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# Junos Space

## Security Whiteboard

Release

# 1.4



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## CHAPTER 1

# Security Whiteboard

- [Security Whiteboard Overview on page 1](#)

## Security Whiteboard Overview

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You can use the Security Whiteboard workspace in Security Design to create a security topology, IPsec VPNs, and security policies.

With the Security Topology Designer you can create a graphical view of the security aspect of the network, which you can use as a base to create IPsec VPNs and security policies on the network.

You can also create Hub-And-Spoke and Site-To-Site VPNs in your security topology. The following objects are used to create an IPsec VPN:

- A VPN proposal, which defines a set of IKE proposals and IPsec proposals used for an IPsec VPN
- A VPN profile, which defines a VPN proposal, IKE settings, IPsec settings, and connectivity parameters used for an IPsec VPN

The Security Policy Designer Whiteboard is used to create security policies among multiple security domains. You can associate the applications hosted by a security domain and the addresses associated with the security domain in real time.

### Related Topics

- [Security Topology Overview on page 3](#)
- [Security Policy Profiles Overview on page 13](#)
- [Security Policies Overview on page 21](#)
- [VPN Proposals Overview on page 35](#)
- [VPN Profiles Overview on page 45](#)
- [IPSec VPNs Overview on page 57](#)



## CHAPTER 2

# Security Topology Designer

- Security Topology Overview on page 3
- Creating a Security Topology on page 4

### Security Topology Overview

---

Security topology is a logical map that depicts the interconnectivity between security devices, networks that are protected by security devices, and security domains that host these networks. Security topology serves as a foundation to create IPsec VPNs on your network and to configure firewall policies on your security devices.

You can use the Security Topology Designer to drag and drop security devices, networks, and security domains on the Security Topology Whiteboard. You can create links between networks and security devices and also between security devices. You can also use the Security Topology Designer to associate multiple networks to a security domain. This helps you to logically partition the network into various security domains based on your organization's security requirements.

A toolbar on the Security Topology Designer provides the functionality to save and edit a topology design, delete the components of a topology, and shrink the entire topology to a visible area in case you host a large topology. You can choose security devices, security domains, and addresses from their individual object chooser panels. You can configure the interfaces used for communication after the components are linked in the topology design.

Security Topology Designer provides the following features to make your topology design flexible and easy:

- Device groups
- Address groups
- Aggregate links between security devices
- CSV Import of addresses and security domains
- Search functionality to search specific objects in the topology

**Related Topics**   • Creating a Security Topology on page 4

## Creating a Security Topology

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To navigate to the Security Topology Designer Whiteboard:

1. From the **Security Design** task ribbon, select **Security Whiteboard > Security Topology**.






The **Security Topology Designer Whiteboard** is displayed, as shown in Figure 1 on page 5.

Figure 1: Security Topology Designer Whiteboard



The toolbar on the left displays a set of functionalities used to design the security topology, as listed in Table 1 on page 5.

Table 1: Security Topology Designer Toolbar Icons

| Toolbar Icon  | Icon Name     | Description  |
|---|---------------|--|
|  | Show All      | Fit the topology graph on the Topology Designer Whiteboard. This shrinks the entire topology to a visible area.                    |
|  | Create Link   | Create links between security devices or between a device and an address in the topology design.                                   |
|  | Save Topology | Save a topology design.  |
|  | Modify        | Modify the selected item of a topology design. For example, modifying the interface on a link or modifying an address or a domain. |
|  | Delete        | Delete links, security devices, addresses, or security domains in the topology design.   |

The Object chooser panel on the right displays the addresses, security devices and security domains that are available for creating the security topology.

You can use the [Select:Page](#) and [Select:All](#) links to select multiple objects at one go. You can use the [Clear:Page](#) and [Clear:All](#) links to de-select the objects that you have selected.

You can use the [Search](#) option, next to the Object chooser panel, to search for specific security devices, addresses, security domains, address groups, and device groups used to create the topology.

You can drag and drop and interconnect the devices, addresses and security domains in the following ways:

1. [Dragging and Dropping Security Devices on page 6](#)
2. [Connecting Security Devices on page 7](#)
3. [Dragging and Dropping Addresses on page 8](#)
4. [Associating Addresses with Security Devices on page 8](#)
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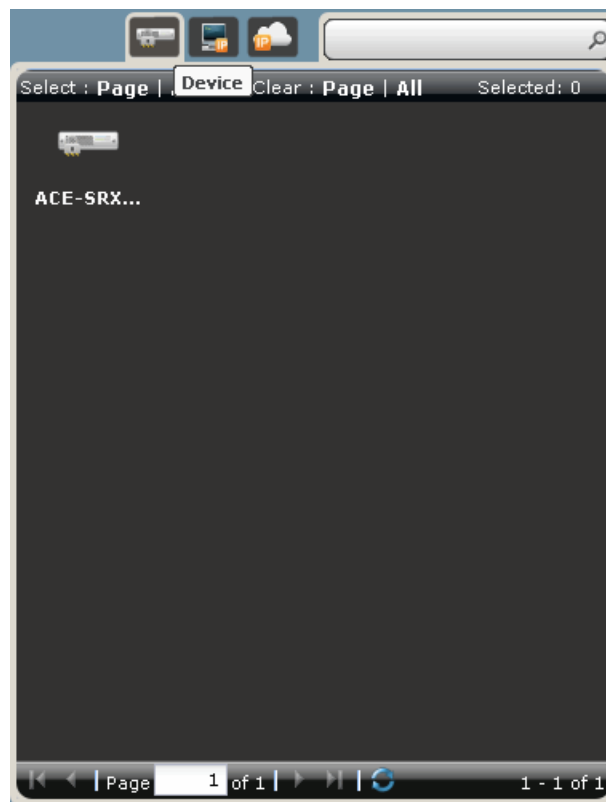
## Dragging and Dropping Security Devices

To drag and drop security devices:

1. From the Object chooser panel, click the **Device** object icon.

All devices available to create the security topology are listed in the collapsible Device chooser, as shown in [Figure 2 on page 7](#).

Figure 2: Security Topology Designer : Selecting Devices



NOTE: Only security devices are shown in Device chooser.

2. From the Device chooser panel, drag and drop security devices to the Security Topology Whiteboard.

## Connecting Security Devices

To connect security devices:

1. Select the Create Link icon from the toolbar and draw a line between security devices. This line represents the link between these security devices.

The link created between security domains is a logical link that may pass through other networking devices like routers and switches.

2. Right-click the link between the security devices and select **Configure Interface** from the contextual menu.

The **Link Properties** window is displayed.

3. In the **Link Properties** window, add an interface from the **Available Interfaces** section to the **Selected Interfaces** section on one end of the link.
4. Repeat Step 2 and Step 3 for the other end of the link and click **Configure**.



NOTE: The overlay icons indicate whether the device interfaces are configured. For example, a yellow triangle with a black exclamation point specifies that the device interface is not configured and a green circle with a white checkmark specifies that the device interface is configured.

## Dragging and Dropping Addresses

To drag and drop addresses:

1. From the Object chooser panel, select the **Address** object icon.  
All address groups available to create a security topology are listed in the collapsible Address chooser.
2. From the Address chooser panel, drag and drop addresses/address groups to the Security Topology Whiteboard.



NOTE: You can use the Internet address object to define a topology that is spread across multiple branches or locations. If the branches are connected through the Internet, you can use the Internet address object as a common point for all your branch topologies to connect to each other and constitute the entire topology.

## Associating Addresses with Security Devices

To associate addresses with security devices:

1. Select the Create Link icon from the toolbar and draw a line between the security device and the address object. This line represents the link between the security device and the address object.  
The link created between a security domain and an address is a logical link that may pass through other networking devices such as routers and switches.
2. Right-click the link between a security device and address object and select **Configure Interface** from the contextual menu.  
The **Link Properties** window is displayed.
3. In the **Link Properties** window, add an interface from the **Available Interfaces** section to the **Selected Interfaces** section on the endpoint that has a device.
4. Click **Configure**.  
This link specifies that the address is protected by the firewall through the specified interface.

## Dragging and Dropping Security Domains

To drag and drop security domains:

1. From the Object chooser panel, select the **Security Domain** object icon.



All security domains available to create a security topology are listed in the collapsible Security Domain chooser.

2. From the Security Domain chooser panel, drag and drop security domains to the Security Topology Whiteboard.

## Associating Addresses with Security Domains

To associate addresses with security domains:

1. From the Address chooser, drag and drop addresses/address groups on top of the security domain to associate them with the security domain.
2. To view the addresses/address groups associated with a security domain, click the "+" symbol on the top left corner of the security domain in the Topology Designer Whiteboard.

A blue rectangular box is displayed; this box bounds all addresses/address groups associated with this security domain.



**NOTE:** You can also drag and drop the addresses/address groups that are already included in the topology.

## Removing Addresses from a Security Domain

To remove addresses from a security domain:

1. Right-click the address that you want to remove from the security domain.
  2. Select the **Detach Address from Security Domain** option in the contextual menu.
- The address is removed from the security domain.

## Creating Address Groups

To create address groups:

1. Select multiple addresses from the Address chooser and drag and drop them to the Security Topology Whiteboard.  
The **Add Objects** window is displayed.
2. In the **As a Group** field, enter a name for the address group.
3. Click **Add**.

The address group is displayed on the Security Topology Whiteboard.

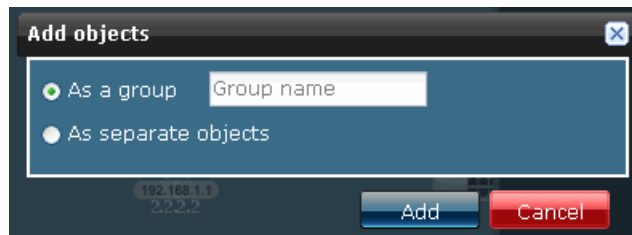
## Creating Device Groups

To create device groups:

1. Select multiple devices from the Device chooser and drag and drop them to the Security Topology Whiteboard.

The **Add Objects** window is displayed, as shown in Figure 3 on page 10.

**Figure 3: Add Objects Window**



2. In the **As a Group** field, enter a name for the device group.
3. Click **Add**.

The device group is displayed on the Security Topology Whiteboard.

4. To view the devices associated with a device group, click the "+" symbol on the top left corner of the device group in the Topology Designer Whiteboard.

A blue rectangular box is displayed; this box bounds all devices associated with this device group.



**NOTE:** You can also add devices that are already a part of the security topology to a device group.

---

## Removing Devices from a Device Group

To remove devices from a device group:

1. Right-click the device you want to delete from the device group.
2. Select the **Detach Device from Device Group** option from the contextual menu.

The device is removed from the device group.

## Searching for Devices, Addresses, and Security Domains in the Topology

To search for devices, addresses or security domains in the topology:

1. In the search field next to the object chooser icons, enter the name of the device, address, or security domain you want to search.
2. Click the magnifying glass icon next to the search field.

All devices, addresses, or security domains that match the search criterion are highlighted on the Topology Whiteboard.

If your search criteria corresponds to an address within a domain, address within an address group, or a device within a device group, the group hosting the object searched for expands and highlights the object.



**NOTE:** You can also use search expressions like \*, + and ? to perform a search.

## Creating Group Links on Device Groups

To create group links on device groups:

1. Select the Create Link icon from the toolbar and draw a line between the device group and the device you want to link.

The interfaces that are shown in the device group are a union of all available interfaces in the device group.

2. Right-click the link between the device group and the device and select **Configure Interface** from the contextual menu.

The **Link Properties** window is displayed.



**NOTE:** If you use the **Configure Interface** option for the entire device group, all device interfaces in the device group are configured on a global basis. To configure unique interfaces for each device on the device group, expand the device group by clicking the "+" symbol on the top left corner of the device group, and configure the interface for each device.

3. In the **Link Properties** window, add an interface from the **Available Interfaces** section to the **Selected Interfaces** section on the endpoint that has a device.
4. Repeat Step 2 and Step 3 for the other end of the link and click **Configure**.

This link is displayed with a different color.



**NOTE:** You can view the number of individual links configured by hovering on the link.

## Adding Addresses and Security Domains Using CSV Import

To add addresses and security domains using CSV import:

1. Right-click the Topology Designer Whiteboard and select **Import Address/Domain** from the contextual menu.

The **Select CSV File** window is displayed.

2. Click **Browse** and upload the CSV file from your storage location.

This CSV file contains the addresses associated with the respective devices and security domains. The addresses and security domains uploaded are available in the respective object chooser panels.

