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# Junos<sup>®</sup> Space

## Security Design User Guide

Release

# 1.4



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Juniper Networks supports a technical book program to publish books by Juniper Networks engineers and subject matter experts with book publishers around the world. These books go beyond the technical documentation to explore the nuances of network architecture, deployment, and administration using the Junos operating system (Junos OS) and Juniper Networks devices. In addition, the Juniper Networks Technical Library, published in conjunction with O'Reilly Media, explores improving network security, reliability, and availability using Junos OS configuration techniques. All the books are for sale at technical bookstores and book outlets around the world. The current list can be viewed at <http://www.juniper.net/books> .

## Documentation Conventions

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Table 1 on page xvi defines notice icons used in this documentation.

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.

## Documentation Feedback

We encourage you to provide feedback, comments, and suggestions so that we can improve the documentation. You can send your comments to [techpubs-comments@juniper.net](mailto:techpubs-comments@juniper.net), or fill out the documentation feedback form at <https://www.juniper.net/cgi-bin/docbugreport/>. If you are using e-mail, be sure to include the following information with your comments:

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

## Requesting Technical Support

Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or JNASC support contract, or are covered under warranty, and need post-sales technical support, you can access our tools and resources online or open a case with JTAC.

- 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.



## Self-Help Online Tools and Resources

For quick and easy problem resolution, Juniper Networks has designed an online self-service portal called the Customer Support Center (CSC) that provides you with the following features:

- Find CSC offerings: <http://www.juniper.net/customers/support/>
- 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

# Security Design Overview

- Security Design Overview on page 3
- Security Design Dashboard Overview on page 5
- Security Design Gadgets Overview on page 7



## CHAPTER 1

# Security Design Overview

- Security Design Overview on page 3

## Security Design Overview

---

Security Design is a Junos Space application that you can use to design your network security using a bottom-up approach. It significantly reduces your intervening time because you can create subconfiguration objects that you can use across multiple configurations. You can customize these for a specific configuration in which this object is used. A set of gadgets displayed on the dashboard graphically illustrate the critical factors related to your security design. These gadgets help you keep track of the objects created and their usage across security configurations easily and effectively.

The Security Design application is divided across two workspaces: Object Builder and Security Whiteboard.

- You can use the Object Builder workspace to prepare yourself for the security configuration
- You can use the Security Whiteboard workspace to configure your network security.

With the Object Builder workspace you can create subconfiguration Application, Network Address, and Security Domain objects and store them in the Junos Space database. You can access these objects from an inventory panel. You can clone objects easily without having to re-enter similar object parameters all over again. You can reuse these objects across multiple security configurations.

With the Security Whiteboard workspace you can create the actual security configurations. You can create a security topology to represent your physical network using a whiteboard-based design. You can drag and drop objects on the whiteboard and link them logically using a set of toolbar icons. You can also create IPsec VPNs and security policies using this workspace.

You can preview the Hub-And-Spoke or Site-To-Site VPN, as an overlay of the security topology, to ensure that you place the VPN strategically in your network. Security Design helps you create security policies in two ways. You can quickly create a security policy using a generic security policy profile object and a set of domain rules from the security domains that constitute a security policy. You can also create a detailed security policy which uses a customized security policy profile and customized rules which are applicable only to this security policy. You can also differentiate inherited rules versus additional

rules and generic security policy profile settings versus customized security policy profile settings using visual indicators.

For information about the using the Security Design application, see “Security Designer Dashboard Overview” on page 5.

## CHAPTER 2

# Security Design Dashboard Overview

- Security Design Dashboard Overview on page 5

## Security Design Dashboard Overview





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The Security Design dashboard graphically illustrates the devices used in the security topology. You can navigate to the Security Design dashboard in the following ways:

- Selecting Security Design from the Junos Space home page
- Selecting Security Design from the Application Switcher
- Selecting the Home icon from any page within the Security Design workspaces

The Security Design dashboard includes the Object Builder and Security Whiteboard workspaces. Table 2 on page 5 shows the workspace icons and the tasks that they perform.

**Table 2: Security Design Workspaces**

Icons	Workspace Name	Tasks
	Devices	Manage, discover, and add devices.
	Object Builder	Create, modify, delete, and copy security domains, addresses and applications.
	Security Whiteboard	Create security topology and security policies. Also used to create VPN proposals, VPN profiles and IPsec VPNs.
	Job Management	Manage and view job status.

The dashboard also includes gadgets that display information about objects and security configurations. To read more about gadgets in Security Design, see “Security Design Gadgets Overview” on page 7.





## CHAPTER 3

# Security Design Gadgets Overview

- Security Design Gadgets Overview on page 7

### Security Design Gadgets Overview

---

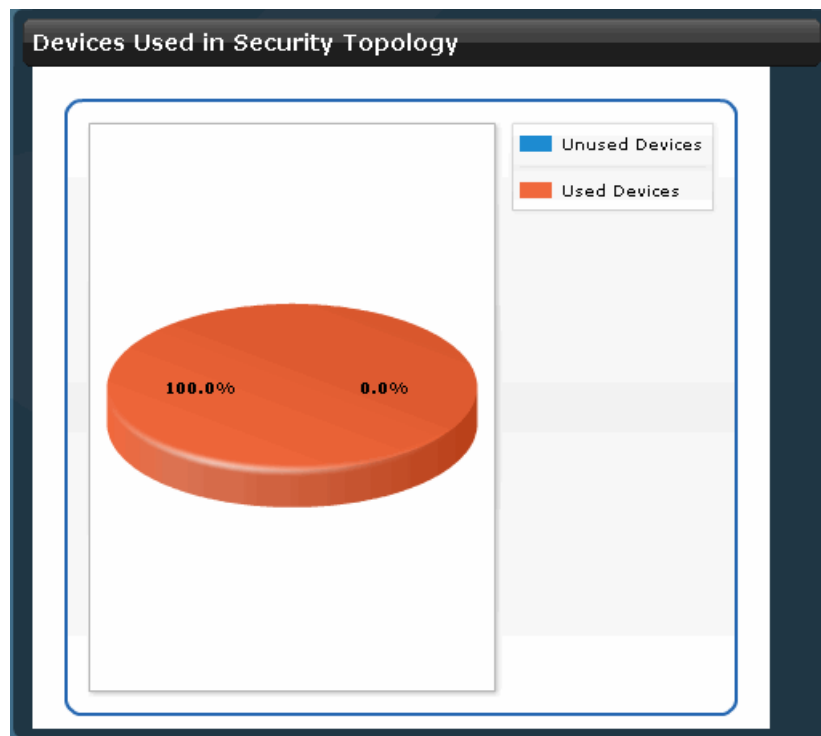
The Security Design dashboard displays gadgets with information that is updated automatically and immediately. You can move gadgets on the dashboard and resize them. These changes persist when you log out and log in to the Security Design application. The gadgets displayed on the Security Design dashboard are:

1. Devices Used in Security Topology on page 7
2. Object Count on page 8
3. Address Types on page 9
4. Object Usage on page 9
5. Devices in Security Topology on page 10
6. Job Types on page 10
7. State of Jobs Run on page 11
8. Average Execution Time per Completed Job on page 11

### Devices Used in Security Topology

You can view the Devices Used in the Security Topology gadget, as shown in Figure 1 on page 8, to learn the number of devices that are part of the security topology. You can use this gadget to keep a track of the number of devices used in your topology design.

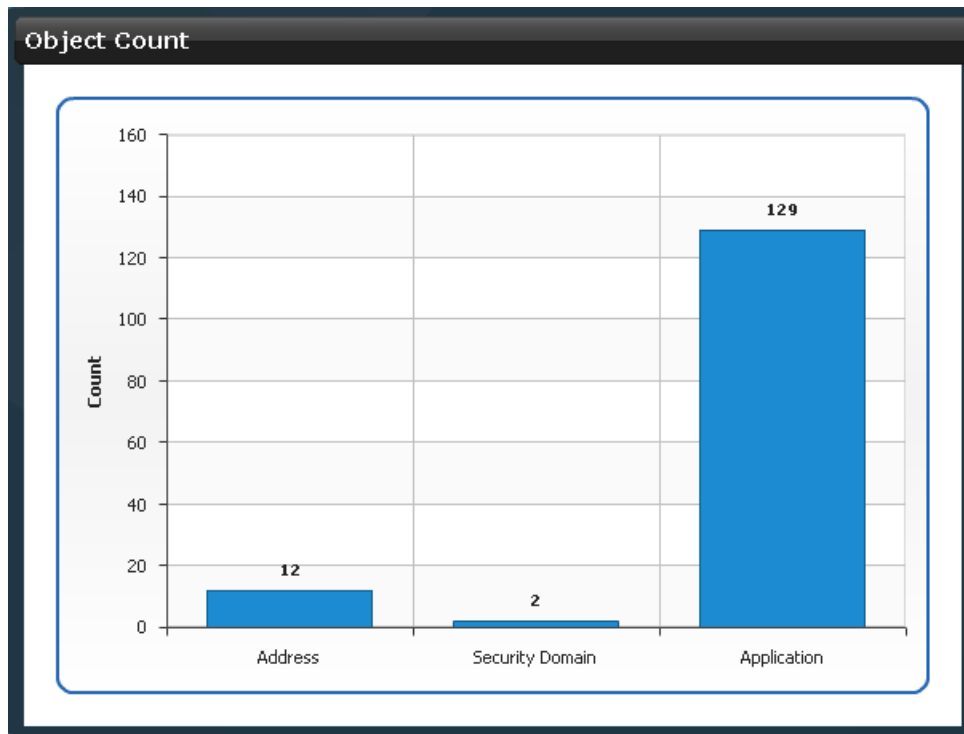
Figure 1: Dashboard Gadget: Devices Used in Security Topology



## Object Count

You can view the Object Count gadget, as shown in Figure 2 on page 9, to learn the number of objects that are created from the Object Builder workspace. You can use this gadget to keep a track of the objects available to create a security topology, IPsec VPNs, or security policies.

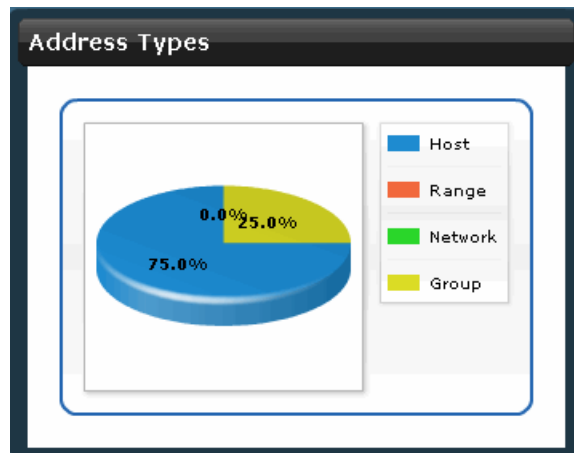
Figure 2: Dashboard Gadgets: Object Count



## Address Types

You can view the Address Types gadget, as shown in Figure 3 on page 9, to learn the distribution among the different address types created using the Address Creation Wizard.

