Configure RSPAN with VMware

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The Remote Switched Port Analyzer (RSPAN) enables you to monitor traffic on one switch through a device on another switch and then send the monitored traffic to one or more destinations.

Before you begin

RSPAN requires that you configure an RSPAN VLAN on your physical switches. If you cannot configure an RSPAN VLAN, consider configuring ERSPAN as an alternative. For more information, see How Mirroring Works.

- You must have experience with basic VMware ESX and ESXi administration through the VMware vSphere Web Client.
- You must have an uplink port (HW NIC) attached to the switch (preferably one that is not designated for general network traffic).
- Direct access to the iDRAC console is preferred.

For information about configuring the VMware vSphere server, see the *Working with Port Mirroring* section in the ESXi and vCenter documentation for your version of VMware.

For information about configuring VMware with an ExtraHop sensor, see Deploy an ExtraHop sensor on VMware.

The following steps outline the key procedures that are required to configure RSPAN with VMware for an ExtraHop sensor. Note that procedures in these steps might vary between versions of VMware.

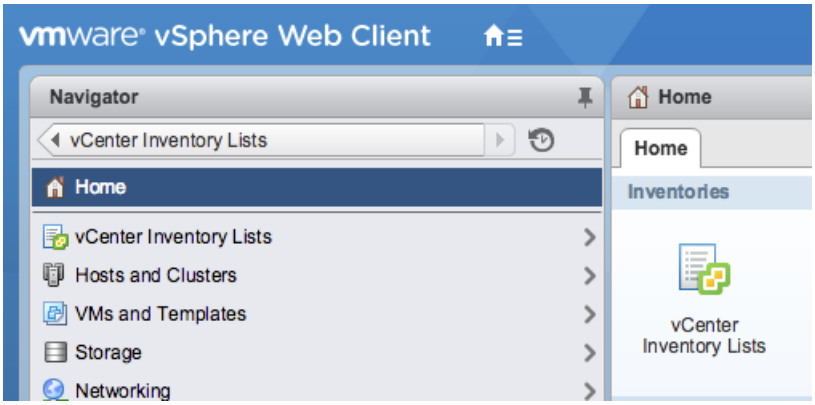
Note: While these steps are required for RSPAN configuration, most deployments have completed the first four steps prior to installing the sensor. If you have an existing Virtual Distributed Switch, start with step 5.

1. Create a virtual distributed switch (VDS)
2. Add port groups to the VDS
3. Add a host to the VDS
4. Add uplink ports to the VDS
5. Configure an RSPAN port mirror on the VDS

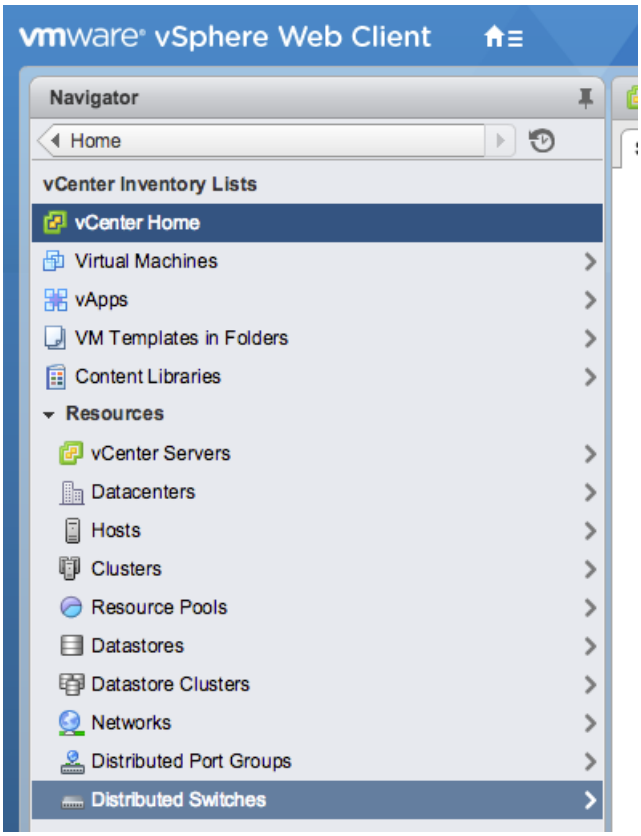
Create a virtual distributed switch

Complete the following steps to create a virtual distributed switch (VDS). The VDS carries traffic from your virtual machines (VM) to your physical network and to other VMs.

