



Junos[®] Space

Junos Space Virtual Control User Guide

Release

11.3



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The information in this document is current as of the date listed in the revision history.

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- [Documentation Conventions](#) on page xv
- [Documentation Feedback](#) on page xvi
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[Junos Space Documentation and Release Notes](#)

For a list of related Junos Space documentation, see <http://www.juniper.net/techpubs/>.

If the information in the latest release notes differs from the information in the documentation, follow the *Junos Space Release Notes*.

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[Documentation Conventions](#)

[Table 1](#) on [page xvi](#) defines the notice icons used in this guide.

Table 1: Notice Icons

Icon	Meaning	Description
	Informational note	Indicates important features or instructions.
	Caution	Indicates a situation that might result in loss of data or hardware damage.
	Warning	Alerts you to the risk of personal injury or death.
	Laser warning	Alerts you to the risk of personal injury from a laser.

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- Document or topic name
- URL or page number
- Software release version (if applicable)

Requesting Technical Support

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- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the *JTAC User Guide* located at <http://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf>.
- Product warranties—For product warranty information, visit <http://www.juniper.net/support/warranty/>.
- JTAC hours of operation—The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

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- Search for known bugs: <http://www2.juniper.net/kb/>
- Find product documentation: <http://www.juniper.net/techpubs/>
- Find solutions and answer questions using our Knowledge Base: <http://kb.juniper.net/>
- Download the latest versions of software and review release notes: <http://www.juniper.net/customers/csc/software/>
- Search technical bulletins for relevant hardware and software notifications: <https://www.juniper.net/alerts/>
- Join and participate in the Juniper Networks Community Forum: <http://www.juniper.net/company/communities/>
- Open a case online in the CSC Case Management tool: <http://www.juniper.net/cm/>

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool: <https://tools.juniper.net/SerialNumberEntitlementSearch/>

Opening a Case with JTAC

You can open a case with JTAC on the Web or by telephone.

- Use the Case Management tool in the CSC at <http://www.juniper.net/cm/> .
- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

For international or direct-dial options in countries without toll-free numbers, see <http://www.juniper.net/support/requesting-support.html> .

PART 1

Junos Space Virtual Control Overview

- [Understanding Junos Space Virtual Control on page 3](#)
- [Dashboard and Inventory Overview on page 7](#)
- [Using the Junos Space Virtual Control Getting Started Assistant on page 13](#)

CHAPTER 1

Understanding Junos Space Virtual Control

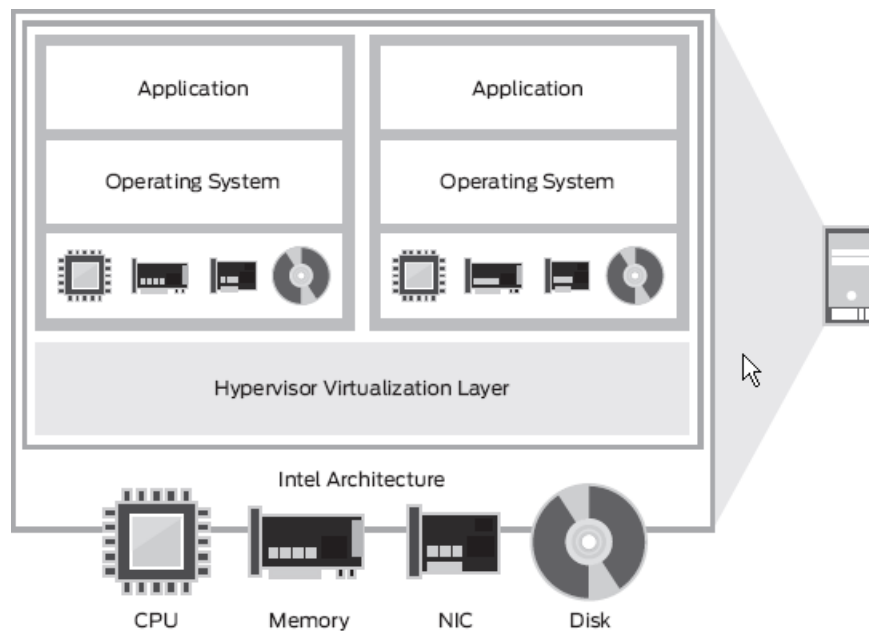
- [About Virtual Networks on page 3](#)
- [About Junos Space Virtual Control on page 4](#)

About Virtual Networks

Virtual networks consist of virtual devices that are connected together in a virtual environment. System virtual machines (VMs), rendered by hypervisors, enable different VMs to share underlying hardware resources.

Hypervisors (virtual machine monitors) are small-footprint software applications that reside between the hardware and the installed operating system, and sometimes behave as an extension of the BIOS. These applications divide the hardware resources (or host) into logical partitions (LPARs) and allocate dedicated or shared slices of these resources to each LPAR. Each VM (or guest) shares the physical resources of the host system. These include the CPU, memory, network interface card (NIC), and storage space. [Figure 1 on page 4](#) illustrates the logical partitioning of hardware resources into virtual devices.

Figure 1: Virtualized Server



Each VM is assigned a MAC address, is logically connected to virtual ports or switches, and seems to initiate traffic from a virtual NIC. Virtual switches allow VMs on the same host to communicate with each other using the same protocols as physical switches. In addition, VMs can be configured with one or more virtual Ethernet adapters, each with its own MAC address and IP address. Virtual networks and virtual machines, therefore, have the same networking capabilities as physical networks built around physical devices.

The increase in the number of virtual switches in the data center presents Data Center (DC) operators with the challenge of having to manage these virtual network resources in addition to their physical networks. Network operators are unable to apply the tools that they currently use for managing the physical infrastructure to managing the virtual infrastructure.

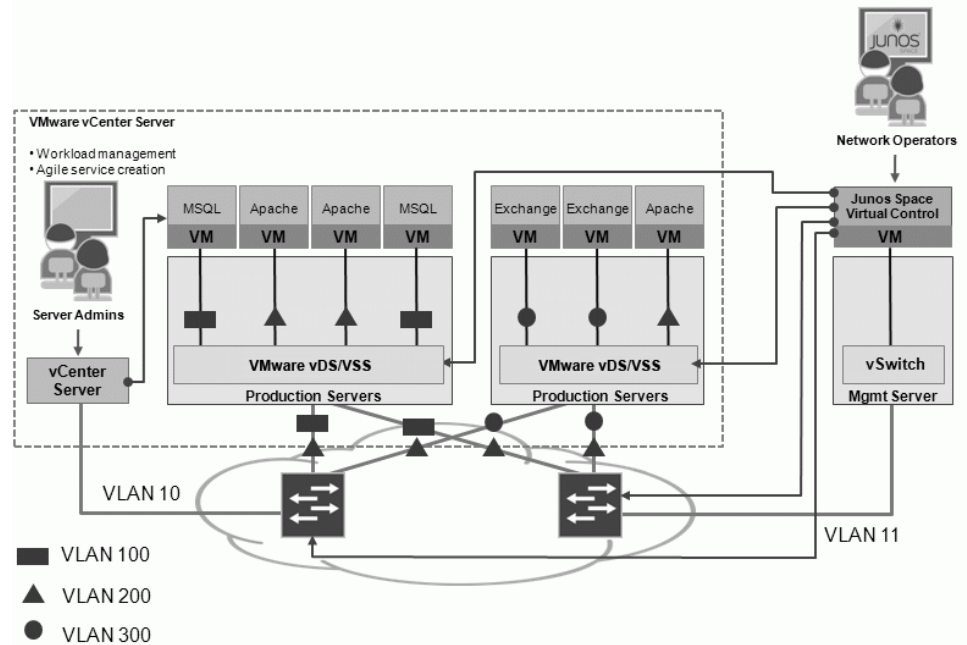
Related Documentation

- [About Junos Space Virtual Control on page 4](#)

About Junos Space Virtual Control

Junos Space Virtual Control (JSVC) unifies the physical and virtual networks and provides network operators with a comprehensive view into the complete end-to-end network infrastructure. JSVC is a Web-based solution that enables you to manage virtual networks deployed in virtualized environments in data centers. It provides a single management interface for you to monitor and control the virtual and physical elements of the virtual environment. This ensures that network policies are consistently and automatically applied across physical and virtual networks. [Figure 2 on page 5](#) illustrates the virtual machines and physical interfaces in a virtual network.

Figure 2: Network View of Virtual Machines



Virtual machines residing on a host connect to ports in a virtual switch. Virtual switches, in turn, are associated with port groups that have a fixed number of ports. You can increase the number of ports in a virtual switch by increasing the number of ports in a port group. Ethernet adapters (also called Uplink adapters) connect the virtual environment to the physical network. These elements constitute the inventory of the virtual network.

You can use JSVC to discover, configure, and monitor the virtual resources in your virtual environment. JSVC also provides consistent orchestration and operation of the physical and virtual components of the environment.

JSVC enables you to use the services and functionality of other Junos Space applications to manage and monitor the virtual network just as you would a physical network.

Related Documentation

- [Port Group Profiles Overview on page 113](#)

CHAPTER 2

Dashboard and Inventory Overview

- [Dashboard Overview on page 7](#)
- [Inventory Overview on page 8](#)

Dashboard Overview

The vNetworks workspace provides a single-page snapshot of the current status of your virtual network. The vNetworks Inventory dashboard is the default landing page when Junos Space Virtual Control (JSVC) is launched.

To launch JSVC, do one of the following:

- Click **Virtual Control** on the **Junos Space Network Application Platform** landing page.
- Select **Virtual Control** from the application switcher

The Virtual Network (vNetworks) Inventory dashboard ([Figure 3 on page 8](#)) displays a graphical depiction of the elements on the vNetwork.

JSVC identifies the environment of virtual networks and virtual switches as a single physical network environment. This enables the administrator to dynamically configure, manage, and monitor the virtual components according to real-time demands. The virtual machines, virtual networks, virtual switches, and hosts make up the inventory of the virtual network environment.

Figure 3: The vNetworks Inventory Dashboard



Related Documentation

- [Inventory Overview on page 8](#)

Inventory Overview

From the Junos Space Virtual Control (JSVC) inventory page, you can view and manipulate the managed virtual and physical components of the virtual network individually or collectively. You can also browse, zoom, filter, tag, and sort objects. You can select one or more objects and perform actions on them using the actions in the **Actions** drawer or from the shortcut menu.

JSVC enables you to manage the virtual network inventory at various levels of granularity, including:

- **Virtual Network:** This includes viewing a graphical representation of the elements in the virtual network, viewing a list of virtual machines in the network and their associated details, and adding a VMWare vCenter server.
- **Hosts:** This includes viewing the virtual machines on a host and drilling down to the details for each host.
- **Virtual Switches and VLANs:** This includes viewing the virtual switches in the network and the details for each switch. It also includes viewing and configuring VLANs.
- **Port Groups:** This includes viewing the ports in port groups and configuring port and port group settings.

From the vNetworks Inventory page, you can display the managed vNetwork elements in two views:

Thumbnail View

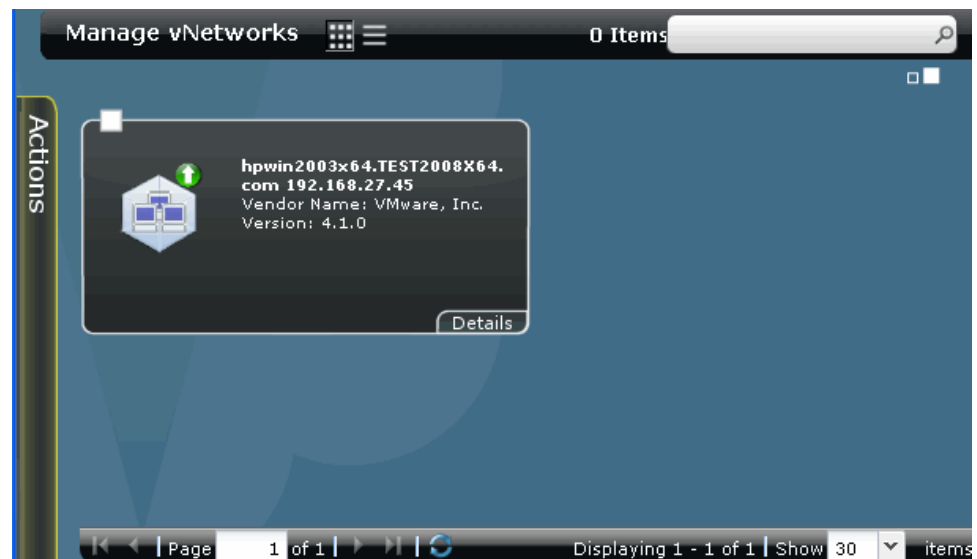
The thumbnail view of the virtual network appears as representative thumbnails of the vNetwork.

To display the thumbnail view of the vNetwork:

- From the Virtual Control task ribbon, select **vNetworks > Manage vNetworks**.

The thumbnail view is displayed ([Figure 4 on page 9](#)).

Figure 4: Manage vNetworks Page (Thumbnail View)



While in thumbnail view, to view the summary information for a specific VMWare vCenter server, click **Details** (the lower-right corner of the thumbnail). The summary information is displayed in the main display area. [Table 2 on page 9](#) explains each of the fields in the summary view.

Table 2: Manage vNetworks Page (Summary Information) Field Descriptions

Field	Description
Host Name/IP Address	IP address used by this server
vNetwork	Name assigned to the vNetwork as configured by the server administrator
Vendor Name	Name of the vendor for the virtual network

Table 2: Manage vNetworks Page (Summary Information) Field Descriptions (*continued*)

Field	Description
Orchestration Mode	One of the following: <ul style="list-style-type: none">• None• Strict• Very Strict
Connection Status	One of the following: <ul style="list-style-type: none">• Connected— The vNetwork is reachable by the Virtual Control application.• Not connected— The vNetwork is not reachable by the Virtual Control application.
Version	Software version of the virtualization infrastructure

Tabular View

The tabular view of the virtual network displays the information for the selected vNetwork in tabular form. To display the tabular view of the vNetwork, from the Thumbnail view, click the Tabular View icon on the title bar.

The tabular view is displayed ([Figure 5 on page 11](#)) showing the information listed in [Table 2 on page 9](#).

You can toggle between thumbnail and tabular views by clicking the icon on the title bar for the other view. The thumbnail and tabular views for each of the vNetwork elements are explained in greater detail in subsequent topics, in the context of the elements that they portray.

Figure 5: Manage vNetworks Page (Tabular View)

Host Name/IP Address	vNetwork	Vendor Name	Orchestration Mode	Connection Status	Version
192.168.27.47	HP_WINXP_	VMware, Inc.	None	Connected	4.1.0

Related Documentation

- [Dashboard Overview on page 7](#)

CHAPTER 3

Using the Junos Space Virtual Control Getting Started Assistant

- [Virtual Control Getting Started Overview on page 13](#)

Virtual Control Getting Started Overview

The Getting Started assistant is a panel on the Junos Space sidebar that guides you through the tasks that you can perform as part of the initial setup for every application. It is displayed when you log in to Junos Space and if the **Show Getting Started on Startup** check box is selected.

Every step in the Getting Started assistant contains a task link, and alongside the task links are help icons that provide information about the individual tasks. To execute the steps, click the task links of every step. The inventory page displays the page where you can execute the tasks.

To use the Virtual Control Getting Started assistant, navigate to Virtual Control, click the **Help** icon, and expand the **Getting Started** assistant. The **Getting Started** assistant displays the following links:

- [How to Manage a Virtual Network on page 13](#)
- [Profiles on page 14](#)

How to Manage a Virtual Network

To manage a virtual network, you must first add a vNetwork. Click the **How to manage a Virtual Network** link to display the following links in the **Getting Started** assistant.

1. The required step is: **Discover vNetworks**. See "[Discover vNetworks Overview](#)" on [page 95](#)
2. The optional step is: **Manage vNetworks**. See "[Manage vNetworks Overview](#)" on [page 73](#).

Profiles

To provision port group profiles, you must first create a port group profile. Click the **Provision Port Group Profile** link, which displays the following links in the **Getting Started** assistant.

1. The required step is: **Create a Port Group Profile**. See [“Creating a Port Group Profile” on page 130](#).
2. The optional step is: **Manage Port Groups**. See [“Port Groups Overview” on page 38](#).

To provision vSwitch profiles, you must first create a vSwitch profile. Click the **Provision vSwitch Profile** link, which displays the following links in the **Getting Started** assistant.

1. The required step is: **Create a vSwitch Profile**. See [“Creating a vSwitch Profile” on page 118](#).
2. The optional step is: **Manage vSwitches**. See [“Manage Virtual Switches Overview” on page 17](#).

PART 2

vNetworks

- [Manage Virtual Switches on page 17](#)
- [Manage Hosts on page 55](#)
- [Manage Virtual Machines on page 67](#)
- [Manage vNetworks on page 73](#)
- [Discover vNetworks on page 95](#)
- [Reference: vCenter User Role Management for JSVC on page 103](#)

CHAPTER 4

Manage Virtual Switches

- [Managing Virtual Switches on page 17](#)
- [Managing Port Groups on page 38](#)
- [Managing Uplink Port Groups on page 48](#)

Managing Virtual Switches

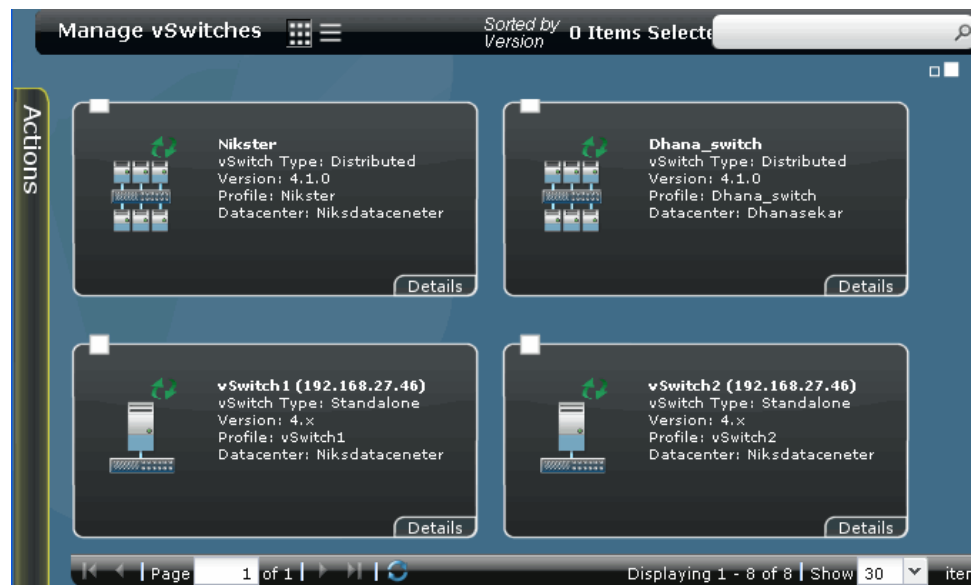
- [Manage Virtual Switches Overview on page 17](#)
- [Viewing the vSwitch Inventory on page 18](#)
- [Creating vSwitches on page 21](#)
- [Modifying vSwitches on page 24](#)
- [Deleting vSwitches on page 25](#)
- [Viewing vSwitch Interface Details on page 26](#)
- [Modifying the Admin Status Using vSwitches on page 27](#)
- [Viewing Port Group Details for vSwitches on page 28](#)
- [Viewing Private VLANs on page 28](#)
- [Managing Private VLANs on page 30](#)
- [Manage Resource Allocation on page 31](#)
- [Viewing Host Associations on page 35](#)
- [Viewing VM Associations on page 36](#)

Manage Virtual Switches Overview

Junos Space Virtual Control enables you to manage virtual switches (vSwitches) as part of managing the vNetwork infrastructure. Virtual switches behave much like modular switches. They are configured with a number of port groups, which in turn determine the number of ports available in a switch.

[Figure 6 on page 18](#) shows the thumbnail view of the **Manage vSwitches** page.

Figure 6: Manage vSwitches Page



You perform the following tasks using the **Manage vSwitches** page:

- Viewing interfaces, port groups, and private LANs
- Managing private VLANs

Related Documentation

- [Viewing the vSwitch Inventory on page 18](#)
- [Viewing Private VLANs on page 28](#)
- [Viewing vSwitch Interface Details on page 26](#)
- [Creating vSwitches on page 21](#)
- [Modifying vSwitches on page 24](#)
- [Deleting vSwitches on page 25](#)
- [Managing Private VLANs on page 30](#)

Viewing the vSwitch Inventory

You can view the virtual switch inventory for information about the vSwitches in the vNetwork infrastructure.

To view the vSwitch Inventory:

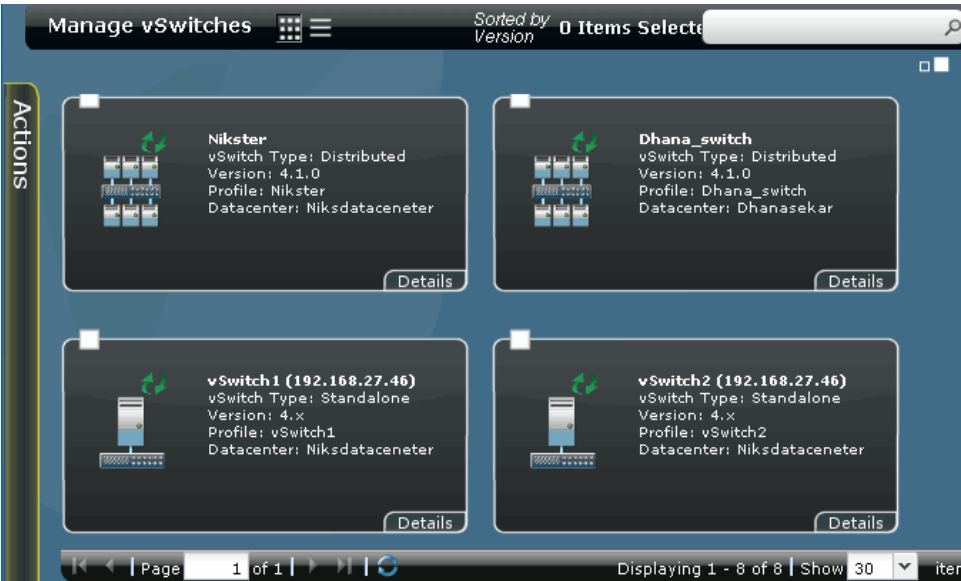
1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches**.
 2. On the **Manage vSwitches** page, select Thumbnail View or Tabular View on the title bar. The vSwitch inventory thumbnail view is displayed.
- [vSwitch Thumbnail View on page 19](#)
 - [vSwitch Tabular View on page 19](#)

vSwitch Thumbnail View

The thumbnail view of the vSwitch inventory shows thumbnails of all the vSwitches in the network.

Figure 7 on page 19 represents the thumbnail view of the **Manage vSwitches** page.

Figure 7: Manage vSwitches Page (Thumbnail View)



While in thumbnail view, to view the summary information of a specific vSwitch, click **Details** on a vSwitch thumbnail. The summary information is displayed in the main display area.

vSwitch Tabular View

The Tabular View of the vSwitch inventory (Figure 8 on page 20) shows the details for all the vSwitches in the vNetwork. Table 3 on page 20 explains the fields on this page.

