Quick Start Guide

VXOA
· VIRTUAL APPLIANCES ·
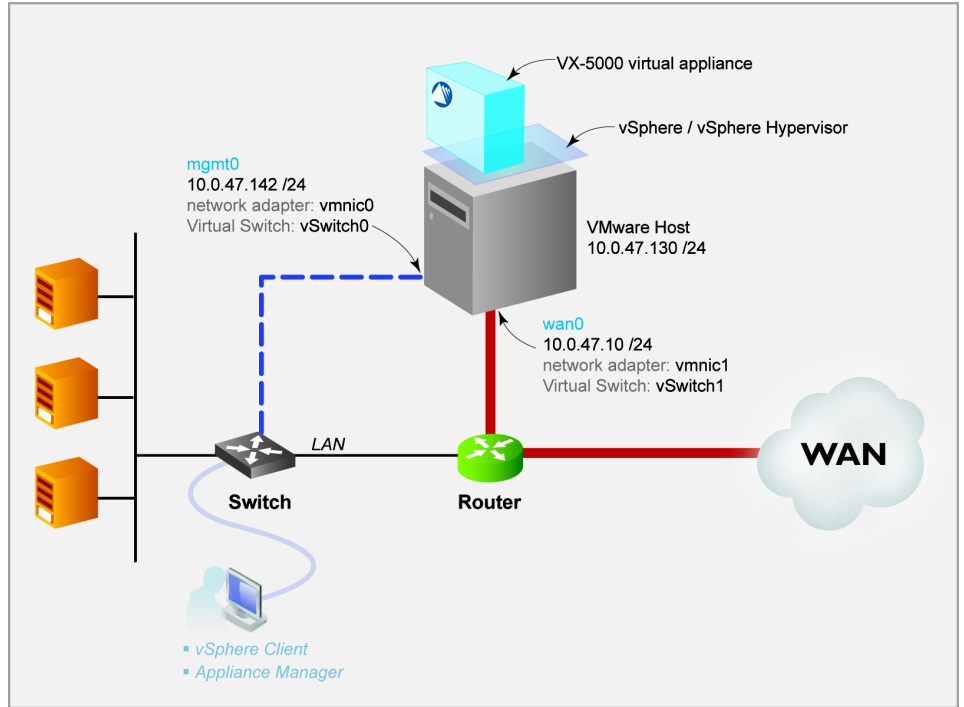
VMware vSphere / vSphere Hypervisor

· **Out-of-Path Deployment** ·
(Router Mode)

Before You Begin

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

☑ Download the virtual appliance OVF template file:

  - For VX-Xpress, go to http://www.silver-peak.com/products/vx-x/

  - For the other VXOA virtual appliances, go to the Silver Peak Support portal.

☑ Collect the IP addresses for:

  - VMware vSphere server

  - **mgmt0**
    [if not using DHCP, then also the default gateway for mgmt0]

  - **wan0** (Appliance IP)

☑ Obtain a VXOA virtual appliance activation license key

Silver Peak

Silver Peak Systems, Inc.

4500 Great America Parkway
Suite 100
Santa Clara, CA 95054

1.877.210.7325 (toll-free in USA)
+1.408.935.1850
www.silver-peak.com/support

Host with Silver Peak VX-5000
OUT-OF-PATH [Router Mode]

VX-5000 virtual appliance

vSphere / vSphere Hypervisor

mgmt0
10.0.47.142 /24
network adapter: vmnic0
Virtual Switch: vSwitch0

VMware Host
10.0.47.130 /24

wan0
10.0.47.10 /24
network adapter: vmnic1
Virtual Switch: vSwitch1

LAN

Switch   Router   **WAN**

▪ *vSphere Client*
▪ *Appliance Manager*

*This Quick Start Guide only covers Router mode, which uses **wan0** for data traffic.*
■ For ease, these instructions use the VX-5000 Virtual Appliance as the example. ■

SUMMARY OF TASKS

1 **Install the vSphere Client**

2 **Prepare the VMware host**

3 **Deploy the VXOA virtual appliance's OVF template**

4 **Power on the Virtual Appliance**

5 **Configure the Virtual Appliance**

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

7 **Verify end-to-end connectivity**

WORKSHEET

ITEM	Example's Values	Your Values
Datastore	datastore1	
mgmt0	virtual network = vmnic0	
	10.0.47.142 / 24	
wan0	virtual network = vmnic1	
	10.0.47.10 / 24	
VMware Host	10.0.47.130 / 24	
mgmt1	virtual switch – no adapter	
lan0	virtual switch – no adapter	

Install the vSphere Client

a. In a browser, enter the IP address for the VMware vSphere host. This is where the VMware vSphere Client resides.
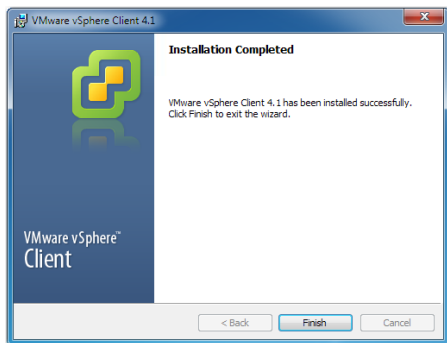
The host interface appears.
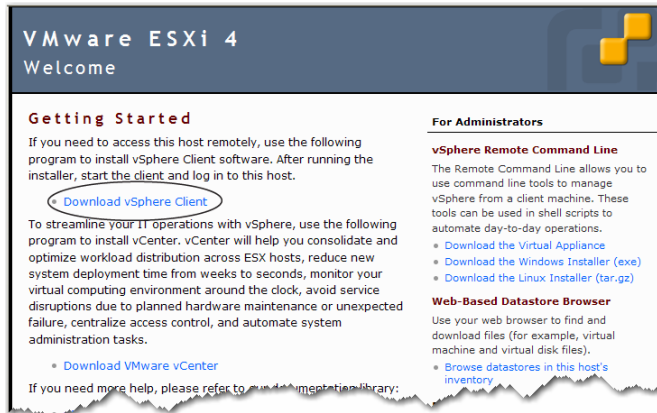
b. Click **Download vSphere Client** and **Save** the file. After the file downloads, the installation wizard for the VMware vSphere Client appears.
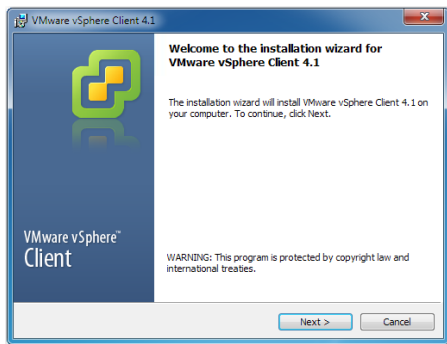
c. Click **Next** to begin going through the wizard.

The screens sequence through the License Agreement, Customer Information, Custom Setup, and Destination Folder screens.

d. Click **Finish**.