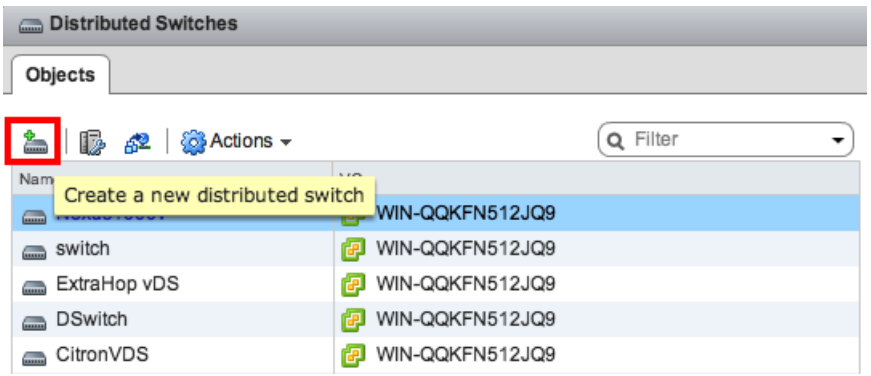
1. Log in to the vSphere Web Client.
2. Click **vCenter Inventory Lists**.



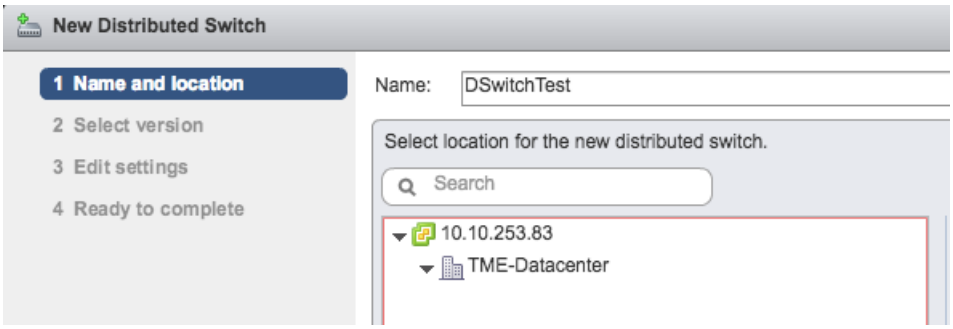
3. In the left panel, click **Distributed Switches**.



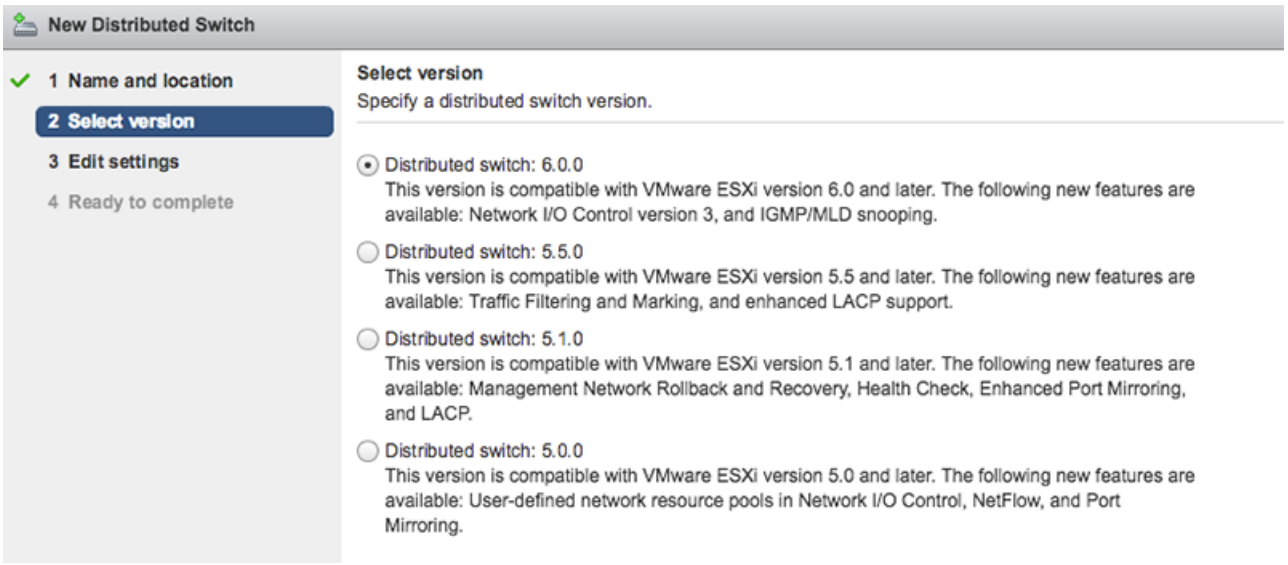
4. Above the list of switches, click the **Create a new distributed switch** icon.



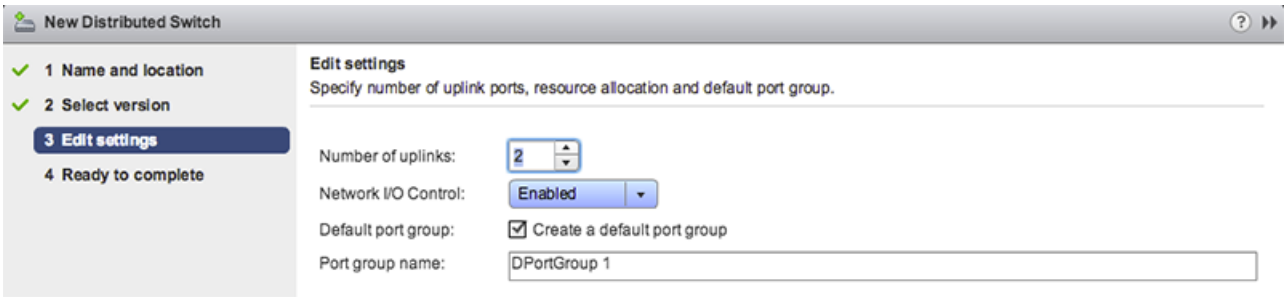
5. In the New Distributed Switch window, type a name for the switch, select the destination data center or network folder, and then click **Next**.