Figure 8: Manage vSwitches Page (Tabular View)

vSwitch	Number	Profile	MTU	Datacenter	vNetwork	Type	Version	State
DVS2_Orc	16	DVS2_Orc	1500	Niksdatac	hpwin200	Distribute	4.0	In Sync
venkat	384	venkat	1500	Niksdatac	hpwin200	Distribute	4.0	In Sync
Nikster	77	Nikster	1500	Niksdatac	hpwin200	Distribute	4.1.0	In Sync
Dhana_sv	256	Dhana_sv	1500	Dhanasek	hpwin200	Distribute	4.1.0	In Sync
vSwitch0 (192.168.	120	vSwitch0	1500	Niksdatac	hpwin200	Standalor	4.x	In Sync
vSwitch0 (192.168.	120	vSwitch0_	1500	Niksdatac	hpwin200	Standalor	4.x	In Sync
vSwitch1 (192.168.	120	vSwitch1	1500	Niksdatac	hpwin200	Standalor	4.x	In Sync
vSwitch2 (192.168.	120	vSwitch2	1500	Niksdatac	hpwin200	Standalor	4.x	In Sync

Table 3: Manage vSwitches Page (Tabular View) Field Descriptions

Field	Description
vSwitch	Name assigned to the virtual switch If it is a standalone vSwitch, the hostname on which the vSwitch resides is also displayed.
Number of Ports	Total number of ports held in the port groups configured for this switch
Profile	Name of the vSwitch profile
MTU	Maximum Transmission Unit—The maximum size of a protocol data unit that can be transmitted
Datacenter	Name of the data center where the vSwitch resides
vNetwork	Name of the vNetwork as assigned by the administrator
Type	One of the following types of vSwitches: <ul style="list-style-type: none"> Distributed vSwitch Standalone vSwitch
Version	Indicates whether the vSphere version is 4.0 or 4.1.0

Related Documentation

- [Manage Virtual Switches Overview on page 17](#)
- [Creating vSwitches on page 21](#)
- [Modifying vSwitches on page 24](#)
- [Deleting vSwitches on page 25](#)
- [Viewing vSwitch Interface Details on page 26](#)

- [Viewing Private VLANs on page 28](#)
- [Managing Private VLANs on page 30](#)

Creating vSwitches

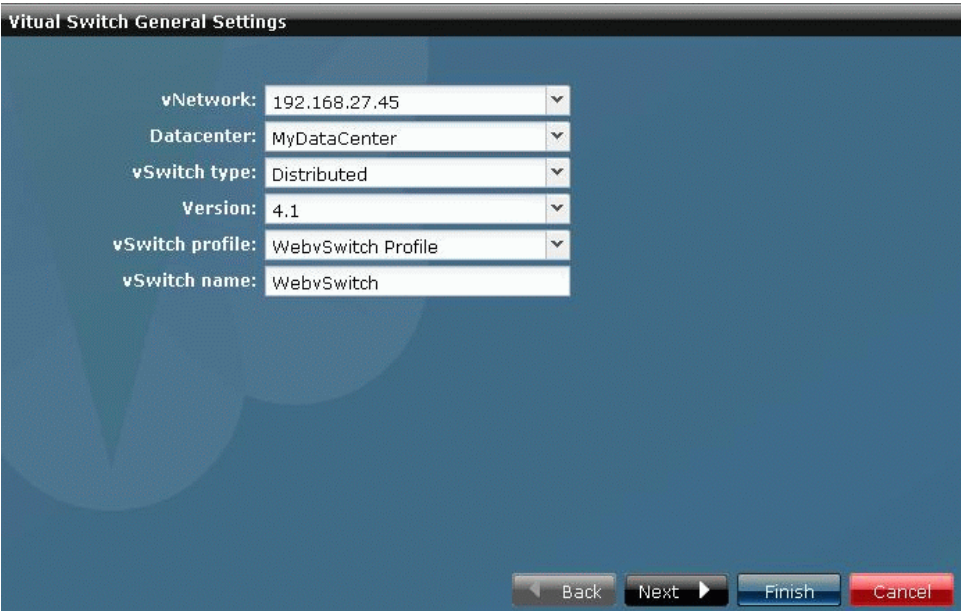
Virtual switches are of two types—standalone and distributed. In order to create a vSwitch, you must ensure that the vSwitch profile is already created and available.

To create a vSwitch:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches > Create vSwitch**.

The **vSwitch General Settings** dialog box is displayed ([Figure 9 on page 21](#)).

Figure 9: vSwitch General Settings



2. Enter the vSwitch parameters as explained in [Table 4 on page 21](#).

Table 4: vSwitch General Settings Field Descriptions

Field	Description
vNetwork	Name of the vNetwork in which you want to create the vSwitch
Datacenter	Name of the data center under which you want to create the vSwitch
vSwitch type	One of the following: <ul style="list-style-type: none">• Standalone—Select this option to create a virtual standard switch.• Distributed—Select this option to create a distributed virtual switch.

Table 4: vSwitch General Settings Field Descriptions (*continued*)

Field	Description
Version	One of the following: <ul style="list-style-type: none"> 4.0 –VMWare vSphere version 4.0 4.1 –VMWare vSphere version 4.1.0
vSwitch profile	Name of the vSwitch profile The list displays profiles filtered by the selected vSwitch type.
vSwitch name	Name of the vSwitch By default, this field contains the name assigned in the vSwitch profile. You can overwrite the name only if the “overridable” option is enabled in the vSwitch profile. This field is not enabled for standalone vSwitches.

- Click **Next** to open the **Select Hosts** page (Figure 10 on page 22).

Figure 10: Select Hosts Page



- To associate a host with the vSwitch, select one or more hosts and click **Next**.

The **Select NICs** page appears (Figure 11 on page 23) displaying the list of NICs from the selected hosts.

Figure 11: Select NICs Page



5. Select the NICs that you want to associate with the vSwitch and click **Next**.

[Figure 12 on page 23](#) appears displaying all the port groups that are part of the selected vSwitch profile.

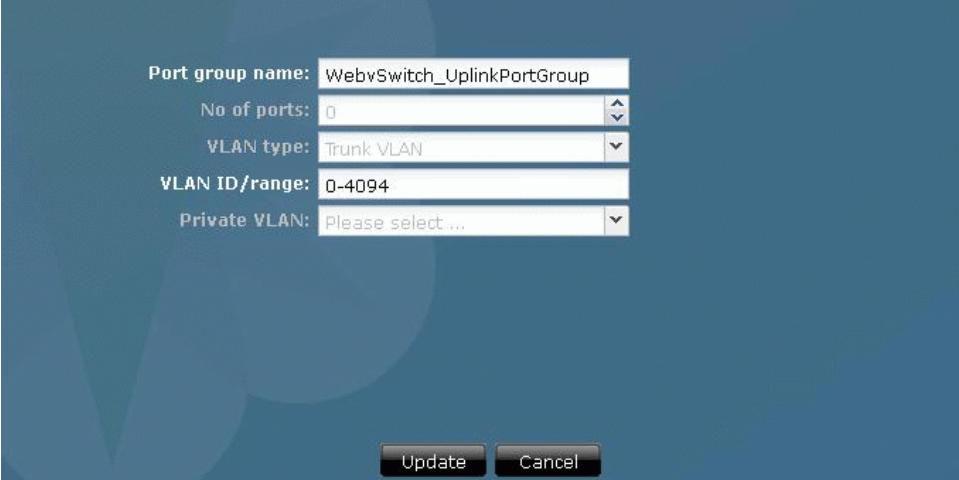
Figure 12: List of Port Groups



6. Select a port group you want to modify and click **Edit**.

Figure 13 on page 24 appears displaying the port group parameters.

Figure 13: Modify port Group




NOTE: You can modify port groups only if the “overriding” option is enabled in the vSwitch profile. Also, you can modify port groups only from distributed profiles.

7. Enter appropriate values and click **Update**.
8. Click **Finish**.

Related Documentation

- [Manage Virtual Switches Overview on page 17](#)
- [Modifying vSwitches on page 24](#)
- [Deleting vSwitches on page 25](#)
- [Viewing vSwitch Interface Details on page 26](#)

Modifying vSwitches

JSVC enables you to modify vSwitches.

To modify a vSwitch:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches**.

The Manage vSwitches page is displayed.

2. Select the required vSwitch, and from the **Actions** drawer, or the shortcut menu, select **Modify**.

The **vSwitch General Settings** page is displayed with the same fields as the Create vSwitch wizard.

3. Modify the fields as necessary and click **Modify**.

The Manage vSwitches page appears displaying the newly modified vSwitch.



NOTE: You cannot associate a virtual standalone switch (VSS) with a different vSwitch profile if the port group in the vSwitch is connected to a virtual machine and the uplink names are not identical.

You cannot associate a virtual distributed switch (VDS) with a different vSwitch profile if a port group in the VDS is connected to a virtual machine. However, if the port binding is ephemeral and the virtual machine is not powered-on, you can modify the vSwitch to vSwitch profile association.

Related Documentation

- [Manage Virtual Switches Overview on page 17](#)
- [Creating vSwitches on page 21](#)
- [Deleting vSwitches on page 25](#)
- [Viewing vSwitch Interface Details on page 26](#)

Deleting vSwitches

JSVC enables you to delete multiple vSwitches.



NOTE:

- A vSwitch (VDS or VSS) cannot be deleted if it has a Kernel/Console NIC association.
- A VDS cannot be deleted if it is connected to a VM, irrespective of the VM's powered-on status.
- A VSS cannot be deleted if it is connected to a virtual machine that is powered-on.

To delete a vSwitch:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches**.

The Manage vSwitches page is displayed.

2. Select the required vSwitch, and from the **Actions** drawer, or the shortcut menu, select **Delete**.

The **Delete vSwitches** dialog box is displayed listing the vSwitches that you selected for deletion.

3. Click **Confirm** to delete the vSwitch from the JSVC database.

Related Documentation

- [Manage Virtual Switches Overview on page 17](#)
- [Creating vSwitches on page 21](#)

- [Modifying vSwitches on page 24](#)
- [Viewing vSwitch Interface Details on page 26](#)

Viewing vSwitch Interface Details

You can view interface details for every vSwitch in the vNetwork.

To view the vSwitch interface details:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches** .
The **Manage vSwitches** page appears.
2. Select one or more vSwitches thumbnails and from the **Actions** drawer, or the shortcut menu, select **View Interfaces**.

The vSwitch interfaces details are displayed ([Figure 14 on page 26](#)) showing the information listed in [Table 5 on page 26](#).

Figure 14: Manage vSwitches Interface Details Page

Return to Manage vSwitches		Edit Admin Status							
<input type="checkbox"/>	vSwitch	Port Group	Port Numbr	Port Name	Connectee	MAC Addre	Operations	Admin Stat	VLAN Type
<input type="checkbox"/>	ClientSwitch	ClientSwitch 5 DVUplinks-7	5	dvUplink1	Not connected	Not available	down	up	Trunk 0-4094
<input type="checkbox"/>	ClientSwitch	ClientSwitch 6 DVUplinks-7	6	dvUplink2	Not connected	Not available	down	up	Trunk 0-4094
<input type="checkbox"/>	ClientSwitch	ClientSwitch 7 DVUplinks-7	7	dvUplink3	Not connected	Not available	down	up	Trunk 0-4094
<input type="checkbox"/>	ClientSwitch	ClientSwitch 8 DVUplinks-7	8	dvUplink4	Not connected	Not available	down	up	Trunk 0-4094
<input type="checkbox"/>	ClientSwitch	ClientSwitch 1	1	1	ClientServer	00:50:56:b5	up	up	Access 200
<input type="checkbox"/>	ClientSwitch	ClientSwitch 2	2	2	Not connected	Not available	down	up	Access 200
<input type="checkbox"/>	ClientSwitch	ClientSwitch 3	3	3	Not connected	Not available	down	up	Access 200
<input type="checkbox"/>	ClientSwitch	ClientSwitch 4	4	4	Not connected	Not available	down	up	Access 200

3. Click **Return to Manage vSwitches** to return to the **Manage vSwitches** page.

Table 5: Manage vSwitches Interface Details Page Field Descriptions

Field	Description
vSwitch	Name assigned to the vSwitch If it is a standalone vSwitch, the hostname on which the vSwitch resides is also displayed.
Port Group	Name assigned to the port group
Port Number	Port in the vSwitch serving the VM-related traffic
Port Name	Name assigned to the port
Connectee	VM or host to which this port is connected

Table 5: Manage vSwitches Interface Details Page Field Descriptions (*continued*)

Field	Description
MAC Address	<p>Unique identifier assigned to the virtual NIC to which the VM connects</p> <p>For uplink ports, the MAC address represents the MAC address of the virtual or the physical NIC depending on the type of interface.</p>
Operational Status	<p>Link status of the virtual port:</p> <ul style="list-style-type: none"> Down—Implies that the port is either not connected to a VM, or the connected VM is powered down Up—Implies that the port is connected to a VM
Admin Status	Status of the port as set by the administrator
VLAN Type	<p>Type of VLAN</p> <p>One of the following:</p> <ul style="list-style-type: none"> Private VLAN Access VLAN Trunk VLAN <p>The VLAN type is displayed along with the assigned VLAN ID.</p>

Related Documentation

- [Manage Virtual Switches Overview on page 17](#)
- [Creating vSwitches on page 21](#)
- [Modifying vSwitches on page 24](#)
- [Deleting vSwitches on page 25](#)
- [Viewing the vSwitch Inventory on page 18](#)
- [Viewing Private VLANs on page 28](#)
- [Managing Private VLANs on page 30](#)

Modifying the Admin Status Using vSwitches

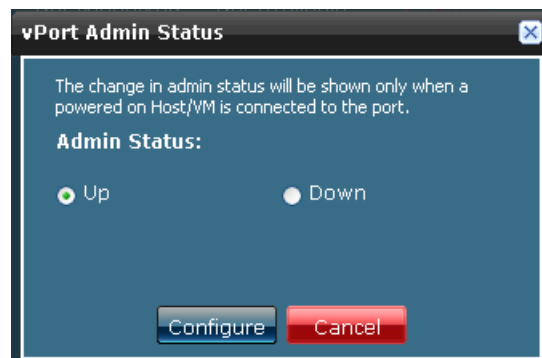
You can modify the status of the port, as set by the administrator, for each vSwitch in the vNetwork.

To modify the status of the port:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches**.
2. Select the required vSwitches and from the **Actions** drawer, or the shortcut menu, select **View Interfaces**.
3. Select a vSwitch and click **Edit Admin Status**.

The **vPort Admin Status** dialog box is displayed ([Figure 15 on page 28](#)).

Figure 15: vPort Admin Status Dialog Box



4. Select the Admin Status (Up or Down).



NOTE: The status can be changed only if the port is connected to a powered-on Host or VM.

Also, you cannot change the Admin Status for a standalone vSwitch port.

5. Click **Configure**.

Related Documentation

- [Viewing vSwitch Interface Details on page 26](#)

Viewing Port Group Details for vSwitches

You can view the port groups configured for each vSwitch in the vNetwork.

To view the vSwitch port group details:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches**.

The **Manage vSwitches** page appears.

2. Select one or more vSwitches and from the **Actions** drawer, or the shortcut menu, select **View Port Groups**.

The port group details for the selected vSwitches appears. See “[Viewing Port Group Details](#)” on page 38 for more information.

Related Documentation

- [Port Groups Overview on page 38](#)
- [Viewing Port Group Details on page 38](#)

Viewing Private VLANs

You can view the private VLAN details for each vSwitch in the vNetwork.



NOTE: This is not applicable for a standalone vSwitch because private VLANs do not exist in a standalone vSwitch.

To view details of private VLANs for a vSwitch:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches**.

The **Manage vSwitches** page appears.

2. Select one or more vSwitches and from the **Actions** drawer, or the shortcut menu, select **View PVLAN**.

The vSwitch private VLANs details are displayed ([Figure 16 on page 29](#)) showing the information listed in [Table 6 on page 29](#).

Figure 16: Viewing PVLANS Page

Return to vSwitch View			
vSwitch	Primary PVLAN	Secondary PVLAN	PVLAN Type
AppSwitch	10	10	Promiscuous
AppSwitch	10	20	Isolated
AppSwitch	10	30	Community
ClientSwitch	20	20	Promiscuous
ClientSwitch	20	60	Community
ClientSwitch	20	70	Community

Table 6: Viewing PVLANS Field Descriptions

Field	Description
vSwitch	Name assigned to the virtual switch
Primary PVLAN	Primary ID on the virtual switch
Secondary PVLAN	Secondary ID on the virtual switch
PVLAN Type	One of the following private VLAN types: <ul style="list-style-type: none">• Promiscuous• Isolated• Community

- Related Documentation
- [Manage Virtual Switches Overview on page 17](#)
 - [Viewing vSwitch Interface Details on page 26](#)

Managing Private VLANs

You can use Junos Space Virtual Control (JSVC) to add new private VLANs (PVLANS) or delete existing VLANs according to your requirements.



NOTE: This is not applicable for a standalone vSwitch because private VLANs do not exist in a standalone vSwitch.

To add a private VLAN:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches**.
The **Manage vSwitches** page appears.
2. Select the vSwitches and from the **Actions** drawer, or the shortcut menu, select **Manage PVLAN**.

The **Manage PVLAN** page is displayed (Figure 17 on page 30).

Figure 17: Manage PVLAN Page

Return to vSwitch View Add Delete		
Primary PVLAN	Secondary PVLAN	PVLAN Type
<input type="checkbox"/> 10	10	Promiscuous
<input type="checkbox"/> 10	20	Isolated
<input type="checkbox"/> 10	30	Community

3. Click **Add** and enter information in the fields as described in Table 7 on page 30.
4. Click **Save** to save your changes and add the private VLANs to the vSwitch.

Table 7: Manage PVLAN Page Field Descriptions

Field	Description
Primary PVLAN	Primary ID on the vSwitch
Secondary PVLAN	Secondary ID on the vSwitch
PVLAN Type	One of the following: <ul style="list-style-type: none"> • Promiscuous • Isolated • Community

To delete a private VLAN:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches**.
The **Manage vSwitches** page appears.
2. Select the vSwitch and from the **Actions** drawer, or the shortcut menu, select **Manage PVLAN**.
3. Select the private VLAN that you want to delete and click **Delete**.
The **Delete PVLAN** dialog box is displayed.
4. Click **Confirm** to remove the entries from the list.
5. Click **Save** to save your changes and delete the private VLANs from the vSwitch.

**Related
Documentation**

- [Manage Virtual Switches Overview on page 17](#)
- [Viewing vSwitch Interface Details on page 26](#)
- [Viewing Private VLANs on page 28](#)

Manage Resource Allocation

- [Resource Allocation Overview on page 31](#)
- [Managing Resource Allocation on page 32](#)

Resource Allocation Overview

Network resource pools determine the priority given to the different types of network traffic on a distributed virtual switch (VDS). You can use Junos Space Virtual Control (JVSC) to enable or disable these resource allocation (network I/O control) features and configure the related parameters.

When network I/O control is enabled, the VDS traffic is divided into the following network resource pools:

- FT traffic
- iSCSI traffic
- vMotion traffic
- Management traffic
- NFS traffic
- Virtual machine traffic

You can specify the priority given to traffic by setting the physical adapter shares and host limits for each network resource pool.

The physical adapter shares assigned to a network resource pool determine the total available bandwidth guaranteed to the traffic that is associated with that network resource pool. The amount of transmit bandwidth available to a network resource pool

is, in turn, determined by the network resource pool's shares and the other network resource pools that are actively transmitting.

For example, if you set your FT traffic and iSCSI traffic resource pools to 100 shares, while each of the other resource pools is set to 50 shares, the FT traffic and iSCSI traffic resource pools each receive 25% of the available bandwidth. The remaining resource pools each receive 12.5% of the available bandwidth. These reservations apply only when the physical adapter is saturated.



NOTE: This operation (resource allocation) is applicable only for distributed virtual switches on vSphere 4.1 or later. It is not available for standard virtual switches and distributed virtual switches on vSphere 4.0.

**Related
Documentation**

- [Managing Resource Allocation on page 32](#)
- [Manage Virtual Switches Overview on page 17](#)

Managing Resource Allocation

By using Junos Space Virtual Control (JSVC), you can view or modify the status of the resource allocation (network I/O control) and the resource allocation details of different network resource pools.

- [Viewing the Resource Allocation on page 32](#)
- [Modifying the Resource Allocation on page 34](#)

Viewing the Resource Allocation

To view the current resource allocation:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches**.
The **Manage vSwitches** page is displayed.
2. Select the vSwitch and from the **Actions** drawer, or the shortcut menu, select **Manage Resource Allocation**.

A tabular view of resource allocation for the selected distributed virtual switch is displayed ([Figure 18 on page 33](#)) showing the information listed in [Table 8 on page 33](#).

Figure 18: Manage Resource Allocation Page

Summary

* Total number of physical adapters:

Total network bandwidth capacity (Mbit/s): This field is required

Network I/O control: Configure

Network Resource Pool	Host Limit - Mbit/s	Physical Adapter Shares	Shares Value
FT Traffic	Unlimited	custom	53
Virtual Machine Traffic	Unlimited	high	100
iSCSI Traffic	Unlimited	normal	50
vMotion Traffic	Unlimited	normal	50
Management Traffic	Unlimited	normal	50
NFS Traffic	Unlimited	normal	50

Configure Cancel

Table 8: Manage Resource Allocation Page Field Descriptions

Field	Description
Actions	Edit icon Click to modify the following parameters: <ul style="list-style-type: none"> Host Limit –Mbit/s Physical Adapter Shares Shares Value
Total number of physical adapters	Total number of physical adapters included for network I/O control
Total network bandwidth capacity	Capacity of the total network bandwidth in Mbit/s This is the combined capacity of all the physical adapters connected to the vSwitch.
Network I/O control	One of the following: <ul style="list-style-type: none"> Enabled—The values configured for each resource pool are applied. Disabled
Network Resource Pools	One of the following: <ul style="list-style-type: none"> FT traffic iSCSI traffic Management traffic NFS traffic Virtual machine traffic vMotion traffic

Table 8: Manage Resource Allocation Page Field Descriptions (*continued*)

Field	Description
Host Limit—Mbit/s	Upper limit of the bandwidth that the network resource pool can use If the value is set as -1 or 0, it is considered unlimited bandwidth. The maximum value is 10,000.
Physical Adapter Shares	Physical adapter shares assigned to a network resource pool This determines the share of the total available bandwidth that is guaranteed to the traffic associated with that network resource pool. One of the following: <ul style="list-style-type: none"> • Custom—A specific number of shares, from 1 through 100, for the network resource pool. • High—The shares for this resource pool is set to 100. • Normal—The shares for this resource pool is set to 50. • Low—The shares for this resource pool is set to 25.
Shares Value	Values are automatically set according to the option selected in the Physical Adapter Shares field If Custom is selected, you can enter any number from 1 through 100.

Modifying the Resource Allocation

To modify the current resource allocation:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches**.
The **Manage vSwitches** page is displayed.
2. Select the vSwitch and from the **Actions** drawer, or the shortcut menu, select **Manage Resource Allocation**.
A tabular view of resource allocation for the selected distributed virtual switch is displayed.
3. To enable or disable network I/O control, click **Configure** (located next to the **Network I/O Control** field).

The **Configure Network I/O Control** dialog box is displayed ([Figure 19 on page 34](#)).

Figure 19: Configure Network I/O Control Dialog Box



4. Select or clear the **Enable network I/O control** check box to enable or disable network I/O control and click **Configure**.

5. To modify the parameters for the resource pools in the table, click the edit icon on the **Actions** column.

You can modify all the fields in the corresponding row except for the **Total number of physical adapters** and **Total network bandwidth capacity** fields.

6. Modify the fields as necessary and click **Update** for the corresponding row.
7. (Optional) Repeat the procedure to modify additional resource pool parameters.
8. Click **Configure** to save your changes.

Related Documentation

- [Resource Allocation Overview on page 31](#)
- [Manage Virtual Switches Overview on page 17](#)

Viewing Host Associations

You can view a list of hosts associated with each vSwitch in the vNetwork.

To view the host associations:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches**.

The **Manage vSwitches** page appears.

2. Select the vSwitch and from the **Actions** drawer, or the shortcut menu, select **View Host Association**.

The associated hosts for the selected vSwitch are displayed ([Figure 20 on page 35](#)) with the information listed in [Table 9 on page 35](#).

Figure 20: View Host Association page

Return to Manage vSwitches						
vSwitch	Host	NIC	NIC Type	Port Group	Port Number	Host Status
vSwitch0 (192.168.27.46)	192.168.27.	vmk0	VMKernel NIC	Management Network 2	key-vim.host.PortGroup. 16777219	Connected
vSwitch1 (192.168.27.46)	192.168.27.	vmk1	VMKernel NIC	VMkernel	key-vim.host.PortGroup. 33554435	Connected

Table 9: Viewing Host Association for vSwitches Field Descriptions

Field	Description
vSwitch	Name assigned to the virtual switch If it is a standalone vSwitch, then the hostname on which the vSwitch resides is also displayed.
Host	IP address or the name of the host to which the vSwitch is connected
NIC	Network Interface Card (NIC) of the host to which the vSwitch is connected

Table 9: Viewing Host Association for vSwitches Field Descriptions (*continued*)

Field	Description
NIC Type	Type of the NIC. The possible values are: <ul style="list-style-type: none"> Physical NIC VMKernel NIC
Port Group	Name of the port group associated with the vSwitch connected to the host's NIC
Port Number	Number of the vSwitch port connected to the host
Host Status	Status of the host-to-vSwitch connectivity It can be either Connected or Not Connected.

- Related Documentation**
- [Manage Virtual Switches Overview on page 17](#)
 - [Viewing vSwitch Interface Details on page 26](#)
 - [Viewing Private VLANs on page 28](#)
 - [Managing Private VLANs on page 30](#)

Viewing VM Associations

You can view a list of virtual machines associated with each vSwitch in the vNetwork.

To view the VM associations:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches**.
The **Manage vSwitches** page appears.
2. Select the vSwitch and from the **Actions** drawer, or the shortcut menu, select **View VM Association**.

The associated VMs for the selected vSwitch are displayed ([Figure 21 on page 37](#)) with the information listed in [Table 10 on page 37](#).

Figure 21: Viewing VM Association for vSwitches

[Return to Manage vSwitches](#)

vSwitch	Host	VM	NIC	Port Group	Port Number	MAC Address	VM Power State
AppSwitch	192.168.27.	MyVM_FC11 (1)	Network adapter 1	PG2	160	00:50:56:9c	Powered Off
vSwitch0 (192.168.27)	192.168.27.	VM_RHEL	Network adapter 4	VM Network 3	key-vim.hos 16777225	00:50:56:b5	Powered On
vSwitch0 (192.168.27)	192.168.27.	VM_FC1234!	Network adapter 1	VM Network 3	key-vim.hos 16777232	00:50:56:9e	Powered On
vSwitch0 (192.168.27)	192.168.27.	VM_FC1234!	Network adapter 2	VM Network 6	key-vim.hos 16777233	00:50:56:9c	Powered On
vSwitch0 (192.168.27)	192.168.27.	VM_RHEL	Network adapter 1	VM Network 3	key-vim.hos 16777228	00:50:56:b5	Powered On
vSwitch0 (192.168.27)	192.168.27.	VM_RHEL	Network adapter 2	VM Network 3	key-vim.hos 16777227	00:50:56:b5	Powered On
vSwitch0 (192.168.27)	192.168.27.	VM_RHEL	Network adapter 3	VM Network 3	key-vim.hos 16777226	00:50:56:b5	Powered On

Table 10: Viewing VM Association for vSwitches Field Descriptions

Field	Description
vSwitch	Name assigned to the virtual switch If it is a standalone vSwitch, then the hostname on which the vSwitch resides is also displayed.
Host	IP address or the name of the host to which the vSwitch is connected
VM	Name of the virtual machine (VM) connected to the vSwitch
VNIC	Virtual NIC of the VM in which the vSwitch is connected
Port Group	Name of the port group associated with the vSwitch connected to the host's NIC
Port Number	Number of the vSwitch port connected to the host
MAC Address	MAC address of the virtual NIC connected to the vSwitch port
VM Power State	One of the following: <ul style="list-style-type: none"> Powered-on—The virtual machine is currently powered on. Powered-off—The virtual machine is currently powered down or shut down. Suspended—The virtual machine is currently on hold. All activities are paused and all transactions are frozen.

