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Junos<sup>®</sup> Space

## Security Director Application Guide

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#### YEAR 2000 NOTICE

Juniper Networks hardware and software products are Year 2000 compliant. The Junos OS has no known time-related limitations through the 2038. However, the NTP application is known to have some difficulty in the year 2036.

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## Junos Space Documentation and Release Notes

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

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

To obtain the most current version of all Juniper Networks® technical documentation, see the product documentation page on the Juniper Networks website at <http://www.juniper.net/techpubs/>.

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 xxv](#) defines the text and syntax conventions used in this guide.

Table 1: Text and Syntax Conventions

Convention	Description	Examples
<b>Bold text like this</b>	Represents text that you type.	To enter configuration mode, type the <b>configure</b> command:  user@host> <b>configure</b>

Table 1: Text and Syntax Conventions (*continued*)

Convention	Description	Examples
Fixed-width text like this	Represents output that appears on the terminal screen.	user@host> <b>show chassis alarms</b>  No alarms currently active
<i>Italic text like this</i>	<ul style="list-style-type: none"><li>Introduces or emphasizes important new terms.</li><li>Identifies guide names.</li><li>Identifies RFC and Internet draft titles.</li></ul>	<ul style="list-style-type: none"><li>A policy <i>term</i> is a named structure that defines match conditions and actions.</li><li><i>Junos OS CLI User Guide</i></li><li>RFC 1997, <i>BGP Communities Attribute</i></li></ul>
<i>Italic text like this</i>	Represents variables (options for which you substitute a value) in commands or configuration statements.	Configure the machine's domain name:  [edit] root@# <b>set system domain-name</b> <i>domain-name</i>
Text like this	Represents names of configuration statements, commands, files, and directories; configuration hierarchy levels; or labels on routing platform components.	<ul style="list-style-type: none"><li>To configure a stub area, include the <b>stub</b> statement at the [edit protocols ospf area area-id] hierarchy level.</li><li>The console port is labeled <b>CONSOLE</b>.</li></ul>
< > (angle brackets)	Encloses optional keywords or variables.	<b>stub &lt;default-metric <i>metric</i>&gt;;</b>
(pipe symbol)	Indicates a choice between the mutually exclusive keywords or variables on either side of the symbol. The set of choices is often enclosed in parentheses for clarity.	<b>broadcast   multicast</b>  <b>(<i>string1</i>   <i>string2</i>   <i>string3</i>)</b>
# (pound sign)	Indicates a comment specified on the same line as the configuration statement to which it applies.	<b>rsvp { # Required for dynamic MPLS only</b>
[ ] (square brackets)	Encloses a variable for which you can substitute one or more values.	<b>community name members [</b> <b><i>community-ids</i> ]</b>
Indentation and braces ( { } )	Identifies a level in the configuration hierarchy.	[edit] routing-options { static { route default { nexthop <i>address</i> ; retain; } } }
;(semicolon)	Identifies a leaf statement at a configuration hierarchy level.	
GUI Conventions		
Bold text like this	Represents graphical user interface (GUI) items you click or select.	<ul style="list-style-type: none"><li>In the Logical Interfaces box, select <b>All Interfaces</b>.</li><li>To cancel the configuration, click <b>Cancel</b>.</li></ul>

Table 1: Text and Syntax Conventions (*continued*)

Convention	Description	Examples
> (bold right angle bracket)	Separates levels in a hierarchy of menu selections.	In the configuration editor hierarchy, select <b>Protocols&gt;Ospf</b> .

## Documentation Feedback

We encourage you to provide feedback, comments, and suggestions so that we can improve the documentation. You can provide feedback by using either of the following methods:

- Online feedback rating system—On any page at the Juniper Networks Technical Documentation site at <http://www.juniper.net/techpubs/index.html>, simply click the stars to rate the content, and use the pop-up form to provide us with information about your experience. Alternately, you can use the online feedback form at <https://www.juniper.net/cgi-bin/docbugreport/>.
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## 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/>.
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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:

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- Search for known bugs: <http://www2.juniper.net/kb/>
- Find product documentation: <http://www.juniper.net/techpubs/>
- Find solutions and answer questions using our Knowledge Base: <http://kb.juniper.net/>

- Download the latest versions of software and review release notes:  
<http://www.juniper.net/customers/csc/software/>
- Search technical bulletins for relevant hardware and software notifications:  
<http://kb.juniper.net/InfoCenter/>
- 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 Director Overview

- [Security Director Overview on page 3](#)
- [Security Director Dashboard on page 7](#)
- [Logging and Reporting Dashboard on page 11](#)



## CHAPTER 1

# Security Director Overview

- [Security Director Overview on page 3](#)

## Security Director Overview

---

Security Director is a Junos Space application that you can use to design your network security using a quick and easy approach. With Security Director, you can create IPsec VPNs, firewall policies, NAT policies, and IPS configurations and push them to your security devices. These configurations use objects such as addresses, services, NAT pools, application signatures, policy profiles, VPN profiles, template definitions, and templates. These objects can be shared across multiple security configurations. You can create these objects prior to creating security configurations.

Firewall policy, NAT policy, and IPS policy can be created and managed in Tabular view. You can easily add new rules to the policies and choose to override policy-inherited settings by customizing the settings at a per-rule level. After you have added the rules to the policy, you can reorder these rules based on priority, or group these rules for easy identification and modify them at a later time. A unified user interface approach for firewall, NAT, and IPS policies helps you reduce the learning time required to create different security configurations.

Security Director allows you to create site-to-site, hub-and-spoke, and full-mesh IPsec VPNs. The IPsec VPN creation interface allows you to define the Phase 1 and Phase 2 settings of the VPN. All VPNs created using Security Director can be viewed in Tabular view. You can also modify the settings at a per-VPN level or per-device level in a VPN.

You can periodically download the latest version of application signatures and IPS signatures from a URL provided by Juniper Networks. You can install these signatures on security devices that have an IPS-related license installed. You can then use application signatures and IPS signatures when creating firewall policy configurations. Security Director also lets you create your own customized signature sets. All application firewall and IPS configurations are pushed to the devices when the firewall policy in which they are used is pushed to the devices.

When you finish creating and verifying your security configurations, you can publish these configurations and keep them ready to be pushed to the security devices. Security Director helps you push all the security configurations to the devices all at once by providing a single interface that is intuitive. You can select all security devices that you are using on the network and push all security configurations to these devices.

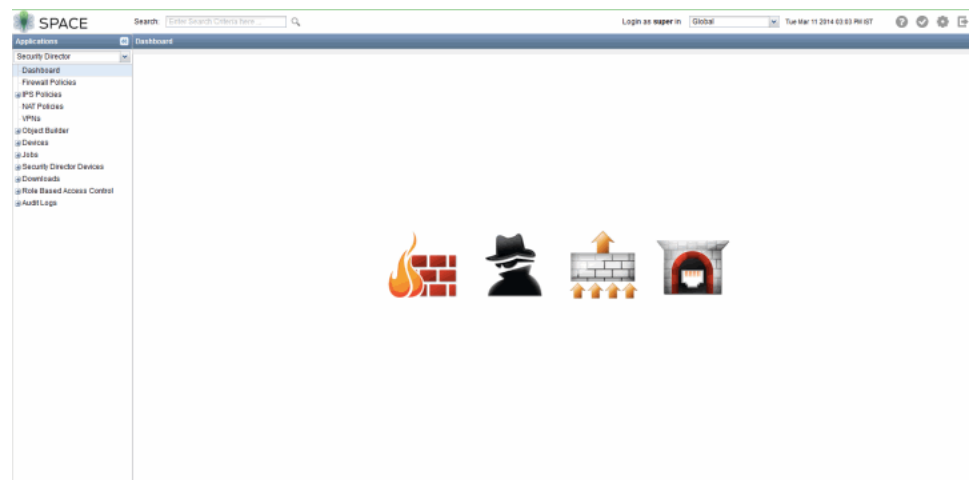
A set of gadgets displayed on the dashboard graphically illustrates the critical elements related to your security configurations. These gadgets help you keep track of the objects created and their usage across security configurations.

The Security Director application is divided into seven workspaces, which include Object Builder, Firewall Policy, NAT Policy, VPN, Downloads, IPS Management, and Security Director Devices.

- Object Builder—A workspace to create objects used for firewall policy, NAT policy, and VPN configurations.
- Firewall Policy—A workspace to create and publish firewall policies on supported devices.
- NAT Policy—A workspace to create and publish NAT policies on supported devices.
- VPN—A workspace to create site-to-site, hub-and-spoke, and full-mesh IPsec VPNs.
- Downloads—A workspace to download and install signatures.
- IPS Management—A workspace to create and manage IPS signatures, signature sets, and IPS policies.
- Security Director Devices—A workspace to update the configurations on the devices.

Figure 1 on page 4 displays the Security Director home page.

**Figure 1: Security Director Home Page**



Some of the global features available with Security Director include:

- Create unique labels for objects and security configurations using the Tagging feature for easier identification.
- Search objects and security configurations from a single search interface.
- Verify and tweak your security configurations before pushing them to the device by viewing the CLI and XML version of the configuration in the Publish workflow. This



approach helps you keep the configurations ready and push these configurations to the devices during the maintenance window.

- Quickly clone objects and policy-related security configurations to save time and effort in creating new objects and configurations.



**NOTE:** Ensure that the exact matching of Junos OS schema is installed on the Junos Space Platform before you start using Security Director features. If there is a mismatch, the following warning message is displayed during the publish preview workflow, as shown in [Figure 2 on page 5](#).

**Figure 2: Junos OS schema Mismatch Warning Message**



**Related Documentation**

- [Security Director Dashboard on page 7](#)



## CHAPTER 2

# Security Director Dashboard

- [Security Director Dashboard on page 7](#)

## Security Director Dashboard

[Table 2 on page 7](#) lists the workspaces on the Security Director dashboard. This is the default dashboard of Security Director.

**Table 2: Security Director Workspaces**





Icons	Workspace Name	Tasks
	Firewall Policy	Create, manage, and publish firewall policies.
	IPS Policy	Create and manage IPS signatures, IPS signature sets, and IPS policies.
	NAT Policy	Create, manage, and publish NAT policies.
	VPN	Create, manage, and publish VPNs.
—	Object Builder	Create, modify, delete, and clone addresses, services, policy profiles, VPN profiles, application signatures, templates, template definitions, templates, and NAT pools.
—	Devices	Manage, discover, and add devices.
—	Job Management	Manage and view job status.
—	Security Director Devices	Update the devices with firewall policies, NAT policies, and VPN configurations.
—	Downloads	Download AppFirewall and IPS signatures.

Table 2: Security Director Workspaces (*continued*)

Icons	Workspace Name	Tasks
—	Audit Logs	View audit logs by task, user, workspace, and application.

The Security Director dashboard has 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 Director application. The gadgets displayed on the Security Director dashboard are shown in the figures that follow.

Figure 3 on page 8 shows the Object Count gadget. This gadget shows the number of objects that are created from the Object Builder workspace. You can use this gadget to keep track of the objects available to create a security topology, IPsec VPNs, or security policies.

Figure 3: Object Count Gadget

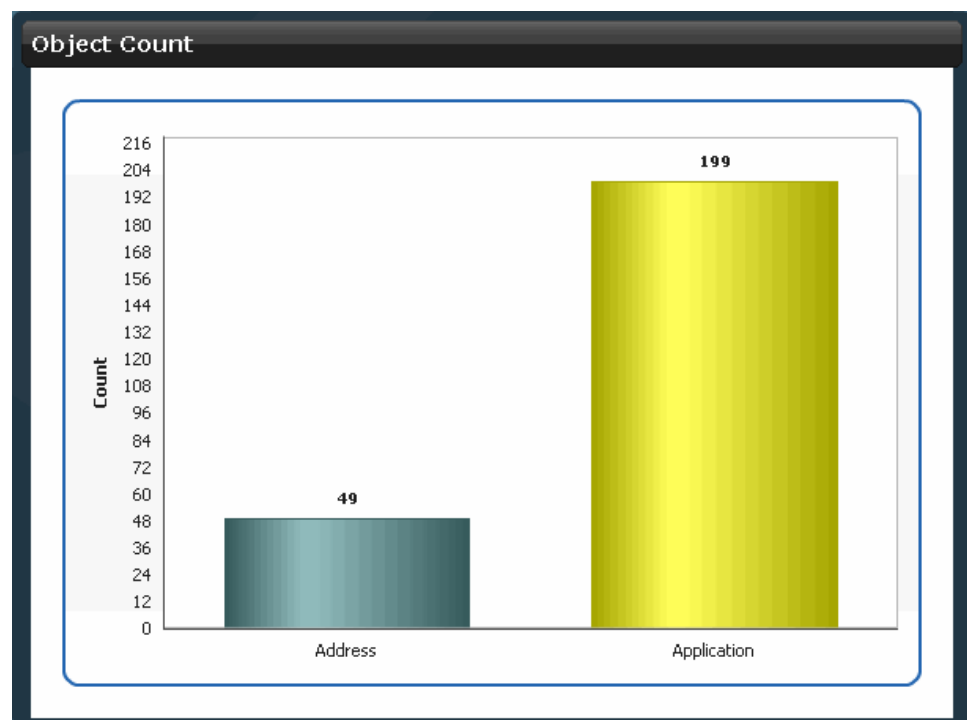
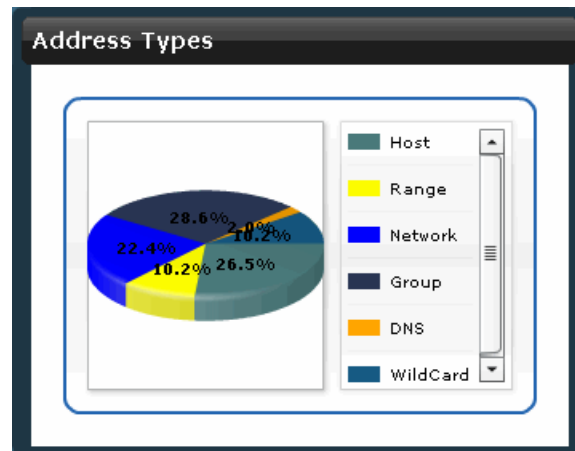


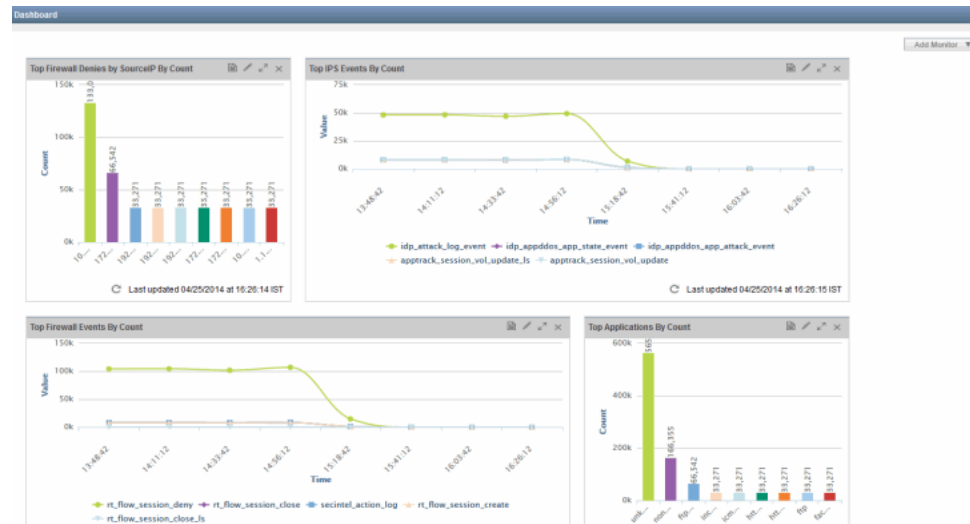
Figure 4 on page 9 shows the Address Types gadget. This gadget shows the different address types created using the Address Creation Wizard.

Figure 4: Address Types Gadgets



If Security Director is installed with Junos Space Log Director application, the Security Director dashboard is replaced with the logging and reporting, as shown in Figure 5 on page 9

Figure 5: Security Director Dashboard with Logging and Reporting



The new dashboard provides a unified view of the system and network status as retrieved from SRX Series Services Gateway firewalls. In addition to a default logging and reporting dashboard, you can define supported monitoring graphs that can be part of a dashboard. You can customize the dashboard as per the domain Role Based Access Control and changes are reflected to all users within the domain.



## CHAPTER 3

# Logging and Reporting Dashboard

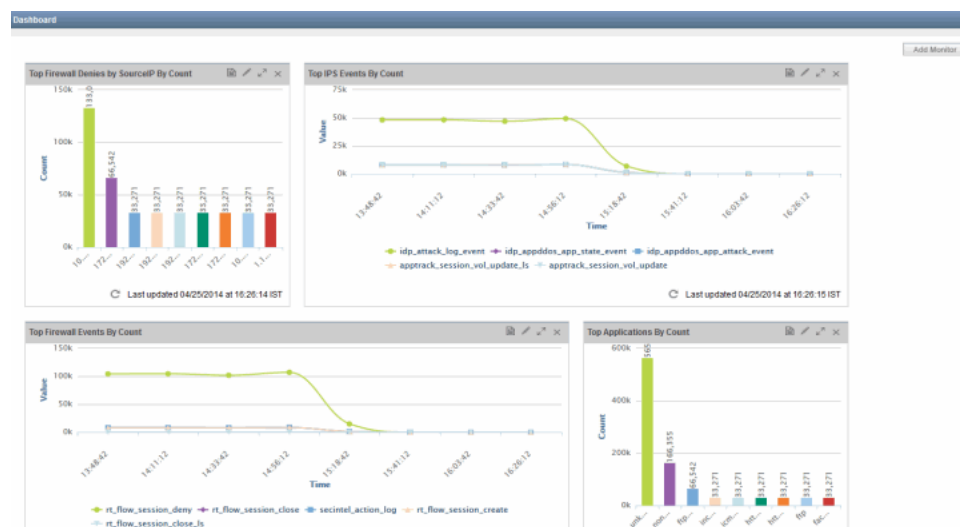
- [Logging and Reporting Dashboard Overview on page 11](#)
- [Understanding the Default Dashboard for Logging and Reporting on page 12](#)
- [Creating a Dashboard Monitor on page 15](#)
- [Managing Dashboard Monitors on page 20](#)

## Logging and Reporting Dashboard Overview

The Junos Space Security Director Logging and Reporting dashboard provides a unified overview of the system and network status retrieved from SRX Series Services Gateway firewalls.

When you install the Junos Space Security Director with Junos Space Log Director application, the new Junos Space Log Director dashboard is displayed, as shown in [Figure 6 on page 11](#)

**Figure 6: Security Director Logging and Reporting Dashboard**



To display the dashboard, select **Security Director > Dashboard** on the Security Director application tree on the left hand side.

You can create a dashboard monitor to meet your requirements. For example, a monitor can display a graph with top 10 applications accessed using VPN in the last 3 hours or the number of logins to devices in the last 10 minutes.

Using the dashboard, you can:

- Refresh monitors independently
- Edit monitors
- Delete monitors
- Maximize the monitors to provide a full-screen view
- Navigate to the event viewer page from an event-based monitor.

The dashboard page automatically adjusts the placement of the monitors to dynamically fit on the browser window without changing the order of the monitors. You can manually reorder the monitors using the drag and drop option. The monitors that you create are automatically placed at the end of the default monitors on the dashboard page.

## Understanding Role-Based Access Control for the Dashboard

Role-based access control (RBAC) has the following impact on the dashboard:

- You can create or edit monitors within a dashboard only if you have **EditDashboard** permissions.

### Related Documentation

- [Understanding the Default Dashboard for Logging and Reporting on page 12](#)
- [Creating a Dashboard Monitor on page 15](#)
- [Managing Dashboard Monitors on page 20](#)

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## Understanding the Default Dashboard for Logging and Reporting

Junos Space Security Director Logging and Reporting provides a default dashboard. Dashboard monitors that you create are automatically added under Add Monitor.

### Default Monitors for Default Dashboard

The default dashboard provides five default monitors:

- Event-based
- CPU utilization
- Memory utilization
- Device health
- VPN status

[Table 3 on page 13](#) provides the details of the default dashboard monitor parameters.



Table 3: Default Dashboard Monitor Parameters

Parameter	Value
<b>Top Firewall Denies by SourceIP by Count</b>	
Target	All firewalls denied
Group by	Source IP
Time Range	3 hours
Chart Type	Bar
Comparison	Disabled
Number to Display	Top 10
Interval	10 minutes
<b>Top IPS Events by Count</b>	
Target	All IPS events—Event category = IPS
Group by	Event type
Time Range	3 hours
Chart Type	Time series
Comparison	Disabled
Number to Display	Top 5
Interval	10 minutes
<b>Top Firewall Events by Count</b>	
Target	All firewall events—Event category=FWALL
Group by	Event type
Time Range	3 hours
Chart Type	Time series
Comparison	Disabled
Number to Display	Top 5
Interval	10 minutes
<b>Top Applications by Count</b>	

**Table 3: Default Dashboard Monitor Parameters** (*continued*)

Parameter	Value
Target	All events
Group by	Application
Time Range	3 hours
Chart Type	Bar
Comparison	Disabled
Number to Display	Top 10
Interval	10 minutes
<b>Top Destination IPs by Count</b>	
Target	All events
Group by	Destination IP
Time Range	3 hours
Chart Type	Bar
Comparison	Disabled
Number to Display	Top 10
Interval	10 minutes
<b>Top Source IPs by Count</b>	
Target	All events
Group by	Source IP
Time Range	3 hours
Chart Type	Bar
Comparison	Disabled
Number to Display	Top 10
Interval	10 minutes

**Related  
Documentation**

- [Logging and Reporting Dashboard Overview on page 11](#)

- [Creating a Dashboard Monitor on page 15](#)
- [Managing Dashboard Monitors on page 20](#)

## Creating a Dashboard Monitor

You can create a dashboard monitor using the option **Add Monitor**. This topic covers the following sections:

- [Creating the Event Based Monitor on page 15](#)
- [Creating the CPU Utilization Monitor on page 17](#)
- [Creating the Memory Utilization Monitor on page 17](#)
- [Creating the Device Health Monitor on page 18](#)
- [Creating the VPN Status Monitor on page 19](#)

### Creating the Event Based Monitor

To create an event-based monitor:

1. On the right side of the dashboard, click **Add Monitor>Event Based**.
2. Enter the following details:

Parameters	Description
<b>General</b>	
Name	Specifies the unique name of the monitor.
Description	Specifies the short description of the monitor.
<b>Data</b>	
Filter	<p>Specifies the list of default and user-created filters. The available options are:</p> <ul style="list-style-type: none"> <li>• None</li> <li>• TopApplication</li> <li>• TopFWDenied</li> <li>• TopSourceIPs</li> <li>• TopFireWallEvents</li> <li>• TopDestinationIPs</li> <li>• TopIPSEvents</li> </ul>

Parameters	Description
Group by	<p>Specifies the aggregation parameter based on the filter. The available options are:</p> <ul style="list-style-type: none"> <li>• None</li> <li>• SourceIP</li> <li>• DestinationIP</li> <li>• SourcePort</li> <li>• DestinationPort</li> <li>• Eventname</li> <li>• Username</li> <li>• Appname</li> <li>• Servicename</li> <li>• Logsource</li> <li>• Attackname</li> </ul>
Time range	<p>Specifies how long the data is displayed. The available options are:</p> <ul style="list-style-type: none"> <li>• 15 mins</li> <li>• 30 mins</li> <li>• 1 hour</li> <li>• 3 hours</li> <li>• 12 hours</li> <li>• 1 day</li> <li>• 7 days</li> </ul>
Auto refresh interval	<p>Specifies the auto-refresh interval. The available options are:</p> <ul style="list-style-type: none"> <li>• 5 minutes</li> <li>• 10 minutes</li> <li>• 15 minutes</li> <li>• 20 minutes</li> </ul>
<b>Display</b>	
Chart Type	<p>Specifies the chart used to display the data. The available options are:</p> <ul style="list-style-type: none"> <li>• Time series</li> <li>• Bar</li> <li>• List</li> </ul>
Number to display	<p>Specifies the number of logs to be displayed. The available options are:</p> <ul style="list-style-type: none"> <li>• Top 1</li> <li>• Top 5</li> <li>• Top 10</li> </ul>

### 3. Click **Create**.

The event-based monitor is created.

## Creating the CPU Utilization Monitor

To create the CPU utilization monitor:

1. On the right side of the dashboard, click **Add Monitor>CPU Utilization**.
2. Enter the following details:

Parameters	Description
<b>General</b>	
Name	Specifies the unique name of the monitor.
Description	Specifies the short description of the monitor.
<b>Data</b>	
Available/Selected	Specifies the devices that are available and can be added. The number of devices you can add is 10.
Time range	Specifies how long the data is displayed. The available options are: <ul style="list-style-type: none"> <li>• 15 mins</li> <li>• 30 mins</li> <li>• 1 hour</li> <li>• 3 hours</li> <li>• 12 hours</li> <li>• 1 day</li> <li>• 7 days</li> </ul>
Auto refresh interval	Specifies the auto-refresh interval. The available options are: <ul style="list-style-type: none"> <li>• 5 minutes</li> <li>• 10 minutes</li> <li>• 15 minutes</li> <li>• 20 minutes</li> </ul>

3. Click **Create**.

The CPU utilization monitor is created.

## Creating the Memory Utilization Monitor

To create the memory utilization monitor:

1. On the right side of the dashboard, click **Add Monitor>Memory Utilization**.

## 2. Enter the following details:

Parameters	Description
<b>General</b>	
Name	Specifies the unique name of the monitor.
Description	Specifies the short description of the monitor.
<b>Data</b>	
Available/Selected	Specifies the devices that are available and can be added. The number of devices you can add is 10.
Time range	Specifies how long the data is displayed. The available options are: <ul style="list-style-type: none"> <li>• 15 mins</li> <li>• 30 mins</li> <li>• 1 hour</li> <li>• 3 hours</li> <li>• 12 hours</li> <li>• 1 day</li> <li>• 7 days</li> </ul>
Auto refresh interval	Specifies the auto-refresh interval. The available options are: <ul style="list-style-type: none"> <li>• 5 minutes</li> <li>• 10 minutes</li> <li>• 15 minutes</li> <li>• 20 minutes</li> </ul>

3. Click **Create**.

The CPU utilization monitor is created.

## Creating the Device Health Monitor

To create the device health monitor:

1. On the right side of the dashboard, click **Add Monitor>Device Health**.
2. Enter the following details:

Parameters	Description
<b>General</b>	
Name	Specifies the unique name of the monitor.
Description	Specifies the short description of the monitor.

Parameters	Description
<b>Data</b>	
Available/Selected	Specifies the devices that are available and can be added. The number of devices you can add is 25.
Time range	<p>Specifies how long the data is displayed. The available options are:</p> <ul style="list-style-type: none"> <li>• 15 mins</li> <li>• 30 mins</li> <li>• 1 hour</li> <li>• 3 hours</li> <li>• 12 hours</li> <li>• 1 day</li> <li>• 7 days</li> </ul>
Auto refresh interval	<p>Specifies the auto-refresh interval. The available options are:</p> <ul style="list-style-type: none"> <li>• 5 minutes</li> <li>• 10 minutes</li> <li>• 15 minutes</li> <li>• 20 minutes</li> </ul>

3. Click **Create**.

The device health monitor is created.



**NOTE:** Device health monitors, will always display the latest CPU/memory information available in the selected time range for a particular device. For Example: If the selected range is 30 minutes, the latest CPU/memory data point for that device in 30 minutes.

## Creating the VPN Status Monitor

To create the VPN status monitor:

1. On the right side of the dashboard, click **Add Monitor>VPN Status**.
2. Enter the following details:

Parameters	Description
<b>General</b>	
Name	Specifies the unique name of the monitor.
Description	Specifies the short description of the monitor.
<b>Data</b>	

Parameters	Description
Time range	<p>Specifies how long the data is displayed. The available options are:</p> <ul style="list-style-type: none"><li>• 15 mins</li><li>• 30 mins</li><li>• 1 hour</li><li>• 3 hours</li><li>• 12 hours</li><li>• 1 day</li><li>• 7 days</li></ul>
Auto refresh interval	<p>Specifies the auto-refresh interval. The available options are:</p> <ul style="list-style-type: none"><li>• 5 minutes</li><li>• 10 minutes</li><li>• 15 minutes</li><li>• 20 minutes</li></ul>

3. Click **Create**.

The VPN status monitor is created.

**Related  
Documentation**

- [Logging and Reporting Dashboard Overview on page 11](#)
- [Understanding the Default Dashboard for Logging and Reporting on page 12](#)
- [Managing Dashboard Monitors on page 20](#)

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## Managing Dashboard Monitors

You can edit, save, delete the dashboard monitors and the dashboard.

- [Using the Dashboard Monitors on page 20](#)

### Using the Dashboard Monitors

To use the monitors on the dashboard:

1. From the left navigation tree on the dashboard, select **Security Director > Dashboard**.  
The Dashboard is displayed.
2. Click one of the following options:
  - Jump to:
    - Event Viewer—Navigates to the Event Viewer page.
    - Device Management—Navigates to the Device Management page from the CPU utilization, memory utilization, and device health monitors.



- VPN Management—Navigates to the VPN Management page.
- Edit monitor—Edits the dashboard monitor.



**NOTE:** The Edit Monitor page contains all available options for creating monitors.

- Maximize monitor—Maximizes the dashboard monitor.
- Delete monitor—Deletes the dashboard monitor.
- Refresh monitor—Refreshes the dashboard monitor.

**Related  
Documentation**

- [Logging and Reporting Dashboard Overview on page 11](#)
- [Understanding the Default Dashboard for Logging and Reporting on page 12](#)
- [Creating a Dashboard Monitor on page 15](#)

**Related  
Documentation**

- [Logging and Reporting Dashboard Overview on page 11](#)
- [Understanding the Default Dashboard for Logging and Reporting on page 12](#)
- [Creating a Dashboard Monitor on page 15](#)
- [Managing Dashboard Monitors on page 20](#)



## PART 2

# Getting Started

- [Getting Started with Security Director on page 25](#)



## CHAPTER 4

# Getting Started with Security Director

- [Getting Started on page 25](#)

## Getting Started

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The Getting Started assistant provides instructions on how to perform tasks related to a firewall policy, a NAT policy, a VPN, an IPS configuration, and an AppFirewall configuration in Security Director.

The Getting Started section displays instructions on how to perform the following tasks:

1. [Provisioning Firewall Policies on page 25](#)
2. [Provisioning NAT Policies on page 25](#)
3. [Provisioning IPsec VPNs on page 26](#)
4. [IPS Management on page 26](#)
5. [AppFW Management on page 26](#)

## Provisioning Firewall Policies

To provision firewall policies:

1. Discover devices. See “Discovering Devices” section in the *Junos Space Network Application Platform User Guide*.
2. Create addresses. See “[Creating Addresses](#)” on page 93.
3. Create a policy profile. See “[Creating Policy Profiles](#)” on page 206.
4. Create a service. See “[Creating Services](#)” on page 80.
5. Create firewall policies. See “[Creating Firewall Policies](#)” on page 131.
6. Publish firewall policies. See “[Publishing Firewall Policies](#)” on page 161
7. Update devices. See “[Updating Devices with Pending Services](#)” on page 455.

## Provisioning NAT Policies

To provision NAT policies:

1. Discover devices. See “Discovering Devices” section in the *Junos Space Network Application Platform User Guide*.
2. Create addresses. See “[Creating Addresses](#)” on page 93.
3. Create firewall policies. See “[Creating Firewall Policies](#)” on page 131.
4. Publish firewall policies. See “[Publishing Firewall Policies](#)” on page 161
5. Create NAT pools. See “[Creating NAT Pools](#)” on page 348
6. Create NAT policies. See “[Creating NAT Policies](#)” on page 305.
7. Publishing NAT policies. See “[Publishing NAT Policies](#)” on page 329
8. Update devices. See “[Updating Devices with Pending Services](#)” on page 455.

## Provisioning IPsec VPNs

To provision IPsec VPNs:

1. Discover devices. See “Discovering Devices” section in the *Junos Space Network Application Platform User Guide*.
2. Create addresses. See “[Creating Addresses](#)” on page 93.
3. Create a VPN profile. See “[Creating VPN Profiles](#)” on page 244.
4. Create an IPsec VPN. See “[Creating IPsec VPNs](#)” on page 221.
5. Publish the IPsec VPN. See “[Publishing IPsec VPNs](#)” on page 234.
6. Update devices. See “[Updating Devices with Pending Services](#)” on page 455.

## IPS Management

To manage IPS:

1. Discover devices. See “Discovering Devices” section in the *Junos Space Network Application Platform User Guide*.
2. Download IPS signature. See “[Downloading the Signature Database](#)” on page 371.
3. Pushing IPS signature to the device. See “[Installing the Signature Database](#)” on page 373.
4. Create a firewall policy with IPS enabled. See “[Creating Firewall Policies](#)” on page 131.
5. Publish firewall policies. See “[Publishing Firewall Policies](#)” on page 161.
6. Update devices. See “[Updating Devices with Pending Services](#)” on page 455.
7. Create IPS signatures. See “[Creating IPS Signatures](#)” on page 381.
8. Create IPS signature set. See “[Creating IPS Signature Sets](#)” on page 386.
9. Create IPS policies. See “[Creating IPS Policies](#)” on page 392.

## AppFW Management

To manage AppFW:

1. Discover devices. See “Discovering Devices” section in the *Junos Space Network Application Platform User Guide*.
2. Download an application signature. See [“Downloading the Signature Database” on page 371](#).
3. Push an application signature to the device. See [“Installing the Signature Database” on page 373](#).
4. Create a firewall policy with AppFW enabled. See [“Creating Firewall Policies” on page 131](#).
5. Publish firewall policies. See [“Publishing Firewall Policies” on page 161](#).
6. Update devices. See [“Updating Devices with Pending Services” on page 455](#).
7. Create application signature. See [“Creating Application Signatures” on page 191](#).





## PART 3

# Event Viewer

- [Event Viewer on page 31](#)



## CHAPTER 5

# Event Viewer

- [Event Viewer Overview on page 31](#)
- [Using Event Viewer Options on page 32](#)
- [Using Event Viewer Table Options on page 38](#)
- [Filter Management on page 44](#)

### Event Viewer Overview

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When you install the Junos Space Security Director with Junos Space Log Director application, the Event Viewer is displayed when you select **Security Director > Event Viewer** from the Security Director Application tree on the left side. Using the Event Viewer, you can view logs based on event logs.

Event Viewer provides:

- Event grouping, and nongrouping—You can group events based on source IP, destination IP, event name, application, service, and log source. When you use Group by option, for every distinct value of that field, one record is displayed and other columns in the row display MULTIPLE(n) for multiple values. If you do not use the Group by option, all the events are displayed.
- Event filtering based on user-defined filter conditions—You can apply specific filter conditions to view logs.
- Navigation between Firewall Policies page, IPS Policies page, and the logs—You can navigate to the policy that generated the events using the option **Jump to Policy**.
- Statistical overview of the events using charts—You can view charts that display top events by source IP, application, event name, destination IP, service, and log source.
- Security Director address object resolution—You can resolve IP addresses in log fields, such as source IP, destination IP, NAT source IP, and NAT destination IP, with Security Director address objects.

You can access the Event Viewer page using:

- **Security Director > Event Viewer** on the left navigation tree.
- **Firewall Rule > Firewall rule table > Show Log** on the Firewall Policies and IPS Policies pages.

- **Jump to Event Viewer** in the dashboard monitor window.

## Understanding Role-Based Access Control for Event Viewer

Role-Based Access Control (RBAC) has the following impact on Event Viewer:

- You cannot view event logs created in other domains.
- You can only view logs from the devices that you can access and that belongs to your domain.
- You can only view, not edit, a policy if you do not have edit permissions.

You must have the following permission under Role Based Access Controls>Roles:

- Event Viewer

### Related Documentation

- [Using Event Viewer Options on page 32](#)
- [Using Event Viewer Table Options on page 38](#)

## Using Event Viewer Options

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This topic contains the following sections:

- [Using the Group By Selection Filter on page 32](#)
- [Selecting Event Viewer Table Columns on page 33](#)
- [Using Time Span on page 35](#)
- [Using the Event Viewer Settings on page 36](#)
- [Using Log View Options on page 37](#)
- [Clearing Filter Settings on page 37](#)
- [Moving Back to the Previous Page on page 37](#)

### Using the Group By Selection Filter

To filter using the Group by selection:

1. On the Event Viewer page, select a Group by option. The available options are:
  - None
  - Event Name
  - Source IP
  - Destination IP
  - Service
  - Log Source



**NOTE:** The default option is **None**. Select **None** to list all events in the Event Viewer table.

2. Click **Filter**.

Event logs based on the Group by selection are displayed.

The Event Viewer table header displays the updated time duration for which the data was requested.

## Selecting Event Viewer Table Columns

To select Event Viewer table columns:

1. Click a column header.
2. Select an option. The available options are:
  - Sort Descending—Sorts event logs in the descending order.
  - Columns—Provides a list of columns with check boxes you use to select or deselect options to add or remove columns from the Event Viewer table. [Table 4 on page 33](#) displays the columns that you can add to the Event Viewer table.

**Table 4: Event Viewer Columns**

Column Name	Description
Log ID	Displays a unique event log ID.
Time	Displays the time that the log was received.
Category	Displays the category of the log.
Severity	Displays the severity of the log.
Event name	Displays the event name.
Source IP	Displays the source IP address.
Destination IP	Displays the destination IP address.
Destination IPV6	Displays the destination IPv6 address.
Source Port	Displays the source port.
NAT Source IP	Displays the NAT source IP address.
NAT Source Zone	Displays the NAT source zone.
NAT Destination IP	Displays the NAT destination IP address.

**Table 4: Event Viewer Columns (*continued*)**

Column Name	Description
NAT Destination Zone	Displays the NAT destination zone.
Source IPV6	Displays the source IPv6 IP address.
Destination Port	Displays the destination port.
Destination Address	Displays the destination IP address.
Destination Zone	Displays the destination zone.
Log source	Displays the IP address of the log source.
Service	Displays the service in the log.
User Name	Displays the username in the log.
Attack Name	Displays the attack name in the log.
Reason	Displays the reason for the log generation.
Application	Display application in the log.
Policy Name	Displays the policy name in the log.
Nested Application	Displays the nested application in the log.
Rule Name	Displays the rule name in the log.
Attack Name	Displays the attack name in the log.
Policy Name	Displays the policy name.
Username	Displays the username in the log.
Application	Display the application in the log.
Service	Displays the service in the log.
Nest App	Displays the nested application in the log.
Rule Name	Displays the rule name in the log.
UTM Category	Displays the UTM category in the log.
Action Details	Displays the action details.
Roles	Displays the roles.

Table 4: Event Viewer Columns (*continued*)

Column Name	Description
URL	Displays the URL in the log.
Profile Name	Displays the profile name in the log.
Path Name	Displays the path name in the log.
Category	Displays the category name in the log.
Sub Category	Displays the sub category name in the log.
Action Details	Displays the action details in the log.
Feed Name	Displays the feed name in the log.
Protocol ID	Displays the protocol ID in the log.
Session ID	Displays the session ID in the log.

To view a list of event logs in the Event Viewer table:

1. Select a Group by option in the drop-down list and select the time span.

For example: Select **None** and the time span as **Last 3 Hours**.

2. Click **Filter**.

The Event Viewer table displays all logs for the last three hours.

The Event Viewer table header displays the time duration for which the data was requested.

The Event Viewer table is empty if no logs match the filter condition. The table footer displays the number of logs that match the filter.

3. Change the time span and click **Filter** or press **Enter** to refresh the Event Viewer table.
4. Select a log displayed in the Event Viewer table.

A detailed view of the log is displayed in the detailed log view section at the bottom of the page.

## Using Time Span

You can use a list of predefined time periods.

To use time span:

1. Select a time span option. The available options are:

- Last 15 Minutes
- Last 30 Minutes

- Last Hour
- Last 3 Hours
- Last 12 Hours
- Last Day
- Last Week
- Custom



**NOTE:** The default value is Last 5 minutes.

Logs for the selected time span are displayed in the Event Viewer table.

2. Click **Filter**.

All logs are displayed.

A detailed view of the log is displayed in the detailed log view section at the bottom of the Event Viewer page.

You can customize the time span to meet your requirements.

To customize the time span:

1. Select **Time Span>Custom**.
2. Select the following in the **From time** and **To time** options:
  - Date from the calendar.  
You can either click on the icon after the date or click the text field.
  - Hour 0-12 from the hour drop-down, or type in the hour.
  - Minutes from the minutes drop-down, or type in the minutes.
  - AM or PM from the hours drop-down .
3. Click **Filter**.

## Using the Event Viewer Settings

You can choose log display time and Security Director object settings that meet your requirements.

To use the Event Viewer settings:

1. Select:  
Log display time:
  - Local time zone—Displays logs in the local time zone.



- UTC time zone—Displays logs in the UTC time zone.
2. Show SD Object—Select to display Security Director address objects.



**NOTE:** If there is no corresponding Security Director address for a specific IP address, only the IP address is displayed.

3. Security Events Only—Select to display Security events.
4. Page size—Key in the number of events that you want to display. The range is 200 to 1000 events.
5. Click **Save** to save the changes.



**NOTE:** By default, the options **Local time zone** and **Show SD address objects** are enabled.

## Using Log View Options

The icons on the top right side of the Event Viewer table enable you to switch between the split view or grid view.

1. Select an icon:
  - Split view—Displays logs as graphs and tables when logs are grouped by log field. When the logs are not grouped, the Event Viewer table and the details window are displayed.
  - Grid view—Displays logs in a table when event logs are not grouped.



**NOTE:** By default, the grid view mode is enabled.

## Clearing Filter Settings

To clear filter settings:

1. Click **Clear Filter Settings**.

## Moving Back to the Previous Page

To move back to the previous page:

1. Click **Back**.

### Related Documentation

- [Event Viewer Overview on page 31](#)
- [Using Event Viewer Table Options on page 38](#)

## Using Event Viewer Table Options

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This section covers the following topics:

- [Using Event Viewer Table Options in Non Grouped Mode on page 38](#)
- [Creating an Address Object on page 39](#)
- [Using Event Viewer Table Options in Grouped Mode on page 40](#)
- [Example: Using Event Viewer Table Options in Grouped Mode on page 40](#)
- [Using the Detailed Log View on page 41](#)
- [Using the Display Option on page 43](#)
- [Using Event Graphs on page 43](#)
- [Using the Show Logs Option to Navigate from the Event Viewer to the Policies Page on page 43](#)
- [Using the Show Logs Option to Navigate from Policies to Logs on the Event Viewer Page on page 44](#)
- [Creating an Exempt Rule on page 44](#)

### Using Event Viewer Table Options in Non Grouped Mode

To use Event Viewer table options in nongrouped mode:

1. Select and right-click a cell.

Table 5 on page 39 describes the event viewer cell options.

**Table 5: Event Viewer Cell Options**

Option	Description	Example
Show policy	Navigates to the Firewall Policies or IPS Policies page that generates the logs.	–
Filter on Cell Data	<p>Updates the logs in the event viewer table with field values matching the selected cell value.</p> <p>The value selected is appended to the existing filter.</p>	For example: If you select an srcip column with the value 2.2.2.2 and click <b>Filter on cell data</b> , then the filter string will be updated with <b>srcip equals 2.2.2.2</b> .
Exclude Cell Data	<p>Updates the logs in the event viewer table without the field values matching the selected cell value.</p> <p><b>NOTE:</b> The option Exclude cell data is not available in the <b>Time</b> column.</p>	For example: If you select an srcip column with the value 2.2.2.2 and click <b>Exclude cell data</b> , then the filter string will be updated with <b>srcip not equals 2.2.2.2</b> .
Show Raw Log	Displays the actual logs received from the SRX Series devices.	For example: <b>Log ID 147696: 1 2014-04-08T11:00:03.917Z - snmpd1099 SNMPD_AUTH_FAILURE [junos@2636.1.1.1.2.96 function-name="nsa_log_community" message="unauthorized SNMP community" source-address="10.207.99.91" destination-address="10.207.99.72" index1="public"] nsa_log_community: unauthorized SNMP community from 10.207.99.91 to 10.207.99.72 (public)</b>
Create Address Object	<p>Allows you to create address objects in Security Director.</p> <p><b>NOTE:</b> This option is available only on source IP, destination IP, NAT source IP, NAT destination IP, source IPv6, and destination IPv6.</p>	–

## Creating an Address Object

To create a Security Director address object:

1. Enter the following details:
  - Name—Name of the address object.
  - Description—Description of the address object.
2. To save the address object, click **Save**.

The host address is created, and the Security Director address object name is displayed in the address or destination address column.

## Using Event Viewer Table Options in Grouped Mode

When you use Group by option to combine logs based on a specific field, for every distinct value of that field, one record is displayed. Other columns in the row display MULTIPLE(n) for multiple values. By default, group by tables are always sorted by count. The group by column is the first column in the table and is followed by the count column. The count column is not displayed when the table is not grouped.

To drill-down Group by logs:

1. Click **Multiple**.

The Event Viewer table displays the grouped log details associated with multiple values.

2. Select a row and click **Show All Logs**.

The Event Viewer table view is switched to nongrouped view.

Group by drop-down is reset to **None**.

## Example: Using Event Viewer Table Options in Grouped Mode

In this sample scenario, assume that the logs are grouped based on event name and that there are multiple destination IP addresses for a specific event names.

To drill-down grouped logs:

1. Click **Multiple** in the Destination IP column of the row that you want to drill-down.

The event viewer table displays the grouped log details.

The filter string displays the expression **SrcIP equals 1.1.1.1**. The logs are grouped based on source IP with the filter **SrcIP equals 1.1.1.1**.

2. Click **Multiple** in the Event Name column of the row that you want to drill-down.

The event viewer table displays the grouped log details.

The filter string displays the expression **SrcIP equals 1.1.1.1 AND DstIP equals 2.1.1.1**. The logs are grouped based on service with the filter **SrcIP equals 1.1.1.1 AND DstIP equals 2.1.1.1**.

3. Select a row, right-click, and select **Show all Logs**.

The Event Viewer table view is switched to nongrouped view with the filter **SrcIP equals 1.1.1.1 AND DstIP equals 2.1.1.1 AND EventName equals rt\_screen\_ip**.

The Group by drop-down is reset to **None**.

## Using the Detailed Log View

To use the detailed log view:

1. Select a log in the Event Viewer table.

The details of the log selected on the event viewer page are displayed in the detailed log view section at the bottom of the event viewer page. [Table 6 on page 41](#) lists the details of the logs.

**Table 6: Detail Log View**

Option	Description
<b>General Information</b>	
Log ID	Displays the unique log ID.
Log Source	Displays the IP address of the log source.
Local Time	Displays the time log was received.
UTC Time	Displays logs in the UTC time zone.
Category	Displays the category of the logs.
Severity	Displays the severity of the logs.
Reason	Displays the reason the log was generated.
<b>Source Information</b>	
Source IP	Displays the source IP address.
Source Port	Displays the source port.
Source Address	Displays the source port address.
Source Zone	Displays the source zone.
NAT Source IP	Displays the NAT source IP address.
NAT Source Port	Displays the NAT source port.
<b>Destination Information</b>	
Destination IP	Displays the destination IP address.
Destination Port	Displays the destination port.
Destination Address	Displays the destination port address.
Destination Zone	Displays the destination zone.

Table 6: Detail Log View (*continued*)

Option	Description
NAT Destination IP	Displays the NAT destination IP address.
NAT Destination Port	Displays the NAT destination port.
<b>Log Information</b>	
Attack Name	Displays the attack name in the log.
Policy Name	Displays the policy name.
Username	Displays the username in the log.
Application	Display the application in the log.
Service	Displays the service in the log.
Nest App	Displays the nested application in the log.
Rule Name	Displays the rule name in the log.
<b>Security Information</b>	
UTM Category	Displays the UTM category in the log.
Action Details	Displays the action details.
Roles	Displays the roles.
URL	Displays the URL in the log.
Profile Name	Displays the profile name in the log.
Path Name	Displays the path name in the log.
<b>SecIntel Information</b>	
Category	Displays the category name in the log.
Sub Category	Displays the sub category name in the log.
Action Details	Displays the action details in the log.
Feed Name	Displays the feed name in the log.
Protocol ID	Displays the protocol ID in the log.
Session ID	Displays the session ID in the log.

## Using the Display Option

To use the display option:

1. Select a Group by option.
2. Click **Filter** or press **Enter**.

The group by logs are displayed in the event viewer table and the option Display is enabled.

3. Click **Display >Display Number**.
4. Select an option to display the top (n) results. The available options are:
  - Top 3
  - Top 5
  - Top 10
  - Top 20

## Using Event Graphs

To use event graphs:

1. Select a Group by option.
2. Click **Filter** or press **Enter**.

The grouped logs are displayed in the Event Viewer table.

3. Select **Split View**.

The Event Viewer displays a bar graph and a table for the top (n) grouped items.

4. Select a row in the table below the graph.

The corresponding bar in the graph is highlighted.

5. Click an item in the bar graph.

You will be switched to nongrouped view which displays all logs related to the filter criteria.

## Using the Show Logs Option to Navigate from the Event Viewer to the Policies Page

You can navigate from the Event Viewer page to the Firewall Policies page or IPS Policies page that displays the policy associated with the logs. To navigate from the Event Viewer page to the Firewall Policies page or IPS Policies page:

1. Launch Event Viewer, query Firewall or IPS logs.

The firewall and IPS logs are displayed.

2. Right click a log to select **Show Policy**.

The current rule associated with the logs displays the changes on the IPS Policies page.

3. For Firewall policy, click one of the options:

- Changes in the Rule—Displays the changes in the rule.

The previous rule and the current rule are displayed. You have the options to either **Go to the current rule** or **Go to Policy Comparison**. The go to policy compare provides the options to compare versions.

- Got to Current Rule—Navigates to the current rule.

## Using the Show Logs Option to Navigate from Policies to Logs on the Event Viewer Page

You can navigate from the Firewall Policies page or IPS Policies to view logs. To navigate from logs to a policies page:

1. Select a Firewall Policy and select a rule.
2. Right click **Show Events Generated by Rule**.

The event logs that contain the rule name associated with the policy are displayed on the Event Viewer page.

## Creating an Exempt Rule

To create an exempt rule:

1. Filter the IPS category logs, right-click, and select **Create an exempt rule**.

An IPS rule is added at the beginning of the Rule Type Exempt list on the IPS policy page.

### Related Documentation

- [Event Viewer Overview on page 31](#)
- [Using Event Viewer Options on page 32](#)

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## Filter Management

- [Filter Management Overview on page 44](#)
- [Creating an Event Viewer Filter Using Advanced Filter Options on page 46](#)
- [Managing Filters in the Event Viewer on page 46](#)
- [Understanding Advanced Filter Options on page 49](#)

## Filter Management Overview

Filters are used to search logs and view information about filter condition, time, or fields in the logs. You can configure basic and advanced filters to match the filtering conditions. You can either load existing filters or define a new filters.



A filter allows you to enter specific information that must be displayed on the Event Viewer page. For example: The columns in the event viewer table, the type of graph, time period, and aggregation point. When you change an existing filter or create a new filter, the Event Viewer table and event graph are updated automatically. If filters contain time details, the time control in event viewer is updated with the time specified in the filter.

Filters provide:

- Quick access to critical information—If you are a firewall administrator, you might have to regularly deny traffic from a specific application or a specific set of addresses. You might also have to allow or deny specific application access to some users. To achieve these conditions, you must have user search criteria, scan through the firewall logs that match that criteria, and display the matching logs.
- Filter sharing among users—Other users in your domain can use the filters you create without modifying or deleting the filters.
- Filter usage across multiple functional areas—Filters can be used across multiple functional areas such as the event viewer, dashboard monitor, alerts, and reports.

### Understanding Role-Based Access Control for Filter Management

Role-based access control (RBAC) has the following impact on filter management:

- You cannot view filters that are created in other domains.
- When you create or edit a filter, you must use devices in the same domain. If a filter contains devices from different domains, logs are not displayed even if they match the filter condition.
- You can create or edit a filter only if you have create and edit permissions.

You must have the following permission under Role Based Access Controls>Roles:

- **Event Viewer** to view Event Viewer.
- **CreateFilter** to create filters.
- **ModifyFilter** to modify filters.
- **DeleteFilter** to delete filters.

## Creating an Event Viewer Filter Using Advanced Filter Options

To create an Event Viewer filter:

1. Select **Security Director > Event Viewer**.

The Event Viewer filter management tabular view is displayed.

The Event Viewer page is divided into the following sections:

- Filter options
- Event view
- Event details

2. Click the plus sign (+) next to the Filter By option.

The filter keys available are displayed alphabetically in a drop-down list.

3. Type the exact key in the filter text field, or select the key from the drop-down key list.

The key appears in the filter bar. While typing in the values, you are prompted with suggestions in the drop-down whenever possible.

For example: **EventName =**

4. Continue to add filter expressions *<key> space <operator> space <value>*.

The key appears, along with the value combination in the filter bar.

For example: **EventName = LOGIN\_FAILED**

5. Repeat the Steps 3 and 4 to add additional filter expressions.

The available filter keys are displayed alphabetically in the drop-down list.

Example of filter expression: **EventName = LOGIN\_FAILED AND SrcIP =**

6. Type in the required IP address.

For example: **EventName = LOGIN\_FAILED SrcIP = 192.168.45.350**

The term operator **AND** is included in the filter bar automatically.

For example: **EventName = LOGIN\_FAILED AND SrcIP = 192.168.45.350**

7. Click **Filter** or press **Enter**.

The event logs for **EventName = LOGIN\_FAILED AND SrcIP = 192.168.45.350** are displayed.



**NOTE:** The filters that you have typed will appear in the filter history until the next session.

---

## Managing Filters in the Event Viewer

You can edit, save, delete, or search filters on the Event Viewer page. To open the filter options, select **Security Director > Event Viewer > Load Filters** on the Event Viewer page.

You can perform the following tasks:

- [Using a Load Filter Selections on page 47](#)
- [Using the Filter Manager on page 47](#)
- [Searching Filters in the Filter Manager on page 48](#)
- [Editing Event Viewer Filters on page 48](#)
- [Saving an Event Viewer Filter on page 48](#)
- [Deleting an Event Viewer Filter on page 48](#)

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### Using a Load Filter Selections

To use load filters:

1. On the right side of the Event Viewer page, select **Load Filter**.  
The drop-down lists the available filters.
2. Select one of the filters available in the drop-down box.  
The Event Viewer page displays the filter details.
3. To search filters, type the filter name in Load Filter search bar and click **Search**.  
Filters matching your search criteria are displayed.

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### Using the Filter Manager

To use the filter manager:

1. Select **Load filters**.  
The saved filters is listed. Only 10 filters are displayed in the load filter drop-down box.
2. To view more filter, select **Load filters>More Filters**.  
The Filter Management window appears.
3. Under **Actions**, select one of the following :
  - Duplicate—Creates a copy of the filter.
  - Rename—Provides the option to rename and save the filter.
  - Edit Description—Provides the option to edit the filter description and save the filter.
4. To view existing filters, select one of the following:
  - All Saved Filters—Displays all the saved filters.
  - My Filters—Displays the filters you created.
  - Default Filters—Displays the default filters.The requested filter are displayed.

### Searching Filters in the Filter Manager

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To search an Event Viewer filter:

1. Select **Load filters>More Filters**.

The filter management window is displayed.

2. In the search bar, type one of the following:

- Name
- Description
- Created by
- Date Last Modified

The requested filter are displayed.

### Editing Event Viewer Filters

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To edit an Event Viewer filter:

1. Select a filter.

The filter details are displayed in the filter bar.

2. Edit the filter string.

3. Click **Save**.

The filter is saved and the database is updated.

### Saving an Event Viewer Filter

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To save an Event Viewer filter:

1. Select a filter.

The Filter Management window is displayed.

2. Edit the filter string.

3. Click **Save**.

The filter is saved and the database is updated.

### Deleting an Event Viewer Filter

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To delete an event viewer filter:

1. Select **Load filters>More Filters**.

The filter management window appears.

2. Select the filter.

3. On the left side of the Filter Management page window, click the delete button (-).

The delete confirmation window displays the message, **Do you wish to permanently delete the selected filter?**

4. Click **Yes** to confirm deletion.

The selected filter is deleted.



**NOTE:** To delete multiple filters, select the filters using the check box and click the delete icon (-).

You can delete filters only if you are the administrator of the domain or have created the filter.

## Understanding Advanced Filter Options

The filter manager provides advanced filtering options. You can filter values for any field in the log.

To use advanced filter options:

- Click the plus sign (+) next to the Filter By option.

Table 7 on page 49 shows the advanced filter options and includes a description, and examples of each. Table 8 on page 51 shows the operators supported on the IP address column fields.

**Table 7: Advanced Filter Options**

Filter Options	Description	Example
Filter String	<p>The options available are:</p> <ul style="list-style-type: none"> <li>• IP—Specifies the IP address.</li> <li>• Name—Specifies the string name. The string name can include uppercase or lowercase letters (a-z) or (A-Z), numbers 0-9, underscores (_), single quotes ('), double quotes ("), hyphens, or (+) indicating that the preceding options can occur one or more times.</li> <li>• Expression—Specifies the key operator value.</li> </ul>	<ul style="list-style-type: none"> <li>• IP—1.2.3.4, 1.2.3.5</li> <li>• Name—Joseph Lagrange.</li> <li>• Expression—dstip = 1.2.3.4 and srcip = 1.2.3.5.</li> </ul>
Term Operator	<p>The options available are:</p> <ul style="list-style-type: none"> <li>• AND—Specifies that two filter strings must be combined.</li> <li>• OR—Specifies that either of the two filters strings can be used.</li> </ul>	<ul style="list-style-type: none"> <li>• AND—Firewall = Deny and srcip = 1.2.3.4.</li> <li>• OR—Firewall = Deny or srcip = 1.2.3.4.</li> </ul>

Table 7: Advanced Filter Options (*continued*)

Filter Options	Description	Example
Key	<p>The options available are:</p> <ul style="list-style-type: none"> <li>SrcIP—Specifies the source IP address. <b>NOTE:</b> You can type either <code>src</code> or <code>srcip</code> to indicate source address.</li> <li>DstIP—Specifies the destination IP address.</li> <li>SrcPort—Specifies the source port address.</li> <li>DstPort—Specifies the destination port address.</li> <li>LogSource—Specifies the source from which the logs are generated.</li> <li>Application—Specifies the type of application.</li> <li>AttackName—Specifies the attack name.</li> <li>AttackSeverity—Specifies the attack severity.</li> <li>DstIPv6—Specifies the destination IPv6.</li> <li>DstZone—Specifies the destination zone.</li> <li>EventCategory—Specifies the event category.</li> <li>EventName—Specifies the event name.</li> <li>LogID—Specifies the log ID.</li> <li>NatDstIP—Specifies the NAT destination IP.</li> <li>NatSrcIP—Specifies the NAT source IP.</li> <li>NatDstPort—Specifies the NAT destination port.</li> <li>NatSrcPort—Specifies the NAT source port.</li> <li>NestedApp—Specifies the nested application.</li> <li>PolicyName—Specifies the policy name.</li> <li>Reason—Specifies the reason.</li> <li>RuleName—Specifies the rule name.</li> <li>Service—Specifies the service.</li> <li>SrcIPv6—Specifies the source IPv6 address.</li> <li>SrcZone—Specifies the source zone.</li> <li>UserName—Specifies the user name.</li> <li>SecIntelSessionID</li> </ul>	<ul style="list-style-type: none"> <li>SrcIP—SrcIP equals 1.3.4.5,1.3.4.6,1.3.4.26 . In this example, multiple IP addresses or values are to be matched. A comma indicates the logical <b>or</b> operator.</li> <li>DstIP—DstIP equals 192.167.2.1</li> <li>SrcPort—SrcPort equals 1.3.4.5,1.3.4.6,1.3.4.26</li> <li>DstPort—DstPort equals 23,35,67</li> <li>LogSource—logsource srx</li> <li>Application—application = aol,http,yahoo and srcip = 2.3.4.5</li> <li>AttackName—AttackName equals 'No TCP flag!</li> <li>AttackSeverity—AttackSeverity equals INFO</li> <li>DstIPv6—DstIPv6 equals 2000::1</li> <li>DstZone—DstZone equals Exploit</li> <li>EventCategory—EventCategory equals IPS</li> <li>EventName—EventName equals IDP_APPDDOS_APP_STATE_EVENT</li> <li>LogID—LogID equals 5392090</li> <li>NatDstIP—NatDstIP equals 172.19.51.235</li> <li>NatSrcIP—NatSrcIP equals 1.1.1.1</li> <li>NatDstPort—NatDstPort equals 1025</li> <li>NatSrcPort—NatSrcPort equals 56752</li> <li>NestedApp—NestedApp equals INCONCLUSIVE</li> <li>PolicyName—PolicyName equals AppDDOS</li> <li>Reason—Reason equals policy deny</li> <li>RuleName—RuleName equals DDOS</li> <li>Service—Service equals HTTP</li> <li>SrcIPv6—HTTPSrcIPv6 equals 2000::2</li> <li>SrcZone—SrcZone equals trust</li> <li>UserName—UserName equals matt</li> <li>SecIntelSessionID—SecIntelSessionID equals 1024</li> </ul>

Table 7: Advanced Filter Options (*continued*)

Filter Options	Description	Example
Operator	<p>The options available are:</p> <ul style="list-style-type: none"> <li>• = — Specifies that the key is equal to the value provided.</li> <li>• != — Specifies that the key is not equal to the value provided.</li> <li>• &gt; — Specifies that the key is greater than the value provided.</li> <li>• &lt; — Specifies that the key is less than the value provided.</li> <li>• &lt;= — Specifies that the key is less than or equal to the value provided.</li> <li>• &gt;= — Specifies that the key is greater than or equal to the value provided.</li> <li>• startswith — Specifies that the key starts with the value provided.</li> <li>• endswith — Specifies that the ends with the value provided.</li> <li>• exists — Specifies that the key exists.</li> <li>• notexists — Specifies that the key does not exist.</li> </ul>	<ul style="list-style-type: none"> <li>• = —srcip = 1.2.3.4</li> <li>• != —DstZone != 1.2.3.4</li> <li>• &gt; —LogSource &gt; 1.2.3.4</li> <li>• &lt; —LogSource &lt; 1.2.3.4</li> <li>• &lt;= —LogSource &lt;= 1.2.3.4</li> <li>• &gt;= —LogSource &gt;= 1.2.3.4</li> <li>• startswith —EventName startswith KMD</li> <li>• endswith —EventName endswith PHASE</li> <li>• exists —EventName exists</li> <li>• notexists —EventName notexists</li> </ul>
Value	<p>The options available are:</p> <ul style="list-style-type: none"> <li>• IP — Specifies the IP address.</li> <li>• String — Specifies the event names, event categories, or any user-defined strings.</li> </ul>	<ul style="list-style-type: none"> <li>• IP — 10.204.49.43, 10.203.49.5</li> <li>• String — Joseph Lagrange.</li> </ul>

Table 8: Operators Supported on the IP Address Column fields

Column Name	Usable Operators	Unusable Operators
Src IP	equals, notequals, exists, notexists, =, !=	startswith, endswith, contains, <, <=, >, >=
Dst IP	equals, notequals, exists, notexists, =, !=	startswith, endswith, contains, <, <=, >, >=
Src IPv6	equals, notequals, exists, notexists, =, !=	startswith, endswith, contains, <, <=, >, >=
Dst IPv6	equals, notequals, exists, notexists, =, !=	startswith, endswith, contains, <, <=, >, >=
NAT Src IP	equals, notequals, exists, notexists, =, !=	startswith, endswith, contains, <, <=, >, >=
NAT Dst IP	equals, notequals, exists, notexists, =, !=	startswith, endswith, contains, <, <=, >, >=

**Table 8: Operators Supported on the IP Address Column fields**  
(continued)

Column Name	Usable Operators	Unusable Operators
Log Source	equals, notequals, exists, notexists, =, !=	startswith, endswith, contains, <, <=, >, >=
Src Port	equals, notequals, exists, notexists, =, !=, <, <=, >, >=	startswith, endswith, contains
Dst Port	equals, notequals, exists, notexists, =, !=, <, <=, >, >=	startswith, endswith, contains
NAT Src Port	equals, notequals, exists, notexists, =, !=, <, <=, >, >=	startswith, endswith, contains
NAT Dst Port	equals, notequals, exists, notexists, =, !=, <, <=, >, >=	startswith, endswith, contains
Log ID	equals, notequals, exists, notexists, =, !=, <, <=, >, >=	startswith, endswith, contains



**NOTE:** While creating the filters, if you use invalid or unsupported operators (as described in the table), the result displayed will be ignore the invalid filter condition.

#### Related Documentation

- [Filter Management Overview on page 44](#)
- [Creating an Event Viewer Filter Using Advanced Filter Options on page 46](#)
- [Understanding Advanced Filter Options on page 49](#)
- [Managing Filters in the Event Viewer on page 46](#)



## PART 4

# Alerts

- [Alerts and Notification on page 55](#)



## CHAPTER 6

# Alerts and Notification

- [Alerts and Notification Overview on page 55](#)
- [Using Alerts on page 56](#)
- [Using Alert Definition on page 57](#)
- [Creating Alert Definitions on page 58](#)
- [Managing Alert Definitions on page 59](#)

### Alerts and Notification Overview

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Alerts and notifications provide options for:

- Defining alert criteria based on a set of predefined filters. You can use the filters defined in the Filter Management window on the Event Viewer page to generate alerts.
- Generating an alert message and notifying you when an alert criteria is met.
- Searching specific alert ID on the generate alerts page.
- Supporting event-based alerts.

For example: If you are an administrator, you can define a condition such that if the number of firewall-deny events crosses a predefined threshold in a given time range for a specific device, you receive an e-mail alert.



**NOTE:** If threshold is crossed and remains for a long duration, new alerts are not generated. Alerts are generated again when the number of logs matching the alert criteria drops below the threshold and crosses the threshold, again.

### Understanding Role-Based Access Control for the Alerts and Alert Definitions

Role-based access control (RBAC) has the following impact on the alerts:

You must have the following permission under Role Based Access Controls>Roles:

- **Alerts** to view generated alerts.
- **CreateAlert** to create alerts generation.
- **ModifyAlert** to modify alerts generation.

- **DeleteAlert** to delete alerts generation.
- **User account** under Role based access control to search for user accounts in alert definition.

**Related  
Documentation**

- [Using Alert Definition on page 57](#)
- [Creating Alert Definitions on page 58](#)
- [Managing Alert Definitions on page 59](#)

## Using Alerts

To use alert generation:

1. Select **Alerts**.

The Alert Page is displayed.

2. Click a column header.

3. Select an option. The available options are:

- Sort Ascending—Sorts logs in the ascending order.
- Sort Descending—Sorts logs in the descending order.
- Columns—Provides a list of columns with check boxes you use to select or deselect options to add or remove columns from the alert generation table.

[Table 9 on page 56](#) displays the columns that you can add to the alert table.

**Table 9: Alert Columns**

Column Name	Description
Time	Specifies the date and time the alert was generated.
Alert ID	Specifies the alert ID.
Description	Specifies the description of the alert.
Severity	Specifies the severity of the alert.
Alert Definition	Specifies the alert definition.
Source	Specifies the source generating the alert.
Recipients	Specifies the recipients of the alerts generated from the alert definitions.
Alert Type	Specifies the alert type.

- Related Documentation**
- [Alerts and Notification Overview on page 55](#)
  - [Creating Alert Definitions on page 58](#)
  - [Managing Alert Definitions on page 59](#)

## Using Alert Definition

To use alert definition:

1. Select **Alerts >Definition**.

The Alert Definition Page is displayed.

2. Click a column header.

3. Select an option. The available options are:

- Sort Ascending—Sorts logs in the ascending order.
- Sort Descending—Sorts logs in the descending order.
- Columns—Provides a list of columns with check boxes you use to select or deselect options to add or remove columns from the alert generation table.  
[Table 10 on page 57](#) displays the columns that you can add to the alert generation table.

**Table 10: Alert Generation Columns**

Column Name	Description
Select	Provides the option to select the available alerts.
Name	Specifies the name of the alert.
Description	Specifies the description of the alert.
Filter	Specifies the filter generating the alerts.
Recipients	Specifies the recipients of the alerts generated from the alert definitions.
Active	Specifies the active alerts.
Alert Type	Specifies the alert type.

- Related Documentation**
- [Alerts and Notification Overview on page 55](#)
  - [Using Alerts on page 56](#)
  - [Creating Alert Definitions on page 58](#)
  - [Managing Alert Definitions on page 59](#)

## Creating Alert Definitions

To create an alert definition:

1. Select **Alerts > Alert Definitions**.

The Alert Definition page is displayed.

2. On the top left side of the Alert Definitions page, click the add button (+).

The alert definitions options are displayed. [Table 11 on page 58](#) displays the available options.

**Table 11: Alert Definitions Options**

Options	Description
<b>General</b>	
Name	Specifies the name of the alert.
Description	Specifies the description of the alert.
Alert Type	Specifies the type of alert.
Status	Specifies the status of the alert. Click the <b>Active</b> check box to view active alerts.
Severity	Specifies the severity of the alert definition. The available options are: <ul style="list-style-type: none"> <li>• Critical</li> <li>• Warning</li> <li>• Info</li> </ul>
<b>Trigger</b>	
Event Filter	Specifies the event filter that generates the alert.
Grouped by	Specifies the grouped by category that triggers the alert.
Number of events	Specifies the number of events.
Time period	Specifies the time interval during which the threshold is applicable for the alert to be generated.
<b>Recipient(s)</b>	
Email address(es)	Specifies the recipients of the alerts generated from the alert definition. <p>By default, you can search by first name and add registered Junos Space Network Platform users. You can also type in external e-mail addresses.</p>

Table 11: Alert Definitions Options (*continued*)

Options	Description
Custom Message	Specifies the custom message that is included in the e-mail message.

3. Select **Create**.

#### Related Documentation

- [Alerts and Notification Overview on page 55](#)
- [Using Alert Definition on page 57](#)
- [Managing Alert Definitions on page 59](#)

## Managing Alert Definitions

- [Deleting Alert Definitions on page 59](#)
- [Editing Alert Definitions on page 59](#)
- [Searching Alert Definitions on page 60](#)
- [Hide or Delete Alert Definitions Using Quick View on page 60](#)

### Deleting Alert Definitions

To delete an alert definition:

1. Select **Alerts > Alert Definitions**.
2. Select an **alert**.  
You can also select multiple alerts for deletion.
3. On the top left side of the Alert Definitions page, click the delete button (-).  
The delete alert notification is displayed.
4. Click **OK**.  
The alert definitions is deleted.