6. Select the distributed switch version and click **Next**.



7. Edit the following settings:



a) Set the **Number of uplinks** to two or more if your SPAN traffic is on a dedicated NIC (recommended). Otherwise, set this value to 1.

b) Click the **Network I/O Control** drop-down menu and select one of the following options.

Disabled

If your SPAN traffic on a dedicated NIC. (Recommended)

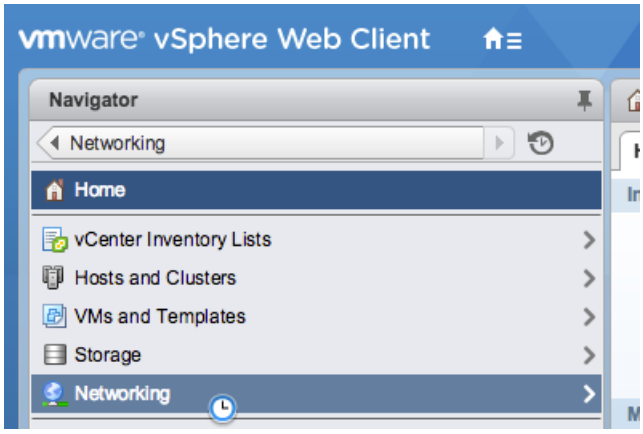
Enabled

If your SPAN traffic is on the same NIC as your monitored traffic.

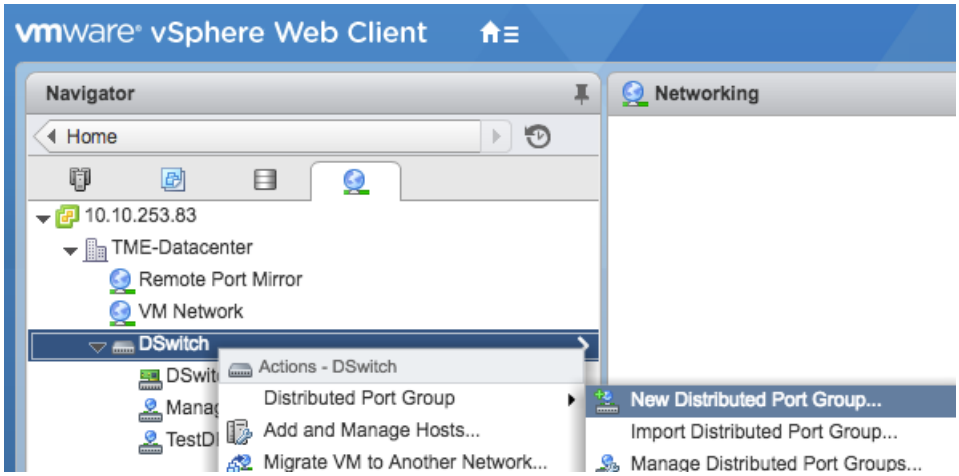
Add port groups to the VDS

Complete the following steps to add port groups when you deploy a new virtual machine or add a new ESX host into your VDS environment. Port groups enable you to properly associate the new machine or host to the port group that is being monitored immediately.

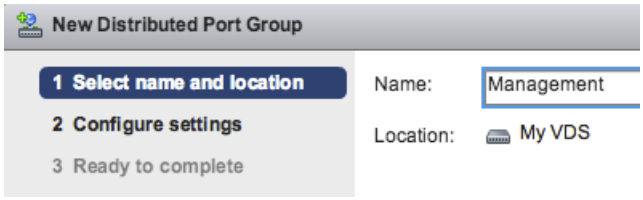
1. Click on **Networking**.



