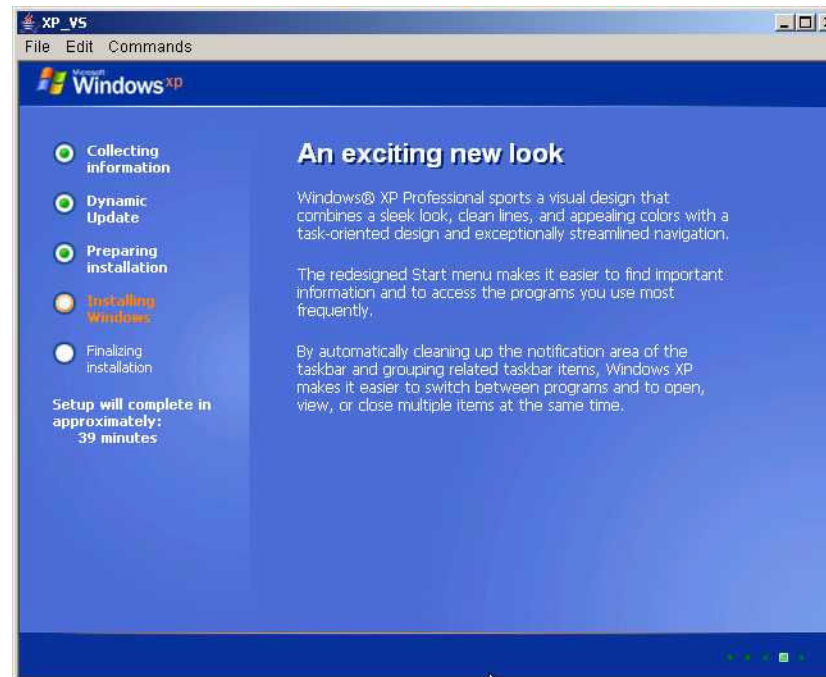
Start the VS Installation

1. Insert the Microsoft Windows XP CD in the CD-ROM/DVD of your node. Select XP VS and choose **Start** from the pop-up menu.

Open a console window



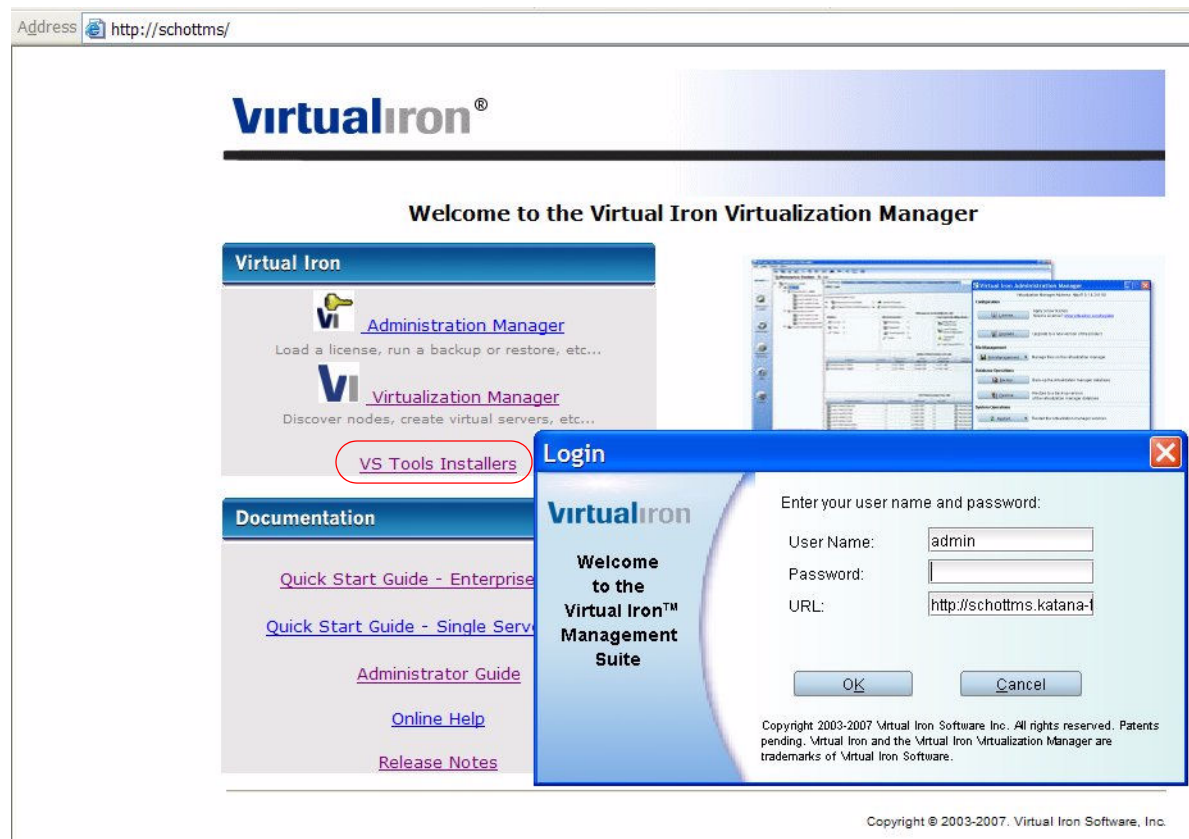
2. Open a console by clicking the console icon on the application toolbar. Windows XP boots in the console window. Follow the instructions to install Windows.