### Editing Alert Definitions

To edit an alert definition:

1. Select **Alerts > Alert Definitions**.
2. Select the alert.
3. On the top left side of the Alert Definitions page, click the edit button.  
The alert definitions options are displayed. The options available in the Create Alert Definitions page are available for editing.
4. Click **Update**.

## Searching Alert Definitions

To quickly locate an alert definition, use the search option on the top right side of the Alert Definition page:

1. Enter the name, description, or recipient name in the search box.
2. Click the search icon.

## Hide or Delete Alert Definitions Using Quick View

To hide or delete alert definitions using quick view:

1. Select **Alerts>Alert Definitions**.
2. Select an alert.
3. On the top left side of the Alert Definitions page, click the eye icon to hide or delete quick view.

The alert definitions quick view pane with the details of the alert is displayed on the right hand side of the Alert Definitions page.

- Related Documentation**
- [Alerts and Notification Overview on page 55](#)
  - [Using Alert Definition on page 57](#)
  - [Creating Alert Definitions on page 58](#)



## PART 5

# Reports

- [Reports on page 63](#)



## CHAPTER 7

# Reports

- [Reports Overview on page 63](#)
- [Using Reports on page 64](#)
- [Creating Reports on page 66](#)
- [Managing Reports on page 69](#)

### Reports Overview

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Reports are generated based on the summary of network activity and overall network status. Using reports you can:

- Schedule reports based on the filters defined.
- Schedule reports based on the available default reports.
- Generate reports daily, weekly, and monthly, send e-mail notifications to defined recipients.
- Generate reports with multiple sections each section having its own criterion.

For example: If you are an administrator, you can schedule reports daily, weekly, or monthly, and configure them to include on multiple criteria. You can also personalize the reports by adding company logo, footer and so on. When the system generates a report, you and other designated recipients receive the report in PDF format via e-mail. Reports enable you to perform trend analysis of your network's activities.

### Understanding Role-Based Access Control for Reports

Role-based access control (RBAC) defines the user roles that control access to and permissions for using report functions.

Administrators must have the following permissions under Role Based Access Controls>Security Analyst/Security Architect:

- **View Report** to view generated reports.
- **Create Report** to create generated reports.
- **Modify Report** to modify generated reports.
- **Delete Report** to delete generated reports.

- Related Documentation**
- [Using Reports on page 64](#)
  - [Creating Reports on page 66](#)
  - [Managing Reports on page 69](#)

## Using Reports

To use reports:

1. Select **Reports**.

The Reports Page is displayed.

2. Click a column header.

3. Select an option. The available options are:

- Sort Ascending—Sorts reports in ascending order.
- Sort Descending—Sorts reports in descending order.
- Columns—Provides a list of columns with check boxes you use to add or remove columns from the reports table. [Table 12 on page 64](#) displays the columns that you can add to the reports table.

**Table 12: Report Columns**

Column Name	Description
Select	Specifies the check boxes to use to select the type of report.
Name	Specifies the name of the report (user-created or default).
Description	Specifies the description of the report.
Report Content	Specifies the details of the sections in the report.
Schedule	Specifies the report generation schedule (daily, weekly, or monthly).
Recipients	Specifies the recipients of the generated reports.
Last Generated	Specifies the time the last report was generated, along with the status.

- Rows—Provides a list of default reports. You can select report options from the following available defaults:

Report options from the following available defaults:

- Top Screen Attackers
- Top Screen Victims
- Top Screen Hits
- Top Firewall Rules
- Top Firewall Deny Sources
- Top Firewall Deny Destinations
- Top Firewall Service Deny
- TopFWDenies
- TopIPSEvent
- TopSourceIPs
- TopFirewallEvents
- TopDestinationIPs
- TopApplication
- Top URL's Detected
- Top URL's Blocked
- Top Viruses Detected
- Top Anti Spam Detected
- Top Screen Attacked
- Top Screen Victims
- Top Screen Hits
- Top Firewall Rules
- Top Attacks Detected
- Top Attacks Blocked
- Top Applications Blocked
- Top Web Apps
- Top Activities By User
- Top Roles

- Related Documentation**
- [Reports Overview on page 63](#)
  - [Creating Reports on page 66](#)
  - [Managing Reports on page 69](#)

## Creating Reports

To create a report:

1. Select **Reports**.

The Reports page is displayed.

2. On the top left side of the Reports page, click the add button (+).

The reports options are displayed. [Table 13 on page 66](#) displays the available options.

**Table 13: Report Options**

Options	Description	Action
<b>General</b>		
Report Name	Specifies the name of the report.	Enter the report name.
Report Description	Specifies the description of the report.	Enter the report description.
<b>Content</b>		
Add Saved Filters	<p>Specifies the options for adding filters.</p> <ul style="list-style-type: none"> <li>The details of the filters displayed are:               <ul style="list-style-type: none"> <li>Select—Specifies the check boxes for selecting the filter.</li> <li>Filter Name—Specifies the name of the filter.</li> <li>Filter Description—Specifies a description of the filter.</li> <li>Group By—Specifies the group by option selected.</li> <li>Time Span—Specifies the duration for which the data is displayed.</li> <li>Filter By—Specifies the list of default and user-created filters.</li> <li>Created—Specifies the date on which the filter was created.</li> </ul> </li> </ul>	<p>To add saved filters:</p> <ol style="list-style-type: none"> <li>1. Click <b>Add Saved Filters</b>.</li> <li>2. Select the filters to be added.</li> <li>3. Click <b>Add Filter(s) to reports</b>.</li> </ol>
<b>Add Filter(s) to Report</b>		
Section	Specifies the sections in the PDF report.	Select the section number.
Action	Specifies the option to delete the section from the report.	Click <b>Delete</b> to delete the section.

Table 13: Report Options (*continued*)

Options	Description	Action
Section Title	Specifies the section title in the PDF report.	Enter the section title.
Section Description	Specifies the description of the section in the PDF report.	Enter the section description.
Filter Criteria	<p>Specifies the filter criteria used for the report. The details displayed are:</p> <ul style="list-style-type: none"> <li>• Group by—Specifies the aggregation parameters based on the filter. This option override the Group By option specified in the filter.</li> <li>• Time Span—Specifies time range used for the data.</li> <li>• Filter by—Specifies the list of default and user-created filters.</li> </ul>	–
Chart	<p>Specifies the chart used to display the data in the report. The available options are:</p> <ul style="list-style-type: none"> <li>• Bar</li> <li>• Timeline</li> </ul>	Select the chart type for the report.
Number To Displays	<p>Specifies the number of top logs that is grouped by to be displayed. The available options are:</p> <ul style="list-style-type: none"> <li>• Top 5</li> <li>• Top 10</li> </ul>	Select the number of logs to be displayed.
<b>Schedule</b>		
Add Schedule	<p>Specifies the option to add a schedule.</p> <p><b>NOTE:</b> Report is not generated if the report is not scheduled.</p>	Click <b>Add schedule</b> .

Table 13: Report Options (*continued*)

Options	Description	Action
Recurrence	<p>The available options are:</p> <ul style="list-style-type: none"> <li>Repeats—Specifies the option to generate recurring reports. Repeats provides the following options: <ul style="list-style-type: none"> <li>Daily—Specifies the option to generate reports daily.</li> <li>Weekly—Specifies the options to generate reports weekly. You are provided with the option to select the day of the week the recurring report will be generated.</li> <li>Monthly—Specifies the options to generate reports monthly. You are provided with the option to select the day of the month the recurring report will be generated.</li> </ul> </li> <li>Every—Specifies the numbers of days for which the recurring report will be generated.</li> </ul>	—
Start Date	<p>The available options are:</p> <ul style="list-style-type: none"> <li>Date—Specifies the start date of report generation.</li> <li>Time—Specifies the start time of the report generation.</li> </ul>	—
End Date	<p>The available options are:</p> <ul style="list-style-type: none"> <li>Date—Specifies the end date of report generation.</li> <li>Time—Specifies the end time of the report generation.</li> </ul>	After entering the end date options, Click <b>Schedule report</b> .
<b>Add Email Recipients</b>		
Email address(es)	<p>Specifies the recipients of the report.</p> <p>By default, you can search by first name and select registered Junos Space Network Platform users. You can also type in external e-mail addresses.</p>	Enter the e-mail address.
Subject	Specifies the subject of the e-mail.	Enter the subject line.



Table 13: Report Options (*continued*)

Options	Description	Action
Comment	Specifies the section to add comments.	<ol style="list-style-type: none"> <li>1. Enter comments.</li> <li>2. Click <b>Add Recipient</b>.</li> </ol>

3. Click one:

- Preview as PDF—Provides the PDF preview of the report.
- Save Report—Saves the report.

#### Related Documentation

- [Reports Overview on page 63](#)
- [Using Reports on page 64](#)
- [Creating Reports on page 66](#)

## Managing Reports

- [Editing Reports on page 69](#)
- [Deleting Reports on page 69](#)
- [Duplicating Reports on page 70](#)
- [Add Information to All Reports on page 70](#)

### Editing Reports

To edit a report:

1. Click **Reports**.
2. Select a report by clicking the select box.
3. On the top left side of the Reports page, click the edit button.

The reports options are displayed. The options available on the Create Reports page are available for editing.

4. Click one:

- Preview as PDF—Provides the PDF preview of the report.
- Save Report—Saves the report.

### Deleting Reports

To delete a report:

1. Click **Reports**.
2. Select a report.

You can also select multiple reports for deletion.

3. On the top left side of the Reports page, click the delete button (-).

The delete report notification is displayed.

4. Click **OK**.

The report is deleted.

## Duplicating Reports

To duplicate a report:

1. Click **Reports**.
2. Select the report.
3. On the top left side of the Reports page, click the clone button.

The reports options are displayed. The options available on the Edit Reports page are available for cloning.

4. Click one:

- **Preview as PDF**—Provides the PDF preview of the report.

You can see a preview of the PDF with in a new browser window or as a separate PDF file, if you do not have a browser configured.

- **Save Report**—Saves the report.

## Add Information to All Reports

To add company information to a report:

1. Click **Reports**.
2. On the top left side of the Reports page, click the upload logo button.

The upload logo options are displayed.

3. Click **Change logo image**.

The upload option is displayed.

4. Click **Browse** to navigate to the logo.
5. Enter the PDF footer text.
6. Click **Save**.

### Related Documentation

- [Reports Overview on page 63](#)
- [Using Reports on page 64](#)
- [Creating Reports on page 66](#)

### Related Documentation

- [Reports Overview on page 63](#)
- [Using Reports on page 64](#)

- [Creating Reports on page 66](#)
- [Managing Reports on page 69](#)



## PART 6

# Object Builder

- [Object Builder Overview on page 75](#)
- [Service and Service Groups on page 79](#)
- [Addresses and Address Groups on page 93](#)
- [Zone Sets on page 109](#)
- [Variables on page 113](#)



## CHAPTER 8

# Object Builder Overview

- [Object Builder Overview on page 75](#)
- [Domain RBAC Overview on page 76](#)

### Object Builder Overview

---

You can use the Object Builder workspace in Security Director to create objects used by firewall policies, VPNs, and NAT policies. These objects are stored in the Junos Space database. You can reuse these objects with multiple security policies, VPNs, and NAT policies. This approach makes the design of services more structured and avoids the need to create the objects during the service design.

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

- Addresses and address groups
- Services and service groups
- Variables

You will not be able to delete any of the objects you have created in Object Builder (except Template definition and Templates) if they are already used in one of the firewall policies, NAT policies, or VPNs.

Object Builder supports concurrent editing of its objects, with a *save as* option to save your changes with a different name.

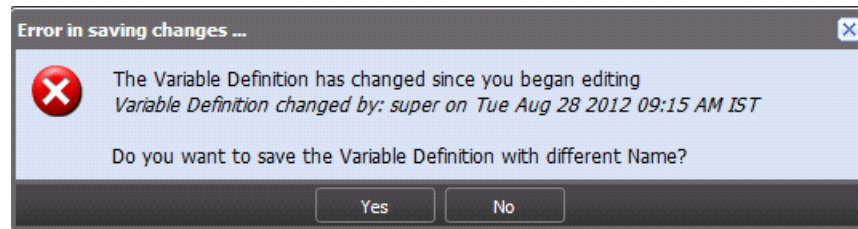
Concurrent editing is supported for the following objects:

- Addresses and address groups
- Services and service groups
- Application signatures
- Schedulers
- Extranet devices
- NAT pools
- Policy profiles

- VPN profiles
- Variables

If a previous user edits any objects and saved the changes, when you attempt to save your changes, the error message appears, as shown in [Figure 7 on page 76](#). This is an example error message received for the Variables object.

**Figure 7: Variable Objects: Concurrent Edit Save Warning Message**



**Related Documentation**

- [Address and Address Groups Overview on page 93](#)
- [Service and Service Group Overview on page 79](#)
- [Security Policy Profiles Overview on page 205](#)
- [VPN Profiles Overview on page 243](#)

## Domain RBAC Overview

A domain is a sphere or a boundary around which you can interact with a system. A Junos Space domain encompasses all Junos Space objects; it enforces access, visibility, and management of objects. By creating a domain, you create a container for interacting with the system. Devices are the key elements in a domain. You use domains and the devices within those domains to configure a device-management partitioning scheme.

Domains allow you to control and partition a network from the management point of view. You can create a network based on certain criteria while providing users with management access to their devices. At the same time, domains also allow sharing of objects and certain configuration enforcements. Objects of the Global domain can only be accessed in read-only mode by the child domains, if view parent is enabled. Access across peer domains is not allowed. This kind of network partitioning is required for both MSPP and enterprise customers.

The following sections explain the impact of domain role-based access control (RBAC) on all Security Director objects and services.

### Creation or Addition of an Object or a Service

Prior to domain RBAC, you only needed write permission for an object to create the object.. Now with the domain RBAC, you also need an access for a domain to create an object in that domain. For example, consider having domains such as D1, D2, and Global. To create an object in D1, switch to the D1 domain before you can create an object in that domain. Note that you cannot create an object in one domain while you are in a different domain.



In Security Director Release 13.2, you cannot create an object in a particular domain to which you have the write access through the REST API. This is not supported by the Network Application Platform Release 13.2 either. All the objects created through the REST API are created in the Global domain.

All the objects that are created internally as part of an operation are part of the domain in which the operation is triggered. For example, all audit logs for an operation are created in the domain in which the operation is triggered.

### Reading or Viewing an Object or a Service

You can view all the objects in a domain to which you are having the access. In the Security Director GUI, you must switch the view to the D1 domain to view objects in that domain. If you have read access to both the D1 and D2 domains, you cannot see D2 domain objects in the D1 domain view, and vice versa. You can see objects in the Global domain from the D1 domain, provided the D1 domain has view parent permission. You cannot see D1 or D2 objects from the Global domain.

Viewing of Security Director domain concept is similar to NSM domain concept. Security Director domain additionally supports viewing of objects in the parent domain in read-only mode from the child domain. For example, if you are currently in the D1 domain, you can view objects in the Global domain irrespective of whether you are assigned to the Global domain, provided the D1 domain has view parent enabled on it.

### Updating or Modifying an Object or a Service

To modify a domain object through the Security Director GUI, you must switch to that domain. You cannot switch to a domain for which you do not have a permission. You cannot modify an object in one domain if you are in a different domain.

Modifying objects through REST is ID based. To modify an object in a domain, you must have write access to that domain. Objects in the System domain are in read-only mode and you cannot modify them.

### Deleting an Object or a Service

To delete a domain object through the Security Director GUI, you must switch to that domain. You cannot delete an object in one domain if you are in a different domain.

Deleting objects through REST is ID based. To delete an object in a domain, you must have write access to that domain. Objects in the System domain are in read-only mode and you cannot delete them.

### Referencing Objects

An object can always reference another object in the same domain, with no restrictions. Referring an object from the same domain is safe. An object in the D1 domain can reference other objects in the D1 domain. The rules are more complex for referencing objects in a different domain. For example, a D1 domain object can reference objects in the D1 domain or in its parent domain, the Global domain. However, D1 objects cannot reference D2 objects. Objects in the Global domain cannot reference objects in its child domains, D1 and D2.

There is an exception to referencing the devices. Objects in the D1 domain can reference devices in the same domain or they can refer devices in the D1 or D2 domain. But this is not true the other way, that is objects in D1 domain cannot reference devices in the Global domain.

## Moving Objects Across Domains

You can move objects from one domain to another, in general. For example, you can move an object the D1 domain to the Global domain and from the Global domain back to the D1domain. A validation is performed to check if the move is valid and invalid moves are disallowed. Moving an object becomes complex if this object is referenced by another object. An object in the D1 domain can be moved up to the Global domain if it is referenced by another object that is either in the D1 domain or in the Global domain. However, moving an object from the Global domain to the D1 domain is disallowed if the object is referenced by another object in the Global domain.

The rules are different for moving device objects between domains. You can move a device from the Global domain to the D1 domain if the device is used by an object in either the Global or the D1 domain. However, moving a device from the D1 domain to the Global domain is not allowed if an object in the D1 domain is using that device.

To move a device that is part of a cluster, you must move both members of the cluster. You cannot move only the primary or only the secondary device. You can move an object from the D1 domain to the Global domain only if you have write access to the Global domain and view parent access enabled in the D1 domain.

## Naming the Objects in a Domain

The name of an object must be unique within a domain hierarchy. Objects with the same name cannot be created in both the D1 and Global domains. The domain hierarchy includes the current domain, its parent, and its child domains.

All the name validations consider domains as one of the constraints.

The object name must be a string beginning with a number or letter and consisting of letters, numbers, colons, periods, slashes, dashes, and underscores. The object name must not contain special characters such as &, <, >, and \n.

## Predefined Objects

All the Security Director predefined objects are in the System domain. The predefined objects are visible from all the domains in read-only mode. The predefined services, addresses, signatures, and so on are all in the System domain.

All the device-specific predefined objects are also in the System domain. When a new predefined object is discovered during the device discover, that object is also placed in the System domain. The All Device policy is in a global domain and you can modify them.

**Related Documentation**

- [Object Builder Overview on page 75](#)

## CHAPTER 9

# Service and Service Groups

- [Service and Service Group Overview on page 79](#)
- [Creating Services on page 80](#)
- [Managing Services on page 84](#)
- [Creating Service Groups on page 90](#)
- [Managing Service Groups on page 91](#)

### Service and Service Group Overview

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

- TCP
- UDP
- MS-RPC
- SUN-RPC
- ICMP
- ICMPv6

You can group service objects to form a service group using the Service Group Creation Wizard. Junos Space creates an object in the Junos Space database to represent an service or an service group.

There are Juniper Networks defined service objects for commonly used services.



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#### NOTE:

- You cannot modify or delete Juniper Networks defined service objects.
  - The number of allowable objects in one group depends on the model of the SRX Series device.
- 

During the device update, you can delete all the unused services and service groups by selecting an option available under Administration > Applications > Modify Application Settings > Update-Device . Select the **Delete unused Services and Service groups** option

to delete all the unused services and service groups. By default, this option is enabled whenever you perform a fresh install of Security Director or upgrade from the previous release.

If the option is enabled, Security Director will manage the services in the same way it manages addresses. Security Director will always delete the unused services (those services that are not referenced by any policy on the device) from the device during publish or update. If the option is disabled, Security Director will never try to delete services from the device, even if the service is unused on a device.



**NOTE:** A *service* in Security Director refers to an application on a device.

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**Related  
Documentation**

- [Creating Services on page 80](#)
- [Creating Service Groups on page 90](#)
- [Managing Services on page 84](#)
- [Managing Service Groups on page 91](#)

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## Creating Services

To create a service:

1. Select **Security Director > Object Builder > Services**.

The Manage Services page appears, listing all available services.

2. Click the plus sign (+) to create a new service.

The Create Service page appears, as shown in [Figure 8 on page 81](#).

Figure 8: Create Service: Basic View Page

Create Service

Object Type: ☒ Service ☐ Service Group

Name:

Description:

Protocols:

Name	Description	Type	Detail
------	-------------	------	--------

Create Cancel

3. By default, the Object Type is selected as Service.
4. In the Name field, enter the name of the service.
5. In the Description field, enter a description for the service.
6. In the Protocols pane, click the plus sign (+) to configure a new protocol.

The New Protocol page appears, as shown in [Figure 9 on page 82](#)

Figure 9: Create Service: Advanced Settings Page

The screenshot shows the 'New Protocol' dialog box. The 'Name' field contains 'nw-prt'. The 'Description' field is empty. The 'Type' dropdown is set to 'TCP'. The 'Destination Port' field is empty. The 'Advanced Settings' section is expanded, showing the 'Disable Inactivity Timeout' checkbox is unchecked. The 'Inactivity Timeout' field is a spinner set to 0. The 'ALG' dropdown is empty. The 'Source Port(s) / Port Range(s)' field is empty, with an example '25, 30-50, 80, 90' provided. The 'Add' and 'Cancel' buttons are at the bottom.

- In the Name field, enter a name for the new protocol.
- In the Description field, enter a description for the new protocol.
- Select a protocol type from the Type menu.

You can select the following protocol types from the Type menu:

- TCP
  - a. Select the appropriate option from the ALG menu.
  - b. Enter a range of TCP source ports in the Source Port field.
  - c. By default, the Disable Inactivity Timeout check box is not selected. Click the **Disable Inactivity Timeout** check box if you want to disable this option.
  - d. Enter a value, in seconds, in the Inactivity Timeout field.
- UDP
  - a. Select the appropriate option from the ALG menu.
  - b. Enter a range of TCP source ports in the Source Port field.
  - c. By default, the Disable Inactivity Timeout check box is not selected. Click the **Disable Inactivity Timeout** check box if you want to disable this option.
  - d. Enter a value, in seconds, in the Inactivity Timeout field.
- ICMP
  - a. Enter a value for the ICMP message you want to display in the ICMP Type field.
  - b. Enter a value for the ICMP type you have specified in the ICMP Code field.

- SUN - RPC
  - a. Enter a value for the RPC service you want to use in the RPC Program Number field.
  - b. Select the TCP or UDP option button to specify an appropriate protocol type in the Protocol Type field.
- MS - RPC
  - a. Enter the universally unique ID corresponding to the RPC service you want to use in the UUID field.
  - b. Select the TCP or UDP option button to specify an appropriate protocol type in the Protocol Type field.
- ICMPv6
  - a. Enter a value for the ICMPv6 message you want to display in the ICMP Type field.
  - b. Enter a value for the ICMPv6 type you have specified in the ICMP Code field.
- Other
  - a. Select the appropriate option from the ALG menu.
  - b. Enter a range of TCP source ports in the Source Port field.
  - c. Enter the number of the protocol in the Protocol Number field.  
This number is specified in the Protocol field for IPv4 packets and the Next Header field for IPv6 packets.
  - d. By default, the Disable Inactivity Timeout check box is unchecked. Click the **Disable Inactivity Timeout** check box if you want to disable this option.
  - e. Enter a value, in seconds, in the Inactivity Timeout field.



**NOTE:** All new ALGs supported by Junos OS Release 12.1X45 appear in the ALG drop-down box. These new ALGs are supported only if the Type selected is TCP, UDP, or Other.

- In the Destination Port field, enter destination ports for the selected types.
  - The Advanced Settings fields are not mandatory fields.
  - Click **Add** in the New Protocol dialog box.
7. To create the service, click **Create**.

#### Related Documentation

- [Service and Service Group Overview on page 79](#)
- [Creating Service Groups on page 90](#)
- [Managing Services on page 84](#)

- [Managing Service Groups on page 91](#)

## Managing Services

---

You can modify, delete, or clone services .

- Select **Security Director > Object Builder > Services**.

The Services page appears.

You can right-click to manage a service.

You can perform the following tasks on the Services page:

1. [Modifying a Service on page 84](#)
2. [Deleting a Service on page 85](#)
3. [Cloning a Service on page 85](#)
4. [Find Duplicate Service Objects on page 85](#)
5. [Find Service Usage on page 86](#)
6. [Replace Services on page 87](#)
7. [Show Unused Services on page 89](#)
8. [Delete All Unused Services on page 89](#)

## Modifying a Service

To modify a service:

1. Select **Security Director > Object Builder > Services**.

The Services page appears.

2. Select the service you want to modify, right-click and select **Modify Service**.

This action redirects you to the window that you used to create a new service. 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 pane.
  - 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 service.



## Deleting a Service

To delete a service:

1. Select **Security Director > Object Builder > Services**.

The Services page appears.

2. Select the service you want to delete, right-click, and select **Delete Services**.

The Delete dialog box appears

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

## Cloning a Service

To clone a service:

1. Select **Security Director > Object Builder > Services**.

The Services page appears.

2. Select the service you want to clone, right-click and select **Clone Service**.

You are redirected to the Clone Service page.

3. Make necessary changes and click **Clone**.

## Find Duplicate Service Objects

To find duplicate service objects:

1. Select **Security Director > Object Builder > Services**.

The Services page appears.

2. Select the service within which you want to find the duplicate objects. Right-click the service, and then click Show Duplicates.

A window appears, showing all the groups with that include duplicate objects, as shown in [Figure 10 on page 86](#). Predefined services are also listed under duplicate objects.

Figure 10: Window Showing Duplicate Services

Return To Service View			
Service	Name	Type	Description
	dhcp-server (3 members)		Merge
	ntp (2 members)		Merge
	netbios-session (2 members)		Merge
	smtp (2 members)		Merge
	dhcp-client (2 members)		Merge
	ldap (2 members)		Merge
	printer (2 members)		Merge
	ike (2 members)		Merge
	isp-global (2 members)		Merge
	ping (2 members)		Merge
	ping6 (2 members)		Merge
	icmp6-all	Service	predefined service
	ping6	Service	predefined service
	sctp-any (2 members)		Merge
	sunrpc (2 members)		Merge

3. If you want to merge duplicate objects in a group, select the objects in a group and click **Merge**.

A merge window appears. In the Name field, provide a new object name or select an existing object name from the list. The merge operation deletes or replaces the reference for only the custom services, and predefined services are not affected.



**NOTE:** You can merge all the objects in a group by clicking **Merge** after selecting all the objects by clicking the group name.



**NOTE:** If the selected duplicate objects are referenced in any other services (firewall policy) and security objects (service groups), a warning message is provided before the objects are merged.

4. If you want to delete objects in a group, select an object or objects, right-click, and then select **Delete**. A confirmation window appears before the selected objects are deleted.

Click **Delete** to delete the selected objects or **Cancel** to cancel the deletion.

5. If you want to find the usage of the duplicate objects in other groups, select an object, right-click, and then select **Find Usage**.

The usage window appears, showing the usage of the selected object in any service (firewall policy) or security objects (service groups).

Procedure to manually rebuild the Index, see ["Indexing Overview" on page 365](#)

## Find Service Usage

To find service usage:

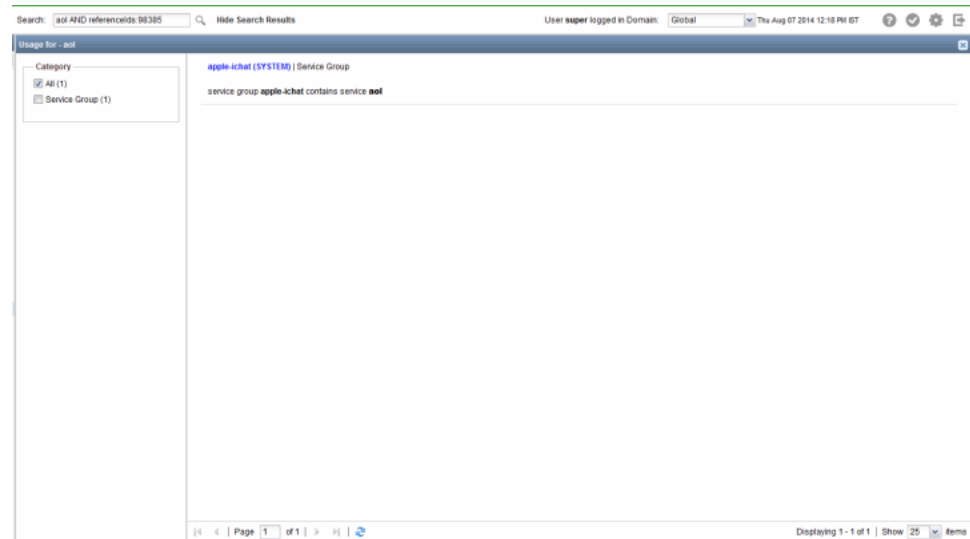
1. Select **Security Director > Object Builder > Services**.

The Services page appears.

2. Select the service for which you want to find the usage. Right-click the service, and then click **Find Usage**.

A window appears, showing all the locations where this object is used and also the search syntax is shown in the global search tool, as shown in [Figure 11 on page 87](#).

**Figure 11: Window Showing Service Usage**



Procedure to manually rebuild the Index, see "[Indexing Overview](#)" on page 365

## Replace Services

You can select one or more services to replace with another service, service group, or nested service group. To replace one or more services:

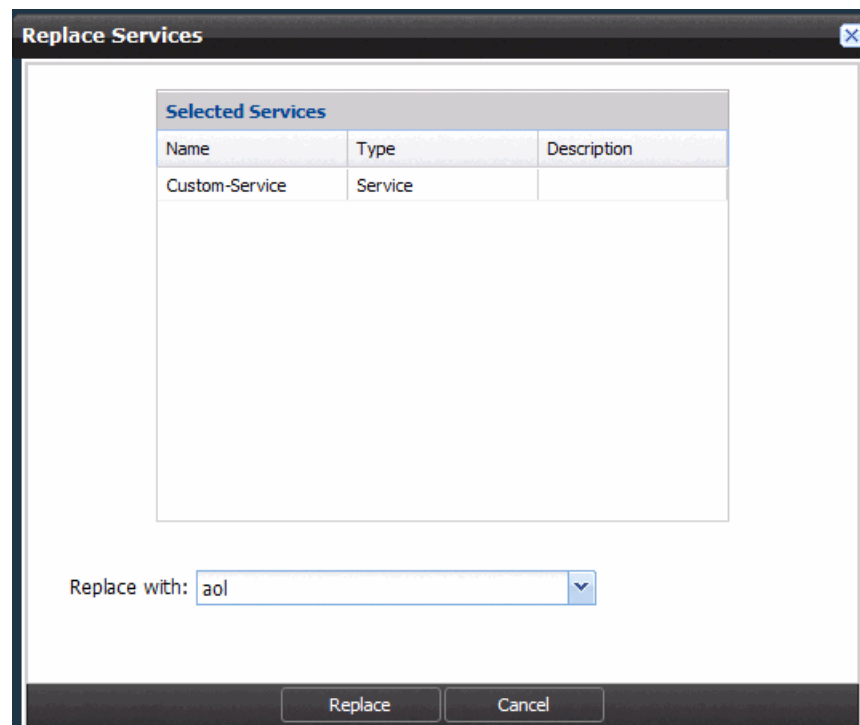
1. Select **Security Director > Object Builder > Services**.

The Services page appears.

2. Select the service or services that you want to replace. Right-click the service or services, and then click **Replace Services**. You can replace a single service or multiple services.

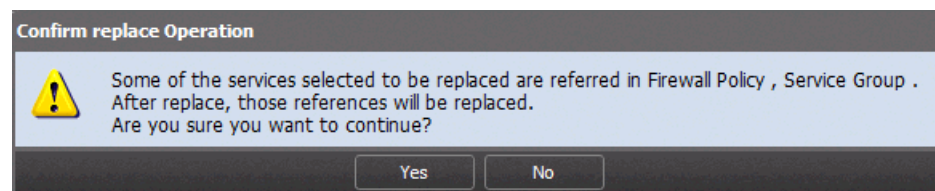
A window appears, showing the service or services you have selected to be replaced, along with a drop-down list of the services that are available to replace the service or services you have selected. See [Figure 12 on page 88](#).

Figure 12: Replace Services Window



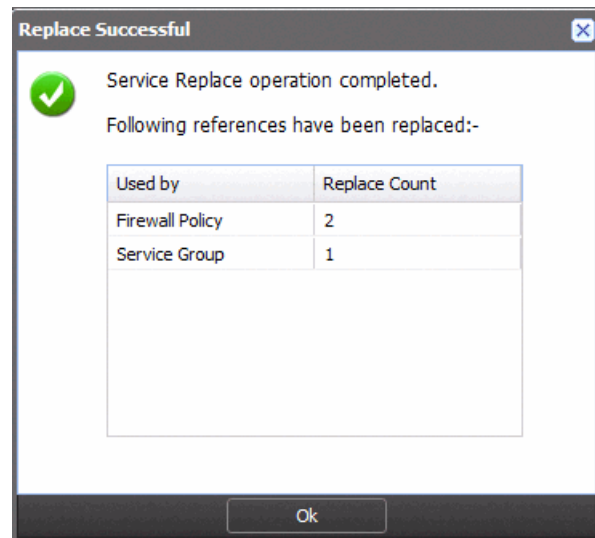
3. In the Replace Services window, select the service, service group, or nested service group that will replace the selected service or services, and click **Replace**. If the selected services are used in any other references, you will receive the following warning message before replacing, as shown in [Figure 13 on page 88](#). Click **Yes** to replace.

Figure 13: Service: Confirm Replace Warning Message



If the operation is successful, you will receive a summary showing the services that were replaced, as shown in [Figure 14 on page 89](#).

Figure 14: Service Replace Successful Message



## Show Unused Services

1. Select **Security Director > Object Builder > Services**.

The Service page appears.

2. You can either right-click any service or use the Actions drawer, and select **Show Unused**.

A list of all unused service objects which are not referenced in any policy or service group, appear on the page.

Procedure to manually rebuild the Index, see [“Indexing Overview” on page 365](#)

## Delete All Unused Services

You can find the unused service objects and delete all unused service objects. You can clear all the unwanted objects which are not used anywhere.

To deleted the unused services:

1. Select the unused service object that you want to delete, right-click or from the Action drawer, select **Delete All Unused Services** option.

A warning message is displayed to confirm the delete operation.

2. Click **Yes** to delete all unused service objects, or **No** to cancel the delete operation.

### Related Documentation

- [Service and Service Group Overview on page 79](#)
- [Creating Services on page 80](#)
- [Creating Service Groups on page 90](#)
- [Managing Service Groups on page 91](#)

## Creating Service Groups

To create a service group:

1. Select **Security Director > Object Builder > Services**.

The Services page appears with all the services and service groups.

2. Click the plus sign (+) to create a service group.

The Create Service appears.

3. Select the Object Type as Service Group, as shown in [Figure 15 on page 90](#).

**Figure 15: Create Service Group Page**

**Create Service**

Object Type: ☐ Service ☒ Service Group

Name:

Description:

Services:

Available		Selected	
Filter	Select: All   None		Select: All   None
aol (tcp/5190-5193)	SYSTEM		
apple-ichat (group)	SYSTEM		
apple-ichat-snatmap (udp/5678)	SYSTEM		
bgp (tcp/179)	SYSTEM		
biff (udp/512)	SYSTEM		
bootpc (udp/68)	SYSTEM		
bootps (udp/67)	SYSTEM		
chargen (udp/19)	SYSTEM		
cifs (group)	SYSTEM		
cvspserver (tcp/2401)	SYSTEM		
dhcpc-client (udp/68)	SYSTEM		
Total: 226			

4. In the Name field, enter a name for the new service group.

5. In the Description field, enter a description for the new service group.

6. In the Services field, from the Available dialog box, select the service that you want to group, and click the right arrow to add to the Selected column.

Click **All** to move all the services to the Selected column. The service you have selected appears in the Selected section of the dialog box.

7. Click **Create**.

The service group appears on the Services page.

### Related Documentation

- [Service and Service Group Overview on page 79](#)
- [Managing Service Groups on page 91](#)

- [Creating Services on page 80](#)
- [Managing Services on page 84](#)

## Managing Service Groups

---

You can modify, delete, or clone service groups listed on the Manage Services page.

To open the Services page:

- Select **Security Director > Object Builder > Services**.

The Services page appears.

You can right-click the service group to manage it.

You can perform the following tasks on the Services page:

1. [Modifying a Service Group on page 91](#)
2. [Deleting a Service Group on page 91](#)
3. [Cloning a Service Group on page 92](#)

### Modifying a Service Group

To modify a service group:

1. Select **Security Director > Object Builder > Services**.

The Services page appears.

2. Select the service group you want to modify, right-click and select **Modify Service**.

This action redirects you to the window that you used to create a new service 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 services used in this group.
6. Click **Modify** to save the changes made to this service group.

### Deleting a Service Group

To delete a service group:

1. Select **Security Director > Object Builder > Services**.

The Services page appears.

2. Select the service group you want to delete, right-click, and select **Delete Services**.

The Delete dialog box appears.

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

## Cloning a Service Group

To clone a service group:

1. Select **Security Director > Object Builder > Services**.

The Services page appears.

2. Select the service group you want to clone, right-click, and select **Clone Service**.

You are redirected to the Clone Service page.

3. Make the necessary modifications and click **Clone**.

### Related Documentation

- [Service and Service Group Overview on page 79](#)
- [Creating Service Groups on page 90](#)
- [Creating Services on page 80](#)
- [Managing Services on page 84](#)



## CHAPTER 10

# Addresses and Address Groups

- [Address and Address Groups Overview on page 93](#)
- [Creating Addresses on page 93](#)
- [Managing Addresses on page 95](#)
- [Creating Address Groups on page 105](#)
- [Managing Address Groups on page 106](#)

## Address and Address Groups Overview

---

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.

### Related Documentation

- [Creating Addresses on page 93](#)
- [Managing Addresses on page 95](#)
- [Creating Address Groups on page 105](#)
- [Managing Address Groups on page 106](#)

## Creating Addresses

---

To create an address:

1. Select **Security Director > Object Builder > Addresses**.

The Address page appears.

2. To create a new address, click the plus sign (+).

The Create Address page appears, as shown in [Figure 16 on page 94](#).

Figure 16: Create Address Page

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

**NOTE:**

- The address name must be a string beginning with a number or letter and consisting of letters, numbers, dashes, and underscores.
- The address name must be a string and cannot contain special characters such as &, <, >, and \n.
- The maximum number of characters allowed in the address name is 63.

4. In the Description field, enter a description for the new address. The description must be a string and cannot contain special characters such as &, <, >, and \n.
5. Direct Security Director 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 **Host** from the drop-down menu and enter the **IP** address in the IP field.
  - To specify a hostname as the address type, select **Host** from the drop-down menu and enter the hostname in the Host Name field.
  - To specify an IP address range, select **Range** from the drop-down menu and enter the IP ranges in the Start IP and End IP fields.
  - To specify a network as an address type, select **Network** from the drop-down menu and enter the network address in the IP and Netmask fields.

- To specify an IP address with a wildcard mask, select **Wildcard** from the drop-down menu and enter the IP address in the IP field and wildcard mask in the Wildcard Mask fields.
- To specify a DNS name as an address type, select **DNS Host** from the drop-down menu and enter the DNS name in the DNS Name field.



**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.



**NOTE:** The host and network address types support both IPv4 and IPv6 address types. These address types also supports multicast addresses. However, the range address type supports only IPv4 addresses. NAT and IPsec VPNs do not support IPv6 addressing and wildcard addresses.



**NOTE:** Ensure that the first 8 bits of the address are not 0 and the highest bit of the mask is 1 when you are using the wildcard address type.

6. Click **Create** to create an address.

The new address appears in the Manage Address page.



**NOTE:** You can also add addresses using the Address import functionality. To use this functionality, select the Actions drawer and click Import Addresses from CSV.



**NOTE:** You can export the addresses using the Address export functionality. To use this functionality, select the addresses you want to export and select Export Addresses to CSV from the Actions drawer.

#### Related Documentation

- [Address and Address Groups Overview on page 93](#)
- [Managing Addresses on page 95](#)
- [Creating Address Groups on page 105](#)
- [Managing Address Groups on page 106](#)

## Managing Addresses

You can modify, delete, clone, export, and import addresses listed on the Manage Address page. Click the **IP Address** column to sort IP addresses in ascending or descending order.

You can sort IP addresses by host, range, and network types; however, DNS host, wildcard, group, and predefined IP addresses are excluded from any type of sorting.

For address range and network type, IP addresses are sorted by the first two digits. The range value does not affect sorting. Multiple devices that have the same address but different ranges are not sorted.

To open the Address page:

- Select **Security Director > Object Builder > Addresses**.

The Address page appears.

You can right-click an address to manage it.

You can perform the following tasks on the Address page:

1. [Modifying an Address on page 96](#)
2. [Deleting an Address on page 97](#)
3. [Cloning an Address on page 97](#)
4. [Exporting Addresses on page 97](#)
5. [Importing Addresses on page 98](#)
6. [Find Duplicate Address Objects on page 98](#)
7. [Find Address Usage on page 100](#)
8. [Replace Addresses on page 101](#)
9. [Show Unused Addresses on page 103](#)
10. [Delete All Unused Addresses on page 103](#)
11. [Assigning Addresses to Domains on page 104](#)

## Modifying an Address

You can modify an address only from the current domain. The address from the Global domain, which is visible in the child domain, cannot be modified.

To modify an address:

1. Select **Security Director > Object Builder > Addresses**.

The Address page appears.

2. Select the address you want to modify, right-click and select **Modify Address**.

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 choose IP Address as the address type, or hostname if you have chosen Hostname).
5. Click **Modify** to save the changes made to this address.

## Deleting an Address

You can delete an address only from the current domain. The address from the Global domain, which is visible in the child domain, cannot be deleted.

To delete an address:

1. Select **Security Director > Object Builder > Addresses**.

The Address page appears.

2. Select the address you want to delete, right-click and select **Delete Addresses**.

The Delete dialog box appears.

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

Only addresses from the current domain are deleted.

## Cloning an Address

To clone an address:

1. Select **Security Director > Object Builder > Addresses**.

The Address page appears.

2. Select the address you want to clone, right-click, and select **Clone Address**.

You are redirected to the Clone Address page.

3. Make the necessary modifications and click **Clone**.

## Exporting Addresses

To export addresses:

1. Select **Security Director > Object Builder > Addresses**.

The Address page appears.

2. Select the addresses you want to export, right-click, and select **Export Addresses to CSV**.

The Export Addresses pop-up window appears.

3. Click **Export Selected** to export the addresses you have selected.

4. If you want to export all addresses to CSV, click the **Export Addresses to CSV** link from the Actions, and click **Export All** from the Export Addresses pop-up window.

The addresses from the current and parent domains are exported to CSV. The domain column is shown in the exported CSV.

## Importing Addresses

To import addresses:

1. Select **Security Director > Object Builder > Addresses**.

The Address page appears.

2. Right-click the address and select **Import Addresses from CSV**.

The Select CSV File window appears.

3. Click **View Sample CSV** to view a sample CSV file. The supported values in the Type field are:

- Host
- Network
- Range
- Wildcard
- DNS Host

4. Click **Browse** and navigate to the location where you saved the CSV file.

5. Click **OK** and then click **Import**.

Importing addresses from CSV creates addresses from the current domain or modifies addresses of the current domain. The new CSVs have an additional Domain Name column in the report. The Older CSVs are also compatible and you can use them for import.

## Find Duplicate Address Objects

To find duplicate address objects:

1. Select **Security Director > Object Builder > Addresses**.

The Address page appears.

2. Select the address for which you want to find the duplicate objects. Right-click the address, and then click **Show Duplicates**.

A window appears showing all the groups with duplicate objects, as shown in [Figure 17 on page 98](#).

**Figure 17: Page Showing Duplicate Address Objects**

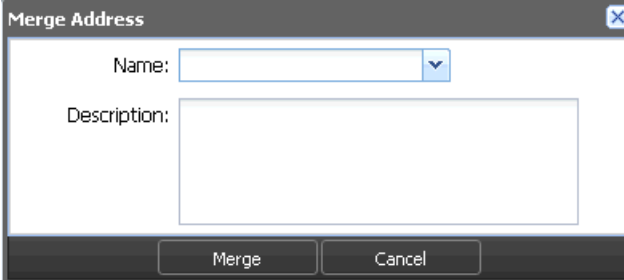
Name	Type	Host Name	IP Address	Description	
1.1.1.1 (2 members)					Merge
Copy_of_host	Host		1.1.1.1		
host	Host		1.1.1.1		
2.2.2.0-2.2.2.20 (2 members)					Merge
3.3.3.0/24 (2 members)					Merge
10.0.0.0/255.0.0.255 (2 members)					Merge
dns (2 members)					Merge
4.4.4.0-4.4.4.255 (2 members)					Merge
2::2 (2 members)					Merge
2::0/20 (2 members)					Merge
emptypp1 (2 members)					Merge
group1 (2 members)					Merge

The duplicate objects only from the current domain are listed.

3. If you want to merge duplicate objects in a group, select the objects in a group and click **Merge**.

A merge window appears as shown in [Figure 18 on page 99](#). In the Name field, provide a new object name or select existing object names from the list.

**Figure 18: Merge Address Page**



The image shows a 'Merge Address' dialog box with a title bar containing a close button. Inside the dialog, there is a 'Name:' label followed by a text input field and a dropdown arrow. Below this is a 'Description:' label followed by a larger text input area. At the bottom of the dialog are two buttons: 'Merge' and 'Cancel'.

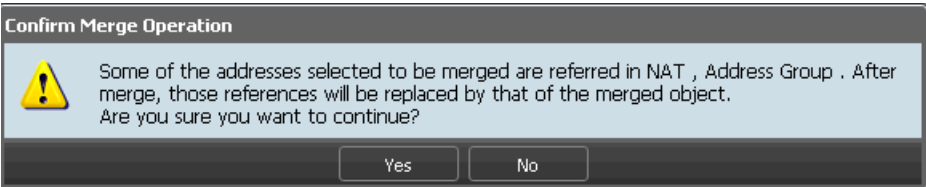


**NOTE:** You can merge all the objects in a group by clicking the Merge button after selecting all the objects by clicking the group name.



**NOTE:** If the selected duplicate objects are referenced in any other services (firewall policy, NAT policy, or VPN), and security objects (NAT pool, address groups), a warning message is provided before the objects are merged, as shown in [Figure 19 on page 99](#).

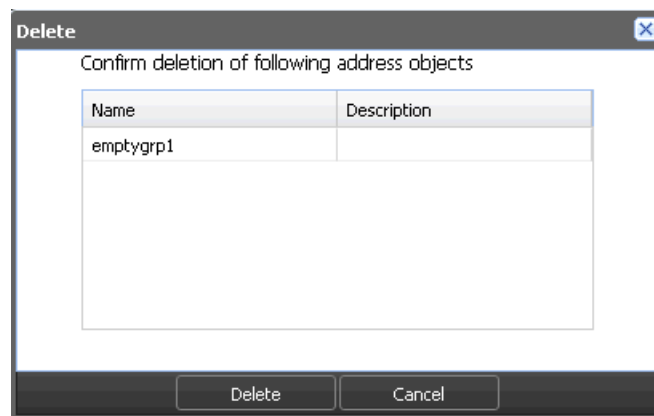
**Figure 19: Merge Operation Confirmation Message**



The image shows a 'Confirm Merge Operation' dialog box. It has a title bar and a light blue background. On the left is a yellow warning triangle icon. To the right of the icon, the text reads: 'Some of the addresses selected to be merged are referred in NAT , Address Group . After merge, those references will be replaced by that of the merged object. Are you sure you want to continue?'. At the bottom are two buttons: 'Yes' and 'No'.

4. If you want to delete objects in a group, select an object or objects, right-click and then select **Delete**. A confirmation window appears before the selected objects are deleted, as shown in [Figure 20 on page 100](#).

Figure 20: Duplicate Objects Delete Confirmation Page



Click **Delete** to delete the selected objects or **Cancel** to cancel the deletion.

5. If you want to find the usage of the duplicate objects in other groups, select an object, right-click, and then select **Find Usage**.

The usage window appears showing the usage of the selected object in any service (firewall policy, NAT policy, or VPN), or security objects (NAT pool, address groups).

Procedure to manually rebuild the Index, see ["Indexing Overview" on page 365](#)

## Find Address Usage

To find address usage:

1. Select **Security Director > Object Builder > Addresses**.

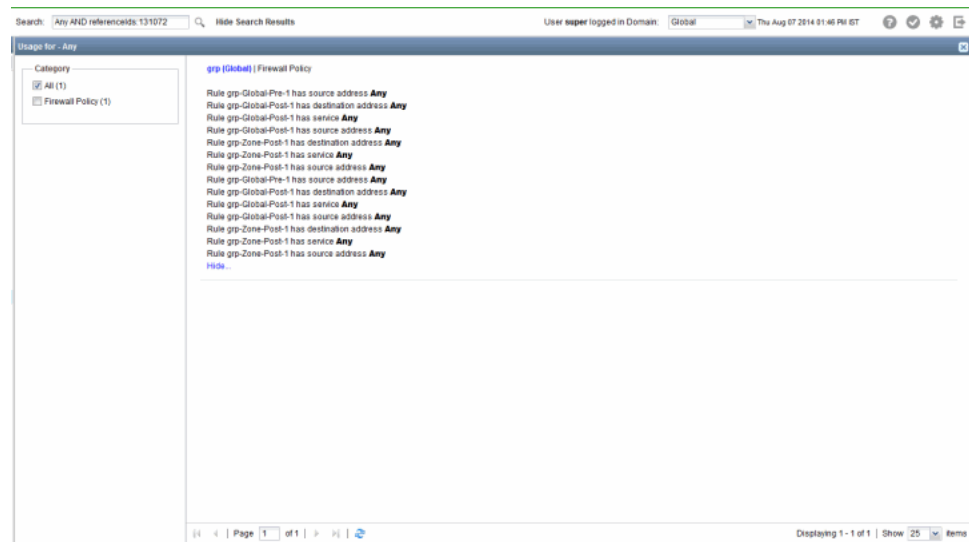
The Address page appears.

2. Select the address for which you want to find the usage. Right-click the address, and then click **Find Usage**.

A window appears, showing all the locations where this address object is used and also the search syntax is shown in the global search tool, as shown in [Figure 21 on page 101](#).



Figure 21: Window Showing Address Usage



If an address is used across domains, you can only navigate to policies of the current domain. A warning message is shown if you navigate to policies of other domains.

Procedure to manually rebuild the Index, see [“Indexing Overview” on page 365](#)

## Replace Addresses

You can select one or more addresses to replace with another address, address group, or nested address group. To replace one or more addresses:

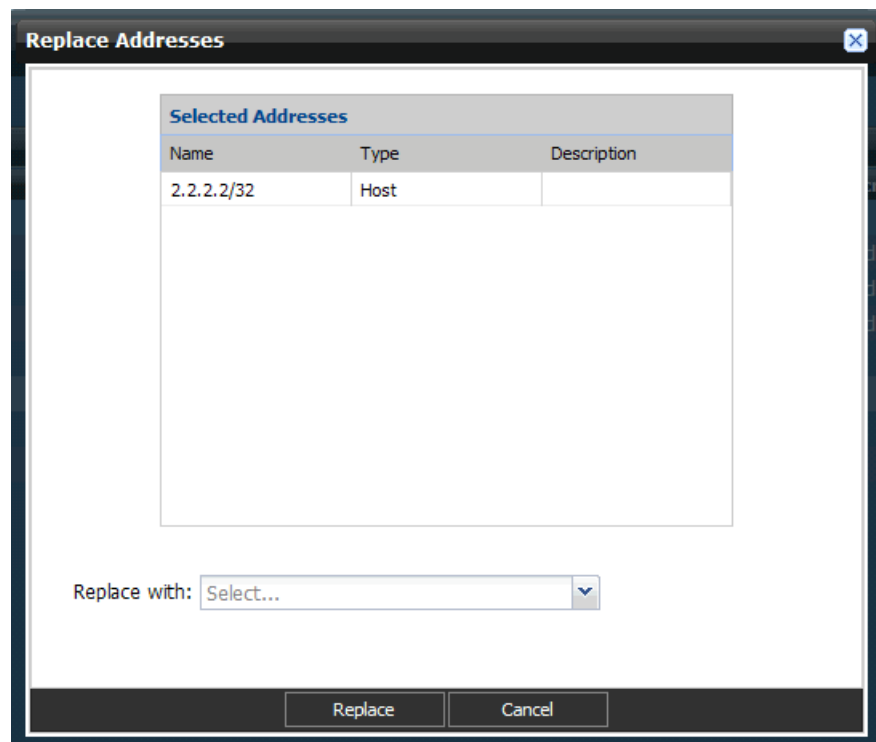
1. Select **Security Director > Object Builder > Addresses**.

The Address page appears.

2. Select the address or addresses that you want to replace. Right-click the address or addresses, and then click **Replace Addresses**. You can replace a single address or multiple addresses.

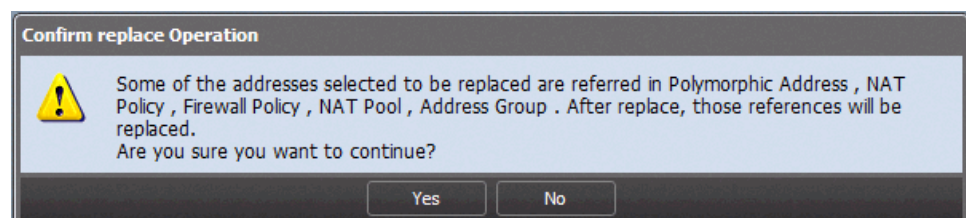
A window appears, showing the address or addresses you have selected to be replaced, along with a drop-down list of the addresses that are available to replace the address or addresses you have selected. See [Figure 22 on page 102](#).

Figure 22: Replace Addresses Window



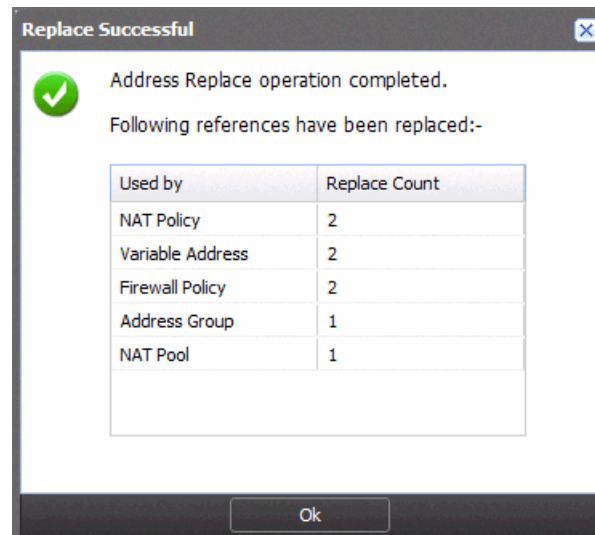
3. In the Replace Addresses window, select the address, address group, or nested address group that will replace the selected address or addresses, and click **Replace**. If the selected addresses are used in any other references, you will receive the following warning message before replacing, as shown in [Figure 23 on page 102](#). Click **Yes** to replace.

Figure 23: Address: Confirm Replace Warning Message



If the operation is successful, you will receive a summary showing the addresses that were replaced, as shown in [Figure 24 on page 103](#).

Figure 24: Address Replace Success Message

**NOTE:**

- You cannot replace VPN with IPv6, DNS, or wildcard addresses.
- You cannot replace addresses with polymorphic addresses or vice versa.
- Only the addresses from the services (firewall, NAT, or VPN policy) or from the address group of the current domain are replaced.

## Show Unused Addresses

1. Select **Security Director > Object Builder > Addresses**.

The Address page appears.

2. You can either right-click any address or use the Action, and select **Show Unused**.

A list of all unused address objects which are not referenced in any policy or address group, appear on the page. The unused objects only from the current domain are listed.

Procedure to manually rebuild the Index, see [“Indexing Overview” on page 365](#)

## Delete All Unused Addresses

You can find the unused address objects and delete all unused address objects. You can clear all the unwanted objects which are not used anywhere.

To deleted the unused addresses:

1. Select the unused address object that you want to delete, and right-click the object, or use the Actions and select **Delete All Unused Addresses**

A warning message appears, confirming the delete operation.

2. Click **Yes** to delete all unused address objects, or **No** to cancel the delete operation.  
Only unused addresses from the current domain are deleted.

## Assigning Addresses to Domains

You can assign or reassign addresses to different domains. You can assign only one address at a time; multiple selections are not allowed. Before assigning an address to other domain, Security Director checks for the validity of the move. For example, you cannot move an address in the Global domain to a child domain, if it is used by a policy in the Global domain. A warning message is shown for such scenarios.

To assign an address to a domain:

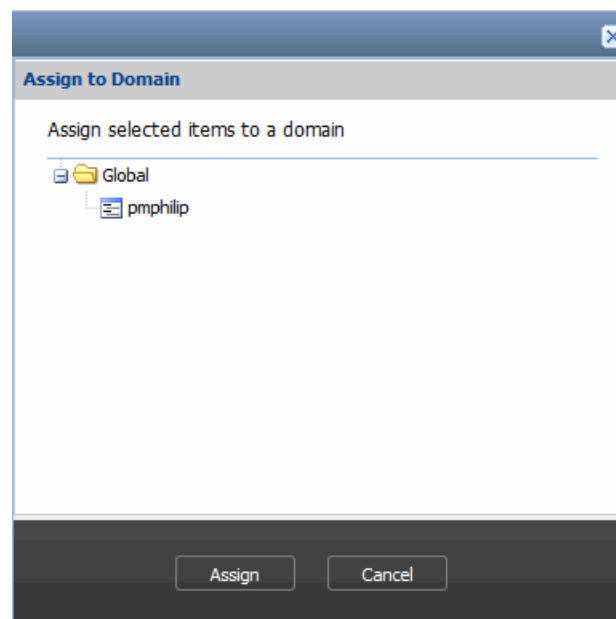
1. Select **Security Director > Object Builder > Addresses**.

The Address page appears.

2. You can either right-click an address or use the Actions, and select **Assign to Domain**.

The Assign to Domain page appears as shown in [Figure 25 on page 104](#).

**Figure 25: Addresses—Assign to Domain**



3. Select the required domain to assign the address, and click **Assign**.

The selected domain is assigned to the address.



**NOTE:** You cannot assign or reassign domains for predefined addresses. These domains are always assigned to the System domain.

- Related Documentation**
- [Address and Address Groups Overview on page 93](#)
  - [Creating Addresses on page 93](#)
  - [Creating Address Groups on page 105](#)
  - [Managing Address Groups on page 106](#)

## Creating Address Groups

To create an address group:

1. Select **Security Director > Object Builder > Address**.  
The Address page appears showing all the addresses and address groups.
2. To create a new address group, click the plus sign (+).
3. Select the Object Type as Address Group, as shown in [Figure 26 on page 105](#).

**Figure 26: Create Address Group Page**

Name	IP Address	Host Name	Type
64.5.195.25	64.5.195.25		Host
64.5.145.253	64.5.145.253		Host
64.4.111.0_27	64.4.111.0/27		Netw
10.159.2.0/25	10.159.2.0/25		Netw
64.34.14.0/24	64.34.14.0/24		Netw
64.74.223.36/	64.74.223.36		Host
64.74.80.0/24	64.74.80.0/24		Netw



**NOTE:** The number of allowable objects in one group depends on the model of the SRX Series device.

4. In the Name field, enter a name for the new address group.
  - The address group name must be a string beginning with a number or letter and consisting of letters, numbers, dashes, and underscores.
  - The address group name must be a string and cannot contain special characters such as &, <, >, and \n.
  - The maximum number of characters allowed in the address group name is 63.

5. In the Description field, enter a description for the new address group. The description must be a string and cannot contain special characters such as &, <, >, and \n.

6. In the Addresses field, from the Available dialog box, select the address that you want to group, and click the right arrow to add to the Selected column.

Click **All** to move all the addresses to the Selected column. The address you have selected appears in the Selected section of the dialog box.

7. Click **Create**.

The address group appears on the Address page.

**Related  
Documentation**

- [Address and Address Groups Overview on page 93](#)
- [Managing Address Groups on page 106](#)
- [Creating Addresses on page 93](#)
- [Managing Addresses on page 95](#)

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## Managing Address Groups

You can modify, delete, or clone address groups listed on the Manage Address page.

To open the Address page:

- Select **Security Director > Object Builder > Address**.

The Address page appears.

You can right-click the address group to manage it.

You can perform the following tasks on the Address page:

1. [Modifying an Address Group on page 106](#)
2. [Deleting an Address Group on page 107](#)
3. [Cloning an Address Group on page 107](#)

## Modifying an Address Group

To modify an address group:

1. Select **Security Director > Object Builder > Addresses**.

The Address page appears.

2. Select the address group you want to modify, right-click, and select **Modify Address**.

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. The description must be a string and cannot contain special characters such as &, <, >, and \n.

4. In the Members pane, make the 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:

1. Select **Security Director > Object Builder > Addresses**.  
The Address page appears.
2. Select the address you want to delete, right-click, and select **Delete Addresses**.  
The Delete dialog box appears.
3. Select the address group you want to delete and click **Delete**.

## Cloning an Address Group

To clone an address group:

1. Select **Security Director > Object Builder > Addresses**.  
The Address page appears.
2. Select the address you want to clone, right-click, and select **Clone Addresses**.  
You are redirected to the Clone Address page.
3. Make necessary modifications and click **Clone**.

### Related Documentation

- [Address and Address Groups Overview on page 93](#)
- [Creating Address Groups on page 105](#)
- [Creating Addresses on page 93](#)
- [Managing Addresses on page 95](#)





## CHAPTER 11

# Zone Sets

- [Creating a Zone Set on page 109](#)
- [Managing Zone Sets on page 110](#)

### Creating a Zone Set

You can group one or more zones into a group and reference them in the global firewall rules. To create a new zone set:

1. Select **Security Director > Object Builder > Zone Sets**.

The Zone Sets page appears, listing the existing zone sets.

2. To create a zone set, click the plus sign (+).

The Create Zone Set page appears, as shown in [Figure 27 on page 109](#).

**Figure 27: Create ZoneSet**

**Create Zone Set**

Name\*:  ⓘ

Description:

Zones:

Available		Selected	
Zones	Domain	Zones	Domain
A1			
MGMT			
RI_TUNN_ZONE			
UNTRUST			
VPN			
Z1			
Zone			
junos-host			
rbalugu-chng			
rbalugu123			

Total: 117

3. In the Name field, enter the name of the new zone set.
  - The zone name must be a string beginning with a number or letter and consisting of letters, numbers, dashes, and underscores.

- The zone name must be a string and cannot contain special characters such as &, <, >, and \n.
  - The maximum number of characters allowed in the zone name is 63.
4. In the Description field, enter a description of the zone set. The description must be a string and cannot contain special characters such as &, <, >, and \n.
  5. In the Zones section, all zones from devices managed by Security Director are displayed in the Available column. Zones for the child domain are also listed.  
  
Choose one or more zones from the Available column and move them to the Selected column.
  6. Click **Create**.  
  
A new zone set is created.

**Related Documentation**

- [Managing Zone Sets on page 110](#)

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## Managing Zone Sets

You can modify, delete, clone, show unused, and find usage for zone sets.

To open the Zone Sets page:

- Select **Security Director > Object Builder > Zone Sets**.  
  
The Zone Sets page appears, listing the zone sets.
- Right-click the zone set to manage it, or select the required options from Actions.

You can perform the following management tasks on the Zone Sets page:

- [Modifying a Zone Set on page 110](#)
- [Deleting a Zone Set on page 111](#)
- [Cloning a Zone set on page 111](#)
- [Showing Duplicate Zone Sets on page 111](#)
- [Finding Zone Set Usage on page 111](#)
- [Showing Unused Zone Sets on page 112](#)
- [Deleting All Unused Zone Sets on page 112](#)

## Modifying a Zone Set

To modify a zone set:

1. Select **Object Builder > Zone Sets**.  
  
The Zone Sets page appears.
2. Right-click the zone set and select **Modify ZoneSet**, or click the pencil icon.  
  
The Modify ZoneSet page appears.

3. You can modify the name, description, and zones selected for that zone set.
4. Click **Modify**.

The required values are modified and saved.

## Deleting a Zone Set

To delete a zone set:

1. Select **Object Builder > Zone Sets**.  
The Zone Sets page appears.
2. Right-click the zone set that you want to delete, and select **Delete ZoneSets**.  
You can also click the minus sign (-) to delete the zone set.
3. A confirmation message appears before deletion. Click **Delete**.  
The required zone set is deleted.

## Cloning a Zone set

To clone a zone set:

1. Select **Security Director > Object Builder > Zone Sets**.  
The Zone Sets page appears.
2. Select the zone set you want to clone, right-click, and select **Clone ZoneSet**.  
You are redirected to the Clone ZoneSet page.
3. Modify the required field values, and click **Clone**.

## Showing Duplicate Zone Sets

To view the duplicate Zone sets:

1. Select **Security Director > Object Builder > Zone Sets**.  
The Zone Sets page appears.
2. Select the zone set within which you want to find the duplicate objects. Right-click the zone set and click **Show Duplicates**.  
A window appears, showing all the sets that include the duplicate objects.

## Finding Zone Set Usage

To find usage for a zone set:

1. Select **Security Director > Object Builder > Zone Sets**.  
The Zone Sets page appears.
2. Select the zone set for which you want to find the usage. Right-click the zone set and then click **Find Usage**.

A window appears, showing all the locations where this object is used and also the search syntax is shown in the global search tool.

## Showing Unused Zone Sets

To view all the unused zone sets:

1. Select **Security Director > Object Builder > Zone Sets**.

The Zone Sets page appears.

2. You can either right-click any zone set or use the Actions, and select **Show Unused**.

A list of all unused zone sets that are not referenced in any policy appear on the page.

## Deleting All Unused Zone Sets

You can find the unused zone sets and delete them. You can clear all the unwanted objects that are not used anywhere.

To delete all unused zone sets:

1. Select the unused zone set that you want to delete and right-click, or, from the Action, select **Delete All Unused**.

A confirmation message appears before deletion.

2. Click **Yes** to delete all unused zone sets, or **No** to cancel the delete operation.

### Related Documentation

- [Creating a Zone Set on page 109](#)

## CHAPTER 12

# Variables

- [Creating Variable Definitions on page 113](#)
- [Managing Variable Definitions on page 117](#)

### Creating Variable Definitions

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To create variable definitions:

1. Select **Security Director > Object Builder > Variables**.

The Variables page appears. This page displays all the variables you have created.

2. Click the plus sign (+) to create a polymorphic object..

The Create Variable Definition page appears, as shown in [Figure 28 on page 114](#). You can create a variable definition on this page.

Figure 28: Create Polymorphic Object Page

**Create Variable Definition**

Name:    
 ❗ This field is required

Description:

Type: ☒ Address ☐ Zone

Default Address:  +

Add   Delete	
<input type="checkbox"/>	
Context Value	Address

Create Cancel

3. Enter the name of the variable definition in the Name field.
4. Enter a description for the variable definition in the Description field.
5. Select the type of variable definition, either Address or Zone, from the Type field.
6. Select the default address value from the Default Address menu.
7. To add variable values:
  - If the Type is Address:
    - a. Click the **Add** icon.
    - A new row appears.
    - b. Double-click the **Context Value** field, and select the device.
    - c. Double-click the **Address** field, and select the address for the device from the menu.
  - If the Type is Zone:
    - a. Click the **Add** icon.
    - A new row appears.
    - b. Double-click the **Context Value** field, and select the device.

- c. Double-click the **Zone** field, and select the zone, either trust or untrust, from the menu.

8. Click **Create**.

During the creation of variables, devices from only the current and child domain are listed. Devices in a domain whose view parent is disabled are not listed.

You can create and address or address groups for the polymorphic objects. To create an address or address group:

1. Click the plus sign (+).

The Create Address Object page appears, as shown in [Figure 29 on page 115](#).

**Figure 29: Inline Address Group Creation for a Polymorphic Object**

**Create Address Object**

Object Type: ☒ Address ☐ Address Group

Name:

Description:

Type: Host

IP  Get IP Get Hostname

2. To create an address object, select the **Address** radio button, and configure the following parameters:
  - In the Name field, enter the name of the address object
  - In the Description field, enter a description.
  - From the Type drop-down list, select the type as Host, Range, or Network.
  - In the IP field, enter IPv4 or IPv6 address.
  - In the Host Name field, enter the host name.
  - To create a new address object, click **Create**.

- To create an address group, select the **Address Group** radio button.

A page appears to create an address group, as shown in [Figure 30 on page 116](#). Configure the following parameters:

**Figure 30: Create Address Object—Inline Address Group Creation Page**

**Create Address Object**

Object Type: ☐ Address ☒ Address Group

Name:

Description:

Addresses:

Available		Selected	
Filter	Select: <a href="#">All</a> <a href="#">None</a>		Select: <a href="#">All</a> <a href="#">None</a>
10.159.2.0/25 (10.159.2.0/25)	Global		
10.159.3.0/24 (10.159.3.0/24)	Global		
10.159.4.0/24 (10.159.4.0/24)	Global		
144.201.76.32 (144.201.76....)	Global		
Addr-66.0.192.112/28 (66.0....)	Global		
Addr-66.184.206.216 (66.18....)	Global		
Total: 211			
<input type="checkbox"/> Host	<input type="checkbox"/> Network	<input type="checkbox"/> Wildcard	<input type="checkbox"/> Range
		<input type="checkbox"/> Other	

- Enter the name of an address group in the Name field.
- In the Addresses filed, you can select all addresses available in the Available column or select few addresses to create a new address group.
- Click **Create** to create the address group. This adds the newly created address objects to the selected addresses and returns to the address selector. Click **Cancel** to discard your changes and return to the Create NAT Pool window.

You can also add variables using the Variables import functionality. To use this functionality, select the Actions drawer and click **Import Variables from CSV**. You can export the variables using the Variables export functionality. To use this functionality, select the variables you want to export and click **Export Variables to CSV** from the Actions drawer.

In the CSV file, device-to-address or device-to-zone mapping is provided. After the import, polymorphic address or polymorphic zone is created based on the information available in the CSV file.





**NOTE:** You can search variables by name, description, or default value in the search box available at the top right corner of the Manage Variables page. If you want to tag the variables, right-click the variable and select a tag option. After tagging, you can search for variables by the respective tag names.

#### Related Documentation

- [Managing Variable Definitions on page 117](#)

## Managing Variable Definitions

You can delete, modify, or clone the variable definitions listed on the Variables page.

To open the Variable page:

- Select **Security Director > Object Builder > Variables**.

The Variables page appears.

You can right-click the variable definition to manage it.

You can perform the following tasks on the Variables page:

- [Deleting Variable Definitions on page 117](#)
- [Modifying Variable Definitions on page 117](#)
- [Cloning Variable Definitions on page 118](#)

## Deleting Variable Definitions

To delete a variable definition:

1. Select **Security Director > Object Builder > Variables**.

The Variables page appears. This page displays all the variable definitions you have created.