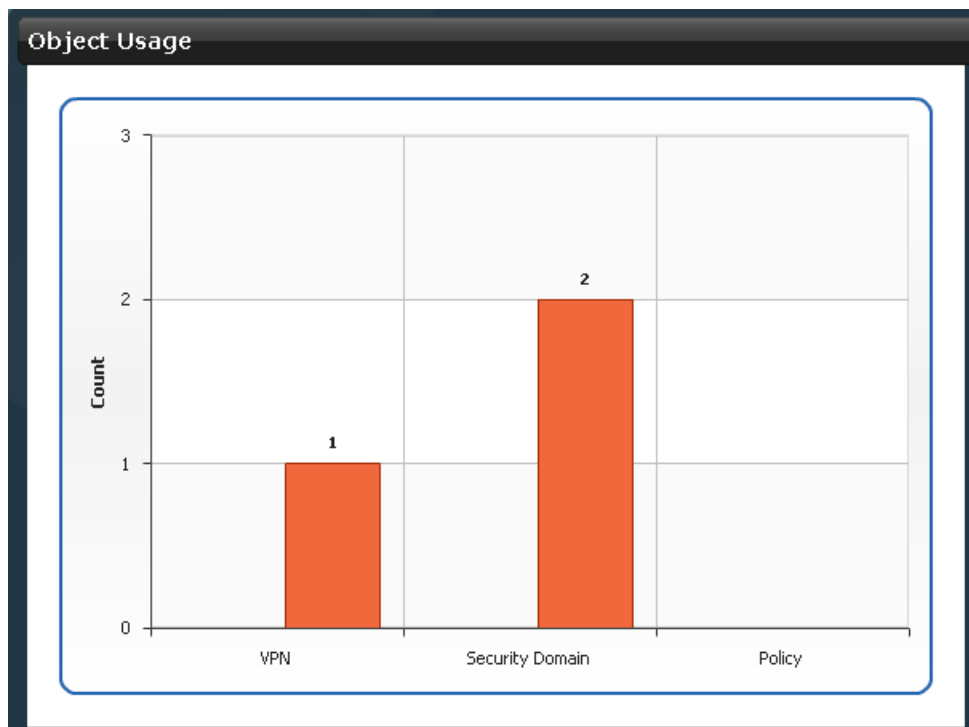
Figure 3: Dashboard Gadget: Address Types



## Object Usage

You can view the Object Usage gadget, as shown in Figure 4 on page 10, to learn the number of objects used to create VPNs, security domains, or security policies.

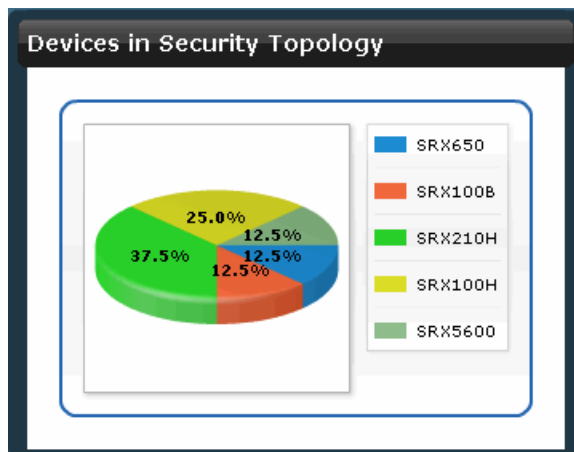
Figure 4: Dashboard Gadget: Object Usage



### Devices in Security Topology

You can view the Devices in Security Topology gadget, as shown in Figure 5 on page 10, to learn the different types of devices used to create the security topology.

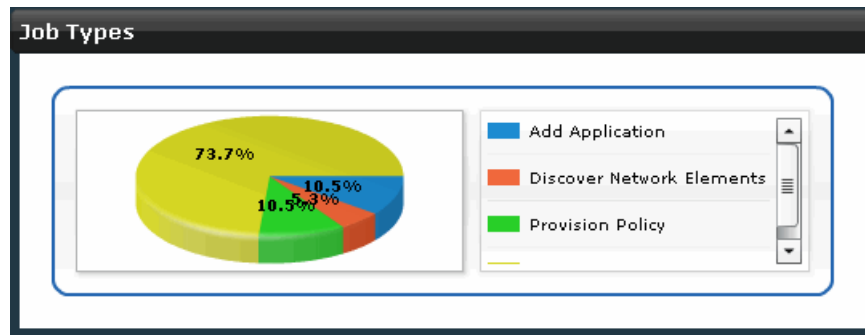
Figure 5: Dashboard Gadgets: Devices in Security Topology



### Job Types

You can view the Job Types gadget, as shown in Figure 6 on page 11, to learn the type of jobs performed using Security Design.

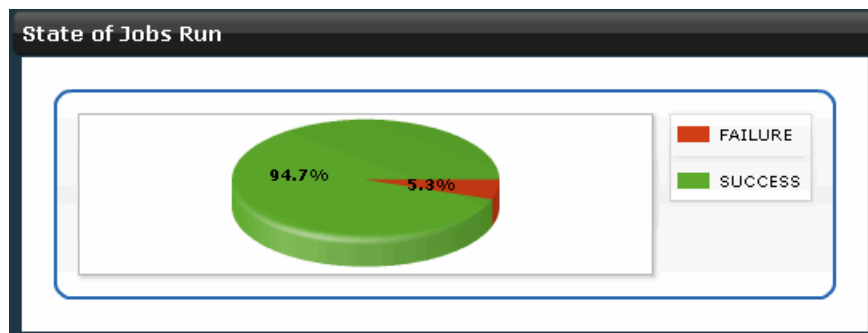
Figure 6: Dashboard Gadgets: Job Types



### State of Jobs Run

You can view the State of Jobs Run gadget, as shown in Figure 7 on page 11, to learn the status of the jobs that your Security Design tasks have initiated.

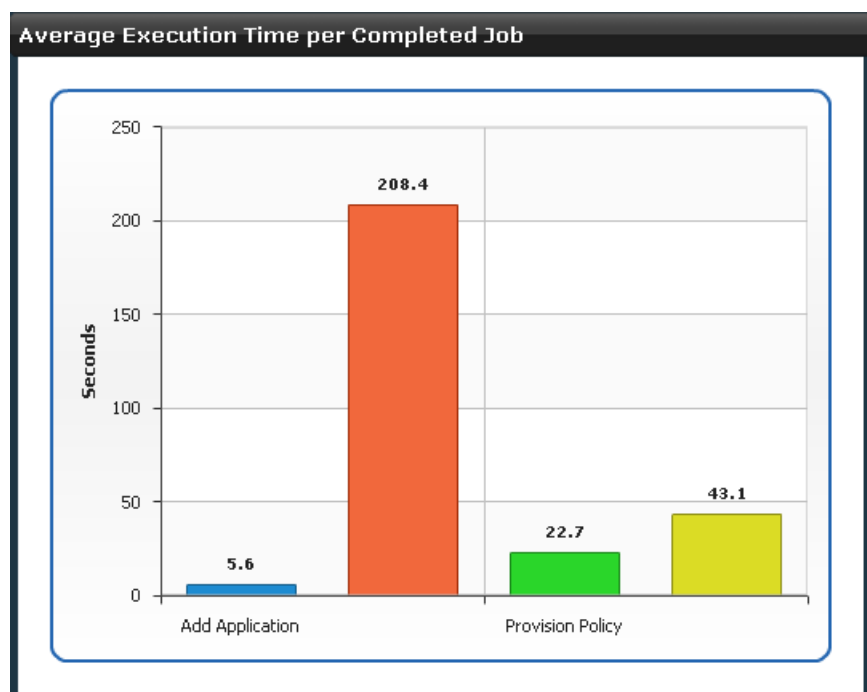
Figure 7: Dashboard Gadgets: State of Jobs Run



### Average Execution Time per Completed Job

You can view the Average Execution Time per Completed Job gadget, as shown in Figure 8 on page 12, to learn the average time that your Security Design tasks have taken to run specific job types.

Figure 8: Dashboard Gadgets: Average Execution Time per Completed Job



## PART 2

# Getting Started

- [Getting Started with Security Design on page 15](#)





## CHAPTER 4

# Getting Started with Security Design

- Getting Started with Security Design on page 15

## Getting Started with Security Design

---

The **Getting Started** assistant is a section on the sidebar that provides instructions on how to perform tasks related to IPsec VPN configuration and security policy configuration in Security Design.

The **Getting Started** section displays instructions on how to:

1. Provisioning an IPsec VPN on page 15
2. Provisioning Firewall Policies on page 16

## Provisioning an IPsec VPN

In general, to provision an IPsec VPN::

1. Discover devices.  
For information about how to discover devices, see the Discovering Devices section in the Junos Space Network Application Platform User Guide.
2. Create addresses.  
For information about how to create addresses, see “Creating Addresses” on page 38.
3. Create security domains.  
For information about how to create security domains, see “Creating Security Domains” on page 32.
4. Create a security topology.  
For information about how to create a security topology, see “Creating a Security Topology” on page 50.
5. Create a VPN profile.  
For information about how to create a VPN profile, see “Creating VPN Profiles” on page 90.
6. Create a VPN proposal.  
For information about how to create a VPN proposal, see “Creating VPN Proposals” on page 82.
7. Create an IPsec VPN.

For information about how to create an IPsec VPN, see “Creating IPsec VPNs” on page 101.

8. Provision the IPsec VPN.  
For information about how to provision the IPsec VPN, see “Deploying IPsec VPNs” on page 105.

## Provisioning Firewall Policies

The steps to provision firewall policies are:

1. Discover devices.  
For information about how to discover devices, see the Discovering Devices section in the Junos Space Network Application Platform User Guide.
2. Create addresses.  
For information about how to create addresses, see “Creating Addresses” on page 38.
3. Create security domains.  
For information about how to create security domains, see “Creating Security Domains” on page 32.
4. Create a security topology.  
For information about how to create a security topology, see “Creating a Security Topology” on page 50.
5. Create a policy profile.  
For information about how to create a policy profile, see “Creating Security Policy Profiles” on page 61.
6. Create a applications.  
For information about how to create an application, see “Creating Applications” on page 20.
7. Create firewall policies.  
For information about how to create firewall policies, see “Creating Security Policies” on page 68.
8. Provision firewall policies.  
For information about how to provision firewall policies, see “Deploying Security Policies” on page 74.

## PART 3

# Object Builder

- [Object Builder Overview on page 17](#)
- [Applications and Application Groups on page 19](#)
- [Security Domains on page 31](#)
- [Addresses and Address Groups on page 37](#)

## Object Builder Overview

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You can use the Object Builder workspace in Security Design to create security policy-related objects like security domains, addresses, and applications. These objects are stored in the Junos Space database. You can reuse them with multiple security policies. This makes the security policy design more structured and avoids the need to create the security policy-related objects during the whiteboard-based security policy design.

You can use the Object Builder workspace to create, modify, and delete the following objects:

- Addresses and address groups
- Applications and application groups
- Security domains

### Related Topics

- [Address and Address Groups Overview on page 37](#)
- [Application and Application Groups Overview on page 19](#)
- [Security Domains Overview on page 31](#)



## CHAPTER 5

# Applications and Application Groups

- Application and Application Groups Overview on page 19
- Creating Applications on page 20
- Managing Applications on page 23
- Creating Application Groups on page 25
- Managing Application Groups on page 27

### Application and Application Groups Overview

---

You can use the Application Creation Wizard to create an application object based on the protocols the application uses. The protocols that are used to create an application object include:

- TCP
- UDP
- MS-RPC
- SUN-RPC
- ICMP

You can group application objects to form an application group using the Application Group Creation Wizard. Junos Space creates an object in the Junos Space database to represent an application or an application group. Security domains use these objects to allow or block applications in the domain.

Junos Space provides Juniper Networks defined application objects for commonly used applications.



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**NOTE:** You cannot modify or delete Juniper Networks defined application objects.