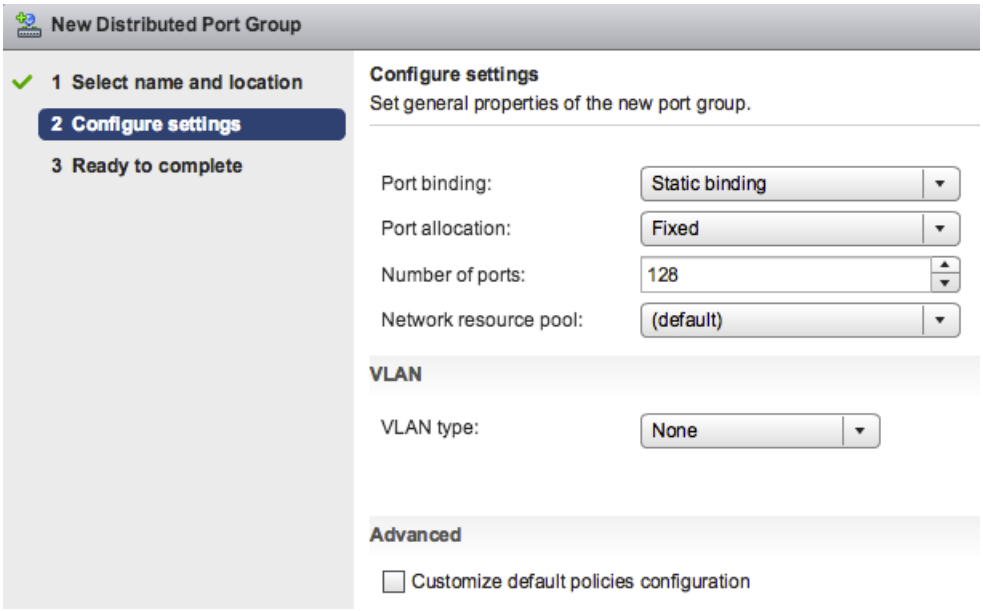
2. Right-click the VDS and then select **New Distributed Port Group**.



3. In the New Distributed Port Group window, type a name for the port group and click **Next**.

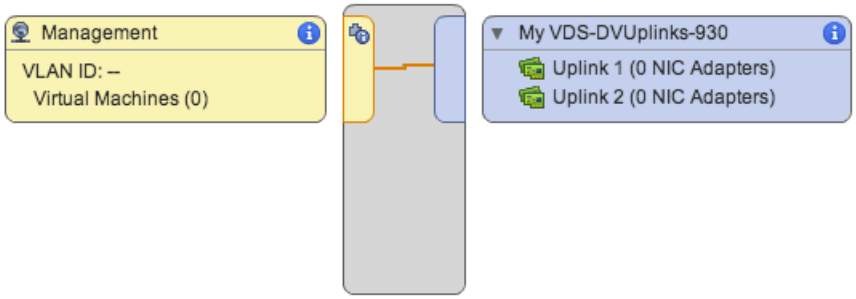


4. Configure the following settings:



a) Click the **Port binding** drop-down menu and select **Static binding**.
b) Click the **Port allocation** drop-down menu and select **Fixed**.
c) In the Number of ports field, type the number of ports you want to connect.
d) Leave the default settings for the remaining items.
e) Click **Next**.