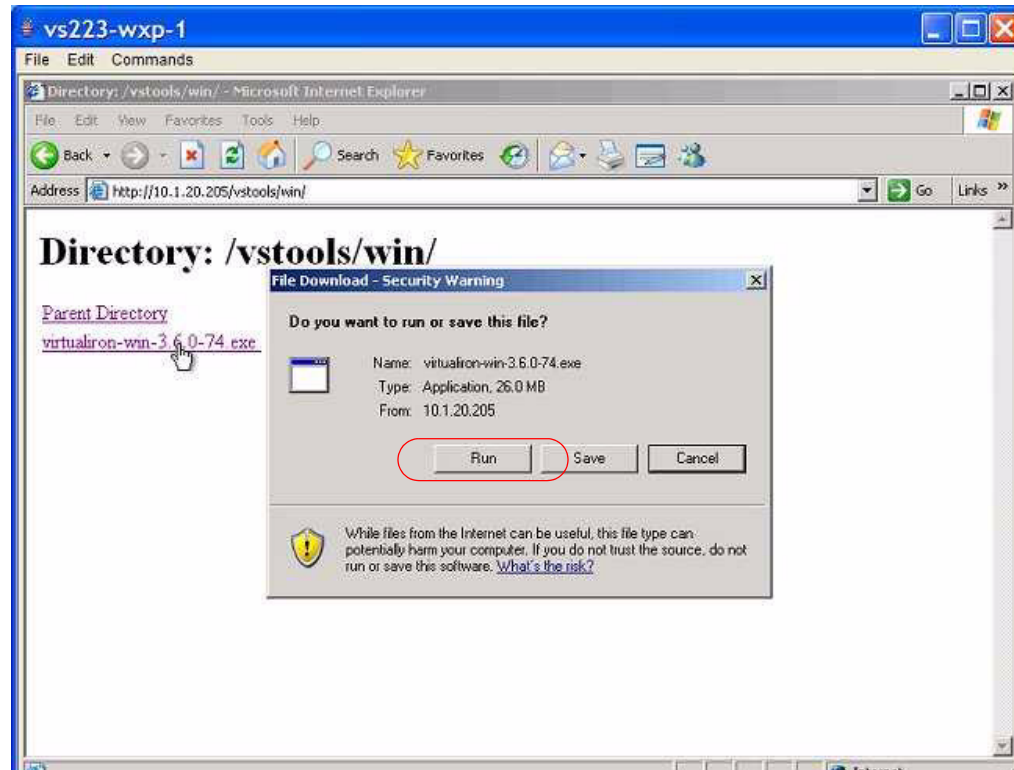
Install VS Tools for Windows® Guests

Virtual Iron® provides a set of VS Tools designed for use with Windows® guest OSs. The steps that follow explain how to install these tools after you have created a virtual server running Windows®.