Related Documentation

- [Manage Virtual Switches Overview on page 17](#)
- [Viewing vSwitch Interface Details on page 26](#)
- [Viewing Private VLANs on page 28](#)
- [Managing Private VLANs on page 30](#)

Managing Port Groups

- [Port Groups Overview on page 38](#)
- [Viewing Port Group Details on page 38](#)
- [Creating Port Groups on page 40](#)
- [Modifying Port Groups on page 44](#)
- [Deleting Port Groups on page 44](#)
- [Viewing Profiles Associated with Port Groups on page 45](#)
- [Viewing Port Group Interface Details on page 45](#)
- [Viewing VMs Associated with Port Groups on page 47](#)
- [Modifying the Admin Status Using Port Groups on page 47](#)

Port Groups Overview

In a virtual switch, a group of ports is collectively identified as a port group. New port groups can be added to increase the number of ports available on a virtual switch.

Related Documentation

- [Creating Port Groups on page 40](#)
- [Viewing Port Group Details on page 38](#)
- [Modifying Port Groups on page 44](#)
- [Deleting Port Groups on page 44](#)

Viewing Port Group Details

You can view a list of port groups configured for each vSwitch in the vNetwork.

To view vSwitch port group details:

- From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches > Manage Port Groups**.

The vSwitch port group details are displayed (Figure 22 on page 39) showing the information listed in Table 11 on page 39.

Figure 22: Manage Port Groups Page



Table 11: Manage Port Groups Page Field Descriptions

Field	Description
Port Group	Name assigned to the port group
vSwitch	Name assigned to the virtual switch If it is a standalone vSwitch, the hostname on which the vSwitch resides is also displayed.
Number of Ports	Total number of ports in this port group
VLAN Type	Type of VLAN One of the following: <ul style="list-style-type: none">Private VLANAccess VLANTrunk VLAN The VLAN type is displayed along with the assigned VLAN ID.
Profile	Name of the port group profile assigned to this port group

Table 11: Manage Port Groups Page Field Descriptions (*continued*)

Field	Description
vNetwork	Name assigned to the vNetwork
Synchronization Status	One of the following: <ul style="list-style-type: none">• In Sync—The port group is in sync with the VMWare vCenter server.• Create Requested—A Create Port Group request has been sent to the VMWare vCenter server for this port group.• Modify Requested—A Modify Port Group request has been sent to the VMWare vCenter for this port group.• Delete Requested—A Delete Port Group request has been sent to the VMWare vCenter for this port group.

- Related Documentation**
- [Port Groups Overview on page 38](#)
 - [Creating Port Groups on page 40](#)
 - [Modifying Port Groups on page 44](#)
 - [Deleting Port Groups on page 44](#)

Creating Port Groups

Virtual switches are associated with port groups, not individual ports. A virtual machine can be associated with one of the available port groups. When a virtual machine is associated with a port group, the configuration of the port group applies to the virtual port assigned to the virtual machine. A single port group can be assigned to multiple virtual machines.

To increase the number of ports on a virtual switch, you need to add new port groups. You can set the characteristics of these port groups by associating them with a port group profile.

To create a port group:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches > Manage Port Group > Create Port Group**.

The **Port Group General Settings** page is displayed (Figure 23 on page 41).

Figure 23: Port Group General Settings

Port Group: General Settings

Port group:

vSwitch:

vSwitch type:

vSwitch version:

vNetwork:

Number of ports:

VLAN type:

VLAN ID/range:

Profile:

Profile description:

2. On the **Port Group General Settings** page, enter the port group parameters as explained in Table 12 on page 41.

Table 12: Port Group General Settings Field Descriptions

Field	Description
Port group	Unique name for the new port group
vSwitch	Name of the virtual switch with which the port group is associated
vNetwork	Name of the vNetwork to which the vSwitch that you selected belongs
vSwitch type	One of the following types of vSwitches: <ul style="list-style-type: none">• Distributed vSwitch• Standalone vSwitch
vSwitch version	Version of the selected vSwitch

Table 12: Port Group General Settings Field Descriptions (*continued*)

Field	Description
Number of ports	Number of ports configured on this port group This field is not applicable for standalone vSwitches.
VLAN type	One of the following as appropriate: <ul style="list-style-type: none">• Private VLAN• Access VLAN• Trunk VLAN The Trunk VLAN is recommended for uplink port groups. For a standalone vSwitch, only Access VLAN is applicable.
VLAN ID/range	Appropriate range based on the type of VLAN selected
Profile	Required port group profile from the drop-down list. The attributes of the selected port group profile apply to this port group. The port group profiles are displayed based on the vSwitch you had selected. For example, only standalone vSwitch profiles are listed when you select a standalone vSwitch. Distributed vSwitch profiles are not listed.
Profile description	Description of the selected port group profile

3. Click **Next**.

The **Port Group: Failover Order** page is displayed ([Figure 24 on page 43](#)).

Figure 24: Port Group: Failover Order



4. On the **Port Group: Failover Order** page, enter the required information as explained in [Table 13 on page 43](#).

Table 13: Port Group: Failover Order Field Descriptions

Field	Description
Active uplinks	Uplink ports assigned to this port group, which are to be used when the connectivity is up and active
Standby uplinks	Uplink ports that are assigned to this port group, on failure of one of the active adapter's connectivity. Select the uplink ports from the list and use the Move Up and Move Down buttons to prioritize the ports in the list.
Unused uplinks	Uplink ports that are not assigned to this port group

5. Click **Create**.

Related Documentation

- [Port Groups Overview on page 38](#)
- [Viewing Port Group Details on page 38](#)
- [Modifying Port Groups on page 44](#)
- [Deleting Port Groups on page 44](#)

Modifying Port Groups

Junos Space Virtual Control (JSVC) enables you to modify port group parameters for existing port groups according to your requirements.

To modify port group parameters:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches > Manage Port Groups**.
2. Select the required port group and from the **Actions** drawer, select **Modify Port Group**.

The **Port Group: General Settings** page is displayed. See [“Creating Port Groups” on page 40](#) for an explanation of the parameters on the **Port Group General Settings** page.

3. Modify the fields as necessary and click **Modify**.



NOTE: The vSwitch name cannot be modified.

Related Documentation

- [Port Groups Overview on page 38](#)
- [Creating Port Groups on page 40](#)
- [Viewing Port Group Details on page 38](#)
- [Deleting Port Groups on page 44](#)

Deleting Port Groups

Junos Space Virtual Control (JSVC) enables you to delete port groups.

To delete one or more port groups:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches > Manage Port Group**.
2. Select the required port groups and from the **Actions** drawer, select **Delete Port Groups**.



NOTE: The following port groups cannot be deleted:

- Uplink port groups in a distributed vSwitch
- Vmkernel port groups in a standalone vSwitch
- Port groups in a distributed vSwitch that are associated with VMs

3. Click **Continue** to confirm the deletion of the selected port groups.

The port group is deleted.

- Related Documentation**
- [Port Groups Overview on page 38](#)
 - [Creating Port Groups on page 40](#)
 - [Viewing Port Group Details on page 38](#)
 - [Modifying Port Groups on page 44](#)

Viewing Profiles Associated with Port Groups

Junos Space Virtual Control (JSVC) enables you to view the port group profiles associated with one or more port groups.

To view port group profiles:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches > Manage Port Group**.
2. Select the required port groups and from the **Actions** drawer, select **View Profiles**.

The **Manage Port Group Profiles** page is displayed with the related profiles (by applying appropriate filters).

- Related Documentation**
- [Port Groups Overview on page 38](#)
 - [Creating Port Groups on page 40](#)
 - [Viewing Port Group Details on page 38](#)
 - [Deleting Port Groups on page 44](#)

Viewing Port Group Interface Details

Junos Space Virtual Control (JSVC) works with the VMWare vCenter server to receive interface information about port groups.

To view the interfaces details for a port group:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches > Manage Port Group**.
2. On the **Manage Port Groups** page, select the port group and from the **Actions** drawer, or the shortcut menu, select **View Interfaces**.

The port group interface details are displayed ([Figure 25 on page 46](#)) showing the information listed in [Table 14 on page 46](#).

Figure 25: View Port Group Interface Details Page

Return to Manage Port Groups		Edit Admin Status					
Port Group	Port Number	Port Name	Connectee	MAC Address	Operational Status	Admin Status	VLAN Type
AppSwitch-10 DVUplinks-7	10	dvUplink2	Not connected	Not available	down	up	Trunk 0-4094
AppSwitch-11 DVUplinks-7	11	dvUplink3	Not connected	Not available	down	up	Trunk 0-4094
AppSwitch-12 DVUplinks-7	12	dvUplink4	Not connected	Not available	down	up	Trunk 0-4094
AppSwitch-23 DVUplinks-7	23	dvUplink1	Not connected	Not available	down	up	Trunk 0-4094
AppSwitch-24 DVUplinks-7	24	dvUplink2	Not connected	Not available	down	up	Trunk 0-4094
AppSwitch-25 DVUplinks-7	25	dvUplink3	Not connected	Not available	down	up	Trunk 0-4094
AppSwitch-26 DVUplinks-7	26	dvUplink4	Not connected	Not available	down	up	Trunk 0-4094
AppSwitch-9 DVUplinks-7	9	dvUplink1	Not connected	Not available	down	up	Trunk 0-4094

Table 14: View Port Group Interface Details Page Field Descriptions

Field	Description
Port Group	Name assigned to the port group
Port Number	Number assigned to the port
Port Name	Name assigned to the port
Connectee	VM or host to which the port is connected
MAC Address	Unique identifier assigned to the virtual NIC to which the VM connects
Operational Status	<p>Link status of the virtual port:</p> <ul style="list-style-type: none"> Down—Implies that the port is not connected to a VM or that the connected VM is powered down Up—Implies that the port is connected to a VM
Admin Status	Status of the port as set by the administrator
VLAN Type	<p>Type of VLAN</p> <p>One of the following:</p> <ul style="list-style-type: none"> Private VLAN Access VLAN Trunk VLAN <p>The VLAN type is displayed along with the assigned VLAN ID.</p>

- Related Documentation**
- [Viewing Port Group Details on page 38](#)
 - [Modifying the Admin Status Using Port Groups on page 47](#)

Viewing VMs Associated with Port Groups

Junos Space Virtual Control (JSVC) enables you to view the virtual machines associated with one or more port groups.

To view the associated virtual machines:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches > Manage Port Group**.
2. On the **Manage Port Groups** page, select the port group and from the **Actions** drawer, or the shortcut menu, select **View Associated VMs**.

The **Manage Virtual Machines** page is displayed with the filtered list of virtual machines associated with the selected port groups.

Related Documentation

- [Viewing Port Group Details on page 38](#)
- [Modifying the Admin Status Using Port Groups on page 47](#)

Modifying the Admin Status Using Port Groups

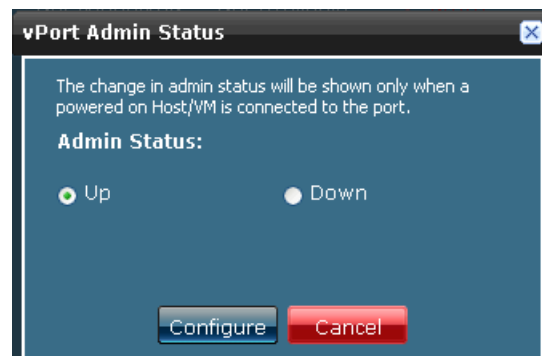
You can also edit the status of the port, set by the administrator, for each port group.

To modify the status of the port:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches > Manage Port Group**.
2. Select the required port groups and from the **Actions** drawer, or the shortcut menu, select **View Interfaces**.
3. Select an entry and click **Edit Admin Status**.

The **vPort Admin Status** page is displayed ([Figure 26 on page 47](#)).

Figure 26: vPort Admin Status Dialog Box



4. Select the **Admin Status** (Up or Down) and click **Configure**.



NOTE: The status is changed only when a powered-on Host or VM is connected to the port. In addition, the Admin Status cannot be changed for a standalone vSwitch port.

**Related
Documentation**

- [Viewing Port Group Details on page 38](#)
- [Viewing Port Group Interface Details on page 45](#)

Managing Uplink Port Groups

- [Uplink Port Group Overview on page 48](#)
- [Creating an Uplink Port Group on page 48](#)
- [Modifying an Uplink Port Group on page 53](#)
- [Deleting an Uplink Port Group on page 53](#)

Uplink Port Group Overview

Uplink ports connect a vNetwork Distributed Switch to physical NICs on associated hosts. The number of uplinks on a vNetwork Distributed Switch determine the maximum number of allowed physical connections to the vNetwork Distributed Switch per host. An Uplink Port Group is a configuration template for a group of uplink ports.

JSVC supports the following Uplink Port Group operations:

- Creating uplink port groups
- Modifying uplink port groups
- Deleting uplink port groups



NOTE: You must have at least one Uplink Port Group defined before you can create a vNetwork Distributed Switch.

**Related
Documentation**

- [Creating an Uplink Port Group on page 48](#)
- [Modifying an Uplink Port Group on page 53](#)
- [Deleting an Uplink Port Group on page 53](#)

Creating an Uplink Port Group

Uplink port groups are created as part of the procedure for creating vNetwork Distributed Switches. Only one instance of an uplink port group can be created for a vNetwork Distributed switch. An uplink port group can be connected to multiple hosts in the vNetwork. The number of uplink ports refers to the cumulative number of uplinks in the vNetwork Distributed Switch.

Creating a vNetwork Distributed Switch and an uplink port as part of it involves:

- Creating a vSwitch profile with a default uplink port group
- Creating a vNetwork Distributed Switch using a vSwitch profile

To create a vSwitch profile with a default uplink port group:

1. From the Virtual Control task ribbon, select **Profiles > Manage vSwitch Profiles > Create vSwitch Profile**. The **vSwitch Profile General Settings** page is displayed, as shown in [Figure 27 on page 49](#).

Figure 27: vSwitch Profile General Settings page

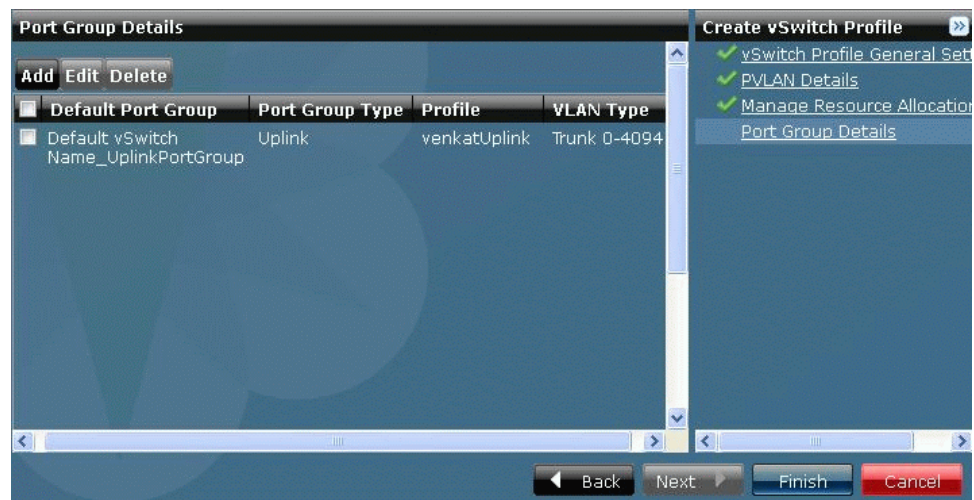
2. Specify the required values and click the **Port Group Details** link. The Port Group Details page is displayed, as shown in [Figure 28 on page 50](#).

If a port group profile is already configured in the system, it is listed as a default uplink port group.



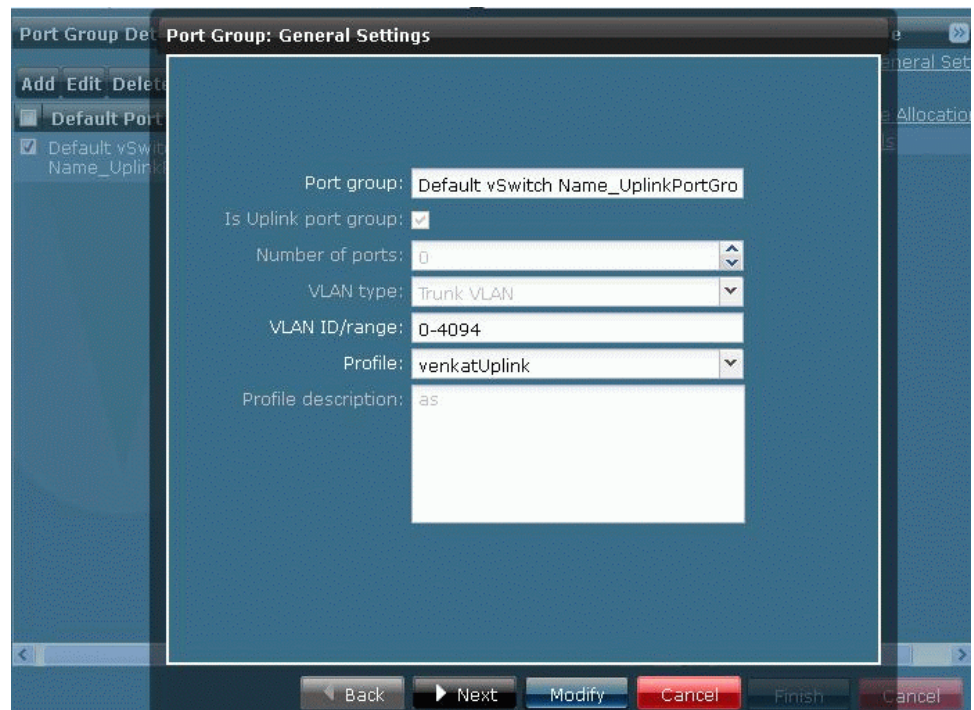
NOTE: You cannot create a vNetwork Distributed Switch if you do not already have an uplink port group profile defined in the system.

Figure 28: The Port Group Details Page



3. To create an uplink port group, select the default port group and click **Edit**. The **Port Group: General Settings** page is displayed, as shown in Figure 29 on page 50.

Figure 29: The Port Group General Settings Page

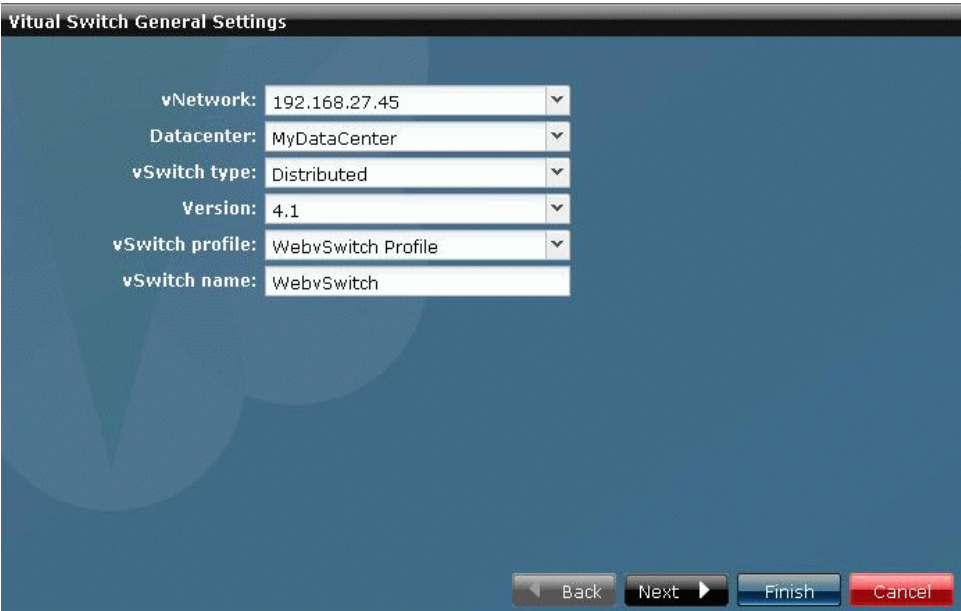


4. Modify the fields as required, and click **Modify**.
5. In the **Port Group Details** page, click **Finish** to save your configuration and create the vSwitch profile.

To create a vNetwork Distributed Switch using a vSwitch profile:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches > Create vSwitch**. The **Virtual Switch General Settings** page is displayed, as shown in [Figure 30 on page 51](#).

Figure 30: The Virtual Switch General Settings page



2. In the **Virtual Switch General Settings** page, define your vSwitch using the parameters explained in [Table 15 on page 51](#).

Table 15: Virtual Switch General Settings

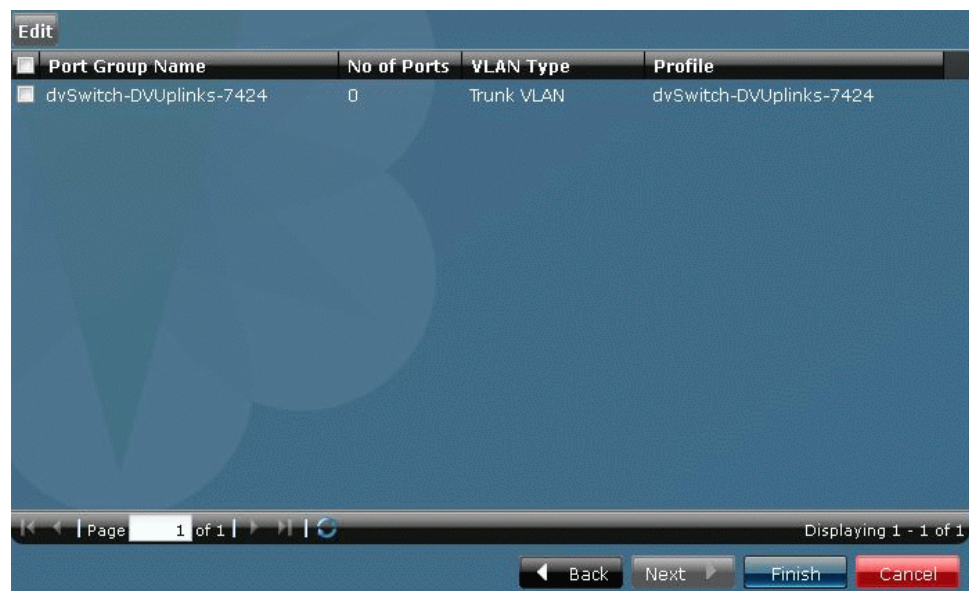
Field	Description
vNetwork	Name of the vNetwork in which you want to create the vSwitch
Datacenter	Name of the data center under which you want to create the vSwitch
vSwitch type	Select Distributed in order to create an uplink port group
Version	One of the following: <ul style="list-style-type: none">• 4.0—VMWare vSphere version 4.0• 4.1—VMWare vSphere version 4.1.0
vSwitch profile	Name of the vSwitch profile. The list displays vSwitch profiles filtered by the selected vSwitch type.

Table 15: Virtual Switch General Settings (*continued*)

vSwitch name	<p>Name of the vSwitch.</p> <p>By default, this field contains the name assigned in the vSwitch profile. You can overwrite the name only if the overridable option is enabled in the vSwitch profile.</p> <p>This field is not enabled for Standalone vSwitches.</p>
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- When you have finished specifying the vSwitch general parameters, click **Next**. The **Port Group Details** page is displayed, as shown in [Figure 31 on page 52](#).

Figure 31: The Uplink Port Group Details page



- Select the uplink port group you want to modify and click **Edit**. The Port Group Details page is displayed as shown in [Figure 32 on page 52](#).

Figure 32: The Uplink Port Group Details Page

5. Enter the values as required and click **Update**.
6. On the **Port Group Details** page, click **Finish**.

**Related
Documentation**

- [Uplink Port Group Overview on page 48](#)
- [Modifying an Uplink Port Group on page 53](#)
- [Deleting an Uplink Port Group on page 53](#)

Modifying an Uplink Port Group

Junos Space Virtual Control (JSVC) enables you to modify parameters for existing port groups according to your requirements. There are two ways by which you can modify port group parameters: Modify the values as required and click Update. 6. On the Port Group Details , click Finish.

- By modifying port group parameters (See “[Modifying Port Groups](#)” on page 44.)
- By modifying port group parameters for VSwitches.