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#### Related Topics

- Creating Applications on page 20
- Creating Application Groups on page 25
- Managing Applications on page 23

- Managing Application Groups on page 27

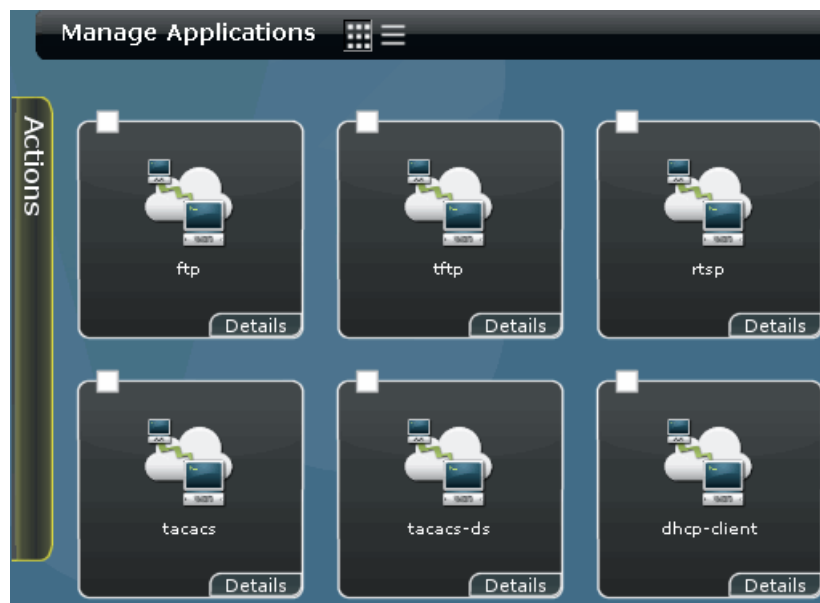
## Creating Applications

To create a new application:

1. From the **Security Design** task ribbon, select **Object Builder > Applications**.

The **Manage Applications** inventory panel is displayed with the icons for all the applications, as shown in Figure 9 on page 20.

Figure 9: Manage Applications Inventory Panel



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

The **Create Application** window is displayed, as shown in Figure 10 on page 21.

Figure 10: Create Application Window

**Create Application**

Name:

Category:

Description:

Protocols: + ✎ ✖

Name	Detail

Create Cancel

3. In the **Name** field, enter a name for the new application.
4. In the **Category** field, enter a category for the new application.
5. In the **Description** field, enter a description for the new application.
6. In the **Protocols** section, click the **Add** icon to add a new protocol.

The **New Protocol** dialog box is displayed with default values.

7. In the **Name** section, enter a name for the new protocol.
8. In the **Inactivity Timeout** section, enter a value in seconds.

The default value is 60 seconds.

9. From the **Type** drop-down menu, select a protocol type.

You can select the following protocol types from the **Type** drop-down menu:

- TCP - Transmission Control Protocol
  - a. From the **Type** drop-down menu, select **TCP** as the protocol type.  
The **New Protocol** dialog box displays the fields relevant to the protocol type.
  - b. From the **ALG** drop-down menu, select the protocol you want to use.

- c. In the **Source Port** field, enter a range of TCP source ports the application uses.
- d. In the **Destination Port** field, enter a range of TCP destination ports the application uses.
- UDP - User Datagram Protocol
  - a. From the **Type** drop-down menu, select UDP as the protocol type.  
The **New Protocol** dialog box displays the fields relevant to the protocol type.
  - b. From the **ALG** drop-down menu, select the protocol you want to use.
  - c. In the **Source Port** field, enter a range of UDP source ports the application uses.
  - d. In the **Destination Port** field, enter a range of UDP destination ports the application uses.
- ICMP - Internet Control Message Protocol
  - a. From the **Type** drop-down menu, select **ICMP** as the protocol type.  
The **New Protocol** dialog box displays the fields relevant to the protocol type.
  - b. In the **ICMP Type** field, enter a value pertaining to the ICMP message you want to display.
  - c. In the **ICMP Code** field, enter a value associated with the ICMP type you have specified.
- SUN - RPC - Remote Procedure Call
  - a. From the **Type** drop-down menu, select **SUN—RPC** as the protocol type.  
The **New Protocol** dialog box displays the fields relevant to the protocol type.
  - b. In the **RPC Program Number** field, enter a value corresponding to the RPC service you want to use.
  - c. Select the **TCP** or **UDP** radio button to specify an appropriate protocol type in the **Protocol Type** field.
- MS - RPC - Remote Procedure Call
  - a. From the **Type** drop-down menu, select **MS—RPC** as the protocol type.  
The **New Protocol** dialog box displays the fields relevant to the protocol type.
  - b. In the **uuid** field, enter the universally unique ID corresponding to the RPC service you want to use.
  - c. Select the **TCP** or **UDP** radio button to specify an appropriate protocol type in the **Protocol Type** field.
- Other Protocols



- a. From the **Type** drop-down menu, select **Other** as the protocol type.  
The **New Protocol** dialog box displays the fields relevant to the protocol type.
- b. From the **ALG** drop-down menu, select the protocol you want to use.
- c. In the **Source Port** field, enter a range of TCP source ports the application uses.
- d. In the **Destination Port** field, enter a range of TCP destination ports the application uses.
- e. In the **Protocol Number** field, enter the protocol number of the protocol you want to use.  
This number is specified in the Protocol field for IPv4 packets and the Next Header field for IPv6 packets.

10. Click **Add** in the **New Protocol** dialog box.

11. Click **Create** to create a new application.

The new application you have created is displayed in the **Manage Applications** inventory panel.

- Related Topics**
- Application and Application Groups Overview on page 19
  - Managing Applications on page 23
  - Creating Application Groups on page 25
  - Managing Application Groups on page 27

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## Managing Applications

You can view, delete, or modify applications listed in the **Manage Application** inventory panel.

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

- From the **Security Design** task ribbon, select **Object Builder > Applications**.

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

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

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

1. Viewing the Details of an Application on page 24
2. Modifying an Application on page 24
3. Deleting an Application on page 24
4. Searching for an Application on page 25

## Viewing the Details of an Application

To view the details of an application:

1. From the **Security Design** task ribbon, select **Object Builder > Applications**.  
The **Manage Applications** inventory panel is displayed.
2. Double-click the icon for the application whose details you intend to view.  
The details of the application are displayed in the **Application Detailed View** window.  
The **Application Detailed View** window lists the name, category, description and protocols used in this application.
3. Click **Close**.

## Modifying an Application

To modify an application you have created:

1. From the **Security Design** task ribbon, select **Object Builder > Applications**.  
The **Manage Applications** inventory panel is displayed.
2. Right-click the application you want to modify and click the **Modify Application** link from the contextual menu.  
This action redirects you to the window that you used to create a new application.  
You can modify all the fields on this window, except the **Name** field.
3. In the **Category** field, enter a new category.
4. In the **Description** field, enter a new description.
5. Make necessary changes in the **Protocols** section.  
You can also edit or modify the existing protocols in the **Protocols** section.
  - To edit a protocol, select the protocol you want to edit and click the **Edit** icon.  
Make the necessary changes and click **OK**.
  - To delete a protocol, select the protocol you want to delete and click the **Delete** icon.
6. Click **Modify** to save the changes made to this application.

## Deleting an Application

To delete an application you have created:

1. From the **Security Design** task ribbon, select **Object Builder > Applications**.  
The **Manage Applications** inventory panel is displayed.
2. Right-click the application you want to delete and click the **Delete Applications** link from the contextual menu.  
The **Delete** dialog box is displayed

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

## Searching for an Application

To search for an application you have created:

1. From the **Security Design** task ribbon, select **Object Builder > Applications**.

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

2. In the **Search** field, enter the name of application you want to search.

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

The **Manage Application** inventory panel is populated with the applications matching your search criterion.

- Related Topics**
- Application and Application Groups Overview on page 19
  - Creating Applications on page 20

## Creating Application Groups

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To create a new application group:

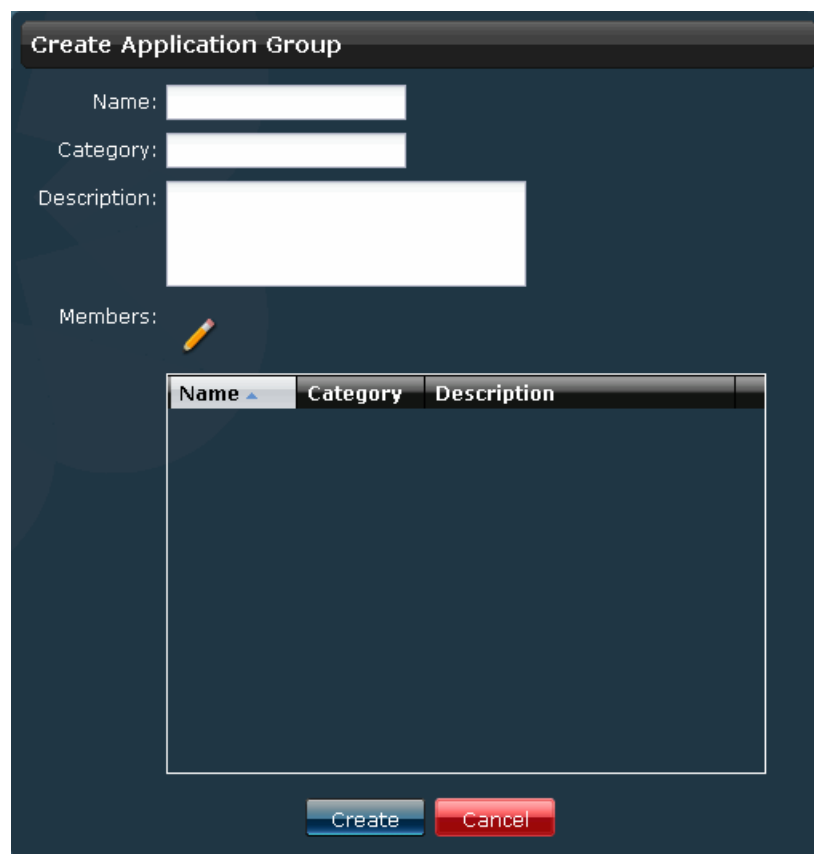
1. From the **Security Design** task ribbon, select **Object Builder > Applications**.

The **Manage Applications** inventory panel is displayed with the icons for all the applications and application groups.

2. From the task ribbon, select the **Create Application Group** icon.

The **Create Application Group** window is displayed, as shown in Figure 11 on page 26.

Figure 11: Create Application Groups Window



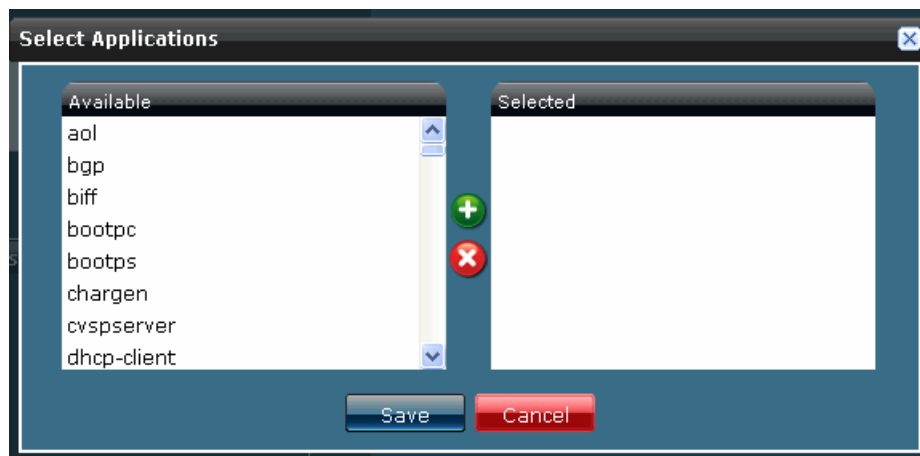
The 'Create Application Group' dialog box features a dark blue background. At the top, the title 'Create Application Group' is displayed in a dark bar. Below the title, there are three input fields: 'Name:' with a single-line text box, 'Category:' with a single-line text box, and 'Description:' with a larger multi-line text box. Under the 'Description' field is the 'Members:' label followed by a small yellow pencil icon. Below this is a table with three columns: 'Name', 'Category', and 'Description'. The table is currently empty. At the bottom of the dialog, there are two buttons: a blue 'Create' button and a red 'Cancel' button.