5. Verify your settings and click **Finish**.
The new port group appears on the **Manage** tab.

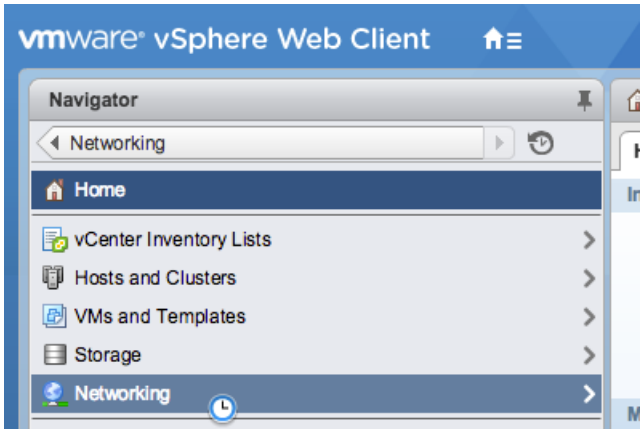


6. Repeat these steps for any additional port groups.

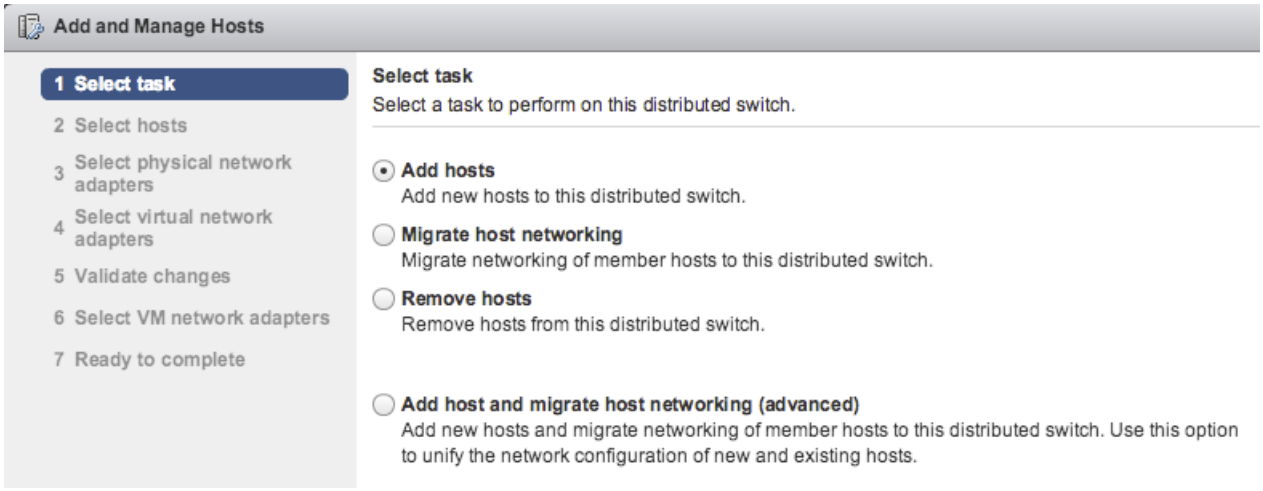
Add a host to the VDS

Complete the following steps to add a host to the VDS. Skip this procedure if all hosts have already been added to the cluster. We recommend that you dedicate one uplink for management and one uplink for spanning.

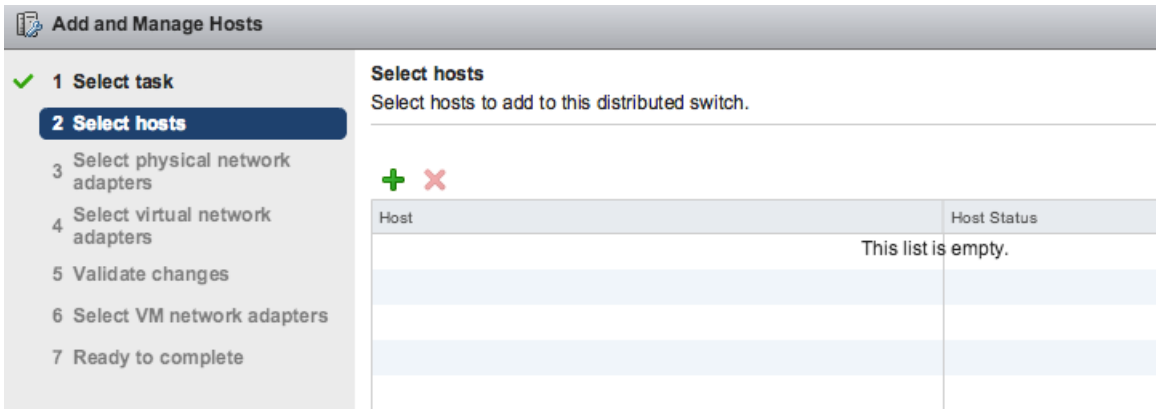
1. Click **Networking**.



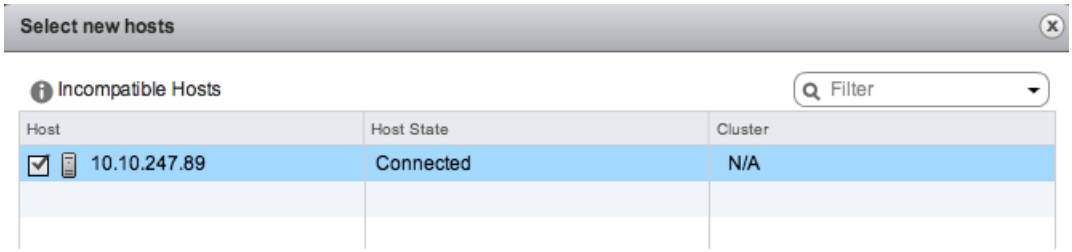
2. Right-click the VDS and then select **Add and Manage Hosts**.
3. In the **Add and Manage Hosts** dialog box, click the **Add Hosts** radio button and click **Next**.



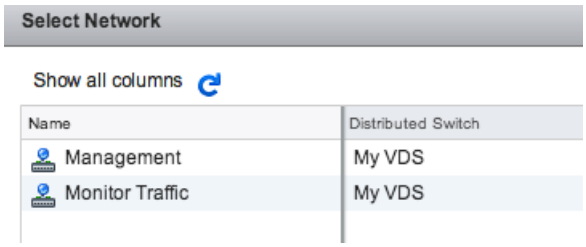
4. Click the plus icon ✚ to add a host.



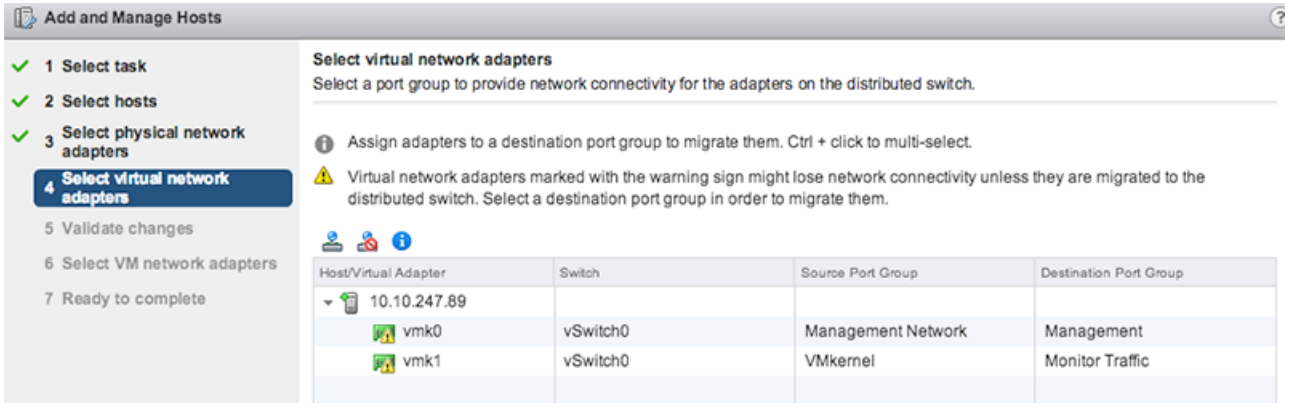
5. In the list of available hosts, select the checkbox next to the host and click **OK**.