2. Select the variable definition you want to delete, and right-click **Delete Variable Definitions**.



**NOTE:** You can also delete the variable definition by right-clicking the variable definition and selecting Delete Variable Definitions. You can select more than one variable to delete.

## Modifying Variable Definitions

To modify a variable definition:

1. Select **Security Director > Object Builder > Variables**.

The Variables page appears. This page displays all the variable definitions you have created.

2. Select the variable definition you want to modify, right-click and select **Modify Variable Definition**.

The Modify Variable Definitions page appears. You can make the modifications on this page.



**NOTE:** You can also modify the variable definition by right-clicking the variable definition and selecting **Modify Variable Definition**.

3. Click **Modify**.

## Cloning Variable Definitions

To clone a variable definition:

1. Select **Security Director > Object Builder > Variables**.

The Variables page appears. This page displays all the variable definitions you have created.

2. Select the variable definition you want to clone, right-click and select **Clone Variable Definition**.

The Clone Variable Definitions page appears. You can make the modifications on this page.



**NOTE:** You can also clone the variable definition by right-clicking the variable definition and selecting **Clone Variable Definition**.

3. Click **Clone**.

## PART 7

# Firewall Policies

- [Firewall Policies on page 121](#)
- [Application Signatures on page 191](#)
- [Schedulers on page 199](#)
- [Policy Profiles on page 205](#)



## CHAPTER 13

# Firewall Policies

- [Firewall Policies Overview on page 121](#)
- [Multiple Group Policy Membership Overview on page 124](#)
- [Global Address Book Overview on page 128](#)
- [Creating Firewall Policies on page 131](#)
- [Unlocking Locked Policies on page 146](#)
- [Inline Creation of Objects in Policy on page 148](#)
- [Policy Priority Precedence Setting on page 153](#)
- [Adding Rules to a Firewall Policy on page 155](#)
- [Ordering the Rules in a Firewall Policy on page 160](#)
- [Publishing Firewall Policies on page 161](#)
- [Managing Firewall Policies on page 168](#)

## Firewall Policies Overview

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Security Director provides you with four types of firewall policies:

- **All Devices**—Predefined firewall policy that is available with Security Director. You can add prerules and postrules. When the all devices policy configuration information is updated on the devices, the rules are updated in the following order:
  - All devices prerules
  - Group prerules
  - Device-specific rules
  - Group postrules
  - All devices postrules

All devices policy enables rules to be enforced globally to all the devices managed by Security Director. All devices policy is part of the Global domain and is visible in all the child domains if the view parent is enabled.

- **Group**—Type of firewall policy that is shared with multiple devices. This type of policy is used when you want to update a specific firewall policy configuration to a large set of devices. You can create group prerules, group postrules, and device rules for a group

policy. When a group firewall policy is updated on the devices, the rules are updated in the following order:

- Group prerules
- Device-specific rules
- Group postrules

During a device assignment for a group policy, only devices from the current and child domains (with view parent enabled) are listed. Devices in the child domain with view parent disabled are not listed. Not all the group policies of the Global domain are visible in the child domain. Group policies of the Global domain (including All device policy) are not visible to the child domain, if the view parent of that child domain is disabled. Only the group policies of the Global domain, which has devices from the child domain assigned to it, are visible in the child domain. If there is a group policy in global domain with devices from both D1 and the Global domains assigned to it, only this group policy of the Global domain is visible in the D1 domain along with only the D1 domain devices. No other devices, that is the Device-Exception policy, of the Global domain is visible in the D1 domain.

You cannot edit a group policy of the Global domain from the child domain. This is true for All Devices policy as well. Modifying the policy, deletion of the policy, managing a snapshot, snapshot policy and acquiring the policy lock is also not allowed. Similarly, you cannot perform these actions on the Device-Exception policy of the D1 domain from the Global domain. You can prioritize group policies from the current domain. Group policies from the other domains are not listed.

- **Device Policy**—Type of firewall policy that is created per device. This type of policy is used when you want to push a unique firewall policy configuration per device. You can create device rules for a device firewall policy.

Security Director views a logical system like it does any other security device, and it takes ownership of the security configuration of the logical system. In Security Director, each logical system is managed as a unique security device.

During a device assignment for a device policy, only devices from the current domain are listed.



**NOTE:** If Security Director discovers the root logical system, the root lsys discovers all other user lsys inside the device.

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- **Device-Exception Policy**—Type of firewall policy that is created when a device is removed from a group policy.

If you move a device from one domain to another and the move is valid, the device-exception policy is also moved from the current domain to the target domain. This is possible if the view parent mode is enabled in the target domain. If the view parent is not enabled in the target domain, the move is not valid.

- **Global Policy**—Global Policy Rules are enforced regardless of ingress or egress zones; they are enforced on any device transit. Any objects defined in the Global Policy Rules must be defined in the global address book.

Security Director permits users to manage the current zone-based firewall policies and the new global policy rules supported in SRX Series devices. To achieve this the current policy model categorizes the rule bases into zone and global policies. Also, all the existing and new firewall policy features extend to the global rule base. The base includes the prerule or postrule predefined groups and the inheritance concept of current firewall policies. Because both the rule bases are managed within a single firewall policy, there is no change in workflow for publish and update. Therefore, both the zone-based rules and global base rule are published and updated together.

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

Firewall policies are displayed in the Tabular view. The left pane of the Tabular view displays all firewall policies. The right pane of the Tabular view displays the rules for the firewall policy that is highlighted in the left pane.

## Rule Base Overview

Security Director allows you to configure one type or both types of rule bases for each policy. If devices are assigned to a policy that does not have one of the rule bases under its management, Security Director still interprets that rule base as being under its scope. For example, if you configure firewall policies out of band on a device under an unmanaged rule base, Security Director deletes those policies. If you do not select the previously configured rule base in a policy in the Security Director policy modify workflow, Security Director automatically deletes all rules in the policy in the next publish and update.

### Example: UnManaging a Previously Managed Rule Base

You can remove a managed device from the Security Director management scope. To unmanage a previously managed rule base when no other policies are published on the device except the existing policy:

1. Do not select the Manage Global Policy option on modifying a device policy in Security Director.
2. Security Director deletes the global rule base in the design data of the Security Director application.
3. Publish a policy and update the device. The update deletes all global rules from the device.
4. On successful update, the all devices policy for the device is removed from the Security Director management scope.



**NOTE:** Security Director will continue to delete any all devices policy configured on the device through the CLI at subsequent publish updates.

## Custom Column Overview

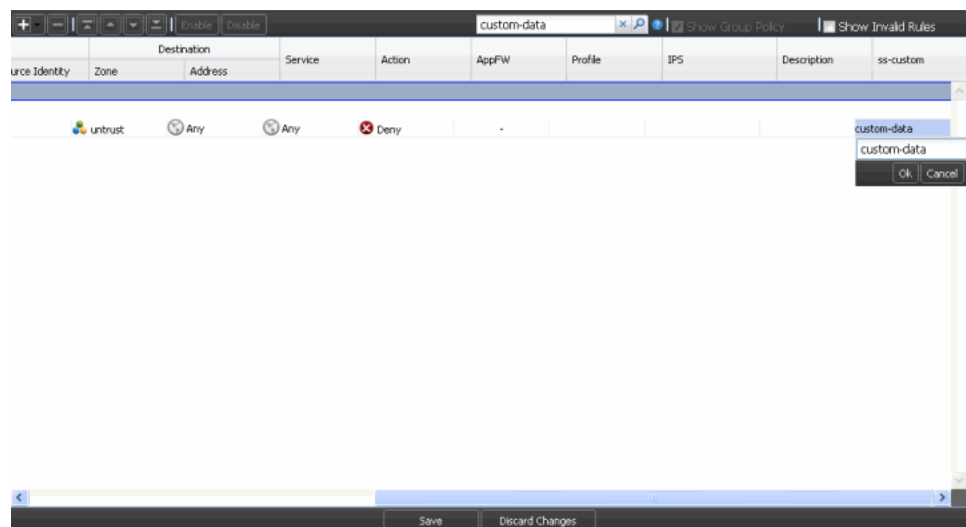
The Custom Column feature is a more structured mechanism used for various purposes such as for tracking changes to firewall policies, owner of the rule, by allowing you to define custom column views. Once the custom columns are defined, they appear on the right pane of the grid, similar to other columns. Data in these columns can be captured and saved in the same way as with other columns. You can also search the custom column data.

You can create a maximum of three custom columns in each domain.

### Custom Column Data Search

Once you entered or modified custom column data, you can perform searches on the data. Security Director searches for the data you specify within the custom column data you have created and filters the results by the rule name that matches the custom column name as well as by the custom column data, as shown in [Figure 31 on page 124](#).

Figure 31: Custom Column Data Search



#### Related Documentation

- [Creating Firewall Policies on page 131](#)
- [Adding Rules to a Firewall Policy on page 155](#)
- [Ordering the Rules in a Firewall Policy on page 160](#)
- [Managing Firewall Policies on page 168](#)
- [Publishing Firewall Policies on page 161](#)

## Multiple Group Policy Membership Overview

The Multiple Group Policy Membership feature supports the placing of devices in more than one policy group, and assigning priorities to the policy groups. This way, the policies, and the rules within them, are applied in the desired order.



The group priority of firewall group policy has the following two parts:

- Priority
- Precedence

Priority indicates the order in which rules are pushed to the device. Priority can be set to high, medium, or low. Precedence is a value that controls the ordering of group policies within a priority level. If two policies are assigned the same priority, their precedences set the order in which the rules are pushed.

## General Rules About Priority and Precedence

When you create or edit a group policy, if you set the precedence to the same value as an existing policy, the newly created or modified policy gets the assigned precedence. The existing group policy that had the same precedence, and all lower priority (higher precedence value) policies, will have their precedence value increased by 1.

If you make changes to a policy, such as deleting a policy or moving a policy from a different priority level, Security Director reorders the precedence of all policies in that priority level.

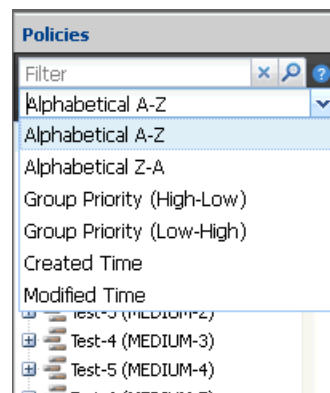
### Example: New Precedence of a Policy Set to the Same Precedence as an Existing Policy

In this example, three medium-priority policies, PolicyA, PolicyB, and PolicyC, are assigned precedences 1, 2, and 3, respectively. If you create a new policy, PolicyNew, and set the priority to medium and the precedence to 2, the order of the policies changes to PolicyA, PolicyNew, PolicyB, and PolicyC, with precedence 1, 2, 3, and 4, respectively.

## Sorting of Firewall Policy Left Pane

The left pane of the firewall policies can be sorted based on priority or precedence values, alphabetically, and by creation or modification time, as shown in [Figure 32 on page 125](#). Global policies always appear at the top of the right pane, and device policies appear at the bottom of the right pane. Only group policies are sorted.

Figure 32: Sorting Order in the Firewall Policy Left Pane



[Table 14 on page 126](#) shows the different sorting orders available for firewall policies.

Table 14: Sorting Order for Firewall Policies

Sorting Order	Description
Alphabetical A-Z	Group policies are sorted alphabetically in ascending order.
Alphabetical A-Z	Group policies are sorted alphabetically in descending order.
Group Priority (High-Low)	Group policies are sorted in the order High, Medium, and Low. For the same priorities, the lower precedence number is placed in the top. For example, High 1 has higher precedence than High 2.
Group Priority (Low-High)	Group policies are sorted in the order Low, Medium, and High. For the same priorities, the higher precedence number is placed in the top. For example, Low 3 has lower precedence than Low 2.
Created Time	Policies are listed based on creation time. The policy created first is placed at the top.
Modified Time	Last modified policies are placed at the bottom (last).

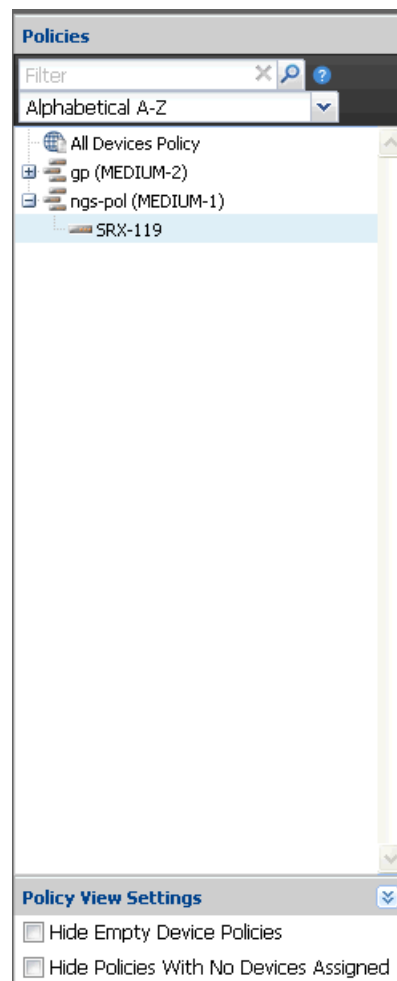


**NOTE:** You cannot set the precedence value greater than the available precedence values that are assigned to the available priority policies. Based on the priority of the policies, the precedence values are applied.

To hide the policies in the left pane that do not have any defined rules:

1. At the bottom of the left pane, click the expandable **Policy View Settings** option.
2. Click the **Hide Empty Device Policies** check box to hide the device exception policies that do not have any rules, as shown in [Figure 33 on page 127](#). Clicking the check box will only hide those device exception policies inside group policies that do not have any rules, not the empty standalone device policies.

Figure 33: Policy View Setting



To hide the policies in the left pane that do not have any devices assigned:

1. At the bottom of the left pane, click the expandable **Policy View Settings** option.
2. Click the **Hide Policies With No Devices Assigned** check box to filter device and group policies that are not assigned to any device, as shown in [Figure 33 on page 127](#).
3. Policies without any assigned devices are hidden in the left pane.

**Related  
Documentation**

- [Managing Firewall Policies on page 168](#)
- [Policy Priority Precedence Setting on page 153](#)
- [Publishing Firewall Policies on page 161](#)

## Global Address Book Overview

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In Junos OS Release 11.2 and later releases, the address book is moved from the zone level to the device global level. This permits objects to be used across many zones and avoids inefficient use of resources. This change also permits nested groups to be configured within the address book, removing redundancy from repeating address objects.

The Security Director application manages its address book at the global level, assigning objects to devices that are required to create policies. If the device is capable of using global address book, Security Director pushes address objects used in the policies to the device global address book. Nested address group capability is used in the publish and update feature of Security Director depending on the device capability.

## Differences Between Global and Zone-Based Address Books

The global address book is supported in Junos OS Release 11.2 and later releases.

- An address book is not configured within a specific zone; therefore, one address book can be associated with multiple zones.
- If a global address book is defined, you cannot create zone-based address books.
- By default, there is an address book called *global* associated with all zones.
- A zone can be attached to only one address book in addition to the global address book, which contains all zones by default.
- Address name overlaps are possible between the global address book and zone address book. For example, Security Director will attempt to match an address in the zone-based address book first, and, if the address is not found, the global address book is checked. You must ensure that the correct address objects are used in the policy.
- NAT rules can use address objects only from the global address book. They cannot use addresses from user-defined address books.



**NOTE:** Beginning in Junos OS Release 11.2, NAT rules can use address objects from the global address book. However, Security Director will still continue to define the NAT address in the rule itself rather than referring to the global address book.

---

## Nested Address Group Support

In Junos OS versions before Release 11.2, nested address groups were not supported on the device. Because of this, address groups were flattened to a single group when pushed to the device. This caused inefficient use of object resource usage. Junos OS Release 11.2 and later releases support the nested references within address sets.

## Mixed-Version Support

Because Security Director supports Junos OS Release 10.3 and later releases, support for both zone-based and global address books is required. SRX Series devices running

Junos OS Releases earlier than Release 11.2 must support the current behavior, that is, populating required address book entries in the zone address books and flattening nested groups. SRX Series devices running Junos OS Release 11.2 and later must use the global address book.

Junos OS Release 11.2 supports both zone address and global address books. However, both are configured separately.

## Migrating from Zone to Global Addressing

Table 15 on page 129 gives the migration matrix covering all scenarios:

**Table 15: Migration Matrix**

Address Book Used in Last Push from Security Director or NSM	Is Device Global Address Book Capable?	Address Book Type Used by Device	Security Device That Will Use Zone or Global
Zone	–	Zone	Zone
Zone	–	Global	Global
Zone	Any	Empty	Depends on device capability
Empty	Yes	–	Global
Empty	No	–	Zone



**NOTE:** In Junos OS Release 11.2 and later releases, devices might be managed by the Security Director and the device might be using the zone address book. In this case, if you want to use the global address book, you can do offline device migration from the zone address book to global address book. In this case, if the device was managed by the Security Director application, you must publish the device again, so that the changes are discovered by the application.

## Example: Configuring Address Book Entries in Global Address Book

If you require a policy to permit all the traffic from the trust and untrust zones of FTP and DNS servers to UNIX server, you might require to create addresses of FTP and DNS servers in both the zones. The following procedure shows the creation of address in global address book.

1. Create address in zone-based address book.

```
set security zones security-zone trust address-book address DNS-server
192.168.1.1
set security zones security-zone trust address-book address FTP-server
192.168.2.1
set security zones security-zone trust address-book address unix-server
192.168.3.1
```

```
set security zones security-zone untrust address-book address DNS-server
192.168.1.1
set security zones security-zone untrust address-book address FTP-server
192.168.2.1
```

2. Create address in global address book. The same can be achieved with the global address book, and not required to create the same address entries multiple times.

```
set security address-book global address DNS-server 192.168.1.1
set security address-book global address FTP-server 192.168.2.1
set security address-book global address unix-server 192.168.3.1
```

3. Create a policy and permit the traffic. The policy CLI is same for both zone-based address book and global address book.

```
set security policies from-zone trust to-zone trust policy unix-trust match
source-address DNS-server
set security policies from-zone trust to-zone trust policy unix-trust match
source-address FTP-server
set security policies from-zone trust to-zone trust policy unix-trust match
destination-address unix-server
set security policies from-zone trust to-zone trust policy unix-trust match
application any
set security policies from-zone trust to-zone trust policy unix-trust then
permit
```

```
set security policies from-zone untrust to-zone trust policy unix-untrust match
source-address DNS-server
set security policies from-zone untrust to-zone trust policy unix-untrust match
source-address FTP-server
set security policies from-zone untrust to-zone trust policy unix-untrust match
destination-address unix-server
set security policies from-zone untrust to-zone trust policy unix-untrust match
application any
set security policies from-zone untrust to-zone trust policy unix-untrust then
permit
```

**Related  
Documentation**

- [Firewall Policies Overview on page 121](#)
- [Creating Firewall Policies on page 131](#)
- [Managing Firewall Policies on page 168](#)

## Creating Firewall Policies

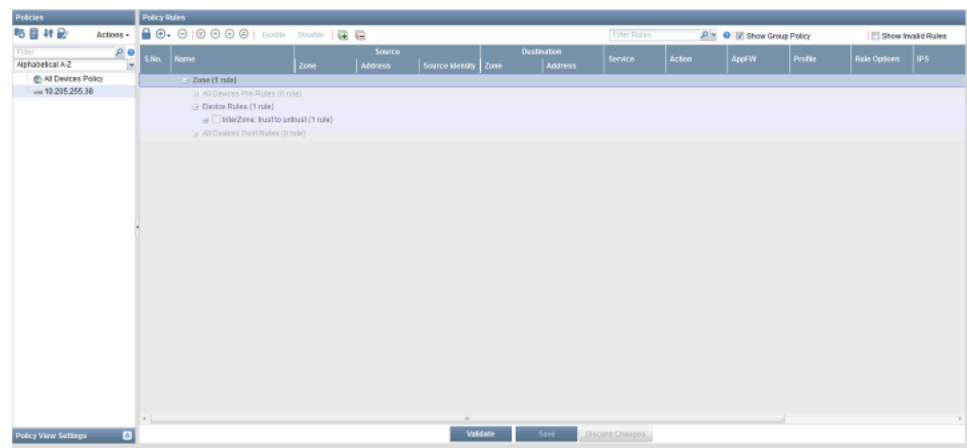
To create a firewall policy:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears. The Policy Tabular view is a table with three panes. The left pane displays all the firewall policies in the system, which includes device, group, and global firewall policies.

If you click a firewall policy in the left pane, the right pane displays the rules and rule groups for the respective policy, as shown in [Figure 34 on page 131](#).

**Figure 34: Firewall Policy Tabular View**



The right pane of the firewall policy divides the set of rules into two rule bases. All zone-based rules are grouped under Zone, and the SRX Series All Devices rules are grouped under Global. You cannot move a rule from one section to the other. The same set of features are available to both the rule bases, however.



**NOTE:** While adding rules, you can select to add them either to the zone rule base or to the global rule base.

2. To create a new firewall policy, click **Create Policy** icon from the middle Policies pane.

The Create Policy page appears, as shown in [Figure 35 on page 132](#). You can create a group policy or a device policy on this page.

Figure 35: Create Firewall Policy

3. Create a group policy:

- a. Enter the name of the group policy in the Name field.
- b. Enter a description for the group policy rules in the Description field. Security Director sends the comments entered in this field to the device.
- c. To manage the firewall rules for SRX Series devices, you can select the following Manage options:
  - Zone Policy—To manage zone-based firewall rules.
  - Global Policy—To manage the global firewall rules.
  - Both Zone and Global Policy—To manage both zone and global firewall rules.

By default, the Manage Zone Policy option is selected and used to manage zone-based firewall rules.

- d. To set the priority for a policy, select **High**, **Medium**, or **Low** from the Priority list.

Enter the order in which group policies are applied to a device when they are assigned multiple policy groups.

For example, if the system has 4 policies Low priority, 5 policies with Medium priority, and 3 policies with High priority, you can set the precedences as follows:



- Low-priority policies—1 through 4
  - Medium-priority policies—1 through 5
  - High-priority policies—1 through 3
- e. Select the profile for the group policy from the Profile menu.
  - f. Click the **Show only devices without policy assigned** check box to see the devices that are not assigned to an all devices policy.
  - g. Select the devices on which the group policy will be published, in the Select Devices pane, select the devices from the Available column and click the right arrow to move these devices to the Selected column.

You can also search for devices by entering the device name, device IP address, or device tags in the Search field in the Select Devices pane. Once the searched devices appear, you can move them to the Selected pane, as shown in [Figure 35 on page 132](#).

By default, all devices appear under Available tab whether or not they have been assigned to an all devices policy.

- h. Click **Create**.



**NOTE:** One device can hold configuration data related to one firewall policy only. Hence you cannot share devices for multiple firewall policies.

#### 4. Create a device policy:

- a. Enter the name of the device policy in the Name field.



**NOTE:**

- The device policy name must be a string beginning with a number or letter and consisting of letters, numbers, dashes, and underscores.
- The policy name must be a string and cannot contain special characters such as &, <, >, and \n.
- The maximum number of characters allowed in the policy name is 63.

- b. Enter a description for the device policy in the Description field. The description must be a string and cannot contain special characters such as &, <, >, and \n.
- c. To manage the firewall rules for SRX Series devices, you can select the following Manage options:
  - Zone Policy—To manage zone-based firewall rules.
  - Global Policy—To manage the global firewall rules.
  - Both Zone and Global Policy—To manage both zone and global firewall rules.

By default, the Manage Zone Policy option is selected and used to manage zone-based firewall rules.

- d. Select the profile for the device policy, from the Profile list.
- e. Select the device on which the device policy will be published from the Device list.
- f. Select the IPS mode from the IPS Configuration Mode list. The following [Table 16 on page 134](#) shows different IPS configuration modes and the purpose:

**Table 16: IPS Configuration Mode**

IPS Mode	Description
Basic	Turns IPS on or off. If you select this mode, you are given the option to select signature sets. Custom and predefined signature sets are listed. The IPS policy is generated by merging the rules from the signature sets you choose. The IPS policy is read-only.
Advanced	Turns IPS on or off. An empty IPS policy is generated. You can either add or delete, disable or enable, or modify IPS rules and exempt rules.
None	If this mode is selected, you cannot configure IPS on or off settings in a firewall rule. You cannot generate any IPS policies.

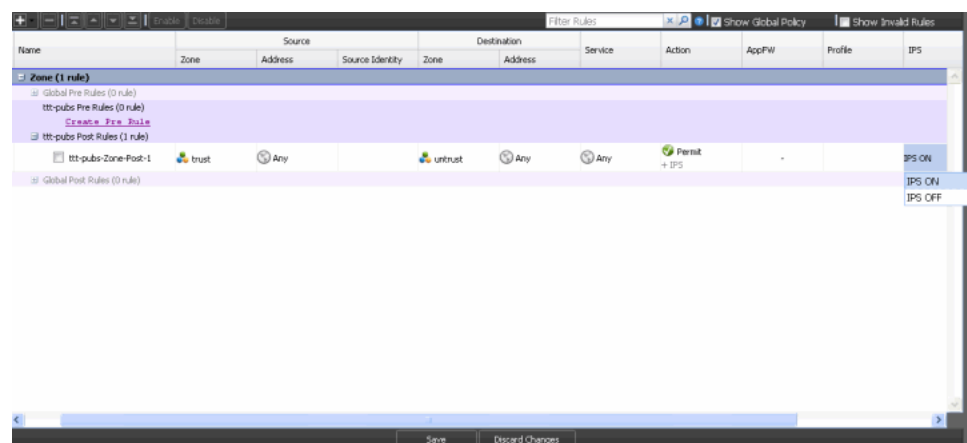
All these IPS modes are available for logical systems also.

- g. Click **Create**.

A tooltip option is available for group policies, device policies, and device exceptions listed in the left pane of the firewall policy ILP. This tooltip also displays the IPS mode.

You can turn the IPS policy on or off on a firewall rule by clicking on the IPS column, as shown in the [Figure 36 on page 134](#). This is available for each rule and you can set on or off only for advanced and basic modes.

**Figure 36: Turning an IPS Policy On or Off**

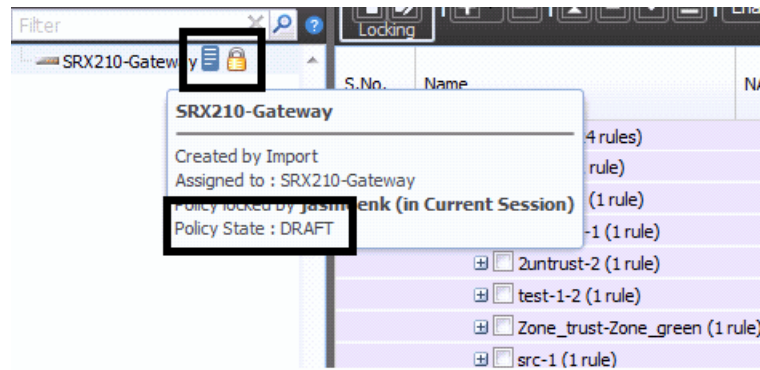


IPS on or off option is available only for permit and tunnel actions. Tooltip is also provided for the IPS column that shows the IPS mode and signature sets.

Validate policies by clicking the **Validate** button, available next to the Save and Discard buttons. If any errors are found during the validation, a red warning icon is shown for the respective policies. For firewall policies, expired schedulers and duplicate rule names are validated.

Security Director permits you to save policies that contain errors. Warnings messages are displayed for policies that contain errors, but you can proceed to save such policies as drafts. You cannot publish policies that are in the draft state. The tooltip for the policy shows the state as draft, as shown in [Figure 37 on page 135](#); because it is a draft, the tooltip does not show the publish option. When you save a policy as a draft, duplicate rule name errors are ignored.

**Figure 37: Policy With Error Saved As Draft**



**NOTE:** If you do not have permission to the device assigned to a device policy, you cannot view the policy in the respective policy ILP.



**NOTE:** When you are viewing a group policy, if you do not want the all devices policy rules to appear in the Policy Tabular view, uncheck the clear the Show Global Policies check box in the right pane. When you are viewing a device policy, if you do not want the global and group policy rules to appear in the Policy Tabular view, clear the Show Global/Group Policies check box in the right pane.



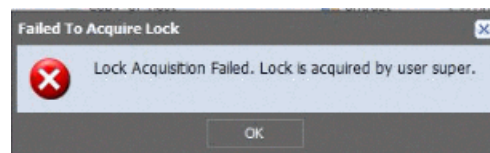
**NOTE:** You can use the search boxes in the left pane and right pane to search for firewall policies and the rules in a specific firewall policy, respectively.



**NOTE:** SRX Series logical systems support complete firewall policy configuration in Security Director. The captive portal is configured in the root logical system and referred from the user logical system. If IPS policy is assigned to a logical system, it enables only the basic IPS mode. When the logical system is published, you'll receive a warning message that the logical system shares only the root device configuration.

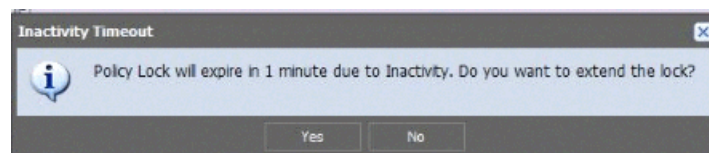
Before you can edit the policy, you must lock it by clicking the lock icon, which is available in the policy view toolbar, as shown in [Figure 34 on page 131](#). You can hold more than one policy lock at a given time. You can unlock the policy by clicking the unlock icon next to the lock icon in the policy tabular view. If you attempt to lock a policy that is already locked by another user, the following message appears, as shown [Figure 38 on page 136](#). The tooltip shows the policy locked user information. Mouse over the policy that you want to lock to view the tooltip.

**Figure 38: Lock Failure Error Message for the Second User**



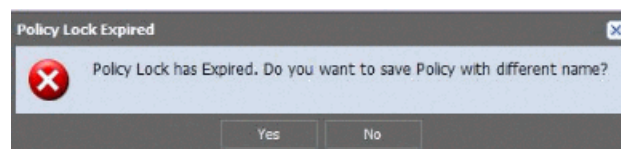
If the locked policy is inactive for the set timeout value (default 5 minutes), just 1 minute before the timeout interval expires, the following message appears, as shown in [Figure 39 on page 136](#). If the policy lock timeout interval expires for multiple locked policies, the same warning message appears for each locked policy. To understand the configuration of timeout value and session timeout value, see [“Unlocking Locked Policies” on page 146](#).

**Figure 39: Inactivity Timeout Error**



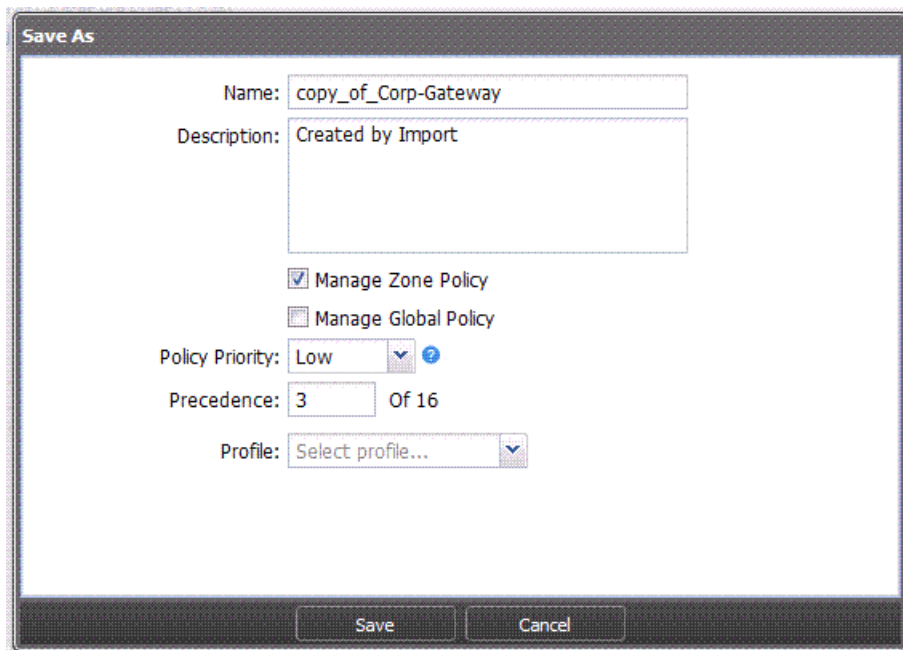
Click **Yes** to extend the locking period. If you click **No**, and if there is activity on the policy within the last minute of the lock's life, the timer will be reset and the lock will not be released. If you ignore the message, when the policy lock timeout interval expires 1 minute later, you are prompted to either save the edited policy with a different name or lose the changes, as shown in [Figure 40 on page 136](#).

**Figure 40: Policy Lock Expired Message**



If you click **Yes** to save the edited policy with a different name, the following window appears, as shown in [Figure 41 on page 137](#). If you navigate away from the locked policy, you will get an option to save the edited policy with different name.

**Figure 41: Save the Edited Policy with a Different Name**

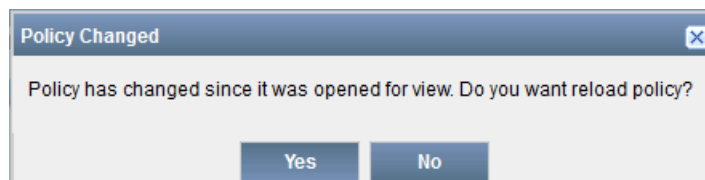


The 'Save As' dialog box contains the following fields and options:

- Name:** A text box containing 'copy\_of\_Corp-Gateway'.
- Description:** A text box containing 'Created by Import'.
- Manage Zone Policy:** A checked checkbox.
- Manage Global Policy:** An unchecked checkbox.
- Policy Priority:** A dropdown menu set to 'Low' with a help icon.
- Precedence:** A text box containing '3' followed by 'Of 16'.
- Profile:** A dropdown menu set to 'Select profile...'.
- Buttons:** 'Save' and 'Cancel' buttons at the bottom.

After editing a locked policy, if you move to another policy without saving your edited policy, or if you unlock the policy without saving, the following warning message appears, as shown in [Figure 42 on page 137](#).

**Figure 42: Unsaved Changes Warning Message**

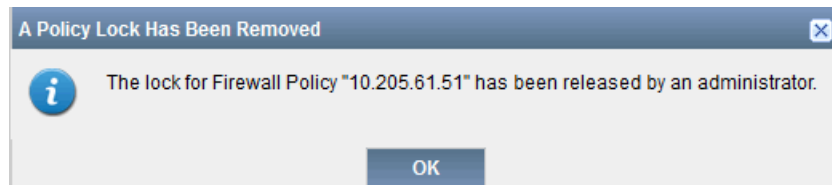


The 'Policy Changed' dialog box contains the following text and buttons:

- Title Bar:** 'Policy Changed' with a close button.
- Message:** 'Policy has changed since it was opened for view. Do you want reload policy?'.
- Buttons:** 'Yes' and 'No' buttons.

If Security Director administrator releases the lock, you will receive the following warning message, as shown in [Figure 43 on page 137](#).

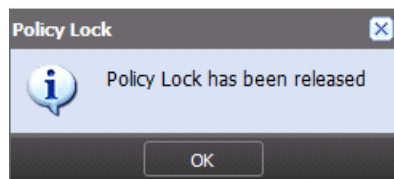
**Figure 43: Policy Unlock by Admin Message**



The 'A Policy Lock Has Been Removed' dialog box contains the following text and buttons:

- Title Bar:** 'A Policy Lock Has Been Removed' with a close button.
- Icon:** Information icon (i).
- Message:** 'The lock for Firewall Policy "10.205.61.51" has been released by an administrator.'
- Buttons:** 'OK' button.

If you do not edit the locked policy and the policy lock timeout expires, the following warning message appears, as shown in [Figure 44 on page 138](#).

**Figure 44: Policy Lock Release Message**

The policy is locked and released for the following policy operations. Also, these operations are disabled for a policy, if the policy is locked by some other user.

- Modify
- Assign devices
- Rollback
- Delete

**NOTE:**

- You can unlock the policy by logging out of the application or when the policy lock timeout expires. You can unlock your policies even if they are not edited.
- If the browser crashes when the policy is still locked, the policy is unlocked only after timeout interval expires.
- If there is an object conflict resolution during a migration, import, or rollback, and if you are editing any objects, you will receive a save as option for the edited objects. The behavior is the same when you import addresses from CSV.
- Policy lock is not released under the following scenario:
  - If you save or discard you changes to the locked policy.
  - if you do not make any changes to the locked policy and navigate to another policy.
- It is recommended to configure the session time longer than the lock timeout value.

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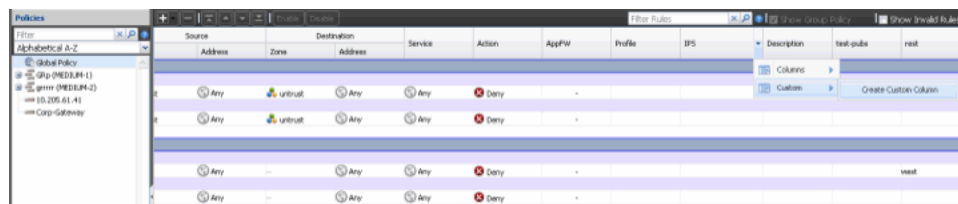
To create a custom column definition for the firewall policy:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

2. Click on any field in the rule table header, select **Custom**, and then **Create Custom Columns**.

Figure 45: Creating Custom Column



3. A window appears. To create the custom column:

- Enter the name of the custom column in the Name field. This is a mandatory field.
- Enter the regular expression data in the Validation Pattern field to validate the entered data for the given custom column. For example, the typical e-mail regular expression looks like

```
^[A-Za-z0-9-]+(\.[A-Za-z0-9-]+)*@[A-Za-z0-9-]+(\.[A-Za-z0-9-]+)*(\.[A-Za-z]{2,})$.
```

This is an optional field. However, if you do not provide the regular expression data, the custom column data will not be validated.

Figure 46: Creating Custom Column Page



**NOTE:** The maximum number of custom columns you can define is 3.

4. Before creating the custom column, the system will show the following warning message to confirm the custom column creation. Click **Yes** to create the custom column or **No** to cancel the custom column creation.

Figure 47: Create Custom Column Confirm Page

The Infranet Controller (IC) maps users to roles based on the information provided by an authentication server. For example, a user could be mapped to a role based on membership in Active Directory groups.

When a user attempts to access a resource, the SRX Series device passes the username and password to the IC. The IC responds with the role(s) that you are mapped to. The SRX Series device then evaluates the security policies to determine whether the user can access the resource.

To add a role to a user:

1. Click **Source Identity** in the source identity table header. A window appears, as shown in [Figure 48 on page 140](#).

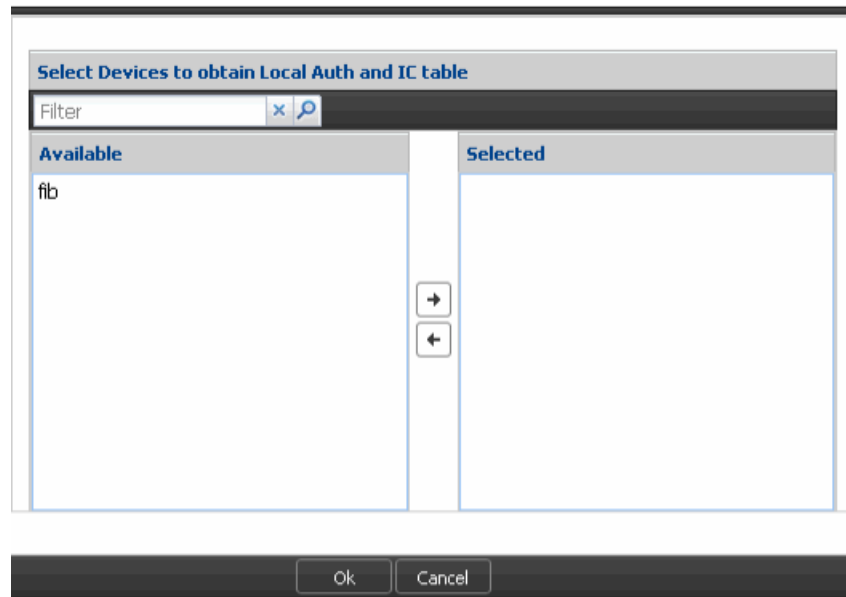
**Figure 48: Source Identity Page**

In addition to the roles provided by IC, the following roles are valid:

- Free text—You can enter a new role name and click Add in the right pane.
  - Any—Default role that matches with any user. The Any role cannot be used in any rule that uses other types of roles. Ensure that the text you enter matches with a role configured in IC.
  - Authenticated-User—User who has an entry in any of the user identification tables (local or ICs). The Authenticated-User role cannot be used in any rule that uses other types of roles. An authenticated user is sometimes referred to as a *known user* in other firewalls.
  - Unauthenticated-User—User with an IP address that does not match the available IP addresses in the user authentication table of the SRX Series device.
  - Unknown-User—Authorization service is unavailable for this user.
2. Click the redo icon to select devices for the selected roles. The following window appears for selecting the devices, as shown in [Figure 49 on page 141](#).



Figure 49: Select Devices Page



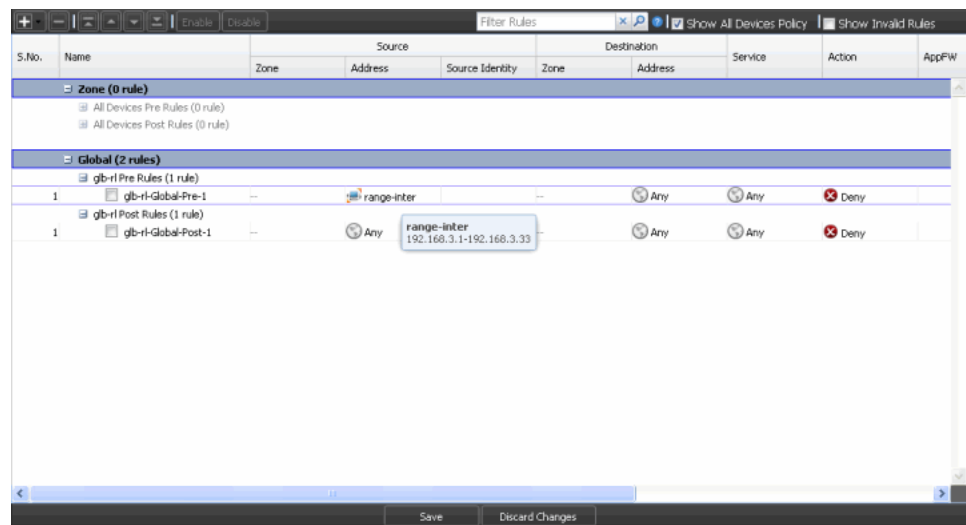
Security Director maintains a list of roles available for a group or for individual devices. You can manually retrieve the available roles from a single SRX Series device or from multiple SRX Series devices.



**NOTE:** Every time you perform a role retrieval, the existing list is overwritten. This prevents deleted roles from persisting.

You can use the available Tooltip view to see information about policy objects. To see the tooltip for an object, you can mouse over the source or destination address object of a rule to see a tooltip containing details about that object. The tooltip displays the address name and other address object details (IP and subnet), as shown in [Figure 50 on page 142](#). For address group, the tooltip shows details regarding its members.

Figure 50: Tooltip Showing Object Information



Tooltips are also available for services. Mouse over a service group to view the group name and other information such as protocol and destination port. For a service group, member details are shown in the tooltip.

You can search for firewall policies in the left pane using the firewall policy names and devices that are used in the firewall policy. You can search rules in the right pane using zones, addresses, description, and services used in the rule.

On the right pane, you can search for rules by using specific search fields, as shown in the [Table 17 on page 142](#)

Table 17: Firewall policy Right Pane Search Options

Rule Column	Search Field	Example Usage	Expected Behavior
Source address name	dcRuleSrcAddressName	dcRuleSrcAddressName:ServerFarm	Searches rules that have serverFarm as the source address
Source address IP	dcRuleSrcIPAddress	dcRuleSrcIPAddress:1.1.1.1	Searches rules that have an address with ip 1.1.1.1 in the source address
Destination address name	dcRuleDstAddressName	dcRuleDstAddressName:ClientMachine	Searches rules that have ClientMachine as the destination address
Destination address IP	dcRuleDstIPAddress	dcRuleDstIPAddress:1.1.1.1	Searches rules that have an address with IP 1.1.1.1 in the destination address
Application name	dcRuleAppName	dcRuleAppName:ftp	Searches rules with application FTP
Application source port	srcPort	srcPort:11243	Searches rules using an application with the source port 11243

Table 17: Firewall policy Right Pane Search Options (*continued*)

Rule Column	Search Field	Example Usage	Expected Behavior
Application destination Port	dstPort	dstPort:22	Searches rules using an application with the destination port 22  To search for destination port range, you must use <i>dstPort: ( 20 AND 65535)</i> . This searches rules using service with destination port range 20-65535.
From Zone	dcRuleFromZone	dcRuleFromZone:trust	Searches rules whose from zone is trust
To Zone	dcRuleToZone	dcRuleToZone:untrust AND dcRuleFromZone:trust	Search rules whose from zone is trust and to zone is untrust



**NOTE:** Any changes you make to both the zone and SRX Series All Devices rule bases are saved or discarded together as a single change list.

Security Director provides advanced search options for the firewall policies. Click the down arrow icon next to the search icon, select **Advanced Search**, and the following dialog appears, as shown in [Figure 51 on page 143](#).

Figure 51: Advanced Search Dialog for Firewall Policies

The Advanced Search dialog box contains the following fields and controls:

- Rule Name:** A text input field.
- Source:** A section containing:
  - Zone:** A text input field.
  - Address:** A text input field.
- Destination:** A section containing:
  - Zone:** A text input field.
  - Address:** A text input field.
- Service:** A text input field.
- Action:** A dropdown menu.
- IPS:** A dropdown menu.
- Description:** A text input field.
- Custom Columns:** A section containing:
  - c1:** A text input field.
- Buttons:** Filter, Reset, and Cancel buttons at the bottom.

You can perform advanced searches for the following fields:

- Rule Name
- Source
  - Zone
  - Address
- Destination
  - Zone
  - Address
- Service
- Action
- IPS
- Description
- Custom column

The following advanced search criteria are available:

- Wildcard search for rule names using an asterisk (\*) is allowed.
- Security Director supports AND and OR operations between search items. The default behavior is OR.
- For rule name search, only the OR operation is allowed, because a policy cannot have multiple rule names.
- For zone search, only the OR operation is allowed. Wildcard search is supported.
- For service and address fields, OR and AND operations are allowed.
- Multiple groups can be grouped using parenthesis. Grouping can be used during filed or keyword searches as well.
- Negate (-) symbol can be used to exclude objects that contain a specific term name.
- The plus (+) operator can be used to specify that the term after the + symbol existing the field value to be filtered along with other searched items.
- Escaping special characters are part of the search syntax. The supported special characters are + - && || ! ( ) { } [ ] ^ " ~ \* ? : \.



**NOTE:** Use the AND operator to find rules that match all values for a given set of fields. Use the OR operator to find rules that match any of the values for a given set of fields.

---

Table 18 on page 145 explains certain specific Security Director search behavior.

Table 18: Specific Security Director Search Behavior

Search Item	Description
IPv4 addresses	If you provide a valid IPv4 address, range, or network in the search field, Security Director finds all addresses that include these IPv4 address, range, or network.
Destination port in service	If you configured a destination port range of a service, Security Director matches ports within this range but this is valid only during field or keyword search.
Keyword or field	If you require to search specific attributes in an object as opposed to global search, you can use keyword or field search.

Table 19 on page 145 shows example search results for different parameters.

Table 19: Examples of Different Advanced Search Parameters

Scenario	Query Parameter	Description
Wildcard search for rule names in both zone and global rules	RuleName:( All* )	Rule names starting with <i>All</i> are filtered.
Wildcard search for a particular rule name pattern	RuleName:(All-Devices-Zone-Pre*)	Returns All Devices Policy Zone Pre rules
	RuleName:(All-Devices-Global-Pre*)	Returns All Devices Policy Global Pre Rules
	RuleName:(All-Devices-Zone-Post*)	Returns All Devices Policy Zone Post Rules
	RuleName:(All-Devices-Global-Post*)	Returns All Devices Policy Global Post Rules
Source zone to destination zone	SrcZone:( polyzone ) AND DstZone:( untrust )	Rules with source zone <i>polyzone</i> and destination zone <i>untrust</i> are filtered.
Source zone and source address to destination zone and destination address	SrcZone:( polyzone ) AND SrcAddress:( any ) AND DstZone:( untrust ) AND DstAddress:( polyaddr )	Rules with source zone <i>polyzone</i> , source address <i>any</i> , destination zone <i>untrust</i> , and destination address <i>polyaddr</i> are filtered.
Source zone and source address to destination zone and destination address along with service	SrcZone:( polyzone ) AND SrcAddress:( polyaddr1 AND polyaddr2 ) AND DstZone:( untrust ) AND DstAddress:( any ) AND Service:( srv1 AND srv2 )	Rules with source zone <i>polyzone</i> , source addresses <i>polyaddr1</i> and <i>polyaddr2</i> , destination zone <i>untrust</i> , and destination address <i>any</i> , with Services <i>srv1</i> and <i>srv2</i> , are filtered.
Source zone and source address to destination zone and destination address along with service port range	SrcZone:( polyzone ) AND SrcAddress:( polyaddr1 AND polyaddr2 ) AND DstZone:( untrust ) AND DstAddress:( any ) AND Service:(10 AND 65535)	Rules with source zone <i>polyzone</i> , source addresses <i>polyaddr1</i> and <i>polyaddr2</i> , destination zone <i>untrust</i> , and destination address <i>any</i> , with Services having destination port range 10-65535 are filtered.

Table 19: Examples of Different Advanced Search Parameters (*continued*)

Rules with action	SrcZone:( polyzone ) AND SrcAddress:( polyaddr1 polyaddr2 ) AND DstZone:( untrust ) AND DstAddress:( any ) AND Service:( aol apple-ichat ) AND dcRuleAction:( Permit )	Rules with source zone <i>polyzone</i> , source address <i>polyaddr1</i> or <i>polyaddr2</i> , destination zone <i>untrust</i> , and destination address <i>any</i> , with service as either <i>aol</i> or <i>apple-ichat</i> , and action <i>Permit</i> , are filtered.
-------------------	--	--



**NOTE:** You can search by giving IPv6 addresses in the source or the destination address field.



**NOTE:** Because you are manually retrieving roles from the SRX Series devices, Security Director might not recognize a valid role on an SRX Series device until you manually retrieve that role.

#### Related Documentation

- [Firewall Policies Overview on page 121](#)
- [Adding Rules to a Firewall Policy on page 155](#)
- [Ordering the Rules in a Firewall Policy on page 160](#)
- [Managing Firewall Policies on page 168](#)
- [Publishing Firewall Policies on page 161](#)
- [Unlocking Locked Policies on page 146](#)

## Unlocking Locked Policies

All the locked policies can be viewed in a single page. This page is available for a user having Manage Policy Locks tasks assigned. This page shows all the locks only if the user has Unlock task assigned, other wise user will see only his locks. To view the locked policies:

1. Select **Security Director > Firewall Policy > Manage Policy Locks**.

The Manage Policy Locks page appears showing only those locks that can be managed by the current user. The page contains the following fields:

- Policy name
- User (IP Address)
- Lock acquired time
- Time for lock expiry

Figure 52: Firewall Policy: Manage Policy Locks

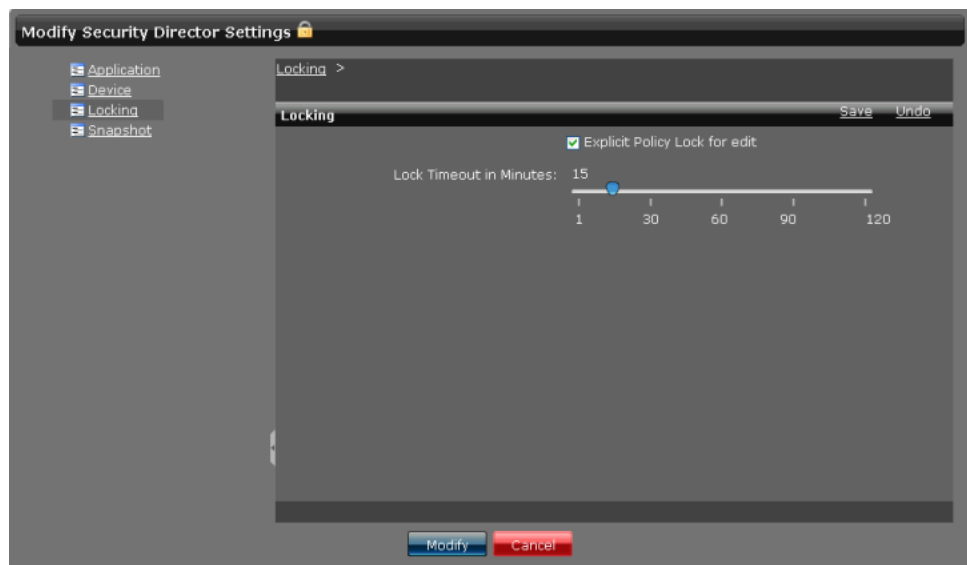
Policy	User	Lock Acquired Time	Lock Expires in
FW_S150	super	Thu Oct 04 2012 16:22:04 GMT+0530 (India Standard Time)	2 Mins 25 Secs
Gateway-China	super	Thu Oct 04 2012 16:24:32 GMT+0530 (India Standard Time)	4 Mins 53 Secs
cdp-cx-fw-j-12	pmphilo	Thu Oct 04 2012 16:23:30 GMT+0530 (India Standard Time)	3 Mins 50 Secs

2. Right-click the policy that you want to unlock, and press **Unlock**. You can select policies that are locked by you and unlock them. To unlock your policies, you do not need any administrator privileges. To unlock policies locked by other users, you must have the task **LOCK** assigned to you.

User with administrator privileges can configure the lock settings. To configure the lock settings:

1. Click **Application Switcher**, and go to **Network Application Platform > Administration > Manage Applications**.
2. Right-click the **Security Director** application, and select **Modify Application Settings**. The following page appears, as shown in [Figure 53 on page 147](#).

Figure 53: Modify Security Director Settings



- Under the Locking option, you can configure the locking timeout value in minutes. The minimum value that you can configure is 2 minutes and the maximum 120 minutes. By default, the timeout value is configured for 5 minutes.
- By default, the Explicit Policy Lock for edit option is enabled. You can disable this option, if you do not want to lock the policies before editing. When this option is disabled, policies can be edited by any user. The first user gets the preference of saving the changes for a policy. The next save on the same version of a policy results in the user being asked to save policy with new name.



**NOTE:** Acquiring a policy lock or releasing a lock is audit logged. Release locking will show the reason for the release, for example, an explicit release, on save, discard, timeout, or administrator release. Administrator changes of the lock configuration are also audit logged. To see the audit logs, from the Security Director task bar, select Audit Logs.

#### Related Documentation

- [Creating Firewall Policies on page 131](#)
- [Managing Firewall Policies on page 168](#)

## Inline Creation of Objects in Policy

To optimize the creation of policies, Security Director allows you to create new objects for policies you create with the policy editor.

To create objects or address groups for a source address:

- In the all devices policy page, click on the source address column. [Figure 54 on page 148](#) shows the window that appears showing the available addresses and options for creating the new object. In this address selector window, you can select all addresses listed in the Available column by selecting **Page** and copy them to Selected column. If you want to unselect all, click **None**.

**Figure 54: Inline Address Object Creation in the Source Address Window**

The screenshot shows the 'Source Address Window' with the following details:

- Radio Buttons:** ☒ Include Addresses, ☐ Negate Addresses
- Available Pane:**
  - Filter: [Search Icon]
  - Select: All | None
  - Table with columns: Address, Domain
  - Rows: 128.212.104.100/32 (128.212.... Global, 128.212.104.101/32 (128.212.... Global, 128.212.104.102/32 (128.212.... Global, 128.212.104.103/32 (128.212.... Global, 128.212.104.104/32 (128.212.... Global, 128.212.104.105/32 (128.212.... Global, 128.212.104.106/32 (128.212.... Global
  - Total: 771
- Selected Pane:**
  - Select: All | None
  - Table with columns: Address, Domain
  - Row: Any SYSTEM
  - Total: 1
- Object Type Selection:**
  - ☐ Host
  - ☐ Network
  - ☐ Wildcard
  - ☐ Variable
  - ☐ Range
  - ☐ Other
- Buttons:** Ok, Cancel



You have an option of excluding the source and destination addresses. The selected address list is considered excluded, and the device permits traffic from addresses other than the excluded address.

The following two new radio buttons are available to allow you to include or exclude the source and destination addresses in a firewall rule:

- Include Addresses
- Negate Addresses

The exclude address option is not supported for the address types IPv6, wildcard, unresolved DNS, and any. No more than 10 addresses per rule can be excluded. If more than 10 addresses are excluded, Security Director flags this during the preview or publish.

2. Click the plus sign (+) to create the new address object or address group. By default, the Address radio button is selected

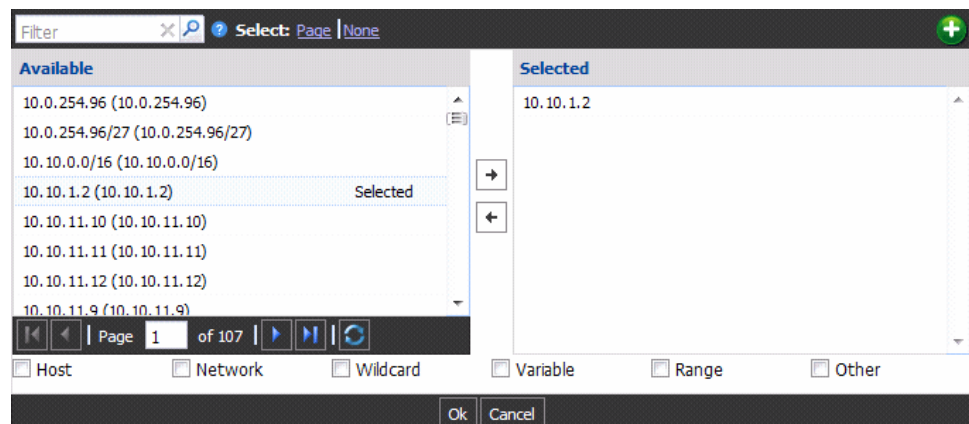
Figure 55 on page 149 shows the page that appears.

**Figure 55: Inline Address Object Create Page**

The Type can be Host, Range, or Network.

3. Click **Create** to finish editing the object. This adds the newly created address object to the selected addresses and returns to the address selector. Click **Cancel** to discard your changes and return to the address selector.

Figure 56: Address Selector Page Showing the New Inline Object

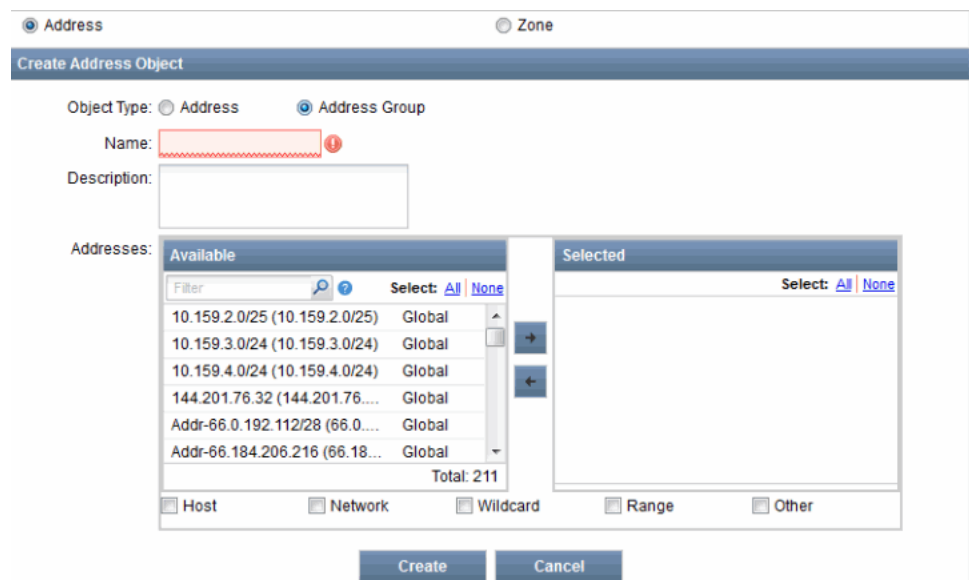


To create address group:

1. Select the Address Group radio button to create the new address group.

[Figure 57 on page 150](#) shows the page that appears.

Figure 57: Inline Address Group Creation



2. Enter the name of an address group in the Name field.
3. In the Addresses field, you can select all addresses available in the Available column or select few addresses to create a new address group.
4. Click **Create** to create the address group. This adds the newly created address objects to the selected addresses and returns to the address selector. Click **Cancel** to discard your changes and return to the address selector.

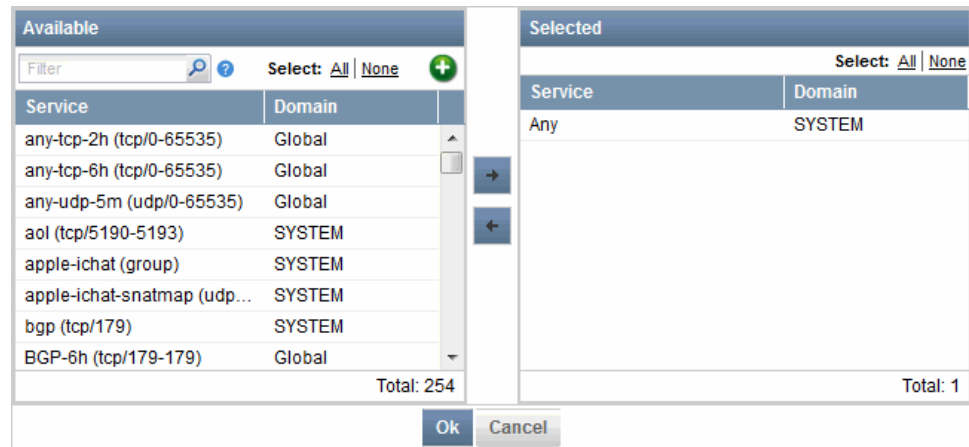


**NOTE:** Follow the same steps to create objects for the destination address.

To create objects for a service:

1. Click the Service column. Figure 58 on page 151 shows the window that appears, showing the available services. In this service selector window, you can select all services listed in the Available column by selecting **Page** and copy them to Selected column. To unselect all, click **None**.

Figure 58: Inline Service Object Creation in the Service List



2. Click the plus sign (+) to create objects for the service.

Figure 59: Inline Service Object Creation Page

**Create Service**

Name: servicecreate

Description: service create test

Type: TCP

Destination Port:

Create Cancel

Type can be TCP or UDP. Any advanced options must be edited in the Object Builder workspace.

3. Click **Create** to finish editing the object. This adds the newly created object to the selected service and returns to the service selector.

Figure 60: Service Selector Page Showing the New Object

Available		Selected	
Filter	Select: <a href="#">All</a>   <a href="#">None</a>	Select: <a href="#">All</a>   <a href="#">None</a>	
aol (tcp/5190-5193)	SYSTEM	servtst	
apple-ichat (group)	SYSTEM		
apple-ichat-snatmap (udp/5678)	SYSTEM		
APP_Proto-Other (APP_Proto-Othe...	Global		
ATG-SERVICE (tcp/9100 (+) )	Global		
bgp (tcp/179)	SYSTEM		
biff (udp/512)	SYSTEM		
bootpc (udp/68)	SYSTEM		
bootps (udp/67)	SYSTEM		
Total: 237		Total: 1	
Ok Cancel			

- Click **Cancel** to discard your changes and return to the service selector.



**NOTE:** The policy publish state is changes to Republish required, If an address or service object in the global domain, referred by a policy in another domain changes. This occurs even though the changed address or service objects are in different domain other than the policy domain.

- Related Documentation**
- [Firewall Policies Overview on page 121](#)
  - [Managing Firewall Policies on page 168](#)

## Policy Priority Precedence Setting

To change the priorities and precedences of different policies simultaneously:

1. Select **Security Director > Firewall Policy**.

In the firewall policies page, select **Prioritize Policies** icon from the Policies pane

The Priority and Precedence page appears with all the group policy names, as shown in [Figure 61 on page 153](#). The page contains the following fields:

- Group Policy Name—Name of the group policies.
- Description—Description of the policy.
- Priority—Priority of the group policy (Low, Medium, or High).

**Figure 61: Policy: Priority And Precedence Page**

Group Policy Name	Description	Priority
testLSYS		Medium-1

2. Select any group policy and right-click the selected policy. The following options shown in [Table 20 on page 154](#) are provided to move the priority up or down or to change the precedence and priority simultaneously.

Table 20: Priority and Precedence for Firewall Policies

Options	Description
Move Up	<p>You can choose one or more policies and select the Move Up in the right-click menu. This option is also available in the toolbar. All the selected policies are moved up by one level. For example:</p> <ul style="list-style-type: none"> <li>Move up a medium-priority policy with a precedence value 1. If a high-priority policy already exists, the medium-priority policy is moved just below the high-priority policy or moved to a high priority.</li> <li>Move up a medium-priority policy with a precedence value 2. If a medium-priority policy with a precedence value 1 already exists, a medium-priority with precedence value 2 is moved up to precedence value 1 and an already existing medium-priority with a precedence value 1 is changed to precedence value 2.</li> <li>Move up a low-priority policy with precedence value 1. The priority of the policy is changed to Medium with precedence value 1, only if there are no medium-priority policies, otherwise it would have the lowest precedence (highest number) in the medium-priority. If you move the policy up again, the priority of the policy is changed to High with precedence value 1.</li> </ul> <p>In all the Move Up operations, the remaining policies in the same priority are pushed up by one level.</p>
Move Down	<p>You can choose a single policy or more than one policy by selecting the Move Down in the right-click menu. This option is also available in the toolbar. All the selected policies are shifted by one level down individually. For example:</p> <ul style="list-style-type: none"> <li>Move down medium-priority with precedence 1. If a medium-priority policy with precedence 2 exists, the precedence of the moved down policy becomes precedence 2, and the original precedence 2 policy is now precedence 1. If there are no other medium-priority policies, the move down moves the policy to low-priority and precedence 1.</li> </ul>
Assign	<p>You can choose this option to set the priority and precedence at the same time. If you choose the same priorities for the policies, set the precedence value between 1 to the number of policies of the same priority. If the priorities are different, set the precedence value between 1 to number of policies in the priority. If highest precedence medium-priority policy is moved down, it becomes priority low and precedence 1.</p>



**NOTE:** If multiple policies are selected, all the policies are moved one-by-one to the given priority and precedence slot sequentially.

3. Click **Assign** to provide precedence value.

Figure 62: Setting Priority And Precedence Value Page

4. Click **Save** to save all the priority and precedence changes. These changes are saved in the database, and page is shown with all the annotations of the changes. If you do not want to save, click **Cancel** to go back to the firewall policies page.

- Related Documentation**
- [Multiple Group Policy Membership Overview on page 124](#)
  - [Managing Firewall Policies on page 168](#)

## Adding Rules to a Firewall Policy

When a new firewall policy is created, by default the policy displays links to create rules for the policy. If you have created a group firewall policy, you will see the Create Pre Rule and Create Post Rule link in the right pane. If you have any cut or copied rules or rule groups, you will also have Paste Rules to paste the rules or rule groups. The pasting options are available only for the predefined rule groups. If you have created a device firewall policy, you will see the Create Device Rule link.

To add rules to a firewall policy:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

2. From the left pane, click the security policy you want to add rules to.

The existing rules of the security policy are displayed in the right pane.

3. Click the **+** icon to add rules, and select the type of the rule you want to add.

A new rule is added in the bottom-most row of the Pre Rule, Post Rule, or Device Rule section, depending on the type of rule you have added. The newly added rule blinks a different color for a few seconds. The behavior is same if you add a new rule before or after a rule, clone a rule, or paste a rule.

The rule is assigned a serial number based on the number of rules already added to the policy. By default, the Source zone is set to trust, Destination zone is set to untrust, and the Action is set to Deny. The Source address, Destination address, and Service is set to Any. You can now modify the default settings to the settings that you want for this security policy.

4. Click the **Name** field in the rule and change the name of the rule.
5. Click the **Source Zone** field in the rule and select the appropriate zone from the list of zones.

The zones that appear in the list are dependent on the type of security policy you have chosen to add rules to. If you are adding a rule for a group policy, all the zones present on all devices are available for selection. Select the correct zone for the device in the group policy.

For the devices running Junos OS Release 12.1X47, global firewall policy rules are enhanced to specify one or more zones for the fromZone and toZone fields in match criteria. Click the zone column to select zones available from the currently associated devices, and the zone sets.

During the policy creation phase, no validation is performed if you configure multizone global policy rule on a policy associated with a device running releases of Junos OS earlier than Junos OS Release 12.1X47. This is schema driven. During publishing of the policy, the multizone global policy is validated to check if Security Director is applied

with Junos OS Release 12.1X47 schema. If the right schema is applied publish is successful; otherwise, publish fails on those devices.

6. Click the **Source Address** field in the rule.

The address selector appears.

7. From the Available column, select the addresses you want to associate the rule.
8. Click the right arrow in the address selector.

The selected addresses are now moved to the Selected column.

9. Click **OK**.

10. Click the **Destination Zone** field in the rule and select the appropriate zone from the list of zones.

11. Click the **Destination Address** field in the rule.

The address selector appears.

12. From the Available column, select the addresses you want to associate the rule.
13. Click the right arrow in the address selector.

The selected addresses are now moved to the Selected column.

14. Click **OK**.

15. Click the **Service** field in the rule.

The service selector appears.

16. Select the services you want to associate the rule to, from the Available column. For high-end SRX Series devices, instead of 128 services, 3072 applications per policy are supported.

17. Click the right arrow in the service selector.

The selected services are now moved to the Selected column.

18. Click **OK**.

19. Click the **Action** field in the rule and select the appropriate action from the drop-down list of actions.

You can select Permit, Deny, Reject, or Tunnel as the actions.

If Tunnel action is selected, a list with all the policy-based VPNs that are created is provided, as shown in [Figure 63 on page 157](#).