3. You can also choose to view a sample CSV file by clicking the **View Sample CSV** link on the **Select CSV File** window.

The fields available in the sample CSV file are as described in Table 2 on page 12

**Table 2: Adding Addresses and Security Domains Using CSV Import**

| Field Name      | Field Description   |
|-----------------|---|
| Name            | Name of the address object.   |
| Description     | Description of the address object.  |
| Type            | Type of address you want to add to the topology.  |
| IP Address      | IP address of the network. It is used if the address type is an IP Address.                               |
| Subnet Mask     | Subnet mask of the network specified by the address. This field is used if the address type is a Network. |
| IP Range Min    | first IP address in the range of IP addresses specified. It is used if the address type is an IP Range.   |
| IP Range Max    | Last IP address in the range of IP addresses specified. It is used if the address type is an IP Range.    |
| Hostname        | Hostname, if the address type is a Hostname.  |
| Security Domain | Security domain to which the address is associated.   |
| Device          | security device which you want to use to protect the network.   |
| Interface       | Interface through which the address is associated with the security device.                               |



**NOTE:** You cannot upload address groups using the CSV import functionality. You can only upload IP address, Network, IP range and Hostname.



**NOTE:** All devices that are associated with the addresses in the CSV file must already exist in the Device chooser panel.

**Related Topics**

- Security Topology Overview on page 3

## CHAPTER 3

# Security Policy Profiles

- Security Policy Profiles Overview on page 13
- Creating Security Policy Profiles on page 14
- Managing Security Policy Profiles on page 17

### Security Policy Profiles Overview

---

You can use the Policy Profile Wizard to create an object that specifies the basic settings of a security policy. You can configure these basic settings using the Policy Profile Wizard:

- Log options
  - Log at session initiation
  - Log at the close of a session
  - Enable counting for the number of packets, bytes, and sessions that enter the firewall for a given policy.
- Firewall authentication schemes
  - Pass through authentication
  - Web authentication
- Traffic redirection options
  - No traffic redirection
  - Redirect Wx — Wx redirection for packets that arrive from the LAN
  - Reverse Redirect Wx — Wx redirection for the reverse flow of packets that arrive from the WAN.

When a policy profile is created, Junos Space creates an object in the Junos Space database to represent the policy profile. You can use this object to create security policies.

Junos Space provides two Juniper Networks defined policy profiles:

1. All logging enabled — This policy profile has all logging options enabled. Logging is enabled at session initiation and the close of the session. Counters are also enabled to collect the number of packets, bytes, and sessions that enter the firewall for a

given policy. The alarm thresholds are set to 100 Bytes/second and 100 Kilobytes/minute.

2. All logging disabled — This policy profile has all logging options disabled.



**NOTE:** You cannot modify or delete Juniper Networks defined policy profiles. You can only copy them and create new policy profiles.

#### Related Topics

- Creating Security Policy Profiles on page 14
- Managing Security Policy Profiles on page 17

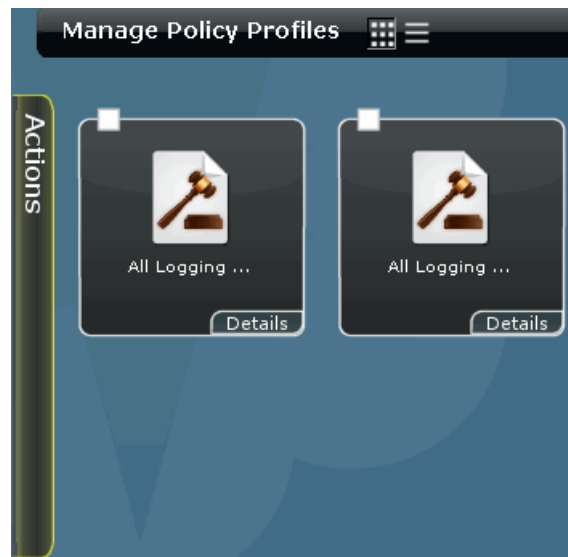
## Creating Security Policy Profiles

To create a new security policy profile, perform the following steps:

1. From the **Security Design** task ribbon, select **Security Whiteboard** > **Security Policy** > **Policy Profiles**.

The **Manage Policy Profiles** inventory panel is displayed with the icons for all the policy profiles, as shown in Figure 4 on page 14. The first two policy profiles listed here are Juniper Networks defined policy profiles.

**Figure 4: Manage Policy Profiles Inventory Panel**



2. From the task ribbon, select the **Create Profile** icon.

The **New Policy Profile** window is displayed, as shown in Figure 5 on page 15.

Figure 5: New Policy Profile Window

**New Policy Profile**

Name:

Description:

**Logging** **Authentication** **Redirect**

☐ Log At Session Init      Alarm Threshold:  Bytes/Second

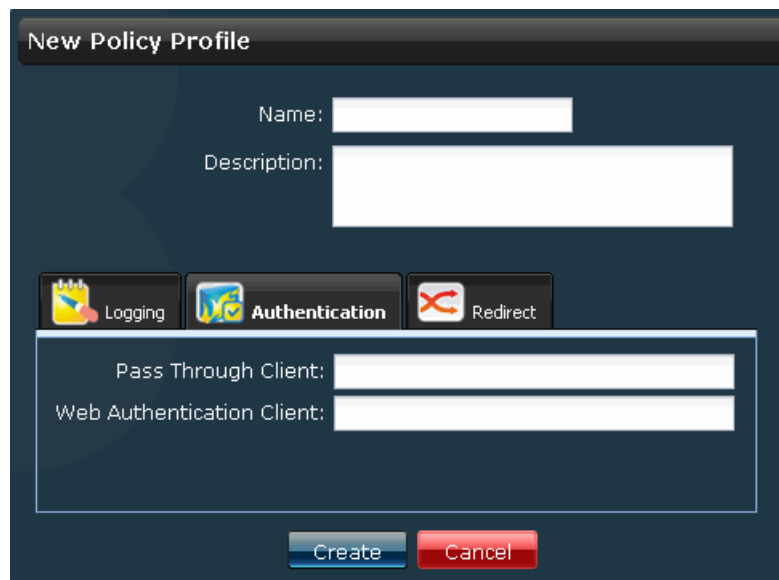
☐ Log At Session       Kilobytes/Minute

☐ Enable Count

3. In the **Name** field, enter a name for the new policy profile.
4. In the **Description** field, enter a description for the new policy profile.
5. Use the **Logging** section of the **New Policy Profile** window to configure the log options for this policy profile. You can configure the following log options:
  - If you want to log the events when the session is created, select the **Log at Session Init** check box.
  - If you want to log the events when the session is closed, select the **Log at Session Close** check box.
  - If you want to enable counting, select the **Enable Count** check box.

If counting is enabled, counters are collected for the number of packets, bytes, and sessions that enter the firewall for a given policy
6. Use the **Firewall Authentication** section of the **New Policy Profile** window to provide authentication to clients, as shown in Figure 6 on page 16.

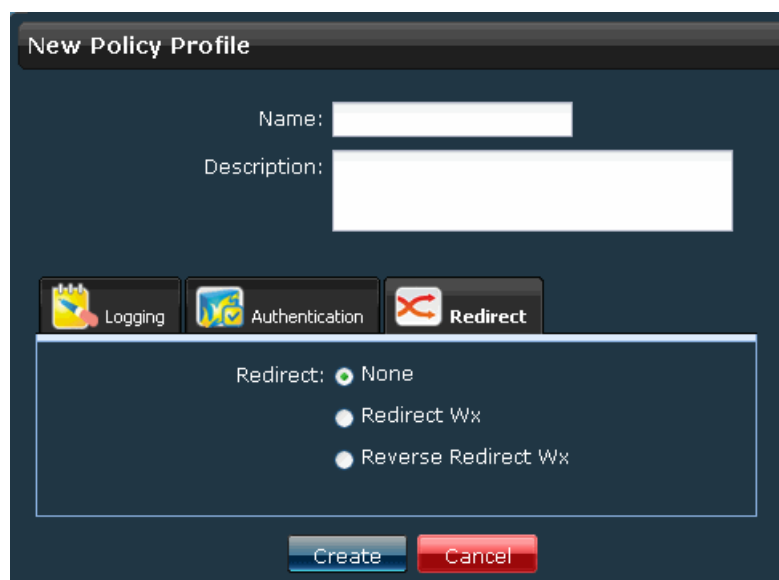
Figure 6: New Policy Profile: Firewall Authentication Section



The screenshot shows the 'New Policy Profile' window with the 'Authentication' tab selected. The 'Name' and 'Description' fields are at the top. Below them are three tabs: 'Logging', 'Authentication', and 'Redirect'. The 'Authentication' tab is active, showing 'Pass Through Client' and 'Web Authentication Client' text boxes. At the bottom are 'Create' and 'Cancel' buttons.

- a. In the **Pass Through Client Name** field enter the host name or IP address of the client used to perform Pass Through authentication.
  - b. In the **Web Authentication Client Name** field enter the host name or IP address of the client used to perform Web authentication.
7. Use the **Redirect** section of the **New Policy Profile** window to configure the traffic redirection options for this policy profile, as shown in Figure 7 on page 16:

Figure 7: New Policy Profile: Redirect Section



The screenshot shows the 'New Policy Profile' window with the 'Redirect' tab selected. The 'Name' and 'Description' fields are at the top. Below them are three tabs: 'Logging', 'Authentication', and 'Redirect'. The 'Redirect' tab is active, showing a 'Redirect' section with three radio button options: 'None' (selected), 'Redirect Wx', and 'Reverse Redirect Wx'. At the bottom are 'Create' and 'Cancel' buttons.

- If you want traffic to be redirected, select the **None** check box.



- If you want to enable Wx redirection for packets that arrive from the LAN, select the **Redirect Wx** check box.
  - If you want to enable Wx redirection for the reverse flow of packets that arrive from the WAN, select the **Reverse Redirect Wx** check box.
8. Click **Create**.

The new security policy profile you have created is displayed in the **Manage Policy Profiles** inventory panel.

- Related Topics**
- Security Policy Profiles Overview on page 13
  - Managing Security Policy Profiles on page 17

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## Managing Security Policy Profiles

You can view, modify, copy or delete security policy profiles listed in the **Manage Policy Profiles** inventory panel.

To open the **Manage Policy Profiles** inventory panel:

- From the **Security Design** task ribbon, select **Security Whiteboard > Security Policy > Policy Profiles**.

The **Manage Policy Profiles** inventory panel is displayed. All security policy policies created is listed by default, in the graphical view.

You can either right-click or use the Actions Drawer to manage a security policy profile. For more information about using the Actions Drawer, see [Inventory Pages Overview](#)

You can perform the following tasks in the **Manage Policy Profiles** space:

1. Viewing the Details of a Security Policy Profile on page 17
2. Modifying a Security Policy Profile on page 18
3. Copying a Security Policy Profile on page 18
4. Deleting a Security Policy Profile on page 19
5. Searching for a Security Policy on page 19

### Viewing the Details of a Security Policy Profile

To view the details of a security policy profile:

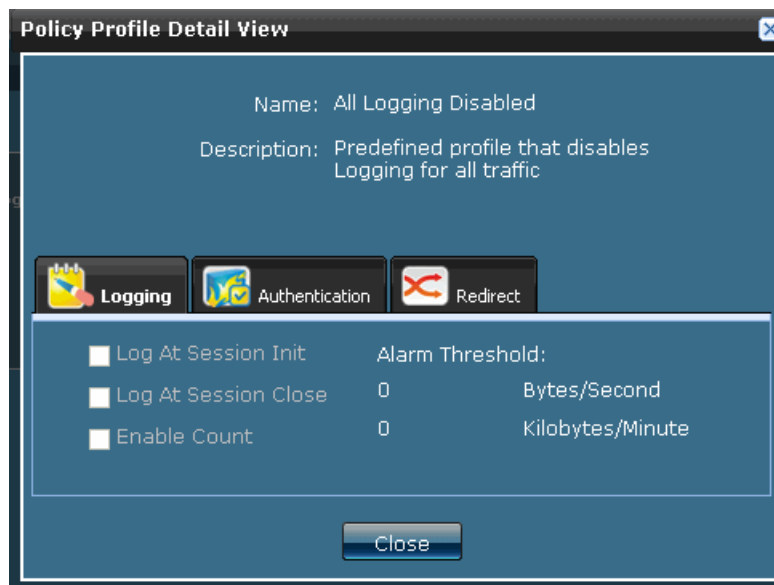
1. From the **Security Design** task ribbon, select **Security Whiteboard > Security Policy > Policy Profiles**.