To modify port group parameters through Modify vSwitches:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches**
2. Select the required vSwitch for which you want to modify uplink port group parameters. The vSwitch General Settings page is displayed.
3. Click **Next** to Navigate to the **Port Group Details** .
4. In the **Port Group Details** , select the required uplink port group and click **Edit**.
5. Modify the port group parameters as required and click **Update**.
6. Click **Finish** to save the changes you have made.

**Related
Documentation**

- [Uplink Port Group Overview on page 48](#)
- [Creating an Uplink Port Group on page 48](#)
- [Deleting an Uplink Port Group on page 53](#)
- [Modifying Port Groups on page 44](#)

Deleting an Uplink Port Group

An uplink port group can only be deleted while deleting the vNetwork Distributed Switch to which it belongs. To delete a vSwitch, see “[Deleting vSwitches](#)” on page 25.

**Related
Documentation**

- [Uplink Port Group Overview on page 48](#)
- [Creating an Uplink Port Group on page 48](#)
- [Modifying an Uplink Port Group on page 53](#)

CHAPTER 5

Manage Hosts

- [Viewing the Host Inventory on page 55](#)
- [Viewing Host Component Details on page 57](#)
- [Viewing VMs Associated with Hosts on page 59](#)
- [Viewing vSwitches Associated with Hosts on page 59](#)
- [Managing Uplink Ports on page 60](#)
- [Configuring Management Networks on page 61](#)

Viewing the Host Inventory

The host inventory displays a list of all the virtual machines on a host and the physical NICs that serve the virtual infrastructure.

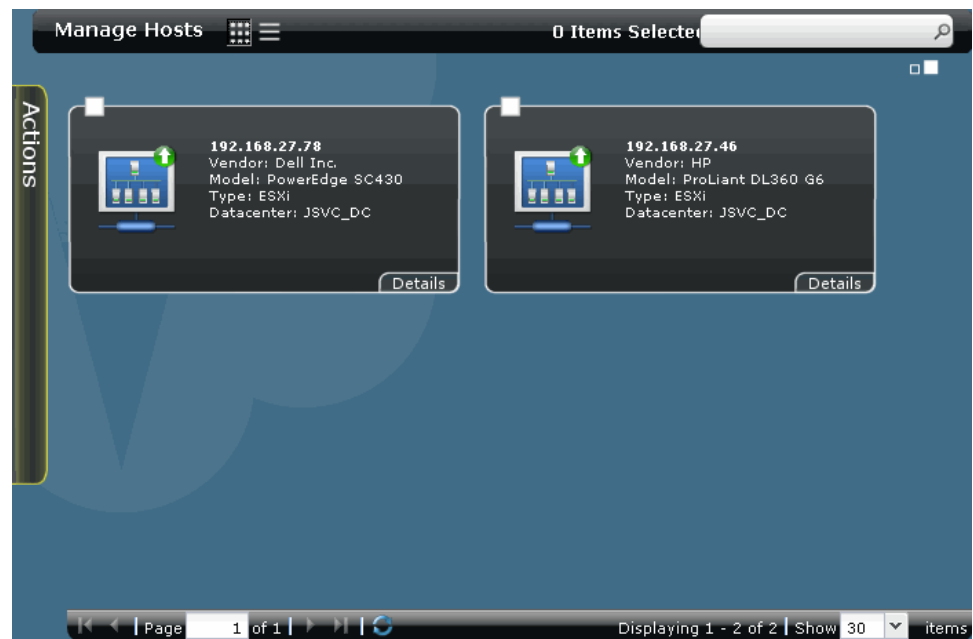
The Manage Hosts page lists all the hosts in the infrastructure. For each host, the detailed inventory provides information about the port number of each virtual machine in the host along with its MAC address, virtual switch, and the vNetwork it belongs to.

To view the host inventory:

1. From the Virtual Control task ribbon, select **vNetworks > Manage Hosts**.

A thumbnail view of the host inventory is displayed ([Figure 33 on page 56](#)).

Figure 33: Manage Hosts Page (Thumbnail View)



- Click the tabular view icon to display a tabular view of the host inventory details.

The tabular view of the host inventory details is displayed (Figure 34 on page 56) showing the information listed in Table 16 on page 56.

Figure 34: Manage Hosts Page (Tabular View)

Host	Connection State	Maintenance Mode	Datacenter	vNetwork	Vendor	Model	Type
192.168.27	Connected	No	JSVC_DC	VCenter4	Dell Inc.	PowerEdge SC430	ESXi
192.168.27	Connected	No	JSVC_DC	VCenter4	HP	ProLiant DL360 G6	ESXi

Table 16: Manage Hosts Page (Tabular View) Field Descriptions

Field	Description
Host	Name/IP of the host
Number of PNICs	Total number of physical NICs existing on the host
Number of VMs	Total number of virtual machines existing on the host

Table 16: Manage Hosts Page (Tabular View) Field Descriptions (*continued*)

Field	Description
Connection State	<p>One of the following:</p> <ul style="list-style-type: none"> • Connected—The host is connected to the vCenter server. • Disconnected—The user has explicitly taken down the host and the host is not connected to the vCenter server. • Not responding—The host is connected to the vCenter server, but the server is not receiving heartbeats from the host. The connection state automatically changes to Connected when heartbeats are received again.
Maintenance Mode	Indicates whether the host is in maintenance mode or not
Datacenter	Name of the data center on which the host resides
vNetwork	Name of the vNetwork on which the host resides
Vendor	Name of the hardware vendor of the host
Model	Name of the host hardware model
Type	<p>Type of hypervisor</p> <p>For example, ESX/ESXi, which is the hypervisor for the VMware.</p>

To view more details about the hosts, click **Details** on a host thumbnail. The summary information, which is similar to the information displayed in tabular format, is displayed in the main display area.

Related Documentation

- [Viewing Host Component Details on page 57](#)

Viewing Host Component Details

To view more details about the hosts, click **Details** on a host thumbnail. The summary information, which is similar to the information displayed in tabular format, is displayed in the main display area.

To view the details of network components on a host:

1. Select the required hosts on the Manage Hosts page, and from the **Actions** drawer, select **View Inventory**.

A detailed tabular view of the components on the host is displayed (Figure 35 on page 58) showing the information listed in Table 17 on page 58.

Figure 35: Hosts Component Details Page

Host/PNIC	NIC Type	Link Spd	Connection	PciDevice	MAC Ad	vSwitch	vSwitchPort
192.168.27.41							
Oracle_WebSi							
Juniper_WebSi							
Juniper_WebSi							
Microsoft_web							
vmnic0	Physical N	1000	Up	NC382i Int	18:a9:c	VMTrafficDVS	484
vmnic1	Physical N	1000	Up	NC382i Int	18:a9:c	vSwitch1 (192.16E	Not applicable
vmnic2	Physical N	0	Down	NC360T PC	00:26:e	Not connected	Not connected
vmnic3	Physical N	1000	Up	NC360T PC	00:26:e	vSwitch0 (192.16E	Not applicable
192.168.27.42							
Microsoft_Wel							
IBM_WebSite							
Oracle_WebSi							
vmnic0	Physical N	1000	Up	NC382i Int	18:a9:c	vSwitch1 (192.16E	Not applicable
vmnic3	Physical N	1000	Up	NC360T PC	00:26:e	vSwitch0 (192.16E	Not applicable
vmnic1	Physical N	1000	Up	NC382i Int	18:a9:c	VMTrafficDVS	480
vmnic2	Physical N	1000	Up	NC360T PC	00:26:e	VMTrafficDVS	481

Table 17: Hosts Component Details Page Field Descriptions



Field/Icon	Description
	Indicates that the row of details pertains to a host or VM
	Indicates that the row of details pertains to a physical NIC
Host/PNIC	Name assigned to the host or the physical NIC
NIC Type	One of the following: <ul style="list-style-type: none"> Physical Virtual
Link Speed	Capability of the current link
Connection State	Displays whether the NICs are connected
PciDevice Name	Name of the PCI device provided by the vendor

Table 17: Hosts Component Details Page Field Descriptions (*continued*)

Field/Icon	Description
MAC Address	MAC address assigned to the physical or virtual NIC to which the VM connects
vSwitch	Virtual switch to which the virtual machine connects
vSwitch Port	Port in the virtual switch serving VM-related traffic

Related Documentation

- [Viewing the Host Inventory on page 55](#)

Viewing VMs Associated with Hosts

Junos Space Virtual Control (JSVC) enables you to view the virtual machines associated with one or more hosts.

To view the associated virtual machines:

1. From the Virtual Control task ribbon, select **vNetworks > Manage Hosts**.
2. Select the required hosts and from the **Actions** drawer, or the shortcut menu, select **View Associated VMs**.

The Manage Virtual Machines page appears displaying the list of all virtual machines associated with the selected port groups.

Related Documentation

- [Importing Switch/Port Associations on page 85](#)
- [Viewing the Host Inventory on page 55](#)
- [Viewing Host Component Details on page 57](#)

Viewing vSwitches Associated with Hosts

Junos Space Virtual Control (JSVC) enables you to view the vSwitches associated with one or more hosts.

To view the associated vSwitches:

1. From the Virtual Control task ribbon, select **vNetworks > Manage Hosts**.
2. Select the required hosts and from the **Actions** drawer, or the shortcut menu, select **View Associated vSwitches**.

The Manage vSwitches page appears displaying the list of all the vSwitches associated with the selected hosts

Related Documentation

- [Importing Switch/Port Associations on page 85](#)
- [Viewing the Host Inventory on page 55](#)

- [Viewing Host Component Details on page 57](#)

Managing Uplink Ports

To support virtual machine traffic, you need to have at least one NIC port on each host. We recommend that you have two physical NICs from each host be a part of an uplink port group. You can group uplink ports the same way you would group virtual ports.

Junos Space Virtual Control (JSVC) displays the uplink ports and the parameters that define how the uplink port connects to the physical switch port.

To view the current configuration:

1. From the Virtual Control task ribbon, select **vNetworks > Manage Hosts**.
2. Select the required hosts and from the **Actions** drawer, or the shortcut menu, select **View Physical Switch Association**.

A tabular view of physical switch association information for the selected host appears ([Figure 36 on page 60](#)), displaying the information listed in [Table 18 on page 60](#).

Figure 36: Physical Switch Association Details Page

Return to Manage Hosts					
Host/PNIC	Uplink MAC	vSwitch	vSwitch Port	External Switch	External Switch Port
192.168.54.42					
vmnic0	18:a9:05:3:	vSwitch0 (192.1	Not applicable	EX4200240	ge-0/0/12
vmnic3	00:26:55:d:	Not connected	Not connected	EX4200240	ge-0/0/14
vmnic1	18:a9:05:3:	Not connected	Not connected	Not connected	Not connected
vmnic2	00:26:55:d:	Not connected	Not connected	Not connected	Not connected
192.168.54.46					
vmnic2	00:26:55:d:	vSwitch0 (192.1	Not applicable	EX4200240	ge-0/0/11
vmnic3	00:26:55:d:	Not connected	Not connected	Not connected	Not connected
vmnic0	18:a9:05:4:	Not connected	Not connected	Not connected	Not connected
vmnic1	18:a9:05:4:	Not connected	Not connected	Not connected	Not connected
192.168.27.74					
vmnic0	00:1c:25:0:	Jboss_switch	5	EX4200240	ge-0/0/4
vmnic1	00:07:e9:b:	Apache_switch	1	EX4200240	ge-0/0/3
vmnic2	00:07:e9:b:	vSwitch9 (192.1	Not applicable	EX4200240	ge-0/0/10
192.168.27.79					
vmnic1	00:07:e9:0:	vSwitch0 (192.1	Not applicable	Not connected	Not connected
vmnic0	00:1c:25:0:	Jboss_switch	1	EX4200240	ge-0/0/8
vmnic2	00:07:e9:0:	Apache_switch	5	EX4200240	ge-0/0/13

Table 18: Physical Switch Association Details Page Field Descriptions

Field	Description
Host/PNIC	Name/IP address of the host or physical NIC
Uplink MAC Address	Unique identifier assigned to the physical or virtual NIC to which the VM connects
vSwitch	Name of the virtual switch

Table 18: Physical Switch Association Details Page Field Descriptions (*continued*)

Field	Description
vSwitch Port	ID of the virtual port on the virtual switch In case of a standalone vSwitch, Not Applicable is displayed.
External Switch	Name of the physical switch
External Switch Port	ID of the port on the physical switch

When you manually connect uplink ports on a virtual switch to physical switches, you need to create an association between the two.

To create or modify an association between physical and virtual switch ports:

1. From the Virtual Control task ribbon, select **vNetworks > Manage Hosts**.
2. Select the required hosts and from the **Actions** drawer, select **Associate Physical Switch Ports**.
3. Edit the configuration using one of the following methods:
 - Double-click any entry in a row.
 - Click the edit icon located at the start of the row.
4. Select the external switch from the drop-down list.
5. Select the required external switch ports from the drop-down list.
6. Click **Update** to apply the configuration parameters.

JSVC validates the parameters and displays the validation errors (if any).

Related Documentation

- [Importing Switch/Port Associations on page 85](#)
- [Viewing the Host Inventory on page 55](#)
- [Viewing Host Component Details on page 57](#)

Configuring Management Networks

Junos Space Virtual Control (JSVC) enables you to configure the management network for the selected host.

To view the list of configured management networks:

1. From the Virtual Control task ribbon, select **vNetworks > Manage Hosts**.
2. Select the required host and from the **Actions** drawer, select **Configure Management Network** ([Figure 37 on page 62](#)).

Figure 37: Configure Management Network Page

Return to Manage Hosts										Add	Edit	Delete
<input type="checkbox"/>	NIC	NIC Type	IP Address	Subnet M	MAC Address	Host	vMotion	Fault Tolerant	Management			
<input type="checkbox"/>	vmk0	VMKernel NIC	192.168.2	255.255.255.0	00:26:55:db:11:11	192.168.2	Disabled	Disabled	Disabled			
<input type="checkbox"/>	vmk1	VMKernel NIC	192.168.2	255.255.255.0	00:50:56:77:11:11	192.168.2	Disabled	Disabled	Disabled			
<input type="checkbox"/>	vmk2	VMKernel NIC	22.36.26.2	255.255.255.0	00:50:56:75:11:11	192.168.2	Disabled	Disabled	Disabled			
<input type="checkbox"/>	vmk3	VMKernel NIC	0.0.0.0	0.0.0.0	00:50:56:71:11:11	192.168.2	Disabled	Disabled	Disabled			

This displays a list of all the NICs created and configured on the selected host as described in [Table 19 on page 62](#).

Table 19: Configure Management Network Field Descriptions

Field	Description
NIC	Name of the NIC (virtual adapter)
NIC type	This field indicates the type of NIC. It is one of the following: <ul style="list-style-type: none"> • VM Kernel—Lets you connect the VMkernel, which runs services for vMotion and IP Storage to the physical network • Service Console—Adds support for host management traffic
IP Address	IP address assigned to the NIC
Subnet Mask	Subnet mask of the NIC
MAC Address	MAC address of the NIC
Host	Name of the IP address of the host on which the NIC resides
vMotion	Select if you want the port group to be used for vMotion operations
Fault Tolerance Logging	Select if you want the port group to be used for fault-tolerance logging
Management Traffic	Select if you want the port group to be used for management traffic

- [Creating a Management Network on page 63](#)
- [Modifying a Management Network on page 64](#)
- [Deleting a Management Network on page 65](#)

Creating a Management Network

To add a management network:

1. From the Virtual Control task ribbon, select **vNetworks > Manage Hosts**.
2. Select the required host and from the **Actions** drawer, select **Configure Management Network**.
3. Click **Add**.

The **Add Management Network** (Figure 38 on page 63) dialog box is displayed.

Figure 38: Add Management Network Dialog Box

Add Management Network

General Settings

Connection type: VM Kernel

vSwitch: Please select...

Port group: Please select...

vMotion: ☐

Fault tolerance logging: ☐

Management traffic: ☐

IP Settings

☒ Obtain IP settings automatically

☐ Use following IP settings

IP address:

Subnet mask:

Default gateway: 151.151.189.2

Create Cancel

4. Enter the network-related parameters as explained in Table 20 on page 63.

Table 20: Add Management Network Field Descriptions

Field	Description
General Settings	

Table 20: Add Management Network Field Descriptions (*continued*)

Field	Description
NIC type	Type of the NIC (virtual adapter) One of the following: <ul style="list-style-type: none"> • VM Kernel • Service Console (applicable only for VMWare ESX hosts)
vSwitch	Name of the virtual switch to which the NIC is going to be connected
Port Group	Name of the port group with which the NIC is going to be associated
vMotion	Select if you want the port group to be used for vMotion operations
Fault Tolerance Logging	Select if you want the port group to be used for fault-tolerance logging
Management Traffic	Select if you want the port group to be used for management traffic
IP Settings	
Obtain IP settings automatically	Select if you want the NIC to be automatically assigned with the IP address
Use following IP settings	Select if you want to set the IP address and subnet mask details manually for the NIC
IP address	IP address for the NIC
Subnet mask	Subnet mask for the NIC
Default gateway	Default gateway for the NIC

5. Click **Create**.

A job is triggered to create the management network.

Modifying a Management Network

Junos Space Virtual Control (JSVC) enables you to modify management network parameters for existing management networks according to your requirements.

To modify management network parameters:

1. From the Virtual Control task ribbon, select **vNetworks > Manage Hosts**.
2. Select the required host and from the **Actions** drawer, select **Configure Management Network**.
3. Click **Edit**.

The **Edit Management Network** dialog box is displayed.

4. Modify the fields as necessary and click **Modify**.

Deleting a Management Network

Junos Space Virtual Control (JSVC) enables you to delete an existing management network that is no longer in use or required.

To delete one or more such management networks:

1. From the Virtual Control task ribbon, select **vNetworks > Manage Hosts**.
2. Select the required host and from the **Actions** drawer, select **Configure Management Network**.
3. Click **Delete**.

The **Delete Management Network** dialog box is displayed listing the NICs that you selected for deletion.

4. Click **Confirm** to delete the network.

Related Documentation

- [Viewing VMs Associated with Hosts on page 59](#)
- [Viewing vSwitches Associated with Hosts on page 59](#)
- [Managing Uplink Ports on page 60](#)
- [Viewing Host Component Details on page 57](#)

CHAPTER 6

Manage Virtual Machines

- [Manage Virtual Machines Overview on page 67](#)
- [Viewing Virtual Machines on page 67](#)
- [Viewing the Virtual NIC on page 69](#)
- [Viewing Associated Port Groups on page 71](#)

Manage Virtual Machines Overview

Junos Space Virtual Control displays a list of all the VMWare vCenter virtual machines (VMs) created in the hosts that are managed by the application.

JSVC receives information from the VMWare vCenter server, and creates a detailed list of all the VMs in the host managed by the VMWare vCenter server. This includes all the VMs configured on each host, along with their key parameters such as the VM name, MAC address, NIC, port group, virtual switches, and port number.

Related Documentation

- [Viewing Virtual Machines on page 67](#)
- [Viewing the Virtual NIC on page 69](#)

Viewing Virtual Machines

You can view the virtual machines in Junos Space Virtual Control (JSVC) in the following ways:

- [Thumbnail View of the Manage Virtual Machines Page on page 67](#)
- [Tabular View of the Manage Virtual Machines Page on page 68](#)

Thumbnail View of the Manage Virtual Machines Page

To view the thumbnail view:

1. From the Virtual Control task ribbon, select **vNetworks > Manage Virtual Machines**.
2. Click the **Thumbnail View** icon on the title bar.

The thumbnail view of the **Manage Virtual Machines** page is displayed ([Figure 39 on page 68](#)).

Figure 39: Manage Virtual Machines Page (Thumbnail View)



Tabular View of the Manage Virtual Machines Page

To view the tabular view:

1. From the Virtual Control task ribbon, select **vNetworks > Manage Virtual Machines**.
2. Click the **Tabular View** icon on the title bar.

The tabular view of the **Manage Virtual Machines** page is displayed (Figure 40 on page 68) showing the information listed in Table 21 on page 69.

Figure 40: Manage Virtual Machines Page (Tabular View)

Manage Virtual Machines							
Sorted by Host 0 Items Selected							
VM	Primary IP	Host	Connection	Power State	vNetwork	Guest OS	Version
Oracle_WebSite2	192.168.27.1	192.168	Connected	Powered On	hpwin2003x64.TEST2	Microsoft Windows Server 2008 R2 (64-bit)	vmx-07
Juniper_WebSite1	Not Available	192.168	Connected	Powered Off	hpwin2003x64.TEST2	FreeBSD (32-bit)	vmx-07
Juniper_WebSite2	Not Available	192.168	Connected	Powered Off	hpwin2003x64.TEST2	FreeBSD (32-bit)	vmx-07
Microsoft_website2	Not Available	192.168	Connected	Powered On	hpwin2003x64.TEST2	FreeBSD (32-bit)	vmx-07
Microsoft_website2	Not Available	192.168	Connected	Powered On	hpwin2003x64.TEST2	Red Hat Enterprise Linux 5 (32-bit)	vmx-07
IBM_WebSite1	Not Available	192.168	Connected	Powered Off	hpwin2003x64.TEST2	FreeBSD (32-bit)	vmx-07
Oracle_WebSite1	Not Available	192.168	Connected	Powered On	hpwin2003x64.TEST2	Microsoft Windows Server 2008 R2 (64-bit)	vmx-07

Table 21: Manage Virtual Machines Page Field Descriptions

Field	Description
VM	Name of the virtual machine
Primary IP Address	Primary IP address of the virtual machine
Host	Host on which the virtual machine resides
Connection State	<p>One of the following:</p> <ul style="list-style-type: none"> • Connected—The virtual machine is accessible by the vCenter server. • Disconnected—The virtual machine is not reachable by the vCenter server because the host is disconnected from vCenter. • Inaccessible—One or more of the virtual machine configuration files are inaccessible (Due to transient disk failures.) In this case, no configuration can be returned for a virtual machine. • Invalid—The virtual machine configuration format is invalid. The configuration file is accessible on the disk but is corrupted in a way that does not allow the server to read the content. In this case, no configuration can be returned for a virtual machine. • Orphaned—The virtual machine is no longer registered on its associated host. For example, a virtual machine that is unregistered or directly deleted from a host managed by the vCenter server.
Power State	<p>One of the following:</p> <ul style="list-style-type: none"> • Powered on—The virtual machine is currently powered on. • Powered off—The virtual machine is currently either powered down or shut down. • Suspended—The virtual machine is currently on hold—all its activities are paused and its transactions are frozen.
Guest OS	Operating system assigned to the virtual machine
Version	Version of the operating system running on the virtual machine
Number of Virtual NICs	Number of virtual network interface cards (NICs) associated with the virtual machine
vNetwork	Name of the virtual network on which the virtual machine resides

**Related
Documentation**

- [Viewing the Virtual NIC on page 69](#)
- [Manage Virtual Machines Overview on page 67](#)

Viewing the Virtual NIC

Junos Space Virtual Control (JSVC) receives information about the virtual NICs and their associated virtual machines (VMs) from the VMWare vCenter server and creates a detailed inventory of each.

To view the virtual NIC inventory:

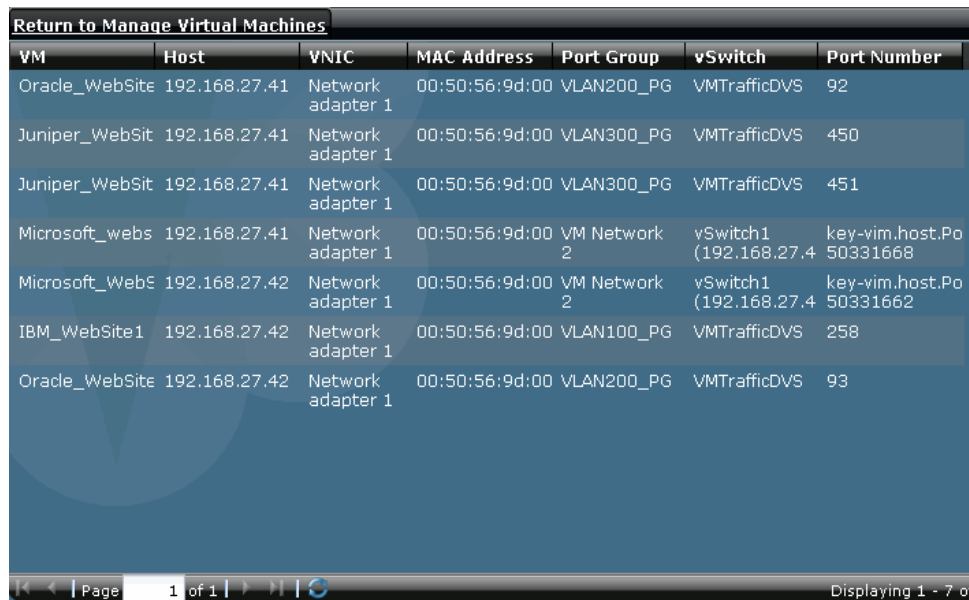
1. From the Virtual Control task ribbon, select **vNetworks > Manage Virtual Machines**.

The **Manage Virtual Machines** page appears.

2. Select the VM and from the **Actions** drawer, or the shortcut menu, select **View Virtual NIC**.

The Virtual NIC details are displayed ([Figure 41 on page 70](#)) showing the information listed in [Table 22 on page 70](#).