Figure 63: Tunnel Option for Device Rule

S.No.	Name	Zone	Address	Source Identity	Zone	Address	Service	Action	AppFW	Profile
<b>Zone (40 rules)</b>										
<b>All Devices Pre Rules (10 rules)</b>										
<b>Device Rules (20 rules)</b>										
1	Device-Zone-1	trust	Any	untrust	Any	Any	Tunnel (SRX220-b_tets)	-	-	-
2	Device-Zone-2	trust	Any	untrust	Any	Any	Tunnel (SRX220-b_tets)	-	-	-
3	Device-Zone-3	trust	Any	untrust	Any	Any	Deny	-	-	-
4	Device-Zone-4	trust	Any	untrust	Any	Any	Deny	-	-	-
<b>test1 (7 rules)</b>										
12	Device-Zone-5	trust	Any	untrust	Any	Any	Permit	-	-	-
13	Grp1-Zone-Pre-3	trust	Any	untrust	Any	Any	Deny	-	-	-
14	Grp1-Zone-Pre-4	trust	Any	untrust	Any	Any	Reject	-	-	-
15	Grp1-Zone-Pre-5	trust	Any	untrust	Any	Any	Tunnel (SRX220-b_tets)	-	-	-
16	Grp1-Zone-Pre-6	trust	Any	untrust	Any	Any	Deny	-	-	-
17	Grp1-Zone-Pre-7	trust	Any	untrust	Any	Any	Deny	-	-	-
18	Grp1-Zone-Pre-8	trust	Any	untrust	Any	Any	Tunnel (SRX220-b_tets)	-	-	-
19	Device-Zone-6	trust	Any	untrust	Any	Any	Deny	-	-	-
20	Device-Zone-14	trust	Any	untrust	Any	Any	Deny	-	-	-
<b>All Devices Post Rules (10 rules)</b>										

From Security Director, you can select the IPsec VPNs that are configured in a device directly in a firewall rule in addition to the ones created and managed from Security Director. Publish will fail if this VPN is deleted from a device.

- Click the **AppFW** field in the rule and select the appropriate AppFirewall settings from the AppFW Configuration window.



**NOTE:** You can modify the AppFW field only if the Action field in the firewall policy rule action is set to Permit or Tunnel.

- Click the **Profile** field in the rule and select the appropriate profile.

You can either select a default profile or a custom profile, or you can inherit a policy profile from another policy. Under the Select Another Profile option, you can select the user firewall for the firewall authentication. If you are selecting a custom profile, you can customize the options in the policy profile. For Custom Settings under the Advanced Settings tab, you can enable TCP session options on a per-policy basis by clicking the **Enable TCP-SYN Check** and **Enable TCP Sequence Check** options, as shown in Figure 64 on page 158.

Figure 64: TCP-Session Options

Profile Type: ☐ None  
☐ Inherit Profile From Policy  
☐ Select Another Profile  
☒ Custom

**Custom Settings**

Template:

**Logging** **Authentication** **Advanced Settings**

Datacenter SRX Acceleration: ☐ Services Offload

Destination Address Translation:

Redirect:

**TCP-Session Options**

☐ TCP-SYN Check

☐ TCP Sequence Check

Ok Cancel

You can click **Show Invalid Rules** check box to view the invalid rules in any policy. You can either first validate the policy and apply the filter to see the invalid rules, or the filter can be directly applied to the policies which are saved as drafts with errors.



## NOTE:

- Update is committed only if these TCP session options are disabled globally. Otherwise, update fails if enabled globally.
- If the update fails for logical systems, you must disable TCP session options for logical systems and not in the root devices.
- If you are making any changes at the root device level or at the policy level, the same changes are captured in the audit trail.
- When you are importing a device configuration, TCP session options are also imported if they are enabled.
- In case of policy export, you can find these TCP session options under Rule Options column.
- TCP session options are retained in case of version roll back and when you take the firewall policy snapshot.

22. To assign a scheduler and UTM policy for a rule, click **Rule Options**. Select the required scheduler from the Scheduler field, and the UTM policy from the UTM Policy field.

To assign the scheduler and UTM policy, click **OK**.

You can select a UTM policy profile object for a rule only when the configured action is Permit.

For rules with an expired scheduler, a warning message appears during the Publish workflow.

23. Click the **IPS** field in the rule and select options wither IPS ON or IPS OFF depending on the firewall rule action and the IPS mode configured in the firewall policy.
24. Click the **Description** field and enter a description for the security policy.
25. Click **Save**.

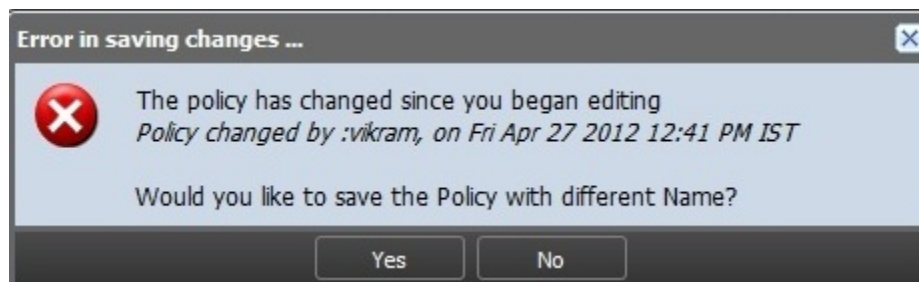


**NOTE:** You should click **Save** to save any changes you have made to the firewall policy. While in the process of making changes to the firewall policy, If you click any of the tasks in the task ribbon before saving the firewall policy changes, all changes you have made will be lost. If you click anywhere inside the Policy Tabular view, a window appears, displaying a message asking if you want to confirm your changes.



**NOTE:** If a previous user has added new rules to the policy and saved the changes, when you attempt to save your changes, the error message shown in [Figure 65 on page 159](#) appears.

Figure 65: Concurrent Policy Edit Error Message



The error message shows the name of the user who made the previous changes and the time they were saved. The changes made by the first user take precedence over any later changes. You will be given an option to save the policy with a different name. Click **Yes** to save the policy with different name. Only saved rules are published to the policy.

#### Related Documentation

- [Firewall Policies Overview on page 121](#)
- [Creating Firewall Policies on page 131](#)
- [Ordering the Rules in a Firewall Policy on page 160](#)
- [Managing Firewall Policies on page 168](#)
- [Publishing Firewall Policies on page 161](#)

## Ordering the Rules in a Firewall Policy

To reorder the rules in a firewall policy:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

2. Select the firewall policy whose rules you want to reorder.

The rules of the firewall policy are displayed in the right pane.

3. Select a rule that you want to reorder and click the appropriate icon on the top of the right pane.

Icon Name	Description
Move Rule Up	Moves the rule one level up in the hierarchy.
Move Rule Down	Moves the rule one level down in the hierarchy.
Move Rule to Top	Moves the rule to the top of the hierarchy.
Move Rule to Bottom	Moves the rule to the bottom of the hierarchy.

The rule is now positioned accordingly. When the policy is provisioned, the rules are provisioned to the devices in the order you have specified.

You can reorder the rules across Pre Rule and Post Rule of a group policy. For example, if you move the last rule in the Pre Rule one level down, it is moved to the Post Rule. Similarly, if you move the first rule in the Post Rule one level up, it is moved to the Pre Rule.



**NOTE:** Movement of Pre and Post rules across zone and global is not permitted.

### Related Documentation

- [Firewall Policies Overview on page 121](#)
- [Creating Firewall Policies on page 131](#)
- [Adding Rules to a Firewall Policy on page 155](#)
- [Managing Firewall Policies on page 168](#)
- [Publishing Firewall Policies on page 161](#)

## Publishing Firewall Policies

When you publish firewall rules, the process takes into account the priority and precedence values set on the policy and the order of rules on the device. Rules are published in the order of their priority groups, with prerules in the High priority group publishing first, before prerules in the Medium and Low priority groups. Within the same priority group, the prerules of policies with lower precedence values are published before the prerules of policies with higher precedence values. Device rules are published after all group prerules have been published. Finally, the Group postrules are published last in the process. The postrules are published in the reverse order of the prerules.

If you change the priority or precedence of a published policy, the policy must be republished for the changes to take effect. Sometimes, changing priority or precedence in one policy can affect other policies in the same priority group. However, such policies do not need to be republished in order for their changes in priority or precedence to take effect for the policies that are implicitly changed by the explicit changes to the republished policy.

To publish a firewall policy:

1. Select the firewall policy that you want to publish and click **Publish Policy** icon from the Policies pane. You can also right-click the policy and select Publish Policy.

The Services page appears with all the firewall policies. It also displays the publish states of the firewall policies.

2. Select the check box next to the firewall policy that you want to publish.



**NOTE:** You can search for a specific device on which the policy is published by entering the search criteria in the search field, in the top-right corner of the Services page. You can search the devices by their name, IP address, and device tags.



**NOTE:** If the firewall policy is to be published on a large number of devices, the devices are displayed across multiple pages. You can use the pagination and display options available on the lower ribbon, just below the list of devices to view all devices on which the firewall policy is published.

3. You can publish the IPS policies along with the firewall policies by selecting the Include IPS Policy check box. By default, this check box is selected.

If the Include IPS Policy check box is selected, two jobs are created after you click the Publish button. The first job is to publish the selected firewall policies. Once the firewall policy publish is successful, the IPS policy publish job is invoked.

If the Include IPS Policy check box is not selected, only the selected firewall policies are published.



**NOTE:** Firewall policy publish and IPS policy publish are mutually exclusive. The firewall policy publish job focuses only on firewall policy-related configuration, and IPS policy publish job focuses only on the IPS policy-related configuration.

- Click the **Schedule at a later time** check box if you want to schedule and publish the configuration later, as shown in [Figure 66 on page 162](#).

**Figure 66: Policy Publish Page**

Name	Publish State	Description	Priority	Precedence
All Devices Policy	Not Published	Predefined Policy for all devices	-	-
gls-ft	Not Published		Medium	1
gls-ft-zn	Not Published		Medium	2

☒ Include IPS Policy  
☒ Schedule at a later time  
 Date and Time: 04/16/12 1:29 PM IST

Back Next Publish Publish and Update Cancel

- Click **Next**.

The Affected Devices page displays the devices on which the policies will be published as shown in [Figure 67 on page 162](#).

**Figure 67: Devices on Which the Policies Will Be Published**

Name	Managed Status	Connection Status	Services	Configuration
longzhou	In Sync	Up	Global Policy	<a href="#">View</a>

☒ Include IPS Policy  
☒ Schedule at a later time  
 Date and Time: 03/20/12 12:35 PM IST

Back Next Publish Publish and Update Cancel

- If you want to preview the configuration changes that will be pushed to the device, click **View** in the **Configuration** column corresponding to the device. A Configuration Preview progress bar is shown while the configuration pushed to the device is generated.

The CLI Configuration tab appears by default. You can view the configuration details in the CLI format as shown in [Figure 68 on page 163](#).

Figure 68: Policy Publish: CLI Configuration

```

Generated Configuration for device srx100-3
CLI Configuration | SRX Configuration

##Security Policy Settings##
set security policies policy-match
##Security Firewall Policy - trust - untrust##
set security policies from-zone trust-to-zone untrust
set security policies from-zone trust-to-zone untrust policy group-1-Pre-2 match application any
set security policies from-zone trust-to-zone untrust policy group-1-Pre-2 match destination-address any
set security policies from-zone trust-to-zone untrust policy group-1-Pre-2 match source-address any
set security policies from-zone trust-to-zone untrust policy group-1-Pre-2 then deny
insert security policies from-zone trust-to-zone untrust policy group-1-Pre-2 before policy Device-1
##Security Firewall Policy - global ##
set security policies global
set security policies global policy group-1-Pre-Global-2 match application any
set security policies global policy group-1-Pre-Global-2 match destination-address any
set security policies global policy group-1-Pre-Global-2 match source-address any
set security policies global policy group-1-Pre-Global-2 then deny
set security policies global policy global-device-1 match application any
set security policies global policy global-device-1 match destination-address any
set security policies global policy global-device-1 match source-address any
set security policies global policy global-device-1 then deny
insert security policies global policy group-1-Pre-Global-2 before policy global-device-0
insert security policies global policy global-device-1 before policy global-device-0

```

If the device does not support global policies, the rules are truncated with a warning message. A device will not support global policies for the following reasons:

- The device is running a Junos OS version earlier than 11.2.
- Global policy is supported only on the global address book. If the device is configured with a zone-based address book, Security Director will not publish a global policy for that device.

SRX Series devices have scaling capacity limitations for networking services. These capacities vary with the “platform” and Junos OS version. Security Director validates these limitations during the publish or preview of the policies and provides warning messages.

Security Director validates only the published service capacities. These validations are not applicable for the designed services that are still not published. If a particular capacity is exceeded, a warning message appears, as shown in [Figure 69 on page 163](#).

Figure 69: Device Validation Warning Message

```

Preview Policy Configuration For Device - 10.205.119.109
CLI Configuration | SRX Configuration

[Warning]: Number of services in rule: Global-Zone-Pre-1 is 255. This exceeds the maximum number of recommended services in a rule for this device which is 128.
[Warning]: Number of addresses in rule: Global-Zone-Pre-1 is 1,105. This exceeds the maximum number of recommended addresses in a rule for this device which is 512.

```

For logical systems that have an assigned security profile, including the root logical system, Security Director validates the resource usage against the maximum and reserved quota configured in the respective profile.

When IDP is assigned to a security profile and that profile is assigned to multiple logical systems, Security Director overwrites the IDP policy with the new name and this effects other logical systems as well. This occurs when you import any logical system and update again. You must use separate security profiles, if you do not want to share the same IPS policy across all logical systems instances.

If you do not specify any resource limits in logical systems security profile, Security Director shows the following warning messages:

[Warning]: Reserved quota is not specified in the security-profile for nat-destination-pool

[Warning]: Reserved quota is not specified in the security-profile for nat-destination-rule

[Warning]: Reserved quota is not specified in the security-profile for policy

If a logical system is assigned to services, you can publish those services to the logical system. You can view the configuration details in CLI format, as shown in [Figure 70 on page 164](#).

**Figure 70: Policy Publish: LSYS Device CLI Configuration**

```

Firewall Policy Configuration For Device - scale-lsys1
CLI Configuration  IP Configuration
##Entering User LSYS context##
edit logical-systems scale-lsys1
##Entering User LSYS context##
exit
##Captive Portal Settings##
set services unified-access-control captive-portal captiveportal_32797 redirect-traffic all
##Entering User LSYS context##
edit logical-systems scale-lsys1
##Security Firewall Policy : trust - untrust##
set security policies from-zone trust to-zone untrust policy ge-Zone-Pre-1
delete security policies from-zone trust to-zone untrust policy ge-Zone-Pre-1
set security policies from-zone trust to-zone untrust policy Device-Zone-1 match application any
set security policies from-zone trust to-zone untrust policy Device-Zone-1 match destination-address any
set security policies from-zone trust to-zone untrust policy Device-Zone-1 match source-address any
set security policies from-zone trust to-zone untrust policy Device-Zone-1 then permit application-services uac-policy captive-portal captiveportal_32797
##Entering User LSYS context##
exit

```



**NOTE:** Captive portal setting can be configured only at the root logical system and referenced only in the user logical system.

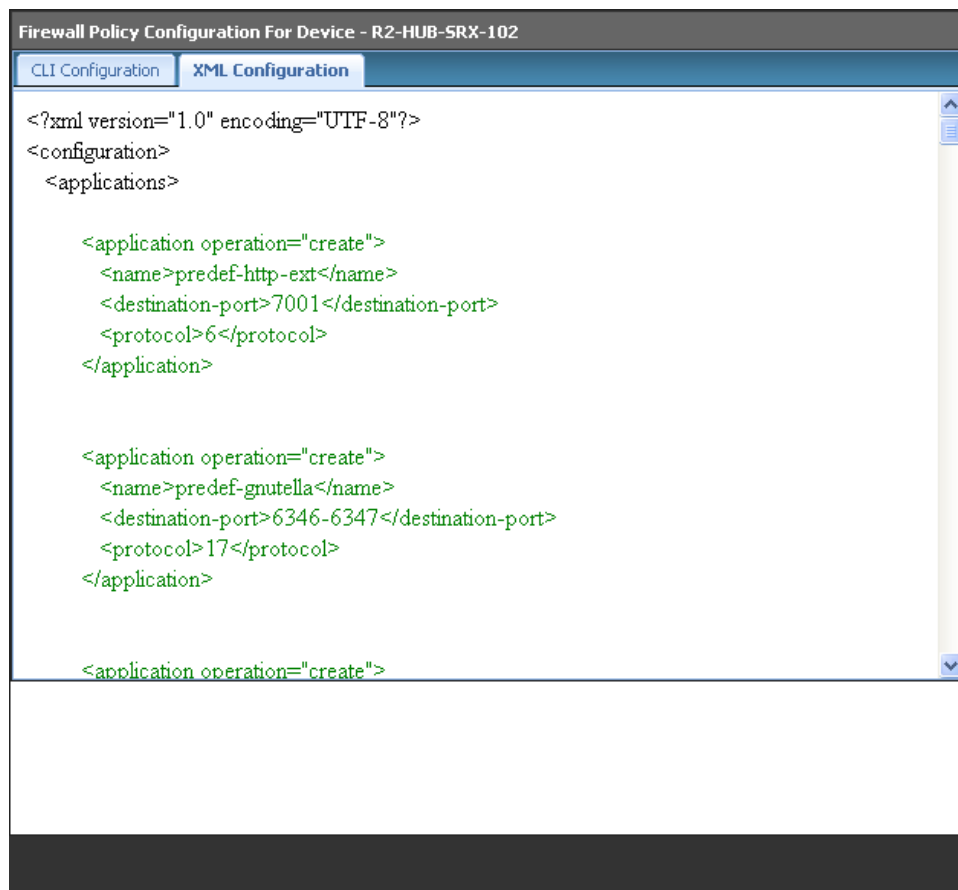


**NOTE:** Configuration updates to the root logical systems are automatically done as part of the user logical system update. For such objects, the LSYS name is appended to the object names to differentiate across logical systems.

7. View the XML format of the configuration by clicking the **XML Configuration** tab, as shown in [Figure 71 on page 165](#).



Figure 71: Policy Publish: XML Configuration



8. Click **Back**.
9. Click **Publish** if you want only to publish the configuration.  
A new job is created, and the job ID appears in the Job Information dialog box.
10. Click **Publish and Update** if you want to publish and update the devices with the configuration.  
The firewall policy is now moved into the Published state if the configuration is published to all devices involved in the policy. If the configuration is not published to all devices involved in the firewall policy, the firewall policy is placed in the Partially Published state. If a firewall policy is created but not published, the firewall policy is placed in the Unpublished state. If any modifications are made to firewall policy configuration after it is published, the firewall policy is placed in the Republish Required state. You can view the states of the firewall policy by hovering over them. When an address object in the Global domain referenced by a policy in the D1 domain changes, the state of the policy is changed to Republish Required. This occurs though the changes are in the address object, which is in the other domain, and is not same as the policy domain. This applies to all the objects referenced by all the services.

A new job is created and the job ID appears in the Job Information dialog box.

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

If you get an error message during the publish or if the firewall policy publish fails, go to the Job Management workspace and view the relevant job ID to see why the publish failed.

In the Job Details window, use the available filter box to search for any device by filter name, tag name, or IP address. Filtering works only for currently available devices. Search with the first character of the tag name to search by tag name. If you search with any middle characters, the search fails.

During publish and update, the disabled rules and objects are not deleted. Disabled rules are updated as inactive configuration. This is an optional step. You can choose to push the disabled rules to a device by selecting the **Update disabled rules to device** option in the Security Director application setting, under Platform. By default, the Update disabled rules to device option is disabled. For the pushed disabled rules to work after the upgrade, Security Director must import the policy again and the application firewall signature must be downloaded prior to the import.

If you are having a disabled rules on the device, as shown in the following example:

```
set security policies from-zone untrust to-zone trust policy Device-Zone-5 match
destination-address any
set security policies from-zone untrust to-zone trust policy Device-Zone-5 match
application any
set security policies from-zone untrust to-zone trust policy Device-Zone-5 then
deny
deactivate security policies from-zone untrust to-zone trust policy Device-Zone-5
```

When you import this rules, Security Director sets the state as disabled. If a particular node in the CLI is deactivated, that node is not imported into the Security Director.

If you import a rule, as shown in the following example, Security Director will not set the application service.

```
set security policies from-zone trust to-zone untrust policy Device-Zone-2
description "Rule With Infranet All Traffic Auth"
set security policies from-zone trust to-zone untrust policy Device-Zone-2 match
source-address any
set security policies from-zone trust to-zone untrust policy Device-Zone-2 match
destination-address any
set security policies from-zone trust to-zone untrust policy Device-Zone-2 match
application any
set security policies from-zone trust to-zone untrust policy Device-Zone-2 then
permit application-services idp
set security policies from-zone trust to-zone untrust policy Device-Zone-2 then
permit application-services uac-policy captive-portal captiveportal_65573
deactivate security policies from-zone trust to-zone untrust policy Device-Zone-2
then permit application-services
```

Security Director does not support inactive nodes and the inactive rules. If the objects in the rule are not defined, Security Director provides a warning message, at the time of import, listing the objects that are not defined.

**NOTE:**

- You can also publish a firewall policy by right-clicking the firewall policy in the Policy Tabular view and selecting Publish Policy. You are redirected to the Affected Devices page.
- You cannot publish a global firewall policy if you have not added rules to the all devices policy.
- During preview, the global rules shown under the comment Security Firewall Policy > Global, if global rules are supported. Otherwise, a warning message is shown.
- If you have configured AppFW and IPS for a firewall policy and the device you are using has the IPS license installed, when you publish and update the device with the firewall policy configuration, IPS and AppFW and IPS-related configuration will also be pushed to the device.
- When you publish a firewall policy that has a custom object associated to it, Security Director generates the custom object-related commands to be updated on the device. The commands for custom objects are generated irrespective of whether the firewall policy is already published or updated. If the custom object is associated with the firewall policy at the time of update, these commands are pushed to the device. Security Director pushes these commands to the device even though these commands may have been pushed to the device in an earlier update.
- You cannot publish a group policy, if you do not have permission for all the assigned devices. Also publish is not permitted if one or more devices are labeled by another Junos Space user.
- The publish fails if you have two addresses in a rule with a same name, one from the Global domain and the other from the child domain.
- You can publish or update the group policy of the global domain from another domain. In this case, policy is published or updated to only those devices which are part of the another domain. However, if you publish or update the group policy in the global domain, the policy is published or updated to all the devices including the devices from the another domain.
- If a global firewall policy rule containing multiple zones is published to a device that is running a Junos OS release earlier than Junos OS Release 12.1X47, publish fails with an error message. This is a schema driven and you must configure the correct schema for the publishing to be successful. Security Director does check the device version during the publish.

**Related Documentation**

- [Firewall Policies Overview on page 121](#)
- [Creating Firewall Policies on page 131](#)
- [Adding Rules to a Firewall Policy on page 155](#)
- [Ordering the Rules in a Firewall Policy on page 160](#)

- [Managing Firewall Policies on page 168](#)

## Managing Firewall Policies

---

You can modify, delete, clone, or export the security policies that are listed on the Manage Policies page.

To open the Manage Policies page:

- Select **Security Director > Firewall Policy**.

The Policy Tabular view appears. You must lock the policy before editing.

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

1. [Modifying Firewall Policies on page 169](#)
2. [Comparing Firewall Policies on page 170](#)
3. [Deleting Firewall Policies on page 172](#)
4. [Adding Rules to a Firewall Policy on page 173](#)
5. [Cloning Firewall Policies on page 173](#)
6. [Promoting a Firewall Policy on page 174](#)
7. [Exporting a Firewall Policy on page 174](#)
8. [Policy Versioning on page 175](#)
9. [Managing Policy Versioning on page 177](#)
10. [Deleting Rules in a Firewall Policy on page 182](#)
11. [Cloning a Rule in a Firewall Policy on page 183](#)
12. [Grouping Rules in a Firewall Policy on page 183](#)
13. [Enabling/Disabling Rules in a Firewall Policy on page 183](#)
14. [Expanding/Collapsing All Rules in a Firewall Policy on page 184](#)
15. [Cutting/Copying and Pasting Rules or Rule Groups in a Firewall Policy on page 184](#)
16. [Assigning Devices to a Firewall Policy on page 185](#)
17. [Deleting Devices from a Firewall Policy on page 186](#)
18. [Rule Operations on the Filtered Rules on page 186](#)
19. [Managing Custom Column Data on page 188](#)
20. [Modifying Custom Columns Definitions on page 188](#)
21. [Deleting a Custom Columns Definition on page 189](#)
22. [Exporting a Custom Columns Definition on page 189](#)

## Modifying Firewall Policies

To modify a firewall policy:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

2. Right-click the security policy you want to modify from the left pane and select **Modify Policy**.

The Edit Policy window appears. You can modify the name, description, profile, and IPS configuration mode of the firewall policy.

**Figure 72: Modify Policy Page**

3. You can modify the Manage Zone Policy and Manage Global Policy options.
4. You can modify the Priority and Precedence for the policy. If the priority is the same, you can enter precedence value from 1 to the number of policies of the same priority. If the priority is changed, you can enter the precedence value from 1 to the number of priorities.

For example, the system has 4 Low priorities, 5 Medium priorities, and 3 High priority policies. [Table 21 on page 169](#) shows the precedence value that can be set for different priorities.

**Table 21: Setting Precedence Values for Different Priorities**

Existing Priority	Modified Priority	Precedence that can be Set
Low	Low	1 to 4
Low	Medium	1 to 5

Table 21: Setting Precedence Values for Different Priorities (*continued*)

Existing Priority	Modified Priority	Precedence that can be Set
Low	High	1 to 4

5. Click **Modify**.

Whenever you make any changes to the firewall policy, you will have the option of entering a comment before saving the policy. You can enable or disable this option in Platform > Administration > Applications. To enable this option, right-click **Security Director**, and select the **Modify Security Director Settings** option. Under Applications, select the **Enable save comments for policies** check box. By default, this option is disabled.

In firewall ILP, once you enter the comment, you can save this version with a different name. Click **Save as Draft** from Save drop-down list to save the edited firewall policy with a different name. Entering a comment is not required. All comments you enter are logged.

## Comparing Firewall Policies

To compare any two policies:

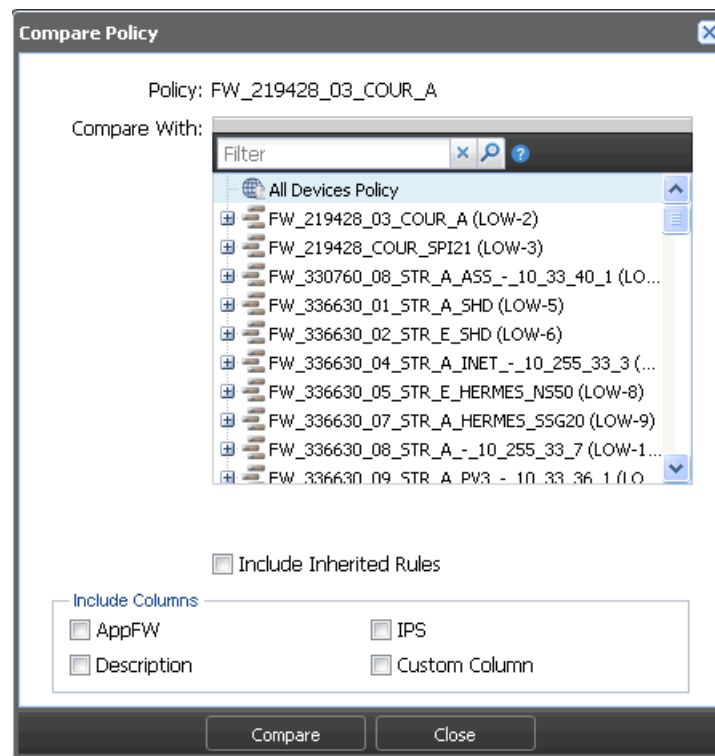
1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

2. Right-click the firewall policy you want to compare with other policies and select **Compare Policy**.

Compare Policy box appears, as shown in [Figure 73 on page 171](#).

Figure 73: Compare Policy



**NOTE:** You can select the Include Inherited Rules check box to include inherited rules while comparing. By default, inherited rules are not part of the comparison.

3. Select the policy to compare with, and click **Compare**.

The following window appears showing the compare result, as shown in [Figure 74 on page 172](#).

Figure 74: Compare Policy Result

Compare Policy -> FW\_219428\_03\_COUR\_A : FW\_219428\_COUR\_SPI21

Previous Diff | Next Diff | Top

Show Unchanged Rules

Added to FW\_219428\_03\_COUR\_A Modified in FW\_219428\_03\_COUR\_A Deleted from FW\_219428\_03\_COUR\_A

Policy Property Changes

Property	FW_219428_COUR_SPI21	FW_219428_03_COUR_A
Name	FW_219428_COUR_SPI21	FW_219428_03_COUR_A

Rule Changes

Rule Name	Source			Destination		Service	Action	Profile
	Zone	Address	Sourceidentity	Zone	Address			
Zone								
5	admin	FW_219428_03_COUR_A		dmz	GrpRes.Admin_NOC	GrpSvc_Vers-Admin	PERMIT	Log Session Close
4	admin	Any		dmz	Any	Any	DENY	Log Session Close
6	dmz	GrpRes.Admin_NOC		admin	FW_219428_03_COUR_A	GrpSvc_Vers-Plateforme	PERMIT	Log Session Close
3	dmz	Any		admin	Any	Any	DENY	Log Session Close
7	dmz	GrpRes.Admin_NOC		trust	Res.FW-WANHD-SPI21	GrpSvc_Vers-Plateforme	PERMIT	Log Session Close
2	dmz	Any		trust	Any	Any	DENY	Log Session Close
1	trust	FW_219428_01_COUR FW_219428_02_COUR		dmz	Lp.Srv_NSM1_Mts Srv_Nsmcompress1_Bdx	ping Recu_NSM_1	PERMIT	Log Session Close
8	trust	Res.FW-WANHD-SPI21		dmz	GrpRes.Admin_NOC	GrpSvc_Vers-Admin	PERMIT	Log Session Close
9	trust	Any		dmz	Any	Any	DENY	Log Session Close
1	trust	Any		untrust	Any	Grp_Q0_basse_depriorise	PERMIT	Log Session Close
2	trust	Any		untrust	Any	Any	PERMIT	Log Session Close
3	untrust	Any		trust	Any	Grp_Q0_basse_depriorise	PERMIT	Log Session Close
4	untrust	Any		trust	Any	Any	PERMIT	Log Session Close

Close

## Deleting Firewall Policies

To delete a firewall policy:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

2. Right-click the firewall policy you want to delete and select **Delete Policy**.

A confirmation window appears.

3. Click **Yes**.



**NOTE:** If you delete a firewall policy, the erase configuration is sent to all devices that were a part of the firewall policy during the next Update operation for the device.



**NOTE:** If the published policy is deleted, Security Director application will unpublish the policy on the device.



## Adding Rules to a Firewall Policy

You can add the rules before or after the firewall rule. To add rules:

1. Select **Security Director > Firewall Policy**.

The Policy tabular view appears.

2. Select the firewall rule to which you want to add rules, right-click, and select **Add Rules Before** or **Add Rules After**.

You will get an option to add rules before the firewall rule, or after the firewall rule.

## Cloning Firewall Policies

To clone a firewall policy:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

2. Right-click the firewall policy you want to clone and select **Clone Policy**.

The **Clone Policy** window appears. You can modify the name, description, profile, manage all devices policy, manage zone policy, priority, precedence, and IPS mode of the firewall policy. By default, the original policy values are displayed in the Priority and Precedence fields. If required, you can change them. When you clone a firewall policy, IPS settings are also cloned.

Figure 75: Clone Policy Page

The screenshot shows the 'Clone Policy' dialog box with the following fields and options:

- Name:** copy\_of\_Gateway-BNG
- Description:** Created by Import
- ☒ **Manage Zone Policy**
- ☐ **Manage Global Policy**
- Policy Priority:** Low
- Precedence:** 4 Of 16
- Profile:** Select profile...
- Buttons:** Clone, Cancel



**NOTE:** The priority and precedence value of the cloned policy is same as the priority and precedence of the original policy. For the other policies, the priority and precedence value will be moved to one level down.

3. Click **Clone**.

## Promoting a Firewall Policy

To promote a device policy to the group policy:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

2. Right-click the device policy you want to promote, and select **Promote Policy to Group Policy**.

The Promote Device Policy to Group Policy window appears, as shown in [Figure 76 on page 174](#).

**Figure 76: Promote Policy Page**

The dialog box titled "Promote Device Policy to Group Policy" contains the following fields and controls:

- Name:** A text box containing "promote\_Device-Policy".
- Description:** A large empty text area.
- Policy Priority:** A dropdown menu set to "Low" with a help icon (?) to its right.
- Precedence:** A text box containing "1" followed by "Of 1".
- Buttons:** "Promote" and "Cancel" buttons at the bottom.

3. Enter the name, description, policy priority, and precedence. Click **Promote**.

The device policy is promoted only to the prerule of the group policy.



**NOTE:** By default, the policy profile and IPS mode of a device policy is promoted to the group policy.

## Exporting a Firewall Policy

To export a firewall policy:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

2. Right-click the firewall policy you want to export and select **Export Policy**.

The Export Policy window appears.

3. Click **Export**.

## Policy Versioning

You create a policy version by taking a snapshot of the policy. You can create versions for all types of firewall policies including All devices, Group, Device, and Device exceptions. The maximum number of versions maintained for any policy is 60. If the maximum limit is reached, you must delete the unwanted versions before saving a new version. Versioning and rollback are independent operations for each policy. For example, if you take a snapshot of a group firewall policy, it does not version all device policy rules and hence you must separately version each policy rules.

You can delete the older version of snapshots by clicking the **Auto delete oldest version** option, as shown in [Figure 78 on page 177](#). This option is enabled by default. If this option is disabled, every time the oldest version of snapshots are deleted (after the maximum number of versions is reached), a warning message is displayed on the screen. If you enable this option, the oldest snapshots are deleted automatically, without any warning messages.

To create a version of the policy:

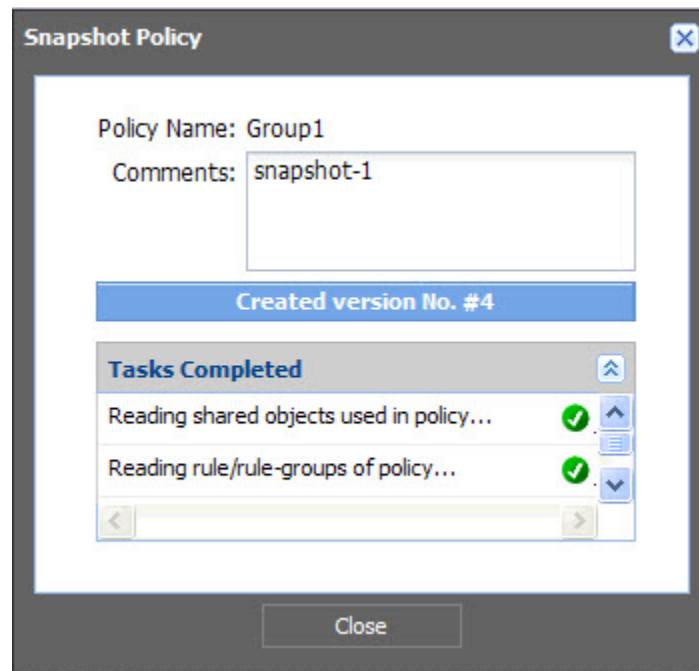
1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

2. Right-click the firewall policy you want to take a snapshot of, and select **Snapshot Policy**.

The Policy Name field shows the name of the firewall policy for which the snapshot is taken. Enter your comments in the Comments field, and press **Create to take the snapshot**. The Snapshot Policy Window appears, showing the status of the version as it is created, [Figure 77 on page 176](#).

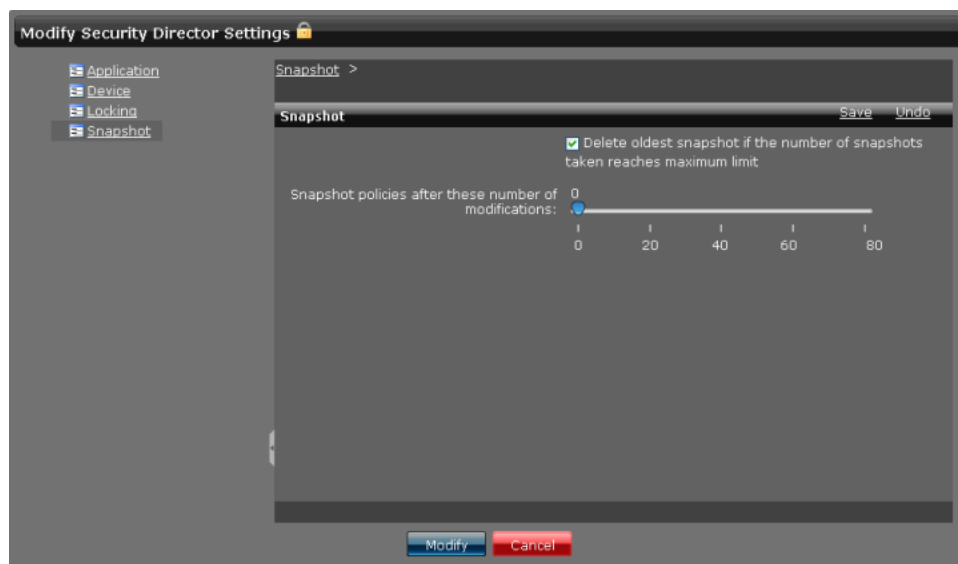
Figure 77: Snapshot Policy Window



The versioned data includes the multiple zones for global rules.

**NOTE:**

- During policy publish, Security Director takes an automatic snapshot of the policy.
- You can set an option to take the snapshot automatically after you have modified and saved a policy after configured number of times, as shown in [Figure 78 on page 177](#). When the snapshot is taken automatically, Security Director does not make any log entry because it is an internal operation.

**Figure 78: Modify Security Director Settings****Managing Policy Versioning**

You can view or manage all available versions of a selected policy. You can perform the following tasks on the snapshots:

- Roll back to a specific version.
- View the differences between any two versions (including the current version) of the policy.
- Delete one or more versions from the system.

To rollback the selected version as the current version:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

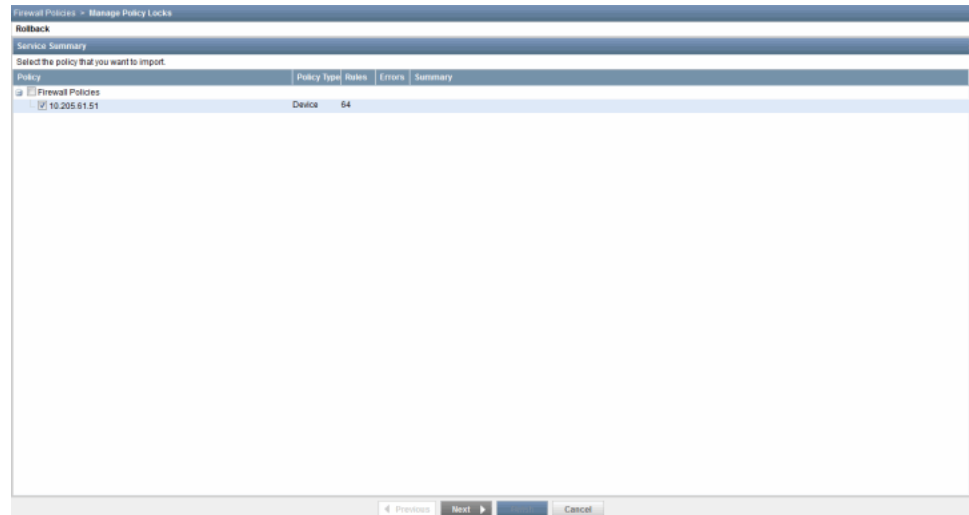
2. Right-click the firewall policy and select **Manage/Rollback Policy**.

A window appears showing all the versions of the policy.

3. Select the version that you want to make as current and click **Rollback**.

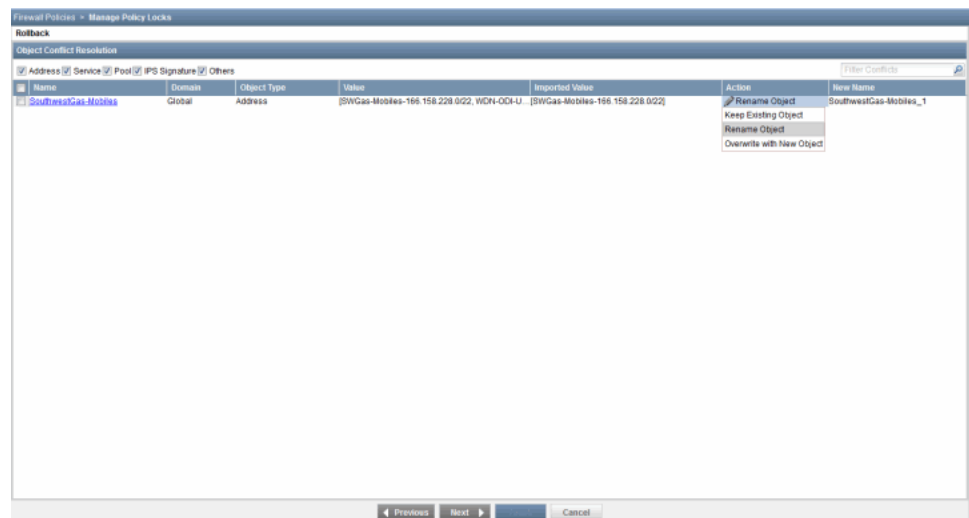
A service summary window appears, as shown in [Figure 79 on page 178](#).

**Figure 79: Rollback Service Summary Page**



The rollback operation replaces all the rules and rule groups of the current version with rules and rule groups from the selected version. For all the shared objects, Object Conflict Resolution (OCR) is done. If there are any conflicts between the versioned data and the current objects in the system, the OCR window is displayed, as shown [Figure 80 on page 178](#).

**Figure 80: Object Conflict Resolution Window**



From the OCR window, you can choose to retain the existing object, rename the object, or overwrite it with the new object.

4. After finishing all the conflict resolution, click **Next** to view the OCR summary report, as shown [Figure 81 on page 179](#).

Figure 81: Rollback OCR Summary Report

Firewall Policies > Manage Policy Locks

**Rollback**

Print Report

Selected Session						
Type	Name	Policy Type	Total Rules	Imported Rules	Errors	Warning
Firewall	10-205-61-51	Device	64	64	0	0

**Object Error Summary**

Type	Object	Affected Objects	Errors
No Errors			

**Object Conflict Resolution**

Object Type	Original Name	Domain	Resolution	Resolved Name	Old Value	New Value
Address	SouthwestGas Mobiles	Global	Create with New Name	SouthwestGas Mobiles_1	[SWGas Mobiles-166.158.228.0/22, VIOFI-CDI-Unraid-MFP-Pool]	[SWGas Mobiles-166.158.228.0/22]

**Object Creation List:**

Address	Name	Type	IP Address	Host Name	Members	Description
SouthwestGas Mobiles_1		Group			SWGas Mobiles-166.158.228.0/22	

Previous Next Finish Cancel

- Click **Finish** to replace the current policy with the versioned data. Summary of the snapshot policy is provided, as shown in Figure 82 on page 179.

Figure 82: Rollback Snapshot Policy Report

**Snapshot Policy**

Status: **SUCCESS**  
 Start Time: Aug 14, 2012 3:16:15 PM UTC+05:30  
 End Time: Aug 14, 2012 3:16:17 PM UTC+05:30

Rollback Policy-361353

Task	Status	Details
Reading import Files	In Progress	Started at Tue Aug 14 09:46:15 UTC 2012
Reading import Files	Success	Finished at Tue Aug 14 09:46:15 UTC 2012
Rollback Addresses	In Progress	Started at Tue Aug 14 09:46:15 UTC 2012
Rollback Addresses	Success	Finished at Tue Aug 14 09:46:16 UTC 2012
Rollback Services	In Progress	Started at Tue Aug 14 09:46:16 UTC 2012
Rollback Services	Success	Finished at Tue Aug 14 09:46:16 UTC 2012
Acquiring Policy Lock	Success	
Rollback Firewall Policy	In Progress	Started at Tue Aug 14 09:46:16 UTC 2012
Rollback Firewall Policy	Success	Started at Tue Aug 14 09:46:16 UTC 2012
Releasing Policy Lock	Success	
Summary		<a href="#">Summary Report</a>

Page 1 of 1 | Displaying 1 - 11 of 11

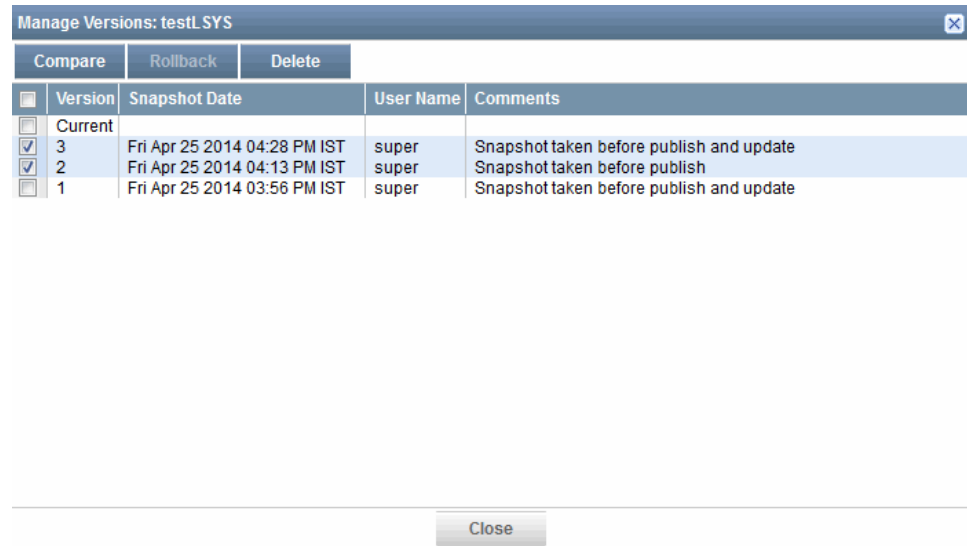
Close

To compare two different versions of a policy:

- Select **Security Director > Firewall Policy**.  
The Policy Tabular view appears.
- Right-click the firewall policy, and select **Manage/Rollback Policy**.

The Manage Versions window appears, showing all policy versions, as shown in [Figure 83 on page 180](#).

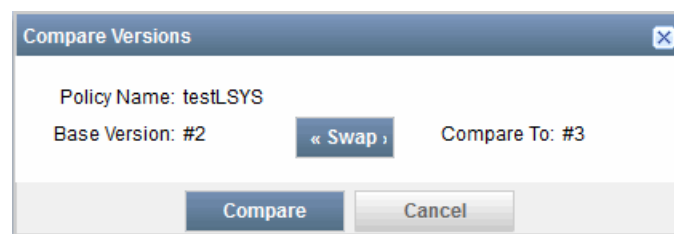
**Figure 83: Manage Versions Window**



3. Select the versions to be compared, and click **Compare**. You can select only two versions at a time to compare.

You can clear the columns you do not want included in the comparison. By default, all columns are selected in the Compare Versions window, as shown in [Figure 84 on page 180](#).

**Figure 84: Compare Versions Window**



4. Click **Compare** to view the results.

A Compare Versions results window appears, showing the differences between the selected versions, as shown in [Figure 85 on page 181](#).



Figure 85: Compare Versions: Results Window

Compare Versions : 10.205.61.41\_2 -> #3 : Current

Previous Diff

Next Diff

Top

Show Unchanged Rules

10.205.61.41(Exception)#Current Modified

Added to 10.205.61.41(Exception)#Current

Deleted from 10.205.61.41(Exception)#Current

Policy Property Changes

Name	10.205.61.41_2#3	10.205.61.41(Exception)#Current
Name	10.205.61.41_2	10.205.61.41(Exception)

Rule Changes

Rule Name	Source			Destination		Service	Action	Profile	AppFW	IPS	Description
	Zone	Address	SourceIdentity	Zone	Address						
Zone											
Device Rules											
Device-Zone-2	trust	Any		untrust	Any	Any	Deny		None		
Global											
Device Rules											
Device-Global-11111		Any		Any	Any	Any	PERMIT	Custom	None	IPS ON	
Device-Global-2		Any		Any	Any	Any	Deny		None		
Device-Global-3		Any		Any	Any	Any	Deny		None		
Device-Global-4		Any		Any	Any	Any	Deny		None		
Device-Global-6		Any		Any	Any	Any	Deny		None		
Device-Global-7		Any		Any	Any	Any	Deny		None		
Device-Global-8		Any		Any	Any	Any	Deny		None		
Device-Global-9		Any		Any	Any	Any	Deny		None		
Device-Global-11		Any		Any	Any	Any	Deny		None		
Device-Global-111		Any		Any	Any	Any	Deny		None		
Device-Global-1		Any		Any	Any	Any	PERMIT	Custom	None	IPS ON	

Column Changes

Rule	Column	10.205.61.41_2#3
		10.205.61.41(Exception)#Current

The general policy Compare Versions results window has the following sections:

- Policy Property Changes—Shows policy changes for the modified rules.
- Rule Changes—Displays rules that are added, modified, or deleted.
- Column Changes—Shows the differences between the column contents for modified rules.

Global policy zone columns are compared according to their content. For example, in version 1 of the policy, the fromZone and toZone columns are configured with the inline values trust, dmz, and vpn. In version 2 of the policy, the Zone column is modified to use a zone set with the same values: trust, dmz, and vpn. Therefore, the policy diff does not show that the Zone column is changed. Although the string representations of the column values are different, the effective fromZone and toZone values are the same and are therefore considered not to have changed.

To delete versions:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

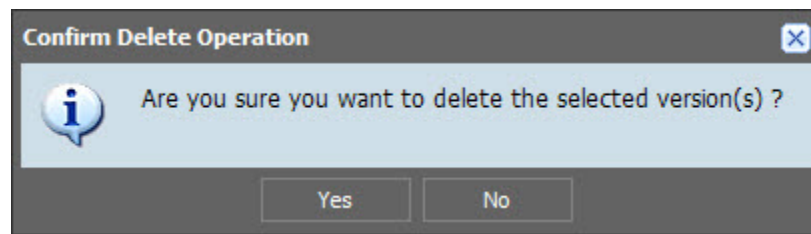
2. Right-click the firewall policy, and select **Manage Snapshots**.

A window appears, showing all policy versions.

3. You can delete multiple versions at a time. During a rollback operation, you are given an option to delete older versions. Select the version that you want to delete, and click **Delete**.

You will receive a Confirm Delete Operation message before you can delete the version, as shown in [Figure 86 on page 182](#).

Figure 86: Confirm Delete Operation Message



4. Click **Yes** to delete the version, or click **No** to abort the operation.



**NOTE:** If you delete a policy, all versioned data for that policy is deleted. Promoting the device to a group policy operation deletes the associated versions.



**NOTE:**

- Priority and precedence of a policy are not rolled back. Only values from the current policy are retained.
- Priority, precedence, IPS mode, IPS signature set (if the mode is basic), and IPS policy rules (if the mode is advanced) are neither versioned, nor rolled back.
- Rollback operation sets the policy publishing state to republishing if the current policy is in the published state.
- For the custom column, only column values are stored in versioned data and rolled back. Column definitions are not part of versioned data.
- If the objects are not present, the following shared objects are not rolled back:
  - Custom template
  - Policy-based VPNs
  - Application signature

## Deleting Rules in a Firewall Policy

To delete rules in a firewall policy:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

2. Select the firewall policy whose rules you want to delete.

The rules of the firewall policy appears in the right pane.

3. Select the check boxes next to the rules that you want to delete.
4. Click the **Delete Rule** icon on the top of the right pane.

### Cloning a Rule in a Firewall Policy

To clone a rule in a firewall policy:

1. Select **Security Director > Firewall Policy**.  
The Policy Tabular view appears.
2. Select the firewall policy whose rule you want to clone.  
The rules of the firewall policy appears in the right pane.
3. Select the check box next to the rule that you want to clone.
4. Right-click and select **Clone**.

### Grouping Rules in a Firewall Policy

To group rules in a firewall policy:

1. Select **Security Director > Firewall Policy**.  
The Policy Tabular view appears.
2. Select the firewall policy whose rules you want to group.  
The rules of the firewall policy are displayed in the right pane.
3. Select the check boxes next to the rules you want to group.
4. Right-click the rules and select **Rule Group > Create Rule Group**.  
The Create Rule Group pop-up window appears.
5. Enter a name for the rule group in the Name field.
6. Enter a description for the rule group in the Description field.
7. Click **Create**.



**NOTE:** When the rule group is created, you can add rules in the rule group, modify the rule group name, move the rule into another rule group, ungroup rules, and ungroup rule groups using appropriate options.

### Enabling/Disabling Rules in a Firewall Policy

To enable or disable rules in a firewall policy:

1. Select **Security Director > Firewall Policy**.  
The Policy Tabular view appears.
2. Select the firewall policy whose rules you want to enable or disable.

The rules of the firewall policy are displayed in the right pane.

3. Select the check boxes next to the rules that you want to enable or disable.
4. Click the **Enable** or **Disable** icon.



**NOTE:** You can enable or disable a rule group. When a rule group is disabled, all rules in the rule group are also disabled. The rule group row in the Tabular view appears dimmed, but the rules do not appear dimmed. However, if the rules in the rule group appear dimmed, they are not published to the device during the publish operation, if they are disabled.

## Expanding/Collapsing All Rules in a Firewall Policy

To expand or collapse all rules in a firewall policy:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

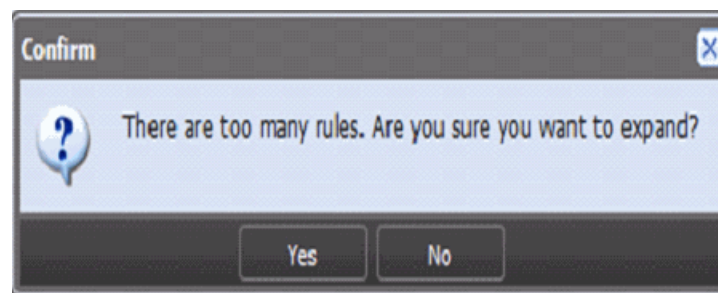
2. Select the firewall policy whose rules you want to expand.

By default, firewall policy rules in collapsed state are displayed in the right pane.

3. Click the **Expand All RuleGroups** icon, and all rules corresponding to that particular policy are expanded.

If a policy contains more than 1000 rules, a warning message is displayed before expanding, as shown in [Figure 87 on page 184](#).

**Figure 87: ExpandAll Warning Message for More Than Thousand Rules**



4. Click the **Collapse All RuleGroups** icon to collapse all rules.

## Cutting/Copying and Pasting Rules or Rule Groups in a Firewall Policy

To cut or copy and paste rules or rule groups in a firewall policy:

1. On the right pane, select the device rule or rule group that you want to cut or copy. Right-click the selected device rule or rule group, and select **Cut** or **Copy**. If Cut is selected, related rule or rule group is removed from the right pane view.

You can copy the rules without locking a policy. However, you must lock the policy for the cut operation. You can select the combination of rules or rule groups for cutting

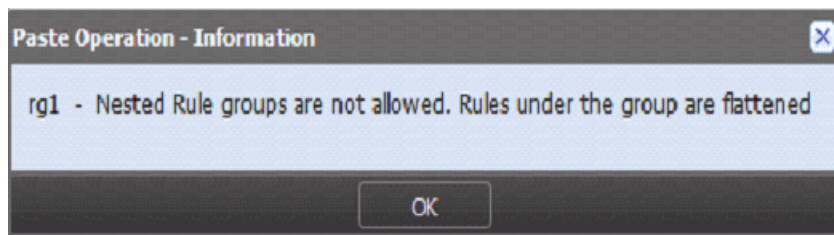
or copying operation. However, a rule group and one or more rules inside the same rule group cannot be copied or cut simultaneously.

2. On the left pane, select the firewall policy in which you want to paste the rule or rule group. On the right pane, right-click the rule or rule group that you want to paste. You can paste the rule or rule group before or after the selected rule or rule group by choosing the **Paste Before** or **Paste After** option, respectively.

If you are cutting and pasting rules across different policies, you must first save the cut operation in the current policy before moving to another policy for pasting. Otherwise, an error message is displayed, giving you the option either save or discard the changes.

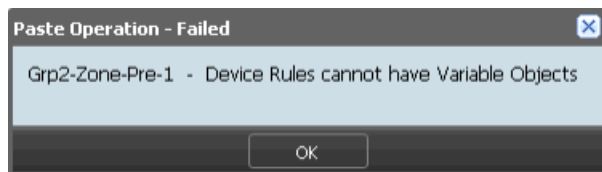
Security Director does not support nested rule grouping. If you paste a rule group in another custom rule group, an error message is displayed, giving you the option to proceed by flattening the copied rule group, as shown in [Figure 88 on page 185](#).

**Figure 88: Nested Rule Group Paste Operation Warning Message**



**NOTE:** If you copy a rule that contains variable objects from the all devices policy and attempt to paste the rule into other policy rules, the following error message is displayed:

**Figure 89: Variable Objects Rule Paste Error**



## Assigning Devices to a Firewall Policy

To assign devices to a group firewall policy:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

2. Right-click the firewall policy to which you want to assign devices and select **Assign Devices**.

The Assign Devices to Service window appears.

3. Select the devices that need to be added to the firewall policy in the Select Devices pane, select the devices from the Available column and click the right arrow to move these devices to the Selected column. There is option to search for any devices in the Selected column of the Assign Devices window. By default, all the selected devices are sorted in a list and you can search for any devices again, if required.
4. Click **Modify**.

**NOTE:**

- If you do not have permission to certain devices, they will not be visible while assigning devices to a new or existing firewall policy.
- You cannot view the device or exception policies at the left pane, for the assigned devices, that are labeled by the other Junos Space users.

---

## Deleting Devices from a Firewall Policy

To delete devices from a group firewall policy:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

2. Right-click the firewall policy from which you want to delete devices and select **Assign Devices**.

The Assign Devices to Service window appears.

3. Select the devices that need to be deleted from the firewall policy in the Select Devices pane, select the devices from the Selected column and click the left arrow to move these devices to the Available column.
4. Click **Modify**.



**NOTE:** Deleting a device from a group firewall policy creates a device firewall policy. This policy carries all the device rules of the device from the group firewall policy.

---

## Rule Operations on the Filtered Rules

You can perform various rule operations on the filtered list of rules. For example, consider a policy having seven rules such as *a, b, c, d, e, f*, and *g* in an order inside a rule group. After filtering, if only second and sixth rules are filtered, that is only rules *b* and *f*,

[Table 22 on page 187](#) explains the various rule operations on the filtered rules.

Table 22: Various Rule Operation on the Filtered Rules

Rule Operation	Action
Add rule before	<p>To add a new rule before an existing rule, select the existing rule in the filtered list and add the new rule above it.</p> <p>For example, if you perform this operation by selecting the sixth rule that is <i>f</i>, the seventh rule must be added before the sixth rule, in the filtered list. The rule <i>f</i> must be moved down to the seventh place in the full list.</p>
Add rule after	<p>To add a new rule after an existing rule, select the existing rule in the filtered list and add the new rule below it.</p> <p>For example, If you perform this operation by selecting the second rule that is <i>b</i> in the filtered list, the seventh rule must be added after the second rule. This rule is added at the third place in the full list.</p>
Paste before	<p>To paste a copied rule before an existing rule, select the existing rule in the filtered list and paste the copied rule above it.</p> <p>For example, If you perform this operation by selecting the sixth rule that is <i>f</i> in the filtered list, the copied rule must be added after the sixth rule. The rule <i>f</i> must be moved down to the seventh place in the full list.</p>
Paste after	<p>To paste a copied rule after an existing rule, select the existing rule in the filtered list and paste the copied rule below it.</p> <p>For example, If you perform this operation by selecting the second rule that is <i>b</i> in the filtered list, the copied rule must be added after the second rule. The new rule is added at the third place in the full list.</p>
Clone	<p>To clone a selected rule, select the existing rule you want to clone in the filtered list. The cloned rule will be added above the selected rule.</p> <p>For example, If you perform this operation by selecting the sixth rule that is <i>f</i> in the filtered list, the cloned rule must be added after the sixth rule, at the seventh place. The rule <i>g</i> must be moved down to the eighth place in the full list. This can be checked by clearing the filter from the search box.</p>
Move rule to top	<p>To move a rule to the top of a list, select the rule you want to move in the filtered list and move rule to the top. If you move a rule from a filtered list to the top of that list, the selected rule is also moved to the top of the full list.</p> <p>For example, If you perform this operation by selecting the sixth rule <i>f</i> in the filtered list, the rule <i>f</i> must be moved to the top in the rule group, at first place in the original list. This can be checked by clearing the filter from the search box.</p> <p>This option is disabled for the top rule in the full list.</p>
Move rule to bottom	<p>To move a rule to the bottom of the list, select the rule you want to move in the filtered list and move rule to the bottom. If you move a rule from a filtered list to the bottom of that list, the selected rule is also moved to the bottom of the full list.</p> <p>For example, If you perform this operation by selecting the second rule <i>b</i> in the filtered list, the rule <i>b</i> must be moved to the bottom in the rule group, at the seventh place in the full list. This can be checked by clearing the filter from the search box.</p> <p>This option is disabled for the last rule in the full list.</p>

Table 22: Various Rule Operation on the Filtered Rules (*continued*)

Rule Operation	Action
Move rule up	<p>To move a rule up one position in the list, select the rule you want to move in the filtered list and move rule up one position.</p> <p>For example, If you perform this operation by selecting the sixth rule <i>f</i> in the filtered list, the rule <i>f</i> must be moved before the second rule <i>b</i> in the filtered list. This rule is moved to the second place in the rule group in the full list.</p> <p>This option is disabled for the top rule in the full list.</p>
Move rule down	<p>To move a rule down one position in the list, select the rule you want to move in the filtered list and move rule down one position.</p> <p>For example, If you perform this operation by selecting the second rule <i>b</i> in the filtered list, the rule <i>b</i> must be moved after the sixth rule <i>f</i> in the filtered list. This rule is moved to the sixth rule in the rule group in the full list.</p> <p>This option is disabled for the last rule in the full list.</p>

## Managing Custom Column Data

You can insert, edit, or delete custom columns and their corresponding policy rules through an inline edit.

Security Director uses the following parameters to validate custom column data:

- Explicit regular expression—Validation is based on the optional regular expression property, if defined for the current custom column.
- Implicit length check—The maximum length of the data must be 256 characters. It is applicable to all custom columns.



**NOTE:** The Save and Discard buttons, which are used to save or discard all the edits—including inline edits of custom column fields—are not used for registering custom columns. These actions are committed as soon as they are completed in their respective UI and are independent of the Save or Discard button.

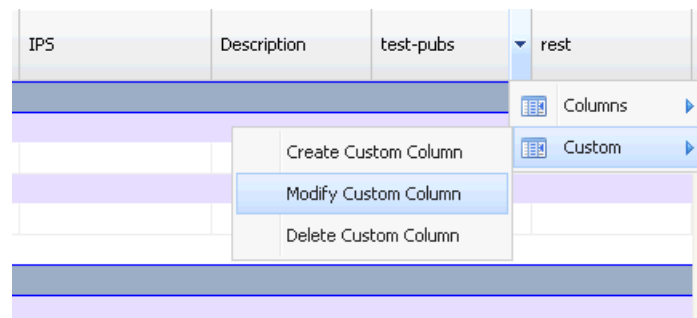
## Modifying Custom Columns Definitions

To modify a custom column:

1. Click the custom column name in the column header, go to **Custom**. Click and select **Modify Custom Column**.



Figure 90: Modifying a Custom Column



2. Once the edit is complete, the column header is refreshed to reflect the changes.



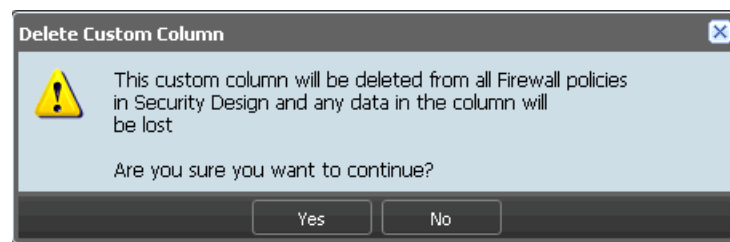
**NOTE:** You must have edit permissions to modify the custom column registration settings.

## Deleting a Custom Columns Definition

To delete the custom column definition:

1. Click the custom column name in the column header, go to **Custom**, then select and click **Delete Custom Column**.
2. A delete confirmation message appears, as shown in [Figure 91 on page 189](#). After you confirm the deletion and the delete process finishes, Security Director updates the header and removes the column.

Figure 91: Deleting a Custom Column



## Exporting a Custom Columns Definition

Custom column definition is exported when a firewall rule is exported.

### Related Documentation

- [Firewall Policies Overview on page 121](#)
- [Creating Firewall Policies on page 131](#)
- [Adding Rules to a Firewall Policy on page 155](#)
- [Ordering the Rules in a Firewall Policy on page 160](#)
- [Publishing Firewall Policies on page 161](#)



## CHAPTER 14

# Application Signatures

- Creating Application Signatures on page 191
- Managing Application Signatures on page 194

## Creating Application Signatures

To create an application signature:

1. Select **Security Director > Firewall Policies > Application Signatures**.

All application signatures that are downloaded appears on the Application Signatures page, as shown in [Figure 92 on page 191](#). This page displays the version of the signature database. On the left side of the page are the different categories of signature, and on the right side of the page are the signatures.

Figure 92: Application Signatures Page

Name	Object Type	Category	Sub-Category	Risk	Characteristics	Device Compat...	Predefined/C...	ID	Comments
IP-UNASSIGN-ED-173	Application	Infrastructure	Networking	Low		All Devices	Predefined	1096	SYSTEM
ICMP-TYPE-114	Application	Infrastructure	Networking	Low		All Devices	Predefined	11451	SYSTEM
TIWNA	Application	Web	Social-Networking	Low	Loss of Productivity	All Devices	Predefined	1253	SYSTEM
NATEON	Application	Web	Messaging	Low	Loss of Productivity	All Devices	Predefined	10403	SYSTEM
ICMP-TYPE-173	Application	Infrastructure	Networking	Low		All Devices	Predefined	11510	SYSTEM
ICMP-TYPE-208	Application	Infrastructure	Networking	Low		All Devices	Predefined	11545	SYSTEM
GRABOID	Application	Web	Multimedia	Moderate	Bandwidth Consumer	All Devices	Predefined	10956	SYSTEM
ICMP-PORT-UNREACH	Application	Infrastructure	Networking	Low		All Devices	Predefined	11311	SYSTEM
CAFEMON	Application	Web	Social-Networking	Low	Loss of Productivity	All Devices	Predefined	374	SYSTEM
IP-UNASSIGN-ED-157	Application	Infrastructure	Networking	Low		All Devices	Predefined	1590	SYSTEM
CAMPFIRENOW	Application	Web	Applications	Moderate	Prone to Misuse	All Devices	Predefined	770	SYSTEM
SKYPE	Application	Infrastructure	VOIP	High	Bandwidth Consumer	All Devices	Predefined	183	SYSTEM
ICMP-ECHO-REPLY	Application	Infrastructure	Networking	Low		All Devices	Predefined	11304	SYSTEM
ENDNOTE	Application	Web	Applications	Unsafe	Can Leak Information	All Devices	Predefined	11260	SYSTEM
XVIDEOS	Application	Web	Multimedia	Moderate	Bandwidth Consumer	All Devices	Predefined	1077	SYSTEM
NATEON-LOGIN	Application	Messaging	Instant-Messaging	Low	Loss of Productivity	All Devices	Predefined	11190	SYSTEM
LINKEDIN	Application	Web	Social-Networking	Low	Loss of Productivity	All Devices	Predefined	305	SYSTEM

From Junos OS Release 12.1X47 onwards, the Nested applications are termed as Applications with the same details converted as members of Application signature. These Application signatures are called ngAppIDs. The Application Signatures page shows only the ngAppID2.0 applications and application group.

2. Click **Create Application Signature**.

The Create Application Signature page appears, as shown in [Figure 93 on page 192](#).

Figure 93: Create Application Signature

**Create Application Signature**

**GENERAL INFORMATION**

Name:

Description:

**TAGS** ?

Category:  ▼

Sub-Category:  ▼

Risk:  ▼

**SIGNATURE TYPE** ?

☒ Basic ☐ Advanced

**SIGNATURE DETAILS**

Min Data\*:

Port Range\*:

**Patterns**

Client to Server:

**Create** **Cancel**

3. Enter the name of the application signature in the Name field.
4. Enter the description for the application signature in the Description field.
5. Select the category of the application signature from the Application Signature drop-down menu.
6. Select the subcategory of the application signature from the Sub-Category drop-down menu.
7. Select the category of risk from the Risk drop-down menu.
8. Select the signature type as either Basic or Advanced.  
 For the devices running Junos OS Release 12.1X46 and previous versions, Basic is same as Application, and Advanced is same as the Nested Application.
9. If you select Basic as the signature type, enter the following information under the Signature Details tab:
  - a. Enter the data range in the Min Data field.
  - b. Enter the range of ports in the Port Range field.

- c. Under the Patterns, enter the following information:
    - Enter the appropriate information in the Client to Server field.
    - Enter appropriate information in the Server to Client field.
  - d. Click **Create**.
10. If you selected Advanced as the signature type, enter the following information:
- a. Enter the range of ports in the Max Transactions field.
  - b. To create the signature details, click the plus sign (+).  
The Signature Details page appears.
  - c. From the Protocol drop-down select the protocol. The available protocols are HTTP and SSL.  
You can create signature details for a single protocol, and each protocol can have members up to 16.
  - d. Select the Chain Order check box which is used to match the pattern.
  - e. Click the plus sign (+) to create the signature.  
The Signature page appears.
  - f. From the Context drop-down list, select required context to match.
  - g. From the Direction drop-down list, select the direction as Client to Server, Server to Client, or Any.
  - h. In the Pattern field, enter the appropriate information.
  - i. Click **OK**.
11. Click **Create**.  
A new Application Signature is created.

Publish fails under the following conditions:

- If you push custom signatures to a device running Junos OS Release 12.1X47.
- Security Director trims the signature if the predefined signatures are not supported.



**NOTE:** In the left pane of the Application Signatures landing page, you can see the device compatibility information under the Device Compatibility column.

#### Related Documentation

- [Managing Application Signatures on page 194](#)

## Managing Application Signatures

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You can filter, modify, delete, or clone, application signatures listed on the Application Signatures page. You can also create application signature groups in this page.