The **Manage Policy Profiles** inventory panel is displayed.

2. Double-click the icon for the security policy profile whose details you intend to view.

The details of the security policy profile are displayed in the **Policy Profile Detail View** window, as shown in Figure 8 on page 18.

Figure 8: Policy Profile Detail View Window



3. Click **Close**.

## Modifying a Security Policy Profile

To modify a security policy profile you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard** > **Security Policy** > **Policy Profiles**.

The **Manage Policy Profiles** inventory panel is displayed.

2. Right-click the security policy profile that you want to modify and select **Modify Policy Profile** from the contextual menu.

The **Modify Policy Profile** window is displayed. You can modify all the fields on this window, except the **Name** field.

3. Make appropriate changes to security policy and click **Modify**.

## Copying a Security Policy Profile

To copy a security policy profile you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard** > **Security Policy** > **Policy Profiles**.

The **Manage Policy Profiles** inventory panel is displayed.

2. Right-click the security policy profile that you want to copy and select **Copy Policy Profile** from the contextual menu.

The **Copy Policy Profile** window is displayed.

3. In the **Name** field, enter a name for the new security policy profile.

4. Edit the other fields of the security policy profile if you intend to do so.
5. Click **Create** to create a new security policy profile.

The new security policy profile you have created is displayed in the **Manage Policy Profiles** inventory panel.

## Deleting a Security Policy Profile

To delete a security policy profile you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > Security Policy > Policy Profiles**.

The **Manage Policy Profiles** inventory panel is displayed.

2. Right-click the security policy profile that you want to delete and select **Delete Policy Profile** from the contextual menu.

The **Delete Policy Profile** window is displayed.

3. Select the security policy profile you want to delete and click **Delete**.

## Searching for a Security Policy

To search for a security policy profile you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > Security Policy > Policy Profiles**.

The **Manage Policy Profiles** inventory panel is displayed.

2. In the **Search** field, enter the name of security policy profile you want to search.
3. Click the Magnifying glass icon next to **Search** field.

The **Manage Policy Profiles** inventory panel is populated with the security policy profiles matching your search criterion.

- Related Topics**
- Security Policy Profiles Overview on page 13
  - Creating Security Policy Profiles on page 14



## CHAPTER 4

# Security Policy Designer

- Security Policies Overview on page 21
- Creating Security Policies on page 22
- Managing Security Policies on page 28
- Deploying Security Policies on page 30
- Decommissioning Security Policies on page 33

### Security Policies Overview

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You can use the Policy Designer Whiteboard to create security policies between security domains. A security policy is a collection of rules defined to permit or deny application data between two security domains. You can use security policies to control the flow of application data from one security domain to another by specifying the applications that are allowed or denied to pass data to a security domain. You can also specify the direction in which the application data is allowed or denied i.e. from domain 1 to domain 2 or domain 2 to domain 1.

The basic settings of a security policy are obtained from the policy profile. The basic settings include log options, firewall authentication schemes, and traffic redirection options.

The advanced settings of a security policy include rule action (permit/deny) and rule direction (both directions/one direction) for a security policy.

In general, to configure a security policy using the Policy Designer Whiteboard:

1. Drag and drop the security domains that are the end points of a security policy.
2. Create a policy between the security domains that are the end points of a security policy.
3. Configure a security policy that defines rules to allow or deny application data in specific directions.

#### Related Topics

- Creating Security Policies on page 22
- Deploying Security Policies on page 30
- Managing Security Policies on page 28

- Decommissioning Security Policies on page 33

## Creating Security Policies

To create security policies between security domains:

1. From the **Security Design** task ribbon, select **Security Whiteboard** > **Security Policy Designer**.





The **Security Policy Designer Whiteboard** is displayed, as shown in Figure 9 on page 22.

Figure 9: Security Policy Designer Whiteboard



The toolbar on the left displays a set of functions you can perform to design security policies, as listed in Table 3 on page 22.

Table 3: Security Policy Designer Toolbar Icons

| Toolbar Icon  | Icon Name        | Description  |
|---|------------------|--|
|  | Show All         | Fit the policy graph on the Policy Designer Whiteboard                     |
|  | Create Policy    | Create a policy between security domains                                   |
|  | Save Coordinates | Save a security policy design  |
|  | Delete           | Delete security policies or security domains in the security policy design |

2. From the right panel, click the Security Domains object icon.

All security domains available to create a security policy are listed in the Security Domain chooser.

3. Drag and drop the first security domain that is a part of the security policy to the Policy Designer Whiteboard.
4. Drag and drop the second security domain that is a part of the security policy to the Policy Designer Whiteboard.
5. Select the Create Policy icon and draw a line between security domains.

This line represents the security policy that is created between the security domains.

6. To configure a policy between the security domains, right-click the line and select **Create Policy** from the contextual menu.

The **Create Policy** window is displayed, as shown in Figure 10 on page 23.

Figure 10: Create Policy Window

**Create Policy**

Engg HR

Name:

Description:

Profile: All Logging Enabled

**Rules**

| Direction | Applications                                  | Action | Settings |
|-----------|---|--------|----------|
|           | rtsp<br>tftp<br>tacacs-ds<br>tacacs<br>bootpc |        |          |
|           | ftp<br>netbios-session<br>smtp                |        |          |
|           | telnet<br>ssh                                 |        |          |

Create Cancel

7. In the **Name** field, enter an appropriate name for this security policy.
8. In the **Description** field, enter a description for this security policy.
9. From the **Profile** field, select an appropriate policy profile.

The **Rules** section of the **Create Policy** window lists the rules that are a part of the security domain.

The **Rules** section displays the following attributes for each rule displayed:

- Whether the rule is inherited from the security domains or added from the **Rules** section
- Direction in which the traffic flows
- Applications that are a part of the rule
- Whether traffic is permitted or denied in the given direction
- Whether the policy profile is customized for a specific rule



**NOTE:** If you inherit a rule from a security domain, the rule displays an icon on the left. If you add a rule from the **Rules** section, this icon is not displayed.

---

10. You can choose to add, edit or delete a rule in the table.
  - To add a rule:



- a. Select the Add icon.

The **Add Rule** window is displayed, as shown in Figure 11 on page 25.

Figure 11: Add Rule Window



- b. In the **Description** field, enter an appropriate description.
- c. Select one or more applications from the **Available** section of the dialog box and click the Add icon.

The application you have selected are displayed in the **Selected** section of this dialog box.

- d. From the **Direction** section of the **Add Rule** window, select the direction of traffic.
- e. From the **Action** section of the **Add Rule** window, select the action to be performed on the traffic.
- f. To make any specific changes to the policy profile settings used in this rule, click **Advanced Setting**.

The **Rule Details** window displays the policy profile settings used for this rule.

- g. Select the **Use Custom Settings for This Rule** check box to ensure that the changes made to the policy profile settings in the **Rule Details** window affect only this rule.

- h. Click **Add**.



NOTE: A rule that is added in the **Create Policy** window displays a red triangle at top left corner of the cell.



NOTE: If any changes are made to the policy profile for a specific rule, an icon is displayed in the **Settings** column of the rule.

- To delete a rule:
  - Select the rule you want to delete and click the **Delete** icon.
- To edit a rule:
  - a. Select the rule you want to edit and click the **Edit** icon.  
The **Rule Details** window is displayed.
  - b. In the **Direction** section, make appropriate changes to the direction of traffic.
  - c. In the **Action** section, make appropriate changes to the action performed by the security policy.
  - d. To add more applications to this rule move the applications from the **Available** section to the **Selected** section.
  - e. To make any specific changes to the policy profile settings used in this rule, click **Advanced Setting**.  
The **Rule Details** window displays the policy profile settings used for this security policy.
  - f. To ensure that the changes made to the policy profile settings in the **Rule Details** window affect only this rule, select the **Use Custom Settings for This Rule** check box.
  - g. Make appropriate changes to the policy profile settings and click **OK**.  
The **Settings** column for the rule that was edited displays the section of the policy profile that was edited. For example, if you made changes to the **Firewall Authentication** section of the policy profile, the **Settings** column displays **Authentication**.



NOTE: You cannot change the action or the direction of traffic for rules that are inherited from a security domain.

11. Click **Create**.

The new security policy you have created is displayed in the **Manage Policies** inventory panel

12. To add more security domains to this security policy design, drag and drop security domains to the Policy Designer Whiteboard. Repeat Steps 4 through 10.



NOTE: You can deploy or delete a security policy from the Policy Designer Whiteboard. To deploy a security policy:

- Right-click the security policy between security domains and select **Deploy Policy** from the contextual menu. To know more about how to deploy a security policy, click “Deploying Security Policies” on page 30.

To delete a security policy:

- Right-click the security policy between security domains and select **Delete Policy** from the contextual menu. To know more about how to delete a security policy, click “Managing Security Policies” on page 28.



NOTE: You can clear a security policy design from the Policy Designer Whiteboard. You must first delete the security policy to be able to delete the security domains that are the end points of a security policy.

To clear a security policy design from the Policy Designer Whiteboard:

1. Select the security policy between the security domains that you want to delete.
2. Select the **Delete** icon from the Policy Designer toolbar.
3. Select one of the two security domains that are the end points of the security policy.
4. Select the **Delete** icon from the Policy Designer toolbar.
5. Select the other security domain that is the end point of the security policy.
6. Select the **Delete** icon from the Policy Designer toolbar.

#### Related Topics

- Security Policies Overview on page 21
- Deploying Security Policies on page 30
- Managing Security Policies on page 28
- Decommissioning Security Policies on page 33

## Managing Security Policies

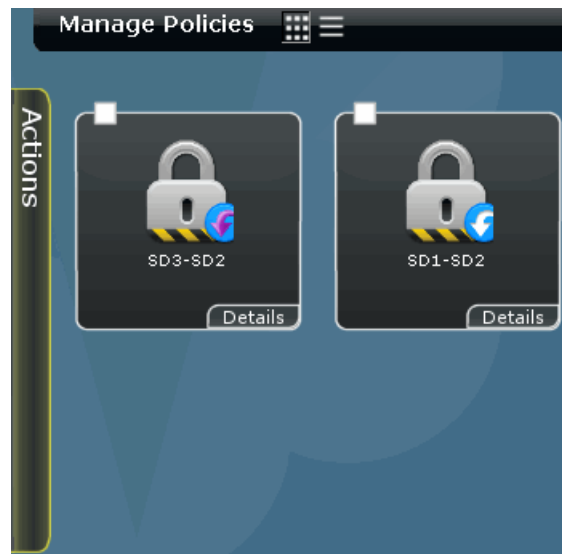
You can view, modify or delete security policies listed in the **Manage Policies** inventory panel.

To open the **Manage Policies** inventory panel:

- From the **Security Design** task ribbon, select **Security Whiteboard > Security Policy**.

The **Manage Policies** inventory panel is displayed, as shown in Figure 12 on page 28. All security policies created are listed by default, in the tabular view.

Figure 12: Manage Policies Inventory Panel



You can either right-click or use the Actions Drawer to manage a security policy. For more information about using the Actions Drawer, see [Inventory Pages Overview](#)

You can perform the following tasks in the **Manage Policies** space:

1. Viewing the Details of a Security Policy on page 28
2. Modifying a Security Policy on page 29
3. Deleting a Security Policy on page 29
4. Searching for a Security Policy on page 29

### Viewing the Details of a Security Policy

To view the details of a security policy you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > Security Policy**.  
The **Manage Policies** inventory panel is displayed.
2. Double-click the icon for the security policy whose details you intend to view.

The details of the security policy are displayed in the **Security Policy Details** window.

3. Click **Close**.

## Modifying a Security Policy

To modify a security policy you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > Security Policy**.

The **Manage Policies** inventory panel is displayed.

2. Right-click the security policy which you want to modify and select **Modify Policy** from the contextual menu.

The **Modify Policy** window is displayed. You can modify all the fields on this window, except the **Name** field.

3. Make appropriate changes to security policy and click **Modify**.

## Deleting a Security Policy

To delete a security policy you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > Security policy**.

The **Manage Policies** inventory panel is displayed.

2. Right-click the security policy which you want to delete and select **Delete Policy** from the contextual menu.

The **Delete Policy** window is displayed.

3. Select the security policy you want to delete and click **Delete**.

## Searching for a Security Policy

To search for a security policy you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > Security Policy**.

