VX-1000

· VIRTUAL APPLIANCE ·

Microsoft Hyper-V Hypervisor

Support Limitations

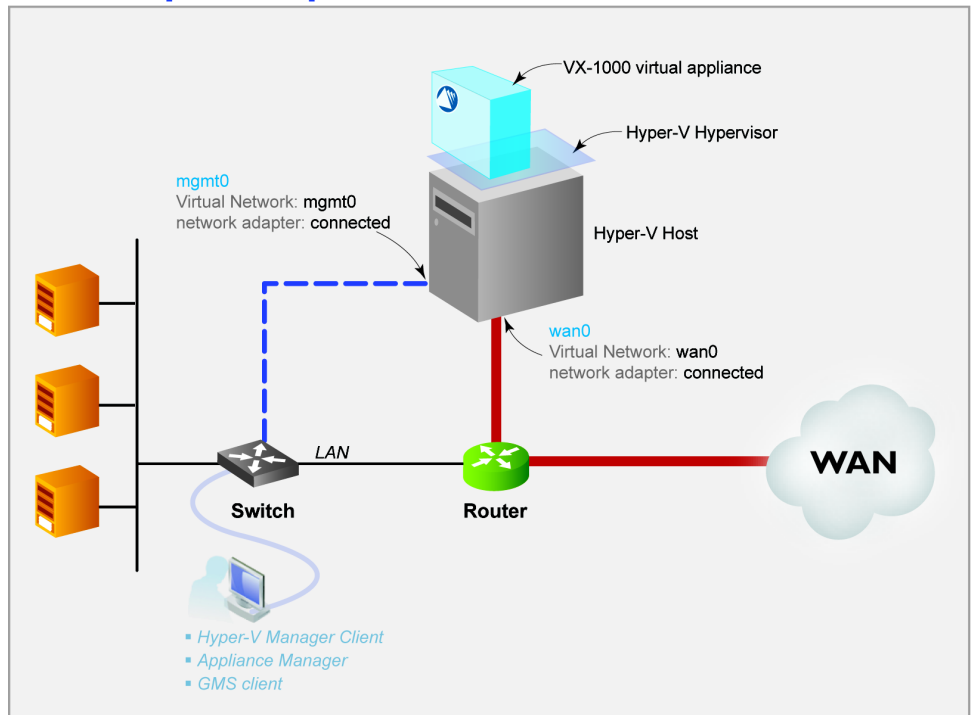☑ In single-homed Router mode, the virtual appliance only uses **mgmt0** and **wan0**.

Assumptions

☑ Windows 2008 server is installed and Hyper-V server is running.

☑ Hyper-V management software is installed on the Windows client.

Before You Begin

☑ Comply with the *VXOA Virtual Appliance Host System Requirements* [PN 200566-001]

☑ From the Silver Peak Support portal, download the virtual appliance ISO file to the Hyper-V host disk.

☑ Obtain a VXOA virtual appliance activation license key

Silver Peak

PN 200548-001 Rev C » R4.4

Host with Silver Peak VX-1000 OUT-OF-PATH [Router Mode]

mgmt0
Virtual Network: **mgmt0**
network adapter: **connected**

VX-1000 virtual appliance

Hyper-V Hypervisor

Hyper-V Host

wan0
Virtual Network: **wan0**
network adapter: **connected**

LAN

Switch

Router

WAN

- *Hyper-V Manager Client*
- *Appliance Manager*
- *GMS client*

This Quick Start Guide only covers single-homed Router mode, using only **wan0** for data traffic.
■ These instructions show the VX-1000 Virtual Appliance running on Windows 7. ■

SUMMARY OF TASKS

1 Create virtual networks [switches] on the Hyper-V server/host

2 Create the virtual machine

3 Configure the virtual machine

4 Power on the virtual machine

5 Configure the Virtual Appliance

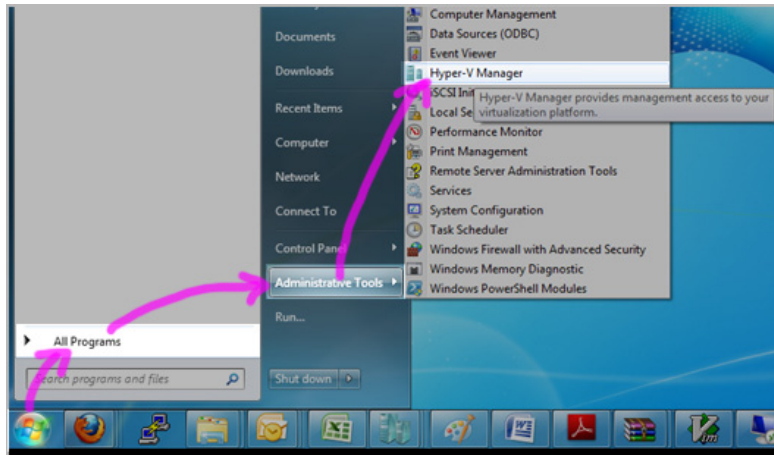**6 Run the Appliance Manager initial configuration wizard**

Required Virtual Interface	Maps to ...
mgmt0	virtual network = mgmt0
wan0	virtual network = wan0
mgmt1	network adapter not connected
lan0	network adapter not connected

TO BEGIN ... Launch the Hyper-V Manager from the desktop, and connect to the target Hyper-V server.


Create virtual networks [switches] on the Hyper-V server/host

In this section, you'll create two external networks:

- The first network is the management network, **mgmt0**, used for configuration and management by the GMS (if installed).

- The second network is **wan0**, for traffic optimization. It should be connected to the router.

a.   In the Hyper-V Manager, go to the **Actions** section and select **Virtual Network Manager**.
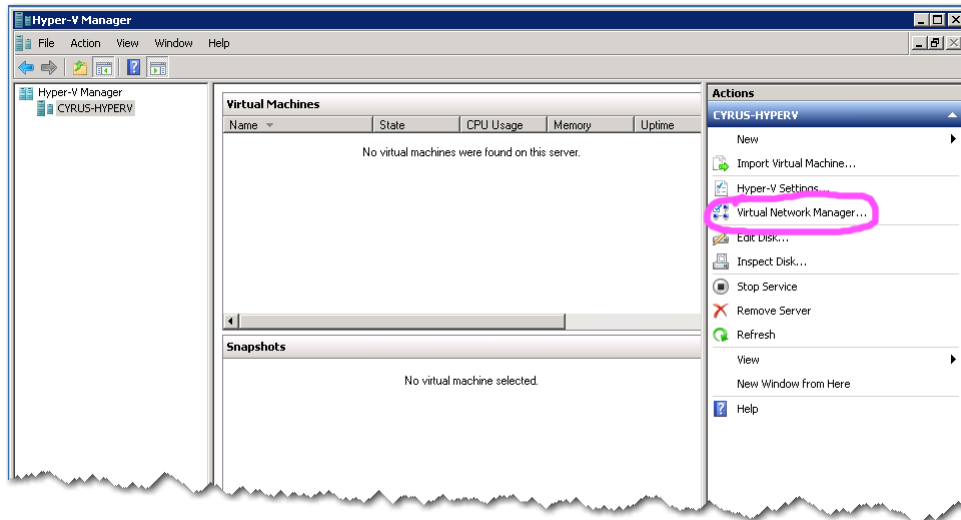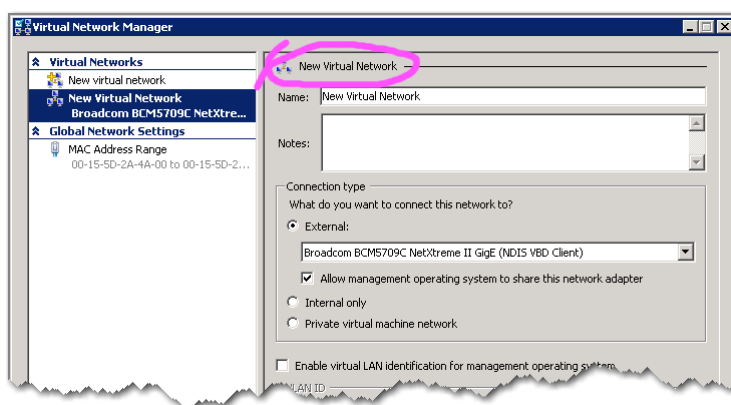