To open the Application Signatures page:

- From the **Security Director > Firewall Policies > Application Signatures**.

The Application Signatures page appears.

You can right-click the application signatures to manage them.

You can perform the following tasks on the Application Signatures page:

- [Filtering Application Signatures on page 194](#)
- [Modifying Application Signatures on page 195](#)
- [Modifying Application Signature Groups on page 195](#)
- [Deleting Application Signatures on page 195](#)
- [Cloning Application Signatures on page 196](#)
- [Cloning Application Signature Groups on page 196](#)
- [Viewing Application Signature Details on page 196](#)

### Filtering Application Signatures

To filter application signatures:

1. Select **Security Director > Firewall Policies > Application Signatures**.

The Application Signatures page displays all signatures that are downloaded. The right pane displays the signatures and the left pane displays the different filters that can be used to filter the signatures. The different parameters that can be used to filter the signatures include Category, Sub-Category, Risk, Predefined/Custom, Object Type, Activation Date, Device Compatibility, and Modify Date. Every parameter has different subparameters.

2. Click the check box next to the subparameters within a parameter.

To filter the signatures based on the device compatibility parameter:

1. In the left pane, under the Advanced Filter, expand the Device Compatibility column.

The available device compatibility version are:

- All Devices
- X46 and older devices
- X47 and newer devices

2. Select the required compatibility version check box.
3. The filtered data is available in the right pane.

## Modifying Application Signatures

To modify application signatures:

1. Select **Security Director > Firewall Policies > Application Signatures**.

The Application Signatures page displays all signatures that are downloaded.

2. Select the check box next to the application signature you want to modify.



**NOTE:** You cannot modify the predefined application signatures. You can only modify the custom application signatures you have added.

3. Right-click the application signature and select **Modify Application Signature**.

You will be redirected to the Modify Application Signature page. You can make necessary changes to the application signature here. However, you cannot modify the signatures in the System domain.

4. Click **Modify**.

## Modifying Application Signature Groups

To modify application signature groups:

1. Select **Security Director > Firewall Policies > Application Signatures**.

The Application Signatures page displays all signatures that are downloaded.

2. Select the check box next to the application signature group you want to modify.

3. Right-click the application signature group, and select **Modify Application Signature Group**.

You will be redirected to the Modify Application Signature Group page. You can make necessary changes to the application signature group here.

4. Click **Modify**.

## Deleting Application Signatures

To delete application signatures:

1. Select **Security Director > Firewall Policies > Application Signatures**.

The Application Signatures page displays all signatures that are downloaded.

2. Select the check box next to the application signatures you want to delete.



**NOTE:** You cannot delete the predefined application signatures, and the signatures in the System domain. You can only delete the custom application signatures you have added.

3. Right-click the application signature and select **Delete Selected**.  
A confirmation window appears.
4. Click **Yes**.

## Cloning Application Signatures

To clone application signatures:

1. Select **Security Director > Firewall Policies > Application Signatures**.  
The Application Signatures page displays all signatures that are downloaded.
2. Select the check box next to the application signature you want to clone.
3. Right-click the application signature and select **Clone Application Signature**.  
You are redirected to the Clone Application Signature page. You can clone the application signature here.

## Cloning Application Signature Groups

To clone application signature groups:

1. Select **Security Director > Firewall Policies > Application Signatures**.  
The Application Signatures page displays all signatures that are downloaded.
2. Select the check box next to the application signature group you want to clone.
3. Right-click the application signature group, and select **Clone Application Signature Group**.  
You are redirected to the Clone Application Signature Group page. You can clone the application signature group here.

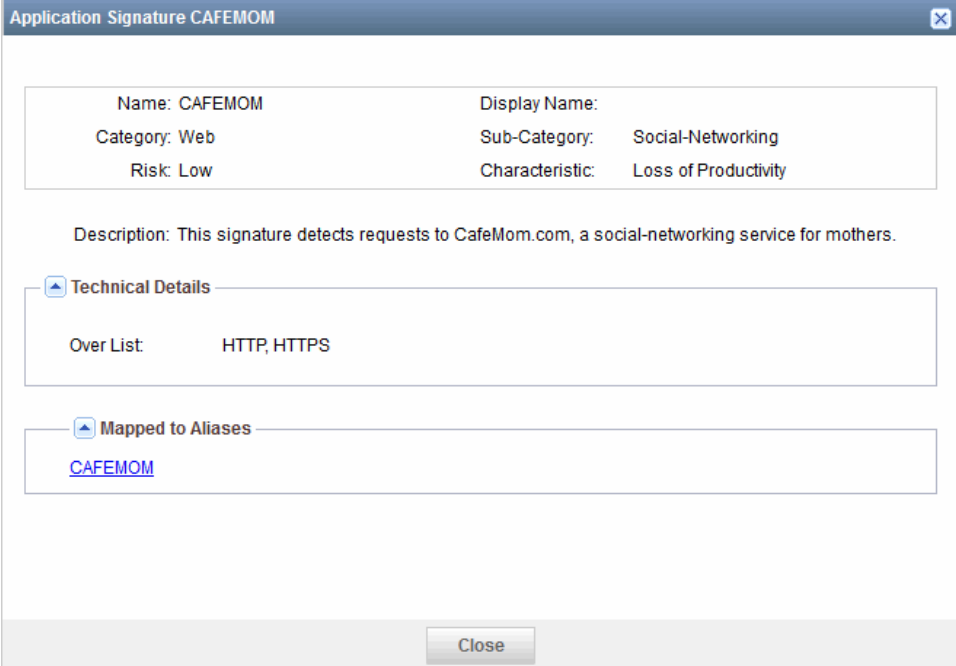
## Viewing Application Signature Details

You can view the details of any application signature. To view the details:

1. Select **Security Director > Firewall Policies > Application Signatures**.  
The Application Signatures page displays all signatures that are downloaded.
2. Double click on any application.  
A pop-up Application Signature window appears, with details of that particular application, as shown in [Figure 94 on page 197](#).



Figure 94: Application Signature Details



The image shows a software window titled "Application Signature CAFEMOM". It contains a table of metadata, a description, and two expandable sections for technical details and aliases.

Application Signature CAFEMOM	
Name: CAFEMOM	Display Name:
Category: Web	Sub-Category: Social-Networking
Risk: Low	Characteristic: Loss of Productivity

Description: This signature detects requests to CafeMom.com, a social-networking service for mothers.

**Technical Details**

Over List: HTTP, HTTPS

**Mapped to Aliases**

[CAFEMOM](#)

Close



## CHAPTER 15

# Schedulers

- [Scheduler Overview on page 199](#)
- [Creating a Scheduler on page 200](#)
- [Managing Scheduler on page 202](#)

### Scheduler Overview

---

A scheduler allows a policy to be active for a specified duration. You can create a scheduler without linking it to a policy; such schedulers are applicable at the rule level. However, if you want a policy to be active during a scheduled time, you must first create a scheduler for that policy or link the policy to an existing scheduler. When a scheduler timeout expires, the associated policy is deactivated and all sessions associated with the policy are also timed out.

If a policy contains a reference to a scheduler, that schedule determines when the policy is active. When a policy is active, it can be used as a possible match for traffic. A scheduler lets you to restrict access to a resource, or remove a restriction to a resource, for a period of time.

A schedule uses the following guidelines:

- A scheduler can have multiple policies associated with it; however, a policy cannot be associated with multiple schedulers.
- A policy remains active as long as the scheduler it refers to is also active.
- You can configure a scheduler using one of the following scenarios:
  - A scheduler can be active during a single time slot, as specified by a start date and time, and a stop date and time.
  - A scheduler can be active forever (recurrent), but only as specified by the daily schedule. The schedule on a specific day (time slot) takes priority over the daily schedule.
  - A scheduler can be active during a time slot, as specified by the weekday schedule.
  - A scheduler be active within two different time slots (daily or for a specified duration).

#### Related Documentation

- [Creating a Scheduler on page 200](#)

- [Managing Scheduler on page 202](#)

## Creating a Scheduler

A scheduler allows a policy to be activated for a specified duration. You can define a scheduler for a single or recurrent time slot during which a policy is active.

To create a scheduler:

1. From the left pane, select **Security Director > Firewall Policies > Scheduler**.

The main Scheduler page appears, as shown in [Figure 95 on page 200](#).

**Figure 95: Scheduler Main Page**

Name	Description	StartDate1	StopDate1	StartDate2	StopDate2	Schedules
TwoStartEnd_1		2012-12-02 00:00	2012-12-03 00:00			
SingleStartEnd_1		2012-12-02 00:00	2012-12-03 00:00			
TwoStartEnd-allday		2012-02-12 00:00	2012-03-12 00:00	2012-04-12 00:00	2012-08-12 00:00	MONDAY, Exclude=false, AllDay=true
TwoStartEnd-daily-FRIAllDay		2012-02-12 00:00	2012-03-12 00:00	2012-04-12 00:00	2012-08-12 00:00	DAILY, Exclude=false, AllDay=false, startTime1=00:00, stopTime1=12:00, FRIDAY, Exclude=false, AllDay=true
TwoStartEnd-daily-exclude		2012-02-12 00:00	2012-03-12 00:00	2012-04-12 00:00	2012-08-12 00:00	DAILY, Exclude=false, AllDay=false, startTime1=00:00, stopTime1=12:00, MONDAY, Exclude=true, AllDay=false
TwoStartEnd-daily-day-startstop		2012-02-12 00:00	2012-03-12 00:00	2012-04-12 00:00	2012-08-12 00:00	DAILY, Exclude=false, AllDay=false, startTime1=00:00, stopTime1=12:00, TUESDAY, Exclude=false, AllDay=false, startTime1=00:00, stopTime1=10:00
TwoStartEnd-daily-day-multiplestart		2012-02-12 00:00	2012-03-12 00:00	2012-04-12 00:00	2012-08-12 00:00	DAILY, Exclude=false, AllDay=false, startTime1=00:00, stopTime1=10:00, startTime2=10:00, stopTime2=12:00

2. Click the plus sign (+) to create a new scheduler. The Create Scheduler window appears, as shown in [Figure 96 on page 201](#).

Figure 96: Create Scheduler

**Create Scheduler**

Name:  !

Description:

Start Date1:

Stop Date1:

Start Date2:

Stop Date2:

**Daily** Monday Tuesday Wednesday Thursday Friday Saturday Sunday

Day Option:

Start Time1:    Start Time2:

Stop Time1:    Stop Time2:

Create Cancel

3. Enter the name of the scheduler in the Name field. The maximum allowed characters are 63. The name must be a string beginning with a number or a letter. The name can have numbers, letters, hyphens, and underscores.
4. Enter the description in the Description field. The maximum allowed characters are 900. The description must be a string and must not contain special characters such as &amp;, &lt;, &gt;, and \n.
5. You can configure two sets of start and end dates and times for a single scheduler. For the first set of the schedule, enter the start date and time in the Start Date1 field, and enter the end date and time in the Stop Date1 field. You must enter the times in HH:MM format.  
  
For the second set of the schedule, enter the start date and time in the Start Date2 field, and enter the end date and time in the Stop Date2 field.
6. You can create a scheduler to be active daily or for any particular day(s) of the week. Select the **Daily** or **any day** option, and enter the start time in the Start Time field and the stop time in the Stop Time field. You must enter times in HH:MM:SS format.
7. Click **Create** to create a new scheduler.

- Related Documentation**
- [Scheduler Overview on page 199](#)
  - [Managing Scheduler on page 202](#)

## Managing Scheduler

---

You can modify, delete, and clone a scheduler listed on the Scheduler main page.

To open the Scheduler page:

- Select **Security Director > Firewall Policies > Scheduler**.

The Scheduler page appears.

Right-click the scheduler to manage it, or select the required options from the Actions drawer.

You can perform the following tasks on the Scheduler page:

- [Modifying a Scheduler on page 202](#)
- [Deleting a Scheduler on page 202](#)
- [Find Scheduler Usage on page 203](#)
- [Show Unused Schedulers on page 203](#)

### Modifying a Scheduler

To modify a scheduler:

1. Select **Security Director > Firewall Policies > Scheduler**.

The Scheduler page appears.

2. Select the scheduler that you want to modify and click the pencil icon or right-click and select **Modify Scheduler**.

The Modify Scheduler page appears.

3. On the Modify Scheduler page, you can modify name, description, start and stop date, and time.
4. Click **Modify** to modify the scheduler.

### Deleting a Scheduler

To delete a scheduler:

1. Select **Security Director > Firewall Policies > Scheduler**.

The Scheduler page appears.

2. Select the scheduler that you want to delete, and click the X icon or right-click and select the **Delete Schedulers** option. A confirmation window appears before you can delete the scheduler.
3. Click **Delete** to delete the scheduler.

You can delete a single scheduler or multiple schedulers.

## Find Scheduler Usage

To find scheduler usage:

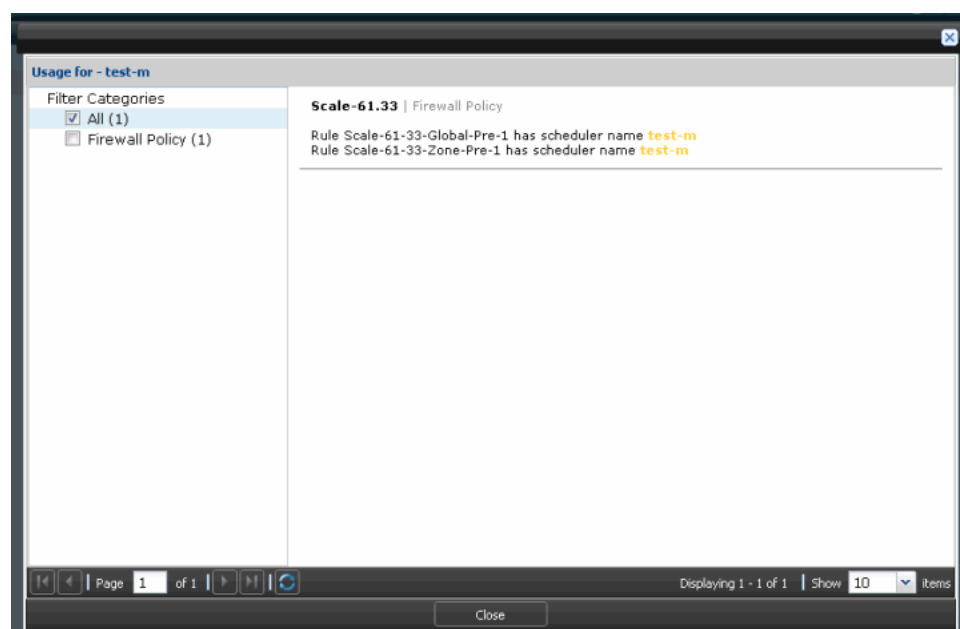
1. Select **Security Director > Firewall Policies > Scheduler**.

The Scheduler page appears.

2. Select the scheduler that you want to find the usage, right-click and select **Find Usage**.

The usage window appears, as shown in [Figure 97 on page 203](#).

**Figure 97: Scheduler Find Usage Window**



## Show Unused Schedulers

To show unused schedulers:

1. Select **Security Director > Firewall Policies > Scheduler**.

The Scheduler page appears.

2. From Actions, select **Show Unused**.

The unused schedulers which are not used for any policy are listed.

- Related Documentation**
- [Scheduler Overview on page 199](#)
  - [Creating a Scheduler on page 200](#)





## CHAPTER 16

# Policy Profiles

- [Security Policy Profiles Overview on page 205](#)
- [Creating Policy Profiles on page 206](#)
- [Managing Policy Profiles on page 210](#)
- [Creating Template Definitions on page 211](#)
- [Creating Templates on page 212](#)
- [Managing Template Definitions on page 213](#)
- [Managing Templates on page 214](#)

### Security Policy Profiles Overview

---

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

- Log options
  - Log at session initiation
  - Log at the close of a session
  - Enable counting for the number of packets, bytes, and sessions that enter the firewall for a given policy
- Firewall authentication schemes
  - Pass-through authentication
  - Web authentication
  - Infranet 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
  - TCP-SYN Check and TCP Sequence Check—TCP session options for policy profile

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.

There are two Juniper Networks defined policy profiles:

- All logging enabled — All logging options are 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.
- All logging disabled — All logging options are 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  
Documentation**

- [Creating Policy Profiles on page 206](#)
- [Managing Policy Profiles on page 210](#)

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## Creating Policy Profiles

---

To create a security policy profile:

1. Select **Security Director > Firewall Policies > Policy Profiles**.

The Policy Profiles page appears with all the policy profiles. The first two policy profiles listed here are Juniper Networks defined policy profiles.

2. Click the plus sign (+) to create a new policy profile.

The New Policy Profile page appears, as shown in [Figure 98 on page 207](#).

Figure 98: New Policy Profile Page

**New Policy Profile**

Name:

Description:

Template:

**Logging** | **Authentication** | **Advanced Settings**

☐ Log At Session Init

☐ Log At Session Close

☐ Enable Count

Alarm Threshold:

0  Bytes/Second

0  Kilobytes/Minute

Create Cancel

3. Enter the name of the policy profile in the Name field.
4. Enter the description of the policy profile in the Description field.
5. In the Logging pane of the New Policy Profile page, configure the log options for this policy profile. You can configure the following log options:
  - a. If you want to log the events when the session is created, select the **Log at Session Init** check box.
  - b. If you want to log the events when the session is closed, select the **Log at Session Close** check box.
  - c. Enter the number of bytes to be logged per second in the Bytes/Second field.
  - d. 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
  - e. Enter the value of the count in the Kilobytes/Minute field.
6. Use the Authentication pane on the New Policy Profile page to provide authentication to clients. You can configure the following authentication options:
  - a. If you want to use Web Authentication, select **Web** in the Authentication Type drop-down menu and enter the hostname or IP address of the client used to perform Web authentication in the Client Name field.
  - b. If you want to use Pass Through Authentication, select **Pass Through** in the Authentication Type drop-down menu and enter the hostname or IP address of the client used to perform Pass Through authentication in the Client Name field.

- c. If you do not want to use any authentication, select **None** in the Authentication Type drop-down menu.
- d. If you want to use Infranet Authentication, select **Infranet** in the Authentication Type drop-down menu and enter the redirect URL in the Redirect URL field. You can also select the appropriate redirect options from the respective check boxes.
- e. If you want to create a user firewall authentication, select **User Firewall** in the Authentication Type drop-down menu.

Enter domain name in the Domain Name field, and access profile information in the Access Profile Name field.

- 7. Use the Advanced Settings section of the New Policy Profile page to configure the traffic redirection options for this policy profile, as shown in [Figure 99 on page 209](#).
  - a. If you want to use the Services Offload option in the Datacenter SRX Acceleration list, select this option.
  - b. If you do not want to take any action for destination address, select **None** from the Destination Address Translation list.
  - c. If you do not want to translate the destination address, select **Drop Untranslated** from the Destination Address Translation list.
  - d. If you do want to translate the destination address, select **Drop Translated** from the Destination Address Translation list.
  - e. If you want traffic to be redirected, select the **None** check box.
  - f. If you want to enable Wx redirection for packets that arrive from the LAN, select the **Redirect Wx** check box.
  - g. 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.
  - h. You can enable TCP session options for a policy profile by clicking the **TCP-SYN Check** and **TCP Sequence Check** options.

Figure 99: Create Policy Profile - Advanced Settings

**NOTE:**

- The update is committed only if these TCP session options are disabled globally. Otherwise, the update fails.
- If the update fails for logical systems, you must disable TCP session options for logical systems but not in the root devices.
- Any changes you make at the root device level or at the policy level are captured in the audit trail.
- When you import a device configuration, TCP session options are also imported, if they are enabled.
- When you export a policy, you can find the associated TCP session options under the Rule Options column.
- When you take a firewall policy snapshot, TCP session options are retained for possible future rollback.

8. Click **Create**.

The new security policy profile appears on the Policy Profiles page.

**Related  
Documentation**

- [Security Policy Profiles Overview on page 205](#)
- [Managing Policy Profiles on page 210](#)

## Managing Policy Profiles

---

You can delete, modify, or clone policy profile listed in the Policy Profiles page.

To open the Policy Profiles page:

- Select **Security Director > Firewall Policies > Policy Profiles**.

The Policy Profiles page appears.

You can right-click the policy profile to manage it.

You can perform the following tasks on the Policy Profiles page:

- [Deleting Policy Profiles on page 210](#)
- [Modifying Policy Profiles on page 210](#)
- [Cloning Policy Profiles on page 211](#)

### Deleting Policy Profiles

To delete a policy profile:

1. Select **Security Director > Firewall Policies > Policy Profiles**.

The Policy Profiles page appears.

2. Select the policy profile that you want to delete and select **Delete Policy Profiles** from the Actions drawer.

The Delete pop-up window appears.

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



**NOTE:** You can also delete the policy profile by right-clicking the policy profile and selecting **Delete Policy Profiles**.

### Modifying Policy Profiles

To modify a policy profile:

1. Select **Security Director > Firewall Policies > Policy Profiles**.

The Policy Profiles page appears.

2. Select the policy profile that you want to modify, right-click, and select **Modify Policy Profile**.

The Modify Policy Profile page appears. You can modify all the fields on this window, except the Name field.

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



**NOTE:** You can also modify the policy profile by right-clicking the policy profile and selecting **Modify Policy Profile**.

## Cloning Policy Profiles

To clone a policy profile:

1. Select **Security Director > Firewall Policies > Policy Profiles**.  
The Policy Profiles page appears.
2. Select the policy profile that you want to clone, right-click, and select **Clone Policy Profile**.  
The Clone Policy Profile page appears.
3. Make the appropriate changes to the security policy and click **Clone**.



**NOTE:** You can also clone the policy profile by right-clicking the policy profile and selecting **Clone Policy Profile**.

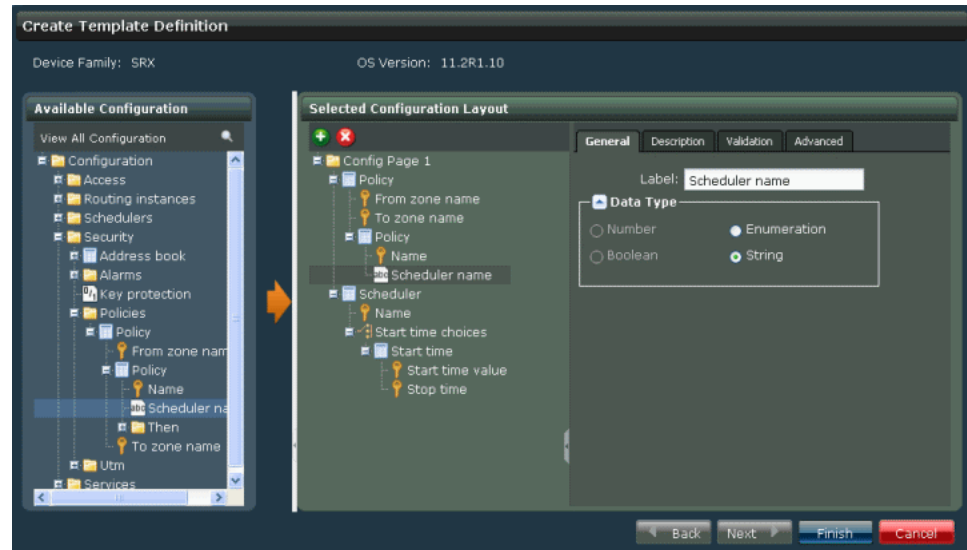
## Creating Template Definitions

To create a Template Definition:

1. Select **Security Director > Firewall Policies > Policy Profiles > Manage Template Definitions**.  
The Manage Template Definitions page appears. This page displays all the template definitions you have created.
2. Click the plus sign (+) to create the template definition.  
The Create Template Definition page appears.
3. Enter the name of the template definition in the Name field.
4. Enter a description for the template definition in the Description field.
5. Select the SRX Series schema version from the SRX Schema Version drop-down menu.
6. Click **Next**.  
This page displays two sections: the Available Configuration pane on the left and the Selected Configuration Layout pane on the right. The Available Configuration pane displays the different configuration nodes. The Select Configuration Layout pane displays a default rule with "\$FromZone" for source zone and "\$ToZone" for destination zone.
7. Select the rule from the configuration node you want to add in the template definition and click the right arrow.

8. Modify the rule in the Select Configuration Layout pane, as shown in [Figure 100 on page 212](#).

**Figure 100: Create Template Definition Page**



9. Click **Finish**.

The new template definition is created.



**NOTE:** Do not modify the existing From zone name, To zone name, and Policy fields. This is because the actual values are selected from the firewall rule where this template is applied and not from the Security Director Template Definition.

#### Related Documentation

- [Managing Template Definitions on page 213](#)

## Creating Templates

To create a template:

1. Select **Security Director > Firewall Policies > Policy Profiles > Manage SD Templates**.

The Manage SD Templates page appears. This page displays all the templates you have created.

2. Click the plus (+) sign to create a policy template.

The Select Template Definition page appears. You can create a template on this page.

3. Select an appropriate template definition and click **Next**.

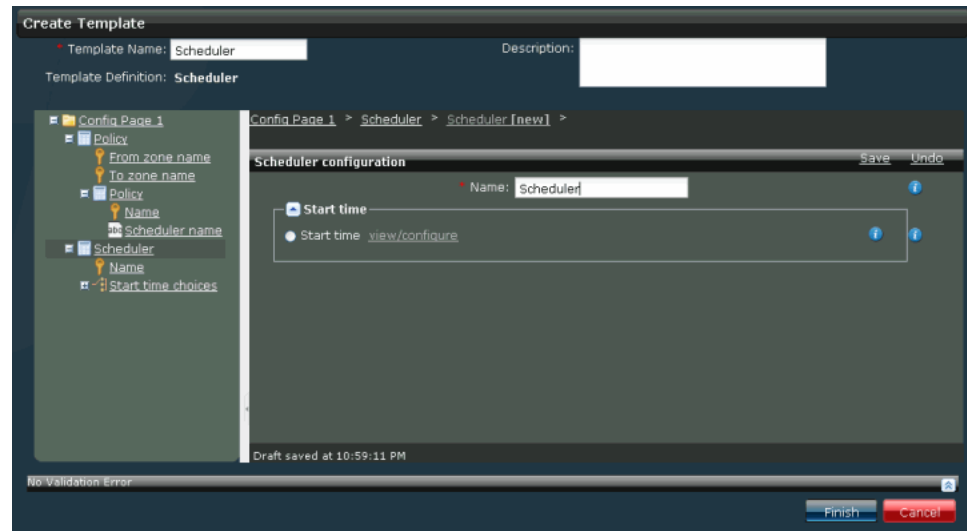
You can create a template on this page.

4. Enter the name of the template in the Template Name field.



5. Enter a description for the template in the Description field.
6. Select the configuration node from the left hand pane.
7. Select the appropriate value in the configuration node.
8. Modify the rule in the right pane, as shown in [Figure 101 on page 213](#).

**Figure 101: Create Template Page**



9. Click **Finish**.



**NOTE:** For logical systems, you must not use policy templates for defining policy shared objects. These objects must be defined using either Platform templates or Config Editor. You can subsequently refer the created objects in the rule options of the policy template.

**Related Documentation**

- [Managing Templates on page 214](#)

## Managing Template Definitions

You can delete, or modify template definitions listed in the Manage Template Definitions page.

To open the Manage Template Definitions page:

- Select **Security Director > Firewall Policies > Policy Profiles > Manage Template Definition**.

The Manage Template Definitions page appears.

You can right-click the template definition to manage it.

You can perform the following tasks on the Manage Template Definitions page:

- [Deleting Template Definitions on page 214](#)
- [Modifying Template Definitions on page 214](#)

## Deleting Template Definitions

To delete a template definition:

1. Select **Security Director > Firewall Policies > Policy Profiles > Manage Template Definition**.

The Manage Template Definitions page appears. This page displays all the template definitions you have created.

2. Select the template definition you want to delete, right-click and select **Delete Template Definitions**.



**NOTE:** You can also delete the template definition by right-clicking the template definition and selecting **Delete Template Definitions**.

## Modifying Template Definitions

To modify a template definition:

1. Select **Security Director > Firewall Policies > Policy Profiles > Manage Template Definitions**.

The Manage Template Definitions page appears. This page displays all the template definitions you have created.

2. Select the template definition you want to modify, right-click and select **Modify Template Definition**.

The Modify Template Definitions page appears. You can make the modifications on this page.



**NOTE:** You can also modify the template definition by right-clicking the template definition and selecting **Modify Template Definition**.

3. Click **Modify**.

## Managing Templates

---

You can delete or modify templates listed on the Manage SD Templates page.

To open the Manage SD Templates page:

- Select **Security Director > Firewall Policies > Policy Profiles > Manage SD Templates**.

The Manage SD Templates page appears.

You can right-click the template to manage it.

You can perform the following tasks on the Manage SD Templates page:

- [Deleting Templates on page 215](#)
- [Modifying Templates on page 215](#)

## Deleting Templates

To delete a template:

1. Select **Security Director > Firewall Policies > Policy Profiles > Manage SD Templates**.  
The Manage SD Templates page appears. This page displays all the templates you have created.
2. Select the template you want to delete, right-click, and select **Delete Templates**.



**NOTE:** You can also delete the template by right-clicking the template and selecting **Delete Templates**.

## Modifying Templates

To modify a template:

1. Select **Security Director > Firewall Policies > Policy Profiles > Manage SD Templates**.  
The Manage SD Templates page appears. This page displays all the templates you have created.
2. Select the template you want to modify, right-click, and select **Modify Template**.

The Modify Templates page appears. You can make the modifications on this page.



**NOTE:** You can also modify the template by right-clicking the template and selecting **Modify Template**.

3. Click **Modify**.



## PART 8

# VPNs

- [VPNs on page 219](#)
- [Extranet Devices on page 239](#)
- [VPN Profiles on page 243](#)



## CHAPTER 17

# VPNs

- [IPsec VPN Overview on page 219](#)
- [Creating IPsec VPNs on page 221](#)
- [Publishing IPsec VPNs on page 234](#)
- [Managing IPsec VPNs on page 236](#)

### IPsec VPN Overview

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You can create site-to-site, hub-and-spoke, and full-mesh VPNs in the VPN Creation page. All VPNs in the system appear in the Tabular view. The left pane of the Tabular view displays the VPNs, and the right pane of the Tabular view displays the devices used for the respective VPN. If you want to use a custom VPN profile, you must configure a VPN profile before creating a VPN.

You can configure the following parameters for an IPsec VPN:

- Endpoints for a site-to-site VPN and full-mesh VPN
- Spokes and hubs for a hub-and-spoke VPN
- External Interface, Tunnel Zone, and Protected networks/zones for each device
- Routing settings
- VPN endpoint configuration

You can also customize endpoint-specific settings like VPN Name, IKE ID, and profile for each tunnel.

After the VPN configuration is saved, you can provision this VPN on the security devices.



**NOTE:** Security Director views each logical system as any other security device and takes ownership of the security configuration of the logical system. In Security Director, each logical system is managed as a unique security device.

Security Director ensures that the tunnel interfaces are exclusively assigned to the individual logical systems of a device. No tunnel interface is assigned to more than one logical system of the same device.



---

**NOTE:**

- Only route-based VPNs are supported for the logical systems. Policy-based VPNs are not supported.
- 

Proxy ID is supported for both route-based and policy-based VPNs.

In Security Director, route-based VPNs support OSPF, and RIP routing along with static routing. Static routing requires that the administrators specify the list of host or network addresses at each site is part of the VPN. For example, in a retail scenario, where thousands of spokes can be part of a VPN, the static routing approach generates a huge configuration at each device. Static routing requires the administrator to manually configure each route. Problems occur as the infrastructure changes or when the administrator does not have access to the addresses for the protected network. Keeping routes up-to-date manually creates tremendous overhead.

Security Director supports dynamic routing in VPN addressing. Security Director supports the dynamic routing protocols Open Shortest Path First (OSPF) and Routing Information Protocol (RIP). Security Director simplifies VPN address management by enabling the administrator to export static routes to a remote site over a tunnel, allowing the static route networks to participate in the VPN. However, only devices on the hub side can export static default routes to the device side. Devices at the spoke side cannot export static default routes over a tunnel.

If you select OSPF or RIP export, the OSPF or RIP network outside the VPN network are imported into VPN network through OSPF or RIP routing protocols.

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**NOTE:**

- All host-inbound-traffic-system-service settings are copied from zone to interfaces.
  - If system-service is configured on the interface level, only IKE is configured, and no zone-level configuration is taken into account.
  - If any-service or IKE is configured at the zone level, no configuration is made at the interface level.
  - The host-inbound-traffic system-service except configuration settings, are also copied from the zone-level to the interface level, if there is no system-service configuration on the interface level.
- 

**Related Documentation**

- [Creating IPsec VPNs on page 221](#)
- [Managing IPsec VPNs on page 236](#)
- [Publishing IPsec VPNs on page 234](#)
- [VPN Profiles Overview on page 243](#)
- [Creating VPN Profiles on page 244](#)



- Managing VPN Profiles on page 249

## Creating IPsec VPNs

1. Creating IPsec VPNs on page 221

### Creating IPsec VPNs

1. In the left pane, under Security Director application, select **VPN**.

The VPN Tabular view appears, as shown in [Figure 102 on page 221](#). VPNs from only the current domain are listed on the landing page.

Figure 102: VPN Landing Page

Device	External Interface	Tunnel Zone	Protected Zone/Network	Routing Instance	IP Address	Proxy ID
10-205-119-1	fe-0/0/1.0 (100.1.1.2.0abc:100)	VPN	Zones Template_1_Zone_1	test-custom-0	100.1.1.2	
105-Router-S...	ge-0/0/0.0 (10.205.119.105)	VPN	Addresses 105.2.2.0-24		10.205.119.105	

2. In the VPNx pane, click the plus sign (+) to create a VPN.

The Create VPN page appears, as shown in [Figure 103 on page 222](#).

Figure 103: Create VPN Page

3. In the Name field, enter a name for the new VPN.
4. In the Description field, enter a description for the new VPN.
5. Select the Tunnel Mode as either Route Based or Policy Based.
6. If you have selected Route Based:
  - a. Security Director provides an option to configure Multi-Proxy ID, also known as Traffic Selector, for route-based VPNs. To configure multi-proxy ID, select the **Multi-ProxyID** check box.
  - b. Select the option button next to the type of VPN you want to create. For the Hub and Spoke type, you can select an option Auto VPN, also known as Zero Touch Hub (ZTH). This is a SRX Series feature which enables the administrators to add or remove spoke devices dynamically without performing any configuration changes on the hub devices. The Auto VPN option is supported on devices running Junos OS Release, 12.1-X45. This Option is applicable only for the route-based VPNs and only with PKI certificate-based authentication. Because this feature is supported only on devices running Junos OS Release, X45, all other devices will not be available for Spoke or Hub selection.

If the multi-proxy ID option is selected, you cannot select ZTH option for Hub and Spoke.



**NOTE:** The Auto VPN feature is not supported on logical systems and the extranet devices. Therefore they are filtered out from device association during Auto VPN design or modification.

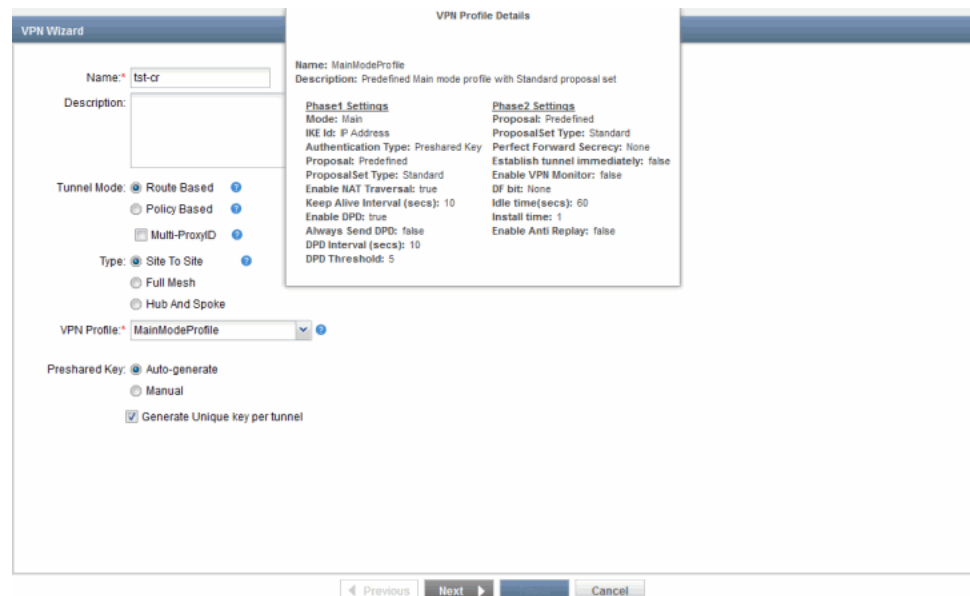
- c. Select the VPN profile from the VPN Profile menu. You can create certificate-based VPNs by choosing the VPN profiles created with an authentication type of either

RSA signature or DSA signature. If you select a VPN profile with certificate-based authentication, the preshared key options are automatically hidden. You can synchronize the certificate for any device. For more details, see [“Updating Devices with Pending Services” on page 455](#).

You can use the available Tooltip view to see information about the VPN profiles. To see the tooltip for a VPN profile, move the mouse over the profile for which details are required. The tooltip displays the following high-level information, as shown in [Figure 104 on page 223](#).

- Phase 1
  - Authentication
  - Mode
  - Proposal(s)
- Phase 2
  - Proposal(s)
  - Perfect Forward Security

**Figure 104: VPN Profile Tooltip**



**NOTE:** If you choose to create a full-mesh VPN, you can choose only the MainModeProfile as the VPN profile.

- d. Select the option button next to the type of preshared key you want to use.
  1. If you select Autogenerate as the option for preshared key, select the Generate Unique key per tunnel check box to generate a unique key per tunnel, as shown in [Figure 103 on page 222s](#).

2. If you select Manual as the option for the preshared key, enter the manual key in the Manual Key field.
  - e. Click **Next**.
- This page displays the Available and Selected panes.
- f. Select the device from the Available column, and click **Add as Endpoint**, as shown in [Figure 105 on page 224](#).

Figure 105: Create VPN: Add as Endpoint Page

All devices from the current and child domains, with view parent enabled, are listed in the Available column. Devices from the child domain with view parent disabled, are not shown.

If the Multi-ProxyID option is selected, the following filter criteria are applied for the device selection:

- Logical systems are not shown.
- SRX Series devices mapped with older than 12.1X46 junos-es schema version are not shown.

- g. Click **Next**.
- h. Select the interface type in the Tunnel Settings pane.

- If you select **Numbered** as the Tunnel setting, enter the IP subnet in the IP Subnet field.

For the multi-proxy ID configuration, the Numbered tunnel option is hidden for Hub and Spoke and Full Mesh VPNs, because the multipoint is not supported with multi-proxy ID.

- Select the routing option in the Routing options pane. If you select **OSPF**, the following check boxes are available:

- Export Static Routes—To export static routes.
- Export RIP Routes—To export RIP routes.
- Area—Numeric field where you enter the area ID.

If you select **RIP**, the following check boxes are available:

- Export Static Routes—To export static routes.
- Export OSPF Routes—To export OSPF routes.

If you select **Static Routing**, the following check box are available

- Allow spoke to spoke to communication—To enable spoke-to-spoke communication with static routes. You can enable this option only for a hub-and-spoke VPN with static routing when you create or modify the VPN. By default, this option is not checked, and you can check or uncheck this option during the modify workflow.
- Export Static Routes—To export static routes.
- Export RIP Routes—To export RIP routes.
- Export OSPF Routes—To export OSPF routes.

The routing options are hidden for the multi-proxy ID configuration,. You cannot select any routing options.

- In the Global Settings pane, under Endpoint Configurations, enter the external interface in the External Interface field.
- In the Global Settings pane, under Endpoint Configurations, enter the tunnel zone in the Tunnel Zone field.
- In the Global Settings pane, under Endpoint Configurations, enter the zone type in the Protected Network Zone field.

If you have chosen to create a hub-and-spoke VPN, you will see Hub Configuration and Spoke Configuration. Enter the appropriate values in the External Interface, Tunnel Zone, and Protected Network Zone fields in these panes, as shown in [Figure 106 on page 226](#).

The tunnel is shared accordingly based on the value specified for number of spoke devices per tunnel interface. The network specified in IP Subnet field is further subnet.

Figure 106: Create VPN: Hub and Spoke Configuration

The screenshot shows the 'VPN Wizard' configuration interface. It is divided into three main sections: Tunnel Settings, Route Settings, and Global Settings.

- Tunnel Settings:** The 'Interface Type' is set to 'Unnumbered' (radio button selected).
- Route Settings:**
  - 'Routing Options' are set to 'Static Routing' (radio button selected).
  - 'Allow spoke to spoke communication' is checked.
  - 'Area ID' is set to '0'.
  - 'Max Retransmission Time' is set to '50'.
  - There are checkboxes for 'Export Static Routes' and 'Export RIP Routes'.
  - 'No Routing' is also an option under Routing Options.
- Global Settings:**
  - A note states: 'Please select default values to be used for all devices in VPN. Per-device settings can be modified in the next step.'
  - A table with columns: Type, External Interface, Tunnel Zone, and Protected Network Zone.
  - The table has two rows: 'Hub' and 'Spoke'. Each row has three 'Click to configure...' links corresponding to the columns.

At the bottom, there are navigation buttons: 'Previous', 'Next', and 'Cancel'.



**NOTE:** Upgrading a Full Mesh, and Numbered VPN with number of peer devices per tunnel value is not available. This value is reset to All and you must modify Tunnel Settings or Route Settings to reflect this change.

Upgrading the Hub And Spoke Numbered VPN with number of peer devices per tunnel value is available. But this might not work in static routing option because of the routing behavior with multiple tunnels having same subnet. You must modify the Tunnel Settings to reflect the subnet split enhancement feature added in Security Director Release 12.2.

These two scenarios are true only when you upgrade Security Director from Release 12.1 to Release 12.2.

- m. For the certificate-based VPNs, another Certificate column appears, displaying the certificate information. Under the Certificate column, you can choose one of the certificate names available from the device. The same certificate is used for all devices. If the certificate specified does not exist in some of the devices, you can choose a device-specific certificate in the next step, as shown in [Figure 107 on page 227](#). If a certificate is not configured, an error message appears.
- n. If you have selected **Static Routing**, enter the values in the External Interface, Tunnel Zone, and Protected Network Zone fields for the type Endpoint.
- o. If you have selected **No Routing**, enter the external interface in the External Interface field, and tunnel zone in the Tunnel Zone field for the type Endpoint.
- p. You can configure the custom routing instance for every device level, as shown in [Figure 107 on page 227](#). This is an optional field and is blank by default. This option

is available only for route-based VPNs (for example, static routing, no routing, and the dynamic protocols (OSPF and RIP)). You can add the routing instance while creating a new VPN or modifying an existing VPN.

The Global Settings pane does not include an option for selecting the routing instance. You must manually select the routing instance for each endpoint in the tabular view.

- q. Click **Next**.

The page that appears gives you a preview of the values you entered for the VPN, as shown in [Figure 107 on page 227](#). The page displays error indicators if the options you have configured do not map to the device. You can also click the **Show all Errors** check box to view all errors in the configuration. If errors are present, you must modify the configuration to eliminate them before you can proceed to the next step.

**Figure 107: Create VPN Page Showing Custom Routing Instance Option**

Device	External interface	Tunnel Zone	Protected Zone/Network	Routing Instance
10-205-119-1...	fe-0/0/1.0 (109.1.12.9abc:109)	VPN	Zones Template_1_Zone_1	test-custom-ri
105-Router-S...	ge-0/0/0.0 (10.205.119.105)	VPN	Addresses 105.2.2.0-24	



**NOTE:** For the multi-proxy ID configuration, the Protected Zone/Networks address is selected as Traffic Selectors.

- r. Click **Finish**.

When the multi-proxy ID is selected, the single Proxy ID column is hidden. Because, you cannot have both multi-proxy ID and single proxy-ID existing together. At the tunnel level, you can select the required local or remote proxy ID pair in the Traffic Selector column. However, at the global level, the Protected Zone/Network address is the traffic selector.

If the traffic selectors are configured at one tunnel end point level, automatically the same is configured on the corresponding remote end point however, the local IP and remote IP values are swapped for the remote end point.



**NOTE:** You can customize the IKE address and local or remote IKE ID for preshared key based VPNs. By default, the IKE address chooses the External Interface IP address. The IKE address can be modified to assign a different address. The Main Mode Profile is enhanced to support IKE ID types such as IP Address, hostname and user-at-hostname similar to Aggressive mode. With this you can modify the IKE ID of each End point in the VPN.

7. If you have selected Policy Based:
  - a. The only Type option available is Site To Site.
  - b. Select the VPN profile from the VPN Profile menu.



**NOTE:** If you choose to create a full-mesh VPN, you can choose only the Main mode profile as the VPN profile.

- c. Select the option button next to the type of preshared key you want to use.
  1. If you select **Autogenerate**, select the **Generate Unique key per tunnel** check box to generate a unique key per tunnel.
  2. If you select **Manual**, enter the manual key in the **Manual Key** field.
- d. Click **Next**.

The page displays the Available and Selected panes.

- e. Select the device from the **Available** column, and click **Add as Endpoint**, as shown in Figure 108 on page 228.

**Figure 108: Create VPN Policy-Based—Add as Endpoint Page**

Device	Domain
10.205.255.38-Secintel	Global
dust-41-node1 (Cluster)	Global
SRX550-51.45-Srikant	Global



- f. Click **Next**.

The page that appears gives you a preview of the values you entered for the VPN, as shown in [Figure 109 on page 229](#). The page displays error indicators if the options you have configured do not map to the device. You can also click the **Show all Errors** check box to view all errors in the configuration. If errors are present, you must modify the configuration to eliminate them before you can proceed to the next step.

Select the external interface for the device from the list. For the certificate-based VPNs, select the certificate in the Certificate column.

**Figure 109: Create VPN Page—External Interface Selection**

Device	External Interface
10-205-119-1...	lo0.0 (9.9.9.9)
105-Router-S...	ge-0/0/0.0 (10.205.119.105)

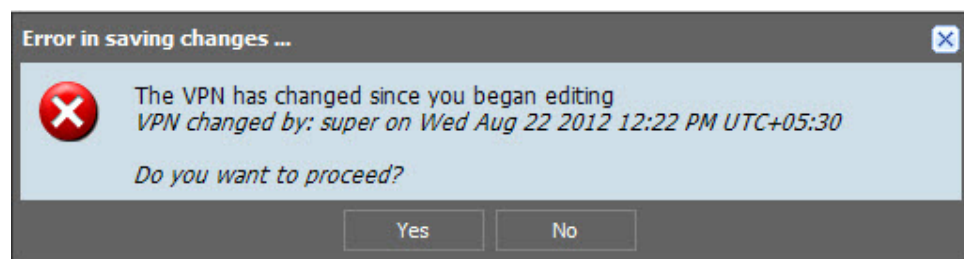
- g. Click **Finish**.

Whenever you make any changes to the VPN, you will get an option to enter a comment before saving the VPN. You can enable or disable this option in Platform > Administration > Applications. To enable this option, right-click **Security Director**, and select **Modify Security Director Settings** option. Under Applications, select the **Enable save comments for policies** check box. By default, this option is disabled.

Entering comments is not mandatory but all entered comments are audit logged.

**NOTE:**

- In addition to the VPNs created and managed from Security Director, you can also select the IPsec VPNs available in the imported device. Security Director created VPNs will be bold in text to differentiate from the imported VPNs.
- You cannot delete a policy-based VPN if the VPN is used in a firewall rule.
- Policy-based VPN is not supported on SRX Series devices with logical systems. Security Director does not show logical systems when you select the policy-based VPN.
- If the same VPN is edited by multiple users, the following warning message is received to over write the changes saved by other users, as shown in [Figure 110 on page 230](#).

**Figure 110: VPN: Concurrent Save Error Message**

- If you create a policy-based VPN in the Global domain using child devices, you can select such VPN for tunnel action in a policy.

**Inline Addition of a New VPN Object**

To perform an inline addition of the new VPN object:

1. Click the **Protected Zone/Networks** column for the available device. The VPN Policy Inline Object Creation page appears, as shown in [Figure 111 on page 231](#). The page lists the zone or networks available for creating the VPN object. In this window, you can select all devices listed in the Available column by selecting **Page** and copying them to the Selected column. If you want to clear all selected devices, click **None**.

Figure 111: Inline Address Object Creation Page

**Address** Zone

**Available** Select: All None

10.159.4.0/24 (10.159.4.0/24)	Global
144.201.76.32 (144.201.76.32)	Global
Addr-66.0.192.112/28 (66.0.192.112/28)	Global
Addr-66.184.206.216 (66.184.206.216)	Global
ADDR-GROUP-v4 (group)	Global
bmtnwxr04-158.31.215.6 (158.31.215.6)	Global
bmtnwxr10-158.31.215.10 (158.31.215.10)	Global
bmtnwxrtemn1-158.31.215.5 (158.31.215.5)	Global

Total: 198

**Selected** Select: All None

10.159.3.0/24
10.159.2.0/25

Total: 2

☐ Host ☐ Network ☐ Range ☐ Other

**Ok** **Cancel**

2. Click the plus sign (+) to create the new address object.
3. Click **Create** to create the object, or click **Cancel** to discard the changes.

### Creating a Address Group

To create address group:

1. Click the second plus sign (+) to create the new address group. [Figure 112 on page 231](#) shows the page that appears.

Figure 112: Inline Address Group Creation for VPN Object

**Address** Zone

**Create Address Object**

Object Type: ☐ Address ☒ Address Group

Name:  !

Description:

Addresses:

**Available** Select: All None

10.159.2.0/25 (10.159.2.0/25)	Global
10.159.3.0/24 (10.159.3.0/24)	Global
10.159.4.0/24 (10.159.4.0/24)	Global
144.201.76.32 (144.201.76....)	Global
Addr-66.0.192.112/28 (66.0....)	Global
Addr-66.184.206.216 (66.18....)	Global

Total: 211

**Selected** Select: All None

--

☐ Host ☐ Network ☐ Wildcard ☐ Range ☐ Other

**Create** **Cancel**

2. Enter the name of an address group in the Name field.
3. In the Addresses filed, you can select all addresses available in the Available column or select few addresses to create a new address group.
4. Click **Create** to create the address group or **Cancel** to discard the changes.

## Creating Auto VPN

Auto VPN, also known as Zero Touch Hub (ZTH), is an SRX Series feature that enables administrators to add or remove spoke devices dynamically without performing any configuration changes on the hub devices. Security Director supports the design and provisioning of Auto VPN on devices running Junos OS Release 12.1X45. The Auto VPN option is available only to route-based VPNs with PKI certificate-based authentication. Because Auto VPN is supported only on devices running Junos OS Release 12.1X45, all other devices will not be available for spoke or hub selection.



**NOTE:** The Auto VPN feature is not supported on logical systems or extranet devices. Therefore, these systems and devices are filtered out from device association during Auto VPN design or modification.

To create a auto VPN:

1. In the VPN Wizard window, select Tunnel Mode as Route Based and Type as Hub and Spoke.
2. Select Auto VPN check box that is available below the Hub and Spoke radio button.
3. For the Auto VPN selection, the VPN Profile lists only RSAPProfile.
4. Click **Next**.
5. Select the devices for Hub and Endpoint. In this device selection page, a validation is performed to filter out the following type of devices:
  - SRX Series devices which do not support Auto VPN feature (devices running versions earlier to Junos OS Release 12.1X45).
  - Logical systems
  - Extranet devices
6. Click **Next**.
7. Enter the IP subnet in the IP Subnet field.

In the Tunnel Settings, only numbered Interface Type is supported. Unnumbered tunnel type option is not available.
8. In the Route Settings section, select the required routing options such as OSPF, RIP, or No Routing.
9. In Global Settings sections, there are 2 new columns available for Auto VPNs such as Group IKE and Certificate. The Group IKE column is applicable only for hub devices.
10. Click **Certificate** column and select the required certificate from the drop-down menu.

Under the Certificate column you can choose any one of the certificate names available from the device. The same certificate is used for all other devices. If the specified certificate does not exist on some of the devices, a device specific certificate can be chosen in the later steps of VPN creation. An error message is displayed if you do not configure the certificate.

11. Click **Group IKE** column to enter the group IKE ID. A free text editor is displayed based on the IKE ID type chosen in the profile.

For IKE ID types FQDN and UFQDN, a normal text field type editor is displayed, whereas for DN KE ID type, a separate editor is provided to enter the container and wildcard informations.

In the Container and WildCard input fields, you can specify the values for CN ( Common Name) and OU ( Organization). The Container field can take multiple values for each field type, but the WildCard field can take only one value for each field.

12. Click **Next**.

The page that appears gives you a preview of the values entered for the Auto VPN. The page displays errors indicators if the options you have configured do no map to the device. You can also edit the values configured for certificate and group IKE ID. The Group IKE field is a mandatory field.

13. Click **Finish**.

The VPN Profile, Preshared Key, and Peer Device columns are hidden for Auto VPNs because they are not applicable. You cannot edit IKE Id field for DN IKE ID type, but you can edit for Hostname IKE ID type.

The new column IKE Address, which is available during creation of new VPN, lists the selected external interface IP address; this is the default value, which you can modify. The Main Mode profile supports IKE ID types such as IP addresses, hostname, and user-at-hostname, similar to Aggressive mode. Using these configuration options, you can modify the IKE ID of each endpoint in the VPN.

Security Director permits you to save VPNs that contain errors. Warnings messages are displayed for VPNs that contain errors, but you can proceed to save such VPNs as drafts. You cannot publish VPNs that are in the draft state. The tooltip for the VPN shows the state as draft; because it is a draft, the tooltip does not show the publish option.

Proxy ID is supported for both route-based and policy-based VPNs. Security Director supports only a single proxy ID. You can input a local (proxy) ID at a per device level in the modify workflow only, as shown in [Figure 102 on page 221](#). Security Director generates the local proxy ID and remote proxy ID at every endpoint settings level. By default, the **service** parameter for proxy ID is set to Any.

Proxy ID is an optional setting. You can choose to configure proxy IDs for a few devices only; Security Director does not generate a warning if you do not configure a proxy ID. The proxy ID setting is generated if both ends have a proxy ID configured. You can configure 0.0.0.0/0 as Proxy ID. By default, proxy ID is configured as Any.



**NOTE:** In the dual hub scenario, If there are two paths available to reach a particular network, you have an option to set the metric value for each path and set the priority. Based on the metric value, you can select the appropriate path to reach the network. This option is available only at the hub side and is available for both static and dynamic routing.



**NOTE:** When a default proposal definition is used (standard, compatible, and basic) in VPN profile for extranet devices, you might not be able to find out what is required for an extranet device. You must use custom proposals if you select an extranet device as an endpoint in VPN.



**NOTE:** When the Autogenerate preshared key option is used for VPN design that involves the extranet device as endpoint, you can view SRX Series device tunnel endpoint settings, edit and unmask the key, and save the key as a reference.

#### Related Documentation

- [IPsec VPN Overview on page 219](#)
- [Publishing IPsec VPNs on page 234](#)
- [Managing IPsec VPNs on page 236](#)
- [VPN Profiles Overview on page 243](#)
- [Creating VPN Profiles on page 244](#)
- [Managing VPN Profiles on page 249](#)

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## Publishing IPsec VPNs

To publish an IPsec VPN:

1. Select **Security Director > VPN > Publish VPN**.

The Services page appears with all VPNs. It also displays the publish states of all the VPNs.

2. Select the check box next to the VPN that you want to publish.



**NOTE:** You can search for a specific device on which the VPN is published by entering the search criteria in the search field in the top-right corner of the Services page. You can search the devices by their name, IP address, or the device OS version.



**NOTE:** If the VPN is to be published on a large number of devices, the devices are displayed across multiple pages. You can use the pagination and display options available on the lower ribbon, just below the list of devices, to view all devices on which the VPN is published.

3. Click the **Schedule at a later time** check box if you want to schedule and publish the configuration later.

4. Click **Next**.

The Affected Devices page displays the devices on which this VPN will be published.

5. If you want to preview the configuration changes that will be pushed to the device, click **View** in the Configuration column corresponding to the device. A Configuration Preview progress bar is shown while the configuration pushed to the device is generated.

The CLI Configuration tab appears by default. You can view the configuration details in the CLI format.

6. View the XML format of the configuration by clicking the **XML Configuration** tab.7. Click **Back**.8. Click **Publish** if you want to only publish the configuration.

A new job is created and the job ID appears in the Job Information dialog box.

9. Click **Publish and Update** if you want to publish and update the devices with the configuration.

The VPN is now moved into the Published state if the configuration is published to all devices involved in the VPN. If the configuration is not published to all devices involved in the VPN, the VPN is placed in the Partially Published state. If a VPN is created but not published, the VPN is placed in the Unpublished state. If any modifications are made to the VPN configuration after it is published, the VPN is placed in the Republish Required state. You can view the states of the VPN by hovering over them.

A new job is created and the job ID appears in the Job Information dialog box.

## 10. Click the job ID to view more information about the job created. This action directs you to the Job Management workspace.

If you get an error message during the publish or if the VPN publish fails, go to the Job Management workspace and view the relevant job ID to see why the publish failed.



**NOTE:** You can also publish a VPN by right-clicking the VPN in the VPN Tabular view and selecting **Publish VPN**. You are redirected to the Affected Devices page.



**NOTE:** You can publish a VPN only if you have the permission for all the assigned devices.

#### Related Documentation

- [IPsec VPN Overview on page 219](#)
- [Creating IPsec VPNs on page 221](#)
- [Managing IPsec VPNs on page 236](#)
- [VPN Profiles Overview on page 243](#)
- [Creating VPN Profiles on page 244](#)

- [Managing VPN Profiles on page 249](#)

## Managing IPsec VPNs

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You can modify and delete the IPsec VPNs listed in the Manage VPNs page.

To open the Manage VPNs page:

- Select **Security Director > VPN**.

The Manage VPNs page appears. All IPsec VPNs created so far are listed by default in the graphical view.

You can perform the following tasks in the Manage VPNs page:

1. [Modifying IPsec VPNs on page 236](#)
2. [Modifying Endpoint Settings in a VPN on page 237](#)
3. [Deleting IPsec VPNs on page 238](#)

## Modifying IPsec VPNs

To modify an IPsec VPN:

1. Select **Security Director > VPN**.

The VPN Tabular view appears.

2. Select the IPsec VPN that you want to modify from the left pane and click the appropriate link from the **Modify: General Settings : Device Association : Tunnel Settings** link on the right pane.

This action redirects you to the section of the IPsec VPN that you want to modify.



**NOTE:**

- You can modify all the parameters of the VPN except the type of VPN.
- You cannot modify general settings, tunnel or route settings, and device selection if permission label is applied to one or more devices.

You can enable or disable the Multi-ProxyID option for the route-based VPNs. In the General Settings tab, if you uncheck the Multi-Proxy ID check box, the routing options in the Tunnel/Route Settings tab is set to No Routing. You can change the routing options based on your requirement.

3. Click **Modify**.
4. Click **Save**.



To modify the global settings of the devices in a VPN:

1. Select **Security Director > VPN**.

The VPN Tabular view appears.

2. Select the IPsec VPN that you want to modify from the left pane.

This devices that are a part of the VPN are displayed in the right pane.

3. Click the **External Interface** field of the device whose external interface you want to modify, and select the new external interface.
4. Click the **Tunnel Zone** field of the device whose tunnel zone you want to modify, and select the new tunnel zone.
5. Click **OK**.

6. Click the **Protected Zone/Networks** field of the device that needs to be modified, and select the new network or zone.

When the multi-proxy ID is selected, at the tunnel level, you can select the required local or remote proxy ID pair in the Traffic Selector column. However, at the global level, the Protected Zone/Network address is the traffic selector.

7. Click **OK**.
8. Click the **Routing Instance** field of the device whose routing instance you want to modify, and select the new routing instance.
9. Click the **Proxy Id** field of the device while proxy ID you want to modify, and select the new proxy ID.

When the multi-proxy ID is selected, the single Proxy Id column is hidden. Because, you cannot have both multi-proxy ID and single proxy-ID existing together.

10. Click **OK**.

## Modifying Endpoint Settings in a VPN

To modify the endpoint settings in an IPsec VPN:

1. Select **Security Director > VPN**.

The VPN Tabular view appears.

2. Select the device in the IPsec VPN that you want to modify from the left pane.

The settings configured for the device are shown in the right pane. You can modify all settings of the device except the External Interface, Tunnel Interface, and Tunnel Zone settings.

3. For each endpoint device, you can modify the VPN Name, and Preshared Key fields, and customize the VPN. Click the required endpoint device in the left pane, and you will get an option to change these fields in the right pane.

You can customize Traffic Selectors at endpoint level that overrides the global settings.

4. Click **Save**.

To modify the general settings of a VPN:

1. Select **Security Director > VPN**.

The VPN Tabular view appears.

2. Select the IPsec VPN that you want to modify from the left pane.

This devices that are a part of the VPN are displayed in the right pane.

3. Click **General Settings** at the top of the VPN Tabular view.

The Modify General Settings window appears. You can modify the name and description of the VPN, VPN profile, and the Preshared key fields.

4. Click **Modify**.



**NOTE:** You can also modify the device associations and tunnel settings of a VPN by clicking the **Device Associations** and **Tunnel/Route Settings** links, respectively, on top of the VPN Tabular view.

## Deleting IPsec VPNs

To delete an IPsec VPN:

1. Select **Security Director > VPN**.

The VPN Tabular view appears.

2. Right-click the IPsec VPN you intend to delete and click the **Delete VPN**.

A confirmation window appears.

3. Click **Delete**.



**NOTE:** If you delete a VPN, the erase configuration is sent to all devices that were a part of the VPN during the next Update operation for the device.

### Related Documentation

- [IPsec VPN Overview on page 219](#)
- [Creating IPsec VPNs on page 221](#)
- [Publishing IPsec VPNs on page 234](#)
- [VPN Profiles Overview on page 243](#)
- [Creating VPN Profiles on page 244](#)
- [Managing VPN Profiles on page 249](#)

# Extranet Devices

- [Creating Extranet Devices on page 239](#)
- [Managing Extranet Devices on page 240](#)

## Creating Extranet Devices

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To create extranet devices:

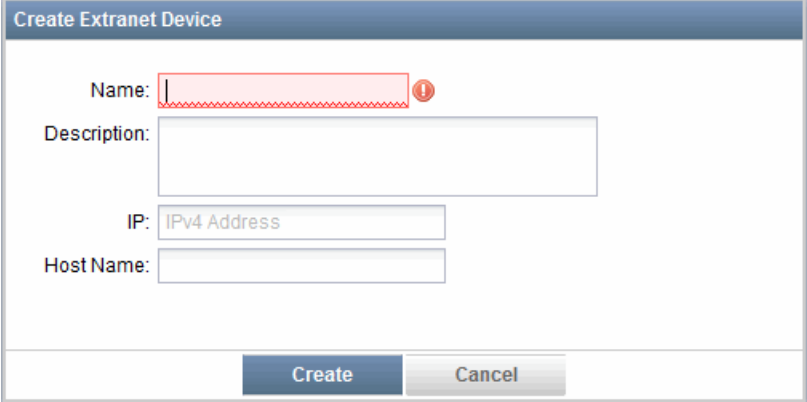
1. Select **Security Director > VPNs > Extranet Devices**.

The Extranet Devices page appears.

2. To create a new extranet device, click the plus sign (+).

The Create Extranet Device page appears, as shown in [Figure 113 on page 239](#).

**Figure 113: Create Extranet Device Page**



The screenshot shows a web form titled "Create Extranet Device". It includes the following fields and controls:

- Name:** A text input field with a red dashed border and a red exclamation mark icon, indicating a required field.
- Description:** A larger text area for providing details about the device.
- IP:** A text input field with a placeholder value of "IPv4 Address".
- Host Name:** A text input field for the device's hostname.
- Buttons:** "Create" and "Cancel" buttons at the bottom right of the form.

3. In the Name field, enter a name for the new extranet device.
4. In the Description field, enter a description for the new extranet device.
5. In the IP field, enter the IP address.
6. In the Host Name field, enter the hostname.
7. Click **Create** to create the extranet device.

The new extranet device appears on the Extranet Devices page.

- Related Documentation**
- [Managing Extranet Devices on page 240](#)

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## Managing Extranet Devices

You can modify, delete, and clone the extranet devices listed on the Extranet Devices page.

To open the Extranet Devices page:

- Select **Security Director > VPNs > Extranet Devices**.

The Extranet Devices page appears.

You can right-click an extranet device to manage it.

You can perform the following tasks on the Extranet Devices page:

- [Modifying an Extranet Device on page 240](#)
- [Deleting an Extranet Device on page 240](#)
- [Cloning an Extranet Device on page 241](#)

### Modifying an Extranet Device

To modify an extranet device:

1. Select **Security Director > VPNs > Extranet Devices**.

The Extranet Devices page appears.

2. Select the extranet device you want to modify, right-click, and select **Modify Extranet Device**.

This action redirects you to the Create Extranet Device page that you used to create a new extranet device. You can modify all the fields on this page.

3. Click **Modify** to save the changes made to this extranet device.

### Deleting an Extranet Device

To delete an extranet device:

1. Select **Security Director > VPNs > Extranet Devices**.

The Extranet Devices page appears.

2. Select the extranet device you want to delete, right-click, and select **Delete Extranet Devices**.

The Delete dialog box appears.

3. Select the extranet devices you want to delete, and click **Delete**.

## Cloning an Extranet Device

1. Select **Security Director > VPNs > Extranet Devices**.

The Extranet Devices page appears.

2. Select the extranet device you want to clone, right-click, and select **Clone Extranet Device**.

You are redirected to the Clone Extranet Device page.

3. Make the necessary modifications, and click **Clone**.

**Related Documentation**

- [Creating Extranet Devices on page 239](#)



## CHAPTER 19

# VPN Profiles

- [VPN Profiles Overview on page 243](#)
- [Creating VPN Profiles on page 244](#)
- [Managing VPN Profiles on page 249](#)

### VPN Profiles Overview

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You can use a VPN Profile Wizard to create an object that specifies the VPN proposals, mode of the VPN, and other parameters used in a route-based IPsec VPN. You can also configure the Phase 1 and Phase 2 settings in a VPN profile.

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.



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

SRX Series devices support preshared key and PKI certificate-based authentication methods in IKE negotiation for IPsec VPNs. The RSA certificate and DSA certificate-based authentication are supported for IKE negotiation. The predefined VPN profile is available with both RSA and DSA certificates-based authentication. The PKI certificate list from the device is automatically retrieved during the device discovery and update-based syslog notifications.

#### Related Documentation

- [Creating VPN Profiles on page 244](#)
- [Managing VPN Profiles on page 249](#)

## Creating VPN Profiles

To create a VPN profile:

1. Select **Security Director > VPNs > VPN Profiles**.

The VPN Profiles page appears with all the VPN profiles. The first two profiles listed here are Juniper Networks defined VPN profiles.

2. Click the plus sign (+) to create a new VPN profile.
3. Enter the name of the VPN profile in the Name field.
4. Enter the description of the VPN profile in the Description field.
5. Click the **Phase 1** tab.

Figure 114 on page 244 shows the Phase 1 tab.

Figure 114: VPN Profile: Phase 1

The screenshot shows the 'VPN Profile' configuration window with the 'Phase 1' tab selected. The 'Name' field is set to 'ssvpn' and the 'Description' field is empty. Under the 'Phase 1' tab, the 'Authentication Type' is set to 'Preshared Key'. The 'Mode' is set to 'Main' (radio button selected). The 'IKE Id' is set to 'Hostname'. The 'Proposals' are set to 'Predefined' (radio button selected). The 'Predefined Proposal Sets' are set to 'Basic'. The 'Advanced Settings' section is expanded, showing 'Enable NAT Traversal' checked, 'Keep Alive Interval(secs)' set to 5, 'Enable DPD' unchecked, 'Always Send DPD' unchecked, 'DPD Interval(secs)' set to 10, and 'DPD Threshold' set to 5. At the bottom, there are 'Create' and 'Cancel' buttons.

6. Select the required authentication type from the Authentication Type drop-down menu. The following authentication types are supported:
- Preshared key
  - RSA signature
  - DSA signature



- EC-DSA-Signature (256)
- EC-DSA-Signature (384)

For the certificate-based authentication method, the predefined proposal sets such as standard, basic, and compatible are not applicable. You must create a custom proposal for certificate-based authentication.

7. Select the VPN mode that you want to use by clicking the radio buttons next to Mode. The IKE ID type selection is enabled for main mode and also for authentication that is based on certificates. You can configure an IKE ID for the main mode VPN proposals using the available Hostname, User@hostname, and IPAddress IKE ID options.
  - If you select Aggressive as the VPN mode for the preshared key authentication type, an IKE ID drop-down menu appears. For the User@hostname IKE ID option, a separate User field appears. Enter an appropriate value in this field.
  - For RSA and DSA signature-authentication types, a distinguished name (DN) is available as an IKE ID option along with hostname and user@hostname. These options are available for both main and aggressive VPN modes.
8. Select the type of proposal as either Predefined or Custom by clicking the radio buttons next to Proposals.
9. To create custom VPN proposal, select the Customer radio button and perform the following steps:
  - a. Click **Add** to add a new VPN proposal.

The Create Phase 1 Proposal pop-up window appears.
  - b. Enter the name for the proposal in the Name field.
  - c. Select the appropriate DH group from the DH Group drop-down menu. The available DH groups are:
    - Group1
    - Group2
    - Group5
    - Group14
    - Group19
    - Group20
    - Group24
  - d. Select the appropriate authentication mechanism from the Authentication drop-down menu. The available authentication algorithms are MD5, SHA-1, SHA-256, and SHA-384.
  - e. Select the appropriate encryption mechanism from the Encryption drop-down menu. The available encryption methods are DES, 3DES, AES(128), AES(192), and AES(256).

- f. Select the life time interval from the Life Time (in seconds) selector.
  - g. Click **Create**.
10. Select the appropriate predefined proposal set from Predefined Proposal Sets drop-down menu. The available proposal sets are:
    - Basic
    - Standard
    - Compatible
    - SuiteB-GCM-128
    - SuiteB-GCM-256
  11. Expand the Advanced Settings pane by clicking the down arrow.

You can configure the advanced settings for Phase 1 here.
  12. Select the **Enable NAT Traversal** check box to enable this option.
  13. Select the appropriate keepalive interval from the Keep Alive Interval (secs) selector.
  14. Select the **Enable DPD** check box if you want to use this option.
  15. Select the **Always Send DPD** check box if you want to use this option.
  16. Select the appropriate dead peer detection interval from the DPD Interval (secs) selector.
  17. Select the appropriate dead peer detection threshold from the DPD Threshold selector.
  18. Click the **Phase 2** tab.