2   Prepare the VMware host

Before deploying the OVF template, the VMware host must meet system requirements.

a.   On your computer desktop, double-click the shortcut for the VMware vSphere Client. The client login screen appears.
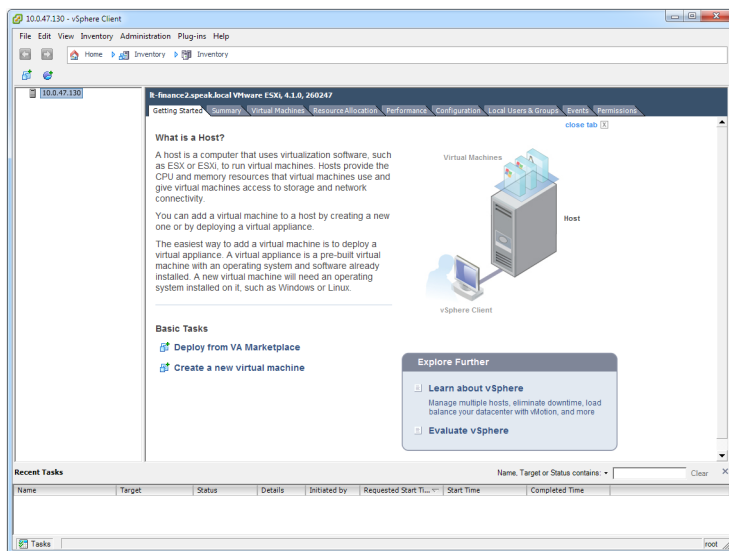
b.   Complete the fields and click **Login**.
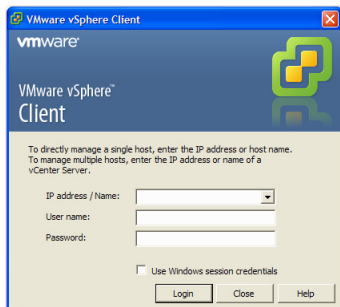
In the **IP address / Name** field, enter the same IP address you used for the VMware vSphere host in Step 1a. Enter your VMware user name and password.

c.   The vSphere Client screen appears. Double-click the **Inventory** icon.
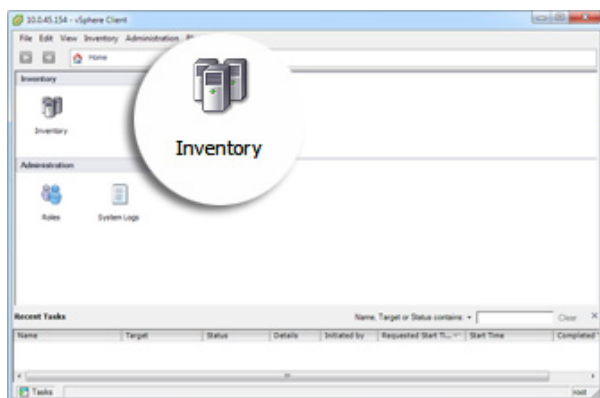
The **Getting Started** tab appears.

Now, with the following two screens, you'll verify that the VMware host's hardware meets the minimum system requirements for the specific VXOA virtual appliance.

(Refer to the *VXOA Virtual Appliance Host System Requirements*, PN 200566-001)

	Item	Where to verify the information
1	CPU	Summary tab
2	Memory	Summary tab
3	Storage	Summary tab
4	Network Interfaces	Configuration tab > Network Adapters

d.   To verify the first three items, click the **Summary** tab.
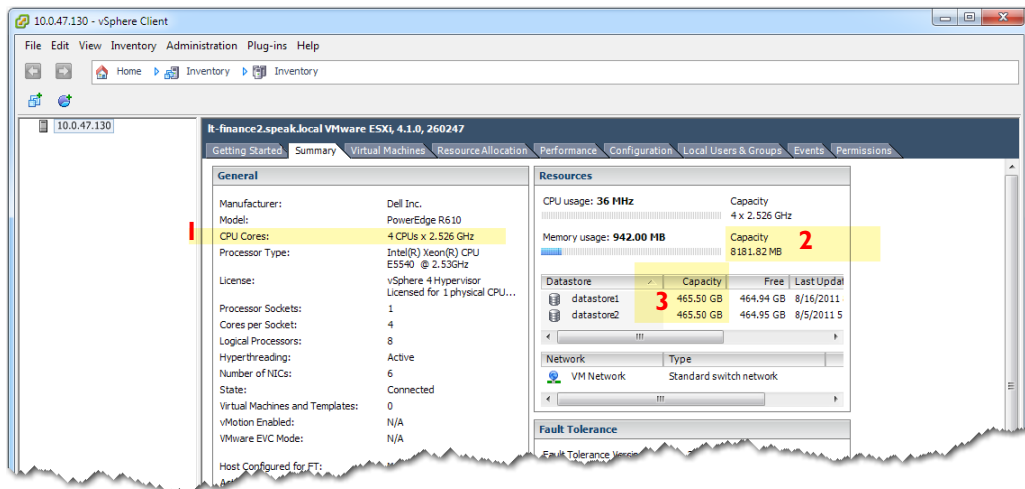
e.   To verify the last item, click the **Configuration** tab and, under **Hardware** on the left, click **Network Adapters**.
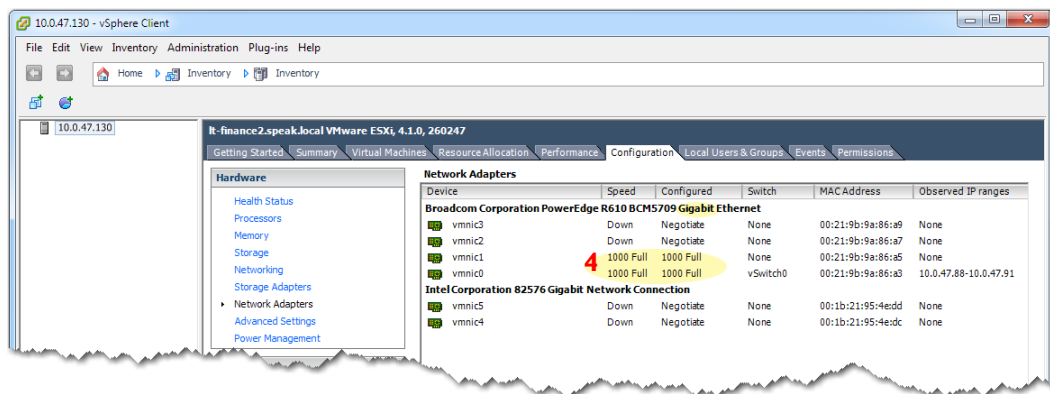

In total, we'll create four networks.

Now, you'll create the two networks that actually carry traffic: You'll pair one with **mgmt0** (for management traffic) and the other with **wan0** (for data traffic).