The **Manage Policies** inventory panel is displayed

2. In the **Search** field, enter the name of security policy you want to search.
3. Click the magnifying glass icon next to **Search** field.

The **Manage Policies** inventory panel is populated with the security policies matching your search criterion.

- Related Topics**
- Security Policies Overview on page 21
  - Creating Security Policies on page 22
  - Deploying Security Policies on page 30
  - Decommissioning Security Policies on page 33

## Deploying Security Policies

To deploy or provision a security policy you have created, perform the following steps:

1. From the **Security Design** task ribbon, select **Security Whiteboard > Security policy**.  
The **Manage Policies** inventory panel is displayed.
2. Right-click the security policy which you want to provision and select **Provision Policy** from the contextual menu.

The **Provision Policy** window displays the devices on which this policy is provisioned. You can view the device name, device IP address, platform, Junos OS version, configuration state, connection status, and the XML commands, as shown in Figure 13 on page 30.

Figure 13: Provision Security Policy

| Provision Policy:SD1-SD2 |              |          |            |               |                   |                      |
|--------------------------|--------------|----------|------------|---------------|-------------------|----------------------|
| Name                     | Device IP    | Platform | OS Version | Configuration | Connection Status | XML Commands         |
| 10.205.61.61             | 10.205.61.61 | SRX210H  | 10.2R1.4   | New           | down              | <a href="#">view</a> |
| 10.205.61.62             | 10.205.61.62 | SRX210H  | 10.2R1.4   | New           | down              | <a href="#">view</a> |
| 10.205.61.65             | 10.205.61.65 | SRX3600  | 10.2R1.4   | New           | down              | <a href="#">view</a> |

☒ Schedule at a later time

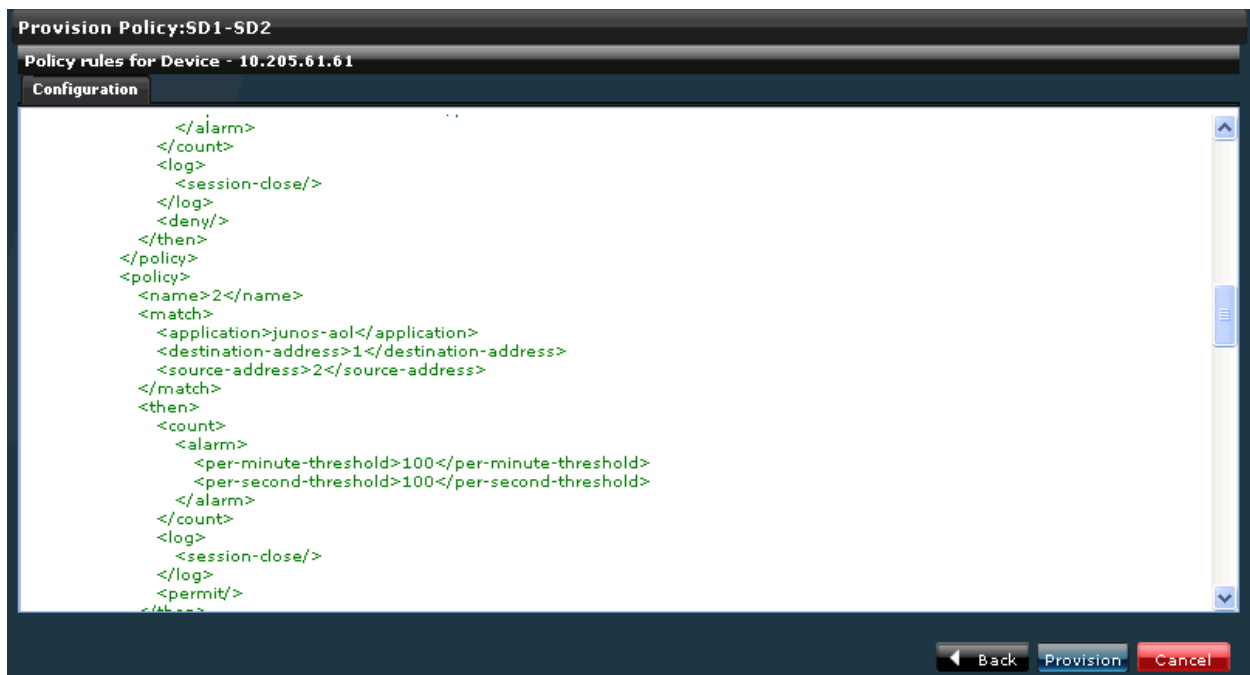
Date and Time: 07/29/10 12:21 PM IST

Provision Cancel

The states displayed in the **Configuration** column specify whether the configuration pushed to the device is new, a modified one, or one that will be removed.

3. If you want to preview the configuration changes pushed to the device, click the **View** link in the **XML Commands** column corresponding to the device. The configuration details are displayed, as shown in Figure 14 on page 31.

Figure 14: Viewing XML Commands






4. Select the check box next to the **Schedule Provisioning** field to schedule the provisioning to a later time and date.
5. Select appropriate values from the **Date and Time** field.
6. Click **Provision** on the following window.

The security policy is provisioned on the devices that are a part of this policy. A new job is created and the job ID is displayed in the **Job Information** dialog box.

7. Click the job ID to view more information about the job created. This action directs you to the **Job Management** work space.

A security policy is placed in a specific state based on whether it is provisioned, not provisioned, or partially provisioned. An overlay icon is placed over the security policy icon to depict the different states. The different states that a security policy is placed in are shown in Table 4 on page 32.

Table 4: Security Policy Provision States

| State                 | Overlay Icon   |
|-----------------------|--|
| Provisioned           |    |
| Not Provisioned       |   |
| Partially Provisioned |  |



NOTE: You can also provision the policy from the Policy Designer Whiteboard. To do so right-click the line between security domains and select **Provision Policy** from the contextual menu. Perform Step 3 through Step 6 to provision the security policy.



NOTE: If you try to provision a security policy and the provision job fails, the security policy is placed in the Not Provisioned state. It may also be placed in the Partially Provisioned state if the configuration is passed onto at least one device before the provisioning job failed. You can provision or delete this security policy using the appropriate workflow.

**Related Topics** • Security Policies Overview on page 21



- Creating Security Policies on page 22
- Managing Security Policies on page 28
- Decommissioning Security Policies on page 33

## Decommissioning Security Policies

To decommission a security policy you have provisioned:

1. From the **Security Design** task ribbon, select **Security Whiteboard > Security policy**.  
The **Manage Policies** inventory panel is displayed.
2. Right-click the security policy you want to decommission and select **Decommission Policy** from the contextual menu.

The **Decommission Policy** window displays the devices on which this security policy is provisioned, as shown in Figure 15 on page 33.

Figure 15: Decommissioning a Security Policy

The screenshot shows the 'Decommission Policy:policy-1' window. It contains a table with the following data:

| Name         | Device IP    | Platform | OS Version | Connection Status | XML Commands         |
|--------------|--------------|----------|------------|-------------------|----------------------|
| 10.205.61.61 | 10.205.61.61 | SRX210H  | 10.2R1.4   | down              | <a href="#">view</a> |
| 10.205.61.62 | 10.205.61.62 | SRX210H  | 10.2R1.4   | down              | <a href="#">view</a> |

Below the table is a pagination bar showing 'Page 1 of 1'. At the bottom, there are two checked checkboxes: 'Delete service after job succeeds' and 'Schedule at a later time'. The 'Schedule at a later time' section includes a date and time picker set to '07/07/10' at '1:54 PM' IST. At the bottom right are 'Decommission' and 'Cancel' buttons.

3. To automatically delete the security policy from Junos Space after the security policy is decommissioned, select the **Delete service after job succeeds** check box.
4. To schedule the decommissioning to a later time and date, select the check box next to the **Schedule at a later time** field.
5. Click **Next**.
6. Select appropriate values from the **Date** and **Time** field.
7. Click **Decommission**.



NOTE: If a provision job on a security policy partially succeeds, (that is, the provision job does not push the configuration details to all devices in the security policy), the security policy is placed in the Partially Provisioned state. You can provision or decommission the security policy using the appropriate workflow.



NOTE: If you try to delete a security policy that is in the Provisioned state, a popup window confirming whether you want to decommission the security policy is displayed. You can click **Yes** to decommission the security policy before deleting it or click **No** to delete the security policy without decommissioning it.

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**Related Topics**

- [Security Policies Overview on page 21](#)
- [Creating Security Policies on page 22](#)
- [Managing Security Policies on page 28](#)
- [Deploying Security Policies on page 30](#)

## CHAPTER 5

# VPN Proposals

- VPN Proposals Overview on page 35
- Creating VPN Proposals on page 36
- Managing VPN Proposals on page 40

### VPN Proposals Overview

You can use the VPN Proposal Wizard to create an object that specifies the IKE and IPsec proposals used in an IPsec VPN. An IKE proposal authenticates peers and negotiates IPsec parameters to establish IPsec Security Associations (SAs). An IPsec proposal exchanges information between established IPsec SAs through an IPsec tunnel.

You can configure the following parameters for a VPN proposal:

- Diffie-Hellman group used by the IKE and IPsec proposal
- Authentication algorithm used by the IKE and IPsec proposal – MD5, SHA, SHA 2
- Encryption standard used by the IKE and IPsec proposal – DES, 3DES, AES
- Life time of the IKE and IPsec proposal
- Life size for the IPsec proposal

When a VPN proposal is created, Junos Space creates an object in the Junos Space database to represent the VPN proposal. You can use this to create VPN profiles.

Junos Space provides three Juniper Networks defined VPN proposals. The parameters of these VPN proposals are listed in Table 5 on page 35.

**Table 5: Default VPN Proposals**

| Proposal Name   | Authentication Algorithm | Encryption Standard | Key Exchange                          |
|-----------------|--------------------------|---------------------|---------------------------------------|
| High Security   | SHA                      | AES                 | DH Group 2 and ESP Protocol           |
| Medium Security | SHA/MD5                  | 3DES                | DH Group 2 / Group 1 and ESP Protocol |
| Low Security    | MD5                      | DES                 | DH Group 1 and AH Protocol            |



NOTE: You cannot modify or delete Juniper Networks defined VPN proposals. You can only copy them and create new VPN proposals.

- Related Topics**
- Creating VPN Proposals on page 36
  - Managing VPN Proposals on page 40

## Creating VPN Proposals

To create a new VPN proposal:

1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN > VPN Proposal**.

The **Manage VPN Proposals** inventory panel is displayed with the icons for all the VPN proposals, as shown in Figure 16 on page 36. The first three proposals listed here are Juniper Networks defined VPN proposals.

Figure 16: Manage VPN Proposals Inventory Panel



2. From the task ribbon, select the **Create VPN Proposal** icon.

The **Create VPN Proposal** window is displayed, as shown in Figure 17 on page 37.

Figure 17: Create VPN Proposal Window

3. In the **Name** field, enter a name for the new VPN proposal.
4. In the **Description** field, enter a description for the new VPN proposal.
5. In the **IKE Proposals** panel, click the **Add** icon.

The **IKE Proposal** dialog box is displayed. You can either add a predefined proposal or a custom proposal in the **IKE Proposal** dialog box.

6. To add a predefined IKE proposal:
  - a. Select the **Predefined** radio button.
  - b. From the **Name** field, select an appropriate proposal

To add a custom IKE proposal:

- a. Select the **Custom** radio button, as shown in Figure 18 on page 38.

Figure 18: Adding a Custom IKE Proposal

The screenshot shows a dialog box titled "IKE Proposal". It has two radio buttons at the top: "Predefined" (unselected) and "Custom" (selected). Below the radio buttons are five input fields: "Name:" (a text box), "DH Group:" (a dropdown menu showing "Please select ..."), "Authentication:" (a dropdown menu showing "SHA-1"), "Encryption:" (a dropdown menu showing "3DES"), and "Life Time (in seconds):" (a text box showing "3600"). At the bottom of the dialog are three buttons: "Restore Defaults", "Add", and "Cancel".

- b. In the **Name** field, enter an appropriate name for the custom proposal.
- c. From the **DH Group** drop-down menu, select an appropriate group
- d. From the **Authentication** drop-down menu, select an appropriate authentication algorithm.
- e. From the **Encryption** drop-down menu, select an appropriate encryption standard.
- f. In the **Life Time (in seconds)** field, enter a value in seconds. The default value of the lifetime is 3600 seconds.



**NOTE:** IKE lifetime defines the duration of an IKE connection. When this time expires, a new phase -1 exchange is performed.