Name	Category	Description
------	----------	-------------

3. In the **Name** field, enter a name for the new application group.
4. In the **Description** field, enter a description for the new application group.
5. In the **Members** section, click the Add icon to add a new application to this application group.

The **Select Applications** dialog box is displayed, as shown in Figure 12 on page 27.

Figure 12: Select Applications Window



6. From the **Available** section of the dialog box, select the application you want to group, and click the Add icon.

The application you have selected is displayed in the **Selected** section of the dialog box. Repeat Steps 5 and 6 to add more applications in this application group.

7. Click **Create**.

The application group you have created is displayed in the **Manage Applications** inventory panel.

- Related Topics**
- Application and Application Groups Overview on page 19
  - Managing Application Groups on page 27
  - Creating Applications on page 20
  - Managing Applications on page 23

## Managing Application Groups

You can view, delete, or modify application groups listed in the **Manage Applications** inventory panel.

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

- From the **Security Design** task ribbon, select **Object Builder > Applications**.

The **Manage Applications** inventory panel is displayed. All application groups created are listed by default, in the graphical view.

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

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

1. Viewing the Details of an Application Group on page 28
2. Modifying an Application Group on page 28
3. Deleting an Application Group on page 29
4. Searching for an Application Group on page 29

## Viewing the Details of an Application Group

To view the details of an application group:

1. From the **Security Design** task ribbon, select **Object Builder > Applications**.

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

2. Double-click the icon for the application group whose details you intend to view.

The details of the application group are displayed in the **Application Detailed View** window. The **View** window lists the name, description, category and the protocols used in this application group.

3. Click **OK**.

## Modifying an Application Group

To modify an application group you have created:

1. From the **Security Design** task ribbon, select **Object Builder > Applications**.

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

2. Right-click the application group you want to modify and click the **Modify Application** link from the contextual menu.

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

3. In the **Description** field, enter a new description.
4. In the **Category** field, enter a new category.
5. In the **Members** section, make appropriate changes to the applications used in this group.
6. Click **Modify** to save the changes made to this application group.

## Deleting an Application Group

To delete an application group you have created:

1. From the **Security Design** task ribbon, select **Object Builder > Applications**.  
The **Manage Applications** inventory panel is displayed.
2. Right-click the application group you want to delete and click the **Delete Applications** link from the contextual menu.  
The **Delete** dialog box is displayed.
3. Select the application group you want to delete and click **Delete**.

## Searching for an Application Group

To search for an application group you have created:

1. From the **Security Design** task ribbon, select **Object Builder > Applications**.  
The **Manage Applications** inventory panel is displayed.
2. In the **Search** field, enter the name of application group you want to search.
3. Click the magnifying glass icon next to **Search** field.  
The **Manage Applications** inventory panel is populated with the application groups matching your search criterion.

- Related Topics**
- Application and Application Groups Overview on page 19
  - Creating Application Groups on page 25





## CHAPTER 6

# Security Domains

- [Security Domains Overview on page 31](#)
- [Creating Security Domains on page 32](#)
- [Managing Security Domains on page 34](#)

### Security Domains Overview

---

You can use the Security Domain Creation Wizard to create a security domain that contains applications hosted by the domain and applications that are blocked to and from the domain. You can also choose to allow intra-domain traffic in a domain that is spread across different locations.

Junos Space creates an object in the Junos Space database to represent the security domain. You can use these security domain objects as endpoints to create a security policy. After the security policy is created, you can configure the direction in which the application data flows between two domains for that policy.

- Related Topics**
- [Creating Security Domains on page 32](#)
  - [Managing Security Domains on page 34](#)

## Creating Security Domains

To create a new security domain:

1. From the **Security Design** task ribbon, select **Object Builder > Security Domains**.

The **Manage Security Domain** inventory panel is displayed with the icons for all security domains, as shown in Figure 13 on page 32.

**Figure 13: Manage Security Domain Inventory Panel**



2. From the task ribbon, select the **Add New Security Domain** icon.

The **Create Security Domain** window is displayed, as shown in Figure 14 on page 33.

Figure 14: Create Security Domain Window

**Create Security Domain**

Name:

Description:

☐ Allow Intra-Domain Traffic

Hosted Applications:

Name	Category	Description
------	----------	-------------

Blacklisted Applications:

Name	Category	Description
------	----------	-------------

3. In the **Name** field, enter a name for the new security domain.
4. In the **Description** field, enter a description for the new security domain.
5. If you want to allow intra-domain traffic in a domain that is spread across different locations, select the **Allow Intra-Domain Traffic** check box.



**NOTE:** You can use the **Allow Intra-Domain Traffic** option to enable seamless communication across all subnets located across your network.

6. In the **Hosted Applications** section of the **Create Security Domain** window, click the Add icon to add the applications you want to host in this domain.
7. From the **Available** section of the dialog box, select the application you want to host, and click the right arrow.

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



NOTE: This action automatically generates allow permissions for these applications, to the domain they are hosted in.

8. In the **Blacklisted Applications** section of the **Create Security Domain** window, click the **Add** icon to add the applications you want to blacklist in this domain.
9. From the **Available** section of the dialog box, select the application you want to host, and click the right arrow.

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



NOTE: This action restricts access to these applications in both directions for the domain they are hosted in. This cannot be overridden by security policies.

10. Click **Create**.

The security domain you have created is displayed in the **Manage Security Domain** inventory panel.

- Related Topics**
- Security Domains Overview on page 31
  - Managing Security Domains on page 34

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## Managing Security Domains

You can view, delete, or modify security domains listed in the **Manage Security Domain** inventory panel.

To open the **Manage Security Domain** inventory panel:

- From the **Security Design** task ribbon, select **Object Builder > Security Domain**.

The **Manage Security Domain** inventory panel is displayed. All security domains created are listed by default, in the graphical view.

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

You can perform the following tasks in the **Manage Security Domain** space:

1. Viewing the Details of a Security Domain on page 35
2. Modifying a Security Domain on page 36
3. Deleting a Security Domain on page 36
4. Searching for a Security Domain on page 36

## Viewing the Details of a Security Domain

To view the details of a security domain:

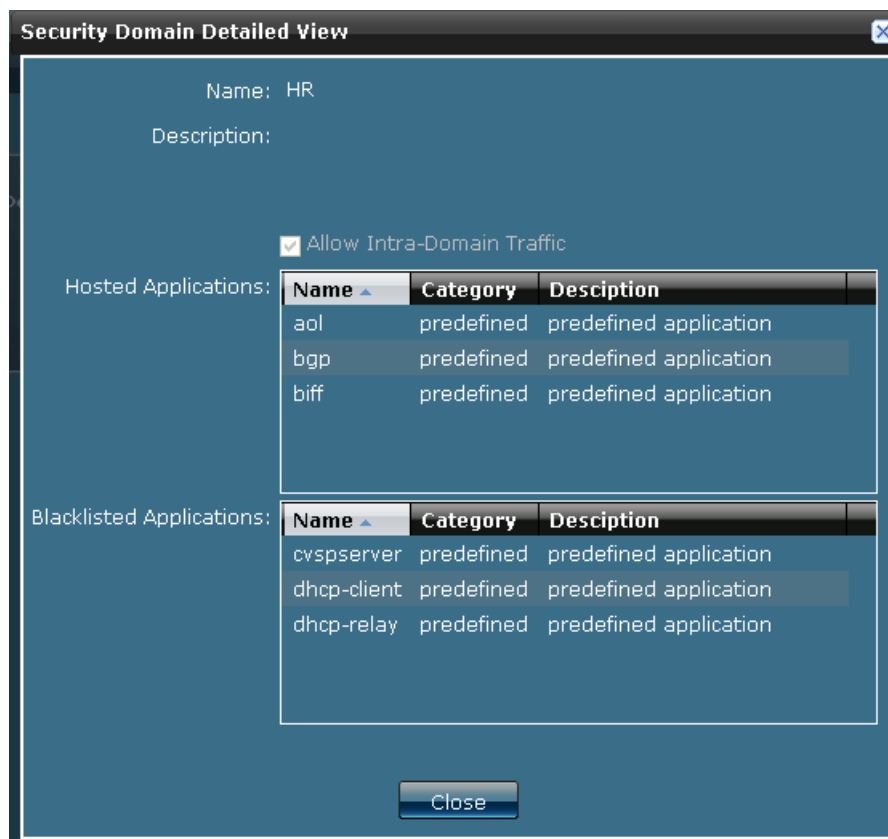
1. From the **Security Design** task ribbon, select **Object Builder > Security Domain**.

The **Manage Security Domain** inventory panel is displayed.

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

The details of the security domain are displayed in the **Security Domain Detailed View** window, as shown in Figure 15 on page 35. The **Security Domain Detailed View** window lists the name, description, hosted applications and the blacklisted applications in this security domain.

Figure 15: Security Domain Detailed View Window



3. Click **Close**.

## Modifying a Security Domain

To modify a security domain you have created:

1. From the **Security Design** task ribbon, select **Object Builder > Security Domain**.  
The **Manage Security Domain** inventory panel is displayed.
2. Right-click the security domain you want to modify and click the **Modify Security Domain** link from the contextual menu.  
This action redirects you to the window that you used to create a new security domain. You can modify all the fields in this window, except the **Name** field.
3. In the **Description** field, enter a new description.
4. Make appropriate changes in the **Hosted Applications** section of the **Create Security Domain** window.
5. Make appropriate changes in the **Blacklisted Applications** section of the **Create Security Domain** window.
6. Click **Modify** to save the changes made to this security domain.

## Deleting a Security Domain

To delete a security domain you have created:

1. From the **Security Design** task ribbon, select **Object Builder > Security Domain**.  
The **Manage Security Domain** inventory panel is displayed.
2. Right-click the security domain you want to delete and click the **Delete Security Domain** link from the contextual menu.  
The **Delete** dialog box is displayed.
3. Select the security domain you want to delete and click **Delete**.

## Searching for a Security Domain

To search for a security domain you have created:

1. From the **Security Design** task ribbon, select **Object Builder > Security Domain**.  
The **Manage Security Domain** inventory panel is displayed.
2. In the **Search** field, enter the name of security domain you want to search.
3. Click the magnifying glass icon next to the **Search** field.  
The **Manage Security Domain** inventory panel is populated with the security domains matching your search criterion.

- Related Topics**
- Security Domains Overview on page 31
  - Creating Security Domains on page 32

## CHAPTER 7

# Addresses and Address Groups

- [Address and Address Groups Overview on page 37](#)
- [Creating Addresses on page 38](#)
- [Managing Addresses on page 39](#)
- [Creating Address Groups on page 41](#)
- [Managing Address Groups on page 43](#)

### Address and Address Groups Overview

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You can use the Address Creation Wizard to create an address object that specifies an IP address or a hostname. You can specify a hostname and use the address resolution option to resolve it to an IP address. You can also resolve an IP address to the corresponding hostname.

You can group address objects to form an address group using the Address Group Creation Wizard. Junos Space creates an object in the Junos Space database to represent an address or an address group. You can use these addresses and address groups to create a security topology.

- Related Topics**
- [Creating Addresses on page 38](#)
  - [Creating Address Groups on page 41](#)
  - [Managing Addresses on page 39](#)
  - [Managing Address Groups on page 43](#)

## Creating Addresses

To create a new address:

1. From the **Security Design** task ribbon, select **Object Builder > Address**.

The **Manage Address** inventory panel is displayed with the icons for all addresses and the address groups, as shown in Figure 16 on page 38.