For **mgmt0**, you can use the NIC that **VMkernel** is currently using, or you can pick a different one. In this example, we'll pair **vmnic0** with **mgmt0**, and **vmnic1** with **wan0**. (See diagram on page 1.)
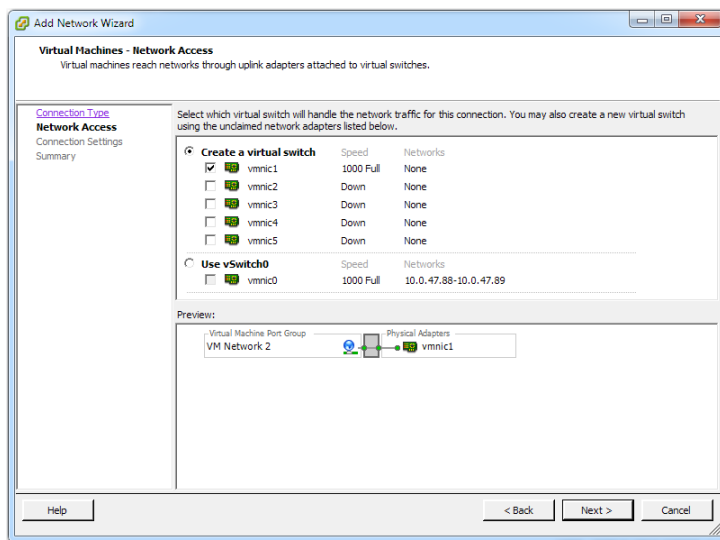
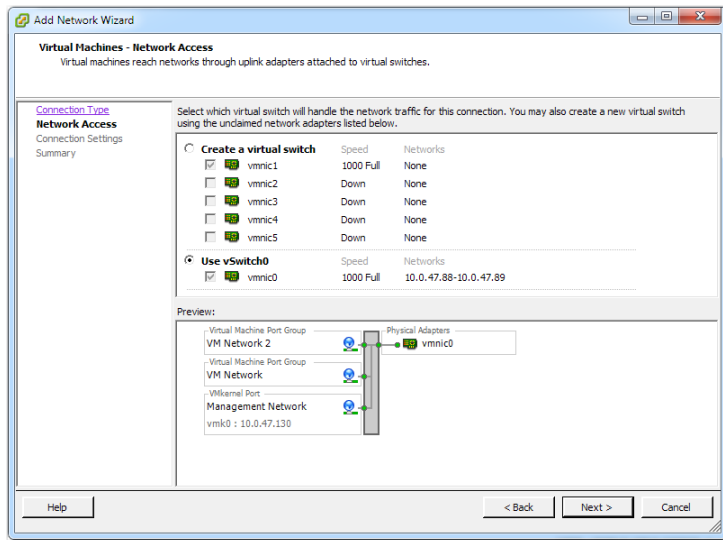f.   In the **Configuration** tab, select **Networking** (on the left) and click **Add Networking**.
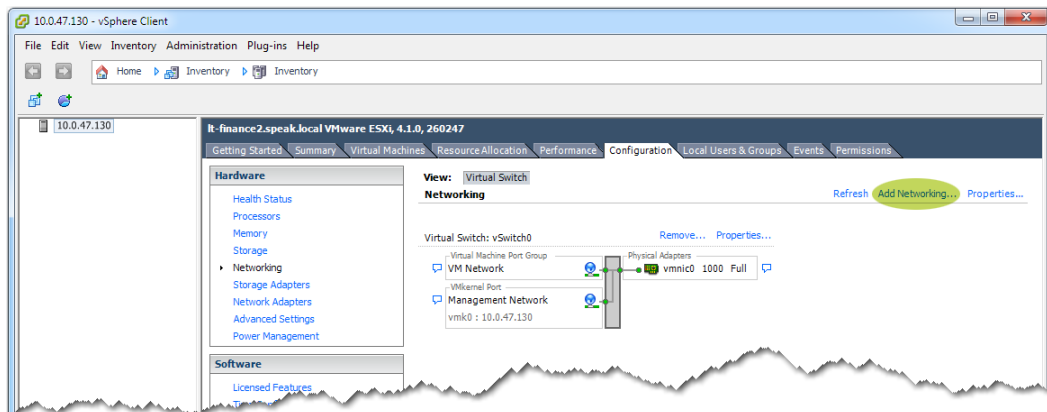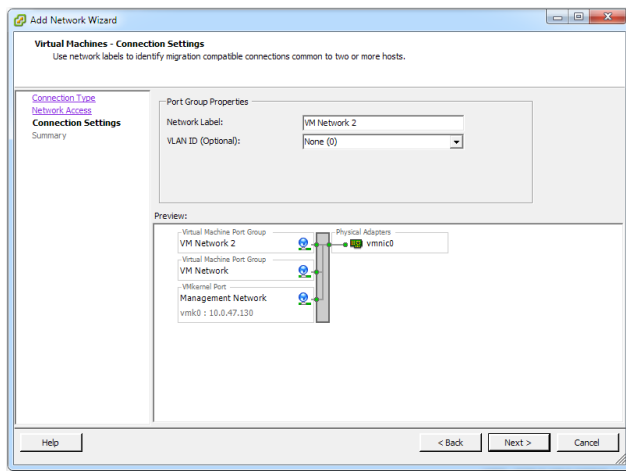

The Connection Type screen appears.
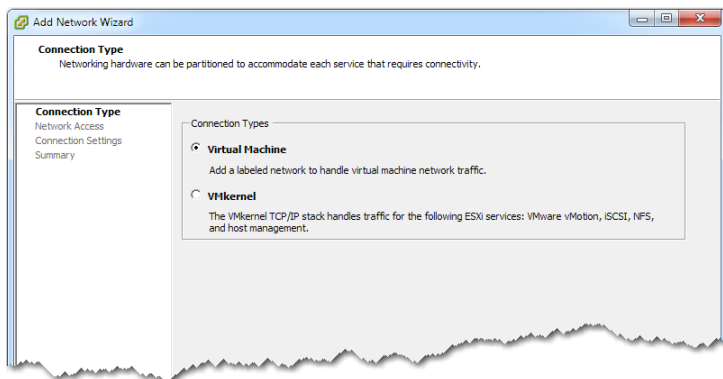
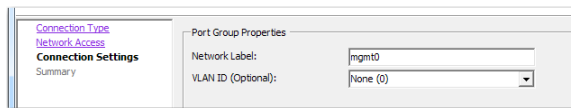g.   Click **Next**. The Virtual Machines - Network Access screen appears.

Since we want to pair **vmnic0** with **mgmt0**, click **Use vSwitch0**.
The Preview content changes.

h.   Click **Next**. The Virtual Machines - Network Access screen appears.
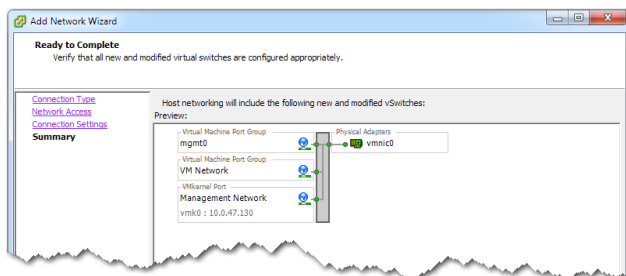

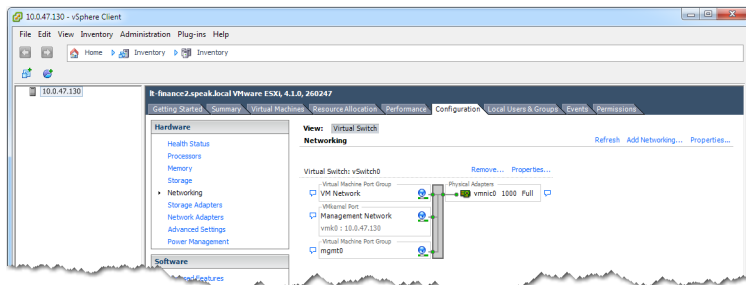i.   In the **Network Label** field, enter **mgmt0**.

This entry also displays below, in the **Preview** area.

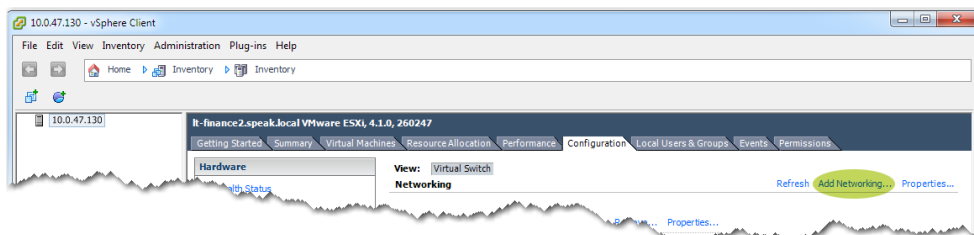j.   Click **Next**. The Ready to Complete screen appears.