[Figure 115 on page 247](#) shows the Phase 2 tab.

Figure 115: VPN Profile: Phase 2

19. Select the option button next to the VPN proposal you want to use.

- To create a custom proposal, select Custom radio button. A separate window appears to enter the information. Click **Add** tab.

The Create Phase 2 Proposal window appears, as shown in [Figure 116 on page 247](#).

Figure 116: Create Phase 2 Proposal

- Enter name of the custom proposal in the Name field.

- Select the authentication from the Authentication drop-down menu. The available authentication algorithms are MD5, SHA-1, SHA-256(96), and SHA-256(28).
- Select the required protocol from the Protocol drop-down menu.
- Select the necessary encryption from the Encryption drop-down menu. The available encryption methods are , , , and .
  - DES
  - 3DES
  - AES(128)
  - AES(192)
  - AES(256)
  - AES-GCM(128)
  - AES-GCM(192)
  - AES-GCM(256)
- Select the Life Time in seconds.
- Select the Life Size in kilo bytes.
- Click **Create** to create a new IPsec custom proposal.

You can also click **Modify** tab to modify any value, or delete the custom proposal by clicking **Delete** tab.

20. Select an appropriate option from Perfect Forward Privacy drop-down menu. The available options are:

- Group1
- Group2
- Group5
- Group14
- Group19
- Group20
- Group24

21. Expand the Advanced Settings pane by clicking the down arrow.

22. Select the **Establish tunnel immediately** check box if you want to enable this option.

23. Select the **Enable VPN Monitor** check box if you want to enable this option.

This is a per-VPN option.

24. Select the appropriate option from the DF Bit drop-down menu.

25. Select the appropriate idle time interval from the Idle time (secs) selector.

26. Select the appropriate value from the Install Time selector.

27. Select the **Enable Anti Replay** check box if you to enable this option.

28. Click **Create**.

- Related Documentation**
- [VPN Profiles Overview on page 243](#)
  - [Managing VPN Profiles on page 249](#)

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## Managing VPN Profiles

You can delete, modify, or clone VPN profiles listed in the VPN Profiles page.

To open the VPN Profiles page:

- Select **Security Director > VPNs > VPN Profiles**.

The VPN Profiles page appears.

You can right-click the VPN profile to manage it.

You can perform the following tasks on the VPN Profiles page:

- [Deleting VPN Profiles on page 249](#)
- [Modifying VPN Profiles on page 249](#)
- [Cloning VPN Profiles on page 250](#)

### Deleting VPN Profiles

To delete a VPN profile:

1. Select **Security Director > Object Builder > VPN Profiles**.

The VPN Profiles page appears.

2. Select the VPN profile you want to delete, right-click, and select **Delete VPN Profiles**.

The Delete Profile confirmation window appears.

3. Click **Delete**.



**NOTE:** You can also delete the VPN profile by right-clicking the VPN profile and selecting **Delete VPN Profiles**.

### Modifying VPN Profiles

To modify a VPN profile:

1. Select **Security Director > VPNs > VPN Profiles**.

The VPN Profiles page appears.

2. Select the VPN profile you want to modify, right-click, and select **Modify VPN Profile**.

You are redirected to the Modify VPN Profile page.

3. Click **Modify**.



**NOTE:** You can also modify the VPN profile by right-clicking the VPN profile and selecting **Modify VPN Profile**.



**NOTE:** If the VPN profile you have created is used as part of a VPN, you cannot modify IKE mode and IKE ID fields.

## Cloning VPN Profiles

To clone a VPN profile:

1. Select **Security Director > VPNs > VPN Profiles**.

The VPN Profiles page appears.

2. Select the VPN profile you want to clone, right-click, and select **Clone VPN Profile**.

You are redirected to the Clone VPN Profile page. By default, a generic name is given to the cloned VPN profile.



**NOTE:** You can also modify the VPN profile by right-clicking the VPN profile and selecting **Modify VPN Profile**.

3. Click **Clone**.

- Related Documentation**
- [VPN Profiles Overview on page 243](#)
  - [Creating VPN Profiles on page 244](#)

## PART 9

# UTM Policies

- [UTM Policies on page 253](#)





## CHAPTER 20

# UTM Policies

- [UTM Overview on page 253](#)
- [Creating a UTM Policy on page 255](#)
- [Managing UTM Policies on page 257](#)
- [Creating an Antispam Profile on page 260](#)
- [Managing Antispam Profiles on page 262](#)
- [Creating an Antivirus Profile on page 264](#)
- [Managing Antivirus Profiles on page 271](#)
- [Creating a Content Filtering Profile on page 273](#)
- [Managing Content Filtering Profiles on page 276](#)
- [Creating a Web Filtering Profile on page 278](#)
- [Managing Web Filtering Profiles on page 282](#)
- [Creating a URL Pattern on page 284](#)
- [Managing URL Patterns on page 286](#)
- [Creating a Custom URL Category List on page 288](#)
- [Managing Custom URL Category Lists on page 290](#)
- [Creating a UTM Device Profile on page 292](#)
- [Managing Device Profiles on page 295](#)

## UTM Overview

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Unified Threat Management (UTM) is a term used to describe the consolidation of several security features into one device, to protect against multiple threat types. The advantage of UTM is a streamlined installation and management of these multiple security capabilities.

The following security features are provided as part of the UTM solution:

- **Antispam**—The antispam feature examines transmitted e-mail messages to identify e-mail spam. E-mail spam consists of unwanted e-mail messages usually sent by commercial, malicious, or fraudulent entities. When the device detects an e-mail message deemed to be spam, it either drops the message or tags the message header or subject field with a preprogrammed string. The antispam feature uses a constantly updated spam block list (SBL). Sophos updates and maintains the IP-based SBL. The antispam feature is a separately licensed subscription service.
- **Full file-based antivirus**—A virus is an executable code that infects or attaches itself to other executable code to reproduce itself. Some malicious viruses erase files or lock up systems. Other viruses merely infect files and overwhelm the target host or network with bogus data. The full file-based antivirus feature provides file-based scanning on specific application layer traffic, checking for viruses against a virus signature database. The antivirus feature collects the received data packets until it has reconstructed the original application content, such as an e-mail file attachment, and then scans this content. Kaspersky Lab provides the internal scan engine. The full file-based antivirus scanning feature is a separately licensed subscription service.
- **Express antivirus**—Express antivirus scanning is offered as a less CPU-intensive alternative to the full file-based antivirus feature. The express antivirus feature is similar to the full antivirus feature in that it scans specific application layer traffic for viruses against a virus signature database. However, unlike full antivirus, express antivirus does not reconstruct the original application content. Rather, it just sends (streams) the received data packets, as is, to the scan engine. With express antivirus, the virus scanning is executed by a hardware pattern-matching engine. This improves performance while scanning is occurring, but the level of security provided is lessened. Juniper Networks provides the scan engine. The express antivirus scanning feature is a separately licensed subscription service.
- **Content filtering**—Content filtering blocks or permits certain types of traffic based on the MIME type, file extension, protocol command, and embedded object type. Content filtering does not require a separate license.
- **Web filtering**—Web filtering lets you manage Internet usage by preventing access to inappropriate Web content.

The following types of Web filtering solutions are available:

- **Integrated Web filtering**—The decision-making process for blocking or permitting Web access is done on the device after it identifies the category for a URL either from user-defined categories or from a category server (Websense provides the CPA server). The integrated Web filtering feature is a separately licensed subscription service.
- **Redirect Web filtering**—The redirect Web filtering solution intercepts HTTP requests and forwards the server URL to an external URL filtering server to determine whether to block or permit the requested Web access. Websense provides the URL filtering server. Redirect Web filtering does not require a separate license.
- **Juniper local Web filtering**—The decision-making process for blocking or permitting Web access is done on the device after it identifies the category for a URL from

user-defined categories stored on the device. With local filtering, there is no additional Juniper license or remote category server required.

Security Director supports creation of SRX Series UTM policies. You can refer to the UTM policies in the firewall policy rules.

- Related Documentation**
- [Creating a UTM Policy on page 255](#)
  - [Managing UTM Policies on page 257](#)

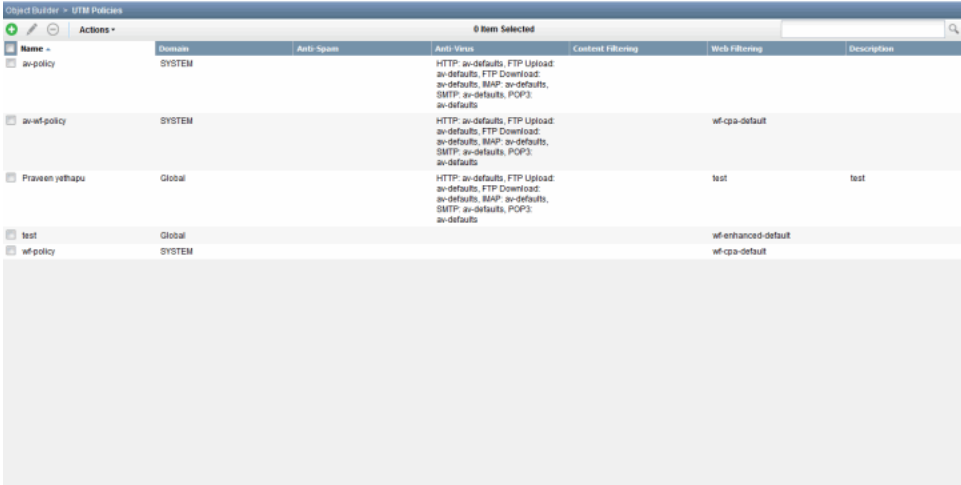
## Creating a UTM Policy

To create a new UTM policy:

1. Select **Security Director > UTM Policies**.

The UTM Policies page appears, as shown in [Figure 117 on page 255](#).

**Figure 117: UTM Policies Page**



Name	Domain	Anti-Spam	Anti-Virus	Content Filtering	Web Filtering	Description
av-policy	SYSTEM		HTTP: av-defaults, FTP Upload: av-defaults, FTP Download: av-defaults, RAMP: av-defaults, SMTP: av-defaults, POP3: av-defaults			
av-wf-policy	SYSTEM		HTTP: av-defaults, FTP Upload: av-defaults, FTP Download: av-defaults, RAMP: av-defaults, SMTP: av-defaults, POP3: av-defaults		wf-cpa-default	
Praveen yethapu	Global		HTTP: av-defaults, FTP Upload: av-defaults, FTP Download: av-defaults, RAMP: av-defaults, SMTP: av-defaults, POP3: av-defaults		test	test
test	Global				wf-enhanced-default	
wf-policy	SYSTEM				wf-cpa-default	

2. To create a new UTM policy, click the plus sign (+).

The Create UTM Policy page appears, as shown in [Figure 118 on page 256](#).

Figure 118: Create UTM Policy Page

3. In the Name field, enter the name of the UTM policy. The asterisk indicates that it is a mandatory field.
4. In the Description field, enter a description for the new UTM policy.
5. In the Connection limit per client field, enter the connection limit . The default is 2000.



**NOTE:** For the high end SRX Series devices, the maximum connection limit is 120.

6. In the Action when connection limit is reached drop-down list, enter the action that must be taken once the connection limit is reached.
7. On the Web filtering Profile tab, select the Web filtering profile from the HTTP drop-down list.
8. On the Anti-Virus Profile tab, select **Apply to all the Protocols** check box, if you want to apply the selected Default Profile to all the protocols. This is an option.

If the Apply to all the Protocols check box is not selected, different profiles can be chosen for different protocols.

To assign different profiles to different protocols, configure the following protocols:

- HTTP
- FTP Upload
- FTP Download
- IMAP
- SMTP
- POP3

9. On the Anti-Spam Profile tab, select the antispam profile from the SMTP drop-down list.

10. In the Content Filtering Profile, select **Apply to all the Protocols** check box, if you want to apply the selected Default Profile to all the protocols. This is an option.

If the Apply to all the Protocols check box is not selected, different profiles can be chosen for different protocols.

To assign different profiles to different protocols, configure the following protocols:

- HTTP
- FTP Upload
- FTP Download
- IMAP
- SMTP
- POP3

11. Click **Create**.

A new UTM policy is created.



**NOTE:** On the UTM Policies main page, you can search for any UTM policies by its name, in the Search field.

#### Related Documentation

- [UTM Overview on page 253](#)
- [Managing UTM Policies on page 257](#)

## Managing UTM Policies

You can modify, delete, and clone the UTM policies that are listed on the UTM Policies main page.

To open the UTM Policies page:

- Select **Security Director > UTM Policies**.

The UTM Policies page appears.

- Right-click the policy to manage it, or select the required options from Actions.

You can perform the following management tasks on the UTM Policies page:

- [Modifying a UTM Policy on page 258](#)
- [Deleting a UTM Policy on page 258](#)
- [Cloning a UTM Policy on page 259](#)
- [Finding UTM Policy Usage on page 259](#)
- [Showing Unused UTM Policies on page 259](#)
- [Deleting All Unused UTM Policies on page 259](#)

## Modifying a UTM Policy

To modify a UTM policy:

1. Select **Security Director > UTM Policies**.

The UTM Policies page appears.

2. Select the policy that you want to modify, and click the pencil icon or right-click and select **Modify UTM Policy**.

The Modify UTM Policy page appears.

3. On the Modify UTM Policy page, you can modify the name, description, connection limit, action to be taken once the connection reaches the limit, and antispam, antivirus, content filtering, and Web filtering profiles.
4. To modify the UTM policy, click **Modify**.

## Deleting a UTM Policy

To delete a UTM policy:

1. Select **Security Director > UTM Policies**.

The UTM Policies page appears.

2. Select the policy that you want to delete, and click the minus sign (-) or right-click and select the **Delete UTM Policies** option. A confirmation window appears before you can delete the UTM policy.
3. To delete the UTM policy, click **Delete UTM Policies**.

You can select more than one policy to delete.

## Cloning a UTM Policy

To clone a UTM policy:

1. Select **Security Director > UTM Policies**.

The UTM Policies page appears.

2. Select the policy that you want to clone, right-click it, and select **Clone UTM Policy**.

The Clone UTM Policy page appears.

3. On the Clone UTM Policy page, modify the required fields.

4. Click **Clone**.

The cloned UTM policy is created.

## Finding UTM Policy Usage

To find UTM policy usage:

1. Select **Security Director > UTM Policies**.

The UTM Policies page appears.

2. Select the policy for which you want to find the usage, right-click it, and select **Find Usage**.

The usage window appears showing the usage of the selected policy.

## Showing Unused UTM Policies

To show unused UTM policies:

1. Select **Security Director > UTM Policies**.

The UTM Policies page appears.

2. From Actions, select **Show Unused**.

All unused UTM policies are listed.

## Deleting All Unused UTM Policies

To delete unused UTM policies:

1. Select **Security Director > UTM Policies**.

The UTM Policies page appears.

2. From Actions, select **Delete All Unused**. A confirmation window appears before you can delete the unused policies.

Click **Yes** to confirm the deletion. All unused UTM policies are deleted.

- Related Documentation**
- [UTM Overview on page 253](#)
  - [Creating a UTM Policy on page 255](#)

## Creating an Antispam Profile

To create an antispam profile:

1. Select **Security Director > UTM Policies**.

The UTM Policies page appears.

2. In the left pane, under the UTM Policies, select **Anti-Spam Profiles**.

The Anti-Spam Profile page appears listing the existing profiles, as shown in [Figure 119 on page 260](#).

**Figure 119: Anti-Spam Profiles Page**

Name	Domain	Blacklist	Action	Custom Tag	Description
AS-1	Global	Sophos Blacklist	Tag Email Subject Line	This mail is Spam and is blocked!	AS-1
as-defaults	SYSTEM	Sophos Blacklist	Block Email	***Spam***	

3. To create a new antispam profile, click the plus sign (+).

The Create Anti-Spam Profile page appears, as shown in [Figure 120 on page 261](#).



Figure 120: Create Anti-Spam Profile Page

4. In the Name field, enter the name of the profile. The asterisk indicates that it is a mandatory field.
5. In the Description field, enter a description for the new profile.
6. To use the server-based spam filtering, select the **Use Sophos Blacklist** check box. Otherwise, local spam filtering is used.  
  
This check box is selected by default. To configure the local spam filter, refer to Creating a Device Profile topic.
7. From the Default Action drop-down list, select one of the following default actions:
  - Tag Email Subject Line
  - Tag SMTP Header
  - Block Email
  - None
8. In the Custom Tag field, enter the custom defined tag information.
9. Click **Create**.

A new antispam profile is created and listed on the Anti-Spam Profiles page.

#### Related Documentation

- [UTM Overview on page 253](#)
- [Creating a UTM Policy on page 255](#)
- [Managing UTM Policies on page 257](#)
- [Managing Antispam Profiles on page 262](#)

## Managing Antispam Profiles

---

You can modify, delete, and clone the antispam profiles that are listed on the Anti-Spam Profile main page.

To open the Anti-Spam Profile page:

- Select **UTM Policies > Anti-Spam Profiles**.

The Anti-Spam Profile page appears.

- Right-click the profile to manage it, or select the required options from Actions.

You can perform the following management tasks on the Anti-Spam Profiles page:

- [Modifying an Antispam Profile on page 262](#)
- [Deleting an Antispam Profile on page 262](#)
- [Cloning an Antispam Profile on page 263](#)
- [Finding Antispam Profile Usage on page 263](#)
- [Showing Unused Antispam Profiles on page 263](#)
- [Deleting All Unused Antispam Profiles on page 263](#)

### Modifying an Antispam Profile

To modify an antispam profile:

1. Select **Security Director > UTM Policies > Anti-Spam Profiles**.

The Anti-Spam Profile page appears.

2. Select the profile that you want to modify and click the pencil icon or right-click and select **Modify Anti-Spam Profile**.

The Modify Anti-Spam Profile page appears.

3. On the Modify Anti-Spam Profile page, you can modify name, description, use Sophos blacklist, default action, and custom tag.
4. To modify the antispam profile, click **Modify**.

### Deleting an Antispam Profile

To delete an antispam profile:

1. Select **Security Director > UTM Policies > Anti-Spam Profiles**.

The Anti-Spam Profile page appears.

2. Select the profile that you want to delete, and click the minus sign (-) or right-click and select the **Delete Anti-Spam Profiles** option. A confirmation window appears before you can delete the profile.
3. To delete the antispam profile, click **Delete**.

## Cloning an Antispam Profile

To clone an antispam profile:

1. Select **Security Director > UTM Policies > Anti-Spam Profiles**.

The Anti-Spam Profile page appears.

2. Select the profile that you want to clone, right-click, and select **Clone Anti-Spam Profile**.

The Clone Anti-Spam Profile page appears.

3. On the Clone Anti-Spam Profile page, modify the required fields.
4. Click **Clone**.

The cloned antispam profile is created.

## Finding Antispam Profile Usage

To find the antispam profile usage:

1. Select **Security Director > UTM Policies > Anti-Spam Profiles**.

The Anti-Spam Profile page appears.

2. Select the profile for which you want to find the usage, right-click it and select **Find Usage**.

The usage window appears, showing the usage of the selected profile.

## Showing Unused Antispam Profiles

To show the unused antispam profiles:

1. Select **Security Director > UTM Policies > Anti-Spam Profiles**.

The Anti-Spam Profile page appears.

2. From Actions, select **Show Unused**.

The antispam profiles that are not used by any UTM policies are listed.

## Deleting All Unused Antispam Profiles

To delete the unused antispam profiles:

1. Select **Security Director > UTM Policies > Anti-Spam Profiles**.

The Anti-Spam Profile page appears.

2. From Actions, select **Delete All Unused**. A confirmation window appears before you can delete the unused profiles.

To confirm the deletion, click **Yes**. All unused antispam profiles are deleted.

- Related Documentation**
- [UTM Overview on page 253](#)
  - [Creating a UTM Policy on page 255](#)
  - [Managing UTM Policies on page 257](#)
  - [Creating an Antispam Profile on page 260](#)

## Creating an Antivirus Profile

To create an antivirus profile:

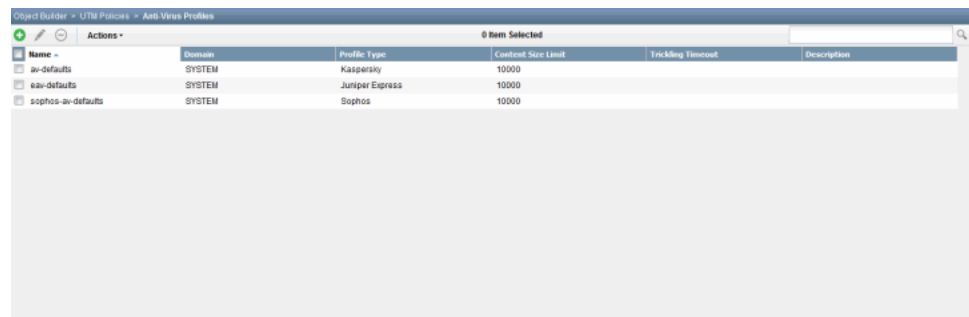
1. Select **Security Director > UTM Policies**.

The UTM Policies page appears.

2. In the left pane, under UTM Policies, select **Anti-Virus Profiles**.

The Anti-Virus Profiles page appears listing all the existing antivirus profiles, as shown in [Figure 121 on page 264](#).

**Figure 121: Anti-Virus Profiles Main Page**



Name	Domain	Profile Type	Content Size Limit	Tracking Timeout	Description
av-defaults	SYSTEM	Kaspersky	10000		
sai-defaults	SYSTEM	Juniper Express	10000		
sophos-av-defaults	SYSTEM	Sophos	10000		

3. To create a new antivirus profile, click the plus sign (+).

The Create Anti-Virus Profile page appears, as shown in [Figure 122 on page 265](#).

Figure 122: Create Anti-Virus Profile Page

**Create Anti-Virus Profile**

**GENERAL INFORMATION**

Name\*  29 characters maximum.

Description

Engine Type  ▼

Trickling Timeout  Seconds

**Scan Options** **Fallback Options** **Notification Options**

Content Size Limits  Kilo Bytes

4. In the Name field, enter the name of the profile. The asterisk indicates that it is a mandatory field.

5. In the Description field, enter a description for the new profile.

6. From the Engine Type drop-down list, select the required engine types.

The available engine types are Juniper Express, Kaspersky, and Sophos. By default, Juniper Express is selected.

7. In the Trickling Timeout field, enter the trickling timeout value in seconds.

8. Based on the engine types that you have selected, configure the parameters under the Scan Options, Fallback Options, and Notification Options tabs.

For Juniper Express or Sophos:

- On the Scan Options tab, in the Content Size Limits field, enter the content size limit in kilobytes.
- On the Fallback Options tab:

- Set Default Action to either Log and Permit or Block. For Sophos, you have an additional option to only permit.
- Set Content Size to either Log and Permit or Block. For Sophos, you have an additional option to only permit.
- Set Engine Error to either Log and Permit or Block. For Sophos, you have an additional option to only permit.

Engine Error combines the errors engine not ready, timeout, too many requests, and out of resources into a single fallback option.

- On the Notification Options tab, configure the following parameters:

#### FALLBACK BLOCK Option

Select the Fallback Block option by selecting **Notify Mail Sender** option, and configure the following fields, as shown in [Figure 123 on page 266](#).

**Figure 123: Juniper Express Engine Type—Notification Options Tab**

**Create Anti-Virus Profile**

**GENERAL INFORMATION**

Name\*

Description

Engine Type

Trickling Timeout  Seconds

**Notification Options**

**FALLBACK BLOCK**

Notify Mail Sender ☒

Notification Type

Custom Message Subject

Custom Message

Display Hostname ☐

Allow Email ☐

Administrator Email Address

- Select the Notification Type as either Protocol or Message.
- In the Custom Message Subject field, enter the custom defined message subject.

- In the Custom Message field, enter the custom message.
- To display the hostname, select the **Display Hostname** option.
- To allow administrator e-mails to be sent, select the **Allow Email** option.
- In the Administrator Email Address field, enter the e-mail address of the administrator who will receive the e-mail messages.

**FALLBACK NON-BLOCK Option**

Select the Fallback Non-Block option by selecting the Notify Mail Recipient option, and configure the following fields:

- Enter the custom defined message subject in the Custom Message Subject field.
- Enter the custom message in the Custom Message field.

## VIRUS DETECTION Option

Select the Virus Detection option by selecting the Notify Mail Sender option, and configure the following fields, as shown in [Figure 124 on page 268](#):

**Figure 124: Juniper Express Engine Type—Virus Detection**

**Create Anti-Virus Profile**

**GENERAL INFORMATION**

Name\*

Description

Engine Type

Tricking Timeout  Seconds

**Scan Options** **Fallback Options** **Notification Options**

**FALLBACK BLOCK**

Notify Mail Sender ☐

**FALLBACK NON-BLOCK**

Notify Mail Recipient ☐

**VIRUS DETECTION**

Notify Mail Sender ☒

Notification Type

Custom Message Subject

Custom Message

**Create** **Cancel**

- Select the Notification Type as either Protocol or Message.
- In the Custom Message Subject field, enter the custom defined message subject .
- In the Custom Message field, enter the custom message.

If the Engine Type is Kaspersky:

- On the Scan Options tab, in the Content Size Limits field, enter the content size limit in kilo bytes.
- On the File Extensions tab, enter the file extensions to scan. Enter multiple file extensions separated by commas.
- On the Fallback Options tab, configure the following parameters:



- Set the Default Action to either Log and Permit or Block.
- Set the Content Size to either Log and Permit or Block.
- Set the Engine Error to either Log and Permit or Block.

Engine error combines the errors engine not ready, timeout, too many requests, and out of resources into a single fallback option.

- Set the Password File to either Log and Permit or Block.
- Set the Corrupt File to either Log and Permit or Block.
- Set the Decompress Layer to either Log and Permit or Block.
- On the Notification Options tab, configure the following options:

### FALLBACK BLOCK Option

Select the Fallback Block option by selecting **Notify Mail Sender** option, and configure the following fields, as shown in [Figure 125 on page 270](#).

**Figure 125: Kaspersky Engine Type–Fallback Options Tab**

**Create Anti-Virus Profile**

**GENERAL INFORMATION**

Name\*  ⓘ

Description

Engine Type Kaspersky ▼

Tricking Timeout  Seconds

**Scan Options** **Fallback Options** **Notification Options**

Default Action Select ▼

Content Size Select ▼

Engine Error Select ▼

Password File Select ▼

Corrupt File Select ▼

Decompress Layer Select ▼

Create Cancel

- Select the Notification Type as either Protocol or Message.
- In the Custom Message Subject field, enter the custom defined message subject.
- In the Custom Message field, enter the custom message.
- To display the hostname, select the **Display Hostname** option.
- To allow administrator e-mails to be sent, select the **Allow Email** option.
- In the Administrator Email Address field, enter the e-mail address of the administrator who will receive the e-mail messages.

### FALLBACK NON-BLOCK Option

Select the Fallback Non-Block option by selecting **Notify Mail Recipient** option, and configure the following fields.

- In the Custom Message Subject field, enter the text to appear in the subject line of your custom message.
- In the Custom Message field, enter text for the message body of your custom message.

### VIRUS DETECTION Option

To select Virus Detection option, select the **Notify Mail Sender** option, and configure the following fields.

- Select the Notification Type as either Protocol or Message.
- In the Custom Message Subject field, enter the text to appear in the subject line of your custom message.
- In the Custom Message field, enter text for the message body of your custom message.

#### 9. Click **Create**.

A new antivirus profile is created.

- Related Documentation**
- [UTM Overview on page 253](#)
  - [Creating a UTM Policy on page 255](#)
  - [Managing UTM Policies on page 257](#)
  - [Managing Antivirus Profiles on page 271](#)

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## Managing Antivirus Profiles

You can modify, delete, and clone the antivirus profiles that are listed on the Anti-Virus profile main page.

To open the Anti-Virus Profile page:

- Select **UTM Policies > Anti-Virus Profiles**.

The Anti-Virus Profile page appears.

- Right-click the profile to manage it, or select the required options from Actions.

You can perform the following managing tasks on the Anti-Virus Profiles page:

- [Modifying an Antivirus Profile on page 272](#)
- [Deleting an Antivirus Profile on page 272](#)
- [Cloning an Antivirus Profile on page 272](#)

- [Finding Antivirus Profile Usage on page 273](#)
- [Showing Unused Antivirus Profiles on page 273](#)
- [Deleting All Unused Antivirus Profiles on page 273](#)

## Modifying an Antivirus Profile

To modify an antivirus profile:

1. Select **Security Director > UTM Policies > Anti-Virus Profiles**.

The Anti-Virus Profile page appears.

2. Select the profile that you want to modify, and click the pencil icon or right-click and select **Modify Anti-Virus Profile**.

The Modify Anti-Virus Profile page appears.

3. On the Modify Anti-Virus Profile page, you can modify name, description, engine type, trickling timeout, scan, fallback and notification options.
4. Click **Modify** to modify the antivirus profile.

## Deleting an Antivirus Profile

To delete an antivirus profile:

1. Select **Security Director > UTM Policies > Anti-Virus Profiles**.

The Anti-Virus Profile page appears.

2. Select the profile that you want to delete, and click the minus sign (-) or right-click and select the **Delete Anti-Virus Profiles** option. A confirmation window appears before you can delete the profile.
3. Click **Delete** to delete the antivirus profile.

## Cloning an Antivirus Profile

To clone an antivirus profile:

1. Select **Security Director > UTM Policies > Anti-Virus Profiles**.

The Anti-Virus Profile page appears.

2. Select the profile that you want to clone, right-click it and select **Clone Anti-Virus Profile**.

The Clone Anti-Virus Profile page appears.

3. Modify any required field data in the Clone Anti-Virus Profile page.
4. Click **Clone**.

The cloned antivirus profile is created.

## Finding Antivirus Profile Usage

To find antivirus profile usage:

1. Select **Security Director > UTM Policies > Anti-Virus Profiles**.

The Anti-Virus Profile page appears.

2. Select the profile for which you want to find the usage, right-click it, and select **Find Usage**.

The usage window appears, showing the usage of the selected profile.

## Showing Unused Antivirus Profiles

To show unused antivirus profiles:

1. Select **Security Director > UTM Policies > Anti-Virus Profiles**.

The Anti-Virus Profile page appears.

2. From Actions, select **Show Unused**.

The antivirus profiles that are not used by any UTM policies are listed.

## Deleting All Unused Antivirus Profiles

To delete the unused antivirus profiles:

1. Select **Security Director > UTM Policies > Anti-Virus Profiles**.

The Anti-Virus Profiles page appears.

2. From Actions, select **Delete All Unused**. A confirmation window appears before you can delete the unused profiles.

To confirm the deletion, click **Yes**. All unused antivirus profiles are deleted.

### Related Documentation

- [UTM Overview on page 253](#)
- [Creating a UTM Policy on page 255](#)
- [Managing UTM Policies on page 257](#)
- [Creating an Antivirus Profile on page 264](#)

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## Creating a Content Filtering Profile

To create a content filtering profile:

1. Select **Security Director > UTM Policies**.

The UTM Policies page appears.

2. In the left pane, under UTM Policies, select **Content Filtering Profiles**.

The Content Filtering Profiles page appears, listing the existing profiles, as shown in [Figure 126 on page 274](#).

### Figure 126: Content Filtering Profiles Main Page

0 Items Selected					
Name	Domain	Permit Command List	Block Command List	Notification Type	Description
<input type="checkbox"/> custom-content-filtering	SYSTEM	user.pass.port.type.mpls-unicast(ip,mpls-unicast,CHCP,SGPE,GRP,OFF,Multi-ast streams	user.pass.port.type.RIP	message	

3. To create a new content filtering profile, click the plus sign (+).

The Create Content Filtering Profile page appears, as shown in [Figure 127 on page 274](#).

Figure 127: Create Content Filtering Profile Page

Create Content Filtering Profile

GENERAL INFORMATION

Name\*

29 characters maximum.

Description

NOTIFICATION OPTIONS

Notify Mail Sender

☐

Notification Type

Select

Custom Notification Message

Protocol Commands

Content Types

File Extensions

MIME

Command Block List

Enter protocol command(s)

Command Permit List

Enter protocol command(s)

Create

Cancel

4. In the Name field, enter the name of the profile. The asterisk indicates that it is a mandatory field.
5. In the Description field, enter a description for the new profile.
6. If you want to notify the sender, select **Notify Mail Sender**.
7. Select Notification Type as either Protocol or Message from the drop-down list.
8. In the Custom Notification Message field, enter the notification message.
9. On the Protocols Commands tab, configure the following parameters :
  - In the Command Block List field, enter the protocol commands to be blocked. Separate protocols command with commas.
  - In the Command Permit List field, enter the protocol commands to be permitted. Separate protocols command with commas.

Different protocols use different commands to communicate between servers and clients. By blocking or allowing certain commands, you can control the traffic on the protocol command level.

10. On the Content Types tab, block the following types of content:
  - ActiveX
  - Windows executable (.exe)
  - Http Cookie
  - Java Applet
  - ZIP files
11. On the File Extensions tab, enter the list of all files extensions to be blocked. Separate file extensions with commas.

Because file names are available during file transfers, using file extensions is a highly practical way to block or allow file transfers. The content filter list contains a list of file extensions to be blocked.

12. On the MIME tab, configure the following parameters :
  - In the MIME Block List field, enter MIME(s) that needs to be blocked . Separate MIME(s) with commas.

The block MIME list contains the MIME type traffic that is to be blocked by the content filter.

  - In the MIME Permit List field, enter MIME(s) that need to be permitted.

13. To create a new content filtering profile, click **Create**.

#### Related Documentation

- [UTM Overview on page 253](#)
- [Creating a UTM Policy on page 255](#)
- [Managing UTM Policies on page 257](#)
- [Managing Content Filtering Profiles on page 276](#)

## Managing Content Filtering Profiles

---

You can modify, delete, and clone the content filtering profiles that are listed on the Content Filtering Profile main page.

To open the Content Filtering Profile page:

- Select **UTM Policies > Content Filtering Profiles**.

The Content Filtering Profile page appears.

- Right-click the profile to manage it, or select the required options from Actions.

You can perform the following management tasks on the Content Filtering Profiles page:

- [Modifying the Content Filtering Profile on page 276](#)
- [Deleting the Content Filtering Profile on page 276](#)
- [Cloning the Content Filtering Profile on page 277](#)
- [Finding Content Filtering Profile Usage on page 277](#)
- [Showing Unused Content Filtering Profiles on page 277](#)
- [Deleting All Unused Content Filtering Profiles on page 277](#)

### Modifying the Content Filtering Profile

To modify the content filtering profile:

1. Select **Security Director > UTM Policies > Content Filtering Profiles**.

The Content Filtering Profiles page appears.

2. Select the profile that you want to modify, and click the pencil icon or right-click and select **Modify Content Filtering Profile**.

The Modify Content Filtering Profile page appears.

3. On the Modify Content Filtering Profile page, you can modify name, description, notification options, protocol commands, content types, file extensions, and MIME types.
4. To modify the content filtering profile, click **Modify**.

### Deleting the Content Filtering Profile

To delete the content filtering profile:

1. Select **Security Director > UTM Policies > Content Filtering Profiles**.

The Content Filtering Profile page appears.

2. Select the profile that you want to delete, and click the minus sign or right-click and select the **Delete Content Filtering Profiles** option. A confirmation window appears before you can delete the profile.
3. To delete the content filtering profile, click **Delete**.



## Cloning the Content Filtering Profile

To clone the content filtering profile:

1. Select **Security Director > UTM Policies > Content Filtering Profiles**.

The Content Filtering Profile page appears.

2. Select the profile that you want to clone, right-click it and select **Clone Content Filtering Profile**.

The Clone Content Filtering Profile page appears.

3. On the Clone Content Filtering Profile page, modify any required field data.
4. Click **Clone**.

The cloned content filtering profile is created.

## Finding Content Filtering Profile Usage

To find Content Filtering profile usage:

1. Select **Security Director > UTM Policies > Content Filtering Profiles**.

The Content Filtering Profile page appears.

2. Select the profile for which you want to find the usage, right-click it, and select **Find Usage**.

The usage window appears, showing the usage of the selected profile.

## Showing Unused Content Filtering Profiles

To show unused content filtering profiles:

1. Select **Security Director > UTM Policies > Content Filtering Profiles**.

The Content Filtering Profile page appears.

2. From Actions, select **Show Unused**.

The content filtering profiles that are not used by any UTM policies are listed.

## Deleting All Unused Content Filtering Profiles

To delete the unused content filtering profiles:

1. Select **Security Director > UTM Policies > Content Filtering Profiles**.

The Content Filtering Profiles page appears.

2. From Actions, select **Delete All Unused**. A confirmation window appears before you can delete the unused profiles.

To confirm the deletion, click **Yes**. All unused content filtering profiles are deleted.

- Related Documentation**
- [UTM Overview on page 253](#)
  - [Creating a UTM Policy on page 255](#)
  - [Managing UTM Policies on page 257](#)
  - [Creating a Content Filtering Profile on page 273](#)

## Creating a Web Filtering Profile

To create a Web filtering profile:

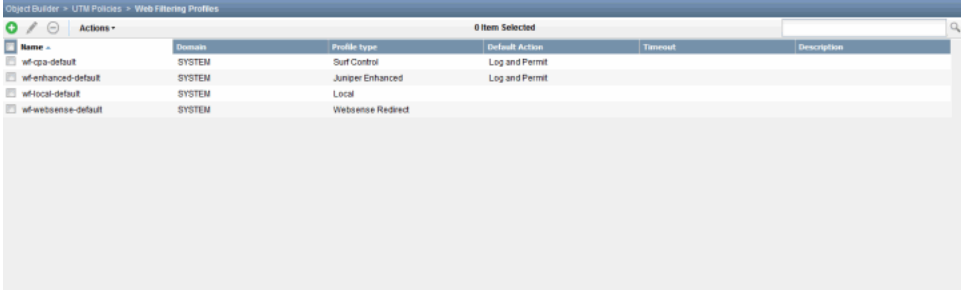
1. Select **Security Director > UTM Policies**.

The UTM Policies page appears.

2. In the left pane, under UTM Policies, select **Web Filtering Profiles**.

The Web Filtering Profiles page appears, listing the existing profiles, as shown in [Figure 128 on page 278](#).

**Figure 128: Web Filtering Profiles Main Page**



Name	Domain	Profile type	Default Action	Timeout	Description
wf-cpa-default	SYSTEM	Surf Control	Log and Permit		
wf-enhanced-default	SYSTEM	Juniper Enhanced	Log and Permit		
wf-local-default	SYSTEM	Local			
wf-websense-default	SYSTEM	Websense Redirect			

3. To create a new web filtering profile, click the plus sign (+).

The Create Web Filtering Profile page appears, as shown in [Figure 129 on page 279](#).

Figure 129: Create Web Filtering Profile

**Create Web Filtering Profile**

**GENERAL INFORMATION**

Name\*

Description

Engine Type\*

Default Action

Timeout  Seconds

Safe Search ☒

Custom Block Message

Quarantine Custom Message

**Fallback Options** | Site Reputation Action | URL Category Action List

Default Action

4. In the Name field, enter the name of the profile. The asterisk indicates that it is a mandatory field.
5. In the Description field, enter a description for the new profile.
6. From the list, select the required Engine Type.  
The following engine types are available:
  - Juniper Enhanced
  - Surf Control
  - Websense Redirect
  - Local
7. From the list, select the default action.

The following default actions are available:

- Log and Permit
- Block
- Permit
- Quarantine

8. Enter the Timeout value in seconds.

Once this limit is reached, fail mode settings are applied. The default is 15 seconds. You can enter a value from 1 to 1800 seconds.

9. By default, the Safe Search option is selected. This option is available only for the Juniper Enhanced engine type.

10. In the Custom Block Message field, enter a custom message to be sent when HTTP requests are blocked.

If a message begins with `http:` or `https:`, that message is considered a block message URL. Messages that begin with values other than `http:` or `https:` are considered custom block messages.

11. In the Quarantine Custom Message field, enter the quarantine message.

12. Configure the Fallback Options, Global Reputation Actions, and URL Category Action List tabs based on the engine type that you have selected.

If the engine type is Juniper Enhanced, configure the following parameters:

- On the Fallback Options tab, select the Default Action as either Log and Permit or Block.
- On the Global Reputation Actions tab:
  - Select Very Safe as Log and Permit, Permit, Block, or Quarantine. By default, Permit is selected.
  - Select Moderately Safe as Log and Permit, Permit, Block, or Quarantine. By default, Permit is selected.
  - Select Fairly Safe as Log and Permit, Permit, Block, or Quarantine. By default, Log and Permit is selected.
  - Select Suspicious as Log and Permit, Permit, Block, or Quarantine. By default, Log and Permit is selected.
  - Select Harmful as Log and Permit, Permit, Block, or Quarantine. By default, Block is selected.
- In the URL Category Action List:
  - Select the URL Category Name from the drop-down list.
  - Select the Action as Log and Permit, Permit, Block, or Quarantine from the drop-down list.

You can further configure the following reputed actions.

- Specify the action to be taken depending on the site reputation returned for the URL if there is no category match found.

Select Very Safe as either Log and Permit, Permit, Block, or Quarantine from the drop-down list.

- Select Moderately Safe as Log and Permit, Permit, Block, or Quarantine from the drop-down list.
- Select Fairly Safe as Log and Permit, Permit, Block, or Quarantine from the drop-down list.
- Select Suspicious as Log and Permit, Permit, Block, or Quarantine from the drop-down list.
- Select Harmful as Log and Permit, Permit, Block, or Quarantine from the drop-down list.
- Click **Add** to add the URL category.

The URL categories are added as tabs, organized by the domain, action, and reputation action for each URL category.

- To delete any category, select the required URL category and select **Delete**.

If the Engine Type is Surf Control, configure the following parameters:

- On the Fallback Options tab, select the Default Action as either Log and Permit or Block.
- In the URL Category Action List:
  - Select the URL Category Name from the drop-down list.
  - Select the Action as Log and Permit, Permit, or Block, from the drop-down list.
  - Click **Add** to add the URL category.

The URL categories are added as tabs, organized by the domain, and action for each URL category.

- To delete any category, select the required URL category and select **Delete**.

If the Engine Type is Websense Redirect, configure the following parameters:

- In the Account field, enter the user account associated with this Websense Web filtering profile.
- In the Server field, enter the hostname or IP address of the Websense server.
- In the Port field, enter the port number to use to communicate with the Websense server. The default port value is 15868.
- In the Socket field, enter the number of sockets used for communications between the client and server. The default value is 8.
- On the Fallback Options tab, select the Default Action as either Log and Permit or Block.

If the Engine Type is Local, configure the following parameter:

- On the Fallback Options tab, select the Default Action as either Log and Permit or Block.

13. Click **Create**.

A new Web filtering profile is created.

**Related  
Documentation**

- [UTM Overview on page 253](#)
- [Creating a UTM Policy on page 255](#)
- [Managing UTM Policies on page 257](#)
- [Managing Web Filtering Profiles on page 282](#)

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## Managing Web Filtering Profiles

You can modify, delete, and clone the Web filtering profiles that are listed on the Web Filtering Profile main page.

To open the Web Filtering Profile page:

- Select **UTM Policies > Web Filtering Profiles**.

The Web Filtering Profile page appears.

- Right-click the profile to manage it, or select the required options from Actions.

You can perform the following management tasks on the Web Filtering Profiles page:

- [Modifying a Web Filtering Profile on page 282](#)
- [Deleting a Web Filtering Profile on page 283](#)
- [Cloning a Web Filtering Profile on page 283](#)
- [Finding Web Filtering Profile Usage on page 283](#)
- [Showing Unused Web Filtering Profiles on page 283](#)
- [Deleting All Unused Web Filtering Profiles on page 284](#)

### Modifying a Web Filtering Profile

To modify a Web filtering profile:

1. Select **Security Director > UTM Policies > Web Filtering Profiles**.

The Web Filtering Profiles page appears.

2. Select the profile that you want to modify, and click the pencil icon or right-click and select **Modify Web Filtering Profile**.

The Modify Web Filtering Profile page appears.

3. On the Modify Web Filtering Profile page, you can modify the name, description, engine type, default action, timeout, custom block message, quarantine custom message, fallback options, site reputation actions, and URL category action list.
4. To modify the Web filtering profile, click **Modify**.

## Deleting a Web Filtering Profile

To delete a Web filtering profile:

1. Select **Security Director > UTM Policies > Web Filtering Profiles**.

The Web Filtering Profile page appears.

2. Select the profile that you want to delete, and click the minus sign or right-click and select the **Delete Web Filtering Profiles** option. A confirmation window appears before you can delete the profile.
3. To delete the Web filtering profile, click **Delete**.

## Cloning a Web Filtering Profile

To clone a Web filtering profile:

1. Select **Security Director > UTM Policies > Web Filtering Profiles**.

The Web Filtering Profile page appears.

2. Select the profile that you want to clone, right-click it, and select **Clone Web Filtering Profile**.

The Clone Web Filtering Profile page appears.

3. Modify any required field data in the Clone Web Filtering Profile page.
4. Click **Clone**.

The cloned Web filtering profile is created.

## Finding Web Filtering Profile Usage

To find the Web filtering profile usage:

1. Select **Security Director > UTM Policies > Web Filtering Profiles**.

The Web Filtering Profile page appears.

2. Select the profile for which you want to find the usage, right-click it, and select **Find Usage**.

The usage window appears, showing the usage of the selected profile.

## Showing Unused Web Filtering Profiles

To show unused Web filtering profiles:

1. Select **Security Director > UTM Policies > Web Filtering Profiles**.

The Web Filtering Profile page appears.

- From Actions, select **Show Unused**.

The Web profiles that are not used by any UTM policies are listed.

## Deleting All Unused Web Filtering Profiles

To delete unused Web filtering profiles:

- Select **Security Director > UTM Policies > Web Filtering Profiles**.

The Web Filtering Profile page appears.

- From Actions, select **Delete All Unused**. A confirmation window appears before you can delete the unused policies.

Click **Yes** to confirm the deletion. All unused Web filtering profiles are deleted.

### Related Documentation

- [UTM Overview on page 253](#)
- [Creating a UTM Policy on page 255](#)
- [Managing UTM Policies on page 257](#)
- [Creating a Web Filtering Profile on page 278](#)

## Creating a URL Pattern

A URL pattern is a list of URLs organized into a group. You can later assign this list to a URL category.

To create a URL pattern:

- Select **Security Director > UTM Policies**.

The UTM Policies page appears.

- In the left pane, under the UTM Policies, select **URL Patterns**.

The URL Patterns page appears, listing the existing patterns, as shown in [Figure 130 on page 284](#).

**Figure 130: URL Patterns Main Page**

Name	Domain	Value	Description
<input type="checkbox"/> ip-black-list	SYSTEM	http://*.sex.com,http://*.gambler.com,http://*.flashgames.com	
<input type="checkbox"/> ip-blaze-black-list	SYSTEM	http://*.sex.com,http://*.gambler.com,http://*.flashgames.com	
<input type="checkbox"/> ip-blaze-black-list	SYSTEM	http://*.sex.com,http://*.gambler.com,http://*.flashgames.com	
<input type="checkbox"/> ip-white-list	SYSTEM	http://*.work.com,http://*.taxes.com,http://*.networking.com	



3. To create a new web filtering profile, click the plus sign (+).

The Create URL Pattern page appears, as shown in [Figure 131 on page 285](#).

**Figure 131: Create URL Pattern Page**

4. In the Name field, enter the name of the URL pattern. The asterisk indicates that it is a mandatory field.
5. In the Description field, enter a description for the new URL pattern.
6. To create the URL pattern, enter URL(s) in the URL List field, and click **Add**. Separate multiple URLs

The URL List field supports the \*, ., [, ], and ? wildcard characters. Precede all wildcard character with http://. You can only use \* if it is at the beginning of the URL followed by a period, and you can only use ? at the end of the URL.

The following wildcard syntaxes are supported:

- http://\*.juniper.net
- http://www.juniper.ne?
- http://www.juniper.n??.

The following wildcard syntaxes are not supported:

- \*juniper.net
- www.juniper.ne?
- http://\*juniper.net
- http://\*:

All URLs entered in the URL List field are added to the URL List column. You can search for any particular URLs in the Search field.

If you want to delete any URL from the list, select the URL and click **Delete**.

7. Click **Create**.

A new URL pattern is created.

**Related  
Documentation**

- [UTM Overview on page 253](#)
- [Creating a UTM Policy on page 255](#)
- [Managing UTM Policies on page 257](#)
- [Managing URL Patterns on page 286](#)

---

## Managing URL Patterns

You can modify, delete, and clone the URL patterns that are listed on the URL Pattern main page.

To open the URL Pattern page:

- Select **UTM Policies > URL Patterns**.

The URL Pattern page appears.

- Right-click the profile to manage it, or select the required options from Actions.

You can perform the following management tasks on the URL Patterns page:

- [Modifying a URL Pattern on page 287](#)
- [Deleting a URL Pattern on page 287](#)
- [Cloning a URL Pattern on page 287](#)
- [Finding URL Pattern Usage on page 287](#)
- [Showing Unused URL Patterns on page 288](#)
- [Delete All Unused URL Patterns on page 288](#)

## Modifying a URL Pattern

To modify a URL pattern:

1. Select **Security Director > UTM Policies > URL Patterns**.

The URL Pattern page appears.

2. Select the URL pattern that you want to modify, and click the pencil icon or right-click and select **Modify URL Pattern**.

The Modify URL Pattern page appears.

3. On the Modify URL Pattern page, you can modify the name, description, and URL list.

You can also perform the inline modification of the URL pattern.

4. To modify the URL pattern, click **Modify**.

## Deleting a URL Pattern

To delete a URL pattern:

1. Select **Security Director > UTM Policies > URL Patterns**.

The URL Pattern page appears.

2. Select the URL pattern that you want to delete, and click the minus sign or right-click and select the **Delete URL Patterns** option. A confirmation window appears before you can delete the profile.

3. To delete the URL pattern, click **Delete**.

## Cloning a URL Pattern

To clone a URL pattern:

1. Select **Security Director > UTM Policies > URL Patterns**.

The URL Pattern page appears.

2. Select the URL pattern that you want to clone, right-click it, and select **Clone URL Pattern**.

The Clone URL Pattern page appears.

3. On the Clone URL Pattern page, modify any required field data.

4. Click **Clone**.

The cloned URL pattern is created.

## Finding URL Pattern Usage

To find the URL pattern usage:

1. Select **Security Director > UTM Policies > URL Patterns**.

The URL Pattern page appears.

2. Select the URL pattern for which you want to find the usage, right-click it, and select **Find Usage**.

The usage window appears, showing the usage of the selected pattern.

## Showing Unused URL Patterns

To show the unused URL patterns:

1. Select **Security Director > UTM Policies > URL Patterns**.

The URL Pattern page appears.

2. From Actions, select **Show Unused**.

The URL patterns that are not used by any UTM policies are listed.

## Delete All Unused URL Patterns

To delete the unused URL patterns:

1. Select **Security Director > UTM Policies > URL Patterns**.

The URL Patterns page appears.

2. From Actions, select **Delete All Unused**. A confirmation window appears before you can delete the unused patterns.

Click **Yes** to confirm the deletion. All unused URL patterns are deleted.

### Related Documentation

- [UTM Overview on page 253](#)
- [Creating a UTM Policy on page 255](#)
- [Managing UTM Policies on page 257](#)
- [Creating a URL Pattern on page 284](#)

---

## Creating a Custom URL Category List

A URL category is a list of URL patterns grouped under a single title.

To create a new custom URL category list:

1. Select **Security Director > UTM Policies**.

The UTM Policies page appears.

2. In the left pane, under UTM Policies, select **Custom URL Category Lists**.

The Custom URL Category Lists page appears, listing the existing URL categories, as shown in [Figure 132 on page 289](#).

Figure 132: Custom URL Category Lists Main Page

Name	Domain	Value	Description
<input type="checkbox"/> Adult_Sexually_Explicit	SYSTEM	0	Predefined in surf-control server
<input type="checkbox"/> Advertisements	SYSTEM	0	Predefined in surf-control server
<input type="checkbox"/> Arts_Entertainment	SYSTEM	0	Predefined in surf-control server
<input type="checkbox"/> Chat	SYSTEM	0	Predefined in surf-control server
<input type="checkbox"/> Computing_Internet	SYSTEM	0	Predefined in surf-control server
<input type="checkbox"/> Criminal_Skills	SYSTEM	0	Predefined in surf-control server
<input type="checkbox"/> Drugs_Alcohol_Tobacco	SYSTEM	0	Predefined in surf-control server
<input type="checkbox"/> Education	SYSTEM	0	Predefined in surf-control server
<input type="checkbox"/> Enhanced_Abortion	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Abused_Drugs	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Adult_Content	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Adult_Material	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Advanced_Malware_Command_and_Control	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Advanced_Malware_Payloads	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Advertisements	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Advocacy_Groups	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Alcohol_and_Tobacco	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Alternative_Journals	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Bandwidth	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Blogs_and_Personal_Sites	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Bot_Networks	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Business_and_Economy	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Computer_Security	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Content_Delivery_Networks	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Cultural_Institutions	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Custom_Encrypted_Payloads	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Drugs	SYSTEM	0	Predefined in juniper-enhanced websense server
<input type="checkbox"/> Enhanced_Dynamic_Content	SYSTEM	0	Predefined in juniper-enhanced websense server

- To create a new custom URL category list, click the plus sign (+).

The Create Custom URL Category List page appears, as shown in [Figure 133 on page 289](#).

Figure 133: Create Custom URL Category List Page

- In the URL Category Name field, enter the name of the URL category list. The asterisk indicates that it is a mandatory field.

5. In the Description field, enter a description for the new URL category list.
6. From the Available Values column, select the required URL patterns and move them to the Selected Values column.

If you want to select the complete list, click **Page**.

7. Click **Create**.

A new custom URL category list is created.

#### Related Documentation

- [UTM Overview on page 253](#)
- [Creating a UTM Policy on page 255](#)
- [Managing UTM Policies on page 257](#)
- [Managing Custom URL Category Lists on page 290](#)

---

## Managing Custom URL Category Lists

You can modify, delete, and clone the custom URL category lists that are listed on the Custom URL Category List main page.

To open the Custom URL Category List page:

- Select **UTM Policies > Custom URL Category List**.

The Custom URL Category List page appears.

- Right-click the profile to manage it, or select the required options from Actions.

You can perform the following management tasks on the Custom URL Category List page:

- [Modifying a Custom URL Category List on page 290](#)
- [Deleting a Custom URL Category List on page 291](#)
- [Cloning a Custom URL Category List on page 291](#)
- [Finding Custom URL Category List Usage on page 291](#)
- [Showing Unused Custom URL Category Lists on page 291](#)
- [Deleting All Unused Custom URL Category Lists on page 292](#)

### Modifying a Custom URL Category List

To modify a custom URL category list:

1. Select **Security Director > UTM Policies > Custom URL Category List**.

The Custom URL Category List page appears.

2. Select the category list that you want to modify, and click the pencil icon or right-click and select **Modify Custom URL Category List**.

The Modify Custom URL Category List page appears.

3. On the Modify Custom URL Category List page, you can modify the name, description, and custom URL category list.
4. To modify the custom URL category list, click **Modify**.

## Deleting a Custom URL Category List

To delete a custom URL category list:

1. Select **Security Director > UTM Policies > Custom URL Category List**.  
The Custom URL Category List page appears.
2. Select the category list that you want to delete, and click the minus sign or right-click and select the **Delete Custom URL Category List** option. A confirmation window appears before you can delete the category list.
3. To delete the custom URL category list, click **Delete**.

## Cloning a Custom URL Category List

To clone a custom URL category list:

1. Select **Security Director > UTM Policies > Custom URL Category List**.  
The Custom URL Category List page appears.
2. Select the category list that you want to clone, right-click it and select **Clone Custom URL Category List**.  
The Clone Custom URL Category List page appears.
3. On the Clone Custom URL Category List page, modify any required field data .
4. Click **Clone**.  
The cloned custom URL category list is created.

## Finding Custom URL Category List Usage

To find a custom URL category list usage:

1. Select **Security Director > UTM Policies > Custom URL Category List**.  
The Custom URL Category List page appears.
2. Select the list for which you want to find the usage, right-click it, and select **Find Usage**.  
The usage window appears, showing the usage of the selected list.

## Showing Unused Custom URL Category Lists

To show unused custom URL category Lists:

1. Select **Security Director > UTM Policies > Custom URL Category List**.  
The Custom URL Category List page appears.

2. From Actions, select **Show Unused**.

The custom URL category lists are not used by any UTM policies are listed.

## Deleting All Unused Custom URL Category Lists

To delete unused custom URL category lists:

1. Select **Security Director > UTM Policies > Custom URL Category List**.

The Custom URL Category List page appears.

2. From Actions, select **Delete All Unused**. A confirmation window appears before you can delete the unused category lists.

To confirm the deletion, click **Yes**. All unused category lists are deleted.

### Related Documentation

- [UTM Overview on page 253](#)
- [Creating a UTM Policy on page 255](#)
- [Managing UTM Policies on page 257](#)
- [Creating a Custom URL Category List on page 288](#)

---

## Creating a UTM Device Profile

A new profile object is available for UTM global options for a device. This object, the UTM device profile, has configurable properties and refers to the profiles for the following Security Director profile objects:

- Antivirus
- Web filtering
- Antispam

Security Director puts no restriction on creating a policy profile based on the global configurations. For example, if you select a antivirus global options type as Sophos, you can still create other profile types such as Kaspersky and others.

To create a new UTM device profile:

1. Select **Security Director > UTM Policies**.

The UTM Policies page appears.

2. In the left pane, under UTM Policies, select **Device Profiles**.

The Device Profiles page appears, listing the existing profiles, as shown in [Figure 134 on page 293](#).



Figure 134: Device Profiles Main Page

Name	Domain	Anti Spam Address White List	Anti Spam Address Black List	Anti Virus URL White List	Web filtering URL White List	Web filtering URL Black List
10.205.50.213	Global	ip-white-list	ip-black-list	white-category	white-category	black-category

3. To create a new device profile, click the plus sign (+).

The Create UTM Device Profile page appears, as shown in [Figure 135 on page 294](#).

Figure 135: Create UTM Device Profile Page

**Create UTM Device Profile**

**GENERAL INFORMATION**

Name\*

Description

Device Selection

Available		Selected
Filter <input type="text"/> Select: Page   None		Filter <input type="text"/> Select: Page   None
10.207.97.195		
clust-41-node1 (Cluster)		
LSYS1(clust-41-node1) (Cluster)		
scale-vsrx		
<div>   Page 1 of 1     </div>		

**Anti-Spam Profile** | Anti-Virus Profile | Web Filtering Profile

Address White List

Address Black List

Create Cancel

4. In the Name field, enter the name of the device profile. The asterisk indicates that it is a mandatory field.
5. In the Description field, enter a description for the new device profile.
6. To assign a device or devices to a profile, select the device or devices in the Available column, and move them to the Selected column.  
If a device is already assigned to a profiles, such devices are not listed in the Available column.
7. On the Anti-Spam Profile tab, configure the following parameters:
  - Select the address whitelist from the drop-down list of the Address White List field.
  - Select the address blacklist from the drop-down list of the Address Black List field.
8. On the Anti-Virus Profile tab, configure the following parameters:

- Enter MIME(s) in the MIME White List field.
  - Enter exception MIME(s) in the Exception MIME White List field.
  - Select the URL list from the URL White List drop-down list,
9. On the Web Filtering Profile tab, configure the following parameters:
- Select the URL whitelist from the drop-down list of the URL White List field.
  - Select the URL blacklist from the drop-down list of the URL Black List field.
10. Click **Create**.

A new UTM device profile is created.



**NOTE:** On the Device Profiles main page, In the Search field, you can search for a device with its IP address.

#### Related Documentation

- [UTM Overview on page 253](#)
- [Creating a UTM Policy on page 255](#)
- [Managing UTM Policies on page 257](#)
- [Managing Device Profiles on page 295](#)

## Managing Device Profiles

You can modify, delete, and clone the device profiles that are listed on the Device Profiles main page.

To open the Device Profiles page:

- Select **UTM Policies > Device Profiles**.

The Device Profiles page appears.

- Right-click the profile to manage it, or select the required options from Actions.

You can perform the following management tasks on the Device Profiles page:

- [Modifying a UTM Device Profile on page 296](#)
- [Deleting a UTM Device Profile on page 296](#)
- [Cloning a UTM Device Profile on page 296](#)
- [Showing Unused UTM Device Profiles on page 296](#)
- [Deleting All Unused UTM Device Profiles on page 297](#)

## Modifying a UTM Device Profile

To modify a device profile:

1. Select **Security Director > UTM Policies > Device Profiles**.

The Device Profiles page appears.

2. Select the profile that you want to modify, and click the pencil icon or right-click and select **Modify UTM Device Profile**.

The Modify UTM Device Profile page appears.

3. On the Modify UTM Device Profile page, you can modify name, description, and antispy, antivirus, and Web filtering profiles.
4. To modify the UTM device profile, click **Modify**.

## Deleting a UTM Device Profile

To delete a device profile:

1. Select **Security Director > UTM Policies > Device Profiles**.

The Device Profiles page appears.

2. Select the profile that you want to delete, and click the minus sign or right-click and select the **Delete UTM Device Profiles** option. A confirmation window appears before you can delete the device profile.
3. To delete the UTM device profile, click **Delete**.

You can select more than one profile to delete.

## Cloning a UTM Device Profile

To clone a device profile:

1. Select **Security Director > UTM Policies > Device Profiles**.

The Device Profiles page appears.

2. Select the profile that you want to clone, right-click it, and select **Clone UTM Device Profile**.

The Clone UTM Device Profile page appears.

3. On the Clone UTM Device Profile page, modify any required field data.
4. Click **Clone**.

The cloned UTM device profile is created.

## Showing Unused UTM Device Profiles

To show unused device profiles:

1. Select **Security Director > UTM Policies > Device Profiles**.

The Device Profile page appears.

2. From Actions, select **Show Unused**.

The device profiles that are not used by any UTM policies are listed.

## Deleting All Unused UTM Device Profiles

To delete unused device profiles:

1. Select **Security Director > UTM Policies > Device Profiles**.

The Device Profile page appears.

2. From Actions, select **Delete Unused**. A confirmation window appears before you can delete the device profile.

Click **Yes** to confirm the deletion. All device profiles that are not used by any UTM policies are deleted.

### Related Documentation

- [UTM Overview on page 253](#)
- [Creating a UTM Policy on page 255](#)
- [Managing UTM Policies on page 257](#)
- [Creating a UTM Device Profile on page 292](#)



## PART 10

# NAT Policies

- [NAT Policies on page 301](#)
- [NAT Pools on page 347](#)
- [Port Sets on page 359](#)





## CHAPTER 21

# NAT Policies

- [NAT Overview on page 301](#)
- [Creating NAT Policies on page 305](#)
- [Unlocking Locked Policies on page 319](#)
- [Global Address Book Overview on page 320](#)
- [Adding Rules to a NAT Policy on page 322](#)
- [Ordering the Rules in a NAT Policy on page 328](#)
- [Publishing NAT Policies on page 329](#)
- [Managing NAT Policies on page 332](#)

## NAT Overview

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Network Address Translation (NAT) is a form of network masquerading where you can hide devices between the zones or interfaces. A trust zone is a segment of the network where security measures are applied. It is usually assigned to the internal LAN. An untrust zone is the Internet. NAT modifies the IP addresses of the packets moving between the trust and untrust zones.

Whenever a packet arrives at the NAT device, the device performs a translation on the packet's IP address by rewriting it with an IP address that was specified for external use. After translation, the packet appears to have originated from the gateway rather than from the original device within the network. This helps you hide internal IP addresses from the other networks and keep your network secure.

Using NAT also allows you to use more internal IP addresses. Because these IP addresses are hidden, there is no risk of conflict with an IP address from a different network. This helps you conserve IP addresses.

Junos Space Security Director supports three types of NAT:

- **Source NAT**—Translates the source IP address of a packet leaving the trust zone (outbound traffic). It translates the traffic originating from the device in the trust zone. Using source NAT, an internal device can access the network by using the IP addresses specified in the NAT policy.

The following use cases are supported with IPv6 NAT:

- Translation from one IPv6 subnet to another IPv6 subnet without Port Address Translation (PAT)
- Translation from IPv4 addresses to IPv6 prefixes along with IPv4 address translation
- Translation from IPv6 host(s) to IPv6 host(s) with or without PAT
- Translation from IPv6 host(s) to IPv4 host(s) with or without PAT
- Translation from IPv4 host(s) to IPv6 host(s) with or without PAT
- Destination NAT—Translates the destination IP address of a packet entering the trust zone (inbound traffic). It translates the traffic originating from a device outside the trust zone. Using destination NAT, an external device can send packets to a hidden internal device.

The following use cases are supported with IPv6 NAT:

- Mapping of one IPv6 subnet to another IPv6 subnet
- Mapping of one IPv6 host (and optional port number) to another special IPv6 host (and optional port number)
- Mapping of one IPv6 host (and optional port number) to another special IPv4 host (and optional port number)
- Mapping of one IPv4 host (and optional port number) to another special IPv6 host (and optional port number)
- Static NAT—Always translates a private IP address to the same public IP address. It translates traffic from both sides of the network (both source and destination). For example, a webserver with a private IP address can access the Internet using a static, one-to-one address translation.

The following use cases are supported with IPv6 NAT:

- Mapping between one IPv6 subnet and another IPv6 subnet
- Mapping between one IPv6 host and another IPv6 host
- Mapping between IPv4 address a.b.c.d and IPv6 address Prefix::a.b.c.d
- Mapping between IPv4 host(s) and IPv6 host(s)
- Mapping between IPv6 host(s) and IPv4 host(s)

Table 23 on page 302 shows the persistent NAT support for different source NAT and destination NAT addresses.

**Table 23: Persistent NAT Support**

Source NAT Address	Translated Address	Destination NAT Address	Persistent NAT
IPv4	IPv6	IPv4	No
IPv4	IPv6	IPv6	No

Table 23: Persistent NAT Support (*continued*)

Source NAT Address	Translated Address	Destination NAT Address	Persistent NAT
IPv6	IPv4	IPv4	Yes
IPv6	IPv6	IPv6	No

Table 24 on page 303, and Table 25 on page 303 show the translated address pool selection for source NAT, destination NAT, and static NAT addresses.

Table 24: Translated Address Pool Selection for Source NAT

Source Address	Destination Addresses	Pool Address
IPv4	IPv4	IPv4
IPv4	IPv6 Subnet must be greater than 96.	IPv6
IPv6	IPv4	IPv4
IPv6	IPv6	IPv6

Table 25: Translated Address Pool Selection for Destination NAT And Static NAT

Source Address	Destination Addresses	Pool/Translated Address
IPv4	IPv4	IPv4 or IPv6
IPv4	IPv6 Subnet must be greater than 96.	IPv4 or IPv6
IPv6	IPv4	IPv4
IPv6	IPv6	IPv4 or IPv6

**NOTE:**

- For source NAT, the proxy NDP is available for NAT pool addresses. For destination NAT and static NAT, the proxy NDP is available for destination NAT addresses.
- A NAT pool can have a single IPv6 subnet or multiple IPv6 hosts.
- You cannot configure the overflow pool if the address type is IPv6.
- NAT pools permit address entries of only one version type: IPv4 or IPv6.

Junos Space Security Director provides you with a workflow where you can create and apply NAT policies on devices in a network.

Security Director views each logical system as any other security device and takes ownership of the security configuration of the logical system. In Security Director, each logical system is managed as a unique security device.



**NOTE:** If the root logical system is discovered, all other user logical systems inside the device, will also be discovered.

---

Because an SRX Series logical system device does not support interface NAT, Security Director also does not allow interface NAT configuration of logical system. The logical system cannot participate in group NAT in Security Director. For a device NAT policy, the interface based translation selection and pool with Overflow Pool as interface are not supported in logical systems. The configuration is validated during the publishing of the NAT policy to avoid commit failures in the device.

**Related  
Documentation**

- [Creating NAT Policies on page 305](#)
- [Publishing NAT Policies on page 329](#)
- [Managing NAT Policies on page 332](#)
- [Managing NAT Pools on page 351](#)
- [Global Address Book Overview on page 320](#)

## Creating NAT Policies

To create a NAT policy:

1. Select **Security Director > NAT Policy**.

The NAT Policy Tabular view appears, as shown in [Figure 136 on page 305](#). NAT Policy Tabular view is a table with two panes. The left pane displays all the NAT policies in the system, which includes device, group, and global NAT policies.

**Figure 136: NAT Tabular View**

S.No.	Name	NAT Type	Original Packet Source	Original Packet Destination	Translated Packet Source
			Ingress Address	Egress Address Port	
1	src-iso-no-nat	SOURCE	Zones: trust Address: dst03-prv	Zones: untrust Address: RTP-Cisco-192-1 Port: Any	No translation
2	dst03-prv-nat	SOURCE	Zones: trust Address: dst03-prv	Zones: untrust Address: Any-IPv4 Port: Any	Interface

2. Click **Create NAT Policy** from the left pane.

The Create NAT Policy page appears. You can create a group policy or a device policy on this page.

3. To create a group policy:
  - a. Enter the name of the group policy in the Name field.
  - b. Enter a description for the group policy rules in the Description field. Security Director sends the comments entered in this field to the device.
  - c. Click the Show Assigned Devices check box to make devices on which policies have been configured available for selection.
  - d. Select the devices on which the group policy will be published in the Select Devices pane. Select the devices from the Available column and click the right arrow to move these devices to the Selected column.

You can also search for the devices by entering the device name, device IP address, or device tag in the Search field in the Select Devices section. Once the searched devices are displayed, you can move them to the Selected column as shown in [Figure 137 on page 306](#).

Figure 137: Create NAT Policy Page

Create NAT Policy

Type: ☒ Group ☐ Device

Name:

Description:

☒ Enable Auto ARP Configuration

☒ Show only devices without policy assigned

Available	Selected
10.205.230.1 Global	
10.205.230.10 Global	
10.205.230.100 Global	
10.205.230.101 Global	
10.205.230.102 Global	
10.205.230.103 Global	
10.205.230.104 Global	
10.205.230.105 Global	
10.205.230.106 Global	
10.205.230.107 Global	
10.205.230.108 Global	
Total: 568	

Create Cancel

e. Click **Create**.