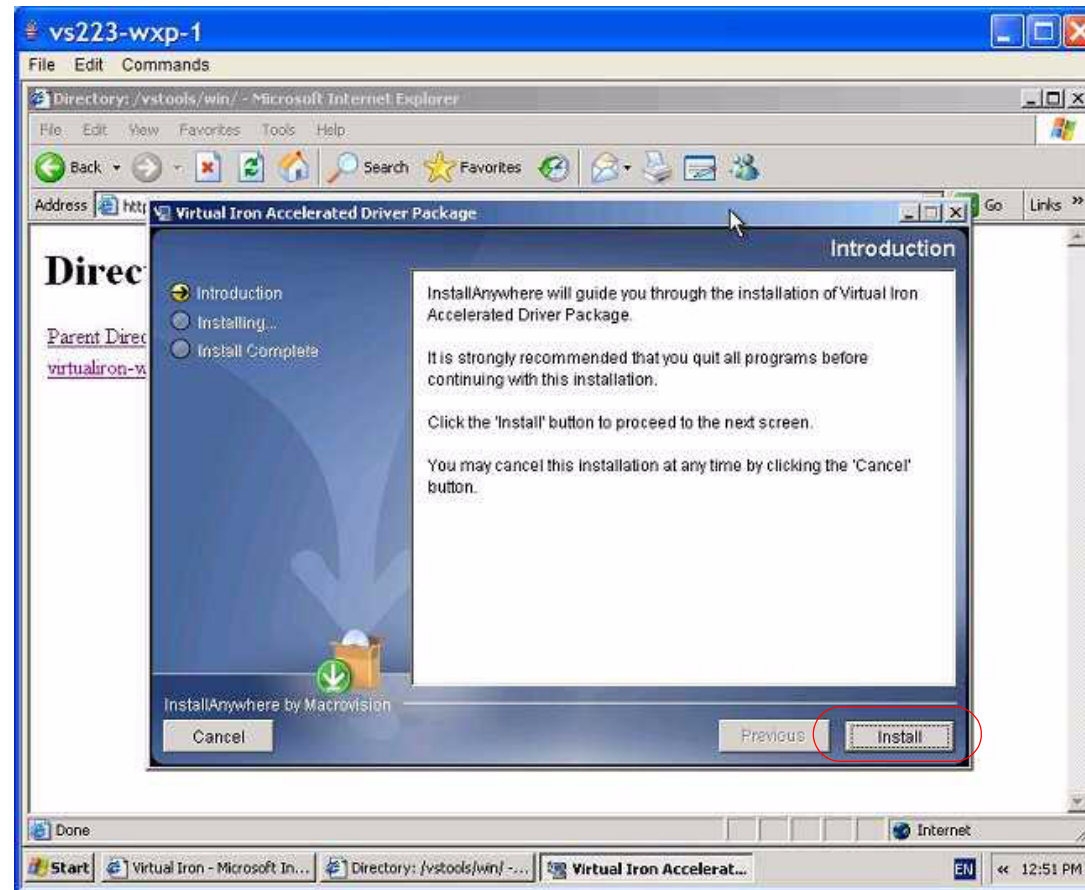
1. Following a successful installation, open a browser within the VS console window. Enter the IP address of the Virtualization Manager to open the Virtualization Manager window.
2. Select the **VS Tools Installers** link.