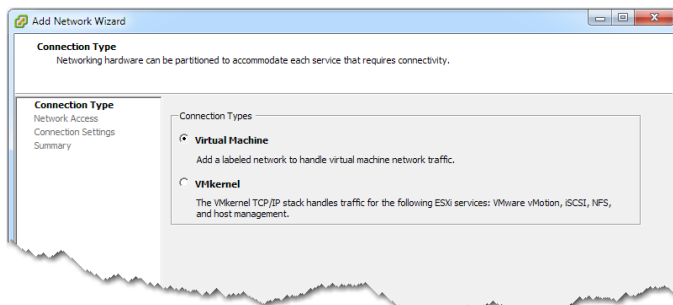k.   Click **Finish**. The client returns to the **Configuration** tab.
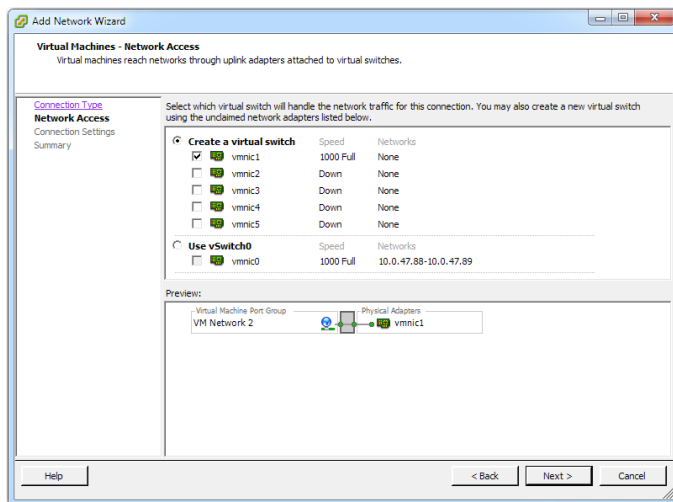

Now we'll add **wan0**.

l.   Return to the vSphere Client's **Configuration** tab, and click **Add Networking**.

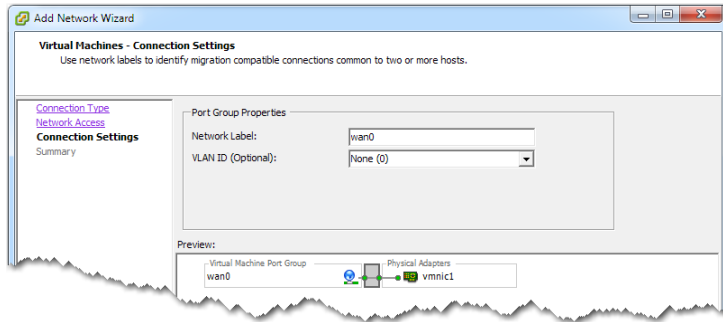The Connection Type screen appears. Make sure that **Virtual Machine** is selected.

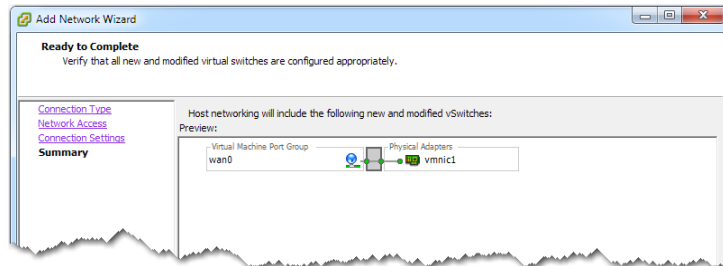m.   Click **Next**. The Virtual Machines - Network Access screen appears.

In this example, we leave **vmnic1** selected, and click **Next**. Based on your own server configuration, select an appropriate interface. The Virtual Machines - Connection Settings screen appears

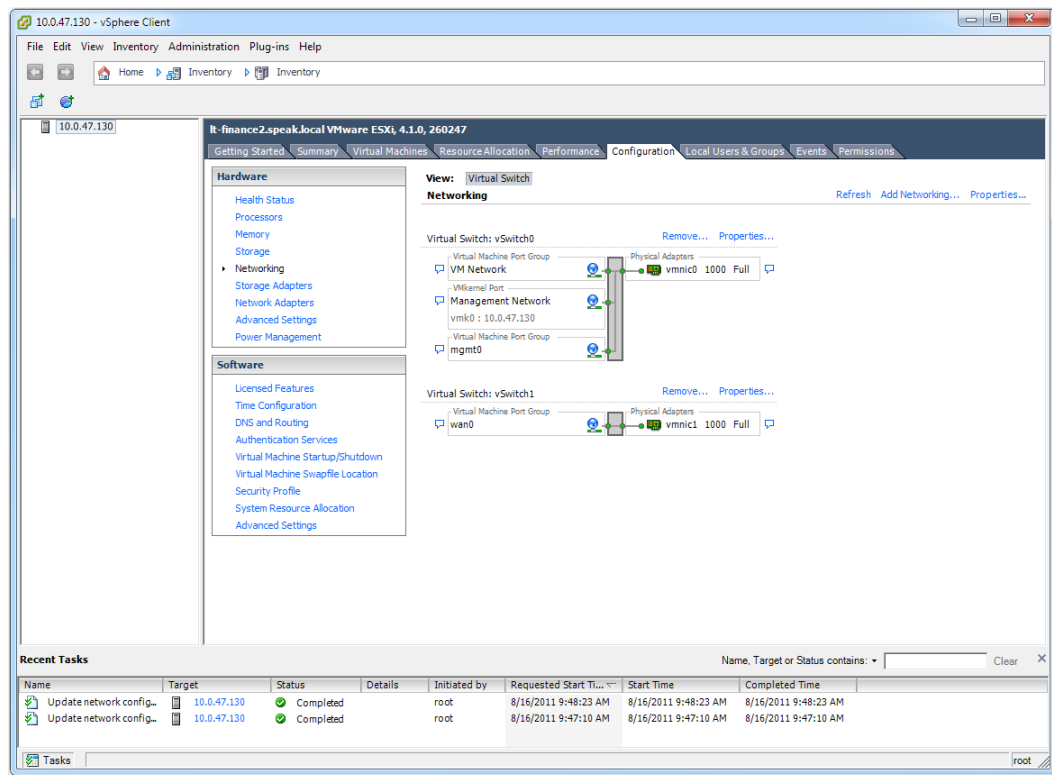n. In the **Network Label** field, enter **wan0** and click **Next**.

The Ready to Complete screen appears.

o. Click **Finish**.

The vSphere Client's **Configuration** tab now reflects the additions of both **mgmt0** and **wan0**.
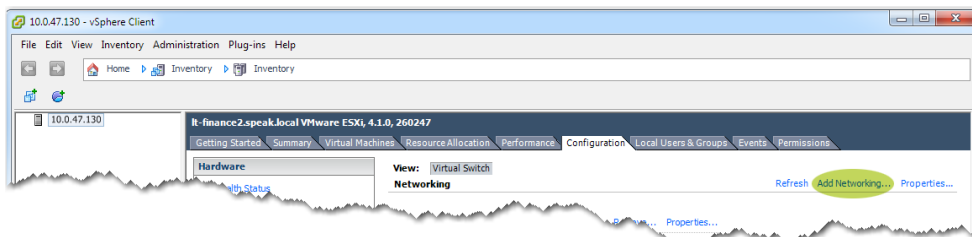

In single-homed Router mode configuration, **mgmt1** and **lan0** are **not used**. Therefore, you must map them to virtual switches that are not connected to any physical interface, as follows.
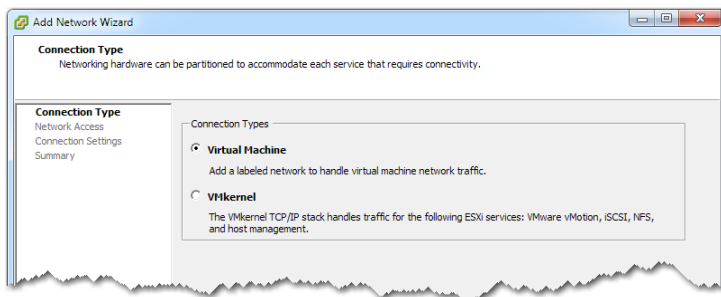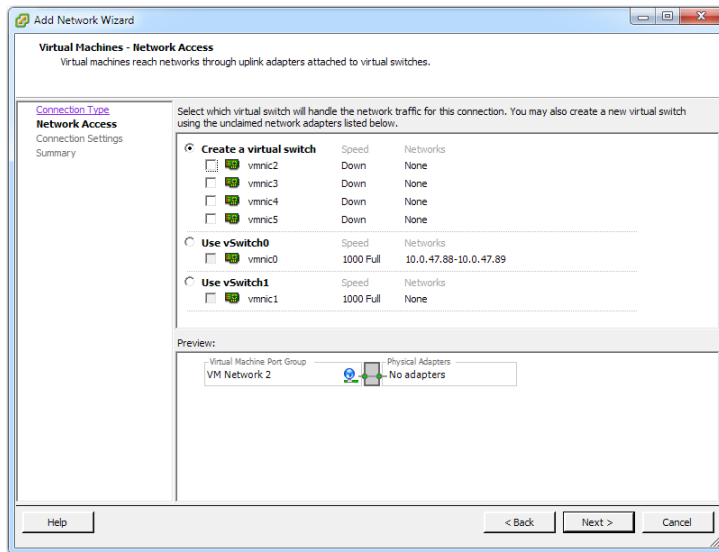
First, we'll map **mgmt1**.

p.   Return to the vSphere Client's **Configuration** tab, and click **Add Networking**.