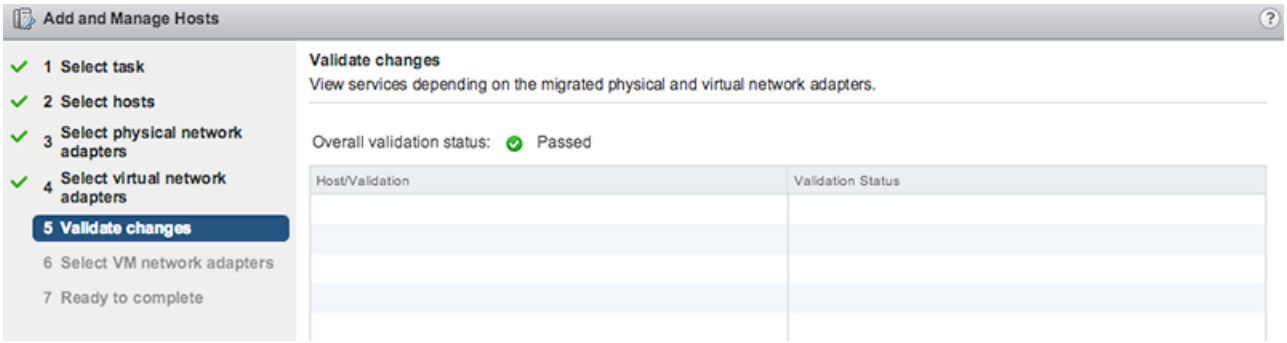
6. Select the host from the list and click **Next**.
7. Select the checkboxes next to the network adapters you want to add to the host and click **Next**.
8. Assign one of the NICs to the management port group.
   a) Select the network adapter from the list and click the **Assign Port Group** icon.
   b) In the **Select Network** pop-up window, select the port group to assign to the network adapter for management.
   c) Assign one NIC to the monitoring port group.
9. Select the network adapter from the list and click the **Assign Port Group** icon.
10. In the Select Network pop-up window, select the port group to assign to the network adapter for monitoring.



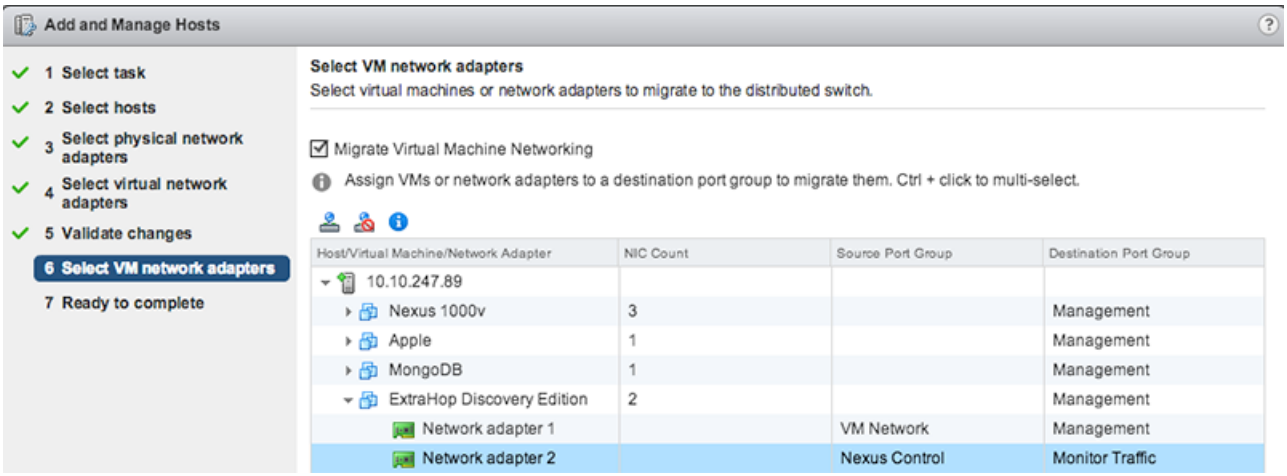
11. After you have assigned each adapter to a Destination Port Group (in the far right column), click **Next**.