Figure 16: Manage Address Inventory Panel



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

The **Create Address** window is displayed, as shown in Figure 17 on page 38.

Figure 17: Create Address Window

The image shows a screenshot of the 'Create Address' window. The window has a dark blue header with the title 'Create Address'. Below the header, there are several input fields and controls. The 'Name' field is a single-line text box. The 'Description' field is a multi-line text box. The 'Type' section has three radio buttons: 'Host' (selected), 'Range', and 'Network'. Below the 'Type' section, there are two input fields: 'IP' and 'Host Name'. Between these two fields are two green circular buttons labeled 'Get IP' and 'Get Hostname'. At the bottom of the window, there are two buttons: 'Create' (blue) and 'Cancel' (red).

3. In the **Name** field, enter a name for the new address.



4. In the **Description** field, enter a description for the new address.
5. You can direct Junos Space to resolve an IP address to a hostname or resolve a hostname to an IP address.
  - To specify an IP address as the address type, select the **Host** radio button and enter the IP address in the **IP** field.
  - To specify a hostname as the address type, select the **Host** radio button and enter the hostname in the **Host Name** field.
  - To specify an IP address range, select the **Range** radio button and enter the IP ranges in the **Start IP** and **End IP** fields.
  - To specify a network as an address type, select the **Network** radio button and enter the network address in the **IP** and **Netmask** fields.



**NOTE:** You can resolve an IP address to a hostname and a hostname to an IP address using the green arrows next to the **IP** and **Host Name** fields.

6. Click **Create** to create a new address.

The new address you have created is displayed in the **Manage Address** inventory panel.

- Related Topics**
- Address and Address Groups Overview on page 37
  - Managing Addresses on page 39
  - Creating Address Groups on page 41
  - Managing Address Groups on page 43

## Managing Addresses

You can view, delete, or modify addresses listed in the **Manage Address** inventory panel.

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

- From the **Security Design** task ribbon, select **Object Builder > Address**.

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

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

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

1. Viewing the Details of an Address on page 40
2. Modifying an Address on page 40

3. Deleting an Address on page 40
4. Searching for an Address on page 41

## Viewing the Details of an Address

To view the details of an address:

1. From the **Security Design** task ribbon, select **Object Builder > Address**.  
The **Manage Address** inventory panel is displayed.
2. Double-click the icon for the address whose details you intend to view.  
The details of the address are displayed in the **Address Detailed View** window. The **Address Detailed View** window lists the name, description, and the IP address/host name specified for this address.
3. Click **Close**.

## Modifying an Address

To modify an address you have created:

1. From the **Security Design** task ribbon, select **Object Builder > Address**.  
The **Manage Address** inventory panel is displayed.
2. Right-click the address you want to modify and click the **Modify Address** link from the contextual menu.  
This action redirects you to the window that you used to create a new address. You can modify all the fields in this window, except the **Name** field.
3. In the **Description** field, enter a new description.
4. Enter a new value for the **Address Type** you specified earlier in the appropriate field (**IP Address** field if you have chosen IP Address as the **Address Type** or hostname if you have chosen **Host Name** as the **Address Type**).
5. Click **Modify** to save the changes made to this address.

## Deleting an Address

To delete an address you have created:

1. From the **Security Design** task ribbon, select **Object Builder > Address**.  
The **Manage Address** inventory panel is displayed.
2. Right-click the address you want to delete and click the **Delete Addresses** link from the contextual menu.  
The **Delete** dialog box is displayed.
3. Select the address you want to delete and click **Delete**.

## Searching for an Address

To search for a address you have created:

1. From the **Security Design** task ribbon, select **Object Builder > Address**.

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

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

The **Manage Address** inventory panel is populated with the addresses matching your search criterion.

- Related Topics**
- Address and Address Groups Overview on page 37
  - Creating Addresses on page 38

## Creating Address Groups

---

To create a new address group:

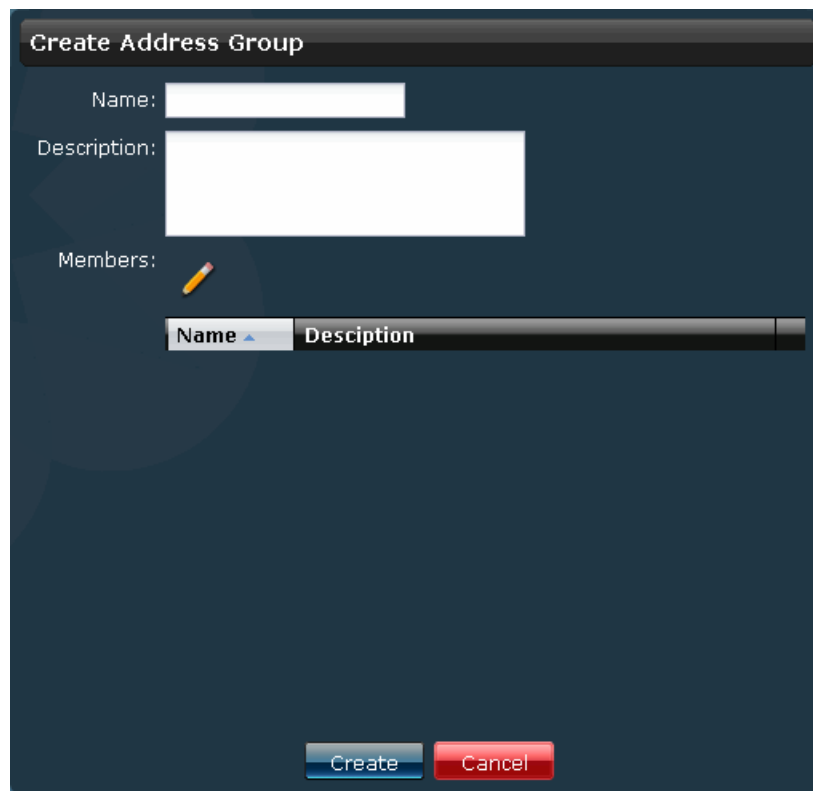
1. From the **Security Design** task ribbon, select **Object Builder > Address**.

The **Manage Address** inventory panel is displayed with the icons for all the addresses and address groups.

2. From the task ribbon, select the **Create Address Group** icon.

The **Create Address Group** window is displayed, as shown in Figure 18 on page 42.

Figure 18: Create Address Group Window



The image shows a 'Create Address Group' dialog box with a dark blue background. At the top is a title bar with the text 'Create Address Group'. Below the title bar are three input fields: 'Name:' with a single-line text box, 'Description:' with a multi-line text box, and 'Members:' with a small yellow pencil icon. Below the 'Members:' section is a table with two columns, 'Name' and 'Description'. The 'Name' column has a small blue triangle icon next to it. At the bottom of the dialog box are two buttons: 'Create' (blue) and 'Cancel' (red).

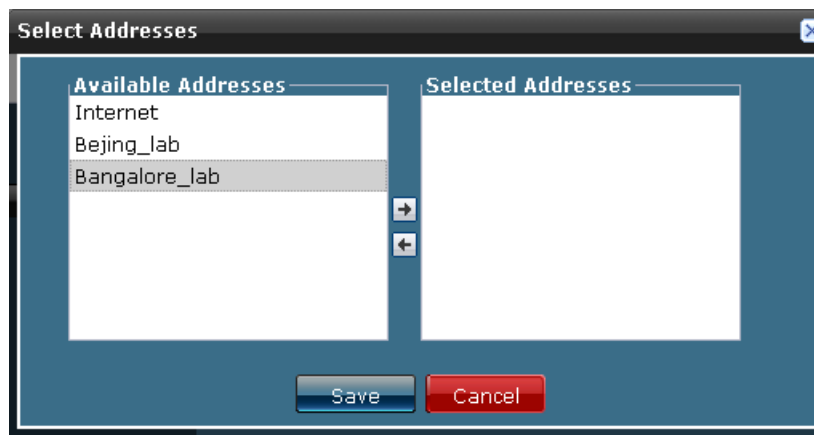
Name	Description
------	-------------

3. In the **Name** field, enter a name for the new address group.
4. In the **Description** field, enter a description for the new address group.
5. In the **Members** section of the **Create Address Group** window, click the **Add** icon to add a new address to this address group.

The **Select Addresses** dialog box is displayed.

6. From the **Available Addresses** section of the dialog box, select the address you want to group, and click the right arrow, as shown in Figure 19 on page 43.

Figure 19: Select Addresses Window



The address you have selected is displayed in the **Selected Addresses** section of the dialog box. Repeat Steps 5 and 6 to group more addresses in this address group.

7. Click **Create**.

The address group you have created is displayed in the **Manage Address** inventory panel.

- Related Topics**
- Address and Address Groups Overview on page 37
  - Managing Address Groups on page 43
  - Creating Addresses on page 38
  - Managing Addresses on page 39

## Managing Address Groups

You can view, delete, or modify address groups listed in the **Manage Address** inventory panel.

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

- From the **Security Design** task ribbon, select **Object Builder > Address**.

The **Manage Address** inventory panel is displayed. All address groups created are listed by default, in the graphical view.

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

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

1. Viewing the Details of an Address Group on page 44
2. Modifying an Address Group on page 44
3. Deleting an Address Group on page 44
4. Searching for an Address Group on page 44

## Viewing the Details of an Address Group

To view the details of an address group:

1. From the **Security Design** task ribbon, select **Object Builder > Address**.  
The **Manage Address** inventory panel is displayed.
2. Double-click the icon for the address group whose details you intend to view.  
The details of the address group are displayed in the **Address Detailed View** window. The **Address Detailed View** window lists the name, description, and the addresses used in this address group.
3. Click **Close**.

## Modifying an Address Group

To modify an address group you have created:

1. From the **Security Design** task ribbon, select **Object Builder > Address**.  
The **Manage Address** inventory panel is displayed.
2. Right-click the address group you want to modify and click the **Modify Address** link from the contextual menu.  
This action redirects you to the window that you used to create a new address group. You can modify all the fields in this window, except the **Name** field.
3. In the **Description** field, enter the new description.
4. In the **Members** section, make appropriate changes to the addresses used in this group.
5. Click **Modify** to save the changes made to this address group.

## Deleting an Address Group

To delete an address group you have created:

1. From the **Security Design** task ribbon, select **Object Builder > Address**.  
The **Manage Address** inventory panel is displayed.
2. Select the address you want to delete and click the **Delete Addresses** link from the **Actions** panel located on the left corner of the inventory panel.  
The **Delete** dialog box is displayed.
3. Select the address group you want to delete and click **Delete**.

## Searching for an Address Group

To search for an address group you have created:

1. From the **Security Design** task ribbon, select **Object Builder > Address**.

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

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

The **Manage Address** inventory panel is populated with the address groups matching your search criterion.

- Related Topics**
- Address and Address Groups Overview on page 37
  - Creating Address Groups on page 41





## PART 4

# Security Whiteboard

- [Security Whiteboard Overview on page 47](#)
- [Security Topology on page 49](#)
- [Security Policies on page 59](#)
- [IPsec VPNs on page 81](#)

## 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 49](#)
- [Security Policy Profiles Overview on page 59](#)
- [Security Policies Overview on page 66](#)
- [VPN Proposals Overview on page 81](#)
- [VPN Profiles Overview on page 90](#)
- [IPSec VPNs Overview on page 101](#)



## CHAPTER 8

# Security Topology

- Security Topology Overview on page 49
- Creating a Security Topology on page 50

### Security Topology Overview

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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 50

## 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 20 on page 51.

**Figure 20: Security Topology Designer Whiteboard**



The toolbar on the left displays a set of functionalities used to design the security topology, as listed in Table 3 on page 51.