The Connection Type screen appears. Make sure that **Virtual Machine** is selected.

q.   Click **Next**. The Virtual Machines - Network Access screen appears.

In this example, we deselect **vmnic2**, while leaving **Create a virtual switch** selected.

r.   Click **Next**. The Virtual Machine - Connection Settings screen appears.

s.   In the **Network Label** field, enter `mgmt1` and click **Next**. The Ready to Complete screen displays.

t.   Click **Finish**.

Now we'll map **lan0**.

u.   Return to the vSphere Client's **Configuration** tab, and click **Add Networking**.

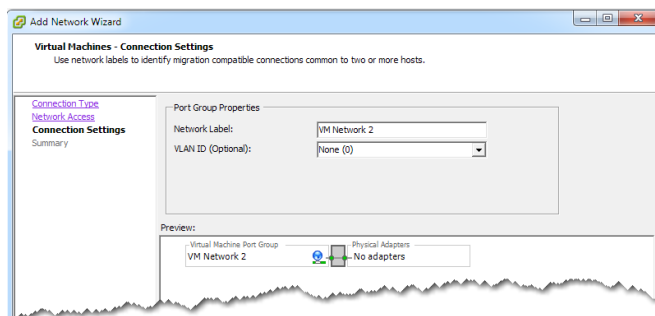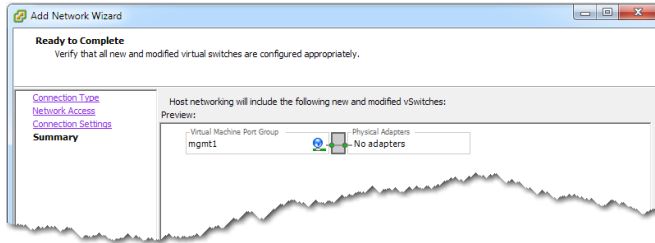The Connection Type screen appears. Make sure that **Virtual Machine** is selected.

v.   Click **Next**. The Virtual Machines - Network Access screen appears.

w. Again, deselect **vmnic2**, while leaving **Create a virtual switch** selected.

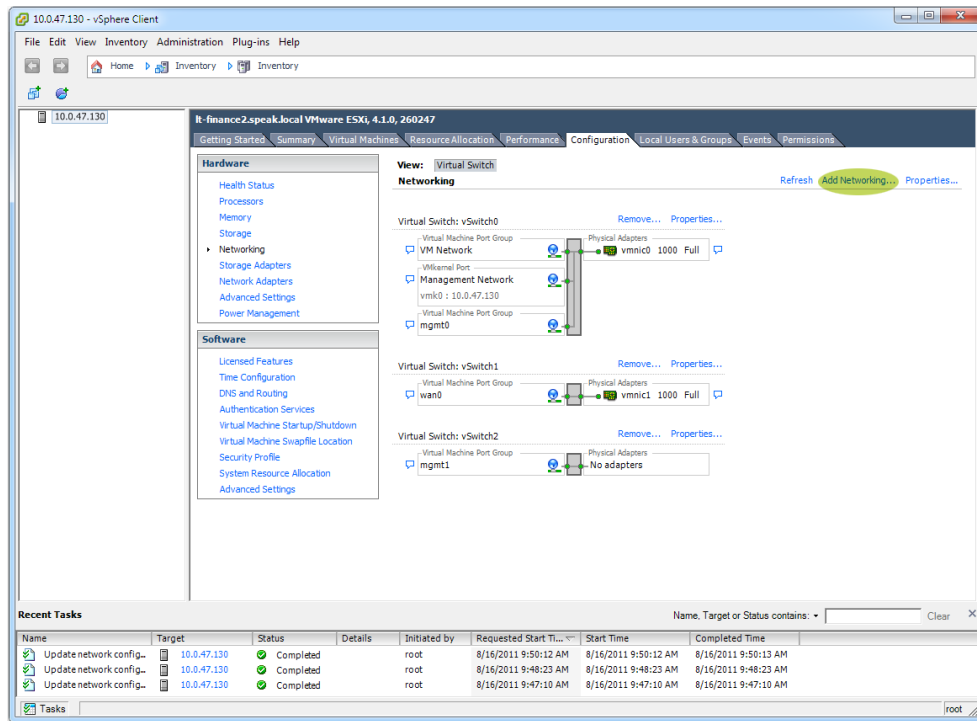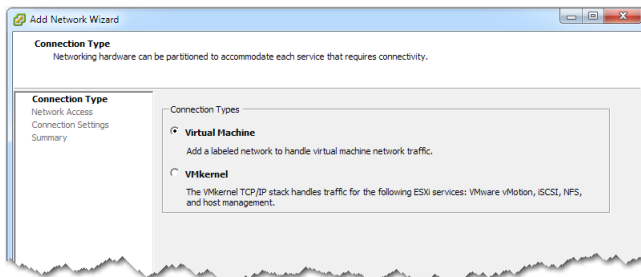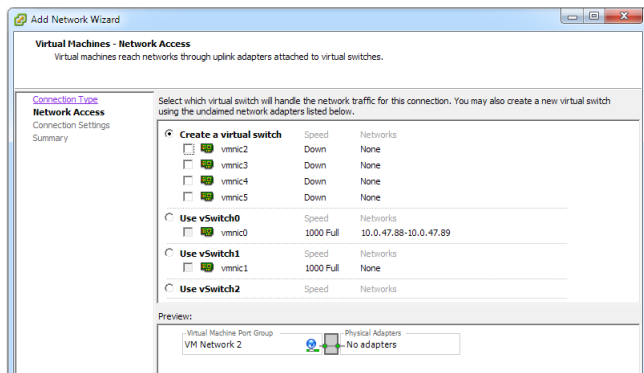x. Click **Next**. The Virtual Machines - Connection Settings screen appears.
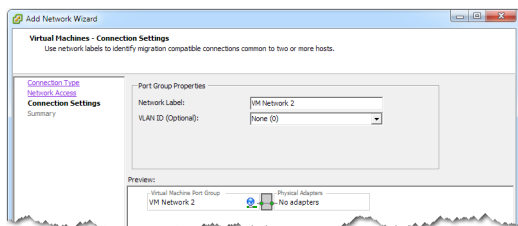
y. In the **Network Label** field, enter **lan0** and click **Next**. The Ready to Complete screen appears.

z. Click **Finish**. This is the complete configuration of virtual switches in the **Networking** view of the **Configuration** tab.