Figure 41: View Virtual NIC Page



The screenshot shows a web interface titled "Return to Manage Virtual Machines". It contains a table with the following data:

VM	Host	VNIC	MAC Address	Port Group	vSwitch	Port Number
Oracle_WebSite	192.168.27.41	Network adapter 1	00:50:56:9d:00	VLAN200_PG	VMTrafficDVS	92
Juniper_WebSite	192.168.27.41	Network adapter 1	00:50:56:9d:00	VLAN300_PG	VMTrafficDVS	450
Juniper_WebSite	192.168.27.41	Network adapter 1	00:50:56:9d:00	VLAN300_PG	VMTrafficDVS	451
Microsoft_webs	192.168.27.41	Network adapter 1	00:50:56:9d:00	VM Network 2	vSwitch1 (192.168.27.4	key-vim.host.Po 50331668
Microsoft_WebS	192.168.27.42	Network adapter 1	00:50:56:9d:00	VM Network 2	vSwitch1 (192.168.27.4	key-vim.host.Po 50331662
IBM_WebSite1	192.168.27.42	Network adapter 1	00:50:56:9d:00	VLAN100_PG	VMTrafficDVS	258
Oracle_WebSite	192.168.27.42	Network adapter 1	00:50:56:9d:00	VLAN200_PG	VMTrafficDVS	93

At the bottom of the table, there is a pagination bar showing "Page 1 of 1" and a status bar indicating "Displaying 1 - 7 of 7".

Table 22: View Virtual NIC Page Field Descriptions

Field	Description
VM	Name of the virtual machine
Host	Name of the host on which the virtual machine resides
NIC	Name of the network interface card
MAC Address	Unique identifier assigned to the virtual NIC to which the VM connects
Port Group	Name of the port group associated with the VM
vSwitch	Name of the virtual switch associated with the VM
Port Number	Port on the virtual switch serving the VM-related traffic

To return to the **Manage Virtual Machines** page, click **Return to Manage Virtual Machines**.

Related Documentation

- [Manage Virtual Machines Overview on page 67](#)

- [Viewing Virtual Machines on page 67](#)

Viewing Associated Port Groups

Junos Space Virtual Control (JSVC) enables you to view the port groups associated with virtual machines.

To view the associated port groups:

1. From the Virtual Control task ribbon, select **vNetworks > Manage Virtual Machines**.
2. Select the VM and from the **Actions** drawer, or the shortcut menu, select **View Associated Port Groups**.

The Manage Port Groups page appears displaying the list of port groups associated with the selected virtual machines.

Related Documentation

- [Manage Virtual Machines Overview on page 67](#)
- [Viewing Virtual Machines on page 67](#)

CHAPTER 7

Manage vNetworks

- [Manage vNetworks Overview on page 73](#)
- [Viewing Notifications on page 74](#)
- [Purging Event Logs on page 75](#)
- [Purging Configuration Audit Reports on page 76](#)
- [Managing vNetworks on page 78](#)
- [Orchestrating vNetworks on page 83](#)
- [Auditing vNetwork Configurations on page 89](#)

Manage vNetworks Overview

Junos Space Virtual Control enables you to view information about all the VMWare vCenter servers (vNetwork) managed by the application. JSVC uses information from the vNetwork to create an inventory view with a detailed list of all the elements in each vNetwork. This includes the hosts and virtual machines configured on each host, along with their key parameters such as MAC addresses, names of the virtual switches, and port numbers.

[Figure 42 on page 73](#) shows the thumbnail view of the **Manage vNetworks** page.

Figure 42: Manage vNetworks Page



You can perform the following tasks from the **Manage vNetworks** page:

- Viewing the vNetwork inventory
- Modifying vNetworks
- Deleting vNetworks
- Re-synchronizing vNetworks
- Configuring orchestration modes
- Viewing event details
- Auditing vNetwork configuration
- Viewing virtual and physical switch audit report
- Configuring event and audit report purging
- Viewing associated hosts, VMs, and vSwitches

**Related
Documentation**

- [Viewing the vNetwork Inventory on page 78](#)
- [Viewing Notifications on page 74](#)
- [Re-synchronizing vNetworks on page 80](#)
- [Modifying vNetwork Credentials on page 79](#)
- [Deleting vNetworks on page 80](#)
- [Orchestration Overview on page 83](#)
- [Setting Orchestration Mode on page 85](#)
- [Configuration Audit Overview on page 89](#)
- [Initiating a Configuration Audit on page 90](#)
- [Viewing Audit Reports on page 91](#)
- [Purging Event Logs on page 75](#)

Viewing Notifications

Junos Space Virtual Control (JSVC) receives regular updates and notification about configuration information from the VMWare vCenter server.

To view the notifications received:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vNetworks**.
2. Select the required vNetworks and from the **Actions** drawer, or the shortcut menu, select **View Event Details**.

The **Event Details** page is displayed ([Figure 43 on page 75](#)) showing the information listed in [Table 23 on page 75](#).

Figure 43: Event Details Page

Return to vNetwork View				
Event Message	Event Object	Created Time	vNetwork	vNetwork User
The Distributed Virtual Switch vDS one in SV-INT was renamed to vDS_vs_40_1.	vDS_vs_40_1	Nov 5, 2010 4:11:10 AM IST	SV-INT-VC01	Administrator
The Distributed Virtual Switch vDS_vs_40_1 in SV-INT was reconfigured.	vDS_vs_40_1	Nov 5, 2010 4:11:11 AM IST	SV-INT-VC01	Administrator
The Distributed Virtual Switch vDS_vs_40_1 in SV-INT was renamed to Web_Switch.	Web_Switch	Nov 5, 2010 4:11:22 AM IST	SV-INT-VC01	Administrator
The Distributed Virtual Switch Web_Switch in SV-INT was reconfigured.	Web_Switch	Nov 5, 2010 4:11:23 AM IST	SV-INT-VC01	Administrator
The Distributed Virtual Switch vDS two in SV-INT was renamed to DB_Switch.	DB_Switch	Nov 5, 2010 4:11:41 AM IST	SV-INT-VC01	Administrator
The Distributed Virtual Switch DB_Switch in SV-INT was reconfigured.	DB_Switch	Nov 5, 2010 4:11:41 AM IST	SV-INT-VC01	Administrator
<div> Page 1 of 1 </div> <div> Displaying 1 - 9 of 9 </div>				

Table 23: Event Details Page Field Descriptions

Field	Description
Event Message	Message notified by the VMWare vCenter server
Event Object	ID or name of the object in focus
Created Time	Time of the event
vNetwork	Name of the vNetwork to which object belongs
vNetwork User	Name of the user who requested the change in the VMWare vCenter server

- Related Documentation**
- [Purging Event Logs on page 75](#)
 - [Purging Configuration Audit Reports on page 76](#)

Purging Event Logs


The records held in the event log are purged periodically. You can schedule the purging of event logs based on the number of records in the logs or a time frame.

To schedule the purging of event logs:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vNetworks**.
2. Select the required virtual networks and from the **Actions** drawer, or the shortcut menu, select **Purge Event Logs**.

The **Configure Event Purging** dialog box is displayed ([Figure 44 on page 76](#)).

Figure 44: Configure Event Purging Dialog Box



The dialog box is titled "Configure Event Purging". It contains two radio buttons: "Records" (selected) and "Days". Below "Records" is a text field "Purge entries older than (count) :" with a value of "1" and a spinner. Below "Days" is a text field "Purge entries older than (days) :" with a value of "3" and a spinner. At the bottom is a checkbox "Purge immediately:" which is unchecked. At the very bottom are "OK" and "Cancel" buttons.

3. Enter the required information as explained in [Table 24 on page 76](#).

Table 24: Configure Event Purging Dialog Box Field Descriptions

Field	Description
Records	Select to schedule an event-log purge based on the number of records in the log
Purge entries older than (count)	Number of records to be retained Records preceding the specified number are periodically purged.
Days	Select to schedule an event-log purge based on the number of records in the log
Purge entries older than (days)	Number of days for which the event records are to be maintained Records older than the specified number of days are periodically purged.
Purge immediately	Select to purge the reports immediately

- Related Documentation**
- [Viewing Notifications on page 74](#)
 - [Purging Configuration Audit Reports on page 76](#)

Purging Configuration Audit Reports

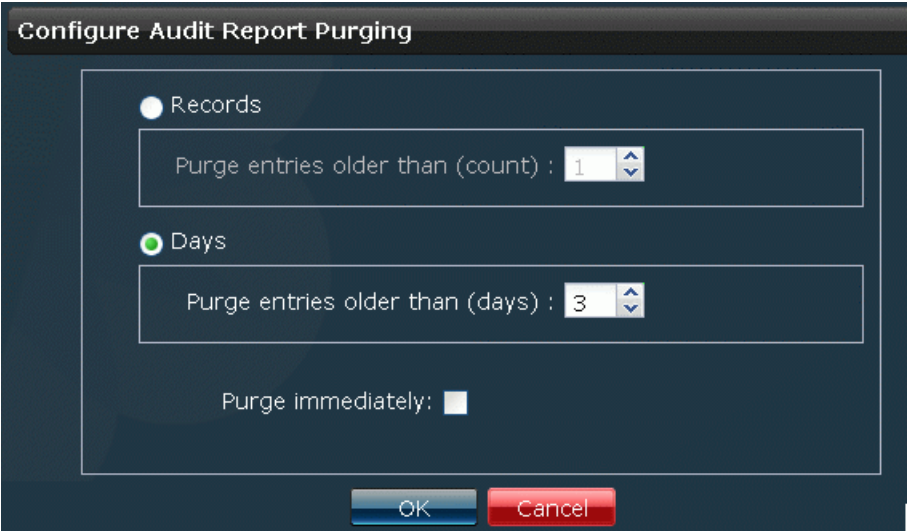
The records held in the audit log are purged periodically. You can schedule the purging of audit logs based on the number of records in the logs or in a time frame.

To schedule the purging of the configuration audit logs:

- 1. From the Virtual Control task ribbon, select **vNetworks > Manage vNetworks**.
- 2. Select the required virtual networks and from the **Actions** drawer, or the shortcut menu, select **Purge Configuration Audit**.

The **Configure Audit Report Purging** dialog box is displayed (Figure 45 on page 77).

Figure 45: Configure Audit Report Purging Dialog Box



- 3. Enter the required information as explained in Table 25 on page 77.

Table 25: Configure Audit Report Purging Dialog Box Field Descriptions

Field	Description
Records	Select to schedule a configuration audit-report purge based on the number of records in the log
Purge entries older than (count)	Number of records to be retained Records preceding the specified number are periodically purged.
Days	Select to schedule a configuration audit-report purge based on a time frame
Purge entries older than (days)	Number of days for which the configuration audit reports are to be maintained Records older than the specified number of days are periodically purged.
Purge immediately	Select to purge the reports immediately

- Related Documentation
- [Viewing Notifications on page 74](#)
 - [Purging Event Logs on page 75](#)

Managing vNetworks

- Viewing the vNetwork Inventory on page 78
- Modifying vNetwork Credentials on page 79
- Deleting vNetworks on page 80
- Re-synchronizing vNetworks on page 80
- Viewing Hosts Associated with vNetworks on page 81
- Viewing VMs Associated with vNetworks on page 82
- Viewing vSwitches Associated with vNetworks on page 82

Viewing the vNetwork Inventory

The components of any of the listed virtual networks can be viewed in one of the following ways:

- Right-click the required virtual network and select **View vNetwork Inventory**.
- Select the required vNetwork and from the **Actions** drawer, select **View vNetwork Inventory**.

The vNetwork Inventory view is displayed (Figure 46 on page 78) showing the information listed in Table 26 on page 78.

Figure 46: vNetwork Inventory Page

Return to vNetwork View					
Host	VM	MAC Address	vSwitch	Port Number	
sv-int-esx02.dcbg.juniper.net	Oracle_VM2	00:50:56:81:04:88	Web_Switch	6591	
sv-int-esx02.dcbg.juniper.net	Apache_VM2	00:50:56:81:48:99	Web_Switch	6586	
sv-int-esx02.dcbg.juniper.net	Oracle_VM1	00:50:56:81:4c:1d	Web_Switch	6590	
sv-int-esx02.dcbg.juniper.net	sv-int-dhcp	Not available	Not connected	Not connected	
sv-int-esx01.dcbg.juniper.net	SQL_VM1	00:50:56:81:0b:a8	Web_Switch	6390	
sv-int-esx01.dcbg.juniper.net	SQL_VM2	00:50:56:81:42:39	Web_Switch	6391	
sv-int-esx01.dcbg.juniper.net	Apache_VM1	00:50:56:81:73:82	Web_Switch	6587	
sv-int-esx03.dcbg.juniper.net	Exchange_VM1	00:50:56:81:59:69	DB_Switch	352	
sv-int-esx03.dcbg.juniper.net	Exchange_VM2	00:50:56:81:01:30	DB_Switch	353	
sv-int-esx03.dcbg.juniper.net	TEST_VM	00:50:56:81:2f:8e	DB_Switch	358	

Page 1 of 1 Displaying 1 - 10 of 10

Table 26: vNetwork Inventory Page Field Descriptions

Field	Description
Host	Name assigned to the host
VM	Name assigned to the virtual machine

Table 26: vNetwork Inventory Page Field Descriptions (*continued*)

Field	Description
MAC Address	Unique identifier assigned to the physical or virtual NIC to which the VM connects
vSwitch	Virtual switch to which the virtual machine connects
Port Number	Port in the virtual switch serving the VM-related traffic

- Related Documentation
- [Manage vNetworks Overview on page 73](#)
 - [Re-synchronizing vNetworks on page 80](#)
 - [Modifying vNetwork Credentials on page 79](#)

Modifying vNetwork Credentials

You can change some of the credentials of an existing vNetwork.

To modify credentials for a vNetwork:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vNetworks**.
2. Select the required vNetwork and from the **Actions** drawer, or the shortcut menu, select **Modify vNetwork**.

The **Modify vNetwork Credentials** dialog box is displayed ([Figure 47 on page 79](#)).

Figure 47: Modify vNetwork (Credentials) Dialog Box

Modify vNetwork

vNetwork Name/IP: 192.168.27.23

Port: 443

Username: administrator

Password:

Confirm password:

Modify

Cancel

3. Modify the fields, as explained in [Table 27 on page 79](#).

Table 27: Modify vNetwork (Credentials) Dialog Box Field Descriptions

Field	Description
vNetwork Name/IP	Name or IP address of the host machine to be used as the VMWare vCenter server
	This cannot be modified.

Table 27: Modify vNetwork (Credentials) Dialog Box Field Descriptions (*continued*)

Field	Description
Port	Port used for connection The default value is 443.
Username	Username to be used to connect to the VMWare vCenter server
Password	Password to be used with the name provided in the previous field
Confirm password	Repeat the password provided in the previous field to confirm.

- Click **Modify** to submit the changes that you made.

Related Documentation

- [Manage vNetworks Overview on page 73](#)
- [Re-synchronizing vNetworks on page 80](#)
- [Deleting vNetworks on page 80](#)

Deleting vNetworks

You can dissociate a vNetwork from Junos Space Virtual Control (JSVC) by deleting it from the system.

To delete a vNetwork:

- From the Virtual Control task ribbon, select **vNetworks > Manage vNetworks**.
- Select the required vNetworks and from the **Actions** drawer, or the shortcut menu, select **Delete vNetwork**.

The **Delete vNetwork** dialog box is displayed with the name of the selected vNetworks listed.

- In the **Delete vNetwork** dialog box, click **Confirm** to delete the vNetwork from JSVC.

Related Documentation

- [Manage vNetworks Overview on page 73](#)

Re-synchronizing vNetworks

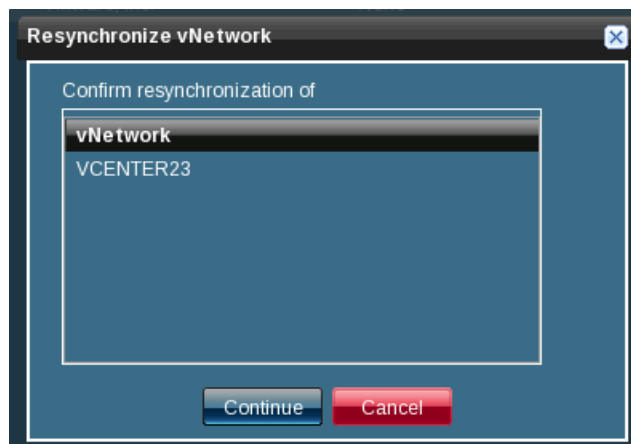
You can re-synchronize vNetworks registered with Junos Space Virtual Control (JSVC). Synchronization is run as a job and is managed by the Job Manager in Junos Space.

To initiate re-synchronizing:

- From the Virtual Control task ribbon, select **vNetworks > Manage vNetworks**.
- Select the required vNetworks and from the **Actions** drawer, or the shortcut menu, select **Re-synchronize with vNetwork**.

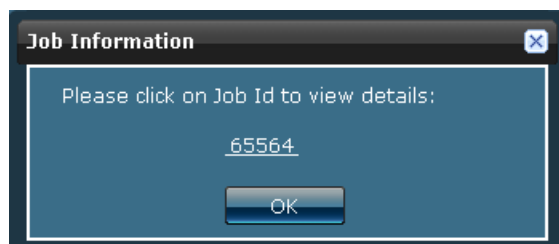
The **Re-synchronize vNetwork** dialog box is displayed with the name of the selected vNetwork ([Figure 48 on page 81](#)).

Figure 48: Re-synchronize vNetwork Dialog Box



3. In the **Re-synchronize vNetwork** dialog box, click **Continue**. The **Job Information** dialog box is displayed ([Figure 49 on page 81](#)).

Figure 49: Job Information Dialog Box



4. In the **Job Information** dialog box, click the job ID link.

The **Job Details** page displays details about the re-synchronization job.

Related Documentation

- [Manage vNetworks Overview on page 73](#)
- [Modifying vNetwork Credentials on page 79](#)

Viewing Hosts Associated with vNetworks

Junos Space Virtual Control (JSVC) provides the option to view the hosts associated with a vNetwork from the Manage vNetworks page.

To view the associated hosts:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vNetworks**.
2. Select the required vNetwork and from the **Actions** drawer, or the shortcut menu, select **View Associated Hosts**.

The Manage Hosts page is displayed with the filtered list of hosts associated with the selected vNetworks.

- Related Documentation**
- [Manage vNetworks Overview on page 73](#)
 - [Viewing Notifications on page 74](#)
 - [Viewing vSwitches Associated with vNetworks on page 82](#)
 - [Viewing VMs Associated with vNetworks on page 82](#)

Viewing VMs Associated with vNetworks

Junos Space Virtual Control (JSVC) provides the option to view the virtual machines associated with a vNetwork from the Manage vNetworks page.

To view the associated virtual machines:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vNetworks**.
2. Select the required vNetwork and from the **Actions** drawer, or the shortcut menu, select **View Associated VMs**.

The Manage Virtual Machines page is displayed with the filtered list of VMs associated with the selected vNetworks.

- Related Documentation**
- [Manage vNetworks Overview on page 73](#)
 - [Viewing Notifications on page 74](#)
 - [Viewing vSwitches Associated with vNetworks on page 82](#)
 - [Viewing Hosts Associated with vNetworks on page 81](#)

Viewing vSwitches Associated with vNetworks

Junos Space Virtual Control (JSVC) provides the option to view the vSwitches machines associated with a vNetwork from the Manage vNetworks page.

To view the associated vSwitches:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vNetworks**.
2. Select the required vNetworks and from the **Actions** drawer, or the shortcut menu, select **View Associated vSwitches**.

The Manage vSwitches page is displayed with the filtered list of vSwitches associated with the selected vNetworks.

- Related Documentation**
- [Manage vNetworks Overview on page 73](#)
 - [Viewing Notifications on page 74](#)
 - [Viewing Hosts Associated with vNetworks on page 81](#)
 - [Viewing VMs Associated with vNetworks on page 82](#)

Orchestrating vNetworks

- [Orchestration Overview on page 83](#)
- [Physical Switch Configuration on page 83](#)
- [Setting Orchestration Mode on page 85](#)
- [Importing Switch/Port Associations on page 85](#)
- [Viewing Details of an Orchestration Job on page 86](#)

Orchestration Overview

Orchestration applies aggregated VLAN configurations (including private VLAN) of the required port group profiles to the appropriate ports of the physical switch. Using Junos Space Virtual Control, you can seamlessly orchestrate across physical and virtual network elements.

Each virtual switch can span across one or more hosts and is configured to have a minimum of one uplink port per host. A distributed vSwitch can span across multiple switches, whereas a standalone vSwitch can be associated with only one host. A virtual switch comprises one or more port groups each of which is a collection of ports. Each of these ports can, in turn, be associated with a virtual machine or host kernel. Traffic coming from these ports is sent out of one of the uplink ports of the vSwitch, which is configured on the same host where the virtual machine or kernel resides.

Each physical NIC in a host is connected to an access port in the EX switch. Any configuration or restrictions that needs to be applied to the physical NIC to manage traffic is applied to the access port of the EX switch.



NOTE: Private VLAN orchestration requires physical switches with Junos OS version 10.4 or later.

Related Documentation

- [Physical Switch Configuration on page 83](#)
- [Setting Orchestration Mode on page 85](#)
- [Importing Switch/Port Associations on page 85](#)

Physical Switch Configuration

VMWare vSphere components such as Distributed Resource Scheduler (DRS), High Availability (HA), Fault Tolerance, and Network vMotion manage automatic migration of VMs across hosts based on the strategy configured by the server administrator.

The migration of VMs triggered by any of these four components have a direct impact on the networking infrastructure. You need to update virtual port configurations to ensure uninterrupted application traffic for the applications running on the virtual machines.

To achieve uninterrupted traffic, Junos Space Virtual Control ensures that the configuration of the networking infrastructure (vSwitches and physical switches) is in line with the latest location of the virtual machine.

The physical switches are configured based on the following modes, as chosen by the administrator:

- None
- Strict
- Very Strict

None

The physical switch is not configured if the orchestration mode is set to None.

Strict

In Strict mode, the ports limit the set of VLAN metrics to those currently required for the port group profiles configured in the virtual machines. All the access ports of the physical switch are, however, configured with the same configuration. This ensures that the configuration need not be changed during VM migration.

This mode offers better traffic control because it allows only the traffic related to the virtual machines to pass through. When a new VM is added or when one of the port group profiles of the vSwitch is changed, the configuration for all these physical switch ports are automatically updated by JSVC.

Very Strict

This is the most secure mode. In this mode, Junos Space Virtual Control (JSVC) maintains a track of the VMs using the EX port for its data traffic and configures the ports to allow only traffic related to the VMs using this EX port.

All the access ports of a virtual switch from a single host have the same configuration. This prevents the traffic that is configured for VMs on other hosts from entering this host. In this mode, the EX ports are reconfigured by JSVC during a VM migration, new VM addition, change in port group profile configuration, and so on.

JSVC adds value to the entire operation of configuring virtual switches with external switches by enabling efficient and automatic configuration of physical switches like the EX4200. When a VM migrates from one host to another, you need to configure the ports of the physical EX appropriately to offer uninterrupted traffic.

Related Documentation

- [Orchestration Overview on page 83](#)
- [Setting Orchestration Mode on page 85](#)
- [Importing Switch/Port Associations on page 85](#)

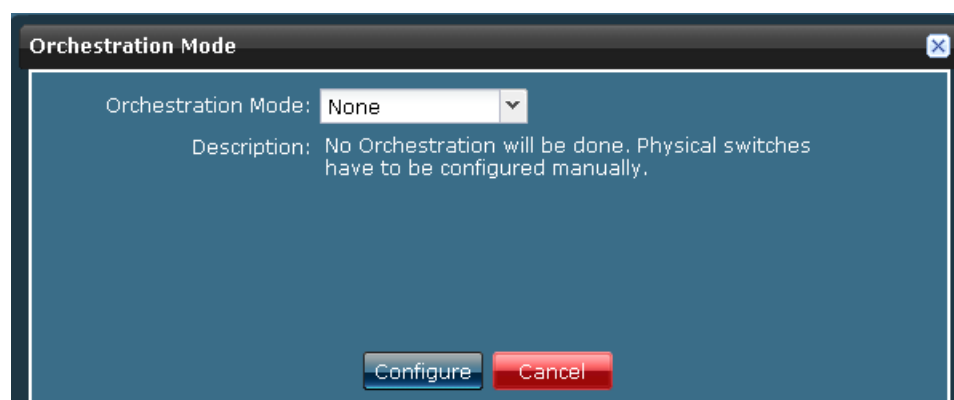
Setting Orchestration Mode

To set the orchestration mode operable on the host:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vNetworks**.
2. Select the required hosts and from the **Actions** drawer, select **Configure Orchestration Mode**.

The **Orchestration Mode** dialog box is displayed ([Figure 50 on page 85](#)).

Figure 50: Orchestration Mode Dialog Box



3. Select the orchestration mode from the drop-down list. The options are None, Strict, and Very Strict.
4. Click **Configure**.

Related Documentation

- [Orchestration Overview on page 83](#)
- [Physical Switch Configuration on page 83](#)
- [Importing Switch/Port Associations on page 85](#)

Importing Switch/Port Associations

In addition to explicitly setting up associations for individual switches and ports, Junos Space Virtual Control (JSVC) enables you to simultaneously create multiple physical port associations. You can do this by importing the switch–port association information in a Comma Separated Values (CSV) file.