The Virtual Network Manager screen appears.
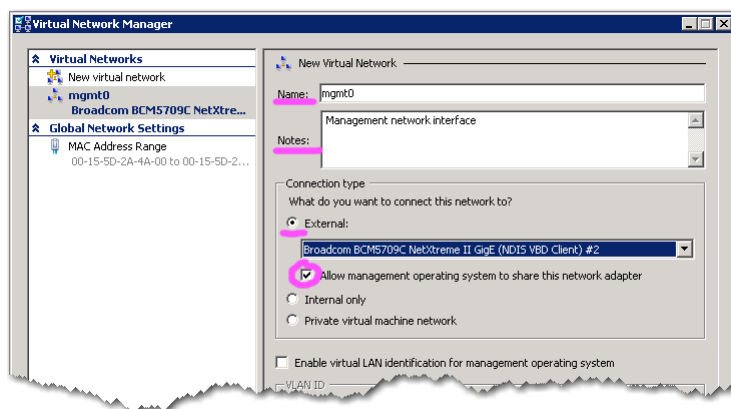
b. Select **External**, and click **Add**.
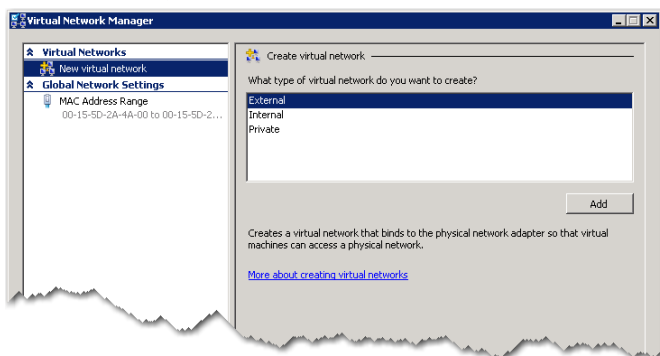
The New Virtual Network screen appears on the right. It defaults to an external interface, which also displays in the left column.

c. In the **Name** field, enter `mgmt0`. As you type, the text in the left column, under **New virtual network**, changes to match.

d. In the **Notes** field, enter **Management network interface**.

e. Under **Connection type**, select **External**.

From the drop-down list, select the specific physical interface (on the Hyper-V host) that connects to the management network. Notice that the same choice now reflects in the left column, under **mgmt0**.
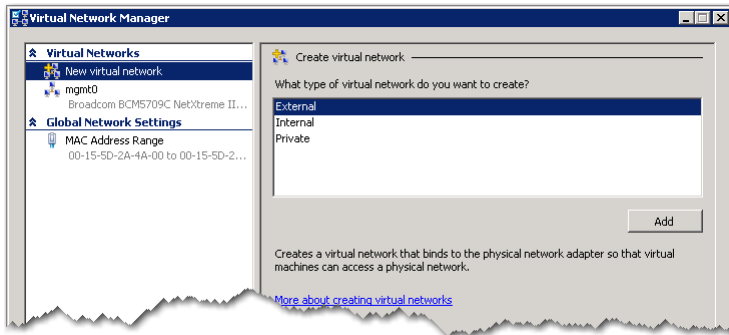
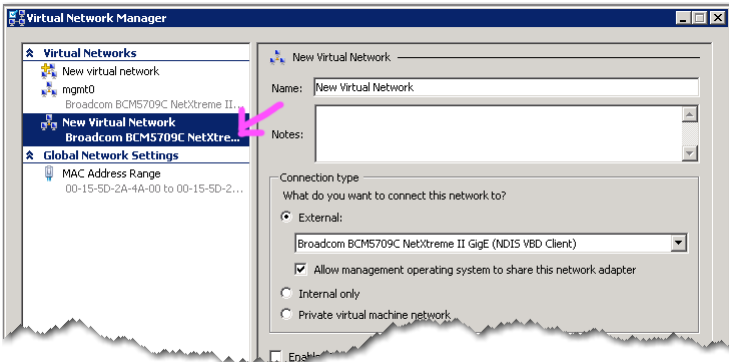Select the option, **Allow management operating system to share this network adapter**.

f. In the lower right corner, click **Apply**.

Now you'll repeat the procedure for the optimization network, **wan0**.

g.   In the left column, click **New Virtual Network**.

h.   With **External** still selected, click **Add**.
Virtual Network Manager adds **New Virtual Network** to the left column.

i.   In the **Name** field, enter `wan0`.

j.   In the **Notes** field, enter a description. Here, we've typed `Virtual appliance data interface`.

k.   From the **External** drop-down list, select the physical network interface that corresponds to the appliance data network, and keep the default option, **Allow management operating system to share this network adapter**.
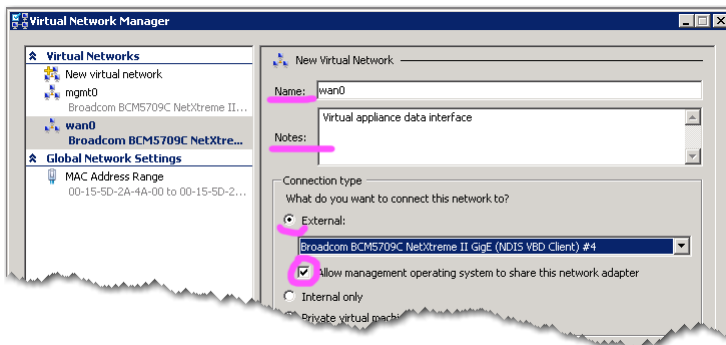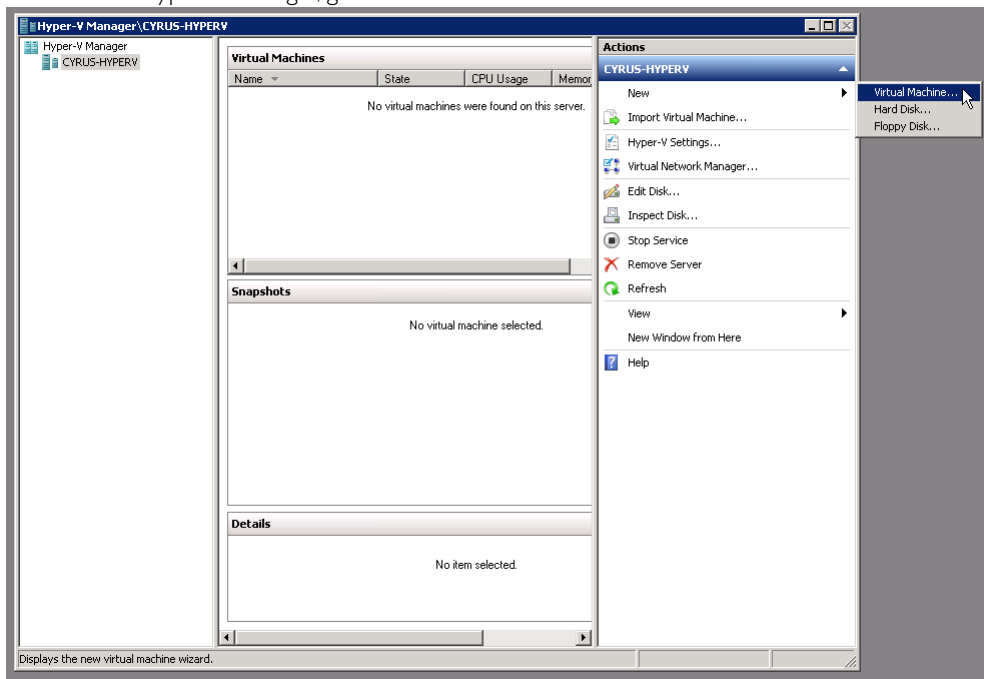

l.   Click **OK**.
The Virtual Network Manager window closes.