3   Deploy the VXOA virtual appliance's OVF template
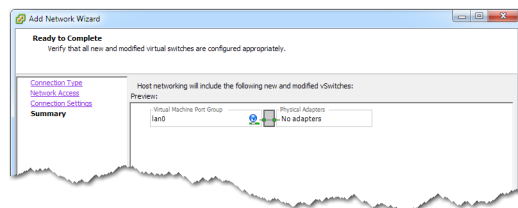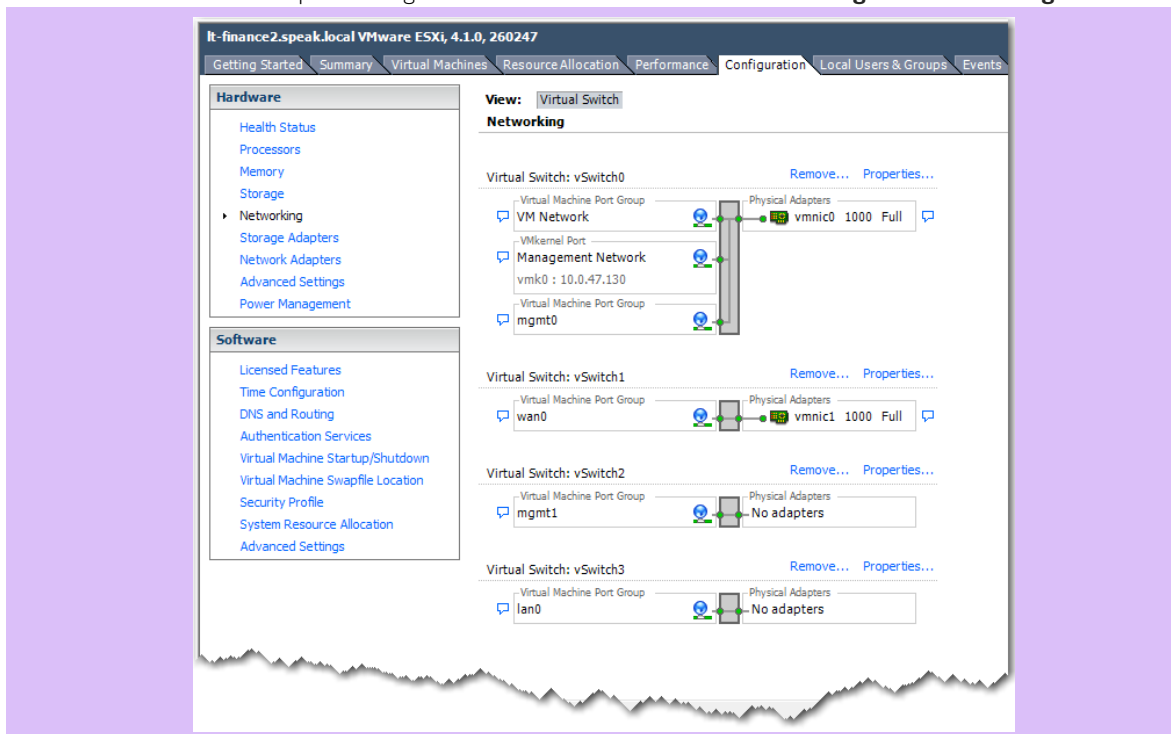
Verify that you know where the destination datastore is. If you don't have a datastore, you'll need to create one on the host before proceeding.

Before this point, you'll have downloaded the OVA file from the appropriate location. The OVA file is a .tar file containing the OVF template and other required content.

NOTE: If Internet Explorer saved the template as a winRAR (.tar) file, then be sure to change the extension back to .ova before using the file.

a.   From the **File** menu, select **Deploy OVF Template**. The following screen appears.
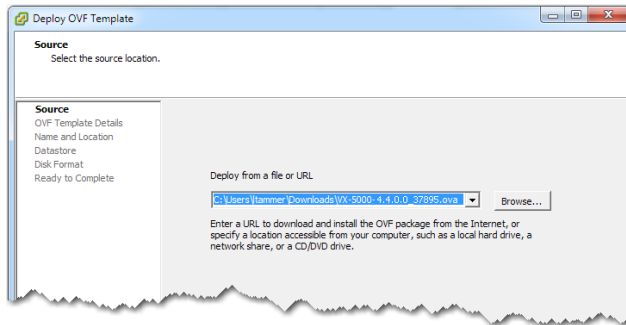
b.   Depending on where you put the OVA filter after you downloaded it from the Silver Peak Support portal, select the appropriate source and click **Next**.

The OVF Template details display.
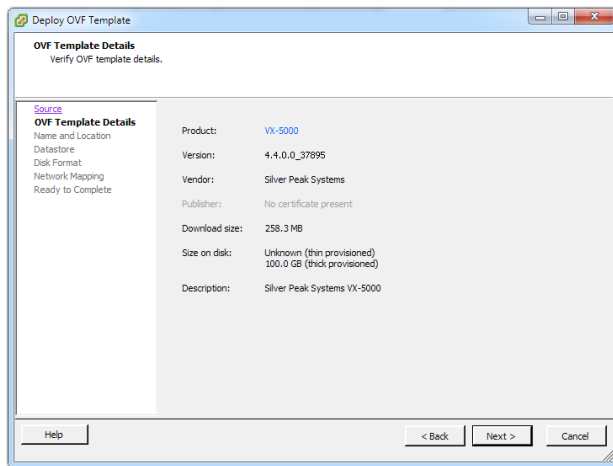
c.   Click **Next**. In the Name and Location screen, either accept the virtual appliance's default name, as in **VX-5000**, or change it. This is the name by which the hypervisor knows the virtual appliance.
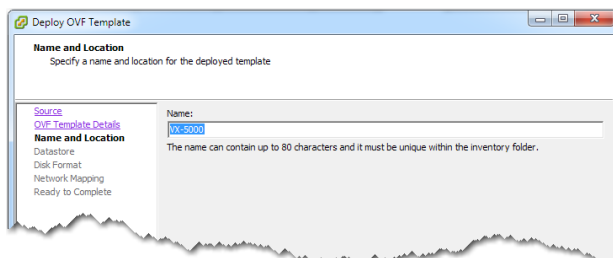
d   Click **Next**.

If you have multiple datastores, then the Datastore screen displays only those items which meet the requirements for minimum contiguous disk space.
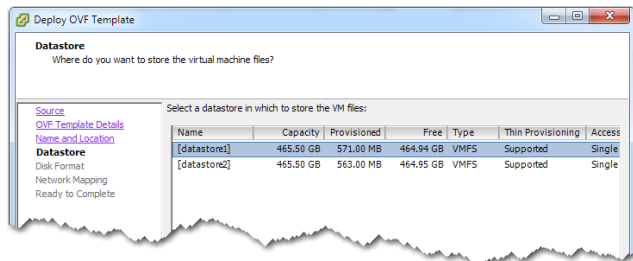
Select a datastore, and click **Next**. The Disk Format screen appears.
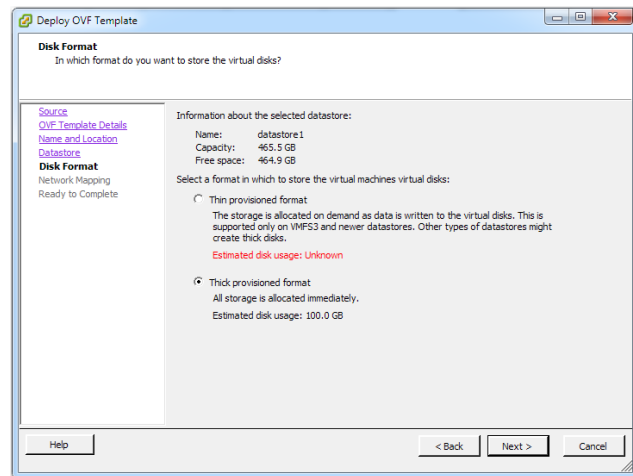
e   Make sure that **Thick provisioned format** is selected, and then click **Next**.