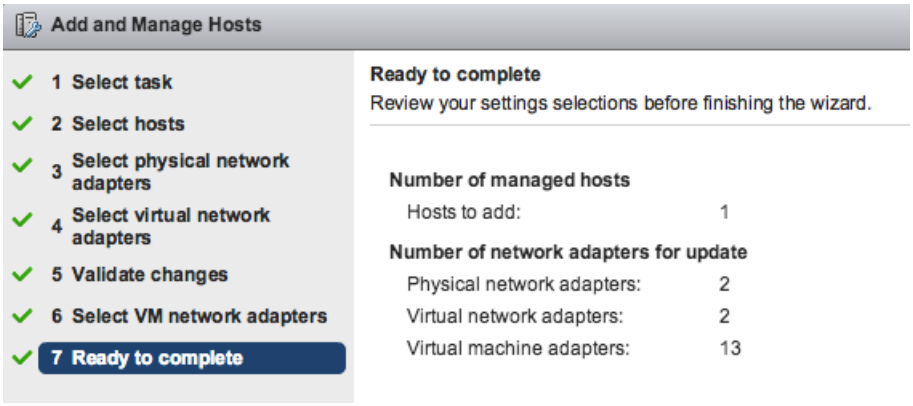
12. On the Validate Changes screen, verify that the status has passed and click **Next**.



13. Select the **Migrate Virtual Machine Networking** checkbox.

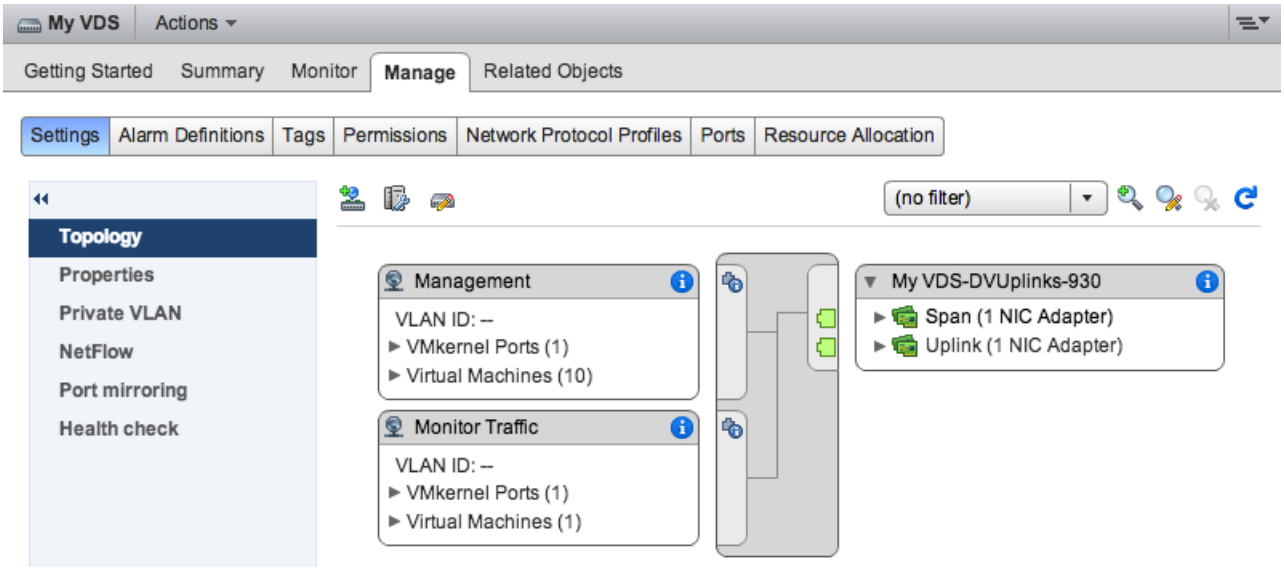


14. Click the **Assign Port Group** icon and assign a network adapter for management and a network adapter for monitoring, and click **Next**.
15. Verify your settings and click **Finish**.