2 Create the virtual machine

Before deploying the ISO template, the Hyper-V host must meet system requirements.

a. Return to the Hyper-V Manager, go to the **Actions** section and select **New > Virtual Machine**.


This example uses the wizard to create the virtual machine and to attach the virtual hard disks. The networking requires additional configuration, which we address in later steps.

b. To begin configuring the virtual appliance, click **Next**.
The Specify Name and Location screen appears.

c. In the **Name** field, enter the machine name. In this example, we're naming the virtual machine, **HyperVX-1000**.
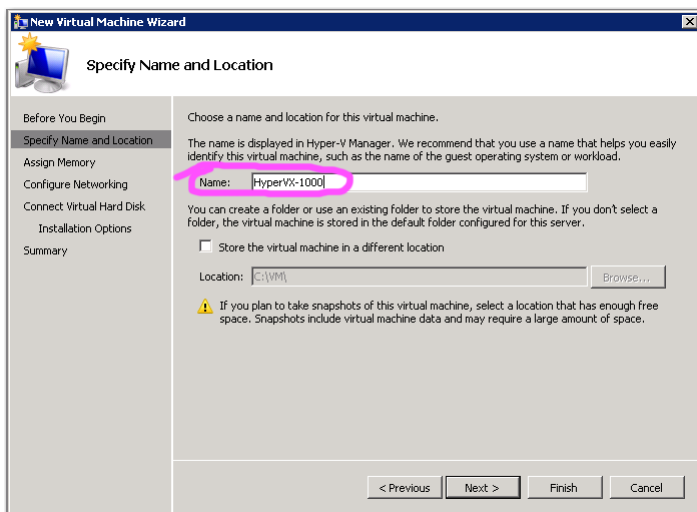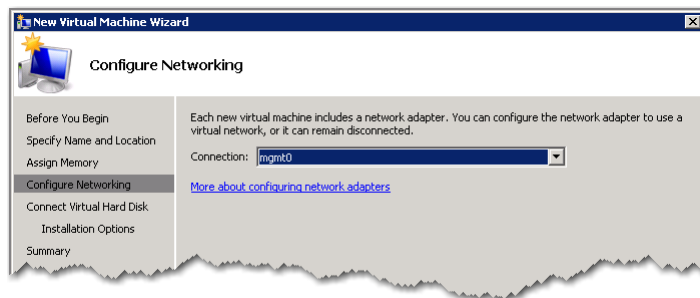

d. Click **Next**. The Assign Memory screen appears.

e. In the **Memory** field, enter **4096** and click **Next**.
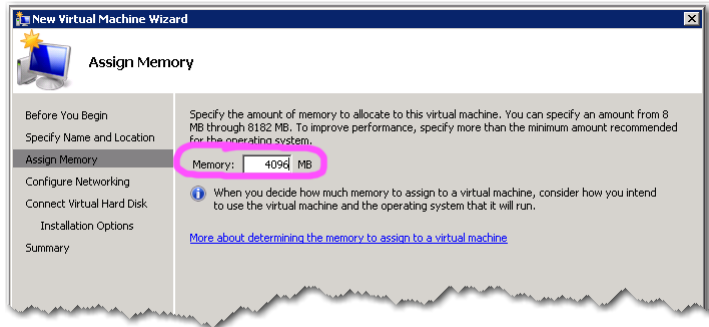
The Configure Networking screen appears.

We'll configure the **mgmt0** interface first, and then configure the data interface, **wan0**, later.

f. In the **Connection** field, select **mgmt0** from the drop-down list.

g. Click **Next**. The Connect Virtual Hard Disk screen appears.

A virtual machine requires storage so that you can install an operating system, so we'll specify the amount here.

h. The **Name** and **Location** fields have populated themselves.

- Modify the name to **HyperVX-1000-System.vhd**.
- In the **Size** field, enter **30**. This sets the system hard disk size to 30 GB.
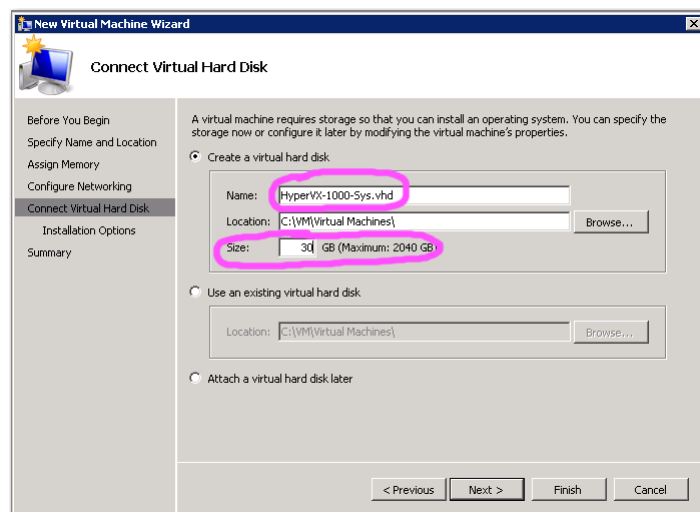
i. Click **Finish**.

    At this point, the software takes some time to create the virtual machine using the parameters provided. Some additional configuration is required before launching the virtual appliance.

j. Return to the **Hyper-V Manager** to see that the new appliance, **HyperVX-1000**, now appears in the **Virtual Machines** section.
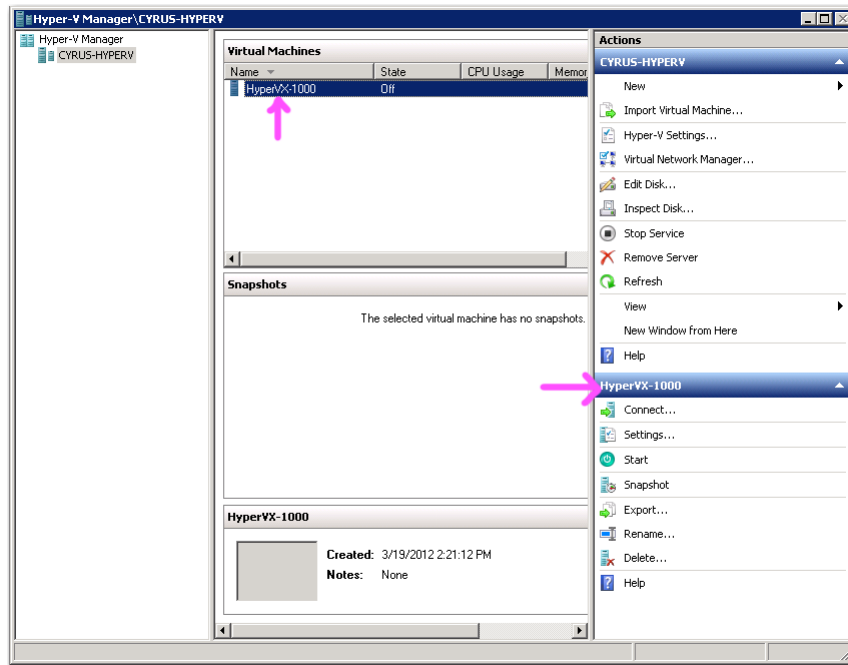
3 Configure the virtual machine

We still have to configure a few more parameters. Tasks include:

- on the virtual machine, creating required virtual interfaces [NICs] and connecting them, as appropriate, to the virtual networks
- modifying the number of virtual processors, to meet the virtual appliance's requirements
- deploying the VX virtual appliance ISO file onto the virtual machine

In the earlier steps, the wizard created the interface for **mgmt0**.