**Table 3: 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 52](#)
2. [Connecting Security Devices on page 53](#)
3. [Dragging and Dropping Addresses on page 54](#)
4. [Associating Addresses with Security Devices on page 54](#)
5. [Dragging and Dropping Security Domains on page 54](#)
6. [Associating Addresses with Security Domains on page 55](#)
7. [Removing Addresses from a Security Domain on page 55](#)
8. [Creating Address Groups on page 55](#)
9. [Creating Device Groups on page 56](#)
10. [Removing Devices from a Device Group on page 56](#)
11. [Searching for Devices, Addresses, and Security Domains in the Topology on page 56](#)
12. [Creating Group Links on Device Groups on page 57](#)
13. [Adding Addresses and Security Domains Using CSV Import on page 57](#)

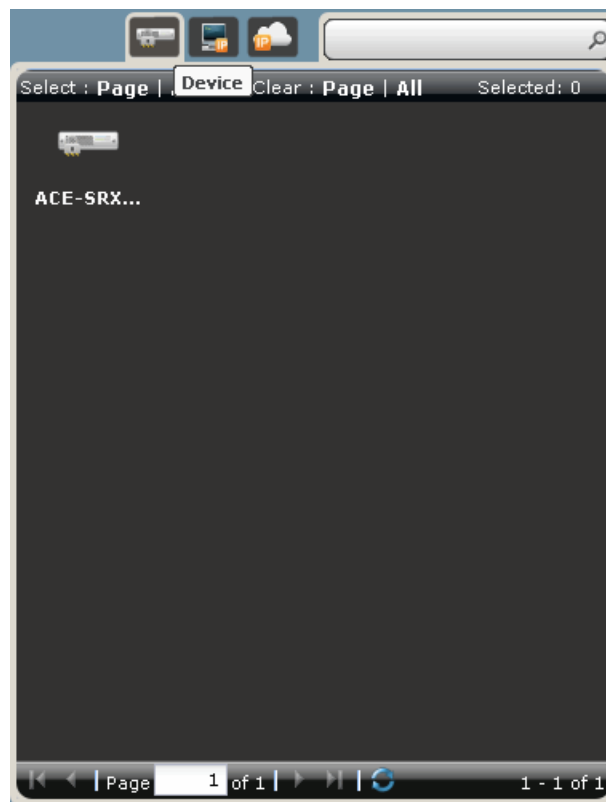
## Dragging and Dropping Security Devices

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 21 on page 53](#).

Figure 21: 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.

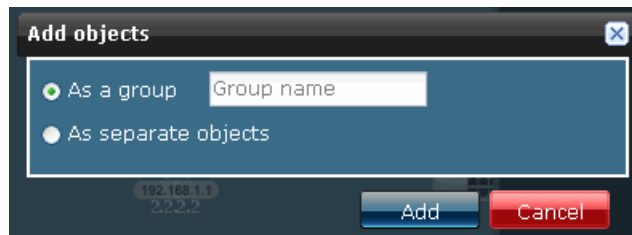
## Creating Device Groups

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 22 on page 56.

Figure 22: 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 4 on page 58

**Table 4: 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 49

## CHAPTER 9

# Security Policies

- Security Policy Profiles Overview on page 59
- Creating Security Policy Profiles on page 61
- Managing Security Policy Profiles on page 64
- Security Policies Overview on page 66
- Creating Security Policies on page 68
- Deploying Security Policies on page 74
- Managing Security Policies on page 77
- Decommissioning Security Policies on page 79

### Security Policy Profiles Overview

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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.

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#### **Related Topics**

- [Creating Security Policy Profiles on page 61](#)
- [Managing Security Policy Profiles on page 64](#)

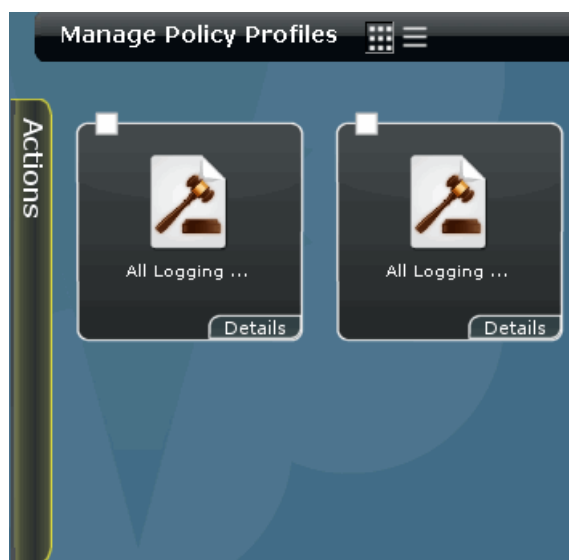
## Creating Security Policy Profiles

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 23 on page 61. The first two policy profiles listed here are Juniper Networks defined policy profiles.

Figure 23: 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 24 on page 62.

Figure 24: 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     

**Create** **Cancel**

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 25 on page 63.



Figure 25: New Policy Profile: Firewall Authentication Section

New Policy Profile

Name:

Description:

Logging Authentication Redirect

Pass Through Client:

Web Authentication Client:

Create Cancel

- 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 26 on page 63:

Figure 26: New Policy Profile: Redirect Section

New Policy Profile

Name:

Description:

Logging Authentication Redirect

Redirect: ☒ None  
☐ Redirect Wx  
☐ Reverse Redirect Wx

Create Cancel

- 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 59
  - Managing Security Policy Profiles on page 64

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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 64
2. Modifying a Security Policy Profile on page 65
3. Copying a Security Policy Profile on page 65
4. Deleting a Security Policy Profile on page 66
5. Searching for a Security Policy on page 66

### Viewing the Details of a Security Policy Profile

To view the details of a security policy profile:

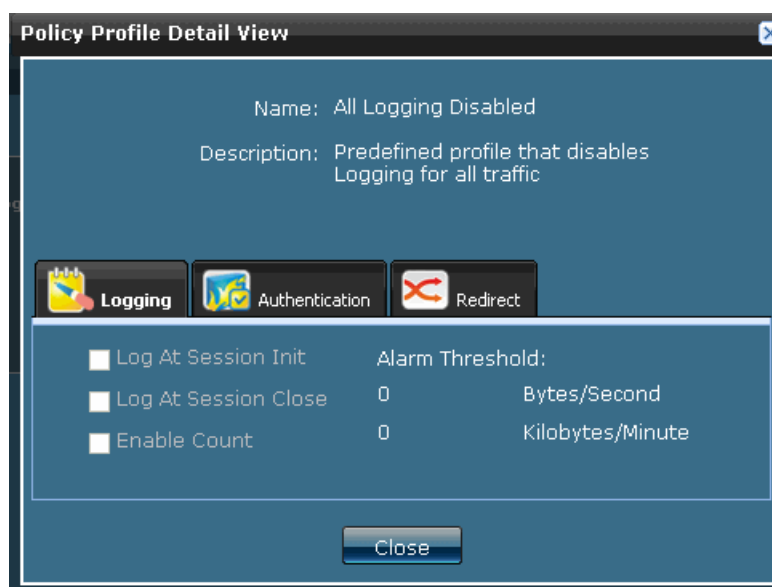
1. From the **Security Design** task ribbon, select **Security Whiteboard > Security Policy > Policy Profiles**.

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 27 on page 65.

Figure 27: 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 59
  - Creating Security Policy Profiles on page 61

## Security Policies Overview

---

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 68](#)
  - [Deploying Security Policies on page 74](#)
  - [Managing Security Policies on page 77](#)
  - [Decommissioning Security Policies on page 79](#)

## 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 28 on page 68.

Figure 28: 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 5 on page 68.

Table 5: 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 29 on page 69.

Figure 29: Create Policy Window

**Create Policy**

Engg HR

Name:

Description:

Profile: All Logging Enabled

**Rules**

Direction	Applications	Action	Settings
	rtsp tftp tacacs-ds tacacs bootpc		
	ftp netbios-session smtp		
	telnet 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 30 on page 71.

Figure 30: 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 74.

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 77.



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 66
- Deploying Security Policies on page 74
- Managing Security Policies on page 77
- Decommissioning Security Policies on page 79

## 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 31 on page 74.

Figure 31: 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

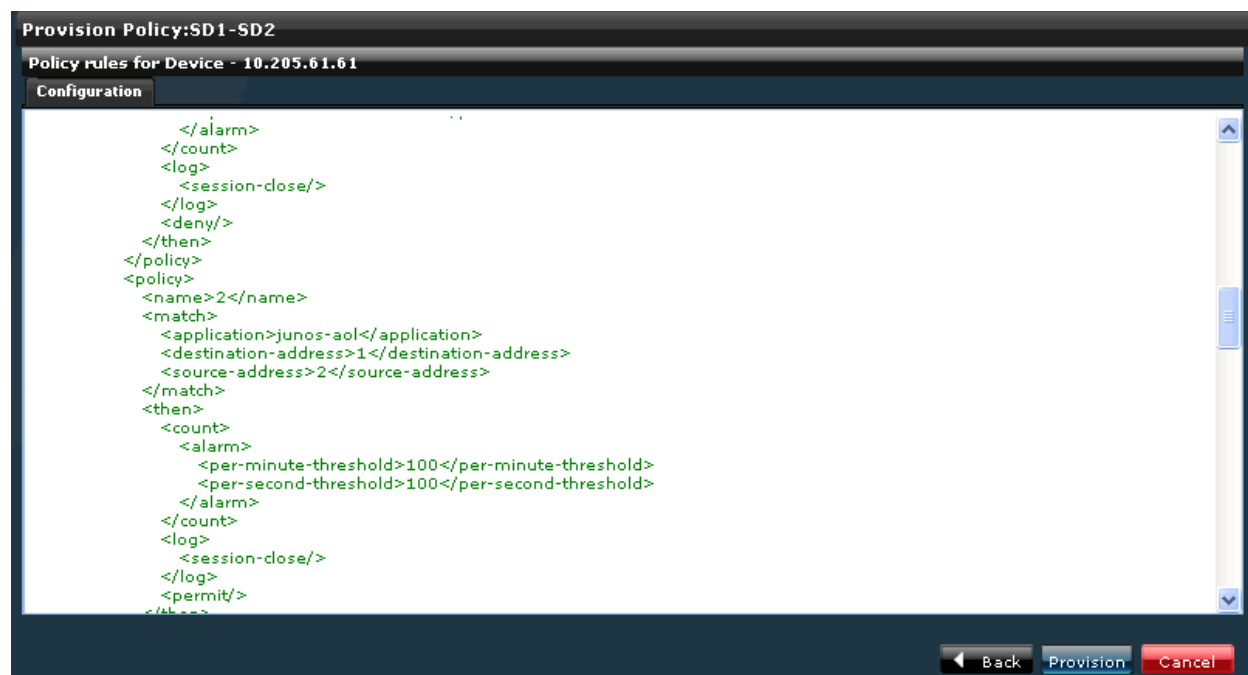
Date and Time: 07/29/10 12:21 PM IST

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 32 on page 75.

Figure 32: 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 6 on page 76.

Table 6: 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 66

- Creating Security Policies on page 68
- Managing Security Policies on page 77
- Decommissioning Security Policies on page 79

## Managing Security Policies

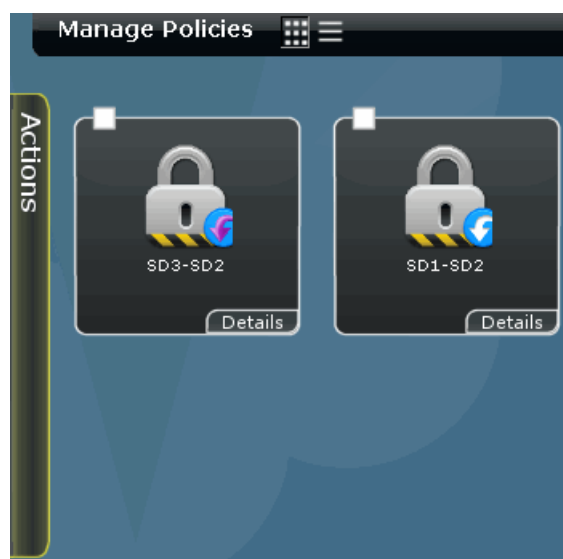
You can view, modify or delete security policies listed in the **Manage Policies** inventory panel.