The data in the file is validated against the existing environment, and only feasible settings are applied.

To import switch and port association information:

1. From the Virtual Control task ribbon, select **vNetworks > Manage Hosts > Import Association**.

The **Import** dialog box is displayed ([Figure 51 on page 86](#)).

Figure 51: Import (Associations) Dialog Box

Host	NIC	External Switch	External Port
192.168.54.74	vmnic3	192.168.27.20	ge-0/0/2
192.168.54.74	vmnic0	192.168.27.20	ge-0/0/0
192.168.54.74	vmnic2	192.168.27.20	ge-0/0/1

View Sample CSV Upload CSV Configure Cancel

- Click **Upload CSV** to locate the required file and upload it to the system.

The valid parameters in the CSV file are listed in [Table 28 on page 86](#).

Table 28: Import Associations CSV File Field Descriptions

Field	Description
Host	Name or IP address of the host
NIC	Name of the physical NIC
External Switch	Name of the external switch
External Port	Name of the port on the external switch

- To proceed with the bulk association, click **Configure**.

Related Documentation

- [Orchestration Overview on page 83](#)
- [Setting Orchestration Mode on page 85](#)
- [Physical Switch Configuration on page 83](#)

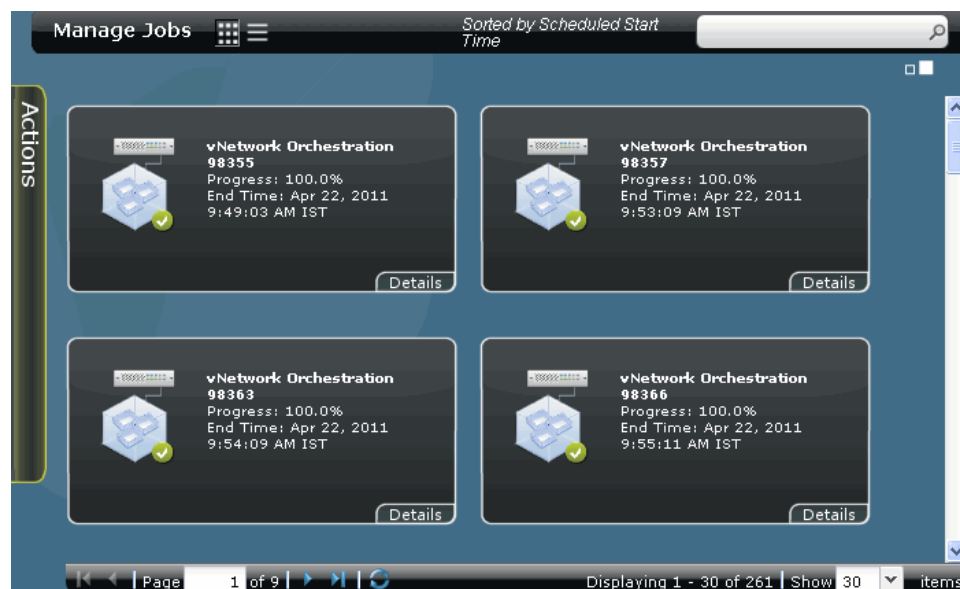
Viewing Details of an Orchestration Job

To view the details of a specific orchestration job:

- From the Virtual Control task ribbon, select **Job Management > Manage Jobs**.

The **Manage Jobs** page appears ([Figure 52 on page 87](#)).

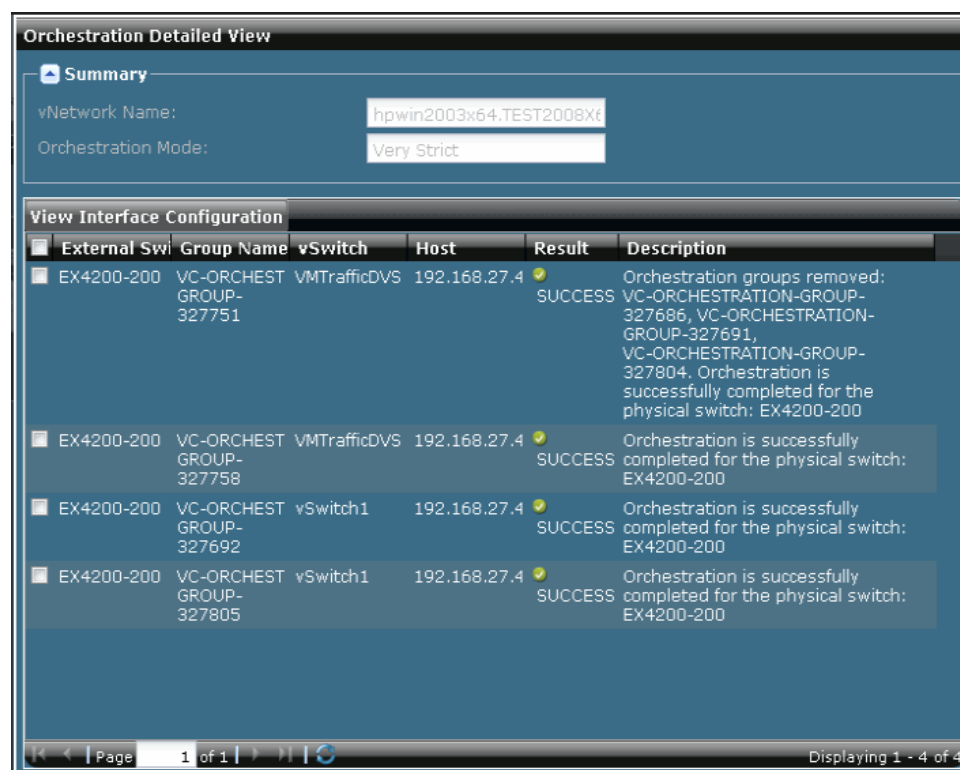
Figure 52: Manage Jobs Page (Thumbnail View)



2. Select the job whose details you want to see and double-click it.

The **Orchestration Detailed View** dialog box appears (Figure 53 on page 87) displaying the information described in Table 29 on page 88.

Figure 53: Orchestration Detailed View



To view more details, select one or more rows and click **View Interface Configuration**.

Table 29: Details of Orchestration Job

Column Name	Description
vNetwork Name	Name of the orchestrated vNetwork
Orchestration Mode	Mode in which orchestration is configured
External Switch	External switches in which orchestration takes place
Group Name	Orchestration groups that are configured in the external switch
vSwitch	vSwitches participating in the orchestration
Host	Host for which the configuration is applied This is applicable only if orchestration is configured in very strict mode.
Result	Result of the orchestration job
Description	Description of the state of the orchestration job
View Interface Configuration	Click to display more details of the selected row as described in Table 30 on page 88 .

Figure 54: View Interface configuration

External Switch	Interface	PNIC	VLANs	PVLANS
EX4200-200	ge-0/0/4	192.168.27.41:vmnic0	200, 300	
EX4200-200	ge-0/0/2	192.168.27.42:vmnic1	100, 200	
EX4200-200	ge-0/0/3	192.168.27.42:vmnic2	100, 200	
EX4200-200	ge-0/0/1	192.168.27.42:vmnic0	400	
EX4200-200	ge-0/0/5	192.168.27.41:vmnic1	500	

Table 30: Details of Interface Configuration

Column Name	Description
External Switch	Name of the external switch in which orchestration takes place
Interface	Name of the interface to which VLANs are configured

Table 30: Details of Interface Configuration (*continued*)

Column Name	Description
PNIC	PNICs of the hosts for which the configuration is applied
VLANs	VLANs configured to the interface
PVLANs	PVLANs (if any) applied to the interface

- Related Documentation**
- [Orchestration Overview on page 83](#)
 - [Setting Orchestration Mode on page 85](#)
 - [Physical Switch Configuration on page 83](#)

Auditing vNetwork Configurations

- [Configuration Audit Overview on page 89](#)
- [Initiating a Configuration Audit on page 90](#)
- [Viewing Audit Reports on page 91](#)

Configuration Audit Overview

A configuration audit analyzes the virtual network environment and summarizes the audit results in a report. The audits uncover any existing mismatch or conflict between the virtual and physical infrastructure in the vNetwork. The auditing process analyzes the configuration of the access ports on the Juniper Networks EX Series Ethernet Switch connected to the hosts and the uplink ports of the virtual switches.

Configuration audits can be scheduled as jobs using the Job Manager in Junos Space. Audits can be scheduled to either follow periodic synchronization jobs or be initiated manually.

The outcome of the audit is available as two reports:

- Virtual switch audit report
- Physical switch audit report



NOTE: The virtual switch audit report is not applicable for a standalone vSwitch.

- Related Documentation**
- [Initiating a Configuration Audit on page 90](#)
 - [Viewing Audit Reports on page 91](#)
 - [Purging Event Logs on page 75](#)

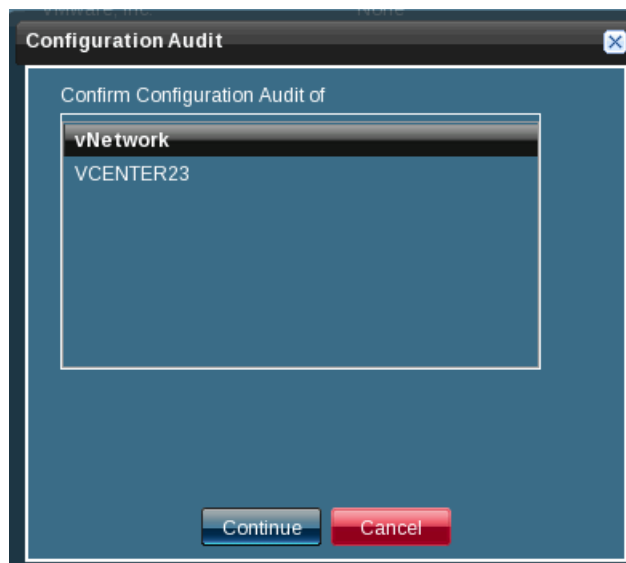
Initiating a Configuration Audit

To manually initiate a configuration audit:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vNetworks**.
2. Select the required virtual networks and from the **Actions** drawer, or the shortcut menu, select **Audit vNetwork Configuration**.

The **Configuration Audit** dialog box is displayed ([Figure 55 on page 90](#)).

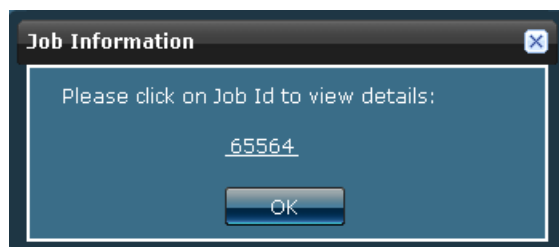
Figure 55: Configuration Audit Dialog Box



3. Click **Continue** to proceed with the audit process.
4. The **Job Information** dialog box appears displaying the job ID ([Figure 56 on page 90](#)).

To view the details of the job, click the job ID link.

Figure 56: Job Information Dialog Box



Related Documentation

- [Configuration Audit Overview on page 89](#)
- [Viewing Audit Reports on page 91](#)
- [Purging Event Logs on page 75](#)

Viewing Audit Reports

The Configuration Audit Reports page lists the compatibility between the physical and virtual network infrastructure. It reports the feasibility for the flow of traffic from and to the virtual machines through the following ports:

- Access ports of the EX Series switch that is connected to the hosts
- Uplink ports of the virtual switches

Viewing Audit Reports for Virtual Switches

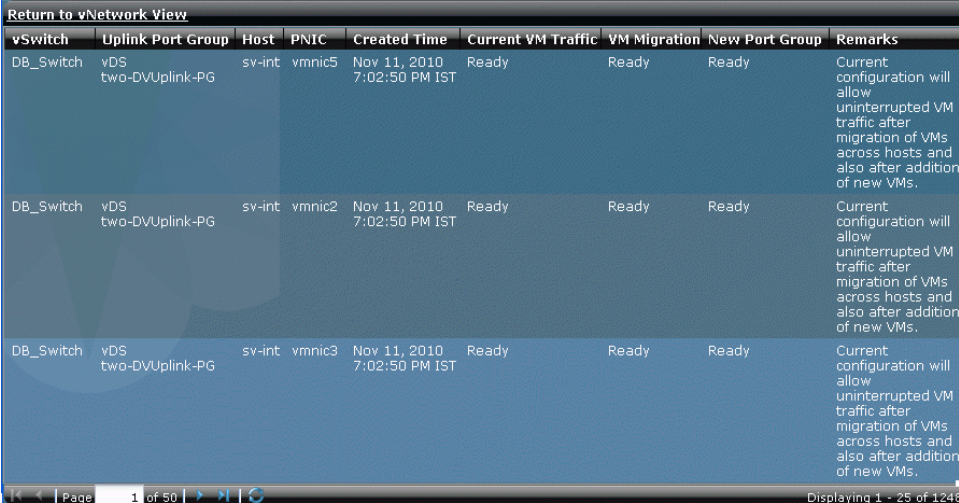
The audit report for virtual switches shows the information about the status of uplink ports configured for the hosts in the selected vNetwork.

To view the audit report for a virtual switch:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vNetworks**.
2. Select the required virtual networks and from the **Actions** drawer, or the shortcut menu, select **View vSwitch Audit Report**.

The audit report for the selected virtual switch is displayed ([Figure 57 on page 91](#)) showing the information listed in [Table 31 on page 91](#).

Figure 57: vSwitch Audit Report Page



vSwitch	Uplink Port Group	Host	PNIC	Created Time	Current VM Traffic	VM Migration	New Port Group	Remarks
DB_Switch	vDS two-DVUplink-PG	sv-int	vmnic5	Nov 11, 2010 7:02:50 PM IST	Ready	Ready	Ready	Current configuration will allow uninterrupted VM traffic after migration of VMs across hosts and also after addition of new VMs.
DB_Switch	vDS two-DVUplink-PG	sv-int	vmnic2	Nov 11, 2010 7:02:50 PM IST	Ready	Ready	Ready	Current configuration will allow uninterrupted VM traffic after migration of VMs across hosts and also after addition of new VMs.
DB_Switch	vDS two-DVUplink-PG	sv-int	vmnic3	Nov 11, 2010 7:02:50 PM IST	Ready	Ready	Ready	Current configuration will allow uninterrupted VM traffic after migration of VMs across hosts and also after addition of new VMs.

Table 31: vSwitch Audit Report Page Field Descriptions

Field	Description
vSwitch	Name of the virtual switch whose ports are being audited
Uplink Port Group	Name of the port group configured to the uplink port being audited
Host	Name of the host to which this uplink port belongs

Table 31: vSwitch Audit Report Page Field Descriptions (*continued*)

Field	Description
PNIC	Name of the physical NIC on the uplink port
Created Time	Time when this report was created
Current VM Traffic	One of the following: <ul style="list-style-type: none"> • Ready • Not Ready
VM Migration	One of the following: <ul style="list-style-type: none"> • Ready • Not Ready
New Port Group	One of the following: <ul style="list-style-type: none"> • Ready • Not Ready
Remarks	Comprehensive summary of the status of traffic through this uplink port based on the current VLAN configuration

Viewing Audit Reports for Physical Switches

The audit report for physical switches shows status information about the access ports configured on the EX Series switch.

To view the audit report for physical switches:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vNetworks**.
2. Select the required virtual networks and from the **Actions** drawer, or the shortcut menu, select **View Physical Switch Audit Report**.

The physical switch audit report is displayed ([Figure 58 on page 93](#)) showing the information listed in [Table 32 on page 93](#).

Figure 58: Physical Switch Audit Report Page

Return to vNetwork View

External Switch	External Port	Created Time	Current VM Traf	VM Migration	New Port Group	Remarks
EX4200	ge-0/0/4	Nov 11, 2010 6:50:12 PM IST	Not Ready	Not Ready	Not Ready	Ex Switch inventory is out of sync. So audit report may not be correct.
EX4200	ge-0/0/2	Nov 11, 2010 6:50:10 PM IST	Not Ready	Not Ready	Not Ready	Ex Switch inventory is out of sync. So audit report may not be correct.
EX4200	ge-0/0/4	Nov 11, 2010 6:29:37 PM IST	Not Ready	Not Ready	Not Ready	Current configuration does not allow traffic for VLANs [100] required for VMs [Apache_VM1].
EX4200	ge-0/0/2	Nov 11, 2010 6:29:37 PM IST	Not Ready	Not Ready	Not Ready	Current configuration does not allow traffic for VLANs [300] required for VMs [centos-1.1.1.3].
EX4200	ge-0/0/4	Nov 11, 2010 6:26:59 PM IST	Ready	Not Ready	Not Ready	Current configuration permits uninterrupted VM traffic only for currently hosted VMs.
EX4200	ge-0/0/2	Nov 11, 2010 6:26:59 PM IST	Ready	Ready	Not Ready	Current configuration will allow uninterrupted VM traffic after migration of VMs across hosts.
EX4200	ge-0/0/4	Nov 11, 2010 6:24:16 PM IST	Not Ready	Not Ready	Not Ready	Ex Switch inventory is out of sync. So audit report may not be correct.
EX4200	ge-0/0/2	Nov 11, 2010 6:24:16 PM IST	Not Ready	Not Ready	Not Ready	Ex Switch is down. So audit report may not be correct.
EX4200	ge-0/0/4	Nov 11, 2010 6:21:32 PM IST	Ready	Ready	Not Ready	Current configuration will allow uninterrupted VM traffic after migration of VMs across hosts.
EX4200	ge-0/0/2	Nov 11, 2010 6:21:32 PM IST	Ready	Ready	Not Ready	Current configuration will allow uninterrupted VM traffic after migration of VMs across hosts.
EX4200	ge-0/0/4	Nov 11, 2010 6:20:53 PM IST	Ready	Ready	Not Ready	Ex Switch inventory is out of sync. So audit report may not be correct.
EX4200	ge-0/0/2	Nov 11, 2010 6:20:53 PM IST	Ready	Not Ready	Not Ready	Ex Switch inventory is out of sync. So audit report may not be correct.

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Table 32: Physical Switch Audit Report Page Field Descriptions

Field	Description
External Switch	Name of the external EX switch
External Port	Port on the external switch
Created Time	Time when this report was created
Current VM Traffic	One of the following: <ul style="list-style-type: none"> Ready Not Ready
VM Migration	One of the following: <ul style="list-style-type: none"> Ready Not Ready
New Port Group	One of the following: <ul style="list-style-type: none"> Ready Not Ready
Remarks	Comprehensive summary of the status of traffic through this external switch, based on the current VLAN configuration In case of failure, this summary lists the VM to or from which traffic cannot flow.

Related Documentation

- [Configuration Audit Overview on page 89](#)
- [Initiating a Configuration Audit on page 90](#)
- [Purging Event Logs on page 75](#)

CHAPTER 8

Discover vNetworks

- [Discover vNetworks Overview on page 95](#)
- [Discovering vNetworks on page 96](#)

Discover vNetworks Overview

You use vNetwork discovery to add vNetworks to Junos Space Virtual Control (JSVC). Discovery is the process of finding a vNetwork (VMWare vCenter server) and then synchronizing its inventory and configuration with the JSVC database. To use vNetwork discovery, JSVC must be able to connect to the vCenter server.

When discovery succeeds, JSVC creates an object in the JSVC database to represent the vCenter server and maintains a connection between the object and the vCenter server so that their information is linked.

When configuration changes are made in JSVC (for example, when you change the parameters of a port group), the changes are pushed to the vCenter server. When configuration changes are made on the vCenter server, JSVC automatically re-synchronizes with the vCenter server so that the inventory information in the JSVC database matches the current vCenter server inventory and the configuration information.

At a high level, the following vCenter server inventory and configuration data is captured and stored in relational tables in the JSVC database:

- **Virtual Switches:** Port groups, interfaces, VLANs, and other configuration details such as QoS parameters, teaming, and failover details
- **Hosts:** Physical NICs and virtual machines
- **Virtual Machines:** Virtual adapters and their associations

Related Documentation

- [Discovering vNetworks on page 96](#)
- [Manage vNetworks Overview on page 73](#)
- [Viewing Notifications on page 74](#)
- [Deleting vNetworks on page 80](#)
- [Re-synchronizing vNetworks on page 80](#)

Discovering vNetworks

You use vNetwork discovery to automatically discover and synchronize the vCenter server in Junos Space Virtual Control (JSVC). vNetwork discovery is a two-step process in which you specify the target vNetworks and the credentials to connect to each vNetwork.



NOTE: The values that you enter to specify the targets and the credentials are persistent from one discovery operation to the next. Therefore, you do not have to reenter information that is the same from one operation to the next.

To discover and synchronize vNetworks, complete the following tasks:

1. [Specifying vNetwork Targets on page 97](#)
2. [Specifying vNetwork Credentials on page 99](#)

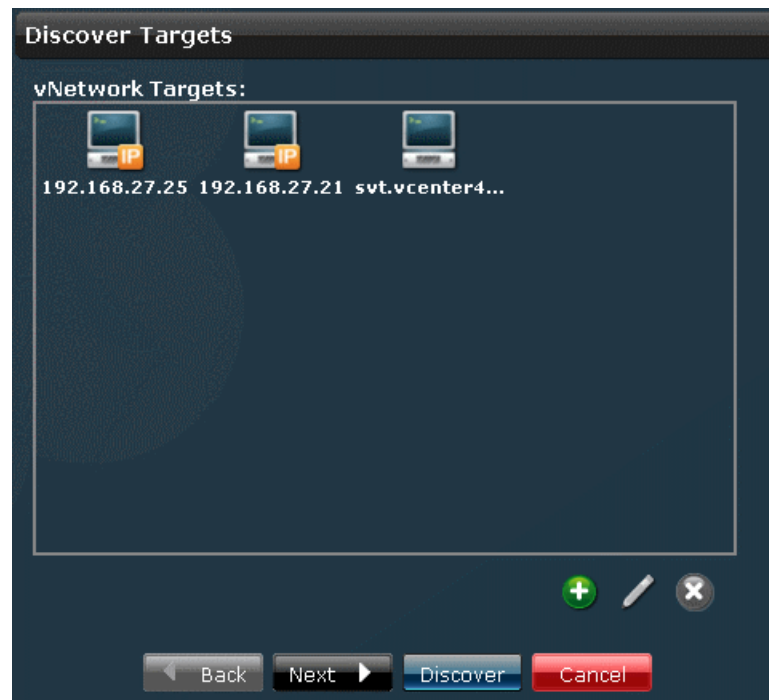
Specifying vNetwork Targets

To specify the vNetwork targets that you want JSVC to discover:

1. From the Virtual Control task ribbon, select **vNetworks > Discover vNetworks > Discover Targets**.

The **Discover Targets** page is displayed (Figure 59 on page 97).

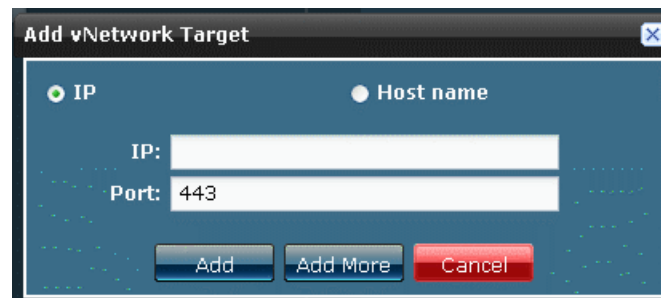
Figure 59: Discover Targets Page



2. Click the **Add** icon.

The **Add vNetwork Target** dialog box is displayed (Figure 60 on page 97).

Figure 60: Add vNetwork Target Dialog Box



3. Choose one of the following options to specify vNetwork targets:
 - Select the **IP** option and enter the IP address of the vNetwork in the text box.

- Select the **Host Name** option and enter the hostname of the vNetwork in the text box.
4. (Optional) Click **Add More** to add additional vNetwork targets and specify the vNetwork targets as explained in the previous step.
 5. When you have added all vNetwork targets that you want JSVC to discover, click **Add**.
The **Discover Targets** page is displayed with the addresses of the vNetwork targets that you configured.
 6. Click **Discover**.

In the next task, you must specify a probe method to connect to and discover the vNetwork targets.

Specifying vNetwork Credentials

You must specify an administrator name and password to establish a connection for each target vNetwork that you configured. The username should exist in the VMWare vCenter server machine and should have appropriate privileges to perform operations on the vCenter.

To create a user and assign required privileges in vCenter, see [“vCenter User Role Management” on page 103](#).

1. From the Virtual Control task ribbon, select **vNetworks > Discover vNetworks > Specify Credentials**.

The **Specify Credentials** page is displayed ([Figure 61 on page 99](#)).

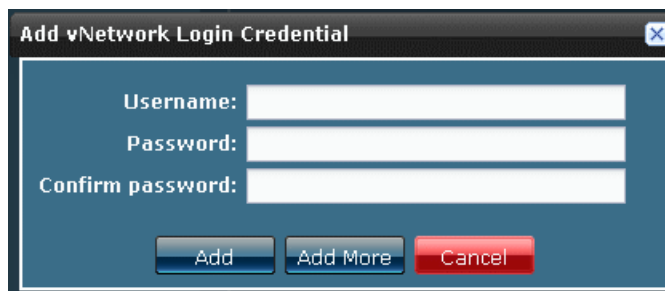
Figure 61: Specify Credentials Page



2. Click the **Add** icon.

The **Add vNetwork Login Credential** dialog box is displayed ([Figure 62 on page 100](#)).