To fulfill the software requirements, we now need to create virtual interfaces for **mgmt1** (not used), **wan0**, and **lan0** (not used).

Software Requirements for Virtual Interfaces			
mgmt0	**mgmt1** not used	**wan0**	**lan0** not used
✔			

First, we'll add a virtual interface as a placeholder for **mgmt1**.

Software Requirements for Virtual Interfaces			
mgmt0	**mgmt1** not used	**wan0**	**lan0** not used
✔	✓		

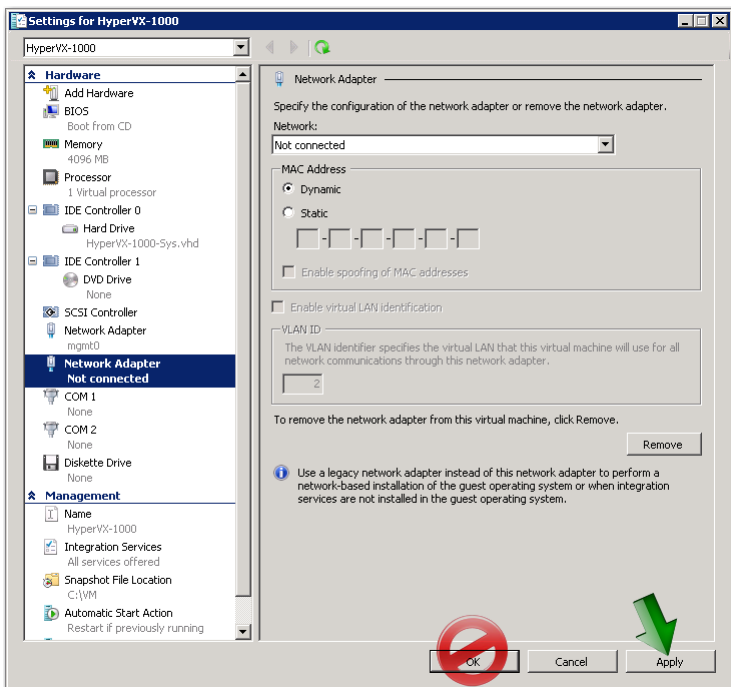a. On the right, below the new appliance's name, click **Settings**.
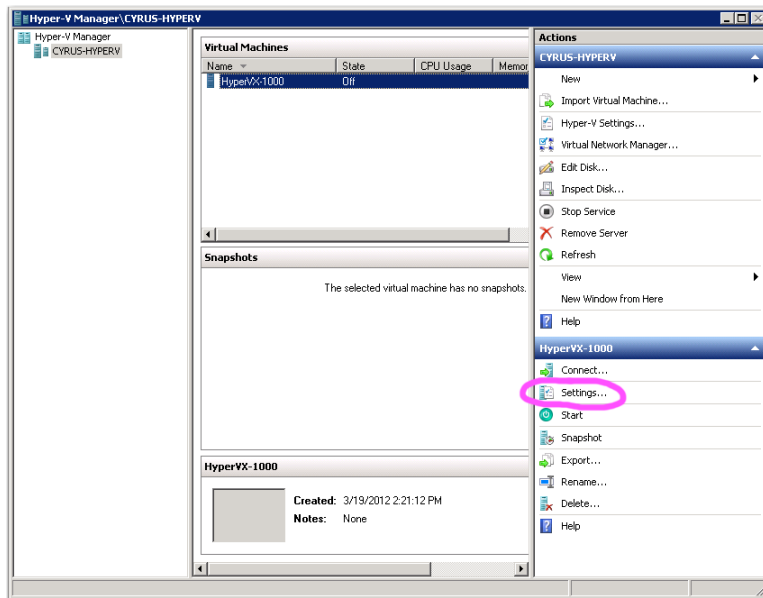
The **Settings for HyperVX-1000** screen appears.

b.   In the left column, click **Add Hardware**.
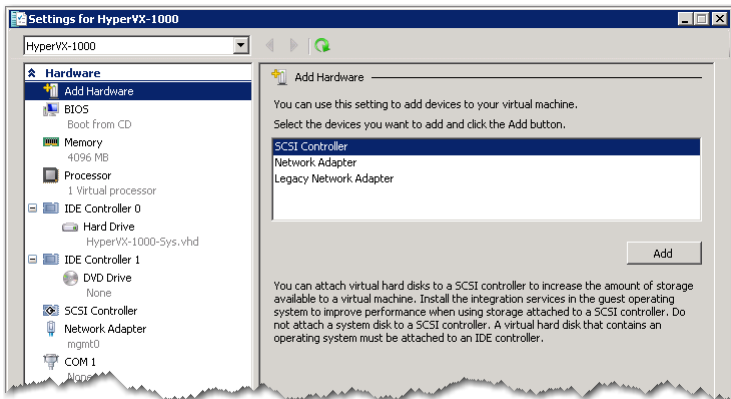
c.   In the **Add Hardware** section on the right, select **Network Adapter** and click **Add**.

After the following screen appears, click **Apply**.

For this appliance, we don't connect **mgmt1**, so we leave it as **Not connected** in the drop-down list. Also, since there's no named virtual network for it, it remains nameless.

Software Requirements for Virtual Interfaces			
mgmt0	mgmt1 not used	wan0	lan0 not used
✔	✔	✔	

d.   To create a placeholder virtual interface for **wan0**, again click **Add Hardware**.

e.   Then, in the **Add Hardware** section on the right, select **Network Adapter** and click **Add**.