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 33 on page 77. All security policies created are listed by default, in the tabular view.

**Figure 33: 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 78
2. Modifying a Security Policy on page 78
3. Deleting a Security Policy on page 78
4. Searching for a Security Policy on page 78

## 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 66
  - Creating Security Policies on page 68
  - Deploying Security Policies on page 74
  - Decommissioning Security Policies on page 79

## 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 34 on page 79.

Figure 34: Decommissioning a Security Policy

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>

Page 1 of 1

☒ Delete service after job succeeds

☒ Schedule at a later time

Date and Time: 07/07/10 1:54 PM IST

Decommission Cancel

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.

#### Related Topics

- Security Policies Overview on page 66
- Creating Security Policies on page 68
- Managing Security Policies on page 77
- Deploying Security Policies on page 74

## CHAPTER 10

# IPsec VPNs

- VPN Proposals Overview on page 81
- Creating VPN Proposals on page 82
- Managing VPN Proposals on page 86
- VPN Profiles Overview on page 90
- Creating VPN Profiles on page 90
- Managing VPN Profiles on page 96
- IPsec VPNs Overview on page 101
- Creating IPsec VPNs on page 101
- Deploying IPsec VPNs on page 105
- Managing IPsec VPNs on page 108
- Decommissioning IPsec VPNs on page 110

### VPN Proposals Overview

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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 7 on page 82.

Table 7: 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 82
- Managing VPN Proposals on page 86

## 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 35 on page 82. The first three proposals listed here are Juniper Networks defined VPN proposals.

Figure 35: 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 36 on page 83.

Figure 36: Create VPN Proposal Window

The screenshot shows the 'Create VPN Proposal' window. It features a title bar at the top. Below the title bar, there are two text input fields: 'Name:' and 'Description:'. Underneath these fields are two panels. The first panel is titled 'IKE Proposals (maximum 4)' and contains a large empty rectangular area for listing proposals. To the right of this area are three icons: a green plus sign, a pencil, and a red X. The second panel is titled 'IPSec Proposals (maximum 4)' and also contains a large empty rectangular area. It has the same three icons (green plus, pencil, red X) to its right. At the bottom of the window are two buttons: 'Create' and 'Cancel'.

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 37 on page 84.

**Figure 37: Adding a Custom IKE Proposal**

The screenshot shows the 'IKE Proposal' dialog box. It has two radio buttons: 'Predefined' and 'Custom'. The 'Custom' radio button is 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 38 on page 85.

Figure 38: Adding a Custom IPsec Proposal

The screenshot shows the 'IPsec Proposal' dialog box with the 'Custom' radio button selected. The fields are as follows:

- Name: [Empty text box]
- DH Group: [Please select ... dropdown menu]
- Authentication: [SHA-1 dropdown menu]
- Protocol: [Please select ... dropdown menu]
- Encryption: [3DES dropdown menu]
- Life Time (in seconds): [28800 text box]
- Life Size (in KBs): [Empty text box]

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 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 81
  - Managing VPN Proposals on page 86

---

## Managing VPN Proposals

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 86
2. Modifying a VPN Proposal on page 87
3. Deleting a VPN Proposal on page 88
4. Copying a VPN Proposal on page 89
5. Searching for a VPN Proposal on page 89

### 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 39 on page 87. The **VPN Proposal Details** window lists all the IKE and IPsec proposals used in this VPN proposal.



Figure 39: 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:

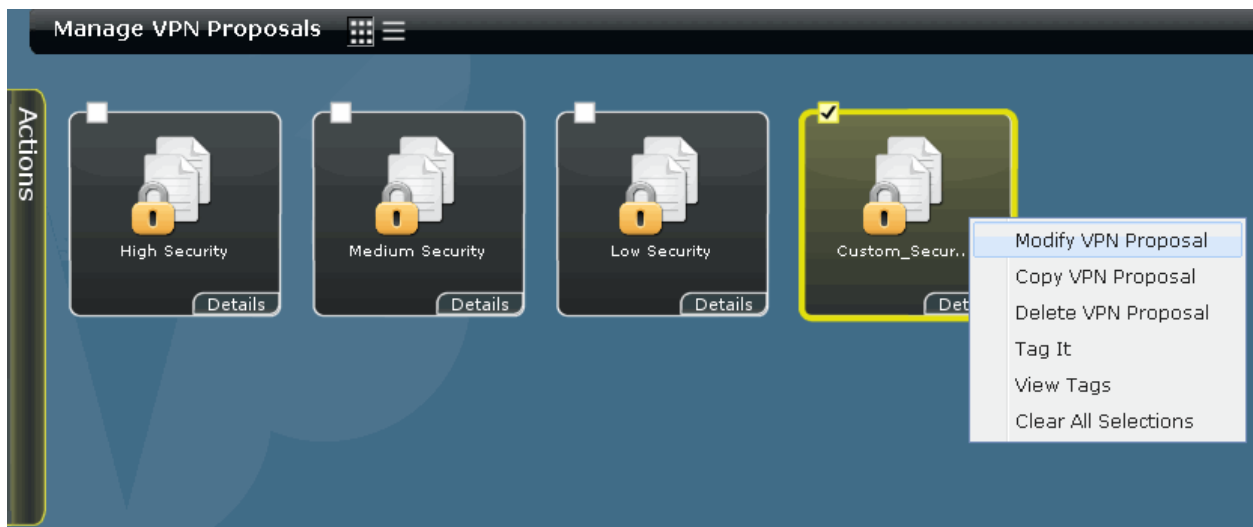
1. From the **Security Design** task ribbon, select **Security Whiteboard > IPsec VPN > VPN Proposal**.

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 40 on page 88.

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 40: 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

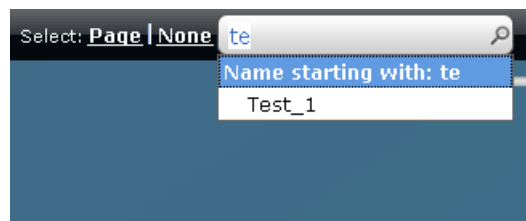
To search for a VPN proposal you have created:

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 41 on page 89.

Figure 41: 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 81
  - Creating VPN Proposals on page 82

## 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 90
  - Managing VPN Profiles on page 96

## 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 42 on page 91. The first two profiles listed here are Juniper Networks defined VPN profiles.

Figure 42: 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 43 on page 91.

Figure 43: Creating a VPN Profile

 The screenshot shows the 'General' panel of the 'Create VPN Profile' window. It has two main sections: 'General' and 'VPN Proposal'. 
   
 In the 'General' section, there are input fields for 'Name:', 'Type: Route Based', and 'Description:'.
   
 In the 'VPN Proposal' section, there are radio buttons for 'Predefined' (selected) and 'Custom'. Below them is a slider for 'Predefined Proposals:' with markers for 'High', 'Medium', and 'Low'.
   
 At the bottom of the window are four buttons: 'Back', 'Next', 'Finish', and 'Cancel'.

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

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

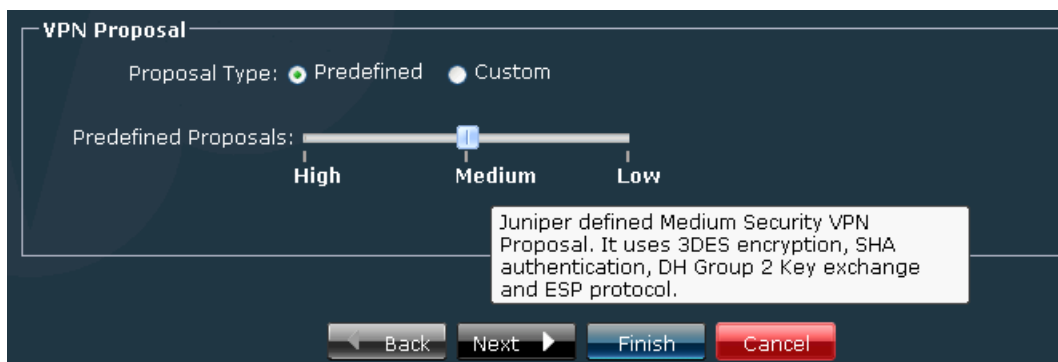
- Specifying the connectivity parameters

### 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 44 on page 92. Mouse over on 'High', 'Medium' and 'Low' markers to view a tool tip description about the respective predefined proposal.

Figure 44: Choosing a Default VPN Proposal



- 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 45 on page 93.

Figure 45: Choosing a Custom VPN Proposal

**VPN Proposal**

Proposal Type: ☐ Predefined ☒ Custom

Custom Proposals:

- 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 82.

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 46 on page 93.

Figure 46: Specifying IKE Settings

**IKE/IPsec Settings**

**IKE Settings**

Mode: ☒ Main ☐ Aggressive

IKE Identity:

Authentication: Preshared Key

Preshared Key: ☐ Auto Generate ☒ Manual

Key Phrase:

**IPSec Settings**

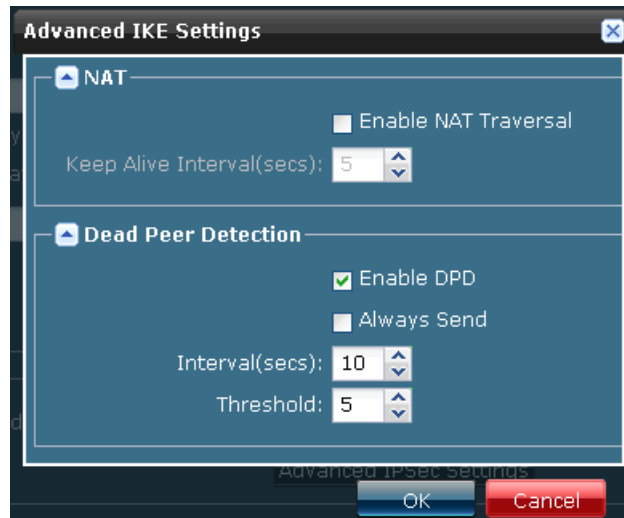
☐ Use Proxy Id

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 47 on page 94.

**Figure 47: 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**.

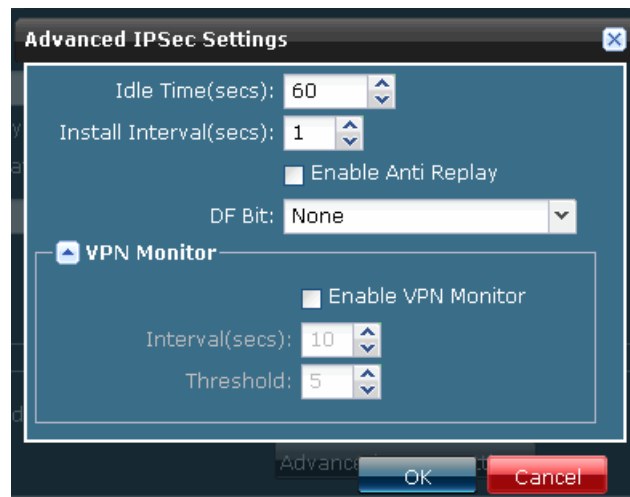


To specify the IPsec settings in the **IPsec Settings** section:

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 48 on page 95.