7. To restore the default settings, click **Restore Defaults**.
8. Click **Add**.  
Repeat Step 5 through Step 9 to add a maximum of four proposals. The proposals you have added are displayed in the **IKE Proposals** panel.
9. In the **IPsec Proposals** panel, click the **Add** icon.  
The **IPsec Proposal** dialog box is displayed. You can either add a predefined proposal or a custom Proposal, in the **IPsec Proposal** dialog box.
10. To add a predefined IPsec proposal:
  - a. Select the **Predefined** radio button.
  - b. From the **Name** field, select an appropriate proposal.

To add a custom IPsec proposal:

- a. Select the **Custom** radio button, as shown in Figure 19 on page 39.

Figure 19: Adding a Custom IPsec Proposal

The screenshot shows the 'IPsec Proposal' dialog box. At the top, there are two radio buttons: 'Predefined' and 'Custom'. The 'Custom' radio button is selected. Below the radio buttons, there are several input fields and dropdown menus: 'Name' (a text box), 'DH Group' (a dropdown menu with 'Please select ...'), 'Authentication' (a dropdown menu with 'SHA-1'), 'Protocol' (a dropdown menu with 'Please select ...'), 'Encryption' (a dropdown menu with '3DES'), 'Life Time (in seconds)' (a text box with '28800'), and 'Life Size (in KBs)' (a text box). At the bottom of the dialog, there are three buttons: 'Restore Defaults', 'Add', and 'Cancel'.

- b. In the **Name** field, enter an appropriate name for the custom proposal.
- c. From the **DH Group** drop-down menu, select an appropriate group.
- d. From the **Authentication** drop-down menu, select an appropriate authentication algorithm.
- e. From the **Encryption** drop-down menu, select an appropriate encryption standard.
- f. In the **Life Time (in seconds)** field, enter a value in seconds.  
The lifetime values for an IPsec proposal can range between 180 to 86,400 seconds.
- g. In the **Life Size (in KBs)** field, enter a value in Kilo Bytes.  
The lifesize values for an IPsec proposal can range between 64 to 1048576 Kilo Bytes.



**NOTE:** IPsec lifetime defines the duration of a VPN connection. When either of the lifetime or lifesize values expire, a re-key is initiated with a new IPsec encryption and authentication session keys.

11. Click **Add**. Repeat Steps 10 through Step13 to add a maximum of four proposals.  
The proposals you have added are displayed in the **IPsec Proposals** panel.
12. Click **Create**.

The new proposal you have created is displayed in the **Manage VPN Proposals** inventory panel.

- Related Topics**
- VPN Proposals Overview on page 35
  - Managing VPN Proposals on page 40

## Managing VPN Proposals

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You can view, delete, modify or copy proposals listed in the **Manage VPN Proposals** inventory panel.

To open the **Manage VPN Proposals** inventory panel:

- From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN > VPN Proposal**.

The **Manage VPN Proposals** inventory panel is displayed. All VPN proposals that you have created are listed by default, in the graphical view.

You can either right-click or use the Actions Drawer to manage a VPN proposal. For more information about using the Actions Drawer, see *Inventory Pages Overview*

You can perform the following tasks in the **Manage VPN Proposals** space:

1. Viewing the Details of a VPN Proposal on page 40
2. Modifying a VPN Proposal on page 41
3. Deleting a VPN Proposal on page 42
4. Copying a VPN Proposal on page 43
5. Searching for a VPN Proposal on page 43

### Viewing the Details of a VPN Proposal

To view the details of a VPN proposal:

1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN > VPN Proposal**.

The **Manage VPN Proposals** inventory panel is displayed.

2. Double-click the icon for the VPN proposal whose details you intend to view.

The details of the proposal are displayed in the **VPN Proposal Details** window, as shown in Figure 20 on page 41. The **VPN Proposal Details** window lists all the IKE and IPsec proposals used in this VPN proposal.



Figure 20: Viewing VPN Proposal Details

**VPN Proposal Details**

Name: VPN\_Proposal1

Definition Type: Custom

Description:

| IKE Proposals |            |          |                |                      |                     |
|---------------|------------|----------|----------------|----------------------|---------------------|
| Name          | Type       | DH Group | Auth Algorithm | Encryption Algorithm | Life Time (in secs) |
| g2-3des-sha1  | Predefined | Group2   | SHA-1          | 3DES                 | 28800               |
| g5-aes256-sha | Predefined | Group5   | SHA-2(256)     | AES(256)             | 28800               |
| High_security | Custom     | Group2   | SHA-1          | 3DES                 | 3600                |

| IPSec Proposals  |            |          |                |                      |                     |          |                      |
|------------------|------------|----------|----------------|----------------------|---------------------|----------|----------------------|
| Name             | Type       | DH Group | Auth Algorithm | Encryption Algorithm | Life Time (in secs) | Protocol | Life Size (in Bytes) |
| g5-esp-aes128-sh | Predefined | Group5   | SHA-1          | AES(128)             | 3600                | ESP      | 0                    |

Close

## Modifying a VPN Proposal

To modify a VPN proposal you have created:

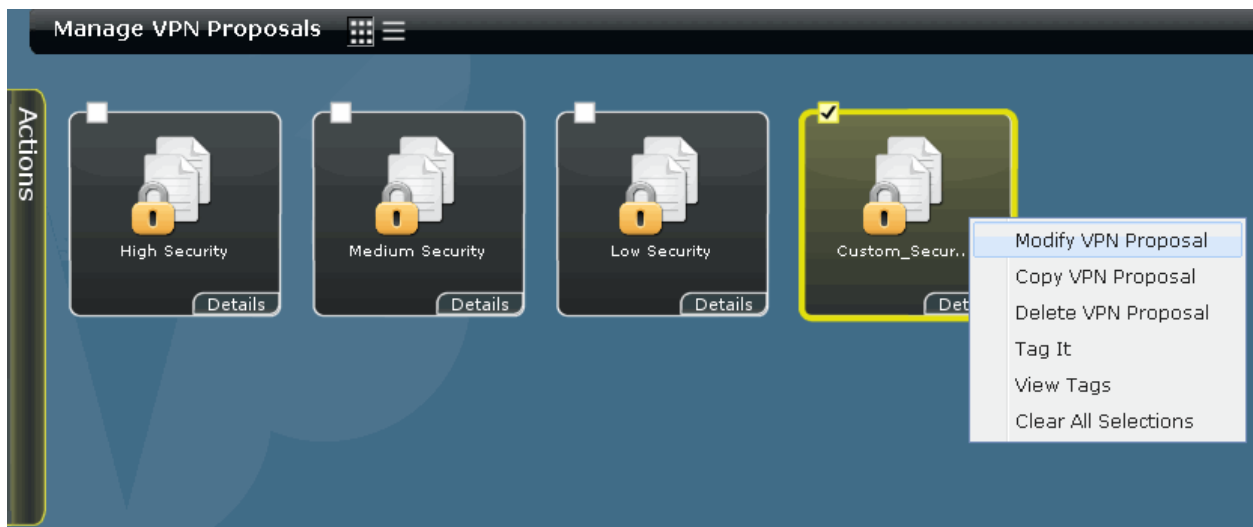
1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN > VPN Proposal**.

The **Manage VPN Proposals** inventory panel is displayed.

2. Right-click the VPN proposal you want to modify and click the **Modify VPN Proposal** link from the contextual menu, as shown in Figure 21 on page 42.

This action redirects you to the window that you used to create a new VPN proposal. You can modify all the fields on this window, except the **Name** field.

Figure 21: Modifying a VPN Proposal



3. In the **Description** field, enter a new description.
4. To edit an IKE or IPsec proposal, select the proposal you want to edit and click the **Edit** icon in the corresponding panel.  
The corresponding dialog box is displayed.
5. Make necessary changes to your IKE or IPsec proposal and click **Modify**.
6. To delete an IKE or IPsec proposal, select the proposal you want to delete in the corresponding panel and click the **Delete** icon.  
The **Delete Proposal** confirmation window is displayed.
7. Click **Delete**.
8. Click **Modify** to save the changes made to this VPN proposal.

## Deleting a VPN Proposal

To delete a VPN proposal you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN > VPN Proposal**.  
The **Manage VPN Proposals** inventory panel is displayed.
2. Right-click the VPN proposal you intend to delete and click the **Delete VPN Proposal** link from the contextual menu.  
The **Delete Proposal** confirmation window is displayed.
3. Select the VPN proposal you want to delete and click **Delete**.



NOTE: You cannot delete a VPN proposal that is already used in a VPN profile. To delete a VPN proposal that is a part of a VPN proposal, you must first dis-associate the VPN proposal from the VPN profile.

## Copying a VPN Proposal

To copy a VPN proposal you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN > VPN Proposal**.

The **Manage VPN Proposals** inventory panel is displayed.

2. Select a VPN proposal you want to copy and click the **Copy Proposal** link from the **Actions** panel located on the left corner of the inventory panel.

This action redirects you to the window that you used to create a new VPN proposal. This window displays the parameters of the proposal you have copied with the **Name** field left blank.

3. In the **Name** field, enter a name for the new VPN proposal.
4. Edit the other fields of the proposal if you intend to do so.
5. Click **Create** to create a new proposal.

The new proposal you have created is displayed in the **Manage VPN Proposals** Inventory panel.

## Searching for a VPN Proposal

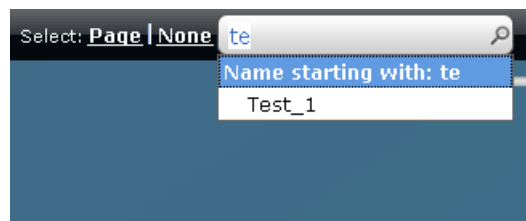
To search for a VPN proposal you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN > VPN Proposal**.

The **Manage VPN Proposals** inventory panel is displayed.

2. In the **Search** field, enter the name of VPN proposal you want to search, as shown in Figure 22 on page 43.

Figure 22: Searching for a VPN Proposal



3. Click the magnifying glass icon next to the **Search** field.

The **Manage VPN Proposals** inventory panel is populated with the VPN proposals matching your search criterion.

- Related Topics**
- [VPN Proposals Overview on page 35](#)
  - [Creating VPN Proposals on page 36](#)

## CHAPTER 6

# VPN Profiles

- [VPN Profiles Overview on page 45](#)
- [Creating VPN Profiles on page 46](#)
- [Managing VPN Profiles on page 52](#)

### VPN Profiles Overview

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You can use a VPN Profile Wizard to create an object that specifies the VPN proposals, IKE/IPsec settings and the connectivity parameters used in a route-based IPsec VPN.

You can configure the following parameters for a VPN profile:

- VPN Proposals – Predefined or custom proposals created using the VPN Proposal Wizard
- IKE Settings – Authentication mode, Pre-shared key authentication mode, NAT Reversal, and Dead Peer Detection
- IPsec Settings – Proxy ID, Idle Time, Install Interval, Anti Replay, and VPN Monitor
- Tunnel Interface Settings – Interface type, and Interface zone

When a VPN profile is created, Junos Space creates an object in the Junos Space database to represent the VPN profile. You can use this object to create route-based IPsec VPNs.

Junos Space provides two Juniper Networks defined VPN profiles:

- Site-To-Site – This profile is used between peers using static IP addresses. It uses Preshared Key based authentication, High Security VPN proposal, Unnumbered tunnel interface and default values for other parameters.
- Hub-Spoke – This profile is used when one of the peers has a dynamic IP address. It uses Preshared Key based authentication, High Security VPN proposal, Unnumbered tunnel interface and default values for other parameters.



**NOTE:** You cannot modify or delete the Juniper Networks defined VPN profiles. You can only copy them and create new profiles.

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**Related Topics** • [Creating VPN Profiles on page 46](#)

- Managing VPN Profiles on page 52

## Creating VPN Profiles

To create a new VPN Profile:

1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN > VPN Profile**.

The **Manage VPN Profiles** inventory panel is displayed with the icons for all the VPN profiles, as shown in Figure 23 on page 46. The first two profiles listed here are Juniper Networks defined VPN profiles.

Figure 23: Default VPN Profiles



2. From the task ribbon, select the **Create VPN Profile** icon.

The **General** panel of the **Create VPN Profile** window is displayed, as shown in the Figure 24 on page 47.