To attach the **wan0** interface, select **wan0** from the **Network** drop-down list.
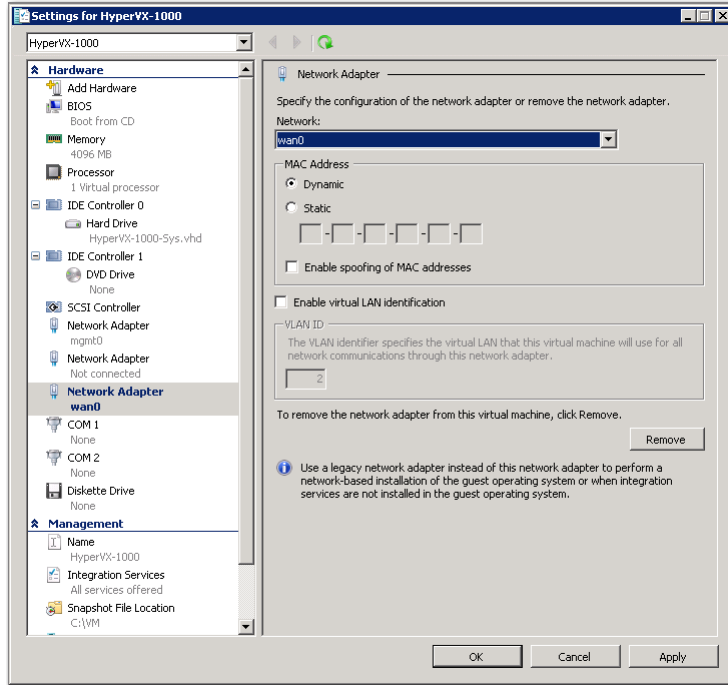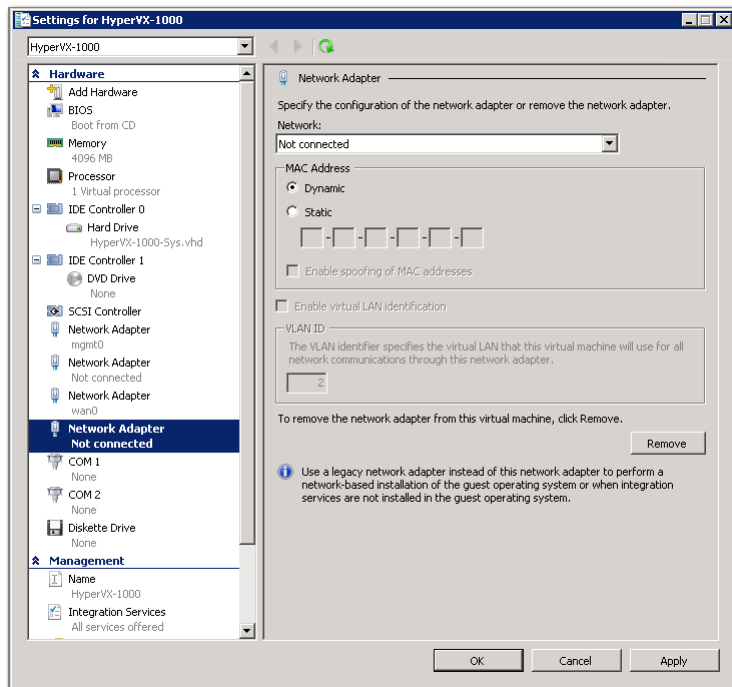

Click **Apply**.

Finally, we'll add and connect a virtual interface for **lan0**.

Software Requirements for Virtual Interfaces			
mgmt0	**mgmt1** not used	**wan0**	**lan0** not used
✔	✔	✔	✔

f.   For the third and last time, in the left column, click **Add Hardware**.

g.   In the right column, select **Network Adapter** and click **Add**.

In the resulting Network Adapter screen, leave the default option of **Not connected** in the **Network** field drop-down list.

Click **Apply**.

The left column displays the four network adapters you've configured.
We've now addressed the software requirement for all the virtual interfaces.

Software Requirements for Virtual Interfaces			
mgmt0	mgmt1 not used	wan0	lan0 not used
✔	✔	✔	✔

Next, we want to add a second processor, to meet the virtual appliance's host requirements.

h.   In the left screen, click **Processor**.

i. On the right side, in the **Number of logical processors** field, select **2** from the drop-down list.
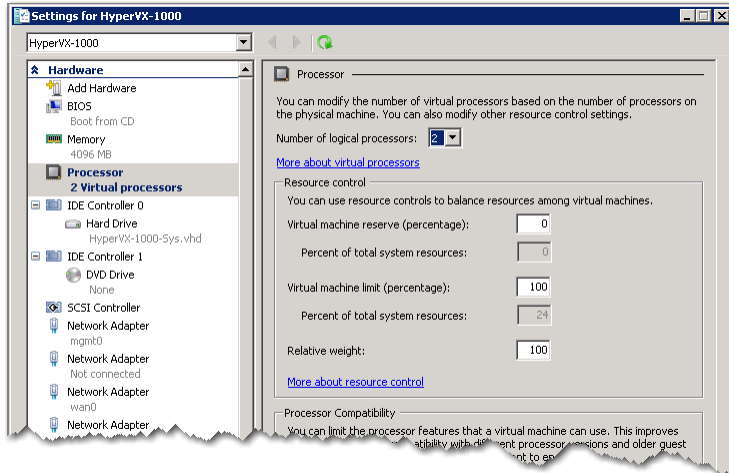
Click **Apply**.

Now, we need to add a second hard drive for *Network Memory*.

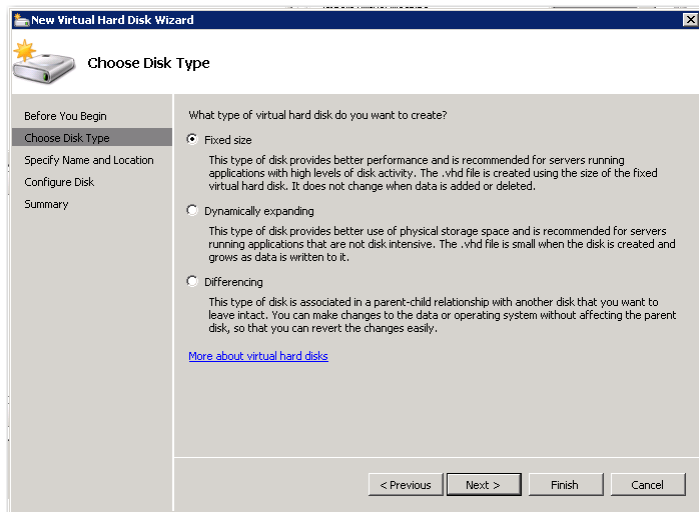j. In the left screen, click **IDE Controller 0**. On the right side, verify that **Hard Drive** is selected.
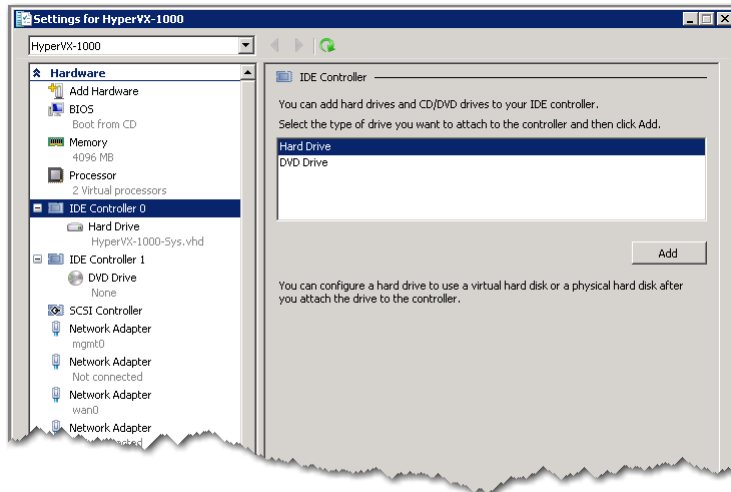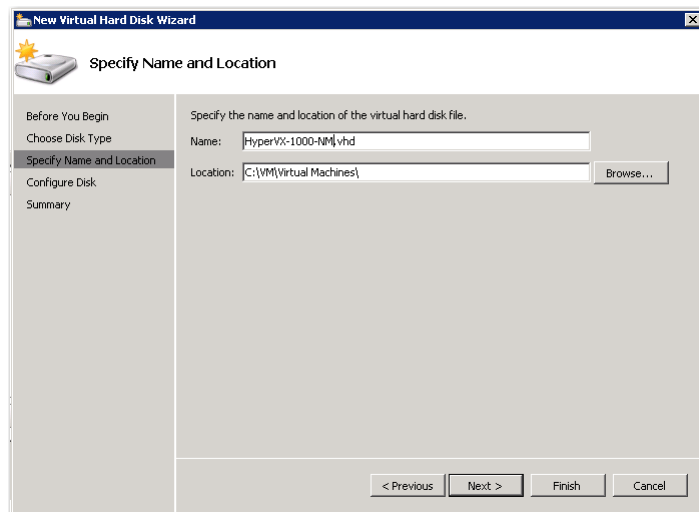