Figure 62: Add vNetwork Login Credential Dialog Box

A screenshot of a dialog box titled "Add vNetwork Login Credential". It has a blue header bar with a close button (X) in the top right corner. The main area is white and contains three text input fields: "Username:", "Password:", and "Confirm password:". Below the fields are three buttons: "Add" (blue), "Add More" (blue), and "Cancel" (red).

3. Enter the username of the administrator in the **Username** field.
4. Enter the password of the administrator in the **Password** field.
5. Reenter the password in the **Confirm password** field.



NOTE: The username and password must match the username and password configured on the vNetwork (vCenter).

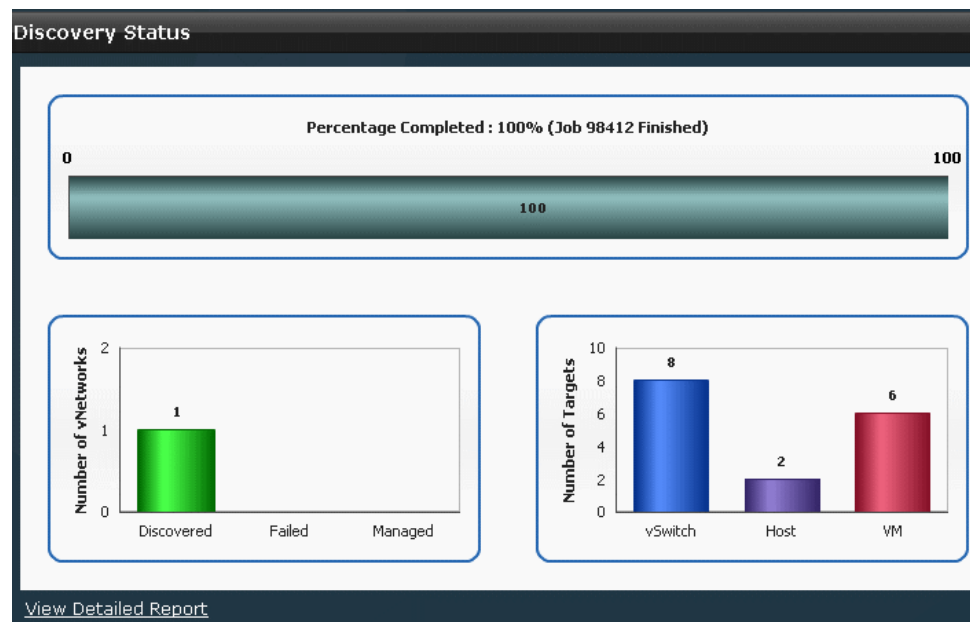
6. (Optional) Click **Add More** to add additional usernames and passwords and enter the information as explained in the previous steps.
7. When you have finished adding the vNetwork login credentials, click **Add**.

The **Specify Credentials** page is displayed with the administrator usernames that you configured.

8. Click **Discover** to discover and synchronize the vNetwork targets in JSVC.

The **Discovery Status** page is displayed ([Figure 63 on page 101](#)) displaying the progress of discovery in real time.

Figure 63: Discover Status Page



9. (Optional) To view more information about device discovery results, click **View Detailed Report**.

The **vNetworks** page is displayed (Figure 64 on page 101) showing the information listed in Table 33 on page 102.

Figure 64: vNetworks (View Detailed Reports) Page

vNetworks		
Host Name/IP Address	Discovery Status	Description
192.168.27.45	Discovery succeeded	Number of virtual switches: 9, Number of hosts: 2, Number of virtual machines: 6
192.168.27.25	Discovery succeeded	Number of virtual switches: 24, Number of hosts: 4, Number of virtual machines: 13
192.168.27.21	Discovery succeeded	Number of virtual switches: 33, Number of hosts: 6, Number of virtual machines: 16

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Table 33: vNetworks (View Detailed Reports) Page Field Descriptions

Field	Description
Host Name/IP Address	Host name or IP address of the discovered vNetwork
Discovery Status	Status of the vNetwork discovery process
Description	One of the following: <ul style="list-style-type: none">• The number of child entities discovered in case the vNetwork discovery was successful• The cause of failure if the vNetwork discovery was unsuccessful

- Related Documentation**
- [Manage vNetworks Overview on page 73](#)
 - [Viewing Notifications on page 74](#)
 - [Discover vNetworks Overview on page 95](#)
 - [Deleting vNetworks on page 80](#)
 - [Re-synchronizing vNetworks on page 80](#)

CHAPTER 9

Reference: vCenter User Role Management for JSVC

- [vCenter User Role Management on page 103](#)

vCenter User Role Management

Junos Space Virtual Control (JSVC) uses the credentials of a vCenter user to discover and manage the vNetwork inventory. This user is a Windows user existing in the Windows machine where the vCenter server is running. JSVC does not require the user to be an administrator or user with all privileges. The user can be restricted to perform only certain operations by assigning the required privileges from the vCenter client application.

- [Creating Users on page 103](#)
- [Creating Roles on page 103](#)
- [Associating the Role with a User on page 106](#)

Creating Users

The process of creating a user depends on the version of the Windows OS installed in the vCenter server. If you do not have sufficient privileges to create a user, contact your system administrator.

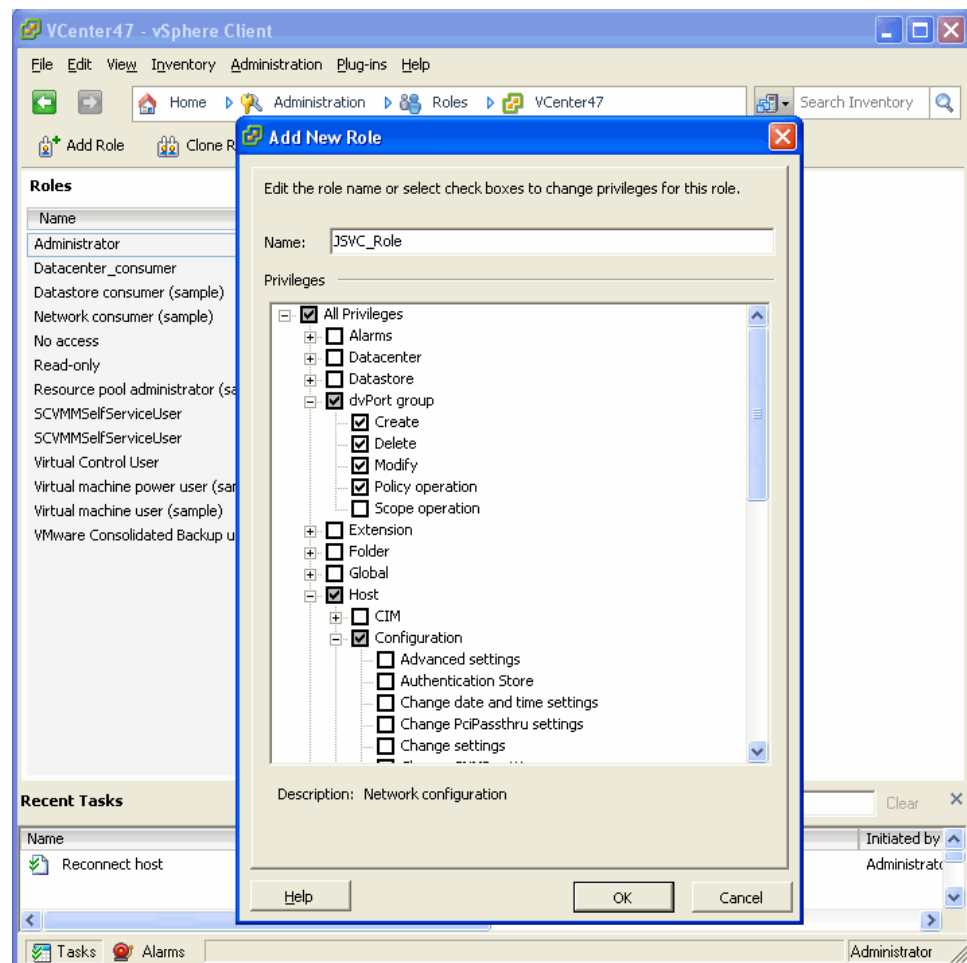
Creating Roles

To create roles in vCenter:

1. Log in to the vCenter client as an administrator or any user with the permissions to create roles in vCenter.
2. Click **Home > Administration > Roles**.
3. Right-click one of the names or default roles and select **Add**.

Alternatively, you can select **Add Role** from the tool bar ([Figure 65 on page 104](#)).

Figure 65: Add New Role Dialog Box



4. Create a role by selecting the required privileges.

See [Table 34 on page 104](#) for the list of privileges required for Virtual Control.

Table 34: Privileges Needed to Perform Operations in vCenter Through JSVC

Privileges list in vCenter 4.0 GUI Configuration	Privileges list in vCenter 4.1 GUI Configuration
Distributed virtual port group => Create	dvPort group => Create
Distributed virtual port group => Modify	dvPort group => Modify
Distributed virtual port group => Policy operation	dvPort group => Policy operation
Distributed virtual port group=>Delete	dvPort group => Delete
Host => Configuration => Network configuration	Host => Configuration => Network configuration
(Not available)	vNetwork Distributed switch => Network I/O control operation

Table 34: Privileges Needed to Perform Operations in vCenter Through JSVC (*continued*)

Privileges list in vCenter 4.0 GUI Configuration	Privileges list in vCenter 4.1 GUI Configuration
Distributed Virtual Switch => Port configuration operation	vNetwork Distributed switch => Port configuration operation
Distributed Virtual Switch => Modify	vNetwork Distributed switch => Modify
Network => Assign network	Network => Assign network
Distributed Virtual Switch => Create	vNetwork Distributed switch => Create
Distributed Virtual Switch => Delete	vNetwork Distributed switch => Delete

You can also disable the privilege for a particular action using these steps. When your credentials are used to discover the vNetwork, you can perform only operations for which you have privileges. For more information, see

http://www.vmware.com/pdf/vsphere4/r40/vsp_40_admin_guide.pdf.

When a vNetwork is already discovered, modify vNetwork can be used for specifying the required credentials.

Restrictions can be applied only to child objects such as hosts, distributed virtual switches (VDS), and so on.

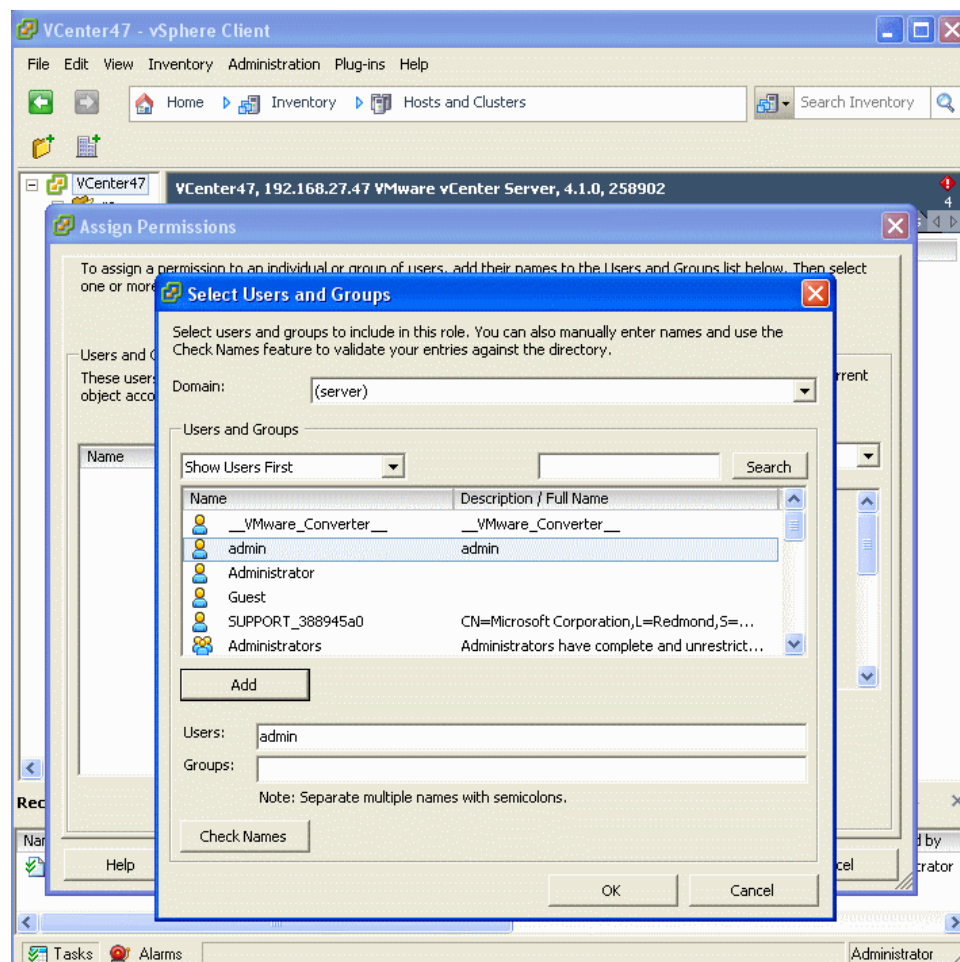
Associating the Role with a User

After you create the role, you are assigned with the permissions defined in that role.

To assign a role in vCenter:

1. Select **Home > Inventory > Hosts and Clusters**. This displays the tree view as shown in [Figure 66 on page 106](#).

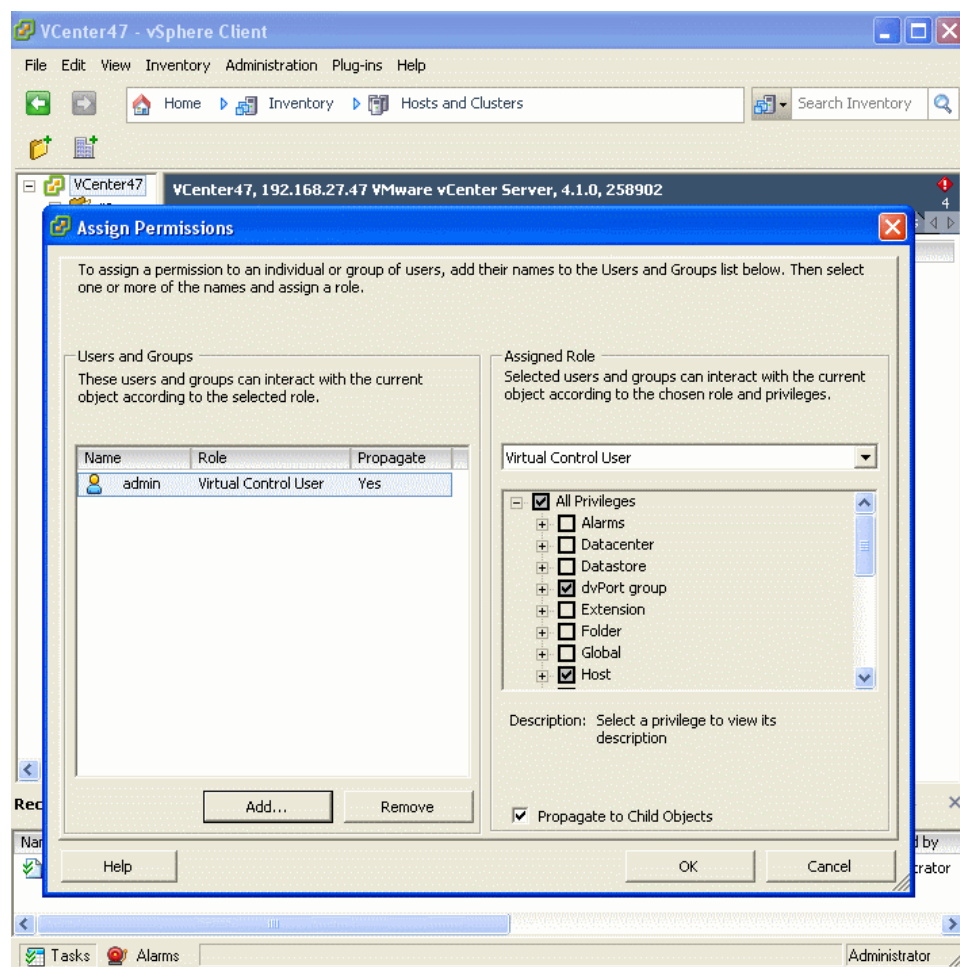
Figure 66: Select Users and Groups Dialog Box



2. In the tree view, right-click the vCenter (root node in the tree) and select **Add Permission**.

This opens the **Assign Permissions** dialog box as shown in [Figure 67 on page 107](#).

Figure 67: Assign Permissions Dialog Box



3. Click **Add** to add the Windows user that you want to use in JSVC.
4. Select the role that needs to be assigned to the user.



NOTE: Ensure that you select the **Propagate to Child Objects** check box so this selected role is applied to all child objects of the selected inventory object.

Related Documentation

- [Discovering vNetworks on page 96](#)

PART 3

Profiles

- [Understanding Profiles on page 111](#)
- [Managing vSwitch Profiles on page 117](#)
- [Managing Port Group Profiles on page 129](#)

CHAPTER 10

Understanding Profiles

- [vSwitch Profiles Overview on page 111](#)
- [Port Group Profiles Overview on page 113](#)

vSwitch Profiles Overview

A vSwitch profile encapsulates the hardware-independent configuration of a virtual switch that can be shared across virtual switches. vSwitch profiles facilitate a seamless one-touch provisioning of port groups across the virtual switches spanning different hosts. JSVC provides options to create and manage vSwitch profiles specific to standalone virtual switches (VSS) and distributed virtual switches (VDS).

The following content explains the behavior of JSVC in various scenarios.

- **Discovery of vSwitch Profiles:** Whenever JSVC discovers a vNetwork, it creates a vSwitch profile for every virtual switch and the profile is considered a discovered profile. Before creating a profile, JSVC checks whether there is another discovered profile with the same configuration. If so, JSVC uses the same profile instead of creating a new one.

JSVC does not consider user-defined profiles during discovery and re-synchronization. vSwitches are not associated with existing user-defined profiles. This behavior is the same for both vSwitch profiles and port group profiles.

- **Modifying a vSwitch Profile:** If you modify a VDS profile that is associated with more than one VDS, then the profile is applied to all the associated VDSes. However, if the override option was enabled in the profile, JSVC asks you whether or not you want to forcibly apply the profile to all the VDSes.

You cannot override the configuration on a specific VSS. After you modify a VSS profile, the configuration is applied to all the vSwitches associated with the profile.

- **Synchronizing a vSwitch Profile:** When you modify the configuration of the only vSwitch associated with a profile, JSVC directly updates that profile. Otherwise, it creates a new profile with the modified configuration.
- **Modifying vSwitch or Port Group Configuration:** When you modify a vSwitch or a port group configuration, JSVC enables you to create a new vSwitch profile with the modified configuration. After you have modified the configuration, JSVC automatically begins the synchronization process. When you modify the configuration of the only vSwitch

associated with a profile, JSVC directly updates that profile. Otherwise, it creates a new profile with the modified configuration.

You also have the option of overriding and modifying the configuration without creating a new profile.

- **Deletion of a vSwitch Profile:** You cannot delete a vSwitch profile that is associated with a vSwitch.

JSVC provides you with a workspace called **Profiles**. From there, you can navigate to the **Manage vSwitch Profiles** page where you can create and manage vSwitch profiles.

From the Virtual Control task ribbon, select **Profiles > Manage vSwitch Profiles**.

This opens the Manage vSwitch Profiles page, which displays the existing vSwitch profiles. These profiles can be displayed in either the thumbnail view ([Figure 68 on page 112](#)) or the tabular view ([Figure 69 on page 113](#)).

Figure 68: Manage vSwitch Profiles (Thumbnail View)



Figure 69: Manage vSwitch Profiles (Tabular View)

Profile	vSwitch Type	vSwitch Vers	Profile Type	MTU	No of Uplinks	No of Associa
vSwitch	Standalone	4.x	User Defined	1500	3	0
vSwitch Profile	Standalone	4.x	User Defined	1500	3	0

Related Documentation

- [Creating a vSwitch Profile on page 118](#)
- [Modifying a vSwitch Profile on page 122](#)
- [Cloning a vSwitch Profile on page 123](#)
- [Deleting a vSwitch Profile on page 123](#)
- [Viewing PVLAN Details on page 124](#)
- [Viewing Resource Allocation on page 125](#)
- [Viewing Associated vSwitches on page 125](#)

Port Group Profiles Overview

You need to configure ports on virtual and physical switches to regulate data-packet traffic. Traffic regulation ensures security and a guaranteed rate of packet flow, and prevents unsolicited traffic. You can use port group profiles to set up parameters and then apply them to multiple port groups across different virtual switches.

Junos Space Virtual Control (JSVC) synchronizes the entire virtual network. This permits administrators to make changes in parameters related to port groups in both the VMWare vCenter server and JSVC. You can create port group profiles by using JSVC, and you can configure port groups in a VMWare vCenter server. JSVC synchronizes the infrastructure with both these kinds of profiles. The port groups you create in a VMWare vCenter server are called **discovered profiles**, whereas those you create using JSVC are called **user-defined profiles**.

Port group profiles can be created for standalone and distributed vSwitches separately. The distributed vSwitch profiles can be further classified based on the different versions of vSphere (for example, 4.0 and 4.1).

JSVC uses a profile to enable multiple port groups with the same set of parameters as defined by the profile. Port group profiles specify rules for:

- Security
- Quality of Service
- Teaming and Failover policy, which enables the port groups to share the load of traffic or provides a passive failover in the event of failure, or both

You can edit port group profiles and apply them to ports across virtual switches to suit your requirements.

JSVC provides you with a workspace called **Profiles**. From there, you can navigate to the **Manage Port Group Profiles** landing page for creating and managing port group profiles.

From the Virtual Control task ribbon, select **Profiles > Manage Port Group Profiles**. This opens the **Manage Port Group Profiles** page, which displays the existing port group profiles. These profiles can be displayed in either the thumbnail view ([Figure 70 on page 114](#)) or the tabular view ([Figure 71 on page 115](#)).

Figure 70: Manage Port Group Profiles Page (Thumbnail View)



Figure 71: Manage Port Group Profiles Page (Tabular View)

Profile	Category	Profile Type	Description	Number of	vSwitch Type	vSwitch Ver
Manageme Network	Access Profile	Discovered	VMWare Generated Port Group Profile.	1	Standalone	4.x
Manageme Network_1	Access Profile	Discovered	VMWare Generated Port Group Profile.	1	Standalone	4.x
Niks_PG	Access Profile	Discovered	VMWare Generated Port Group Profile.	2	Standalone	4.x
PortGroup_	Access Profile	Discovered	VMWare Generated Port Group Profile.	4	Distributed	4.1.0
VM Network	Access Profile	Discovered	VMWare Generated Port Group Profile.	2	Standalone	4.x
VM Network 2	Access Profile	Discovered	VMWare Generated Port Group Profile.	3	Standalone	4.x
VMkernel_	Access Profile	Discovered	VMWare	2	Standalone	4.x

Page 1 of 1 | Displaying 1 - 9 of 9 | Show 30

Related Documentation

- [Creating a Port Group Profile on page 130](#)
- [Viewing Port Group Profile Associations on page 137](#)
- [Modifying a Port Group Profile on page 136](#)
- [Cloning a Port Group Profile on page 136](#)
- [Deleting a Port Group Profile on page 137](#)

CHAPTER 11

Managing vSwitch Profiles

- [Creating a vSwitch Profile on page 118](#)
- [Modifying a vSwitch Profile on page 122](#)
- [Cloning a vSwitch Profile on page 123](#)
- [Deleting a vSwitch Profile on page 123](#)
- [Viewing PVLAN Details on page 124](#)
- [Viewing Resource Allocation on page 125](#)
- [Viewing Associated vSwitches on page 125](#)
- [Creating a vNetwork Distributed Switch on page 126](#)

Creating a vSwitch Profile

To create a vSwitch profile:

1. From the Virtual Control task ribbon, select **Profiles > Manage vSwitch Profiles > Create vSwitch Profile**.

The **vSwitch Profile General Settings** page is displayed (Figure 72 on page 118).

Figure 72: vSwitch Profile General Settings

2. Select the appropriate fields to create a specific type of profile, as described in Table 35 on page 118.

Table 35: vSwitch Profile: General Settings Page Field Descriptions

Field	Description
Vendor	Name of the vendor who provides the virtualization software (for example, VMWare).
Profile name	Name of the vSwitch profile to be created
vSwitch profile type	One of the following: <ul style="list-style-type: none"> • Standalone—Select this option to create a profile that can be used for the virtual standalone switch of the VMWare • Distributed—Select this option to create a profile that can be used for the distributed virtual switch of the VMWare
Switch version	One of the following: <ul style="list-style-type: none"> • 4.0—VMWare vSphere version 4.0 • 4.1—VMWare vSphere version 4.1.0 This field is not applicable for standalone vSwitches.

Table 35: vSwitch Profile: General Settings Page Field Descriptions (*continued*)

Field	Description
Default switch name	Default name for the vSwitch created through this profile
MTU	Value of the maximum transmission unit to be set in the profile
No. of uplinks	Number of uplink ports to be created through this profile
No. of ports	Number of access ports to be created through this profile This field is not applicable for distributed vSwitches.
Is overridable	Select to allow the configuration to be set for one or more specific vSwitches This field is not applicable for standalone vSwitches.