Figure 24: Creating a VPN Profile

**General**

**General**

Name:

Type: Route Based

Description:

**VPN Proposal**

Proposal Type: ☒ Predefined ☐ Custom

Predefined Proposals:

High Medium Low

Back Next Finish Cancel

In general, creating a VPN profile involves the following tasks:

- Specifying the general settings
- Specifying the IKE/IPsec settings
- Specifying the connectivity parameters

### Specifying the general settings

To specify the general settings for the VPN profile:

1. In the **General** Section:
  - a. In the **Name** field, enter a name for the new VPN profile.
  - b. In the **Description** field, enter a description for the new VPN profile.
2. In the **VPN Proposal** section:
  - a. Choose a proposal you intend to use. To choose one of the Juniper Networks defined proposals, select the **Predefined** radio button.
  - b. Drag the slider to the intended position on the **Predefined Proposals** slider bar. You can choose to place the slider at the **High**, **Medium** or **Low** markers to choose the associated proposals, as shown in the Figure 25 on page 48. Mouse over on 'High', 'Medium' and 'Low' markers to view a tool tip description about the respective predefined proposal.

Figure 25: Choosing a Default VPN Proposal

The screenshot shows the 'VPN Proposal' configuration window. At the top, 'Proposal Type' has two radio buttons: 'Predefined' (selected) and 'Custom'. Below this is a 'Predefined Proposals' slider with three positions: 'High', 'Medium', and 'Low'. The slider is currently positioned at 'Medium'. A tooltip box is open over the 'Medium' position, containing the text: 'Juniper defined Medium Security VPN Proposal. It uses 3DES encryption, SHA authentication, DH Group 2 Key exchange and ESP protocol.' At the bottom of the window are four buttons: 'Back', 'Next', 'Finish', and 'Cancel'.

- c. To choose a custom VPN proposal you have created using the Create VPN Proposal Wizard, select the **Custom** radio button.

The **VPN Proposal** section is displayed. You can choose a custom VPN proposal or create new VPN proposals.

- d. From the **Custom Proposals** drop-down menu, choose a custom VPN proposal, as shown in Figure 26 on page 48.

Figure 26: Choosing a Custom VPN Proposal

The screenshot shows the 'VPN Proposal' configuration window. At the top, 'Proposal Type' has two radio buttons: 'Predefined' and 'Custom' (selected). Below this is a 'Custom Proposals' drop-down menu, which is currently empty. To the right of the drop-down menu is an 'Add New Proposal' button.

- e. If you want to add a new VPN proposal, click **Add New Proposal**.

This redirects you to the VPN Proposal creation page. For more information about creating a VPN proposal, see "Creating VPN Proposals" on page 36.

3. Click **Next**.

The **IKE/IPsec Setting** panel of the **Create VPN Profile** window is displayed.



### Specifying the IKE/IPsec settings

To specify the IKE settings in the **IKE Settings** section:

1. Select the **Main** radio button or the **Aggressive** radio button to select the mode of authentication, as shown in Figure 27 on page 49.

Figure 27: Specifying IKE Settings

**IKE/IPSec Settings**

**IKE Settings**

Mode: ☒ Main ☐ Aggressive

IKE Identity:

Authentication: Preshared Key

Preshared Key: ☐ Auto Generate ☒ Manual

Key Phrase:

**Advanced IKE Settings**

**IPSec Settings**

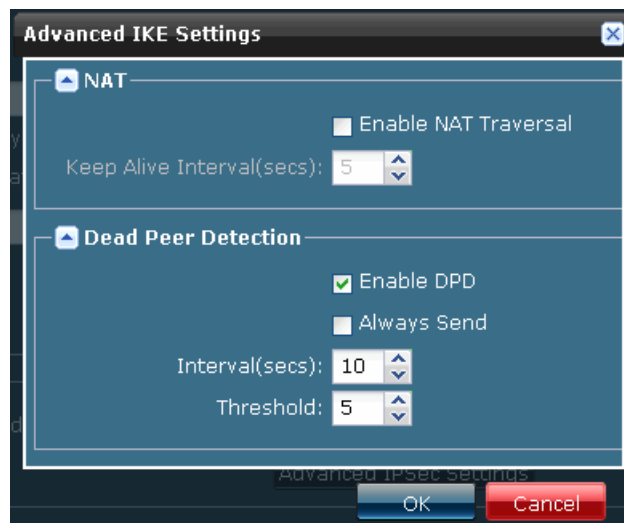
☐ Use Proxy Id

**Advanced IPSec Settings**

2. From the **IKE Identity** drop-down menu, select an appropriate mode, to identify IKE peers.
3. Select how the pre-shared key is generated by choosing appropriate the radio button.
  - a. Select the **Auto Generate** radio button to auto-generate the pre-shared key.
  - b. Select the **Manual** radio button to specify a pre-shared key manually.
  - c. Enter the pre-shared key in the **Key Phrase** field.
4. To configure advanced IKE settings, click **Advanced IKE Settings**.

The **Advanced IKE Settings** dialog box is displayed, as shown in Figure 28 on page 50.

Figure 28: Specifying Advanced IKE Settings



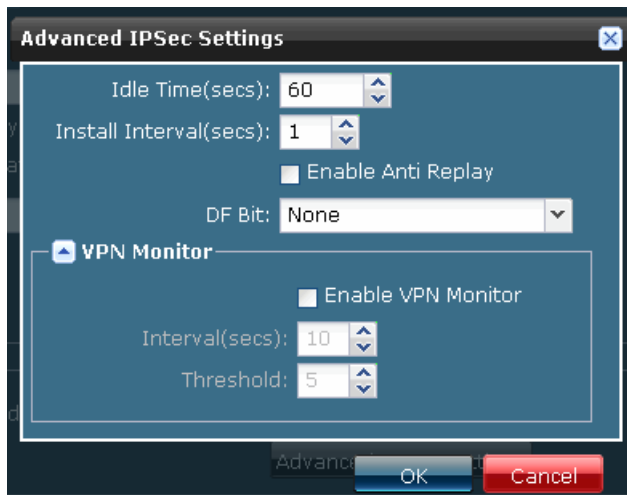
5. In the **NAT** section:
  - a. Select/Clear the **Enable NAT Traversal** check box to enable/disable the NAT traversal feature respectively.
  - b. In the **Keep Alive Interval (secs)** field, enter a value in seconds.  
You can also increase or decrease the value currently displayed by selecting the upward or downward pointing arrows respectively.
6. In the **Dead Peer Detection** section:
  - a. Select/Clear the **Enable DPD** check box to enable/disable the Dead Peer Detection feature respectively.
  - b. Select/Clear the **Always Send** check box to enable/disable the Always Send feature respectively.
  - c. In the **Interval (secs)** field, enter a value in seconds.  
You can also increase or decrease the value currently displayed by selecting the upward or downward pointing arrows respectively.
  - d. In the **Threshold** field, enter a value in seconds.  
You can also increase or decrease the value currently displayed by selecting the upward or downward pointing arrows respectively.
7. Click **OK**.

To specify the IPsec settings in the **IPsec Settings** section:

1. Select/Clear the **Use Proxy ID** check box to enable/disable the Proxy ID feature respectively.
2. To configure advanced IPsec settings, click **Advanced IPsec Settings**.

The **Advanced IPsec Settings** dialog box is displayed, as shown in Figure 29 on page 51.

Figure 29: Specifying Advanced IPsec Settings



3. In the **Idle Time (secs)** field, enter a value in seconds.  
You can also increase or decrease the value currently displayed by selecting the upward or downward pointing arrows respectively.
4. In the **Install Interval (secs)** field, enter a value in seconds.  
You can also increase or decrease the value currently displayed by selecting the upward or downward pointing arrows respectively.
5. Select/Clear the **Enable Anti Replay** check box to enable/disable the Anti Replay feature respectively.
6. Select an appropriate option from the **DF Bit** field.  
This option specifies if a router is allowed to fragment a packet.
7. Select/Clear the **Enable VPN Monitor** check box to enable/disable the VPN Monitor feature respectively. Configure the following options In the **VPN Monitor** section.
  - a. In the **Interval (secs)** field, enter a value in seconds.  
You can also increase or decrease the value currently displayed by selecting the upward or downward pointing arrows respectively.
  - b. In the **Threshold** field, enter a value.  
You can also increase or decrease the value currently displayed by selecting the upward or downward pointing arrows respectively.
8. Click **OK**.
9. Click **Next**.

The **Connectivity Parameters** panel of the **Create VPN Profile** window is displayed.

#### Specifying the connectivity parameters

To specify the connection parameters in the Connectivity Parameters Panel:

1. In the **Tunnel Interface Settings** section:
  - a. From the **Interface Type** drop-down menu, select whether the interface is numbered or unnumbered, as shown in Figure 30 on page 52.

**Figure 30: Specifying Connectivity Parameters**

The screenshot shows a dark-themed window titled "Connectivity Parameters". Inside, there is a section titled "Tunnel Interface Settings" with a light blue border. Within this section, the following settings are visible: "Tunnel Interface:" with the value "Auto Pick"; "Interface Type:" with a dropdown menu showing "Unnumbered"; "Interface Zone:" with a text input field containing "vpn"; and a checked checkbox labeled "Enable Multipoint".

- b. In the **Interface Zone** section, enter the name for the interface zone.
  - c. Select/Clear the **Enable Multipoint** check box to specify if you want to enable/disable a multipoint interface for this VPN profile.
2. Click **Finish**.

- Related Topics**
- VPN Profiles Overview on page 45
  - Managing VPN Profiles on page 52

## Managing VPN Profiles

You can view, delete, modify, or copy VPN profiles listed in the **Manage VPN Profiles** inventory panel.

To open the **Manage VPN Profiles** inventory panel:

- From the **Security Design** task ribbon, select **Security Whiteboard** > **IPsec VPN** > **VPN Profile**.

The **Manage VPN Profiles** inventory panel is displayed. All VPN profiles created are listed by default, in the graphical view.

You can either right-click or use the Actions Drawer to manage a VPN profile. For more information about using the Actions Drawer, see [Inventory Pages Overview](#)

You can perform the following tasks in the **Manage VPN Profiles** space:

1. Viewing the Details of a VPN Profile on page 53
2. Modifying a VPN Profile on page 54
3. Deleting a VPN Profile on page 55

4. Copying a VPN Profile on page 55
5. Searching for a VPN Profile on page 55

## Viewing the Details of a VPN Profile

To view the details of a VPN profile:

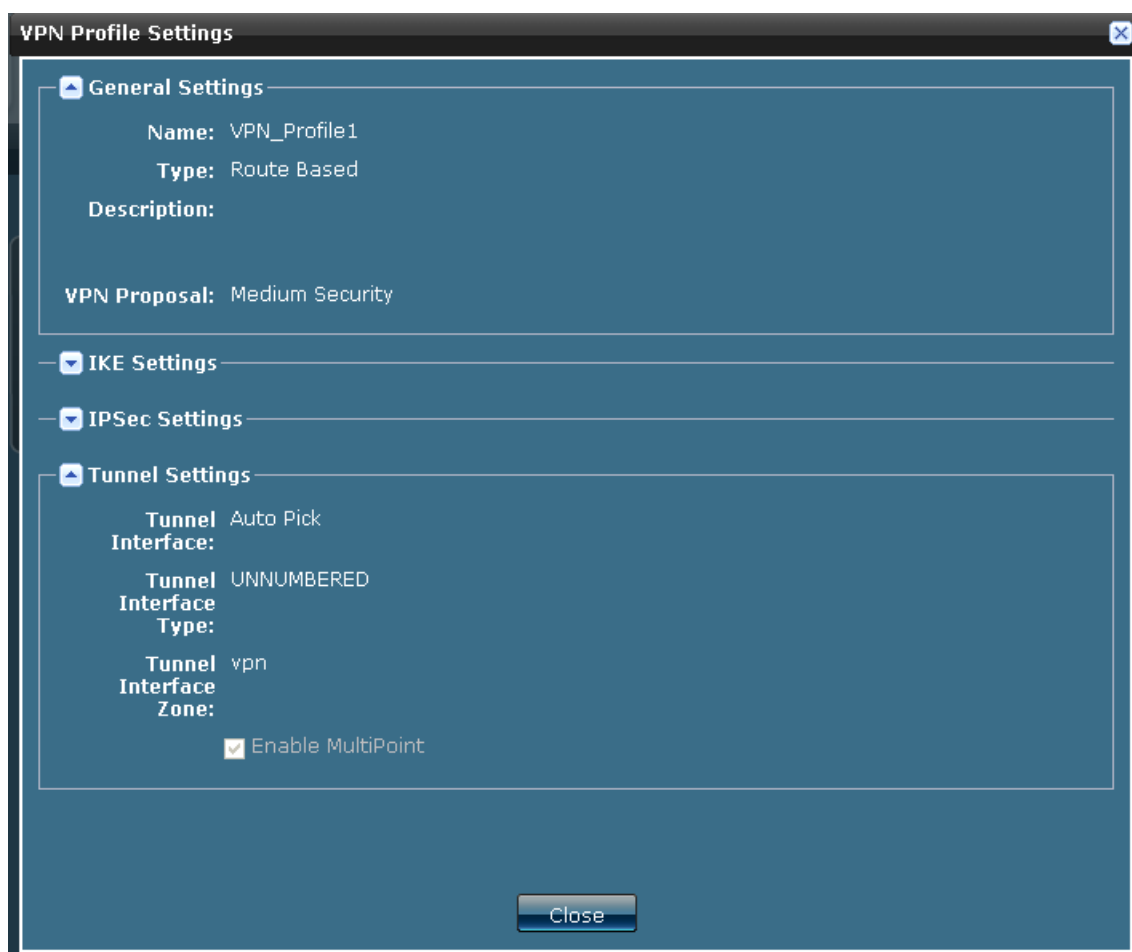
1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN > VPN Profile**.