k. Click **Add**. The Hard Drive window appears.
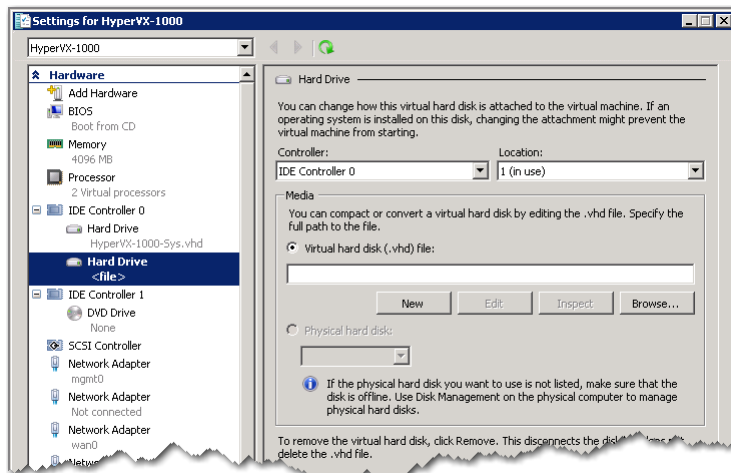
l. Verify that **Virtual Hard Drive** is selected, make no changes, and click **New**.
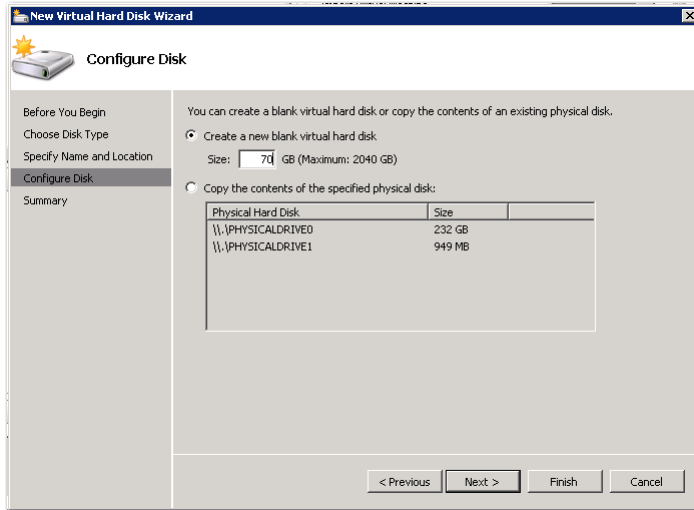
The Choose Disk Type window appears.

m. Select **Fixed Size**, and click **Next**. The Specify Name and Location screen appears.

n. In the name field, change **New Virtual Hard Disk.vhd** to **HyperVX-1000-NM.vhd**.

o. Click **Next**. The Configure Disk screen appears.

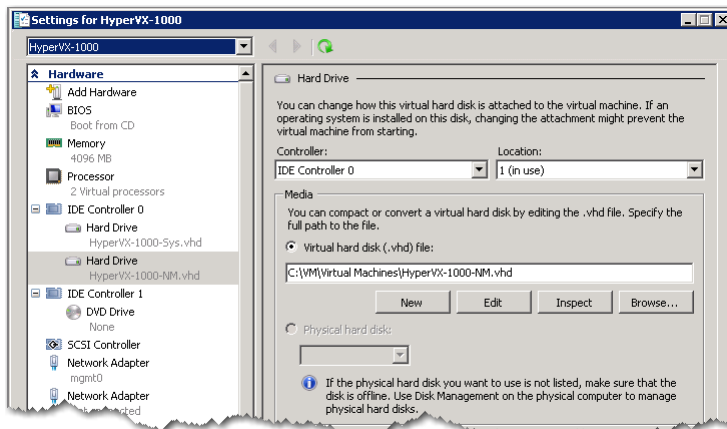p. Select **Create a new blank virtual hard disk** selected, and in the **Size** field, enter **70** (for 70GB of Network Memory).

q. Click **Next**. The Completing the New Virtual Hard Disk Wizard screen appears, summarizing the configuration parameters.
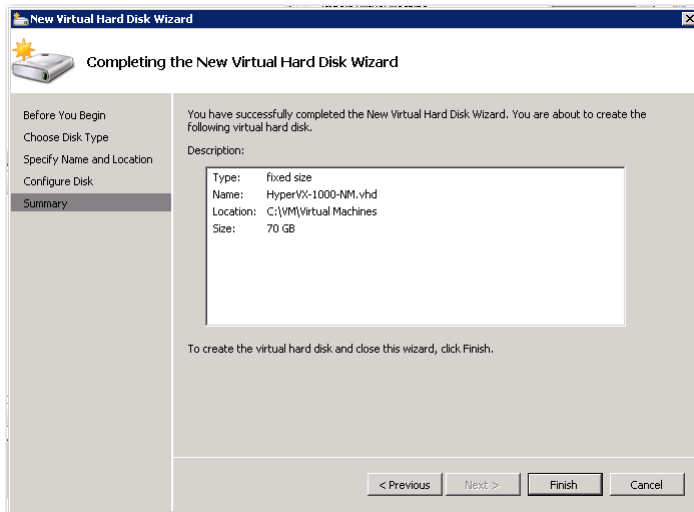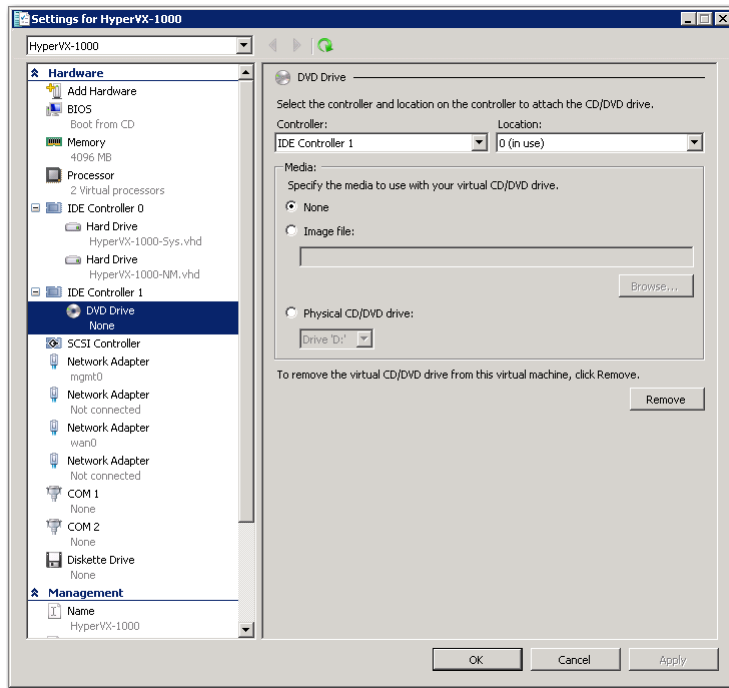

r. Click **Finish**. The wizard creates the new virtual hard disk.
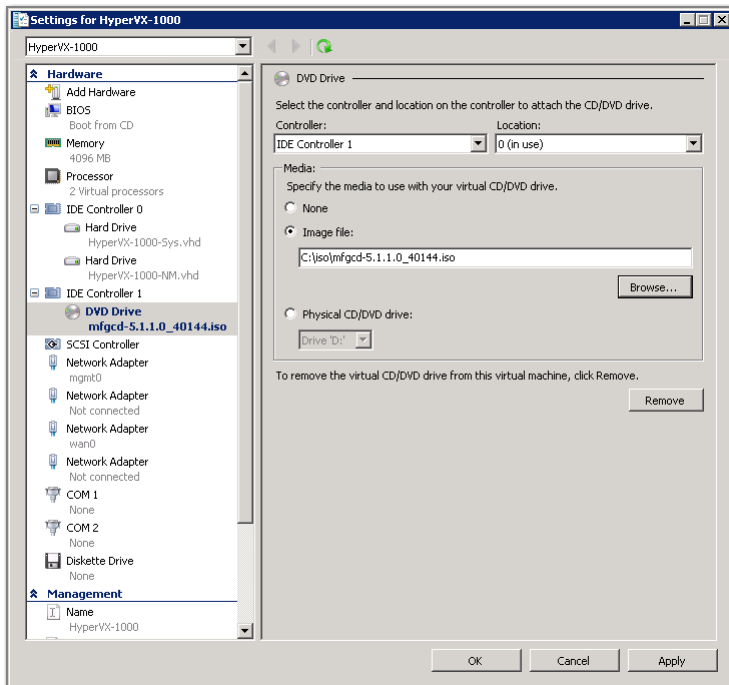
The Hard Disk page returns, displaying the new hard disk.