The Network Mapping screen shows the completed mapping of virtual appliance (VX-5000) source networks to logical destination networks you created in Step 2.
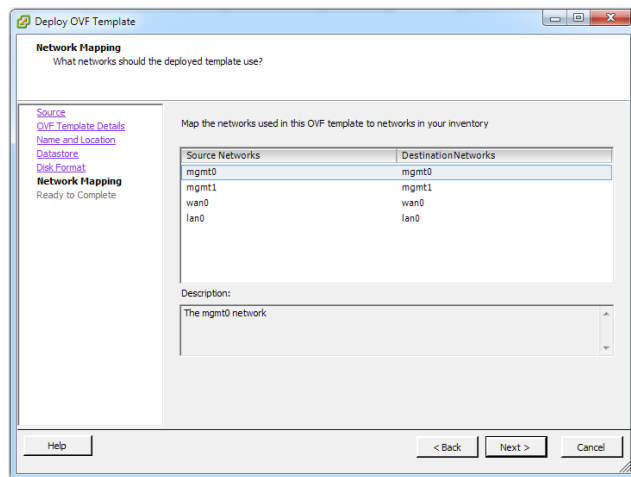
f.   Click **Next**. The Ready to Complete screen summarizes the VX-5000's deployment settings.
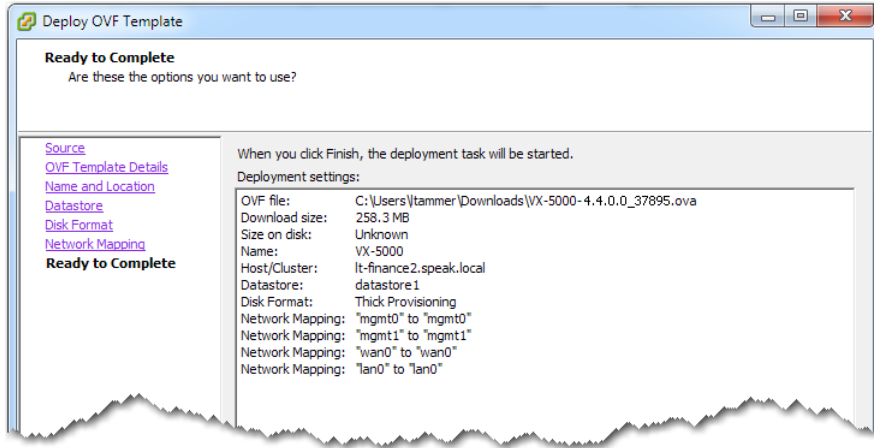
g   Review the data, and click **Finish**.

While showing a progress bar, the VX-5000 completes deployment and returns to the Summary screen.

NOTE: The virtual appliance is configured to have two virtual disks. The first disk is for System, and the second disk is for Network Memory.

4   Power on the Virtual Appliance

a.   In the vSphere Client, expand the VMware host node [in this example, it's 10.0.47.130] to show the VX-5000.

b.   To power on the virtual appliance, first select VX-5000, and then click ▶ in the menu bar above it.
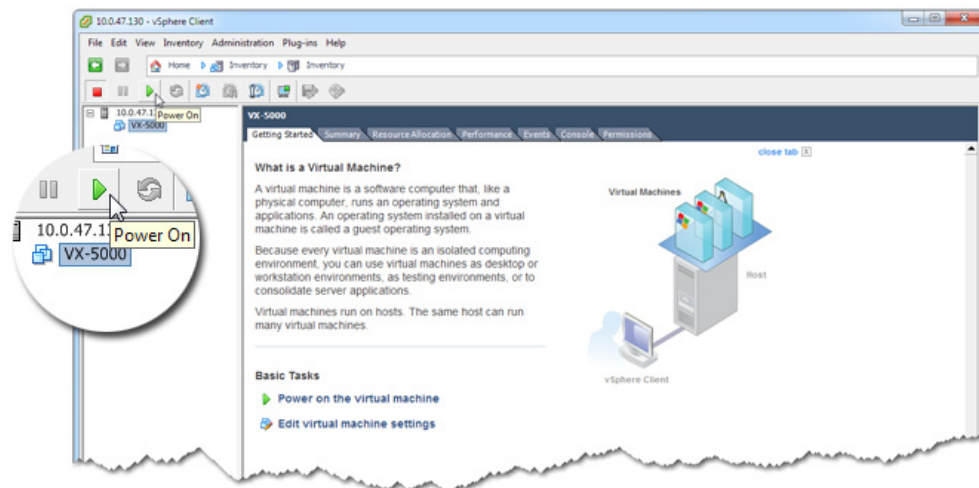
You can monitor the status at the bottom of the page, in the **Recent Tasks** area.

5 Configure the Virtual Appliance

To access the VX-5000's user interface, you'll need to discover the IP address for its **mgmt0** interface and enter it into a browser.

a. With **VX-5000** still selected in the tree view, click **Console**. After the VX-5000 boots up, it arrives at the login prompt.
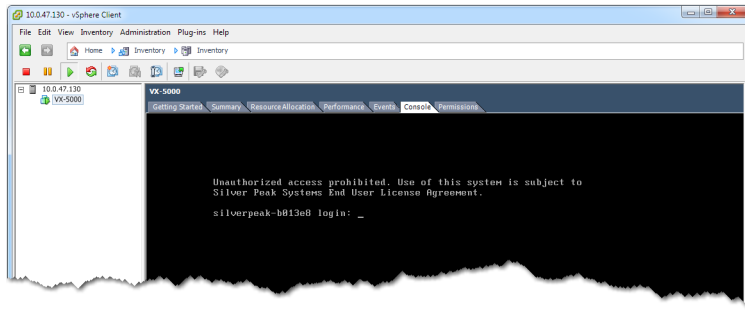

NOTE: You'll be entering commands in the console. If you ever need to click outside the client window, press **CTRL**+**ALT**.

b. Log in as follows:

```
vx name] login: admin          [ENTER]
Password: admin                [ENTER]
[vx name] > enable             [ENTER]
[vx name] #
```

c. To discover **mgmt0**'s IP address, enter the following:

[vx name] # **show interfaces mgmt0**   [ENTER]

The console displays the **mgmt0** IP address and netmask.
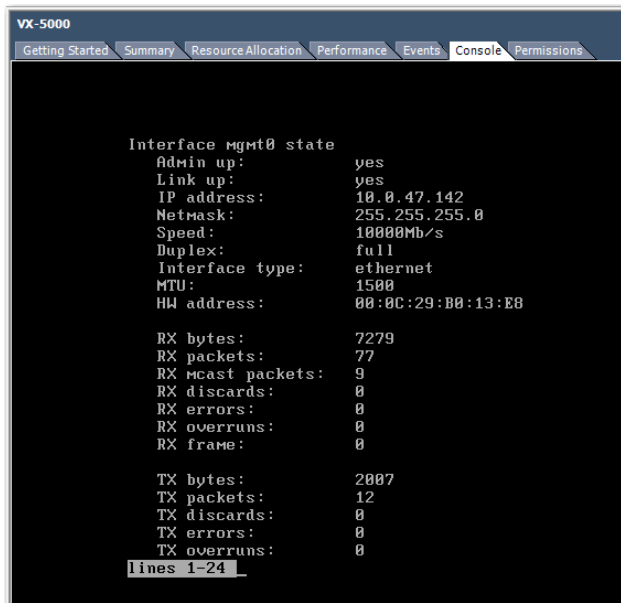
NOTE: To get to the login prompt from this point, enter **q** for quit, or hit the **spacebar** to continue paging through the returned information.

If the **mgmt0** IP address and netmask display no values, then you'll need to configure both with a static IP address and add a default gateway. Make sure you have both addresses before continuing.