The **Manage VPN Profiles** inventory panel is displayed.

2. Double-click the icon for the VPN profile whose details you intend to view. The details of the VPN profile are displayed in the **VPN Profile Settings** window, as shown in Figure 31 on page 53.

The **VPN Profile Settings** window lists all the parameters you have specified for this profile.

Figure 31: Viewing the Details of a VPN Profile



## Modifying a VPN Profile

To modify a VPN profile you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN > VPN Profile**.

The **Manage VPN Profiles** inventory panel is displayed.

2. Right-click the VPN profile and click the **Modify VPN Profile** link from the contextual menu, as shown in Figure 32 on page 54.

This action redirects you to the window that you used to create a new VPN profile. You can modify all the fields in this window, except the **Name** field.

Figure 32: Modifying a VPN Profile



3. In the **Description** field, enter a new description
4. Make necessary changes to the fields in the **VPN Proposal** section.
5. Click **Next**.
6. Make necessary changes to the fields in the **IKE Settings** and **IPsec Settings** sections in the **IKE/IPsec Settings** Panel.
7. Click **Next**.
8. Make necessary changes to the fields in the **Tunnel Interface Settings** and **Policy Settings** sections in the **Connectivity Parameters** panel.
9. Click **Finish**.

## Deleting a VPN Profile

To delete a VPN profile you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN > VPN Profile**.

The **Manage VPN Profiles** inventory panel is displayed.

2. Right-click the VPN profile you intend to delete and click the **Delete VPN Profile** link from the contextual menu.

The **Delete Profile** confirmation window is displayed.

3. Select the VPN profile you want to delete and click **Delete**.

## Copying a VPN Profile

To copy a VPN profile you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN > VPN Profile**.

The **Manage VPN Profiles** inventory panel is displayed.

2. Right-click the VPN profile you intend to delete and click the **Copy VPN Profile** link from the contextual menu.

This action redirects you to the window that you used to create a new VPN profile. This window displays the parameters of the profile you have copied with the **Name** field left blank.

3. In the **Name** field, enter a name for the new VPN profile.
4. Edit the other fields in the **General** panel if you intend to do so.
5. Click **Next**.
6. Edit the fields in the **IKE/IPsec Settings** panel if you intend to do so.
7. Click **Next**.
8. Edit the fields in the **Connectivity Parameters** panel if you intend to do so.
9. Click **Finish** to create a new profile.

The new profile you have created is displayed in the **Manage VPN Profiles** inventory panel.

## Searching for a VPN Profile

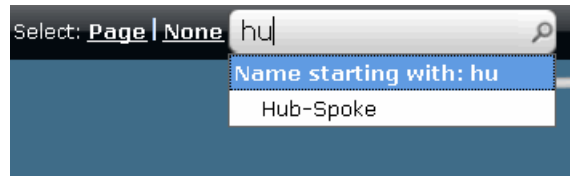
To search for a VPN profile you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN > VPN Profile**.

The **Manage VPN Profiles** inventory panel is displayed.

2. In the **Search** field, enter the name of VPN profile you want to search, as shown in Figure 33 on page 56.

**Figure 33: Searching for a VPN Profile**



3. Click the magnifying glass icon next to the **Search** field.  
The **Manage VPN Profiles** inventory panel is populated with the VPN profiles matching your search criterion.

- Related Topics**
- VPN Profiles Overview on page 45
  - Creating VPN Profiles on page 46



## CHAPTER 7

# IPSec VPN

- [IPsec VPNs Overview on page 57](#)
- [Creating IPsec VPNs on page 58](#)
- [Managing IPsec VPNs on page 62](#)
- [Deploying IPsec VPNs on page 64](#)
- [Decommissioning IPsec VPNs on page 67](#)

### IPsec VPNs Overview

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You can use an IPsec VPN Creation Wizard to create Site-To-Site and Hub-And-Spoke VPNs. The security topology you have created will serve as a base to create an IPsec VPN. You must configure the following to configure an IPsec VPN:

- VPN proposal
- VPN profile
- Security topology

You can configure the following parameters for an IPsec VPN:

- Tunnel IP range - In case you want to use a VPN profile with a numbered tunnel interface
- Endpoints for a Site-To-Site VPN
- Spokes and Hubs for a Hub-And-Spoke VPN

You can use the VPN Creation Wizard to view an overlay of the VPN you are creating on your security topology. This helps you make modifications to the VPN design before saving the configuration. After the configuration is saved, you can provision this VPN on the security devices.

#### Related Topics

- [Creating IPsec VPNs on page 58](#)
- [Managing IPsec VPNs on page 62](#)
- [Deploying IPsec VPNs on page 64](#)
- [Decommissioning IPsec VPNs on page 67](#)

## Creating IPsec VPNs

To create an IPsec VPN:

1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN**.

The **Manage VPNs** inventory panel is displayed. All IPsec VPNs created are listed by default, in the graphical view.

2. From the task ribbon, select the **Create IPsec VPN** icon.

The **General** panel of the **Create IPsec VPN** window is displayed as shown in Figure 34 on page 58.

Figure 34: Create IPsec VPN:General Panel

The screenshot shows the 'General' panel of the 'Create IPsec VPN' window. It features a blue background with a large, faint 'V' watermark. The panel includes the following elements:

- Name:** A text input field.
- Description:** A larger text input field.
- VPN Type:** Two icons representing 'Site To Site' and 'Hub And Spoke' VPN types. The 'Site To Site' icon is highlighted with a blue border.
- Select Profile:** A dropdown menu showing 'Site-To-Site' as the selected profile, highlighted with a yellow border.
- Buttons:** 'Back', 'Next', 'Finish', and 'Cancel' buttons at the bottom right.

1. In the **Name** field, enter a name for the new Site-To-Site VPN.
2. In the **Description** field, enter a description for the new Site-To-Site VPN.
3. From the **VPN Type** field, choose the type of VPN you want to create.
4. From the **Select Profile** field, choose an appropriate VPN profile.
5. If you have chosen a VPN profile which has a numbered tunnel interface, the **Tunnel IP Range** fields are displayed. Enter an appropriate tunnel IP range.



NOTE: You should enter a unique tunnel IP range for every VPN. You will not be able to use this IP range for other VPNs that are created in the future.

6. Click **Next**.

This screen displays your security topology you have created using the Topology Designer. You can create a Site-To-Site or a Hub-And-Spoke VPN based on the VPN type you have chosen in the **VPN Type** field.



NOTE: If you select **Site-To-Site** as the VPN type, only those VPN profiles which use the Main mode to negotiate keys are available for selection.  
The VPN profiles which use Aggressive mode for negotiating keys are not available for selection.



NOTE: If you select **Hub-And-Spoke** as the VPN type, only those VPN profiles which use a numbered tunnel interface are available for selection.  
The VPN profiles which use an unnumbered tunnel interface are not available for selection.

1. Site-To-Site on page 60
2. Hub-And-Spoke on page 61

## Site-To-Site

To create a Site-To-Site IPsec VPN, perform the following steps:

1. Right-click the device or the network that is the first endpoint of the VPN and select **Mark Endpoint** from the contextual menu.

The device or network chosen as an endpoint displays an overlay icon.



NOTE: If you right-click a network and mark it as an endpoint, the device associated with the network is selected as an endpoint by default.



NOTE: If you right-click a device and mark it as an endpoint, all networks associated with the device is a part of the endpoint.



NOTE: You cannot configure a device group as an endpoint for a Site-To-Site VPN.



NOTE: You cannot select a network that is associated with multiple devices as an endpoint for a Site-To-Site VPN.

2. Right-click the device or the network that is the second endpoint of the VPN and select **Mark Endpoint** from the contextual menu.
3. Click **Next**.

This screen displays an overlay of the VPN you are creating over the topology design. You can also view the tunnels that connect the endpoints.

4. Click **Finish** to complete the VPN creation.

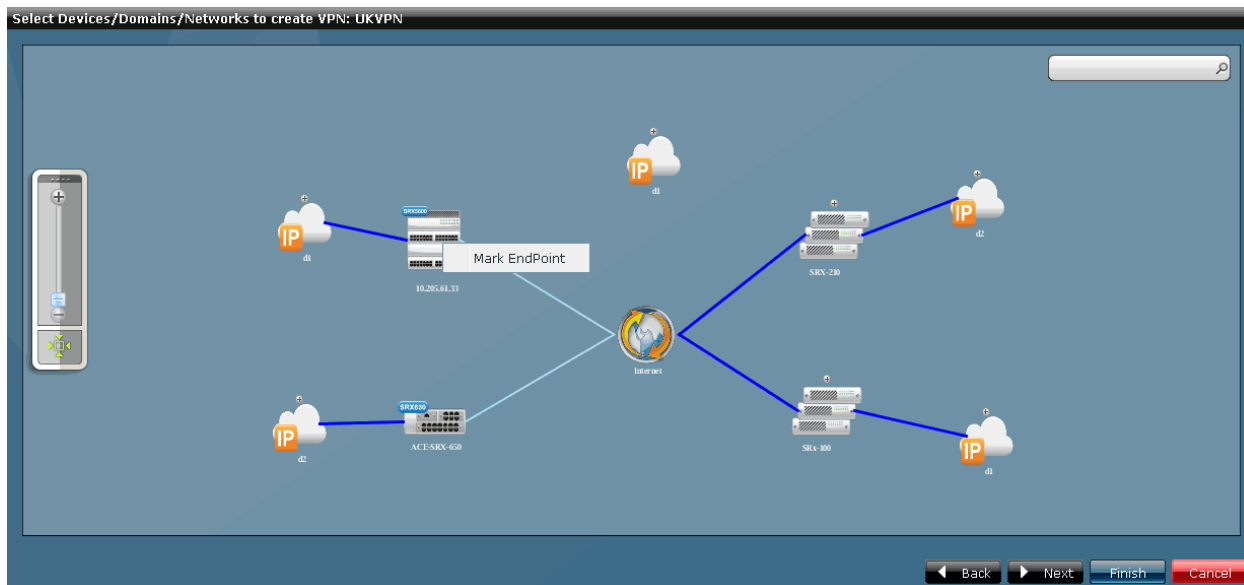
The new VPN you have created is displayed in the **Manage VPNs** inventory panel.

## Hub-And-Spoke

To create a Hub-And-Spoke IPsec VPN:

1. Right-click the device or the network that is the first spoke of the VPN and select **Mark Endpoint** from the contextual menu, as shown in Figure 35 on page 61.

Figure 35: Marking Endpoints For a VPN



**NOTE:** If you right-click a network and mark it as an endpoint, the device associated with the network is selected as an spoke by default.



**NOTE:** If you right-click a device and mark it as an endpoint, all networks associated with the device is a part of the spoke.