Now, we need to insert the ISO file into the virtual machine's virtual DVD.

s. From the left panel, click **DVD Drive**.

t. In the DVD Drive section on the right, click **Image file** and browse to the image file you previously downloaded from Silver Peak's support site.
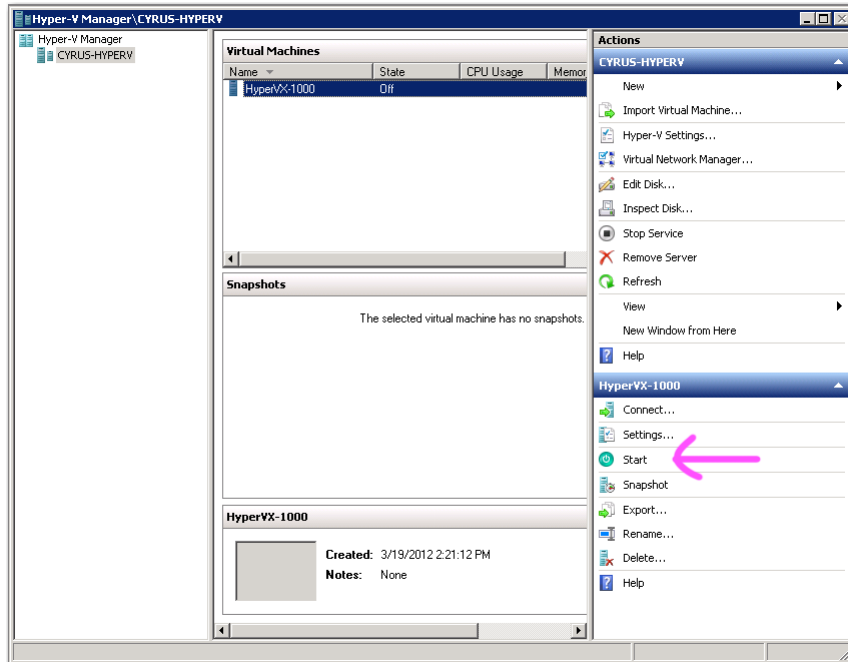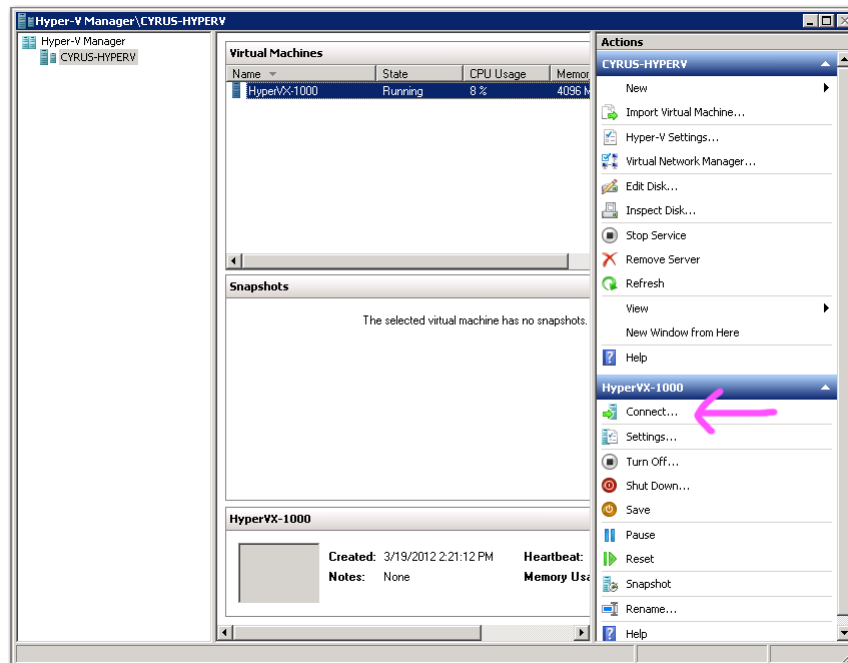

u. Click **OK**.

This commits the changes and closes the window, returning you to the Hyper-V Manager.

4   Power on the virtual machine

a.   In the **Virtual Machines** section, select **HyperVX-1000** and click **Start**.

b.   After starting the appliance, click **Connect**.
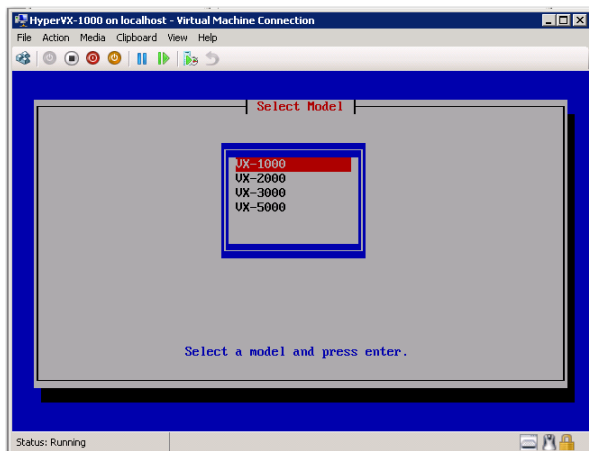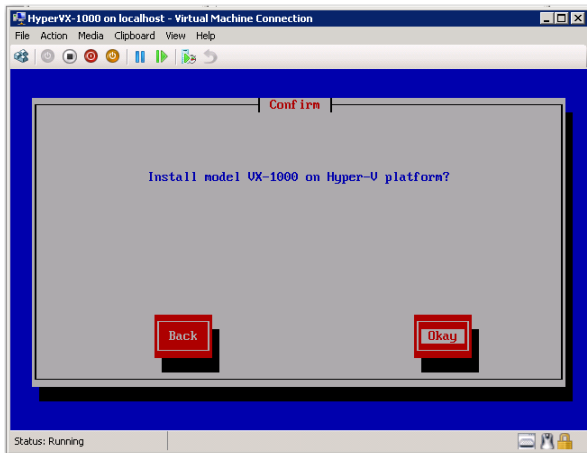
This displays a console window for the virtual appliance.

Multiple boot messages appear in the window. After the system has initialized, a **Select Model** screen appears.

Select **VX-1000** and press **Enter**. A confirmation screen appears.

c.   To start the VX-1000 software installation process, click the mouse in the window and then press **Enter** in the keyboard.

NOTE: Clicking [Okay] in the console has no effect.