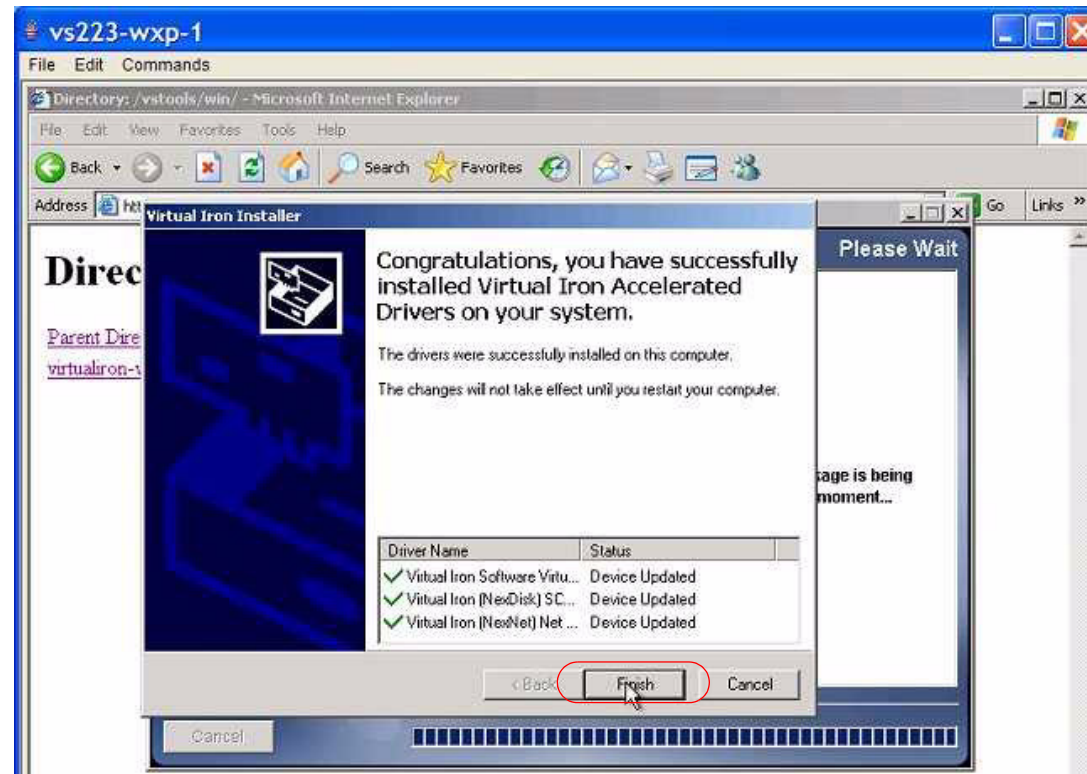
3. Navigate to the “win” location and select **Run**.



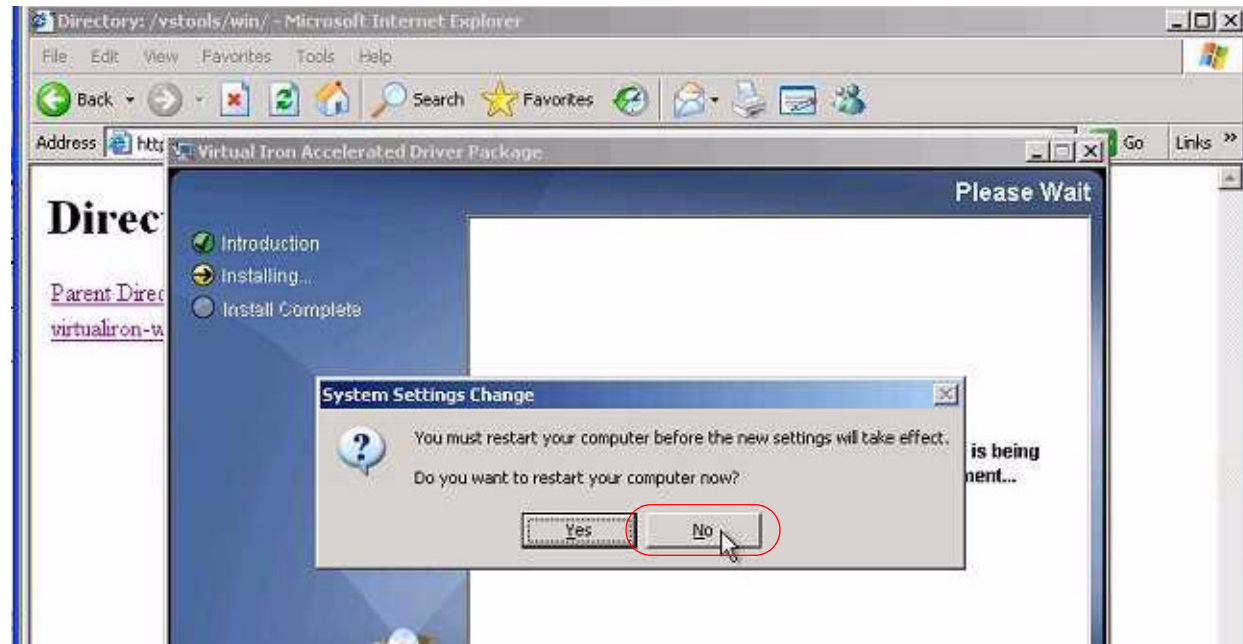
4. Click the **Install** button to perform the installation.