**Figure 48: 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**.

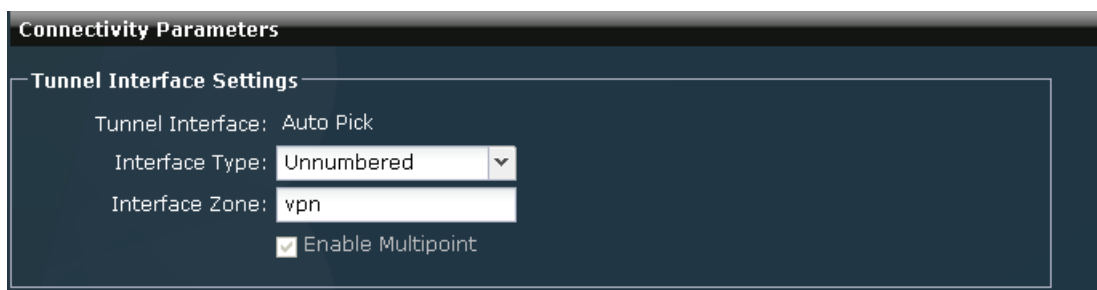
The **Connectivity Parameters** panel of the **Create VPN Profile** window is displayed.

### 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 49 on page 96.

**Figure 49: Specifying Connectivity Parameters**



The screenshot shows the **Connectivity Parameters** window. Under the **Tunnel Interface Settings** section, the **Tunnel Interface** is set to **Auto Pick**. The **Interface Type** is a drop-down menu currently showing **Unnumbered**. The **Interface Zone** is a text field containing **vpn**. There is a checked checkbox for **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 90](#)
  - [Managing VPN Profiles on page 96](#)

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## 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 97
2. Modifying a VPN Profile on page 98
3. Deleting a VPN Profile on page 99
4. Copying a VPN Profile on page 100
5. Searching for a VPN Profile on page 100

## 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 50 on page 98.

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

Figure 50: Viewing the Details of a VPN Profile

The screenshot shows a window titled "VPN Profile Settings" with a close button in the top right corner. The window contains four expandable sections:

- General Settings:**
  - Name: VPN\_Profile1
  - Type: Route Based
  - Description:
  - VPN Proposal: Medium Security
- IKE Settings:** (Collapsed)
- IPSec Settings:** (Collapsed)
- Tunnel Settings:**
  - Tunnel Interface: Auto Pick
  - Tunnel Interface: UNNUMBERED
  - Tunnel Interface Type: vpn
  - Tunnel Interface Zone:
  - ☒ Enable MultiPoint

A "Close" button is located at the bottom center of the window.

## 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 51 on page 99.

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 51: 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

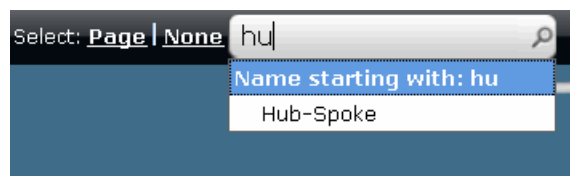
To search for a VPN profile you have created:

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 52 on page 100.

**Figure 52: 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 90
  - Creating VPN Profiles on page 90

## 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 101
  - Managing IPsec VPNs on page 108
  - Deploying IPsec VPNs on page 105
  - Decommissioning IPsec VPNs on page 110

## 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 53 on page 102.

Figure 53: Create IPsec VPN:General Panel

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 103
2. Hub-And-Spoke on page 104

## 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.

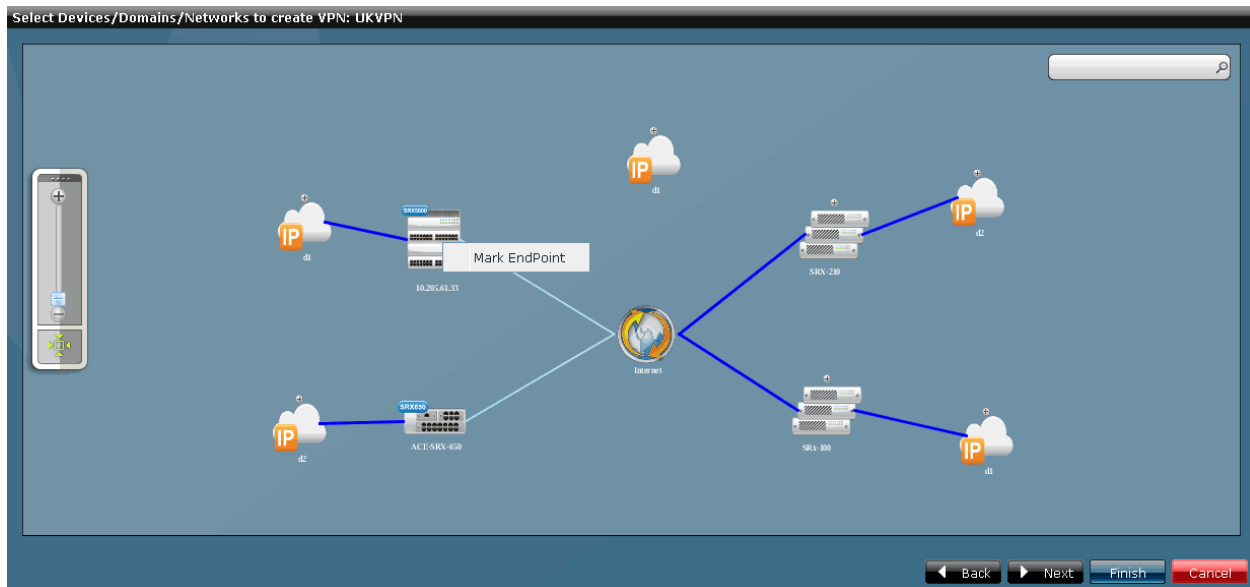
The new VPN you have created is displayed in the **Manage VPNs** inventory panel.

## 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 54 on page 104.

Figure 54: 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.

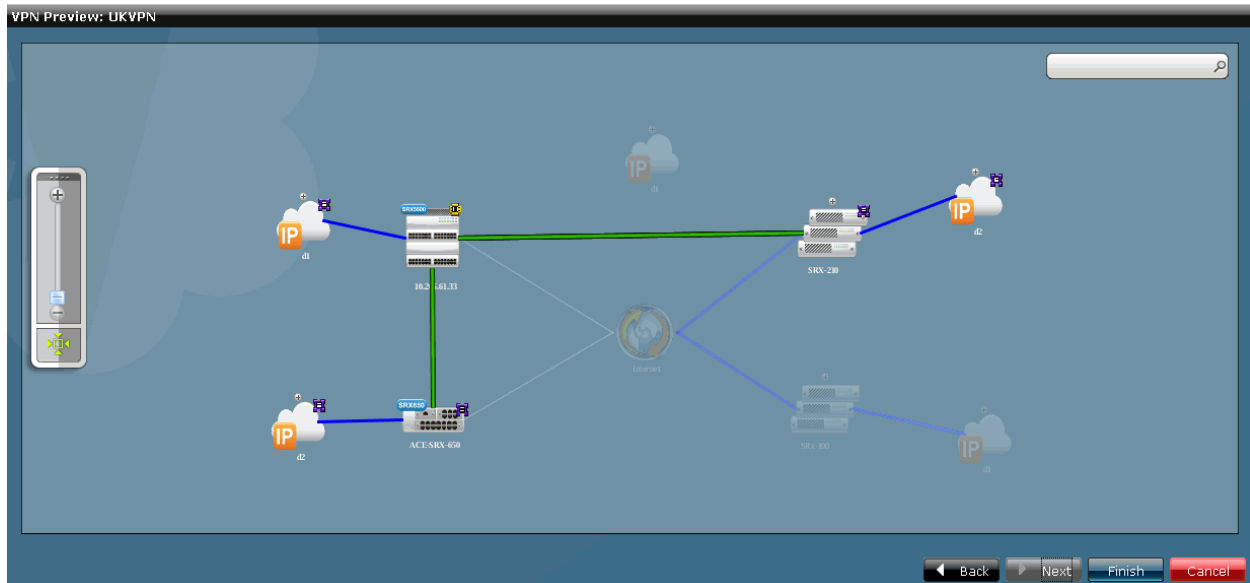
2. Right-click the device or the network that is the second spoke of the VPN and select **Mark Endpoint** from the contextual menu.
3. Right-click the device or the network that is the third spoke of the VPN and select **Mark Endpoint** from the contextual menu.
4. Right-click the spoke that you intend 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 55 on page 105.

Figure 55: 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 101
  - Managing IPsec VPNs on page 108
  - Deploying IPsec VPNs on page 105
  - Decommissioning IPsec VPNs on page 110

## 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 56 on page 106.

Figure 56: 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.

- 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 57 on page 106.

Figure 57: Viewing XML Commands

```

VPN configuration for device - 10.205.61.33
Configuration
<?xml version="1.0" encoding="UTF-8"?>
<configuration>
  <interfaces>
    <interface>
      <name>st0</name>
      <unit operation="create">
        <name>2</name>
        <family>
          <inet/>
        </family>
      </unit>
    </interface>
  </interfaces>
  <routing-options>
    <static>
      <route operation="create">
        <name>2.2.2.2/32</name>
        <next-hop>st0.2</next-hop>
      </route>
    </static>
  </routing-options>
  <security>
    <ike>
      <policy operation="create">
        <name>London_VPN_Site-To-Site_0_0</name>
        <proposals>g5-aes128-sha2</proposals>
        <proposals>g5-aes192-sha2</proposals>
        <proposals>g5-aes256-sha2</proposals>
        <mode>main</mode>
        <pre-shared-key>

```

- Select the check box next to the **Schedule Provisioning** field to schedule the provisioning to a later time and date.
- Select appropriate values from the **Date and Time** field.
- 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.

- 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.





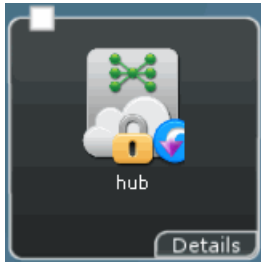
**NOTE:** You can also choose to provision a VPN using the **Actions Panel**. To do so:

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 8 on page 108.

Table 8: IPsec VPN Provision States

State	Overlay Icon
Provisioned	 The icon shows a dark square with a small white tab in the top-left corner. Inside, there's a green double-headed arrow at the top, a white cloud with a yellow padlock in the center, and a blue circular icon with a white 'P' on the right. The word 'site' is written below the cloud. A 'Details' button is in the bottom-right corner.
Not Provisioned	 The icon is similar to the 'Provisioned' state but features a blue circular icon with a white lightning bolt instead of a 'P'. The word 'new' is written below the cloud. A 'Details' button is in the bottom-right corner.
Partially Provisioned	 The icon shows a green double-headed arrow at the top, a white cloud with a yellow padlock in the center, and a blue circular icon with a white 'P' on the right. The word 'hub' is written below the cloud. A 'Details' button is in the bottom-right corner.

- Related Topics**
- IPsec VPNs Overview on page 101
  - Creating IPsec VPNs on page 101
  - Managing IPsec VPNs on page 108
  - Decommissioning IPsec VPNs on page 110

## 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 109
2. Deleting an IPsec VPN on page 109

## 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 101
- [Creating IPSec VPNs](#) on page 101
- [Deploying IPSec VPNs](#) on page 105

- Decommissioning IPsec VPNs on page 110

## 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 58 on page 110.

Figure 58: 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" which is currently unchecked. Below that is a checkbox labeled "Schedule at a later time" which is also unchecked, followed by a text input field. At the bottom right, there are two buttons: "Decommission" (blue) and "Cancel" (red).

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 101](#)
  - [Creating IPSec VPNs on page 101](#)
  - [Managing IPSec VPNs on page 108](#)
  - [Deploying IPSec VPNs on page 105](#)



## PART 5

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