3. Click **Next** to open the **vSwitch Profile: Private VLAN Details** page (Figure 73 on page 119).

Figure 73: vSwitch Profile: Private VLAN Details Page



4. (Optional) Enter PVLANS details as described in Table 36 on page 119.

Table 36: vSwitch Profile: Private VLAN Details Field Description

Field	Description
Primary PVLAN	Primary ID on the virtual switch
Secondary PVLAN	Secondary ID on the virtual switch

Table 36: vSwitch Profile: Private VLAN Details Field Description (*continued*)

Field	Description
PVLAN Type	One of the following: <ul style="list-style-type: none"> Promiscuous Isolated Community

- Click **Next** to open the **vSwitch Profile: Manage Resource Allocation** page (Figure 74 on page 120).

Figure 74: vSwitch Profile: Manage Resource Allocation Page

Manage Resource Allocation

Summary

Network I/O control: **Configure**

Configure Network Resource

Network Resource	Host Limit - Mbit/s	Physical Adapter Sh	Shares Value
FT Traffic	Unlimited	normal	50
iSCSI Traffic	Unlimited	normal	50
vMotion Traffic	Unlimited	normal	50
Management Traffic	Unlimited	normal	50
NFS Traffic	Unlimited	normal	50
Virtual Machine Traffic	Unlimited	high	100

Create vSwitch Profile

- ✓ vSwitch Profile General
- ✓ PVLAN Details
- ✓ **Manage Resource Allocation**
- Port Group Details

Back **Next** **Finish** **Cancel**

See “Managing Resource Allocation” on page 32 for information about entering resource allocation details.



NOTE: Resource allocation is applicable only for distributed virtual switch on vSphere 4.1 or later. It is not available for standard virtual switch and distributed virtual switch on vSphere 4.0.

- To enable or disable network I/O control, click **Configure** located next to the **Network I/O Control** field.

The **Configure Network I/O Control** dialog box opens (Figure 75 on page 121).

Figure 75: Configure Network I/O Control Dialog Box



7. Select or clear the **Enable network I/O control** check box to enable or disable network I/O control respectively, and click **Configure**.
8. Click **Configure Network Resource** to configure the network resource pools.

The Configure Network Resource page is displayed ([Figure 76 on page 121](#)).

Figure 76: vSwitch Profile: Configure Network Resource Pool

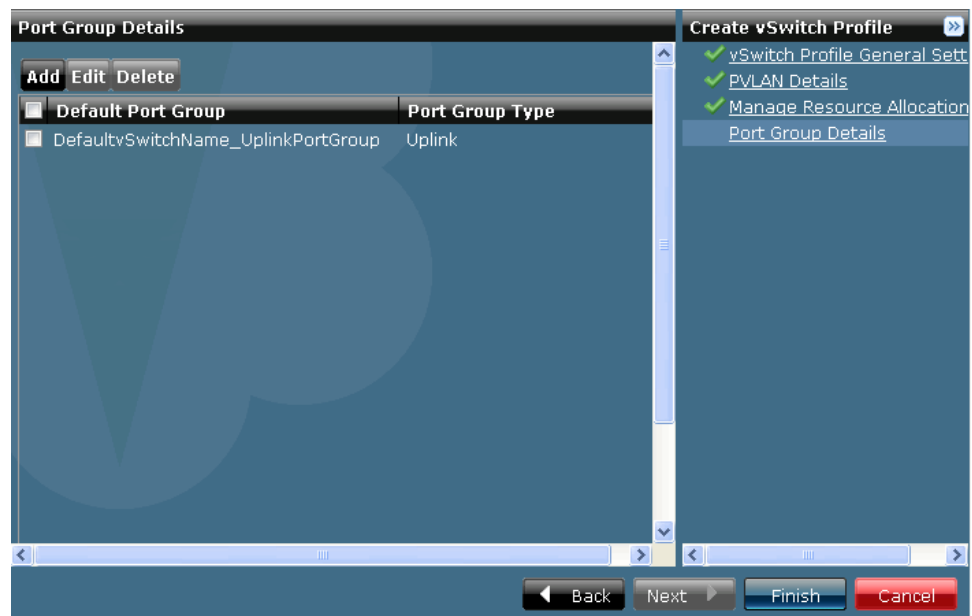
Network Resource Pool	Host Limit - Mbit/s	Physical Adapter Shares	Shares Value
Virtual Machine Traffic	Unlimited	high	100
iSCSI Traffic	Unlimited	normal	50
vMotion Traffic	Unlimited	normal	50
NFS Traffic	Unlimited	normal	50
Management Traffic	Unlimited	normal	50
FT Traffic	Unlimited	normal	50

See “[Managing Resource Allocation](#)” on [page 32](#) for information about entering resource allocation details.

9. To modify the parameters for the resource pools in the table, click the edit icon on the first column.
10. After you enter the required values, click **Update** and then click **Next**.

The Port Group Details page is displayed ([Figure 77 on page 122](#)).

Figure 77: vSwitch Profile: Port Group Details



11. You can add, edit, or delete a port group from the vSwitch profile.
12. After you have entered the necessary details, click **Finish** to create a new vSwitch profile.

Related Documentation

- [vSwitch Profiles Overview on page 111](#)
- [Modifying a vSwitch Profile on page 122](#)
- [Cloning a vSwitch Profile on page 123](#)
- [Deleting a vSwitch Profile on page 123](#)
- [Viewing PVLAN Details on page 124](#)
- [Viewing Resource Allocation on page 125](#)
- [Viewing Associated vSwitches on page 125](#)

Modifying a vSwitch Profile

To modify a vSwitch profile:

1. From the Virtual Control task ribbon, select **Profiles > Manage vSwitch Profiles**.
The Manage vSwitch Profiles page is displayed.
2. Select the required vSwitch profile, and from the **Actions** drawer, or the shortcut menu, select **Modify profile**.
The **vSwitch Profile: General Settings** dialog box is displayed.
3. Modify the fields as necessary and click **Modify**.

The Manage vSwitch Profiles page appears displaying the newly modified vSwitch profile.

**Related
Documentation**

- [vSwitch Profiles Overview on page 111](#)
- [Creating a vSwitch Profile on page 118](#)
- [Cloning a vSwitch Profile on page 123](#)
- [Deleting a vSwitch Profile on page 123](#)
- [Viewing PVLAN Details on page 124](#)
- [Viewing Resource Allocation on page 125](#)
- [Viewing Associated vSwitches on page 125](#)

Cloning a vSwitch Profile

To clone a vSwitch profile:

1. From the Virtual Control task ribbon, select **Profiles > Manage vSwitch Profiles**.

The Manage vSwitch Profiles page is displayed.

2. Select the required vSwitch profile, and from the **Actions** drawer, or the shortcut menu, select **Clone profile**.

The **vSwitch Profile: General Settings** dialog box is displayed.

3. Modify the fields as necessary and click **Clone**.

The Manage vSwitch Profiles page appears displaying the newly cloned vSwitch profile.

**Related
Documentation**

- [vSwitch Profiles Overview on page 111](#)
- [Creating a vSwitch Profile on page 118](#)
- [Modifying a vSwitch Profile on page 122](#)
- [Deleting a vSwitch Profile on page 123](#)
- [Viewing PVLAN Details on page 124](#)
- [Viewing Resource Allocation on page 125](#)
- [Viewing Associated vSwitches on page 125](#)

Deleting a vSwitch Profile

JSVC enables you to delete multiple vSwitch profiles.

To delete a vSwitch profile:

1. From the Virtual Control task ribbon, select **Profiles > Manage vSwitch Profiles**.

The Manage vSwitch Profiles page is displayed.

2. Select the required vSwitch profile, and from the **Actions** drawer, or the shortcut menu, select **Delete Profiles**.

The **Delete vSwitch Profile** dialog box is displayed listing the profiles that you selected for deletion.

3. Click **Confirm** to delete the vSwitch profile from the JSVC database.



NOTE: You cannot delete a vSwitch profile that is associated with a vSwitch.

Related Documentation

- [vSwitch Profiles Overview on page 111](#)
- [Creating a vSwitch Profile on page 118](#)
- [Modifying a vSwitch Profile on page 122](#)
- [Cloning a vSwitch Profile on page 123](#)
- [Viewing PVLAN Details on page 124](#)
- [Viewing Resource Allocation on page 125](#)
- [Viewing Associated vSwitches on page 125](#)

Viewing PVLAN Details

You can view the private VLAN details configured for each vSwitch profile.

To view details of private VLANs for a vSwitch profile:

1. From the Virtual Control task ribbon, select **Profiles > Manage vSwitch Profiles**.

The Manage vSwitch Profiles page is displayed.

2. Select the required vSwitch profile, and from the **Actions** drawer, or the shortcut menu, select **View PVLAN Details**.

The private VLANs details on the specific vSwitch profile are displayed. See [“Viewing Private VLANs” on page 28](#) for more information.



NOTE: This is not applicable for a standalone vSwitch because private VLANs do not exist in a standalone vSwitch.

Related Documentation

- [vSwitch Profiles Overview on page 111](#)
- [Creating a vSwitch Profile on page 118](#)
- [Modifying a vSwitch Profile on page 122](#)
- [Cloning a vSwitch Profile on page 123](#)

- [Deleting a vSwitch Profile on page 123](#)
- [Viewing Resource Allocation on page 125](#)
- [Viewing Associated vSwitches on page 125](#)

Viewing Resource Allocation

You can view the network resource allocation details configured for each vSwitch profile.



NOTE: This operation (resource allocation) is applicable only for distributed virtual switches on vSphere 4.1 or later. It is not available for standard virtual switches and distributed virtual switches on vSphere 4.0.

To view details of the network resource allocation for a vSwitch profile:

1. From the Virtual Control task ribbon, select **Profiles > Manage vSwitch Profiles**.

The Manage vSwitch Profiles page is displayed.

2. Select the required vSwitch profile, and from the **Actions** drawer, or the shortcut menu, select **View Resource Allocation**.

A tabular view of resource allocation for the selected distributed vSwitch Profile is displayed. See “[Managing Resource Allocation](#)” on [page 32](#) for more information.

Related Documentation

- [vSwitch Profiles Overview on page 111](#)
- [Creating a vSwitch Profile on page 118](#)
- [Modifying a vSwitch Profile on page 122](#)
- [Cloning a vSwitch Profile on page 123](#)
- [Deleting a vSwitch Profile on page 123](#)
- [Viewing PVLAN Details on page 124](#)
- [Viewing Associated vSwitches on page 125](#)

Viewing Associated vSwitches

To view the vSwitch profile associations:

1. From the Virtual Control task ribbon, select **Profiles > Manage vSwitch Profiles**.

The Manage vSwitch Profiles page is displayed.

2. Select the required vSwitch profile, and from the **Actions** drawer, or the shortcut menu, select **View Association**.

The Manage vSwitches page appears displaying the vSwitches associated with the selected profiles. See [“Manage Virtual Switches Overview” on page 17](#) for more information.

- Related Documentation**
- [vSwitch Profiles Overview on page 111](#)
 - [Creating a vSwitch Profile on page 118](#)
 - [Modifying a vSwitch Profile on page 122](#)
 - [Cloning a vSwitch Profile on page 123](#)
 - [Deleting a vSwitch Profile on page 123](#)
 - [Viewing PVLAN Details on page 124](#)

Creating a vNetwork Distributed Switch

To create a vNetwork Distributed Switch using a vSwitch profile:

1. From the Virtual Control task ribbon, select **vNetworks > Manage vSwitches > Create vSwitch**. The **Virtual Switch General Settings** page is displayed, as shown in [Figure 78 on page 126](#).

Figure 78: The Virtual Switch General Settings page

2. In the **Virtual Switch General Settings** page, define your vSwitch using the parameters explained in [Table 37 on page 126](#).

Table 37: Virtual Switch General Settings

Field	Description
vNetwork	Name of the vNetwork in which you want to create the vSwitch

Table 37: Virtual Switch General Settings (*continued*)

Datacenter	Name of the data center under which you want to create the vSwitch
vSwitch type	Select Distributed in order to create an uplink port group
Version	One of the following: <ul style="list-style-type: none"> 4.0—VMWare vSphere version 4.0 4.1—VMWare vSphere version 4.1.0
vSwitch profile	Name of the vSwitch profile. The list displays vSwitch profiles filtered by the selected vSwitch type.
vSwitch name	Name of the vSwitch. By default, this field contains the name assigned in the vSwitch profile. You can overwrite the name only if the overridable option is enabled in the vSwitch profile. This field is not enabled for Standalone vSwitches.

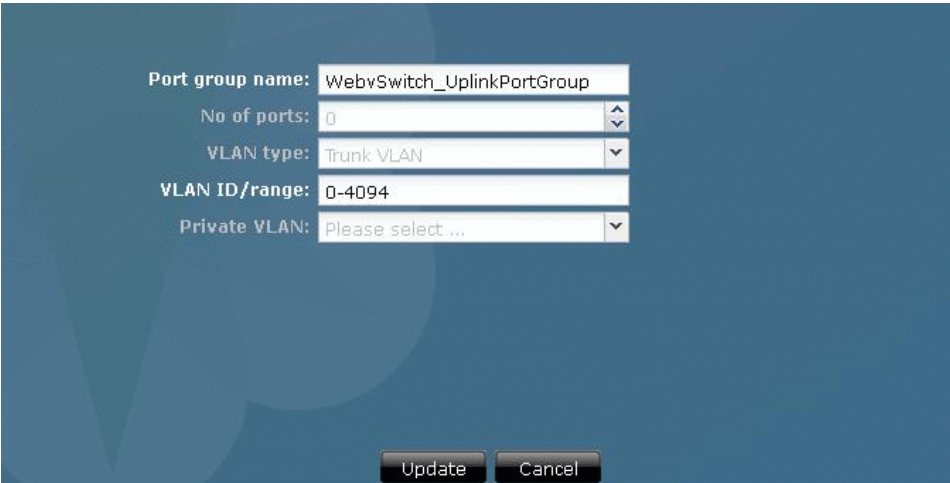
- When you have finished specifying the vSwitch general parameters, click **Next**. The **Port Group Details** page is displayed, as shown in [Figure 79 on page 127](#).

Figure 79: The Uplink Port Group Details page



- Select the uplink port group you want to modify and click **Edit**. The Port Group Details page is displayed as shown in [Figure 80 on page 128](#)

Figure 80: The Uplink Port Group Details Page



The screenshot displays the 'Uplink Port Group Details' configuration page. It features a dark blue background with a light blue abstract graphic on the left. The configuration fields are as follows:

Port group name:	WebvSwitch_UplinkPortGroup
No of ports:	0
VLAN type:	Trunk VLAN
VLAN ID/range:	0-4094
Private VLAN:	Please select ...

At the bottom right, there are two buttons: 'Update' and 'Cancel'.

5. Enter the values as required and click **Update**.
6. On the **Port Group Details** page, click **Finish**.

CHAPTER 12

Managing Port Group Profiles

- [Creating a Port Group Profile on page 130](#)
- [Modifying a Port Group Profile on page 136](#)
- [Cloning a Port Group Profile on page 136](#)
- [Deleting a Port Group Profile on page 137](#)
- [Viewing Port Group Profile Associations on page 137](#)

Creating a Port Group Profile

To create a port group profile:

1. From the Virtual Control task ribbon, select **Profiles > Manage Port Group Profiles > Create Port Group Profile**.

The **Port Group Profile: Selection** page is displayed ([Figure 81 on page 130](#)).

Figure 81: Port Group Profile: Selection Page

2. Select the appropriate fields to create a specific type of profile, as described in [Table 38 on page 130](#).

Table 38: Port Group Profile: Selection Page Field Descriptions

Field	Description
Switch type	<p>One of the following:</p> <ul style="list-style-type: none"> • Standalone vSwitch—Select this option to create a profile that can be used for port groups under a VMWare virtual standalone switch. • Distributed vSwitch—Select this option to create a profile that can be used for port groups under a VMWare distributed virtual switch.
Switch version	<p>One of the following:</p> <ul style="list-style-type: none"> • 4.0—VMWare vSphere version 4.0 • 4.1—VMWare vSphere version 4.1.0 <p>This field is not applicable for standalone vSwitches.</p>

Table 38: Port Group Profile: Selection Page Field Descriptions (*continued*)

Field	Description
Profile category	<p>One of the following:</p> <ul style="list-style-type: none"> Uplink—The profile is created as an uplink port group profile. Access—The profile is created as an access port group profile. <p>This field is not applicable for standalone vSwitches.</p>

3. Click **Next**.

The **Port Group Profile: General Settings** page is displayed ([Figure 82 on page 131](#)).

Figure 82: Port Group Profile: General Settings Page

4. Enter the values in the fields as described in [Table 39 on page 131](#).

Table 39: Port Group Profile: General Settings Page Field Descriptions

Field	Description
General Settings	
Profile name	Name of the profile
Profile description	Description of the port group profile

Table 39: Port Group Profile: General Settings Page Field Descriptions (*continued*)

Field	Description
Port binding type	<p>One of the following:</p> <ul style="list-style-type: none"> Static binding—Assigns a fixed port ID to the virtual machine whenever it connects to a virtual port that exists in a port group associated with this profile. Dynamic binding—Assigns a port ID to the virtual machine whenever it is first switched on after connecting to a virtual port. Ephemeral—The number of ports are automatically set to 0, and the port group assigns one port for every connected virtual machine. This is done until the maximum number of ports available in the switch are assigned. <p>NOTE: This field is not applicable for standalone vSwitches.</p>
Security	
Mirroring mode	<p>One of the following:</p> <ul style="list-style-type: none"> Accept Reject
MAC address changes	<p>One of the following:</p> <ul style="list-style-type: none"> Accept—Accepts requests to change the effective MAC address to an address other than the initial value set. Reject—Denies requests to change the effective MAC address. This protects the host from MAC address impersonations.
Forged transmits	<p>One of the following:</p> <ul style="list-style-type: none"> Accept—Stops the comparison of source and effective MAC addresses. Reject—Allows the comparison of source and effective MAC addresses. This protects the host from MAC address impersonations.
Block all ports	<p>Select to block all ports assigned to this profile</p> <p>NOTE: This field is not applicable for standalone vSwitches.</p>

5. Click **Next**.

The **Port Group Profile: Traffic Settings** page ([Figure 83 on page 133](#)) is displayed.

Figure 83: Port Group Profile: Traffic Settings Page

Port Group Profile: Traffic Settings

Ingress Traffic Shaping

Status: ☒ Enable

Avg bandwidth (Kbits/sec): 100000

Peak bandwidth (Kbits/sec): 100000

Burst size (Kbytes): 102400

Egress Traffic Shaping

Status: ☒ Enable

Avg bandwidth (Kbits/sec): 100000

Peak bandwidth (Kbits/sec): 100000

Burst size (Kbytes): 102400

◀ Back ▶ Next Create Cancel

6. Enter the values in the fields as described in [Table 40 on page 133](#)

Table 40: Port Group Profile: Traffic Settings Page Field Descriptions

Field	Description
Ingress Traffic Shaping	
Status	Select to enable shaping of inbound traffic
Avg bandwidth	Average load (Kbits/sec) permitted
Peak bandwidth	Maximum load (Kbits/sec) allowed across the port
Burst size	KMaximum kilobytes allowed in a burst Set a value that enables the port to gain a burst bonus if it does not use all its allocated bandwidth.
Egress Traffic Shaping	
NOTE: This group and its fields are not applicable for standalone vSwitches.	
Status	Select to enable shaping of outbound traffic
Average bandwidth	Average load (Kbits/sec) permitted
Peak bandwidth	Maximum load (Kbits/sec) allowed across the port

Table 40: Port Group Profile: Traffic Settings Page Field Descriptions (*continued*)

Field	Description
Burst size	Maximum kilobytes allowed in a burst Set a value that enables the port to gain a burst bonus if it does not use all its allocated bandwidth.

7. Click **Next**.

The **Port Group Profile: Teaming and Failover** page ([Figure 84 on page 134](#)) is displayed.

Figure 84: Port Group Profile: Teaming and Failover Page

8. Enter the values in the fields as described in [Table 41 on page 135](#).

Table 41: Port Group Profile: Teaming and Failover Field Descriptions Page

Field	Description
Load balancing type	<p>One of the following:</p> <ul style="list-style-type: none"> Route based on IP hashing—Chooses the uplink port based on a hash of the source and destination IP addresses in each packet Route based on source MAC hash—Chooses the uplink port based on a hash of the source MAC address of the packet Route based on physical NIC load—Chooses the uplink port based on the current loads of physical NICs <p>NOTE: This option is applicable only for port groups on vSphere 4.1.</p> <ul style="list-style-type: none"> Route based on the originating virtual port—Chooses the uplink port based on the virtual port where the traffic entered the virtual switch Use explicit failover order—Uses the highest order uplink port from the list of active adapters
Network failover detection	<p>One of the following:</p> <ul style="list-style-type: none"> Link Status only—Detects failovers based on the link status provided by the network adapter This option detects failures but not configuration errors. Beacon Probing—Detects failovers based on the beacon probes that were sent out and listened for by all NICs in the team This is used in addition to link status.
Notify switches	<p>One of the following:</p> <ul style="list-style-type: none"> Yes—Sends a notification over the network whenever a virtual NIC is connected to the virtual switch, or whenever the traffic of that virtual NIC is routed over a different physical NIC No—Does not send out a notification <p>NOTE: Do not use this option when Microsoft Network Load Balancing is used in unicast mode</p>
Failback	<p>One of the following:</p> <ul style="list-style-type: none"> Yes—Returns the adapter to active duty immediately after recovery No—Leaves the adapter inactive even after recovery. Returns the adapter to active duty only when another active adapter fails and requires a replacement

9. Click **Create** to create the port group profile.

The newly created port group profile is displayed on the **Manage Port Group Profiles** page.

Related Documentation

- [Port Group Profiles Overview on page 113](#)
- [Viewing Port Group Profile Associations on page 137](#)
- [Modifying a Port Group Profile on page 136](#)
- [Cloning a Port Group Profile on page 136](#)
- [Deleting a Port Group Profile on page 137](#)

Modifying a Port Group Profile

To modify a port group profile:

1. From the Virtual Control task ribbon, select **Profiles > Manage Port Group Profiles**.

The **Manage Port Group Profiles** page is displayed.

2. Select the required port group profile, and from the **Actions** drawer, or the shortcut menu, select **Modify profile**.

The **Port Group Profile: General Settings** dialog box is displayed with the same fields as the **Create Port Group Profile** dialog box.

3. Modify the fields as necessary and click **Modify**.

The **Manage Port Group Profiles** page appears displaying the newly modified port group profile.

Related Documentation

- [Port Group Profiles Overview on page 113](#)
- [Creating a Port Group Profile on page 130](#)
- [Viewing Port Group Profile Associations on page 137](#)
- [Cloning a Port Group Profile on page 136](#)
- [Deleting a Port Group Profile on page 137](#)

Cloning a Port Group Profile

To clone a port group profile:

1. From the Virtual Control task ribbon, select **Profiles > Manage Port Group Profiles**.

The **Manage Port Group Profiles** page is displayed.

2. Select the required port group profile, and from the **Actions** drawer, or the shortcut menu, select **Clone profile**.

The **Port Group Profile: General Settings** dialog box is displayed with the same fields as the **Create Port Group Profile** dialog box.

3. Enter the required values and click **Clone**.

The **Manage Port Group Profiles** page appears displaying the newly cloned port group profile.

Related Documentation

- [Port Group Profiles Overview on page 113](#)
- [Creating a Port Group Profile on page 130](#)
- [Viewing Port Group Profile Associations on page 137](#)
- [Modifying a Port Group Profile on page 136](#)
- [Deleting a Port Group Profile on page 137](#)

Deleting a Port Group Profile

Junos Space Virtual Control (JSVC) enables you to delete multiple port group profiles.

To delete a port group profile:

1. From the Virtual Control task ribbon, select **Profiles > Manage Port Group Profiles**.
The **Manage Port Group Profiles** page is displayed.
2. Select the required port group profiles, and from the **Actions** drawer, or the shortcut menu, select **Delete Profiles**.
The **Delete Port Group Profile** dialog box is displayed listing the profiles that you selected for deletion.
3. Click **Confirm** to delete the port group profile from the JSVC database.



NOTE: You cannot delete a port group profile that is associated with a port group.

Related Documentation

- [Port Group Profiles Overview on page 113](#)
- [Creating a Port Group Profile on page 130](#)
- [Viewing Port Group Profile Associations on page 137](#)
- [Modifying a Port Group Profile on page 136](#)
- [Cloning a Port Group Profile on page 136](#)

Viewing Port Group Profile Associations

To view the port group profile associations:

1. From the Virtual Control task ribbon, select **Profiles > Manage Port Group Profiles**.
The **Manage Port Group Profiles** page is displayed.
2. Select the required port group profile, and from the **Actions** drawer, or the shortcut menu, select **View Association**.

The **View Associations** page is displayed. See "[Port Groups Overview](#)" on page 38 for more information.

Related Documentation

- [Port Group Profiles Overview on page 113](#)
- [Creating a Port Group Profile on page 130](#)
- [Modifying a Port Group Profile on page 136](#)
- [Cloning a Port Group Profile on page 136](#)
- [Deleting a Port Group Profile on page 137](#)

PART 4

Virtual Control Index

- [Index on page 141](#)

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