The installation takes approximately 5 minutes. When the installation to disk is complete, the Install Done screen appears, instructing the user to eject the CD and restart the appliance.
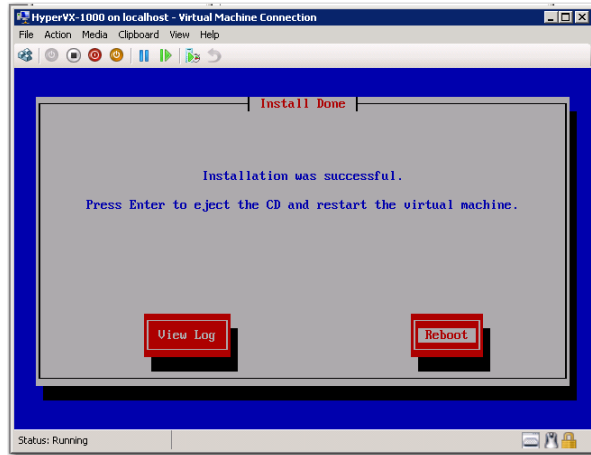
d.   Press **Enter** on the keyboard.

After the VX-1000 boots up, it arrives at the **login** prompt.

5 Configure the Virtual Appliance

To access the VX-1000's user interface, you'll need to discover the IP address for its **mgmt0** interface and enter it into a browser.

> NOTE: You'll be entering commands in the console. If you ever need to click outside the client window, press **CTRL**+**ALT**.
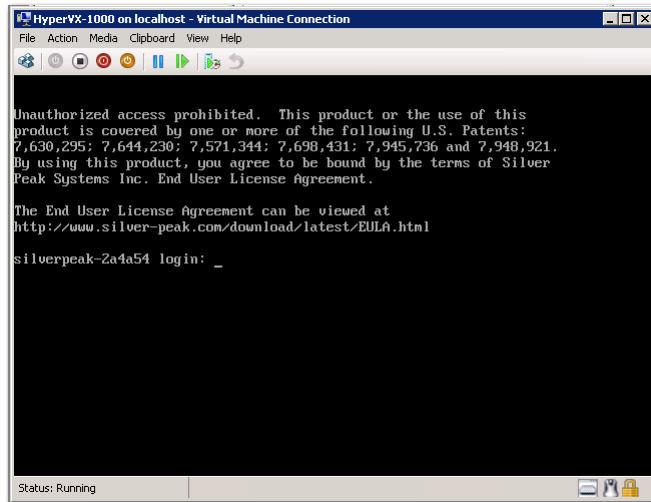
a. Log in as follows:

[vx name] login: **admin**	[ENTER]
Password: **admin**	[ENTER]

If you're using DHCP, then after you enter the password, the console displays the **mgmt0** IP address to enter into your browser. Make a note of it.

NOTE: To get to the login prompt from this point, enter **q** for quit, or hit the **spacebar** to continue paging through the returned information.

If the console doesn't display the [**mgmt0**] IP address, then you'll need to configure a static IP address and add a default gateway. Make sure you have both addresses before continuing.

In this example we'll say that **mgmt0 = 10.0.42.84/24** and the default gateway is **10.0.42.65/24**.

b. To configure **mgmt0**, enter the following command sequence:

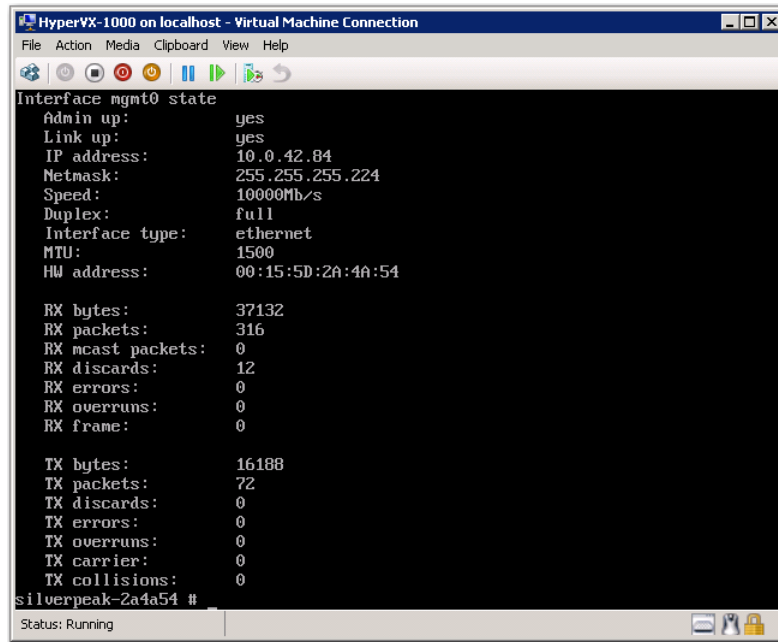|	
[vx name] # **enable**	[ENTER]
[vx name] # **config t**	[ENTER]
[vx name] (config) # **interface mgmt0 shutdown**	[ENTER]
[vx name] (config) # **no interface mgmt0 dhcp**	[ENTER]
[vx name] (config) # **interface mgmt0 ip address 10.0.42.84 /24**	[ENTER]
[vx name] (config) # **no interface mgmt0 shutdown**	[ENTER]
[vx name] (config) # **show interfaces mgmt0**	[ENTER]

c. To configure the default gateway, enter the following command sequence:

[vx name] (config) # **ip default-gateway 10.0.42.65**	[ENTER]
[vx name] (config) # **show ip default-gateway**	[ENTER]

d.   To verify the configuration, enter the following:

[vx name] (config) # **show interfaces mgmt0**   [ENTER]
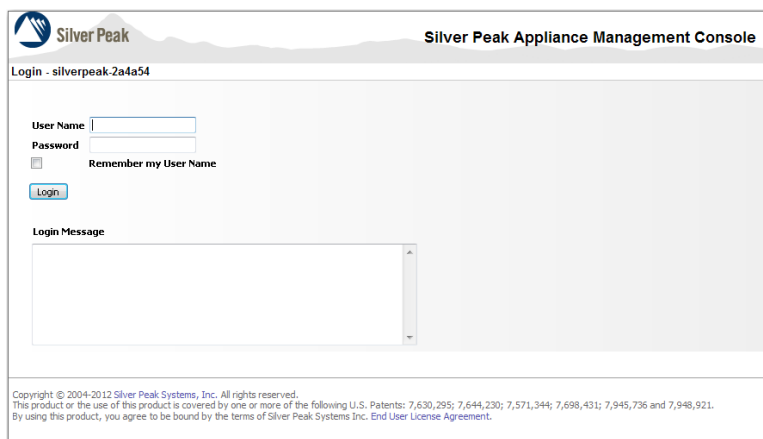
```
Interface mgmt0 state
    Admin up:            yes
    Link up:             yes
    IP address:          10.0.42.84
    Netmask:             255.255.255.224
    Speed:               10000Mb/s
    Duplex:              full
    Interface type:      ethernet
    MTU:                 1500
    HW address:          00:15:5D:2A:4A:54

    RX bytes:            37132
    RX packets:          316
    RX mcast packets:    0
    RX discards:         12
    RX errors:           0
    RX overruns:         0
    RX frame:            0

    TX bytes:            16188
    TX packets:          72
    TX discards:         0
    TX errors:           0
    TX overruns:         0
    TX carrier:          0
    TX collisions:       0
silverpeak-2a4a54 #
```

6 Run the Appliance Manager initial configuration wizard

a. In a browser, enter the **mgmt0** IP address you just discovered or configured. The Silver Peak Appliance Management Console login page appears.

b. For both the **User Name** and **Password**, enter `admin`. The initial configuration wizard appears.

c. Complete the remaining wizard screens.

- If desired, change the **Hostname**. This is the name by which the Silver Peak software knows the virtual appliance.

- When the wizard asks for the license number, it also provides a hyperlink to the Silver Peak Support Portal. From there you can retrieve the key and paste it into the **License** field.

- Be sure to select **Router** mode.

d. On the last wizard screen, click **Apply**.
The Appliance Manager takes a few minutes to reboot and return to the login page.

You are now ready to start using the appliance.