During a device assignment for a group policy, only devices from the current and child domains (with view parent enabled) are listed. Devices in the child domain with view parent disabled are not listed. Not all the group policies of the Global domain are visible in the child domain. Group policies of the Global domain (including All device policy) are not visible to the child domain, if the view parent of that child domain is disabled. Only the group policies of the Global domain, which has devices from the child domain assigned to it, are visible in the child domain. If there is a group policy in global domain with devices from both D1 and the Global domains assigned to it, only this group policy of the Global domain is visible in the D1 domain along with only the D1 domain devices. No other devices, that is the Device-Exception policy, of the Global domain is visible in the D1 domain.

You cannot edit a group policy of the Global domain from the child domain. This is true for All Devices policy as well. Modifying the policy, deletion of the policy, managing a snapshot, snapshot policy and acquiring the policy lock is also not allowed. Similarly, you cannot perform these actions on the Device-Exception policy of the D1 domain from the Global domain. You can prioritize group policies from the current domain. Group policies from the other domains are not listed.

**NOTE:**

- One device can hold configuration data related to one NAT policy only. Therefore you cannot share devices for multiple NAT policies.
- All logical systems are now available for selection for a group NAT policy. These logical systems support the Translated Packet Source match type as Interface.

## 4. To create a device policy:

- Enter the name of the device policy in the Name field.
- Enter a description for the device policy in the Description field.
- Select the device on which the device policy will be published from the Device menu.
- Click **Create**.

During a device assignment for a device policy, only devices from the current domain are listed.

All devices policy enables rules to be enforced globally to all the devices managed by Security Director. All devices policy is part of the Global domain and is visible in all the child domains if the view parent is enabled.

Validate policies by clicking the **Validate** button, available next to the Save and Discard buttons. If any errors are found during the validation, a red warning icon is shown for the respective policies. For NAT policies, incomplete rules and duplicate rule names are validated.

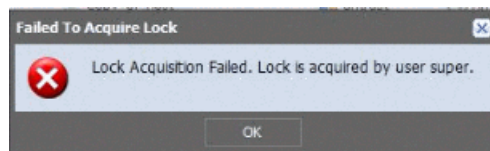
Security Directors permits you to save policies that contain errors. Warnings messages are displayed for policies that contain errors, but you can proceed to save such policies as drafts. You cannot publish policies that are in the draft state. The tooltip for the policy shows the state as draft; because it is a draft, the tooltip does not show the publish option.



**NOTE:** If you do not have permission to the device assigned to a device policy, you cannot view the policy in the respective policy ILP.

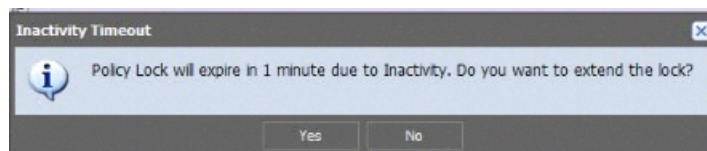
Before you can edit the policy, you must lock it by clicking the lock icon, which is available in the policy tabular view, as shown in [Figure 136 on page 305](#). You can hold more than one policy lock at a given time. You can unlock the policy by clicking the unlock icon next to the lock icon in the policy tabular view. If you attempt to lock a policy that is already locked by another user, the following message appears, as shown in [Figure 138 on page 308](#). The tooltip shows the policy locked user information. Mouse over the policy that you want to lock to view the tooltip.

Figure 138: Lock Failure Error Message for the Second User



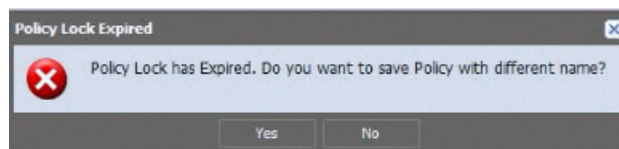
If the locked policy is inactive for the set timeout value (default 5 minutes), just 1 minute before the timeout interval expires, the following message appears, as shown in [Figure 139 on page 308](#). If the policy lock timeout interval expires for multiple locked policies, the same warning message appears for each locked policy. To understand the configuration of timeout value and session timeout value, see [“Unlocking Locked Policies” on page 319](#)

Figure 139: Inactivity Timeout Error



Click **Yes** to extend the locking period. If you click **No**, and if there is activity on the policy within the last minute of the lock's life, the timer will be reset and the lock will not be released. If you ignore the message, when the policy lock timeout interval expires 1 minute later, you are prompted to either save the edited policy with a different name or lose the changes, as shown in [Figure 140 on page 308](#)

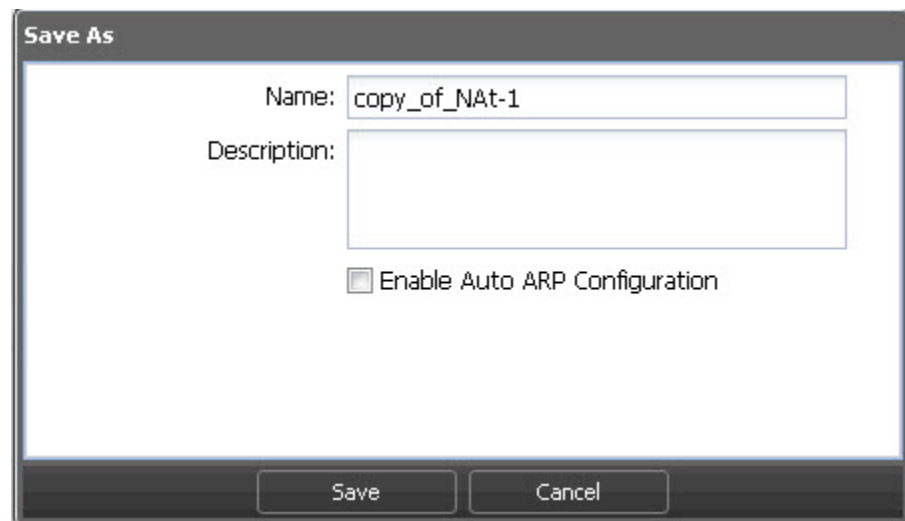
Figure 140: Policy Lock Expired Message



If you click **Yes** to save the edited policy with a different name, the following window appears, as shown in [Figure 141 on page 309](#). If you navigate away from the locked policy, either the policy is unlocked (when there are no changes) or you will get an option to save the edited policy with a different name.

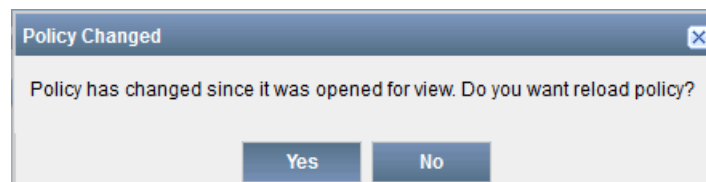


Figure 141: NAT Locked Policy: Save As Window



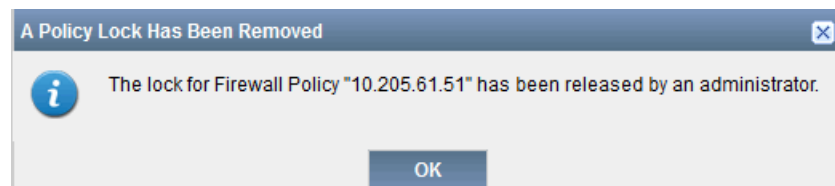
After editing a locked policy, if you move to another policy without saving your edited policy, or if you unlock the policy without saving, the following warning message appears, as shown in [Figure 142 on page 309](#).

Figure 142: NAT Policy: Unsaved Changes Message



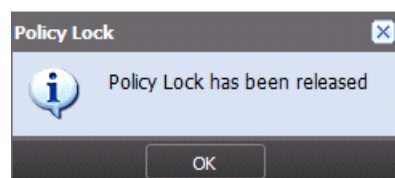
If the Security Director administrator releases the lock, you will receive the following warning message, as shown in [Figure 143 on page 309](#).

Figure 143: NAT Policy: Policy Unlock by Admin Message



If you do not edit the locked policy and the policy lock timeout expires, the following warning message appears, as shown in [Figure 144 on page 309](#).

Figure 144: NAT Policy Lock Release Message



The policy is locked and released for the following policy operations. Also, these operations are disabled for a policy, if the policy is locked by some other user.

- Modify
- Assign devices
- Rollback
- Delete



**NOTE:**

- You can unlock the policy by logging out of the application or when the policy lock timeout expires. You can unlock your policies even if they are not edited.
- If the browser crashes when the policy is still locked, the policy is unlocked only after the timeout interval expires.
- If there is an object conflict resolution during a migration, import, or rollback, and if you are editing any objects, you will receive a save as option for the edited objects. The behavior is the same when you import addresses from CSV.
- Policy lock is not released under the following scenario:
  - If you save or discard you changes to the locked policy.
  - if you do not make any changes to the locked policy and navigate to another policy.
- It is recommended to configure the session time longer than the lock timeout value.

---

To perform an inline addition of a new NAT pool object in the source NAT pool:

1. Click **Translated Packet Source** and select **Translation Type** as Pool.

Figure 145: Setting Source NAT Pool Page

Translation Type: Pool

Source Pool: Select Pool ...

Pool Address:

☐ Advanced

☐ Configure Proxy ARP for Pool Addresses

☐ Persistent

Ok Cancel

2. Click the plus sign to create the source NAT pool.

Figure 146: Create Source NAT Pool Page

Create Source NAT Pool

Name:

Description:

Pool Address: Select Address ...

☐ Advanced

Translation: Port/Range

Port: Range

Start:

End:

Create Cancel

You can select **No Translation**, **Port/Range**, or **Overload** for the Translation field.

3. Click **Create** to create the source NAT pool or **Cancel** to discard the changes.

To perform inline addition of a new NAT pool object in the destination NAT pool:

1. Click **Translated Packet Destination** and select **Pool** for the Translation Type.

Figure 147: Setting the Destination Pool Page

2. Click the plus sign (+) to create the destination NAT pool.

Figure 148: Create Destination NAT Pool Page

3. Click **Create** to create the destination NAT pool or **Cancel** to discard the changes.



**NOTE:** Advanced NAT pool options must be modified from the Object Builder workspace in the NAT pool ILP.

To create address objects or address group for the NAT policy:

1. Click the source address. The following window appears with the available addresses to create the objects.

Figure 149: Create Inline NAT Address Object

2. Click on the plus sign (+) to create the new address object or address group for NAT policy.

There are two radio buttons available to create a new address object or address group, as shown in [Figure 150 on page 313](#). By default, the Address radio button is selected.

**Figure 150: Create NAT Address Page**

3. Click **Create** to create the new address object or **Cancel** to discard all changes.

To create address groups for Source and Destination NAT rules of source address:

1. Select the Address Group radio button to create the new address group.

[Figure 151 on page 313](#) shows the page that appears.

**Figure 151: Inline Address Group Creation for NAT Policy**

2. Enter the name of an address group in the Name field.
3. In the Addresses filed, you can select all addresses available in the Available column or select few addresses to create a new address group.
4. Click **Create** to create the address group. This adds the newly created address objects to the selected addresses and returns to the address selector. Click **Cancel** to discard your changes and return to the NAT ILP.



**NOTE:** Follow the same steps to create objects for the Source NAT rule for the destination address. You can create address object inline similar to address group inline.

To add Junos OS protocols to the NAT policy:

1. Click on any column and select the **Protocol** check box. The Protocol column is added in the NAT ILP.

This column is not enabled by default.

2. Click the **Protocol** column for the required policy, and a separate window appears, listing all the protocols.

The supported protocol range is from 0 to 255 in the Junos OS Release 11.4 and later. For a single rule, you can choose up to four protocols.

[Table 26 on page 314](#) shows the protocols that have unique names. The other protocols, which do not have names, are identified with numbers.

**Table 26: Junos OS Protocol Names**

Protocol Name	Description
ah	Authentication Header
egp	Exterior gateway protocol
esp	Encapsulating Security Payload
gre	Generic routing encapsulation
icmp	Internet Control Message Protocol
icmp6	Internet Control Message Protocol version 6
igmp	Internet Group Management Protocol
ipip	IP over IP
ospf	Open Shortest Path First
pim	Protocol Independent Multicast
rsvp	Resource Reservation Protocol
sctp	Stream Control Transmission Protocol
tcp	Transmission Control Protocol
udp	User Datagram Protocol

3. Select the required protocols from the list, and click **OK**.

You can send the protocols to clusters, logical systems, or standalone devices. You can perform a normal or global search of protocols with names or numbers.

You can search for NAT policies in the left pane using NAT policy names and devices used in the NAT policy. You can search the rules in the right pane using NAT rule type, original packet source, original packet destination, translated packet source, translated packet destination, and the description used in the rule.

Tooltip view is available to show the object value information for the objects that you are using within the policies. Mouse over the source address or destination address and objects information is provided in the tool tip, as shown in figure. The tooltip contains address group name, value of the address such as IP, and subnet.

Security Director provides advanced search options for NAT policies. Click the down arrow icon next to the search icon and select **Advance Search**, and the following box appears, as shown in [Figure 152 on page 315](#).

**Figure 152: Advanced Search Box for NAT Policies**

The screenshot shows a web-based 'Advance Search' dialog box. It features a title bar with the text 'Advance Search'. Below the title bar, there are several search criteria sections. The first section is 'Rule Name' with a text input field. The second section is 'Type' with a dropdown menu. The third section is 'Original Packet Source' with a sub-section containing 'Ingress' and 'Address' text input fields. The fourth section is 'Original Packet Destination' with a sub-section containing 'Egress', 'Address', and 'Port' text input fields. The fifth section is 'Translated Packet Address' with a text input field. At the bottom of the dialog, there are three buttons: 'Filter', 'Reset', and 'Cancel'.

You can perform advanced searches for the following fields:

- Rule Name
- Type—Type of NAT (source, destination, or static)
- Original Packet Source
  - Ingress—Zone, interface, or routing instance
  - Address
- Original Packet Destination
  - Egress—Zone, interface, or routing instance
  - Address

- Port
- Translated Packet Address
- Description
- Custom column

The following advanced search criteria are available:

- Wildcard search for rule names using an asterisk (\*) is allowed.
- For a rule name search, only the OR operation is allowed, because a policy cannot have multiple rule names.
- For source and destination addresses, both AND and OR operations are allowed.
- For ingress and egress fields, both AND and OR operations are allowed.
- For port, you can only use the OR operation.
- Translated packet address field can only use the OR operation.
- Multiple groups can be grouped using parenthesis. Grouping can be used during filed or keyword searches as well.
- Negate (-) symbol can be used to exclude objects that contain a specific term name.
- The plus (+) operator can be used to specify that the term after the + symbol existing the field value to be filtered along with other searched items.
- Escaping special characters are part of the search syntax. The supported special characters are + - & || ! ( ) { } [ ] ^ " ~ \* ? : \.

[Table 27 on page 316](#) explains certain specific Security Director search behavior.

**Table 27: Specific Security Director Search Behavior**

Search Item	Description
IPv4 addresses	If you provide a valid IPv4 address, range, or network in the search field, Security Director finds all addresses that include these IPv4 address, range, or network.
Destination port in service	If you configured a destination port range of a service, Security Director matches ports within this range but this is valid only during field or keyword search.
Keyword or field	If you require to search specific attributes in an object as opposed to global search, you can use keyword or field search.

[Table 28 on page 316](#) shows example search results for different parameters.

**Table 28: Example: Different Advanced Search Parameters for NAT**

Scenario	Query Parameter	Description
Wildcard search for rule names	RuleName:( Device* )	Rule names starting with <i>Device</i> are filtered.



Table 28: Example: Different Advanced Search Parameters for NAT (*continued*)

Scenario	Query Parameter	Description
Search rule name along with NAT type	RuleName:( <i>rs1</i> ) AND dcNatRuleType:( SOURCE )	Source NAT with rule name <i>rs1</i> are filtered.
Ingress zone with address to egress zone with address	Ingress:( <i>trust</i> ) AND SrcAddress:( <i>add1_1</i> ) AND Egress:( <i>trust</i> ) AND DstAddress:( 2.2.2.2/32 )	Rules with ingress zone <i>trust</i> , address <i>add1_1</i> , and egress zone <i>trust</i> , address 2.2.2.2/32, are filtered.
Ingress zone with address to egress zone with address, along with the port number	dcNatRuleType:( DESTINATION ) AND Ingress:( <i>zone</i> ) AND SrcAddress:( 2.2.2.2/32 ) AND DstAddress:( any-ipv4 ) AND Service:( 1024 )	Destination NAT rule having ingress as <i>zone</i> , source address as 2.2.2.2/32, destination address as <i>any-ipv4</i> , and port number as 1024 are filtered.  You can provide the port number (1024) or the port range (1024 65535).
Search rule name with translated packet source address	RuleName:( <i>r1</i> ) AND dcNatRuleType:( SOURCE ) AND Ingress:( <i>trust</i> ) AND SrcAddress:( <i>add1_1</i> ) AND Egress:( <i>trust</i> ) AND DstAddress:( 2.2.2.2/32 ) AND Service:( 1024 65535 ) AND TranslatedPacketAddress:(src-pool )	Source rules with rule name <i>r1</i> , source address <i>add1_1</i> , egress zone <i>trust</i> , destination address 2.2.2.2/32, port 1024 or 65535, and translated packet address <i>src-pool</i> are filtered.



**NOTE:** You can also search by giving IPv6 addresses in the source field or the destination address field.

To hide the policies in the left pane that do not have any defined rules:

1. At the bottom of the left pane, click the expandable **Policy View Settings** option.
2. Click the **Hide Empty Device Policies** check box to hide the device exception policies that do not have any rules, as shown in [Figure 153 on page 318](#).

Figure 153: Policy View Settings



3. Policies with no defined rules are hidden in the left pane.

To hide the policies in the left pane that do not have any devices assigned:

1. At the bottom of the left pane, click the expandable **Policy View Settings** option.
2. Click the **Hide Policies With No Devices Assigned** check box to filter device and group policies that are not assigned to any device, as shown in [Figure 153 on page 318](#).
3. Policies without any assigned devices are hidden in the left pane.

#### Related Documentation

- [Adding Rules to a NAT Policy on page 322](#)
- [Ordering the Rules in a NAT Policy on page 328](#)
- [Publishing NAT Policies on page 329](#)
- [Managing NAT Policies on page 332](#)

## Unlocking Locked Policies

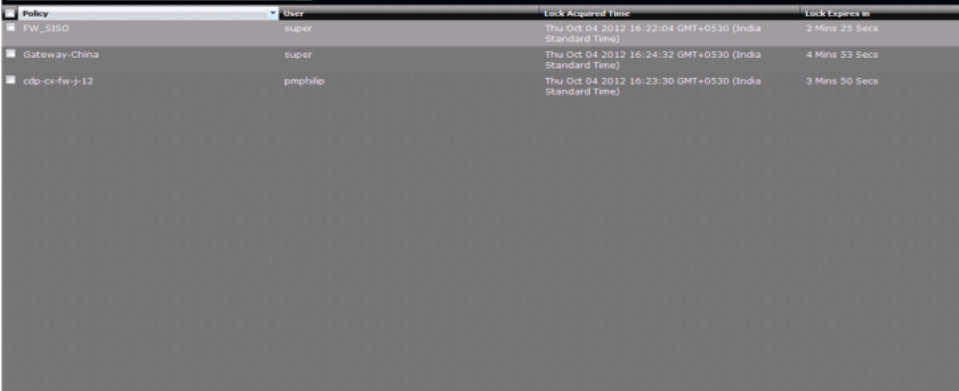
All the locked policies can be viewed in a single page. This page is available for a user with Manage Policy Locks tasks assigned. This page shows all the locks only if the user has Unlock task assigned, other wise user will see only his locks. To view the locked policies:

1. Select **Security Director > NAT Policy > Manage Policy Locks**.

The Manage Policy Locks page appears showing only those locks that can be managed by the current user. The page contains the following fields:

- Policy name
- User (IP Address)
- Lock acquired time
- Time for lock expiry

Figure 154: NAT Policy: Manage Policy Locks



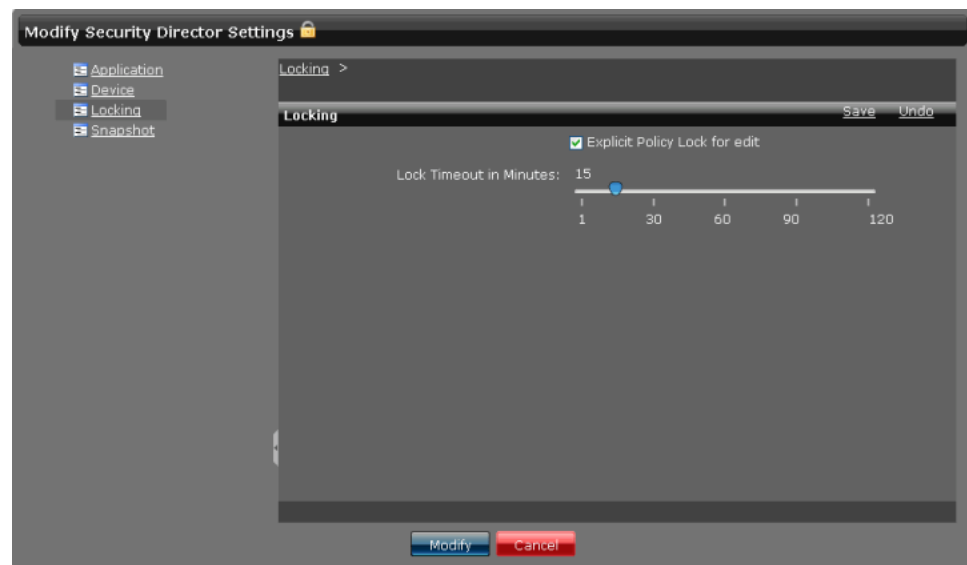
Policy	User	Lock Acquired Time	Lock Expires In
FW_3150	super	Thu Oct 04 2012 16:22:04 GMT+0530 (India Standard Time)	2 Mins 25 Secs
Gateway-China	super	Thu Oct 04 2012 16:24:32 GMT+0530 (India Standard Time)	4 Mins 53 Secs
cdp-cx-fw-j-12	pmphilo	Thu Oct 04 2012 16:23:30 GMT+0530 (India Standard Time)	3 Mins 50 Secs

2. Right-click the policy that you want to unlock, and press **Unlock**. You can select policies that are locked by you and unlock them. To unlock your policies, you do not need any administrator privileges. To unlock policies locked by other users, you must have the task LOCK assigned to you.

User with administrator privileges can configure the lock settings. To configure the lock settings:

1. Click on **Application Switcher** option, and go to **Network Application Platform > Administration > Manage Applications**.
2. Right click the Security Director application, and select **Modify Application Settings**. The following page appears, as shown in [Figure 155 on page 320](#).

Figure 155: Modify Security Director Settings



3. Under the Locking option, you can configure the locking timeout value in minutes. The minimum value that you can configure is 2 minutes and the maximum is 120 minutes. By default, the timeout value is configured for 5 minutes.
4. By default, the Explicit Policy Lock for edit option is enabled. You can disable this option, if you do not want to lock the policies before editing. When this option is disabled, policies can be edited by any user. The behavior is the same as for concurrent editing. The first user gets the preference of saving the changes for a policy. The next save on the same version of a policy results in the user being asked to save the policy with a new name.



**NOTE:** Acquiring a policy lock or releasing lock is audit logged. Release locking will show the reason for the release, for example, an explicit release, on save, discard, timeout, or administrator release. Administrator changes of the lock configuration are also audit logged. To see the audit logs, from the Security Director task bar, select Audit Logs.

- Related Documentation**
- [Creating NAT Policies on page 305](#)
  - [Managing NAT Policies on page 332](#)

## Global Address Book Overview

In Junos OS Release 11.2 and later releases, the address book is moved from the zone level to the device global level. This permits objects to be used across many zones and avoids inefficient use of resources. This change also permits nested groups to be configured within the address book, removing redundancy from repeating address objects.

The Security Director application manages its address book at the global level, assigning objects to devices that are required to create policies. If the device is capable of using a global address book, Security Director pushes address objects used in the policies to the device global address book. Nested address group capability is used in the publish and update feature of Security Director depending on the device capability.

## Differences Between Global and Zone-Based Address Books

The global address book is supported in Junos OS Release 11.2 and later releases.

- An address book is not configured within a specific zone; therefore, one address book can be associated with multiple zones.
- If a global address book is defined, you cannot create zone-based address books.
- By default, there is an address book called *global* associated with all zones.
- A zone can be attached to only one address book in addition to the global address book, which contains all zones by default.
- Address name overlaps are possible between the global address book and zone address book. For example, Security Director will attempt to match an address in the zone-based address book first, and, if the address is not found, the global address book is checked. You must ensure that the correct address objects are used in the policy.
- NAT rules can use address objects only from the global address book. They cannot use addresses from user-defined address books.



**NOTE:** Beginning in Junos OS Release 12.1, zone-based address books are no longer supported. Devices running Junos OS Release 12.1 or later must use the global address book.



**NOTE:** Beginning in Junos OS Release 11.2, NAT rules can use address objects from the global address book. However, Security Director will still continue to define the NAT address in the rule itself rather than referring to the global address book.

### Related Documentation

- [NAT Overview on page 301](#)
- [Creating NAT Policies on page 305](#)
- [Managing NAT Policies on page 332](#)

## Adding Rules to a NAT Policy

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When a new NAT policy is created, by default the policy displays links to create rules for the policy. If you have created a group NAT policy, you will see a Create Source Rule link in the right pane. If you have any cut or copied rules or rule groups, you will also have Paste Rules to paste the rules or rule groups. If you have created a device NAT policy, you will see Create Source Rule, Create Destination Rule, and Create Static Rule links, and also Paste Rules to paste the rules or rule groups.

Depending on the type of rule you have chosen, some fields in the rule will not be applicable. If you choose a source NAT rule, the Translated Packet Destination field will not be applicable. If you choose a destination NAT rule, the Egress field in the Original Packet Destination column and the Translated Packet Source fields are not applicable. If you choose a static NAT rule, the Address field in the Original Packet Source column, the Egress field in the Original Packet Destination column, Port field in the Original Packet Destination column, and Translated Packet Source fields are not applicable.

In addition to defining rules between zones and interfaces, you can define NAT rules with virtual routers defined on the device. These rules can be successfully published and updated on the device.

The Proxy ARP option is available under different fields based on the type of rule you have chosen. With a static NAT rule, the Proxy ARP option is available under the Translated Packet Source field. With the destination NAT rule and static NAT rule, the Proxy ARP option is available under the Address field in the Original Packet Destination column.

The Proxy ARP feature also automatically selects the interface based on the Egress field for source NAT rule and the Ingress field for destination NAT rule and static NAT rule. The auto Proxy ARP is enabled by default. It is only applicable for imported, migrated, and cloned NAT policies.



**NOTE:** Based on the IP version used, Security Director pushes either Proxy ARP or Proxy NDP CLI command to the device. GUI shows only the Proxy ARP check box.

To add rules to a NAT policy:

1. Select **Security Director > NAT Policy**.

The NAT Policy Tabular view appears.

2. Click the NAT policy you want to add rules to from the left pane.

The existing rules of the NAT policy are displayed in the right pane.

3. Click the + icon to add rules, and select the type of rule you want to add.

A new rule is added in the last row depending on the type of rule you have added. The newly added rules blink with a different color for few seconds. The behavior is same if you add a new rule before or after a rule, clone a rule, or paste a rule.

The rule is assigned a serial number based on the number of rules already added to the policy. By default, the zones are set to Empty, and the address and port of the packet source and packet destination are set to Any. The Translated Source and Translated Packet Source columns are either set to No Translation or Not Applicable, depending on the rule you are adding.

4. Click the **Name** field in the rule and change the name of the rule.
5. Click the **Ingress** field in the Original Packet Source column and select the appropriate zone or interface or routing instance.

The Zone or Interface or routing instance selector appears.

6. Select the appropriate option from the Source Traffic Matching Type drop-down menu.
7. In the zone or interface or routing instance selector, select the zones or interfaces or routing instance you want to associate the rule to, from the Available column.

On selection of Routing Instance option, you can select one or more of the available virtual routers on the device. For the group NAT policy, the consolidated list of all virtual routers on all devices that the policy is assigned to will be listed.

8. Click the right arrow in the selector.

The selected zones or interfaces or virtual routers are moved to the Selected column.

9. Click **OK**.
10. Click the **Address** field in the Original Packet Source column and select the appropriate addresses.

The Address selector appears.

11. In the address selector, select the addresses you want to associate the rule to, from the Available section. You can select all addresses by clicking **Page** and unselect them all by clicking **None**.
12. Click the right arrow in the selector.

The selected addresses are now moved to the Selected section.

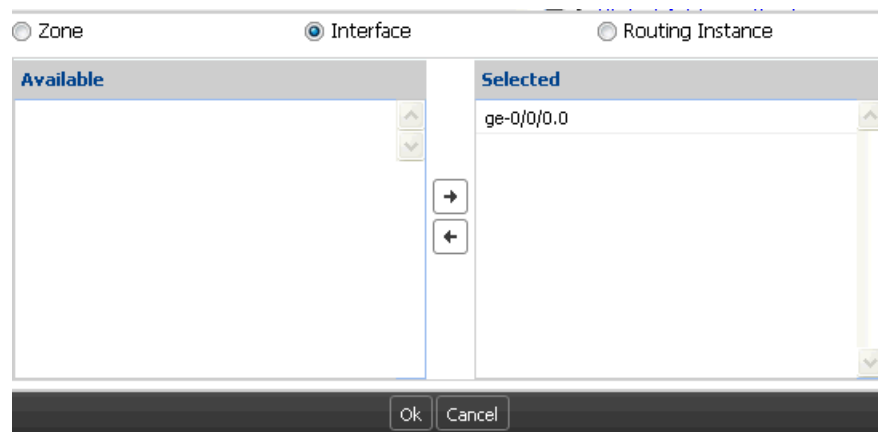
13. Click **OK**.
14. Click the **Port** field in the Original Packet Source column to enter the source port numbers. Source NAT supports a source port for the original packet source. For all rules, the source port is added to the Original Packet Source column. The source Port field is disabled for the destination NAT. The port numbers must be separated by commas, and a maximum of eight entries is allowed, including ports and port ranges.

The Address and Port fields are also available in the Original Packet Source field for Static NAT.

15. Click the **Egress** field in the Original Packet Destination column and select the appropriate zone or interface or routing instance.

The zone or interface or routing instance selector appears.

Figure 156: Destination Traffic Match Type Selector Page



16. Select the appropriate option from the Destination Traffic Matching Type list.

17. In the zone or interface or routing instance selector, select the zones and interfaces or routing instance you want to associate the rule to, from the Available column.

18. Click the right arrow in the selector.

The selected zones or interfaces or routing instance are now moved to the Selected column.

19. Click **OK**.

20. Click the **Address** field in the Original Packet Destination column and select the appropriate addresses.

The Address selector appears.

21. In the address selector, select the addresses you want to associate the rule to, from the Available column. You can select all addresses by clicking **Page** and unselect them all by clicking **None**.

22. Click the right arrow in the selector.

The selected addresses are now moved to the Selected column.

23. Click **OK**.

24. Click the **Port** field in the Original Packet Destination column.

You can enter a single port value or the port range. The devices running Junos OS Release 12.1X47 and later releases support multiple ports and ranges, in the same way as does the Source port.

Click **Select Port Sets** to expand and choose port sets. The maximum number of ports or port ranges that you can configure in a single rule is 8. A validation error is displayed in a tooltip if you select more than 8 ports or port ranges.

The device capability of the port set is validated based on the matching schema version and not on the Junos OS version running on the device.

25. Click the **Service** column to select one or more services for the source and destination type NAT rules. This is supported for the devices running Junos OS Release 12.1X47.



Select the required services from the Available column and move them to the Selected column. You can also create services inline by clicking the plus sign (+).



**NOTE:** NAT rule cannot reference a combination of port, protocol, and service options. If service information is configured, you cannot configure port and protocol. Publishing of services is validated based on the schema.

26. Click the **Translated Packet Source** field.

27. Select the appropriate translation type from the Translation Type drop-down menu.

- a. If you select **Pool** as the option from the Translation Type drop-down menu, you will see that there will be new fields to specify.
- b. Select the appropriate NAT pool from the Source Pool drop-down menu.  
All relevant options from the NAT pool you have chosen are displayed.
- c. Select the **Configure Proxy ARP** check box to enable the proxy ARP feature.
- d. Select the check boxes next to the address ranges you want to include and select the appropriate interface.

28. Click **OK**.

29. Click the **Destination Address** field in the Translated Packet Destination column and select the appropriate addresses.

This option is available only for destination NAT rule.



**NOTE:** For static NAT rule, you can configure Routing Instance from the Translated Packet Destination column.

30. Select the type of translation from the Translation Type drop-down menu.

31. Select the appropriate NAT pool from the Destination Pool drop-down menu.



**NOTE:** If you are creating a static NAT rule, the Translated Address list appears. You can select the appropriate address from the list.

32. Click **OK**.

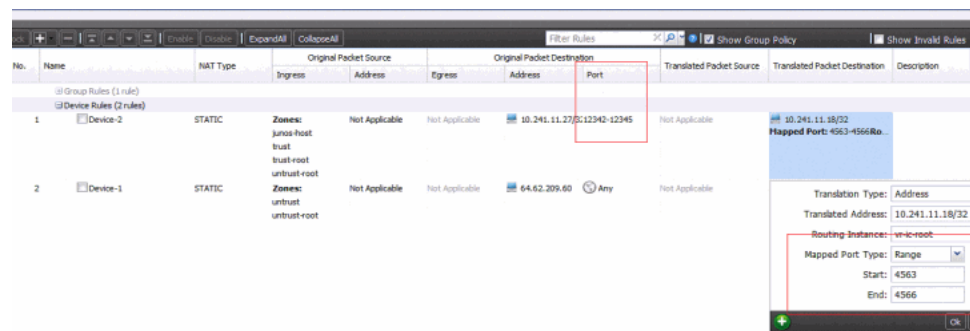
33. Click the Port field in the Original Packet Destination column.

The port selector appears.

34. Select the appropriate port type from the Port Type drop-down menu.

You can configure static NAT destination and mapped ports (single port, range of ports, or no ports) along with destination and translated addresses. This is supported in Junos OS Releases 12.1 R13.5, 12.1X44-D1, and 11.4R5.5. If the destination port is configured, destination and translated addresses must be host addresses. The destination and translated host addresses can be either IPv4, or IPv6 version.

Figure 157: Port Configuration for Static NAT



If the device Junos OS version is previous to the Junos OS Release 12.1R3.5, and there is a schema mismatch in Security Director, a warning message is displayed during the preview of NAT CLI.

35. Click **OK**.

36. Click the **Description** field and enter a description for the rule.

37. Click **Save**.

Security Director automatically generates the rule set names, each consisting of alphabets, numbers, underscore, and hyphen. A rule set name has only 30 characters, with the last 4 characters reserved for the counter value that is used if two rule sets have the same name. Security Director will truncate the rule set name if it goes beyond 26 characters.

A rule set name for source, destination, and static NAT rules is created as follows:

- Source NAT rule—The rule set name is created by taking the first value of the ingress and the first value of the egress, along with the match type (zone, routing instance, or interface). If two rule set names are the same, a counter value is appended to the end of one of the names.

Rule set name format for source NAT rules: <Ingress

Type>\_<firstIngressValue>-<EgressType>\_<firstEgressValue>-<nextCounterValue>

Table 29 on page 326 shows the rule set names for different ingress and egress values.

**Table 29: Example: Rule Set Names for Different Ingress And Egress Values of Source NAT Rules**

Ingress and Egress Value	Rule Set Name
source rule1 from zone trust to zone untrust	Zone_trust-Zone_untrust
source rule2 from zone trust to zone untrust,dmz	Zone_trust-Zone_untrust-1
source rule3 from zone trust to zone untrust,dmz,xyz	Zone_trust-Zone_untrust-2
source rule4 from Routing instance vrouter1, vrouter2 to zone dmz,xyz	RI_vrouter1-Zone_dmz
source rule5 from interface fe-0/0/1.0 to zone dmz,xyz	IF_fe-0010 -Zone_dmz

- Destination NAT and static NAT rules—The rule set name is created by taking the first and second value of the ingress, along with the match type (zone, routing instance, interface). If two rule set names are the same, a counter value is appended to the end of one of the names.

Rule set name format for destination NAT and static NAT rules: <Ingress Type>\_<firstIngressValue>\_<secondIngressValue>—<nextCounterValue>

Table 30 on page 327 shows the rule set names for different ingress values.

**Table 30: Example: Rule Set Names for Destination NAT and Static NAT**

Ingress Value	Rule Set Name
static rule1 from zone trust	Zone_trust
source rule2 from zone trust,untrust	Zone_trust_untrust
source rule3 from zone trust,untrust,dmz	Zone_trust_untrust-1



**NOTE:** During NSM migration and publish, Security Director will create the rule set names.

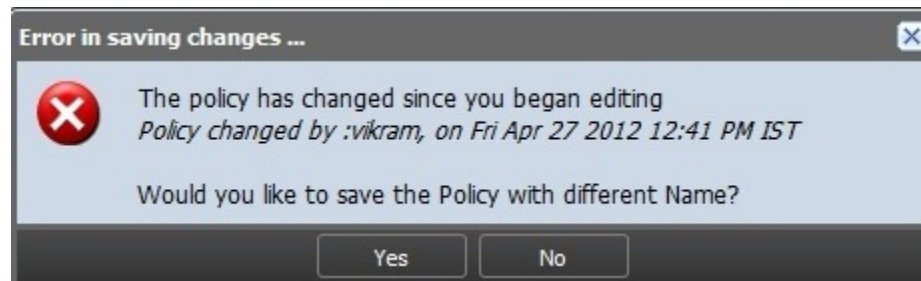


**NOTE:** You should click Save to save any changes you have made to the NAT policy. While in the process of making changes to the NAT policy, If you click on any of the tasks in the task ribbon before saving the NAT policy changes, all changes you have made will be lost. If you click anywhere inside the NAT Policy Tabular view, you will see a confirmation window to save the changes you have made.



**NOTE:** If another user has added new rules to the same policy, modified the existing rules, or deleted existing rules, and that user had already saved the changes before you, you will see the error message as shown in [Figure 158 on page 328](#).

**Figure 158: Concurrent NAT Policy Editing Error**



The error message provides the user name and time at which changes were made to the policy. Whoever saves the changes first gets the preference to save the new rules added. You will be given an option to save your policy changes with a different name. Click Yes to save the policy with a different name. Only saved rules are published to the policy.

#### Related Documentation

- [Ordering the Rules in a NAT Policy on page 328](#)
- [Publishing NAT Policies on page 329](#)
- [Managing NAT Policies on page 332](#)

## Ordering the Rules in a NAT Policy

To reorder the rules in a NAT policy:

1. Select **Security Director > NAT Policy**.  
The NAT Policy Tabular view appears.
2. Select the NAT policy whose rules you want to reorder.  
The rules of the NAT policy are displayed in the right pane.
3. Select a rule that you want to reorder and click the appropriate icon on the top of the right pane.

Icon Name	Description
Move Rule Up	Moves the rule one level up in the hierarchy.
Move Rule Down	Moves the rule one level down in the hierarchy.
Move Rule to Top	Moves the rule to the top of the hierarchy.

Icon Name	Description
Move Rule to Bottom	Moves the rule to the bottom of the hierarchy.

The rule is now positioned accordingly. When the NAT policy is provisioned, the rules are provisioned to the devices in the order you have specified.

#### Related Documentation

- [Creating NAT Policies on page 305](#)
- [Adding Rules to a NAT Policy on page 322](#)
- [Publishing NAT Policies on page 329](#)
- [Managing NAT Policies on page 332](#)

## Publishing NAT Policies

To publish a NAT policy:

1. Select **Security Director > NAT Policy > Publish policy**.

The Services page appears with all the NAT policies. It also displays the publish states of the NAT policies.

2. Select the check box next to the NAT policy that you want to publish.



#### NOTE:

- You can search for a specific device on which the policy is published by entering the search criteria in the Search field, in the top-right corner of the Services page. You can search the devices by their name, IP address, and device tags.
- If the NAT policy is to be published on a large number of devices, the devices are displayed across multiple pages. You can use the pagination and display options available on the lower ribbon, just below the list of devices, to view all devices on which the policy is published.
- Publish fails if two addresses are having the same name.

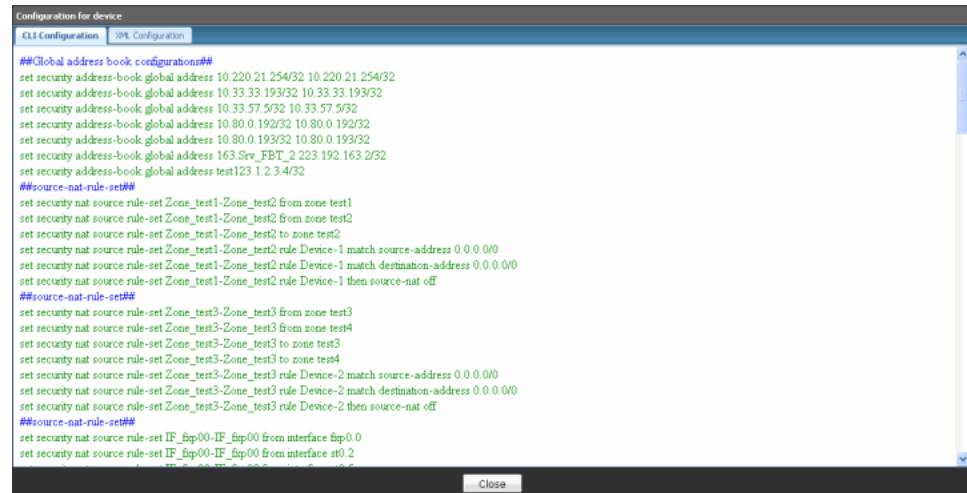
3. Select the **Schedule at a later time** check box if you want to schedule and publish the configuration later.
4. Click **Next**.

The Affected Devices page displays the devices on which this NAT policy will be published.

5. If you want to preview the configuration changes that will be pushed to the device, click **View** in the Configuration column corresponding to the device. A Configuration Preview progress bar is shown while the configuration pushed to the device is generated.

The CLI Configuration tab appears by default. You can view the configuration details in CLI format.

Figure 159: NAT Policy CLI Configuration



6. View the XML format of the configuration by clicking the XML Configuration tab.
7. Click **Back**.
8. Click **Publish** if you want to only publish the configuration.

A new job is created and the job ID appears in the Job Information dialog box.

9. Click **Publish and Update** if you want to publish and update the devices with the configuration.

The NAT policy is now moved into the Published state if the configuration is published to all devices involved in the policy. If the configuration is not published to all devices involved in the NAT policy, the NAT policy is placed in the Partially Published state. If a NAT policy is created but not published, the NAT policy is placed in the Unpublished state. If any modifications are made to NAT policy configuration after it is published, the NAT policy is placed in the Republish Required state. You can view the states of the NAT policy by mousing over them. When an address object in the Global domain referenced by a policy in the D1 domain changes, the state of the policy is changed to Republish Required. This occurs though the changes are in the address object, which is in the other domain, and is not same as the policy domain. This applies to all the objects referenced by all the services.

A new job is created and the job ID appears in the Job Information dialog box.

10. Click the job ID to view more information about the job created. This action directs you to the Job Management workspace.

If you get an error message during the publish or if the NAT policy publish fails, go to the Job Management workspace and view the relevant job ID to see why the publish failed.

In the Job Details window, use the available filter box to search for any device by filter name, tag name, or IP address. Filtering works only for currently available devices.

Search with the first character of the tag name to search by tag name. If you search with any middle characters, the search fails.

During the publish and update, the disabled rules and objects are not deleted. Disabled rules are updated as inactive configuration. This is an optional setting. You can choose to push the disabled rules to a device by selecting **Update disabled rules to device** option in Security Director application setting, under Platform. By default, Update disabled rules to device option is disabled. For the pushed disabled rules to work after the upgrade, Security Director must import the policy again and the application firewall signature must be downloaded prior to the import.

If you are having the disabled rules on the device, as shown in the following example:

```
set security policies from-zone untrust to-zone trust policy Device-Zone-5 match
destination-address any
set security policies from-zone untrust to-zone trust policy Device-Zone-5 match
application any
set security policies from-zone untrust to-zone trust policy Device-Zone-5 then
deny
deactivate security policies from-zone untrust to-zone trust policy Device-Zone-5
```

When you import this rules, Security Director sets the state as disabled. If a particular node in the CLI is deactivated, that node is not imported into the Security Director.

If you import a rule, as shown in the following example, Security Director will not set the application service.

```
set security policies from-zone trust to-zone untrust policy Device-Zone-2
description "Rule With Infranet All Traffic Auth"
set security policies from-zone trust to-zone untrust policy Device-Zone-2 match
source-address any
set security policies from-zone trust to-zone untrust policy Device-Zone-2 match
destination-address any
set security policies from-zone trust to-zone untrust policy Device-Zone-2 match
application any
set security policies from-zone trust to-zone untrust policy Device-Zone-2 then
permit application-services idp
set security policies from-zone trust to-zone untrust policy Device-Zone-2 then
permit application-services uac-policy captive-portal captiveportal_65573
deactivate security policies from-zone trust to-zone untrust policy Device-Zone-2
then permit application-services
```

Security Director does not support inactive nodes and the inactive rules. If the objects in the rule are not defined, Security Director provides a warning message, at the time of import, listing the objects that are not defined.



---

**NOTE:**

- You can also publish a NAT policy by right-clicking the NAT policy in the NAT Policy Tabular view and selecting Publish NAT Policy. You are redirected to the Affected Devices page.
  - You cannot publish a group NAT policy, if you do not have permission for all the assigned devices. Also publish is not permitted if one or more devices are labeled by another Junos Space user.
  - The publish fails if you have two addresses in a rule with a same name, one from the Global domain and the other from the child domain.
  - You can publish or update the group policy of the global domain from another domain. In this case, policy is published or updated to only those devices which are part of the another domain. However, if you publish or update the group policy in the global domain, the policy is published or updated to all the devices including the devices from the another domain.
  - If a NAT rule with multiple destination port or service configuration is published to a device running the previous version of Junos OS Release 12.1X47, publish fails with an error message.
  - The maximum allowed services for a NAT rule is 3072. If the services exceed more than 3072, publish fails with an error message.
- 

**Related Documentation**

- [Creating NAT Policies on page 305](#)
- [Adding Rules to a NAT Policy on page 322](#)
- [Ordering the Rules in a NAT Policy on page 328](#)
- [Managing NAT Policies on page 332](#)

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## Managing NAT Policies

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- [Modifying NAT Policies on page 333](#)
- [Deleting NAT Policies on page 333](#)
- [Cloning NAT Policies on page 333](#)
- [Exporting a NAT Policy on page 334](#)
- [Configuring NAT Rule Sets on page 334](#)
- [NAT Policy Versioning on page 335](#)
- [Managing NAT Policy Versioning on page 336](#)
- [Deleting Rules in a NAT Policy on page 341](#)
- [Grouping Rules in a NAT Policy on page 341](#)
- [Enabling/Disabling Rules in a NAT Policy on page 341](#)
- [Expanding/Collapsing All Rules in a NAT Policy on page 342](#)
- [Cutting/Copying and Pasting Rules or Rule Groups in a NAT Policy on page 342](#)



- [Assigning Devices to a NAT Policy on page 344](#)
- [Deleting Devices from a NAT Policy on page 344](#)
- [Rule Operations on the Filtered Rules on page 345](#)

## Modifying NAT Policies

To modify a NAT policy:

1. Select **Security Director > NAT Policy**.

The NAT Policy Tabular view appears.

2. Right-click the NAT policy you want to modify from the left pane and select **Modify Policy**.

The Edit Policy window appears. You can modify the name and description of the NAT policy.

3. Click **Modify**.

Whenever you make any changes to the NAT policy, you will have the option of entering a comment before saving the policy. You can enable or disable this option in Platform > Administration > Applications. To enable this option, right-click **Security Director**, and select the **Modify Security Director Settings** option. Under Applications, select the **Enable save comments for policies** check box. By default, this option is disabled.

In NAT ILP, once you enter the comment, you can save this version with a different name. Click **Save as Draft** from Save drop-down list to save the edited NAT policy with a different name. Entering a comment is not required. All comments you enter are logged.

## Deleting NAT Policies

To delete a NAT policy:

1. Select **Security Director > NAT Policy**.

The NAT Policy Tabular view appears.

2. Right-click the NAT policy you want to delete and select **Delete Policy**.

A confirmation window appears.

3. Click **Yes**.



**NOTE:** If you delete a NAT policy, the erase configuration is sent to all devices that were a part of the NAT policy during the next Update operation for the device.

## Cloning NAT Policies

To clone a NAT policy:

1. Select **Security Director > NAT Policy**.

The NAT Policy Tabular view appears.

2. Right-click the NAT policy you want to clone and select **Clone Policy**.

The Clone Policy window appears. You can modify the name and description mode of the NAT policy.

3. Click **Clone**.

## Exporting a NAT Policy

To export a NAT policy:

1. Select **Security Director > NAT Policy**.

The NAT Policy Tabular view appears.

2. Right-click the NAT policy you want to export and select **Export Policy**.

The Export Policy window appears.

3. Click **Export**.

## Configuring NAT Rule Sets

To configure a NAT rule set:

1. Select **Security Director > NAT Policy**.

The NAT Policy Tabular view appears.

2. Right-click the NAT policy you want to configure the rule set and select **Configure RuleSets**.

The Configure Rule Set window appears.

3. Modify the rule set name in the Rule Set column and click **Save** to save the changes.

## NAT Policy Versioning

You create a policy version by taking a snapshot of the policy. You can create versions for all types of NAT policies, including group and device exceptions. The maximum number of versions maintained for any policy is 60. If the maximum limit is reached, you must delete the unwanted versions before taking a new version snapshot. You can delete the older version of snapshots by clicking the **Auto delete oldest version** option, as shown in [Figure 161 on page 336](#). This option is enabled by default. If this option is disabled, every time the oldest version of snapshots are deleted (after the maximum number of versions is reached), a warning message is displayed on the screen. If you enable this option, the oldest snapshots are deleted automatically, without any warning messages.

Versioning and rollback are independent operations for each policy. For example, if you take a snapshot of a group NAT policy, you must create a separate version of each policy rule.

To create a version of the policy:

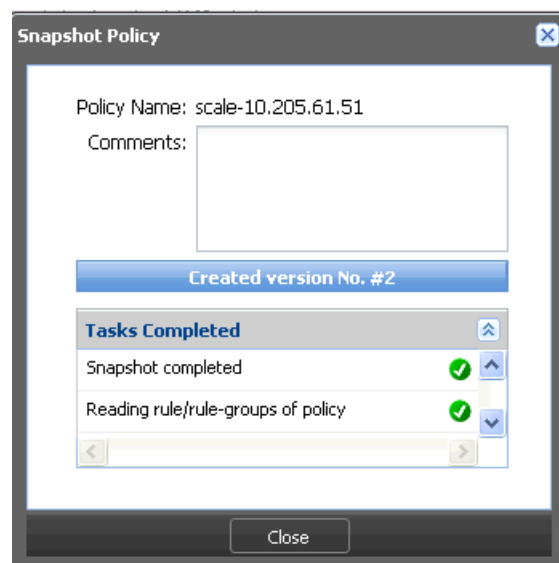
1. Select **Security Director > NAT Policy**.

The Policy Tabular view appears.

2. Right-click the NAT policy you want to take a snapshot of, and select **Snapshot Policy**.

The Policy Name field shows the name of the NAT policy for which the snapshot is taken. Enter your comments in the Comments field, and press **Create to take the snapshot**. The Snapshot Policy Window appears, showing the status of the version as it is created, as shown in [Figure 160 on page 335](#).

**Figure 160: Snapshot Policy**

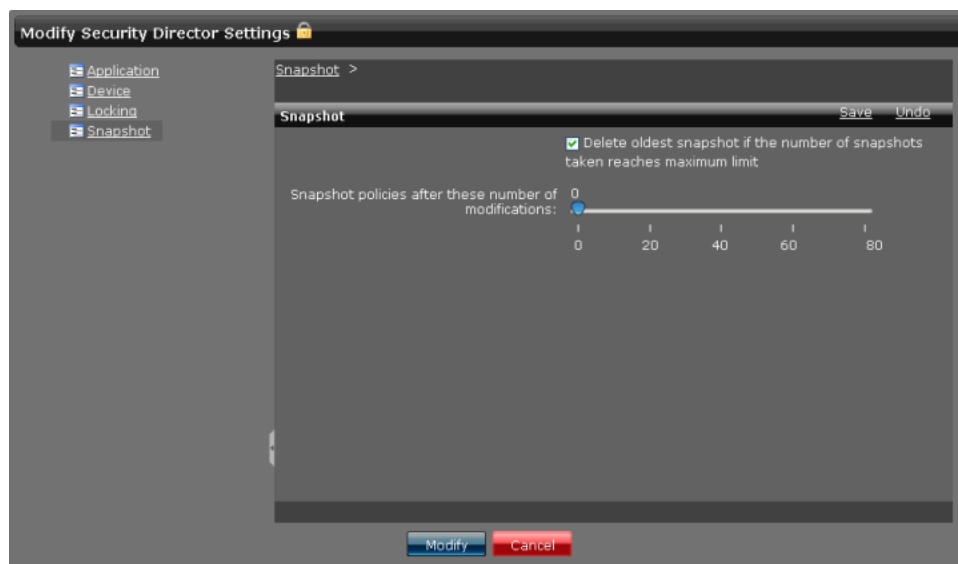




#### NOTE:

- During policy publish, Security Director takes an automatic snapshot of the policy.
- You can set an option to take the snapshot automatically after you have modified and saved a policy after configured number of times, as shown in [Figure 161 on page 336](#). When the snapshot is taken automatically, Security Director does not make any log entry because it is an internal operation.

Figure 161: Modify Security Director Settings



- NAT versioning includes the destination port and services as part of the versioned data you can compare when searching for changes across different versions.

## Managing NAT Policy Versioning

You can view or manage all available versions of a selected policy. You can perform the following tasks on the snapshots:

- Roll back to a specific version.
- View the differences between any two versions (including the current version) of the policy.
- Delete one or more versions from the system.

To roll back the selected version as the current version:

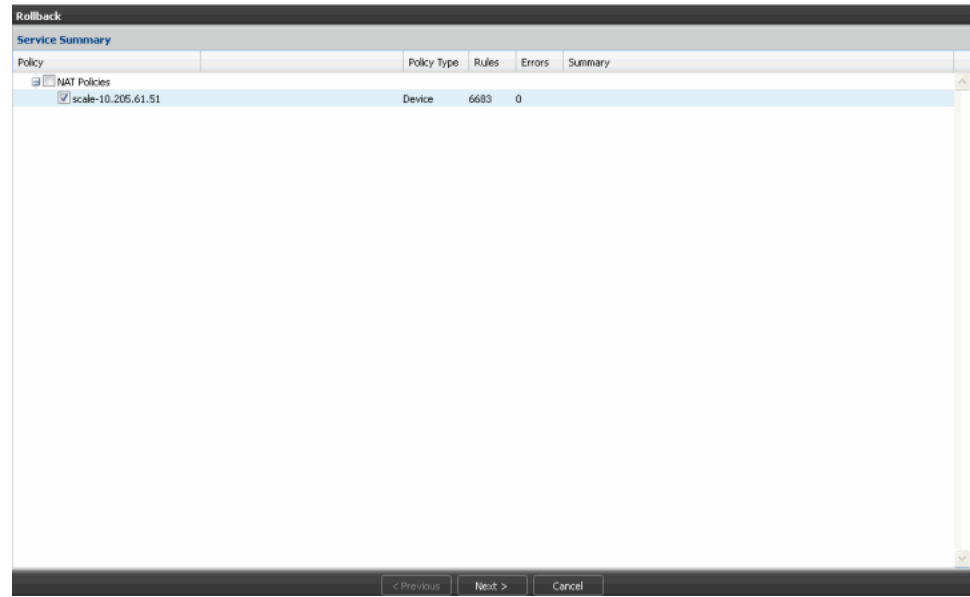
1. Select **Security Director > NAT Policy**.  
The Policy Tabular view appears.
2. Right-click the natl policy, and select **Manage Snapshots**.

A window appears showing all the versions of the policy.

3. Select the version that you want to make current and click **Rollback**.

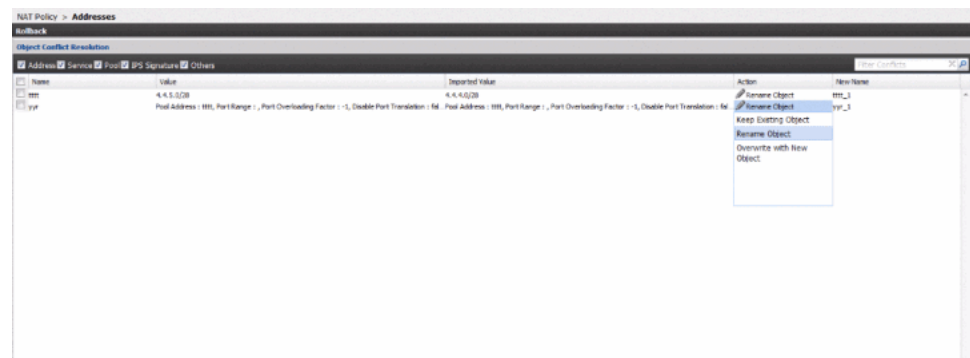
A service summary window appears, as shown in [Figure 162 on page 337](#).

**Figure 162: Rollback Service Summary Report**



The rollback operation replaces all the rules and rule groups of the current version with rules and rule groups from the selected version. For all the shared objects, Object Conflict Resolution (OCR) is performed. If there are any conflicts between the versioned data and the current objects in the system, the OCR window is displayed, as shown in [Figure 163 on page 337](#).

**Figure 163: Object Conflict Resolution Window**



From the OCR window, you can choose to retain the existing object, rename the existing object, or overwrite the existing object with the new object.

4. After finishing all the conflict resolution, click **Next** to view the OCR summary report, as shown in [Figure 164 on page 338](#).

Figure 164: Rollback OCR Summary Report

**Rollback**

**Print Report**

**Selected Services**

Type	Name	Policy Type	Total Lines	Errors	Warning	Summary
NAT	scale-10.205.61.51	Device	6683	0	0	

**Object Error Summary**

Type	Object	Affected Objects	Errors
No Errors			

**Object Conflict Resolution**


Object Type	Original Name	Resolution	Resolved Name	Old Value	New Value
No Conflicts					

< Previous Finish Cancel

- Click **Finish** to replace the current policy with the versioned data. A summary of the snapshot policy is provided, as shown in Figure 165 on page 338.

Figure 165: Rollback Policy Summary Report

**Rollback Policy**

 **Status: SUCCESS**  
**Start Time: Mar 13, 2013 2:19:55 PM IST**  
**End Time: Mar 13, 2013 2:21:01 PM IST**

**NAT Rollback Policy-5603504**

Task	Status	Details
Reading import Files	In Progress	Started at Mar 13, 2013 2:19:55 PM IST
Reading import Files	Success	Finished at Mar 13, 2013 2:19:56 PM IST
Rollback Addresses	In Progress	Started at Mar 13, 2013 2:19:56 PM IST
Rollback Addresses	Success	Finished at Mar 13, 2013 2:19:56 PM IST
Rollback Nat Pools	In Progress	Started at Mar 13, 2013 2:19:56 PM IST
Rollback Nat Pools	Success	Finished at Mar 13, 2013 2:19:56 PM IST
Acquiring Policy Lock	Success	
Rollback NAT Policy	In Progress	Started at Mar 13, 2013 2:19:57 PM IST
Rollback NAT Policy	Success	Finished at Mar 13, 2013 2:21:00 PM IST
Releasing Policy Lock	Success	
Summary		<a href="#">Summary Report</a>

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Close

To compare two different versions of a policy:

1. Select **Security Director > NAT Policy**.

The Policy Tabular view appears.

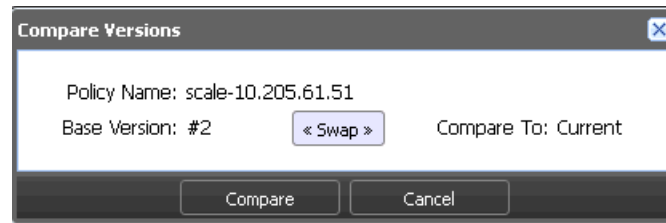
2. Right-click the NAT policy, and select **Manage Snapshots**.

The Manage Versions window appears, showing all policy versions.

3. Select the versions to be compared, and click **Compare**. You can select only two versions at a time to compare.

You can swap the version that you want to make the base version and compare it with the other version by clicking **Swap**, as shown in [Figure 166 on page 339](#).

**Figure 166: Compare Versions with Swap Option**



4. Click **Compare** to view the results.

A Compare Versions window appears, showing the differences between the selected versions, as shown in [Figure 167 on page 339](#).

**Figure 167: Versions Comparing Summary Report**

**Policy Property Changes**

Property	scale-10.205.61.51#1	scale-10.205.61.51#Current
PublishedState	Not Published	Re-publishing Required

**NAT Rule Changes**

Rule Name	NAT Type	Original Packet Source			Original Packet Destination			Translated Packet Source	Translated Packet Destination	Description	Protocol
		Ingress	Address	Egress	Address	Port					

The modified column is highlighted in blue as a hyper link. If you click the modified column, it takes you to the Rule Column Change section to the specific column. Click **NextDiff** to view the each diff. The each diff is highlighted in yellow.

The Compare Versions window has the following sections:

- **Policy Property Changes**—Shows policy changes for the modified rules.
- **Rule Changes**—Displays rules that are added, modified, or deleted.
- **Column Changes**—Shows the differences between the column contents for modified rules.

The Port column is compared based on the effective value of the column content. For example, in version 1 of the policy, the port is configured with the inline values 10, 20, and 30. In version 2 of the policy, the port column is configured to use the port set. Therefore, the policy diff does not show that the Port column is changed. Although the string representations of the column values are different, the effective port values are the same and are therefore considered not to have changed.

To delete versions:

1. Select **Security Director > NAT Policy**.

The Policy Tabular view appears.

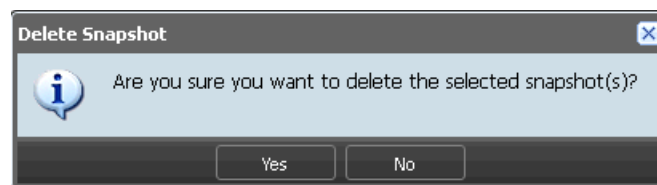
2. Right-click the NAT policy, and select **Manage Snapshots**.

A window appears, showing all policy versions.

3. You can delete multiple versions at one time. When you perform a rollback operation, you are given the option to delete older versions. Select the version that you want to delete, and click **Delete**.

You will receive a Confirm Delete Operation message before you can delete the version, as shown in [Figure 168 on page 340](#).

**Figure 168: Snapshot Delete Confirm Window**



4. Click **Yes** to delete the version, or click **No** to abort the operation.



**NOTE:** If you delete a policy, all versioned data for that policy is deleted.



## Deleting Rules in a NAT Policy

To delete rules in a NAT policy:

1. Select **Security Director > NAT Policy**.  
The NAT Policy Tabular view appears.
2. Select the NAT policy whose rules you want to delete.  
The rules of the NAT policy appears in the right pane.
3. Select the check boxes next to the rules that you want to delete.
4. Click the **Delete Rule** icon on the top of the right pane.

## Grouping Rules in a NAT Policy

To group rules in a NAT policy:

1. Select **Security Director > NAT Policy**.  
The NAT Policy Tabular view appears.
2. Select the NAT policy whose rules you want to group.  
The rules of the NAT policy are displayed in the right pane.
3. Select the check boxes next to the rules you want to group.
4. Right-click the rules and select **Rule Group > Create Rule Group**.  
The Create Rule Group window appears.
5. Enter a name for the rule group in the Name field.
6. Enter a description for the rule group in the Description field.
7. Click **Create**.



**NOTE:** When the rule group is created, you can add a rule into the rule group, modify the rule group name, move the rule into another rule group, ungroup rules, and ungroup rule groups using appropriate options.

## Enabling/Disabling Rules in a NAT Policy

To enable or disable rules in a NAT policy:

1. Select **Security Director > NAT Policy**.  
The NAT Policy Tabular view appears.
2. Select the NAT policy whose rules you want to enable or disable.  
The rules of the NAT policy appears in the right pane.

3. Select the check boxes next to the rules that you want to enable or disable.
4. Click the **Enable** or **Disable** icon.



**NOTE:** You can enable or disable a rule group. When a rule group is disabled, all rules in the rule group are also disabled. The rule group row in the Tabular view is greyed out but the rules are not greyed out. However, the rules in the rule group are not published to the device during the publish operation, if they are disabled.

## Expanding/Collapsing All Rules in a NAT Policy

To expand or collapse all rules in a firewall policy:

1. Select **Security Director > NAT Policy**.

The NAT Policy Tabular view appears.

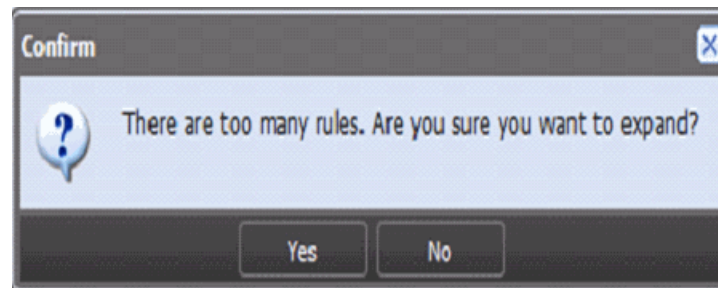
2. Select the NAT policy whose rules you want to expand.

By default, NAT policy rules in collapsed state are displayed in the right pane.

3. Click the **ExpandAll** icon, and all rules corresponding to that particular NAT policy are expanded.

If a NAT policy contains more than 1000 rules, a warning message is displayed before expanding, as shown in [Figure 169 on page 342](#).

**Figure 169: ExpandAll Warning Message for More Than Thousand Rules**



4. Click the **CollapseAll** icon to collapse all rules.

## Cutting/Copying and Pasting Rules or Rule Groups in a NAT Policy

To cut or copy and paste rules or rule groups in a NAT policy:

1. On the right pane, select the device rule or rule group that you want to cut or copy. Right-click the selected device rule or rule group, and select **Cut** or **Copy**. If Cut is selected, related rule or rule group is removed from the right pane view.

You can copy the rules without locking a policy. However, you must lock the policy for the cut operation. You can select the combination of rules or rule groups for cutting

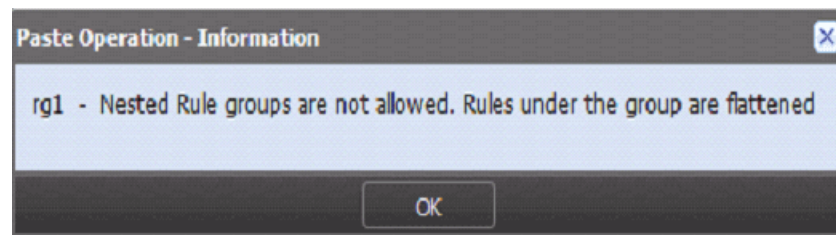
or copying operation. However, a rule group and one or more rules inside the same rule group cannot be copied or cut simultaneously.

2. On the left pane, select the NAT policy in which you want to paste the rule or rule group. On the right pane, right-click the rule or rule group that you want to paste. You can paste the rule or rule group before or after the selected rule or rule group by choosing the **Paste Before** or **Paste After** option, respectively.

If you are cutting and pasting rules across different policies, you must first save the cut operation in the current policy before moving to another policy for pasting. Otherwise, an error message is displayed, giving you the option either save or discard the changes.

Security Director does not support nested rule grouping. If you paste a rule group in another custom rule group, an error message is displayed, giving you the option to proceed by flattening the copied rule group, as shown in [Figure 170 on page 343](#).

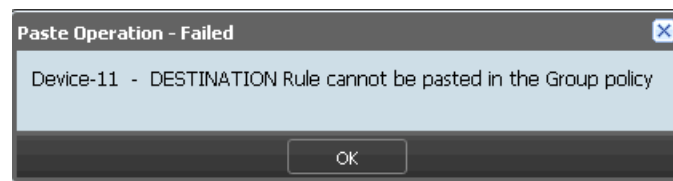
**Figure 170: Nested Rule Group Operation Warning Message**



Rule paste fails under the following conditions:

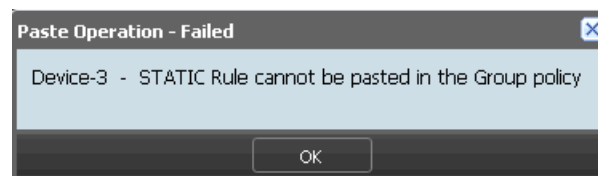
- If you copy the destination NAT rule and paste the rule in the group policy, the error shown in [Figure 171 on page 343](#) appears.

**Figure 171: Destination NAT Rule Paste Error**



- If you copy the static NAT rule and paste the rule in the group policy, the error shown in [Figure 172 on page 343](#) appears.

**Figure 172: Static NAT Rule Paste Error**



- If you copy a source rule of translation type Pool to the group rule, the error shown in [Figure 173 on page 344](#) appears.

**Figure 173: Group Policy Paste Error**

## Assigning Devices to a NAT Policy

To assign devices to a group NAT policy:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

2. Right-click the NAT policy to which you want to assign devices and select **Assign Devices**.

The Assign Devices to Service window appears.

3. Select the devices that need to be added to the NAT policy in the Select Devices pane. Select the devices from the Available column and click the right arrow to move these devices to the Selected column. There is option to search for any devices in the Selected column of the Assign Devices window.
4. Click **Modify**.



### NOTE:

- If you do not have permission to certain devices, they will not be visible while assigning devices to a new or existing NAT policy.
  - You cannot view the device or exception policies at the left pane, for the assigned devices, that are labeled by the other Junos Space users.
- 

## Deleting Devices from a NAT Policy

To delete devices from a group NAT policy:

1. Select **Security Director > Firewall Policy**.

The Policy Tabular view appears.

2. Right-click the NAT policy from which you want to delete devices and select **Assign Devices**.

The Assign Devices to Service window appears.

3. Select the devices that need to be deleted from the NAT policy in the Select Devices pane. Select the devices from the Selected column and click the left arrow to move these devices to the Available column.
4. Click **Modify**.



**NOTE:** Deleting a device from a group NAT policy creates a device NAT policy. This policy carries all the device-exception rules of the device from the group NAT policy.