16. View the progress bar in the right panel and wait for the system to add the host.

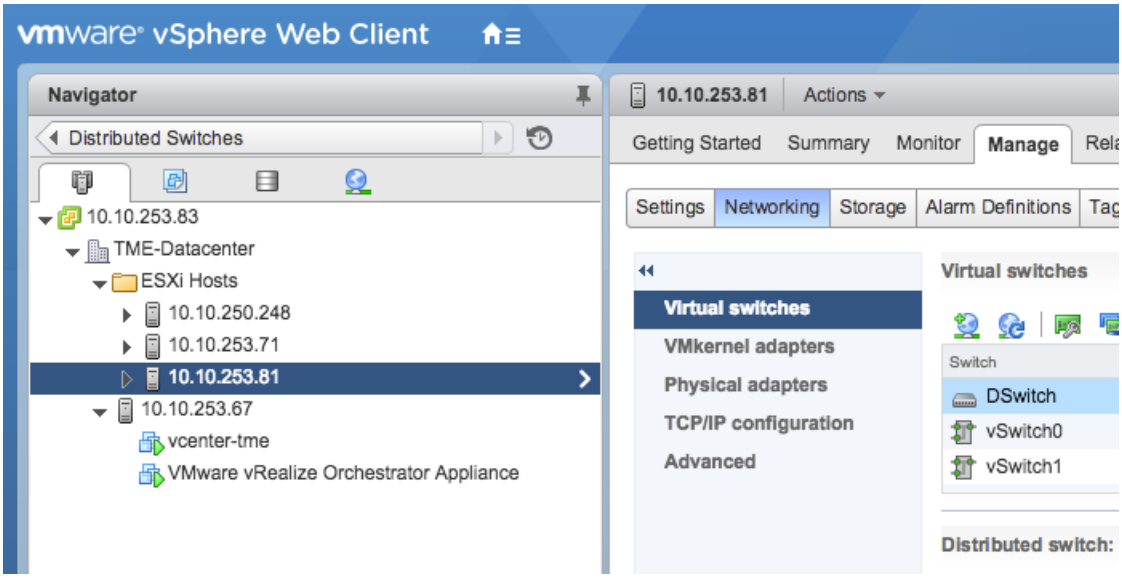
    The following figure shows an example configuration.



Add uplink ports to the VDS

Complete the following steps to add an uplink port to the VDS. You must assign one uplink port to the VDS for each associated host.

1. Browse to a host in the vSphere Web Client.
2. Click the **Manage** tab, and then select **Networking** > **Virtual Switches**.



3. From the list, select the distributed switch you want to add an uplink port to.
4. Click **Manage the physical network adapters**.
5. Click **Add**.
6. From the list, select a network adapter and then select the uplink port from the drop-down menu that you want to assign to the network adapter.
7. Click **OK**.

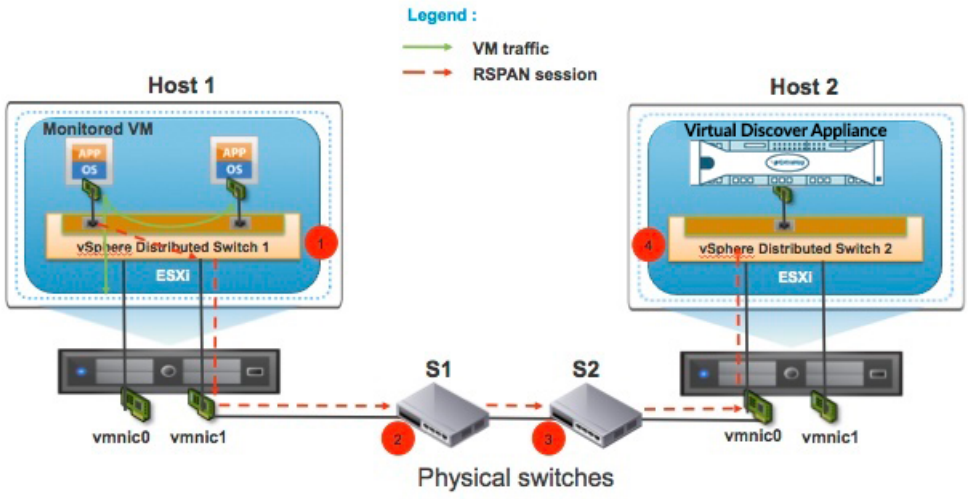
Configure an RSPAN port mirror

Complete the following steps to configure an RSPAN port mirror to view traffic on the VDS, to configure the local switch to view external traffic, and to configure the virtual Discover appliance to do a combination of both. The virtual Discover appliance can be deployed in environments with multiple ESX servers connected with a virtual distributed switch (VDS).

Complete the following steps to configure a virtual Discover appliance as the destination for one or more RSPAN mirror sessions. The RPSAN mirror sessions can originate from either a virtual distributed switch (VDS) that mirrors local VM traffic or from a physical switch that mirrors external traffic.

The following steps are for a Discover appliance deployed on an ESX host that is managed by vCenter with a configured VDS. You must connect a local switch to an uplink port that is configured as a VLAN trunk port and that carries the RSPAN VLAN traffic. The RSPAN VLAN will carry the mirrored traffic and can span multiple switches to reach the virtual Discover appliance.

The following figure illustrates the port mirror setup.



1. Click **Networking**.
2. Click the **Configure** tab and expand Settings.
3. Click the **Port mirroring** option and click **New**.
4. Select the **Remote Mirroring Destination** session type, and then click **Next**.
5. In the Name field, type a name to identify the port mirroring session.
6. From the Status drop-down menu, select **Enabled**.
7. Click **Next**.
8. Click **Select distributed ports**. A dialog box displays a list of existing ports. Select the check box next to the distributed port and click **OK**.
9. Click **Next**.
10. Select one of the available options to specify the destination port where you want to send mirrored traffic. This port is the virtual port on the VDS that corresponds to the monitoring interface on your virtual ExtraHop sensor.
11. Click **Next**.
12. Verify the summary information and then click **Finish** to add the port mirror. The new port mirroring session appears in the Port Mirroring section of the settings tab.