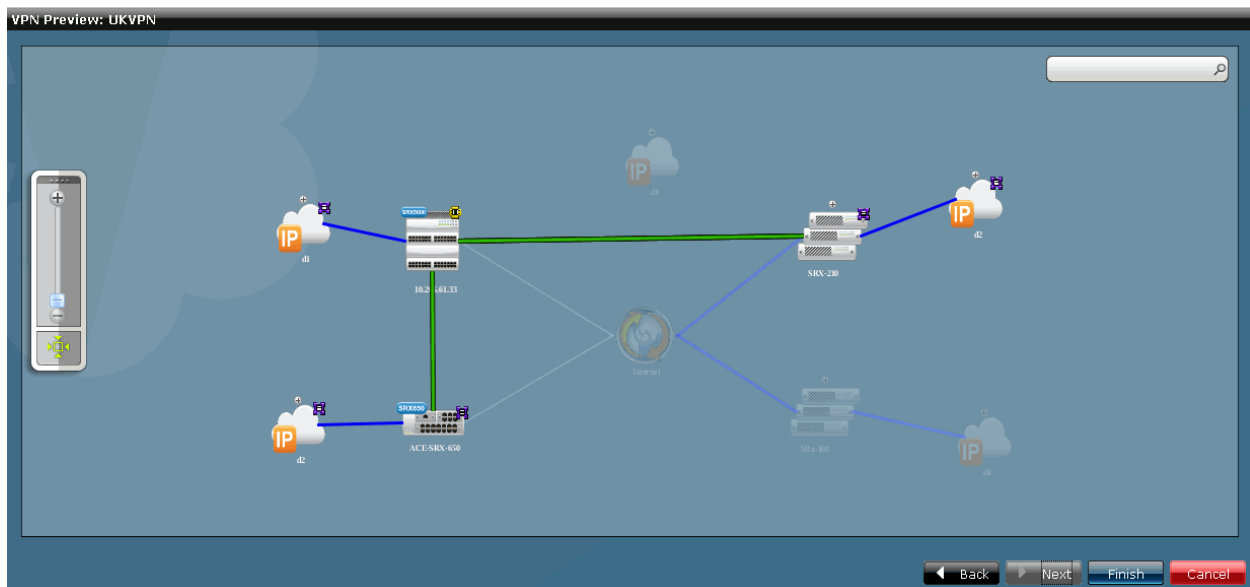
2. Right-click the device or the network that is the second spoke of the VPN and select **Mark Endpoint** from the contextual menu.
3. Right-click the device or the network that is the third spoke of the VPN and select **Mark Endpoint** from the contextual menu.
4. Right-click the spoke that you intend to configure as a hub and select **Mark Hub** from the contextual menu.

The overlay icon changes to the one indicating a hub in the VPN.

5. Click **Next**.

This screen displays an overlay of the VPN you are creating over the topology design. You can also view the tunnels that connect the hub/s with the spokes, as shown in Figure 36 on page 62.

Figure 36: VPN Preview



6. Click **Finish**.

The new VPN you have created is displayed in the **Manage VPNs** inventory panel.

- Related Topics**
- IPsec VPNs Overview on page 57
  - Managing IPsec VPNs on page 62
  - Deploying IPsec VPNs on page 64
  - Decommissioning IPsec VPNs on page 67

## Managing IPsec VPNs

You can edit or delete the IPsec VPNs listed in the **Manage VPNs** inventory panel.

To open the **Manage VPNs** inventory panel:

- From the **Security Design** task ribbon, select **Security Whiteboard** > **IPsec VPN**.

The **Manage VPNs** inventory panel is displayed. All IPsec VPNs created so far is listed by default, in the graphical view.

You can either right-click or use the Actions Drawer to manage an IPsec VPN. For more information about using the Actions Drawer, see [Inventory Pages Overview](#)

You can perform the following tasks in the **Manage VPNs** space:

1. Modifying a IPsec VPN on page 63
2. Deleting an IPsec VPN on page 63

## Modifying a IPsec VPN

To modify an IPsec VPN you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN**.  
The **Manage VPNs** inventory panel is displayed.
2. Right-click the IPsec VPN and click the **Modify VPN** link from the contextual menu.  
This action redirects you to the window that you used to create a new IPsec VPN. You can modify all the fields on this window, except the **Name** field and the **VPN Type** field.
3. In the **Description** field, enter a new description.
4. Make necessary changes in the **Select Profile** field.
5. Click **Next**.
6. Make necessary changes to VPN setup and click **Next**.  
This screen displays an overlay of the VPN you have created over the topology design.
7. Click **Finish**.

## Deleting an IPsec VPN

To delete an IPsec VPN you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN**.  
The **Manage VPNs** inventory panel is displayed.
2. Right-click the IPsec VPN you intend to delete and click the **Delete VPN** link from the contextual menu.  
The **Delete VPN** confirmation window is displayed.
3. Select the IPsec VPN you want to delete and click **Delete**.

### Related Topics

- IPsec VPNs Overview on page 57
- Creating IPsec VPNs on page 58
- Deploying IPsec VPNs on page 64
- Decommissioning IPsec VPNs on page 67

## Deploying IPsec VPNs

To deploy or provision an IPsec VPN you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN**.

The **Manage VPNs** inventory panel is displayed.

2. Right-click the IPsec VPN which you want to provision and select **Provision VPN** from the contextual menu.

The **Provision VPN** window displays the devices on which this VPN is provisioned. You can view the device name, device IP address, platform, Junos OS version, configuration state, connection status, and the XML commands, as shown in Figure 37 on page 64.

Figure 37: Provision VPN Window

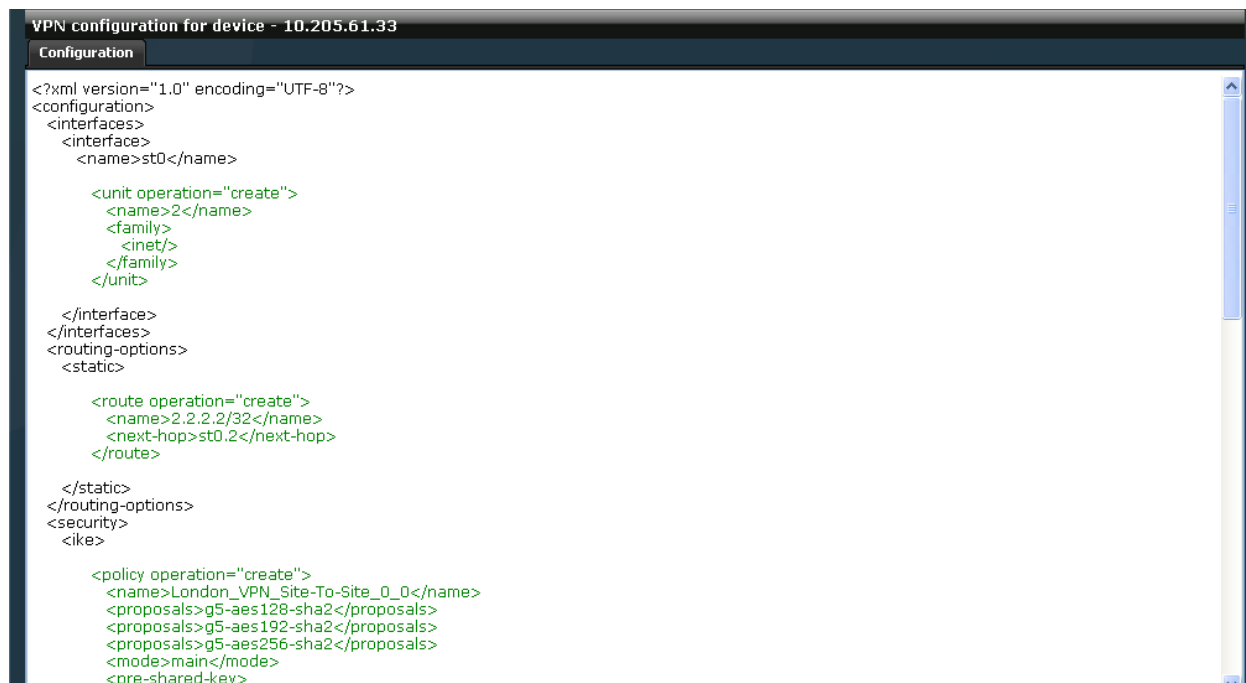
| Provision VPN : London_VPN |               |          |            |               |                   |                      |
|----------------------------|---------------|----------|------------|---------------|-------------------|----------------------|
| Name                       | Device IP     | Platform | OS Version | Configuration | Connection Status | XML Commands         |
| 10.205.61.33               | 10.205.61.33  | SRX5600  | 10.3       | New           | up                | <a href="#">view</a> |
| ACE-SRX-650                | 10.204.79.134 | SRX650   | 10.3       | New           | up                | <a href="#">view</a> |

The states displayed in the **Configuration** column specify if the configured pushed to the device is new, a modified one, or one that will be removed.

3. If you want to preview the configuration changes pushed to the device, click the **View** link in the **XML Commands** column corresponding to the device. You can view the configuration details, as shown in Figure 38 on page 65.



Figure 38: Viewing XML Commands



4. Select the check box next to the **Schedule Provisioning** field to schedule the provisioning to a later time and date.
5. Select appropriate values from the **Date and Time** field.
6. Click **Provision**.

The IPsec VPN is provisioned on the devices that are a part of this VPN. A new job is created and the job ID is displayed in the **Job Information** dialog box.

7. Click the job ID to view more information about the job created. This action directs you to the **Job Management** work space.

The **Device Provisioning Status** window is displayed with the status of the IPsec VPN you have provisioned on each device. You will see appropriate error messages in the **Message** column of this window, if the provisioning fails. The error messages include:

- Connection Status is not up  
This indicates that there is no active connection to the device from Junos Space.
- Managed Status is not In Sync  
This indicates that the latest device configuration is not synchronized with Junos Space.
- Configuration Update Failed  
This indicates configuration commit errors. This error message includes the error message sent by the device.





NOTE: You can also choose to provision a VPN using the Actions Panel. To do so:

1. Select the check box on the left corner of the VPN you want to provision.
2. Click the Actions Panel located on the left corner of the inventory panel and select Provision VPN.
3. Click Provision.

An IPsec VPN is placed in a specific state based on whether it is provisioned, not provisioned, or partially provisioned. An overlay icon is placed over the IPsec VPN icon to depict the different states. The different states that an IPsec VPN is placed in is listed in Table 6 on page 66.

Table 6: IPsec VPN Provision States

| State                 | Overlay Icon   |
|-----------------------|--|
| Provisioned           |   |
| Not Provisioned       |  |
| Partially Provisioned |  |

- Related Topics**
- IPsec VPNs Overview on page 57
  - Creating IPsec VPNs on page 58

- Managing IPSec VPNs on page 62
- Decommissioning IPSec VPNs on page 67

## Decommissioning IPSec VPNs

To decommission a IPSec VPN you have created:

1. From the **Security Design** task ribbon, select **Security Whiteboard > IPSec VPN**.  
The **Manage VPNs** inventory panel is displayed.
2. Right-click the VPN you want to decommission and select **Decommission VPN** from the contextual menu.

The **Decommission VPN** window displays the devices on which this VPN is provisioned, as shown in Figure 39 on page 67.

Figure 39: Decommissioning a VPN

The screenshot shows a window titled "Decommission VPN:hub". It contains a table with the following data:

| Name       | Device IP     | Platform  | OS Version | Connection Status | XML Commands         |
|------------|---------------|-----------|------------|-------------------|----------------------|
| SRX-61.63  | 10.205.61.63  | SRX210-HM | 10.0R2.10  | up                | <a href="#">view</a> |
| SRX-50.113 | 10.205.50.113 | SRX210H   | 10.2R1.4   | up                | <a href="#">view</a> |
| SRX-5600   | 10.205.61.33  | SRX5600   | 10.2R1.4   | up                | <a href="#">view</a> |

Below the table, there is a checkbox labeled "Delete service after job succeeds". Below that is a checkbox labeled "Schedule at a later time" followed by a text input field. At the bottom right, there are two buttons: "Decommission" and "Cancel".

3. To automatically delete the VPN from Junos Space once the VPN is decommissioned, select the **Delete service after job succeeds** check box.
4. To schedule the decommissioning to a later time and date, select the check box next to the **Schedule at a later time** field.
5. Click **Next**.
6. Select appropriate values from the **Date** and **Time** field.
7. Click **Decommission**.



**NOTE:** If a provision job on a VPN partially succeeds, (that is, the provision job does not push the configuration details to all devices in the VPN) the VPN is placed in the Partially Provisioned state. You can provision or decommission the VPN using the appropriate workflow.



NOTE: If you try to delete a VPN which is in the Provisioned state, a popup window confirming whether you want to decommission the VPN is displayed. You can click **Yes** on this window to decommission the VPN before deleting it, or click **No** to delete the VPN without decommissioning it.

**Related Topics**

- [IPSec VPNs Overview on page 57](#)
- [Creating IPSec VPNs on page 58](#)
- [Managing IPSec VPNs on page 62](#)
- [Deploying IPSec VPNs on page 64](#)

## CHAPTER 8

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