In this example, we'll say **mgmt0** = 10.0.47.142/24 and its default gateway is 10.0.47.110.

d   To configure **mgmt0**, enter the following command sequence:

[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 10.0.47.142 /24`   [ENTER]

[vx name] (config) # `no interface mgmt0 shutdown`   [ENTER]

[vx name] (config) # `show interfaces mgmt0`   [ENTER]

e   To configure the default gateway, enter the following command sequence:
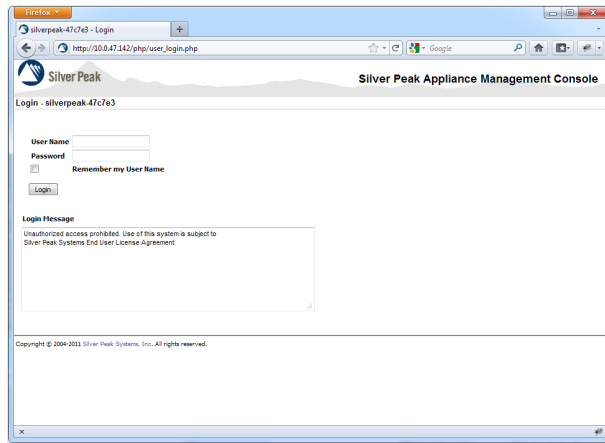
[vx name] (config) # `ip default-gateway 10.0.47.110`   [ENTER]

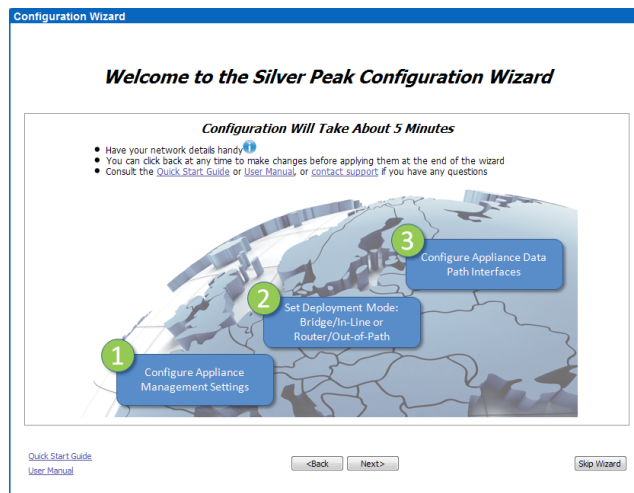[vx name] (config) # `show ip default-gateway`   [ENTER]

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**. When the virtual appliance asks permission to reboot, allow it.
     The Appliance Manager takes a few minutes to reboot and return to the login page.

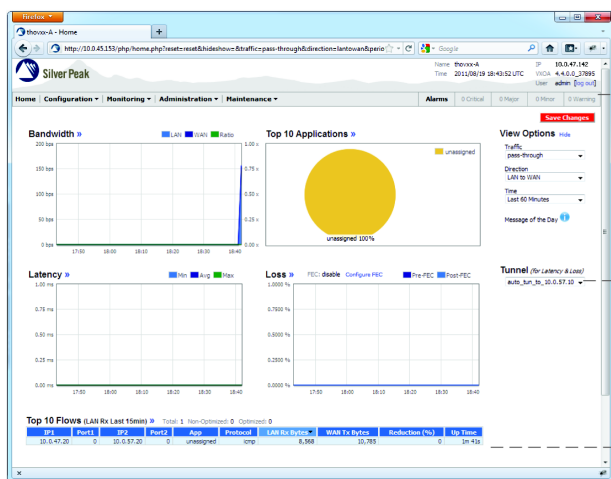   You are now ready to start using the appliance.

7 Verify end-to-end connectivity

After you configure both pairs of virtual appliances and their WAN routers, you must verify that the tunnel is **Up** and **Active**, and that you're able to access the hosts through the tunnel. You can find all the information you need on the Appliance Manager home page.

To verify connectivity for your specific redirection deployment, see the *Silver Peak Network Deployment Guide*.
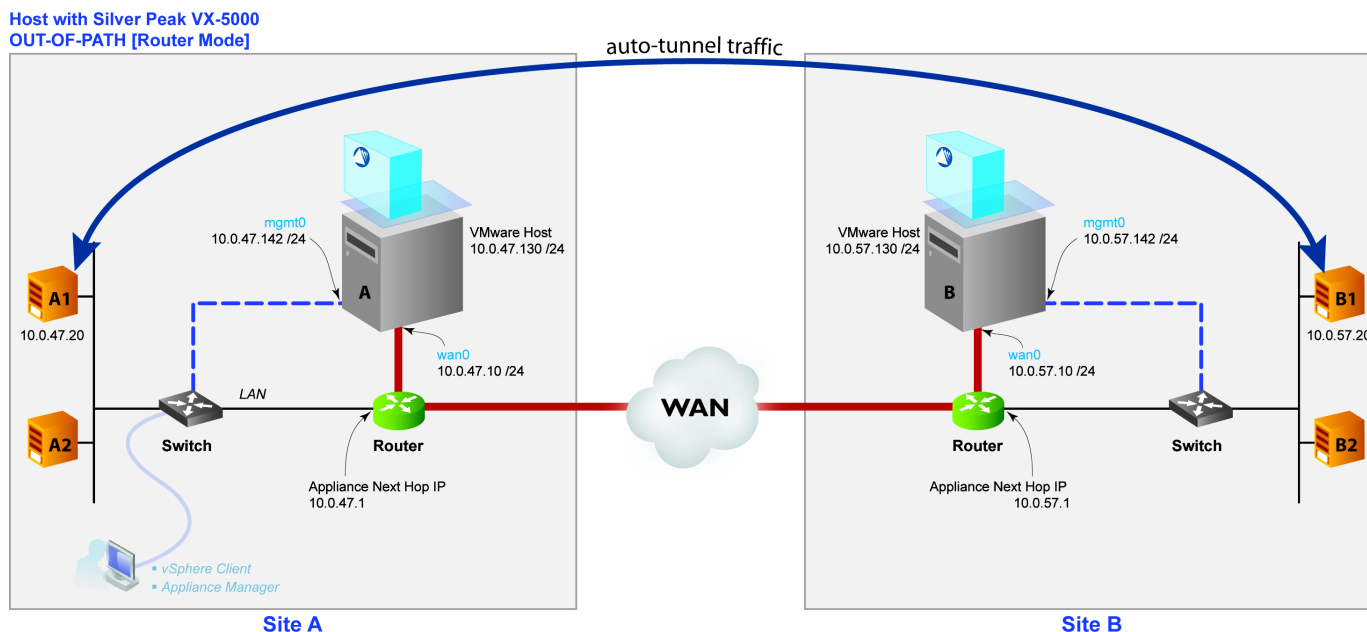
Verify connectivity for tunnel traffic between two LANs. In this example, verify the connection between **A1** and **B1**. In other words, from **10.0.47.20** to **10.0.57.20**. Screen refresh may take up to 60 seconds.

⚠ **CAUTION**

Using VMware's Snapshot function can severely degrade performance. Please don't take snapshots of the VX Virtual Machine.

To backup the configuration file with GMS, access either of the two following menus for backup options:

•   **Maintenance > Configuration Management > Backup**

•   **Maintenance > Configuration Management > Schedule Backup**

If you don't have GMS, or you're using VX-Xpress, then use Appliance Manager and navigate to **Maintenance > Configuration Management** for available backup options.

NOTE: If you want, you can configure Silver Peak appliances to create auto-tunnels as soon as they detect traffic.

If there was no existing traffic and therefore no tunnel …

… you can force the creation of an auto-tunnel. In a command line, manually setting up a continuous ping from **A1** to **B1**, and **then** check **Appliance A**'s Appliance Manager home page for tunnel status, the presence of flows, and the presence of any alarms:

•   To create a continuous ping from a **Linux** machine, enter

[A1] > **ping <IP Address for B1>**   [ENTER]

In this example, that would be **ping 10.0.57.20**

•   To create a continuous ping from a **Windows** machine, enter

[A1] > **ping -t <IP Address for B1>**   [ENTER]

In this example, that would be **ping -t 10.0.57.20**

After verifying connectivity, enter **CTRL-C** to stop the ping.

If you still don't see a tunnel, contact Silver Peak Customer Support.

If you're deploying VX-Xpress, see your Network Administrator or the VX-Xpress user forum.