5. At the end of the installation, the following screen appears. Click **Finish**.



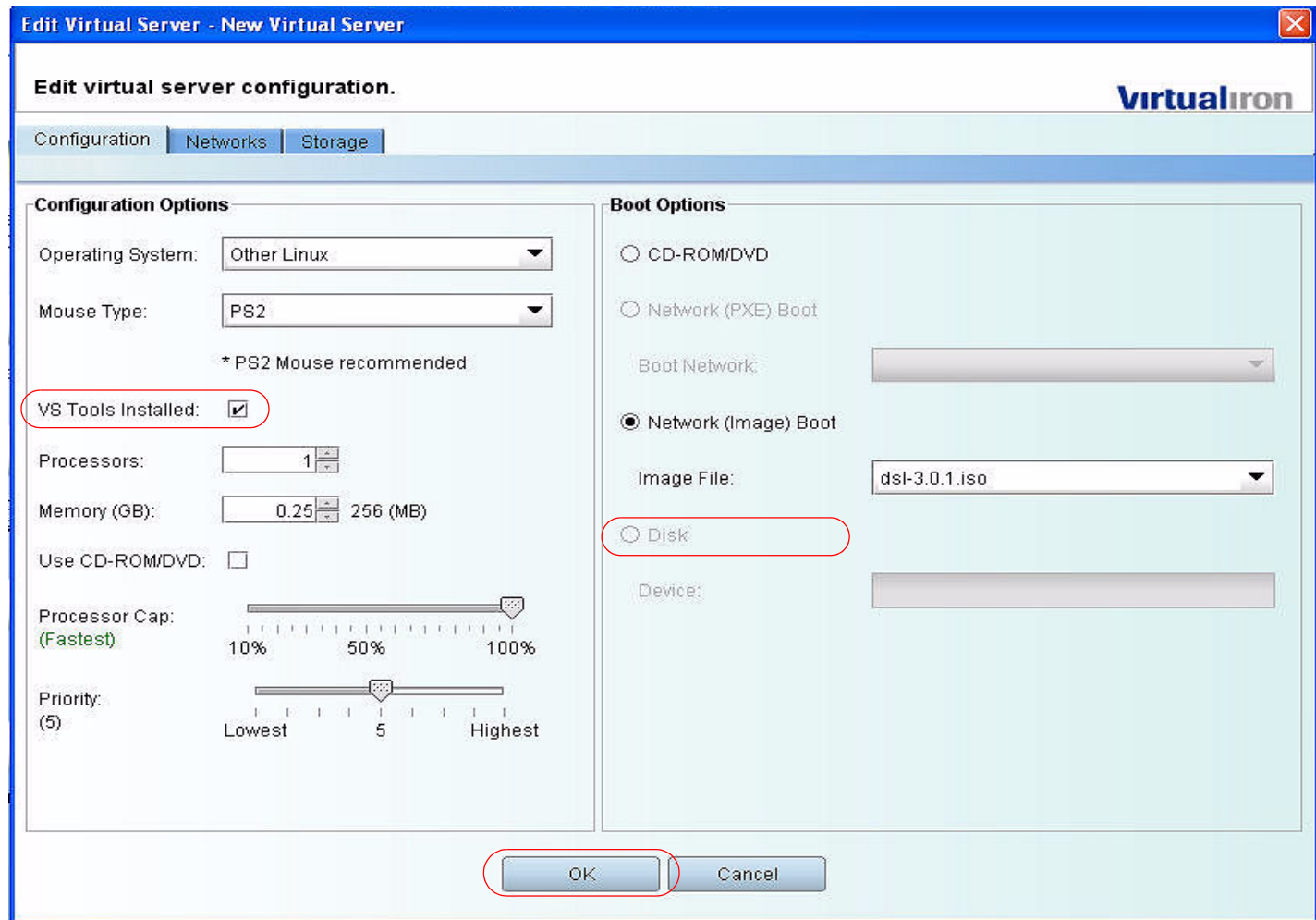
- When you are prompted to reboot, select **No**.



- Instead, turn off your computer.



- After the VS shuts down, open the **VS Configuration** window and check **VS Tools Installed**. Select **Disk** in the Boot Option section of the screen.



- Select **OK**, and start your VS.
You now have a running VS with Windows XP and VS Tools installed.