## Rule Operations on the Filtered Rules

You can perform various rule operations on the filtered list of rules. For example, consider a policy having seven rules such as *a*, *b*, *c*, *d*, *e*, *f*, and *g* in an order inside a rule group. After filtering, if only second and sixth rules are filtered, that is only rules *b* and *f*, [Table 31 on page 345](#) explains the various rule operations on the filtered rules.

**Table 31: Various Rule Operation on the Filtered Rules**

Rule Operation	Description
Add rule before	<p>To add a new rule before an existing rule, select the existing rule in the filtered list and add the new rule above it.</p> <p>For example, if you perform this operation by selecting the sixth rule that is <i>f</i>, the seventh rule must be added before the sixth rule, in the filtered list. The rule <i>f</i> must be moved down to the seventh place in the full list.</p>
Add rule after	<p>To add a new rule after an existing rule, select the existing rule in the filtered list and add the new rule below it.</p> <p>For example, If you perform this operation by selecting the second rule that is <i>b</i> in the filtered list, the seventh rule must be added after the second rule. This rule is added at the third place in the full list.</p>
Paste before	<p>To paste a copied rule before an existing rule, select the existing rule in the filtered list and paste the copied rule above it.</p> <p>For example, If you perform this operation by selecting the sixth rule that is <i>f</i> in the filtered list, the copied rule must be added after the sixth rule. The rule <i>f</i> must be moved down to the seventh place in the full list.</p>
Paste after	<p>To paste a copied rule after an existing rule, select the existing rule in the filtered list and paste the copied rule below it.</p> <p>For example, If you perform this operation by selecting the second rule that is <i>b</i> in the filtered list, the copied rule must be added after the second rule. The new rule is added at the third place in the full list.</p>
Clone	<p>To clone a selected rule, select the existing rule you want to clone in the filtered list. The cloned rule will be added above the selected rule.</p> <p>For example, If you perform this operation by selecting the sixth rule that is <i>f</i> in the filtered list, the cloned rule must be added after the sixth rule, at the seventh place. The rule <i>g</i> must be moved down to the eighth place in the full list. This can be checked by clearing the filter from the search box.</p>

Table 31: Various Rule Operation on the Filtered Rules (*continued*)

Rule Operation	Description
Move rule to top	<p>To move a rule to the top of a list, select the rule you want to move in the filtered list and move rule to the top. If you move a rule from a filtered list to the top of that list, the selected rule is also moved to the top of the full list.</p> <p>For example, If you perform this operation by selecting the sixth rule <i>f</i> in the filtered list, the rule <i>f</i> must be moved to the top in the rule group, at first place in the original list. This can be checked by clearing the filter from the search box.</p> <p>This option is disabled for the top rule in the full list.</p>
Move rule to bottom	<p>To move a rule to the bottom of the list, select the rule you want to move in the filtered list and move rule to the bottom. If you move a rule from a filtered list to the bottom of that list, the selected rule is also moved to the bottom of the full list.</p> <p>For example, If you perform this operation by selecting the second rule <i>b</i> in the filtered list, the rule <i>b</i> must be moved to the bottom in the rule group, at the seventh place in the full list. This can be checked by clearing the filter from the search box.</p> <p>This option is disabled for the last rule in the full list.</p>
Move rule up	<p>To move a rule up one position in the list, select the rule you want to move in the filtered list and move rule up one position.</p> <p>For example, If you perform this operation by selecting the sixth rule <i>f</i> in the filtered list, the rule <i>f</i> must be moved before the second rule <i>b</i> in the filtered list. This rule is moved to the second place in the rule group in the full list.</p> <p>This option is disabled for the top rule in the full list.</p>
Move rule down	<p>To move a rule down one position in the list, select the rule you want to move in the filtered list and move rule down one position.</p> <p>For example, If you perform this operation by selecting the second rule <i>b</i> in the filtered list, the rule <i>b</i> must be moved after the sixth rule <i>f</i> in the filtered list. This rule is moved to the sixth rule in the rule group in the full list.</p> <p>This option is disabled for the last rule in the full list.</p>

- Related Documentation**
- [Creating NAT Policies on page 305](#)
  - [Adding Rules to a NAT Policy on page 322](#)
  - [Ordering the Rules in a NAT Policy on page 328](#)
  - [Publishing NAT Policies on page 329](#)

## CHAPTER 22

# NAT Pools

- [Creating NAT Pools on page 348](#)
- [Managing NAT Pools on page 351](#)

## Creating NAT Pools

A Network Address Translation (NAT) pool is a continuous range of IP addresses that you can use to create a NAT policy. NAT policies perform address translation by translating internal IP addresses to the addresses in these pools.

To create a NAT pool:

1. Select **Security Director > NAT Policies > NAT Pools**. In the NAT pools page, click plus sign (+) to create a new NAT pool.

The Create NAT Pool page appears, as shown in [Figure 174 on page 348](#).

**Figure 174: Create NAT Pool Page**

**Create NAT Pool**

Name:

Description:

Pool Type:

Pool Address:

**Routing Instance**

Device:

Routing Instance:

**Advanced**

Host Address Base:

Translation:

Address Pooling:

Address Sharing: ☐

Overflow Pool Type:

2. Enter the name of the NAT pool in the Name field.
3. Enter a description for the NAT pool in the Description field.
4. Select the type of NAT pool from the Pool Type menu.
5. Select the appropriate address from the Pool Address menu.
6. Expand the Routing Instance pane by clicking on the down arrow.
7. Select the device from the Device list. The Routing Instance field lists the available routing instances for the selected devices.



8. Select the desired routing instance for the selected device from the routing instances listed.
9. Expand the Advanced pane by clicking the down arrow.
10. Enter an appropriate value in the Host Address Base field.
11. Select the appropriate option from the Translation menu.

If the Translation type is No Translation:

- You can now create a source NAT pool with a single IP and no port translation.
- Two new parameters, Address Pooling and Address Sharing, are available. You can choose Address Pooling for all types of translations, but you can enable address sharing only when you select No Translation. If you select Host Address Base, the Address Pooling or Address Sharing options are not shown.
- Select the appropriate option from the Overflow Pool Type menu. If you select Pool in the Overflow Pool Type menu, select the appropriate NAT pool from the Overflow Pool selector.

If the Translation type is Port/Range:

- Select the required address pool the Address Pooling menu.
- Select the port from the Port menu.

If the Translation type is Overload:

- Select the required address pool the Address Pooling menu.
- Select an appropriate value from the Port Overloading Factor selector.

12. Click **Create**.

To create an address or address group:

1. Click the plus sign (+) next to the Pool Address drop-down menu to create a new address or new address object. [Figure 175 on page 350](#) shows the page that appears.

**Figure 175: Inline Address Group Creation for NAT Pool**

**Create NAT Pool**

**Create Address Object**

Object Type: ☐ Address ☒ Address Group

Name:

Description:

Addresses:

Available		Selected	
Filter	Select: <a href="#">All</a> <a href="#">None</a>		Select: <a href="#">All</a> <a href="#">None</a>
10.159.2.0/25 (10.159.2.0/25)	Global		
10.159.3.0/24 (10.159.3.0/24)	Global		
10.159.4.0/24 (10.159.4.0/24)	Global		
Addr-66.0.192.112/28 (66.0....)	Global		
Addr-66.184.206.216 (66.18...	Global		
ADDR-DNS-VIP-v6 (2001:48...	Global		
Total: 30			
<input type="checkbox"/> Host	<input type="checkbox"/> Network	<input type="checkbox"/> Wildcard	<input type="checkbox"/> Range <input type="checkbox"/> Other

**Create** **Cancel**

2. Select the Object Type radio buttons to create either a new NAT pool address or a new address group.
3. In the Name field, enter the name of an address group.
4. In the Addresses field, you can select all addresses available in the Available column or select few addresses to create a new address group.
5. Click **Create** to create the address group. This adds the newly created address objects to the selected addresses and returns to the address selector. Click **Cancel** to discard your changes and return to the Create NAT Pool window.



**NOTE:** You can create address object inline similar to address group inline.

**Related Documentation**

- [NAT Overview on page 301](#)
- [Managing NAT Pools on page 351](#)

- [Creating NAT Policies on page 305](#)
- [Managing NAT Policies on page 332](#)

## Managing NAT Pools

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You can delete, modify, and clone NAT pools listed in the NAT Pool page.

To open the NAT Pool page:

- Select **Security Director > NAT Policies > NAT Pool**.

The NAT Pool page appears.

You can right-click the NAT pool to manage it.

You can perform the following tasks on the NAT Pool page:

- [Deleting NAT Pools on page 351](#)
- [Modifying NAT Pools on page 351](#)
- [Cloning NAT Pools on page 352](#)
- [Show Duplicate NAT Pools on page 352](#)
- [Find NAT Pool Usage on page 354](#)
- [Replace Addresses on page 355](#)
- [Show Unused NAT Pools on page 356](#)
- [Delete All Unused NAT Pools on page 357](#)

## Deleting NAT Pools

To delete a NAT pool:

1. Select **Security Director > NAT Policies > NAT Pools**.  
The Manage NAT Pool page appears.
2. Select the NAT pool that you want to delete, right-click, and select **Delete NAT Pools**.  
The Delete pop-up window appears displaying all the NAT pools that you can delete.
3. Click **Delete**.



**NOTE:** You cannot delete a NAT pool that is associated with a NAT policy.

---

## Modifying NAT Pools

To modify a NAT pool:

1. Select **Security Director > NAT Policies > NAT Pools**.  
The NAT Pool page appears.
2. Select the NAT pool that you want to modify, right-click, and select **Modify NAT Pool**.

The Modify NAT Pool page appears.

3. On the Modify NAT Pool page, you can edit the description and IP range of the NAT pool. You cannot modify the NAT pool name.
4. Click **Modify**.

You will receive a warning message when you try to modify a NAT pool used in a NAT policy. When you modify a pool associated with a published policy, you must republish the policy so that the changes are reflected in the policy.

## Cloning NAT Pools

To clone a NAT pool:

1. Select **Security Director > NAT Policies > NAT Pools**.  
The NAT Pools page appears.
2. Select the NAT pool you want to clone, right-click, and select **Clone NAT Pool**.  
The Clone NAT Pool window appears.
3. Make appropriate changes and save the NAT pool.



**NOTE:** You can also clone the NAT pool by right-clicking the NAT pool and selecting the Clone NAT Pool option.

## Show Duplicate NAT Pools

To find duplicate address objects:

1. Select **Security Director > NAT Policies > NAT Pools**.  
The NAT Pools page appears.
2. Select the NAT pool for which you want to find the duplicate objects. Right-click the NAT pool or use the Action drawer, and click **Show Duplicates**.

A window appears showing all the groups with duplicate objects, as shown in [Figure 176 on page 353](#).

Figure 176: Show Duplicates of NAT Pool

Object Builder > NAT Pools > **Show Duplicates**

[Return To NAT Pool View](#)

Name	Pool Address	Pool Type	Description	
<b>nat_171_182_211_61 (3 members)</b> <span>Merge</span>				
<input checked="" type="checkbox"/> nat_171_182_211_61	h_171.182.211.61	Destination		
<input checked="" type="checkbox"/> dst_pool_171_182_2... h_171.182.211.61		Destination		
<input type="checkbox"/> dst_pool_171_182_2... h_171.182.211.61		Destination		
<b>dst_pool_171_182_210_169 (3 members)</b> <span>Merge</span>				
<input type="checkbox"/> dst_pool_171_182_2... h_171.182.210.169		Destination		
<input type="checkbox"/> dst_pool_171_182_2... h_171.182.210.169		Destination		
<input type="checkbox"/> nat_171_182_210_169 h_171.182.210.169		Destination		

- If you want to merge duplicate objects in a group, select the objects and click **Merge**.

A merge window appears, as shown in [Figure 177 on page 353](#). In the Name field, provide a new object name or select existing object names from the list.

Figure 177: Merge NAT Pool

**Merge NAT Pool** ✕

Name:  ▼

Description:

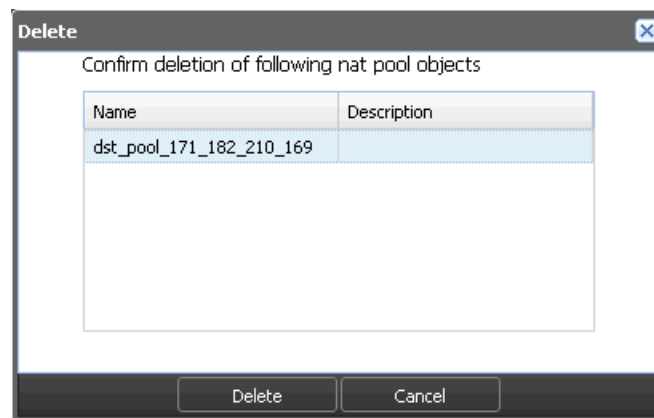
Merge Cancel



**NOTE:** You can merge all the objects in a group by clicking the **Merge** button after you select all the objects by clicking the group name.

- If you want to delete objects in a group, select an object or objects, right-click, and then select **Delete**. A confirmation window appears before the selected objects are deleted, as shown in [Figure 178 on page 354](#).

Figure 178: Delete Duplicate NAT Pool Objects

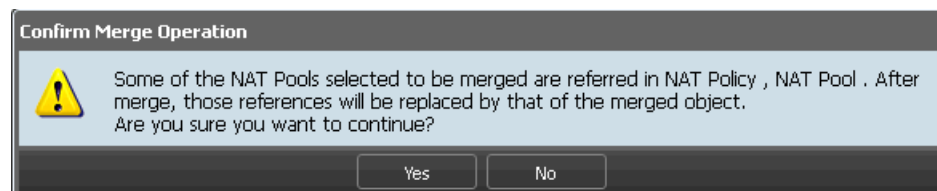


Click **Delete** to delete the selected objects or **Cancel** to cancel the deletion.

5. If you want to find the usage of the duplicate objects in other groups, select an object, right-click, and then select **Find Usage**.

The usage window appears showing the usage of the selected object in any service ( NAT policy ) or security objects (NAT pool or address groups), as shown in [Figure 179 on page 354](#).

Figure 179: Confirm Merge Operation



Procedure to manually rebuild the Index, see [“Indexing Overview” on page 365](#)

## Find NAT Pool Usage

To find address usage:

1. Select **Security Director > NAT Policies > NAT Pools**.

The NAT pool page appears.

2. Select the NAT pool for which you want to find the usage. Right-click the address or use the Action drawer, and click **Find Usage**.

A window appears, showing all the locations where this NAT pool object is used, as shown in [Figure 180 on page 355](#).

Figure 180: NAT Pool Usage Window



Procedure to manually rebuild the Index, see [“Indexing Overview” on page 365](#)

## Replace Addresses

You can select one or more NAT pools to replace with another NAT pool of the same pool type. To replace one or more NAT pools:

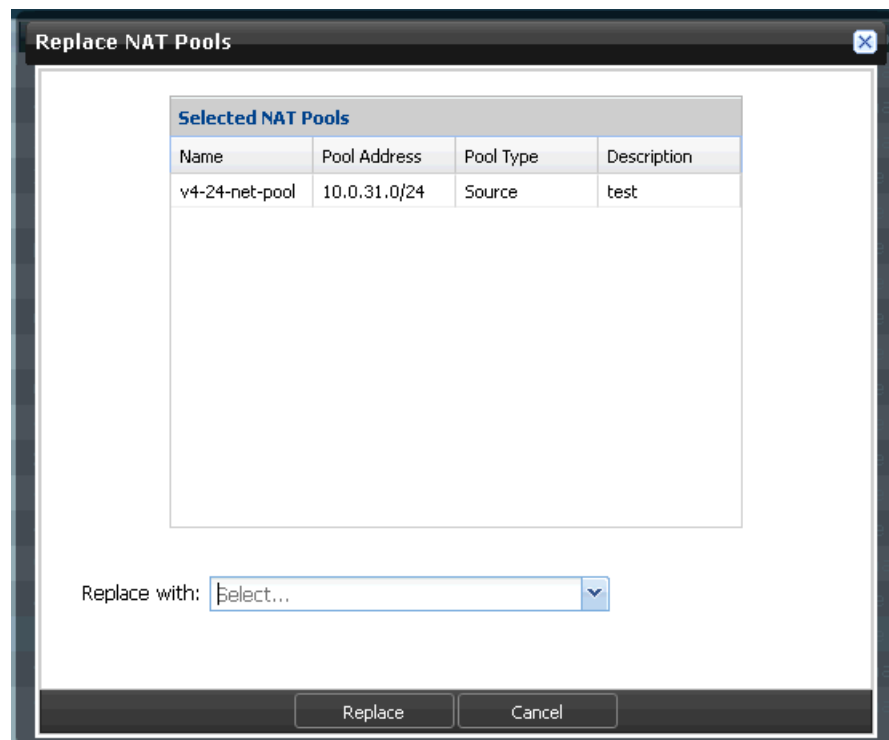
1. Select **Security Director > NAT Policies > NAT Pools**.

The NAT pool page appears.

2. Select the NAT pool that you want to replace. Right-click the NAT pool or use the Action drawer, and click **Replace NAT Pools**. You can replace a single NAT pool or multiple NAT pools.

A window appears, showing the NAT pool(s) you have selected to be replaced, along with a drop-down list of the NAT pools that are available to replace the NAT pool you have selected. See [Figure 181 on page 356](#).

Figure 181: Replace NAT Pools



3. In the Replace NAT Pools window, select the NAT pool to be replaced with the other NAT pool, and click **Replace**. If the selected NAT pools are used in any other references, you will receive the following warning message before the pools are replaced. Click **Yes** to continue the replacement operation.

If the operation is successful, you will receive a summary showing the NAT pools that were replaced.

## Show Unused NAT Pools

1. Select **Security Director > NAT Policies > NAT Pools**.

The NAT pool page appears.

2. Right-click any NAT pool or use the Actions drawer, and select **Show Unused**.

A list of all unused NAT pool objects that are not referenced in any policy appear on the page.

Procedure to manually rebuild the Index, see [“Indexing Overview” on page 365](#)



## Delete All Unused NAT Pools

You can find the unused NAT pool objects and delete them. You can clear all the unwanted objects that are not used anywhere.

To delete the unused NAT pools:

1. Select the unused NAT pool object that you want to delete, and right-click the object or use the Actions drawer, and select **Delete All Unused NAT Pools**.

A warning message appears, confirming the delete operation.

2. Click **Yes** to delete all unused NAT pool objects or **No** to cancel the delete operation.

### Related Documentation

- [NAT Overview on page 301](#)
- [Creating NAT Pools on page 348](#)
- [Creating NAT Policies on page 305](#)
- [Managing NAT Policies on page 332](#)



# Port Sets

- [Creating a Port Set on page 359](#)
- [Managing Port Sets on page 360](#)

## Creating a Port Set

---

You can group a set of ports or port ranges, and reference these port sets, using NAT rules, as source and destination ports.

To create a port set:

1. Select **Security Director > NAT Policies > Port Sets**.

The Port Sets page appears, listing the existing port sets.

2. To create a new port set, click the plus sign (+).

The Create PortSet page appears, as shown in [Figure 182 on page 359](#).

**Figure 182: Create PortSet**

The screenshot shows a web form titled "Create PortSet". It has three input fields: "Name\*" (with a red asterisk indicating it is mandatory), "Description", and "Ports/Port-Ranges\*" (also with a red asterisk). Below the fields are two buttons: "Create" and "Cancel".

3. In the Name field, enter the name of the new port set. This is a mandatory field.
4. In the Description field, enter a description of the port set.

5. In the Ports/Port-Ranges field, enter the port range. Enter multiple ports with comma separated. The maximum number of port or port range that you can enter for a single port is 8.

6. Click **Create**.

A new port set is created.

**Related  
Documentation**

- [Managing Port Sets on page 360](#)

---

## Managing Port Sets

You can modify, delete, clone, show unused, and find usage for port sets.

To open the Port Sets page:

- Select **Security Director > NAT Policies > Port Sets**.

The Port Sets page appears, listing the port sets.

- Right-click the port set to manage it, or select the required options from Actions.

You can perform the following management tasks on the Port Sets page:

- [Modifying a Port Set on page 360](#)
- [Deleting a Port Set on page 361](#)
- [Cloning a Port Set on page 361](#)
- [Showing Duplicate Port Sets on page 361](#)
- [Finding a Port Set Usage on page 361](#)
- [Showing Unused Port Sets on page 362](#)
- [Deleting All Unused Port Sets on page 362](#)
- [Assigning Domains to Port Sets on page 362](#)

### Modifying a Port Set

To modify a port set:

1. Select **NAT Policies > Port Sets**.

The Port Sets page appears.

2. Right-click the port set and select **Modify PortSet**, or click the pencil icon.

The Modify PortSet page appears.

3. You can modify the name, description, and ports or port ranges.

4. Click **Modify**.

The required values are modified and saved.

## Deleting a Port Set

To delete a port set:

1. Select **NAT Policies > Port Sets**.

The Port Sets page appears.

2. Right-click the port set that you want to delete, and select **Delete PortSets**.

You can also click the minus sign (-) to delete the port set.

3. A confirmation message appears before deletion. Click **Delete**.

The required port set is deleted.

## Cloning a Port Set

To clone a port set:

1. Select **NAT Policies > Port Sets**.

The Port Sets page appears.

2. Select the port set you want to clone, right-click, and select **Clone PortSet**.

You are redirected to the Clone PortSet page.

3. Modify the required field value, and click **Clone**.

## Showing Duplicate Port Sets

To view the duplicate port sets:

1. Select **NAT Policies > Port Sets**.

The Port Sets page appears.

2. Select the port set within which you want to find the duplicate objects. Right-click the port set, and click **Show Duplicates**.

A window appears, showing all the sets that include the duplicate objects.

## Finding a Port Set Usage

To find usage for a port set:

1. Select **NAT Policies > Port Sets**.

The Port Sets page appears.

2. Select the port set for which you want to find the usage. Right-click the port set, and then click **Find Usage**.

A window appears, showing all the locations where this object is used.

## Showing Unused Port Sets

To view all the unused port sets:

1. Select **NAT Policies > Port Sets**.

The Port Sets page appears.

2. You can either right-click any port set or use the Actions, and select **Show Unused**.

A list of all unused port sets that are not referenced in any policy appears on the page.

## Deleting All Unused Port Sets

You can find all the unused port sets and delete them. You can clear all the unwanted objects that are not used anywhere.

To delete all unused port sets:

1. Select the unused port sets that you want to delete and right-click, or, from Actions, select **Delete All Unused**.

A confirmation message appears before deletion.

2. Click **Yes** to delete all unused port sets, or **No** to cancel the delete operation.

## Assigning Domains to Port Sets

To assign or modify the domain for a port set:

1. Select **NAT Policies > Port Sets**.

The Port Sets page appears.

2. Select the port set for which you want to assign a domain and right-click, or, from Actions, select **Assign PortSet to Domain**.

The Assign To Domain window appears.

3. Select the required domain to assign, and click **Assign**.

A domain is assigned to the port set.

**Related Documentation**

- [Creating a Port Set on page 359](#)

## PART 11

# Global Search

- [Global Search on page 365](#)





# Global Search

- [Indexing Overview on page 365](#)
- [Global Search on page 366](#)

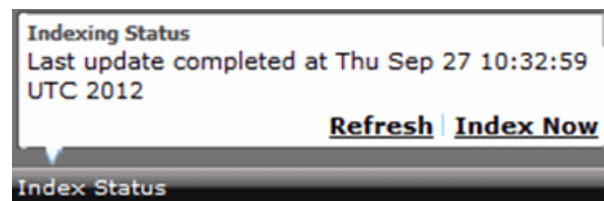
## Indexing Overview

---

Index Now option is a manual override option to completely re-index the Security Director database for search functionality. However, Security Director does this process automatically when you add, delete, or update the objects. Therefore, this option should only be used in scenarios when you notice that objects are not searchable. One such scenario is database restore or other unknown failure conditions, in which the search indexes might have gone out of sync with Security Director.

[Figure 183 on page 365](#) shows the indexing status for Security Director.

Figure 183: Indexing Status Message



To get the Indexing Status, go to Object Builder workspace and click either Addresses or Services option. In the Addresses or Services page, right-click any address or service and select **Find Usage**. You can see the Indexing Status option at the bottom of the Usage window.



**NOTE:** After the Junos Space database is restored, a manual re-index of the Security Director database is required.

Related  
Documentation

- [Global Search on page 366](#)

## Global Search

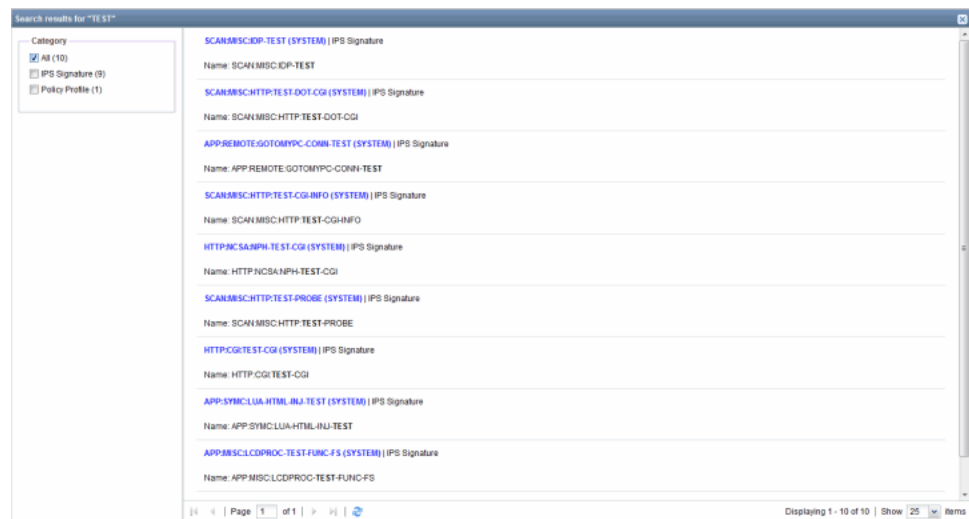
The Security Director home page provides a global search option to find objects and security configurations. You can also click a search result and navigate to its page.

To search for objects or configurations using the Global search:

1. Enter the search criteria in the Search field and click the magnifying glass icon.

All objects and configurations matching the search criteria appear in the search results page. The area on the left displays the search results with appropriate filters and the area on the right displays the detailed search results with a short description as shown in [Figure 184 on page 366](#).

**Figure 184: Global Search Results**



2. Click a detailed search result URL to navigate to its respective page.

The search results for Global search are based on how the Security Director objects and configurations are indexed. [Table 32 on page 366](#) specifies the objects and configurations that you can search using Global search.

**Table 32: Security Director Global Search**

Security Director Object/Configuration	Attributes by which Global search is possible.
Firewall Policy	Name, profile name, description, source address, destination address, service, and zone.
Address	Addresses that are IP, subnet, range, and hostname type.
Address Group	All address parts of the group after expanding address groups within the group.
Service	Services that include ports, ICMP, RPC, and UUID searches.

Table 32: Security Director Global Search (*continued*)

Service Group	All service parts of the group.
VPN	All addresses used in VPN or protected resources of the VPN.
NAT	All addresses used in NAT, NAT pools, and Match Type (zone, interface).
IPS	IPS signature name, signature CVE ID, bug ID, and IPS policy names.

You cannot search objects such as device name, policy profile, and template using Global search. If you type a valid IPv4 address, subnet or range search results return all addresses that include that specific valid IPv4 address. For example, if you type 1.1.1.1 and if there is an subnet address 1.1.1.0/24, the search result will match the subnet and return the result.

With Global search, the search is free-text based. You can search for phrases and multiple terms. The default value for multiple terms is the OR operator. You can also search for multiple terms using the AND operator. By default, the search query looks at name, IP, port, category, ICMP code, ICMP type, subnets, and IP ranges. All search results are highlighted as part of the result, and the search results have a URL to jump to the corresponding object in its ILP. The IP address searches looks for an IP address, within ranges and subnets as long as the user gives a valid IP address. In range-based searches for IP addresses; you would need to add the – for range; for example, 1.1.1.1/24 and 10.204.76.56-10.204.76.80. The subnet searches should be provided with valid subnets. All port-specific searches will only search for ports. The source port uses the keyword “srcPort” and the destination port uses the keyword “dstPort”.

SD Search supports wildcard searches if you use the “\*” character in the search query. Names of objects will be broken down into one or more terms if the name has a nonletter character or a number. For example, a name like “enet\_dest12” will be broken into “enet” “dest” and “12”. You can search on “enet” “dest” or 112 or type “ene\*” “des\*” and so on.

**Related Documentation**

- [Indexing Overview on page 365](#)



## PART 12

# Downloads

- [Downloads on page 371](#)



# Downloads

- Downloading the Signature Database on page 371
- Installing the Signature Database on page 373

## Downloading the Signature Database

To download the signature database:

1. Select **Security Director > Download**.

You can see the last log date in the last two weeks as shown in [Figure 185 on page 371](#).

**Figure 185: Signature Download Logs**

Logs in 2 weeks (May 23, 2014 - Jun 6, 2014)					
User Name	User IP	Task	Timestamp	Result	Description
super	localhost	Clean up after parsing IPS/Application Signatures	Jun 6, 2014 3:24:43 PM IST	Success	Clean up successful after parsing signature version 2384
super	localhost	Parse IPS/Application Signatures	Jun 6, 2014 3:24:18 PM IST	Success	Signature version 2384 parsed successfully.
super	localhost	Download	Jun 6, 2014	Success	Signature version

Page 1 of 1 | Displaying 1 - 14 of 14

2. Select **Signature Database** from the Downloads workspace.

The Signature Database page appears, as shown in [Figure 186 on page 372](#). You can see the active databases that were downloaded earlier. At any time, Security Director will have only one active signature database.

Figure 186: Signature Database Page

Signature Database

Active Database on Space

Database Version	Publish date	Update Job	Installed Device Count	Detectors	Action
2384	2014-06-04 20:10:58	266344	0	5.1.110140207...	Install

Latest list for IPS signatures

Search Version:

Database Version	Publish date	Update Summary	Detectors	Action
2382	2014-06-02 20:35:03	3 new signatures 4 updated signatures	12.6.140140207...	Delta Download Full Download
2380	2014-05-29 16:34:58	1 new signatures 2 updated signatures	12.6.140140207...	Delta Download Full Download
2379	2014-05-27 23:36:53	14 new signatures 7 updated signatures	12.6.140140207...	Delta Download Full Download
2376	2014-05-21 18:00:11	6 new signatures 10 updated signatures 2 renamed signatures	12.6.140140207...	Delta Download Full Download
2375	2014-05-19 18:00:04	6 new signatures 2 updated signatures	12.6.140140207...	Delta Download Full Download
2374	2014-05-14 21:00:06	1 new signatures 9 updated signatures	12.6.140140207...	Delta Download Full Download
2373	2014-05-13 16:08:44	13 new signatures	12.6.140140207...	Delta Download Full Download

Upload From FileSystem

The following download options are available for the signature download:

- Delta Download—Downloads only the updates from the previous downloaded version.
- Full Download—Downloads the complete signature database; the download might take a longer time.

### 3. Select **Download Configuration**.

The Download Configuration page appears, as shown in [Figure 187 on page 372](#).

Figure 187: Download Configuration Page

Download Configuration	
Download URL:	<input type="text" value="https://services.netscreen.com"/>
Use Proxy Server	
Enable Proxy:	<input type="checkbox"/>
Host Name:	<input type="text"/>
Host Port:	<input type="text"/>
User Name:	<input type="text"/>
User Password:	<input type="password"/>
<input type="checkbox"/> <input type="button" value="Schedule at a later time"/>	
<input type="checkbox"/> <input type="button" value="Repeat"/>	
<input type="button" value="Download"/> <input type="button" value="Cancel"/>	



4. Enter the URL from where you want to download the IPS and AppFw signature database in the Download URL field.
5. Click the **Enable Proxy** check box.
6. Enter the hostname in the Proxy Host Name field.
7. Enter the host's port number in the Proxy Host Port field.
8. Enter the username in the Proxy User Name field.
9. Enter the password in the Proxy User Password field.
10. Select the **Schedule at a later time** check box or down arrow to view the scheduling options.
11. Enter a date in the Date and time field. You can also choose a date from the date picker by clicking the date picker icon.
12. Select the time from the drop-down menu.
13. Select the Repeat check box to enable the schedule to recur in a given time interval.
14. Enter a numerical value in the first field in this section.
15. Select the appropriate length of time from the drop-down menu below the first field.
16. Select the **End Time** check box to view the options available to set the end time for recurring downloads.
17. Enter a date in the Date and time field. You can also choose a date from the date picker by clicking the date picker icon.
18. Select the time from the drop-down menu.
19. Click **Download**.

All the downloaded signatures are created in the System domain in read-only mode. The configuration that are downloaded are also saved in the System domain.

Security Director downloads both the AppID1.0 and the ngAppID2.0 application, and groups them with Security Director. These two applications and this group are downloaded and parsed from different ZIP folders. The offline packages are also imported and parsed similarly to the online packages. You can perform the offline download from <https://signatures.juniper.net/space/2/latest/latest-space-update.zip>.

#### Related Documentation

- [Installing the Signature Database on page 373](#)

## Installing the Signature Database

To install the signature database:

1. Select **Security Director > Downloads**.  
You can see the last login date in the last two weeks.
2. Select Signature Database from the Downloads workspace.

The Signature Database page appears. You can see the active database that was downloaded earlier.

3. Select **Install Configuration**.

The Install Configuration page appears, as shown in [Figure 188 on page 374](#).

**Figure 188: Install Configuration Page**

Device name	Device IP	Platform	OS Version	IPS License	APP License	Detector Vers...	Connection St...
HE_SRX-61-41	10.205.61.41	SRX3400	12.1X47-D10	Yes(2360)	Yes(2360)	12.6.140140207	Up
SRX2	10.207.98.110	FIREFLY-PERIMETER	12.1X47-D2	No(-)	No(-)	12.6.130121210	Up
Node-177 (Cluster)	10.205.50.177	SRX3400	12.1I20140508_srx_12q1_x47.1-647656	Yes(2379)	Yes(2379)	12.6.140140207	Up

Page 1 of 1 | Probe Devices | Displaying 1 - 3 of 3 | Show 25 items

☒ Enable Incremental Update

☐ Schedule at a later time

☐ Repeat

Install Cancel

Firefly Perimeter devices support IDP from Junos OS Release 12.1X47 onwards, and does not need license to use the IDP feature. The Signature Installation page lists the Firefly Perimeter devices though there is no license for IDP.

4. Click the down arrow next to Signature Summary to view the version of the database and platforms that support this database.
5. When you select a device for signature update, you can perform an incremental update or a full update of the signature database. Incremental update is the default. If the diff files for each incremental version are not available, a full update is performed regardless of which option you select. If diff files for incremental versions are available in Security Director and you select an incremental signature update, an incremental signature update is performed for both branch SRX Series devices and high-end SRX Series devices. For high-end SRX Series devices, a full update of the signature database is always performed.

If you do not want to perform an incremental update, clear the **Enable Incremental Update** check box, and a full signature update will be performed. For each new version download of the signature database, Junos Space will store the diff files for the previous 10 versions.

6. Click the check box next to the devices on which you want to install the database.
7. Select the **Schedule at a later time** check box or click the down arrow to view the scheduling options.
8. Enter a date in the Date and time field. You can also choose a date from the date picker by clicking the date picker icon.
9. Select the time from the drop-down menu.
10. Click the down arrow next to the Repeat section to enable the schedule to recur in a given time interval. You can also click the check box next to Repeat section to enable the schedule to recur in a given time interval.
11. Enter a numerical value in the first field in this pane.
12. Select the appropriate length of time from the drop-down menu below the first field.
13. Click the down arrow next to the End Time section to view the options available to set the end time for recurring installations. You can also click the check box next to End Time section to view the options available to set the end time for recurring installations.
14. Enter a date in the Date and time field. You can also choose a date from the date picker by clicking the date picker icon.
15. Select the time from the drop-down menu.
16. Click **Install**.

The configuration installing and device probing list devices only from the current domain, and probes devices only from the current domain.

Security Director sends the full signature database update if any one of the following scenarios is true:

- You install an older version of the signature files.
- The corresponding diff files do not exist.
- A signature file is added using the offline update.

You can perform an offline update of the signature database files by downloading the latest signature version from

<https://services.netscreen.com/space/latest/latest-space-update.zip> and storing it locally. Select **Upload From FileSystem** to upload the signature to Junos Space. Once the upload is completed, you can install the latest signature file version on to the device.



**NOTE:** Only the primary SRX Series device node is discovered by Security Director. If a job is created to install an IPS signature on the primary SRX Series node, the IPS signature is automatically installed on the SRX Series secondary node also.

Based on the device schema version (Junos OS Release 12.1x47 or older), Security Director installs the App-Sig-Package to the device, as shown in the [Table 33 on page 376](#):

Table 33: App-Sig-Package Details

Device Junos Version	App-Sig-Package
12.1x47	ngAppID2.0
Versions previous to 12.1X47	AppID1.0

**Related Documentation**    • [Downloading the Signature Database on page 371](#)

## PART 13

# IPS Management

- [IPS Management Overview on page 379](#)
- [IPS Management on page 381](#)



# IPS Management Overview

- [IPS Management Overview on page 379](#)

## IPS Management Overview

---

You can use the IPS Management workspace to download and install the AppSecure signature database to security devices. You can automate the download and install process by scheduling the download and install tasks and configure these tasks to recur at specific time intervals. This ensures that your signature database is up-to-date.

You can view the predefined IPS policy templates and create customized IPS policy-sets in this workspace. You can also enable IPS configuration in a firewall policy and provision IPS related configuration with firewall policy.

During a device assignment for a group policy, only devices from the current and child domains (with view parent enabled) are listed. Devices in the child domain with view parent disabled are not listed. Not all the group policies of the Global domain are visible in the child domain. Group policies of the Global domain (including All device policy) are not visible to the child domain, if the view parent of that child domain is disabled. Only the group policies of the Global domain, which has devices from the child domain assigned to it, are visible in the child domain. If there is a group policy in global domain with devices from both D1 and the Global domains assigned to it, only this group policy of the Global domain is visible in the D1 domain along with only the D1 domain devices. No other devices, that is the Device-Exception policy, of the Global domain is visible in the D1 domain.

You cannot edit a group policy of the Global domain from the child domain. This is true for All Devices policy as well. Modifying the policy, deletion of the policy, managing a snapshot, snapshot policy and acquiring the policy lock is also not allowed. Similarly, you cannot perform these actions on the Device-Exception policy of the D1 domain from the Global domain. You can prioritize group policies from the current domain. Group policies from the other domains are not listed.

During a device assignment for a device policy, only devices from the current domain are listed. If you move a device from one domain to another and the move is valid, the device-exception policy is also moved from the current domain to the target domain. This is possible if the view parent mode is enabled in the target domain. If the view parent is not enabled in the target domain, the move is not valid.

- Related Documentation**
- [Downloading the Signature Database on page 371](#)
  - [Installing the Signature Database on page 373](#)



## CHAPTER 27

# IPS Management

- [Creating IPS Signatures on page 381](#)
- [Managing IPS Signatures on page 383](#)
- [Creating IPS Signature Sets on page 386](#)
- [Adding Rules to an IPS Signature Set on page 387](#)
- [Managing IPS Signature Sets on page 388](#)
- [Creating IPS Policies on page 392](#)
- [Managing Policy Locks on page 401](#)
- [Ordering the Rules in a IPS Policy on page 402](#)
- [Adding Rules to an IPS Policy on page 403](#)
- [Publishing IPS Policies on page 405](#)
- [Managing IPS Policies on page 409](#)

## Creating IPS Signatures

---

To create an IPS signature:

1. Select **Security Director > IPS Management**.

The IPS Policies page appears with all IPS policies.

2. Click **IPS Signature**.

All IPS signatures that are downloaded appears in the View All IPS Signatures page, as shown in [Figure 189 on page 382](#). This page displays the version of the signature database. The left pane displays the different categories of signature and the right pane displays the signatures.

Figure 189: View All IPS Signatures Page

Name	Severity	Category	Object Type	Recommended	Pre-defined/Custom
Additional Web Services - Critical	Critical	SSL_FTR,WORM,GOP...	Dynamic Group	No	Pre-defined
Additional Web Services - Info	Info	SSL_FTR,WORM,GOP...	Dynamic Group	No	Pre-defined
Additional Web Services - Major	Major	SSL_FTR,WORM,GOP...	Dynamic Group	No	Pre-defined
Additional Web Services - Minor	Minor	SSL_FTR,WORM,GOP...	Dynamic Group	No	Pre-defined
Additional Web Services - Warning	Warning	SSL_FTR,WORM,GOP...	Dynamic Group	No	Pre-defined
All Attacks			Static Group	No	Pre-defined
Anomaly			Static Group	No	Pre-defined
Anomaly - All			Dynamic Group	No	Pre-defined
Anomaly - Critical	Critical		Dynamic Group	No	Pre-defined
Anomaly - Info	Info		Dynamic Group	No	Pre-defined
Anomaly - Major	Major		Dynamic Group	No	Pre-defined
Anomaly - Minor	Minor		Dynamic Group	No	Pre-defined
Anomaly - Warning	Warning		Dynamic Group	No	Pre-defined
APP		APP	Static Group	No	Pre-defined
APP - All		APP	Dynamic Group	No	Pre-defined
APP - Critical	Critical	APP	Dynamic Group	No	Pre-defined
APP - Info	Info	APP	Dynamic Group	No	Pre-defined
APP - Major	Major	APP	Dynamic Group	No	Pre-defined
APP - Minor	Minor	APP	Dynamic Group	No	Pre-defined
APP - Warning	Warning	APP	Dynamic Group	No	Pre-defined

### 3. Click Create IPS Signature.

The Create IPS Signature page appears, as shown in [Figure 190 on page 382](#).

Figure 190: Create IPS Signature Page

4. Enter the name of the signature in the Name field.
5. Enter the category of the signature in the Category field.
6. Enter a keyword in the Keywords field.
7. Select the appropriate severity of the signature from the Severity drop-down menu.
8. Select the appropriate action for the signature from the Action drop-down menu.
9. Enter the description for this signature in the Description field.
10. Select the **Signature Details** tab from the Pattern Set page. Enter the following:

- a. Select the appropriate option from the Attack Object Binding drop-down menu.
  - b. Select the appropriate option from the Time Scope drop-down menu.
  - c. Select the appropriate option from the Match Assurance drop-down menu.
  - d. Enter the name of the protocol in the Protocol field.
  - e. Enter the value of the time count in the Time Count field.
  - f. Select the **Performance Impact** check box if you want to do so.
  - g. Click the **Add Signature** button.
  - h. Select the appropriate option from the Context drop-down menu.
  - i. Select the appropriate direction from the Direction dropdown menu.
  - j. Enter appropriate information in the Pattern field.
  - k. Enter appropriate information in the Regex field.
  - l. Select the **Negated** check box if you want to do so.
  - m. Select the **Shellcode** check box if you want to do so.
  - n. Click the **Add Anomaly** button.
  - o. Select the appropriate anomaly from the Anomaly drop-down menu.
11. Click the **Supported Detectors** button to view the descriptors that are supported with this signature.
  12. Click **Save**.

**Related Documentation**

- [Managing IPS Signatures on page 383](#)

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## Managing IPS Signatures

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You can filter, modify, or delete IPS signatures listed in the View All IPS Signatures page.

To open the View All IPS Signatures page:

- Select **Security Director > IPS Management > IPS Signature**.

The View All IPS Signatures page appears.

You can either right-click or use the Actions drawer to manage IPS signatures.

You can perform the following tasks in the View All IPS Signatures page:

- [Filtering IPS Signatures on page 384](#)
- [Modifying IPS Signatures on page 384](#)
- [Deleting IPS Signatures on page 384](#)
- [Cloning IPS Signatures on page 385](#)
- [Creating Static Signature Groups on page 385](#)

- [Creating Dynamic Signature Groups on page 385](#)
- [Creating IPS Signature Sets on page 386](#)

## Filtering IPS Signatures

To filter IPS signatures:

1. Select **Security Director > IPS Management > IPS Signature**.

The View All IPS Signatures page displays all IPS signatures. The right pane displays the signatures and the left pane displays the different filters that can be used to filter the signatures. The different parameters that can be used to filter the signatures include, Severity, Category, Object Type, Direction, Action, Match Assurance, Recommended, and Signature Set. Every parameter has different subparameters.

2. Click the check box next to the subparameters within a parameter.

The IPS signatures will now be filtered by the filters you have applied.

## Modifying IPS Signatures

To modify IPS signatures:

1. Select **Security Director > IPS Management > IPS Signature**.

The View All IPS Signatures page displays all IPS signatures.

2. Select the check box next to the IPS signature you want to modify.



**NOTE:** You cannot modify a predefined IPS signature. You can only modify the custom IPS signatures you have added.

3. Click **Modify IPS Signature** in the Actions drawer.

You are redirected to the Modify IPS Signature page. You can make necessary changes to the application signature here.

4. Click **Save**.

## Deleting IPS Signatures

To delete IPS signatures:

1. Select **Security Director > IPS Management > IPS Signature**.

The View All IPS Signatures page displays all IPS signatures.

2. Select the check box next to the IPS signatures you want to delete.



**NOTE:** You cannot delete the predefined IPS signatures. You can only delete the custom IPS signatures you have added.

3. Click **Delete Selected** in the Actions drawer.

A confirmation window appears.

4. Click **Yes**.

## Cloning IPS Signatures

To clone IPS signatures:

1. Select **Security Director > IPS Management > IPS Signature**.

The View All IPS Signatures page displays all IPS signatures that are downloaded.

2. Select the check box next to the IPS signature you want to clone.
3. Click **Clone IPS Signature** in the Actions drawer.

You are redirected to the Create IPS Signature page. You can clone the IPS signature [here](#).

## Creating Static Signature Groups

To create a static signature group:

1. Select **Security Director > IPS Management > IPS Signature**.

The View All IPS Signatures page displays all IPS signatures.

2. Select the check box next to the IPS signatures you want to include in the IPS signature static group.
3. Select the signature, right-click and select **Create Static Group**.

The Create IPS Signature Static Group page appears.

4. Enter the name of the static signature group in the Name field.
5. Select the Recommended check box if you want to do so.
6. Click the **Add** icon to add IPS signatures to the static group.

The IPS Signature Selector window appears.

7. Select the appropriate IPS signatures and click Update.

## Creating Dynamic Signature Groups

To create a dynamic signature group:

1. Select **Security Director > IPS Management > IPS Signature**.

The View All IPS Signatures page displays all IPS signatures.

2. Select the signature, right-click and select **Create Dynamic Group**.

The Create IPS Signature Dynamic Group page appears.

3. Enter the name of the dynamic signature group in the Name field.
4. Select the check box next to the appropriate option in the Recommended pane.

5. Select the check boxes next to the appropriate actions in the Actions pane.
6. Select the appropriate directions from the drop-down menus in the Direction pane.
7. Select the appropriate check box in the Pre-defined/Custom pane.
8. Select the appropriate check boxes in the Match Assurance pane.
9. Select the appropriate check boxes in the Performance Impact pane.
10. Click the **Advanced** tab.
11. In the Category pane, select the appropriate signatures from the Available column and click the right arrow to push them to the Selected column.
12. In the Service pane, select the appropriate signatures from the Available column and click the right arrow to push them to the Selected column.
13. Select the appropriate check boxes in the Severity pane.
14. Click **Create**.



**NOTE:** In Security Director Release 13.1, all Security Director filters in dynamic group are removed. During upgrade from Security Director Release 12.2 to Release 13.1, if the dynamic group in Release 12.2 contains Security Director related filters, Security Director internally converts to static group during the migration.

---

## Creating IPS Signature Sets

To create an IPS signature set:

1. Select **Security Director > IPS Management > IPS Signature**.  
The View All IPS Signatures page displays all IPS signatures.
2. Select the appropriate IPS signatures and then click **Create IPS Signature-Set**.

**Related Documentation**

- [Creating IPS Signatures on page 381](#)

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## Creating IPS Signature Sets

To create an IPS signature-set:

1. Select **Security Director > IPS Management**.  
You see the IPS Policies Tabular view.
2. Click **IPS Signature-Set**.

You see the IPS Signature Set Tabular view with two panes and the first signature set is selected by default. The left pane displays all the IPS signature sets in the system. The IPS signature sets from the current domain and the predefined signature sets are

listed. The right pane displays all the rules in a specific IPS signature set as shown in Figure 191 on page 387.

Figure 191: IPS Signature Set Tabular View

S.No.	Name	Rule Type	IPS Signature	Action	Notification	IPS Options
<b>Web_Server (Predefined) Rules (6 rules)</b>						
1	Web_Server-1	IPS	IP - Critical IP - Major TCP - Critical TCP - Major	Drop packet		IP Action: None IP Target: None Timeout: 0 Log IP Action: Disable More
2	Web_Server-2	IPS	DNS - Critical DNS - Major	Drop packet		IP Action: None IP Target: None Timeout: 0 Log IP Action: Disable More
3	Web_Server-3	IPS	FWUSER - Critical FWUSER - Major FTP - Critical FTP - Major	Drop packet		IP Action: None IP Target: None Timeout: 0 Log IP Action: Disable More
4	Web_Server-4	IPS	DNS - Minor FWUSER - Minor FTP - Minor Gopher - Minor	No action		IP Action: None IP Target: None Timeout: 0 Log IP Action: Disable More
5	Web_Server-5	IPS	Anomaly - Warning Signature - Warning	No action		IP Action: None IP Target: None Timeout: 0 Log IP Action: Disable More
6	Web_Server-6	IPS	Anomaly - Info	No action		IP Action: None IP Target: None Timeout: 0 Log IP Action: Disable More

All the IPS signature sets under the Predefined node are predefined signature sets. All the IPS signature sets under the Custom node are user-defined signature sets.

3. Click **Create IPS Signature-Set**.

The Create IPS Signature-Set page appears.

4. Enter the name of the IPS signature set in the Name field.
5. Enter the description for the IPS signature set in the Description field.
6. Click **Create**.

Validate IPS signature sets by clicking the **Validate** button, available next to the Save and Discard buttons. If any errors are found during the validation, a red warning icon is shown for the respective signature sets.

**Related Documentation**

- [Adding Rules to an IPS Signature Set on page 387](#)
- [Managing IPS Signature Sets on page 388](#)

## Adding Rules to an IPS Signature Set

To add rules to an IPS signature-set:

1. Select **Security Director > IPS Management > IPS Signature-Set**.

The IPS signature set Tabular view appears.

2. Click the IPS signature set you want to add rules to from the left pane.

The existing rules of the IPS signature-set are displayed in the right pane.

3. Click the **+** icon to add rules, and select the type of the rule you want to add. The newly added rule blinks different color for a few seconds.

A new rule is added in the last row.

4. Click the **IPS Signature** column in the rule.

The IPS Signature Selector window appears. You can select and add IPS signatures from this window.

5. Click **Update** in the IPS Signature Selector window when you select the IPS signatures for the rule.
6. Click the **Action** column in the rule and select the appropriate action for the rule.
7. Click the **Notification** column in the rule.

A drop-down menu with all notification options appears. To add appropriate notification options:

- a. Click the **Enable** check box next to the Attack Logging field if you want to log the attacks.
- b. Click the **Enable** check box next to the Attack Flag field if you want to flag attacks.
- c. Select the appropriate option from the IP Action drop-down menu.
- d. Select the appropriate option from the IP Target drop-down menu.
- e. Enter the value of the timeout interval in the Timeout field.
- f. Click the **Enable** check box next to the Log IP Action field if you want to maintain a log of the IP actions performed.
- g. Select the appropriate severity from the Severity drop-down menu.
- h. Click the **Enable** check box next to Terminal field.
- i. Click **Update**.



**NOTE:** You can also modify the IP action and the additional sections in the Notification drop-down menu by clicking the IP Action and Additional columns in the rule.

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8. Click the **Description** column and enter a description for the rule.
9. Click **Save**.

#### Related Documentation

- [Creating IPS Signature Sets on page 386](#)
- [Managing IPS Signature Sets on page 388](#)

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## Managing IPS Signature Sets

- [Deleting IPS Signature Sets on page 389](#)
- [Cloning IPS Signature Sets on page 389](#)



- [Enable or Disable Rules in an IPS Signature-set on page 389](#)
- [Grouping Rules in an IPS Signature Set on page 390](#)
- [Expanding/Collapsing All Rules in an IPS Signature Set on page 390](#)
- [Cutting/Copying And Pasting Rules or Rule Groups in an IPS Signature Set on page 391](#)
- [Adding Rules to an IPS Signature Set on page 391](#)

## Deleting IPS Signature Sets

To delete IPS signature sets:

1. Select **Security Director > IPS Management > IPS Signature-Set**.

The IPS Signature Set page displays all signature sets. The left pane displays the predefined and custom signature sets. The right pane displays the signatures in the respective signature-set.

2. Right-click the signature set you want to delete and select **Delete IPS Signature Set**.

A confirmation window appears.



**NOTE:** You cannot delete a predefined signature set. You can only delete a custom signature set.

3. Click **Yes**.

## Cloning IPS Signature Sets

To clone IPS signature sets:

1. Select **Security Director > IPS Management > IPS Signature-Set**.

The IPS Signature Set page displays all signature sets. The left pane displays the predefined and custom signature sets. The right pane displays the signatures in the respective signature-set.

2. Right-click the signature set you want to clone and select **Clone IPS Signature Set**.

You are redirected to the Clone IPS Signature Set page. You can modify the name and description on this page.

3. Click **Clone**.

## Enable or Disable Rules in an IPS Signature-set

To enable or disable rules in an IPS signature-set:

1. Select **Security Director > IPS Management > IPS Signature-Set**.

The IPS Signature Set page displays all signature sets. The left pane displays the predefined and custom signature sets.

2. Select the signature set for which you want to enable or disable the rule in the left pane.

All rules of the this signature set appear in the right pane.

3. Select the rule you want to enable or disable and click the appropriate button.

The disabled rule appears dimmed.

4. Click **Save**.

## Grouping Rules in an IPS Signature Set

To group rules in an IPS policy:

1. Select **Security Director > IPS Management > IPS Signature-Set**.

The IPS Signature Set page displays all signature sets. The left pane displays the predefines and custom signature sets.

2. Select the signature set for which you want to group all rules, in the left pane.

All rules of the this signature set appear in the right pane.

3. Select the check boxes next to the rules you want to group.

4. Right-click the rules and select **Rule Group > Create Rule Group**.

The Create Rule Group pop-up window appears.

5. Enter a name for the rule group in the Name field.

6. Enter a description for the rule group in the Description field.

7. Click **Create**.



**NOTE:** When the rule group is created, you can add rules in the rule group, modify the rule group name, move the rule into another rule group, ungroup rules, and ungroup rule groups using appropriate options.

---

## Expanding/Collapsing All Rules in an IPS Signature Set

To expand or collapse all rules in an IPS policy:

1. Select **Security Director > IPS Management > IPS Signature-Set**.

The IPS Signature Set page displays all signature sets. The left pane displays the predefines and custom signature sets.

2. Select the signature set for which you want to expand or collapse all rules, in the left pane.

All rules of the this signature-set appear in the right pane.

3. Click the **Expand All RuleGroups** icon, and all rules corresponding to that particular signature set are expanded.

4. Click the **Collapse All RuleGroups** icon to collapse all rules.

## Cutting/Copying And Pasting Rules or Rule Groups in an IPS Signature Set

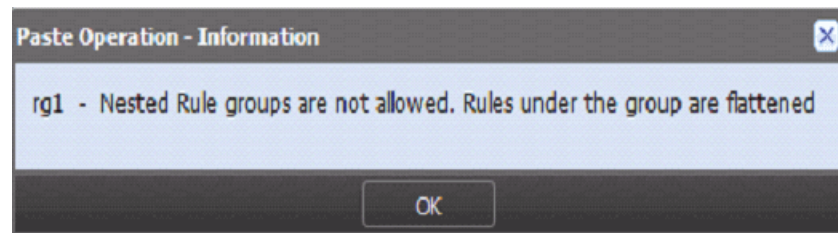
To copy and paste rules in an IPS signature set:

1. In the right pane, select the rule that must be copied. Right-click on the selected rule, and select **Cut** or **Copy**. If Cut is selected, related rule or rule group is removed from the right pane view.
2. In the left pane, select the IPS signature set that you want to paste the rule. In the right pane, right-click on the rule that you want the rule to be pasted. You can paste the rule before the selected rule or after the selected rule by choosing **Paste Before** or **Paste After** options.

If you are cutting and pasting rules across different IPS signature sets, you must first save the cut operation in the current signature set before moving to another IPS signature set for pasting. Otherwise, an error message is displayed, giving you the option either save or discard the changes.

Security Director does not support nested rule grouping. If you paste a rule group in another custom rule group, an error message is displayed, giving you the option to proceed by flattening the copied rule group, as shown in [Figure 192 on page 391](#).

Figure 192: Nested Rule Group Paste Warning Message



## Adding Rules to an IPS Signature Set

You can add the rules before or after the IPS rule or exempt rule. To add rules:

1. Select **Security Director > IPS Management > IPS Signature-Set**.  
The IPS Signature Set page displays all signature sets. The left pane displays the predefines and custom signature sets.
2. Select the IPS rule to which you want to add rules, right-click, and select **Add Rules Before** or **Add Rules After**.

You will get an option to add rules before the IPS rule or Exempt rule, or after the IPS rule or Exempt rule.

- Related Documentation**
- [Creating IPS Signature Sets on page 386](#)
  - [Adding Rules to an IPS Signature Set on page 387](#)

## Creating IPS Policies

If you want to enable IPS policy creation for a group firewall policy, you need to:

- Enable IPS configuration mode to Advanced for the devices in the group firewall policy.

[Table 34 on page 392](#) shows different IPS configuration modes and their purposes:

**Table 34: IPS Configuration Mode**

IPS Mode	Description
Basic	Turns IPS on or off. If you select this mode, you are given the option to select signature sets. Custom and predefined signature sets are listed. The IPS policy is generated by merging the rules from the signature sets you choose. The IPS policy is read-only.
Advanced	Turns IPS on or off. An empty IPS policy is generated. You can add or delete, disable or enable, or modify an IPS rules and exempt rules.
None	If this mode is selected, you cannot configure IPS on or off settings in a firewall rule. You cannot generate any IPS policies.

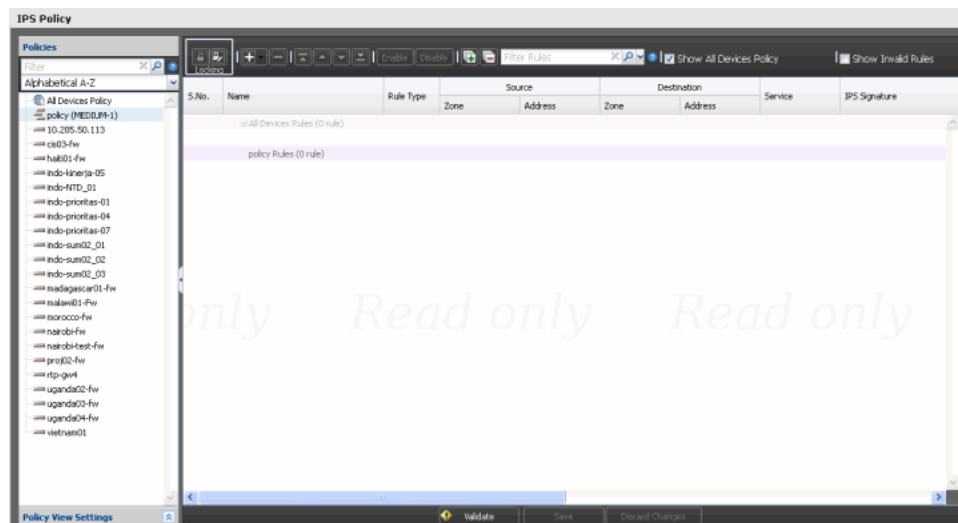
- Set the Action field for the device rule for which you want to enable the firewall policy to Permit.
- Select IPS field to IPS ON or IPS OFF when the firewall policy is configured with IPS mode basic or advanced, and the firewall rule action is set to either permit or tunnel.

To create an IPS rule:

1. Select **Security Director > IPS Management**.

The IPS Policies tabular view appears. The left pane displays the firewall policies and the right pane displays the all devices policy rules and the device rules for which IPS policy can be created as shown in [Figure 193 on page 393](#).

**Figure 193: IPS Policies Tabular View**



2. Select the device policy for which you want to create an IPS rule.

The right pane displays the device policy for which the IPS rules can be created.



**NOTE:** If you do not have permission to the device assigned to a device policy, you cannot view the policy in the respective policy ILP.

3. Select the IPS signature in the IPS signature set that you want to customize for creating an IPS policy and modify the fields appropriately.

You can now add more IPS and exempt rules for this device rule.

4. Click the **Add Rule** icon and select the type of the rule you want to add.

A new rule is added in the last row. If you add an IPS rule, by default, the Source and Destination zones and addresses are inherited from the device rule. The IPS Signature field is set to None. You can now customize the fields in this rule.

For logical systems, you cannot edit source and destination zones, source and destination addresses, and application. Automatically, Security Director sets zone and address fields as Any and application field as default.

5. Click **Save**.

Validate policies by clicking the **Validate** button, available next to the Save and Discard buttons. If any errors are found during the validation, a red warning icon is shown for the respective policies. For IPS policies, incomplete rules and duplicate rule names are validated.

Security Director permits you to save policies that contain errors. Warnings messages are displayed for policies that contain errors, but you can proceed to save such policies as drafts. You cannot publish policies that are in the draft state. The tooltip for the policy shows the state as draft ; because it is a draft, the tooltip does not show the publish option. When you save a policy as a draft, duplicate rule name errors are ignored.

Whenever you make any changes to the IPS policy, you will get an option to enter a comment before saving the policy. You can enable or disable this option in Platform > Administration > Applications. To enable this option, right-click **Security Director**, and select **Modify Security Director Settings** option. Under Applications, select the **Enable save comments for policies** check box. By default, this option is disabled.

Once you enter the comment, in IPS ILP you can save this version with a different name. Click **Save as Draft** from Save drop-down list to save the edited IPS policy with a different name. Entering comments is not mandatory but all entered comments are audit logged.

**NOTE:**

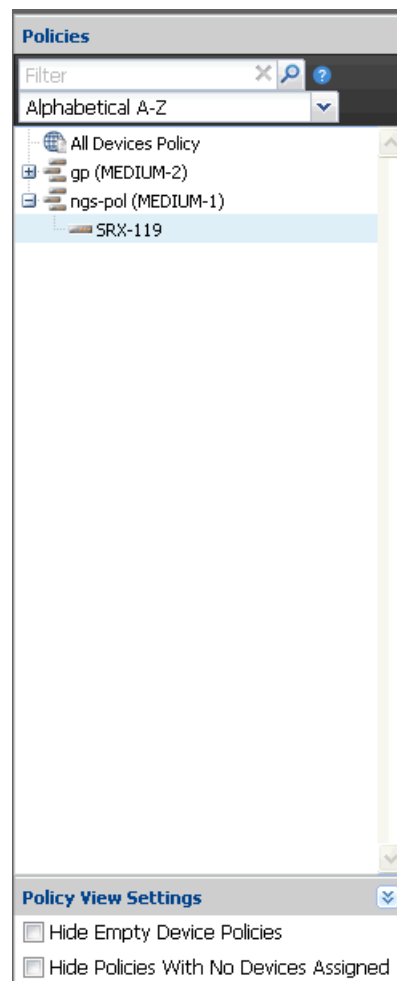
- When the firewall policy is published and updated on the device, the IPS policy configuration is also pushed along with the firewall configuration.
- Security Director deletes custom defined IPS policies only while updating the IPS policy to the device. In case of logical system, if there is a reference to any user defined IPS policy in any of the logical system, those IPS policies are not deleted. But if there an IPS policy which is not referred in any logical system, that policy would be cleaned up during the next update.

---

To hide the policies in the left pane that do not have any defined rules:

1. At the bottom of the left pane, click the expandable **Policy View Settings** option.
2. Click the **Hide Empty Device Policies** check box to hide the device exception policies that do not have any rules, as shown in [Figure 194 on page 395](#).

Figure 194: Policy View Settings



3. Policies with no defined rules are hidden in the left pane.

To hide the policies in the left pane that do not have any devices assigned:

1. At the bottom of the left pane, click the expandable **Policy View Settings** option.
2. Click the **Hide Policies With No Devices Assigned** check box to filter device and group policies that are not assigned to any device, as shown in [Figure 194 on page 395](#).
3. Policies without any assigned devices are hidden in the left pane.

Security Director provides advanced search options for the IPS policies. Click the down arrow icon next to the search icon, select **Advanced Search**, and the following dialog appears, as shown in [Figure 195 on page 396](#).

Figure 195: IPS Advance Search Window

**Advanced Search**

Rule Name:

Rule Type:

**Source**

Zone:

Address:

**Destination**

Zone:

Address:

Service:

IPS Signature Name:

Action:

Description:

You can perform advanced searches for the following fields:

- Rule Name
- Source
  - Zone
  - Address
- Destination
  - Zone
  - Address
- Service
- IPS Signature Name
- Action
- Description

The following advanced search criteria are available:

- Wildcard search for rule names using an asterisk (\*) is allowed.
- Security Director supports AND and OR operations between search items. The default behavior is OR.
- For rule name search, only the OR operation is allowed, because a policy cannot have multiple rule names.
- For zone search, only the OR operation is allowed. Wildcard search is supported.



- For service and address fields, OR and AND operations are allowed.
- Multiple groups can be grouped using parenthesis. Grouping can be used during filed or keyword searches as well.
- Negate (-) symbol can be used to exclude objects that contain a specific term name.
- The plus (+) operator can be used to specify that the term after the + symbol existing the field value to be filtered along with other searched items.
- Escaping special characters are part of the search syntax. The supported special characters are + - && || ! ( ) { } [ ] ^ " ~ \* ? : \.



**NOTE:** Use the AND operator to find rules that match all values for a given set of fields. Use the OR operator to find rules that match any of the values for a given set of fields.

Table 35 on page 397 explains certain specific Security Director search behavior.

**Table 35: Specific Security Director Search Behavior**

Search Item	Description
IPv4 addresses	If you provide a valid IPv4 address, range, or network in the search field, Security Director finds all addresses that include these IPv4 address, range, or network.
Destination port in service	If you configured a destination port range of a service, Security Director matches ports within this range but this is valid only during field or keyword search.
Keyword or field	If you require to search specific attributes in an object as opposed to global search, you can use keyword or field search.

Table 36 on page 397 shows example search results for different parameters.

**Table 36: Examples of Different Advanced Search Parameters**

Scenario	Query Parameter	Description
Wildcard search for rule names in both zone and global rules	RuleName:( All* )	Rule names starting with <i>All</i> are filtered.
Wildcard search for a particular rule name pattern	RuleName:(All-Devices-Zone-Pre*)	Returns All Devices Policy Zone Pre rules
	RuleName:(All-Devices-Global-Pre*)	Returns All Devices Policy Global Pre Rules
	RuleName:(All-Devices-Zone-Post*)	Returns All Devices Policy Zone Post Rules
	RuleName:(All-Devices-Global-Post*)	Returns All Devices Policy Global Post Rules
Source zone to destination zone	SrcZone:( polyzone ) AND DstZone:( untrust )	Rules with source zone <i>polyzone</i> and destination zone <i>untrust</i> are filtered.

Table 36: Examples of Different Advanced Search Parameters (*continued*)

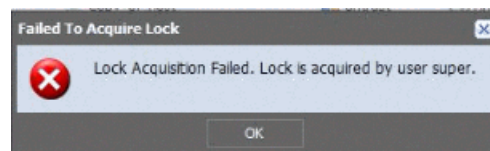
Source zone and source address to destination zone and destination address	SrcZone:( <i>polyzone</i> ) AND SrcAddress:( <i>any</i> ) AND DstZone:( <i>untrust</i> ) AND DstAddress:( <i>polyaddr</i> )	Rules with source zone <i>polyzone</i> , source address <i>any</i> , destination zone <i>untrust</i> , and destination address <i>polyaddr</i> are filtered.
Source zone and source address to destination zone and destination address along with service	SrcZone:( <i>polyzone</i> ) AND SrcAddress:( <i>polyaddr1</i> AND <i>polyaddr2</i> ) AND DstZone:( <i>untrust</i> ) AND DstAddress:( <i>any</i> ) AND Service:( <i>srv1</i> AND <i>srv2</i> )	Rules with source zone <i>polyzone</i> , source addresses <i>polyaddr1</i> and <i>polyaddr2</i> , destination zone <i>untrust</i> , and destination address <i>any</i> , with Services <i>srv1</i> and <i>srv2</i> , are filtered.
Source zone and source address to destination zone and destination address along with service port range	SrcZone:( <i>polyzone</i> ) AND SrcAddress:( <i>polyaddr1</i> AND <i>polyaddr2</i> ) AND DstZone:( <i>untrust</i> ) AND DstAddress:( <i>any</i> ) AND Service:(10 AND 65535)	Rules with source zone <i>polyzone</i> , source addresses <i>polyaddr1</i> and <i>polyaddr2</i> , destination zone <i>untrust</i> , and destination address <i>any</i> , with Services having destination port range 10-65535 are filtered.
Rules with action	SrcZone:( <i>polyzone</i> ) AND SrcAddress:( <i>polyaddr1</i> <i>polyaddr2</i> ) AND DstZone:( <i>untrust</i> ) AND DstAddress:( <i>any</i> ) AND Service:( <i>aol</i> <i>apple-ichat</i> ) AND dcRuleAction:( <i>Permit</i> )	Rules with source zone <i>polyzone</i> , source address <i>polyaddr1</i> or <i>polyaddr2</i> , destination zone <i>untrust</i> , and destination address <i>any</i> , with service as either <i>aol</i> or <i>apple-ichat</i> , and action <i>Permit</i> , are filtered.



**NOTE:** You can search by giving IPv6 addresses in the source or the destination address field.

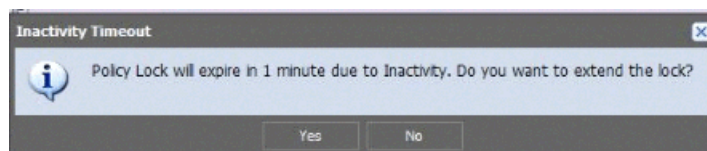
Before you can edit the policy, you must lock it by clicking the lock icon, which is available in the policy view toolbar. You can hold more than one policy lock at a given time. You can unlock the policy by clicking the unlock icon next to the lock icon in the policy tabular view. If you attempt to lock a policy that is already locked by another user, the following message appears, as shown [Figure 196 on page 398](#). The tooltip shows the policy locked user information. Mouse over the policy that you want to lock to view the tooltip.

Figure 196: Lock Failure Error Message for the Second User



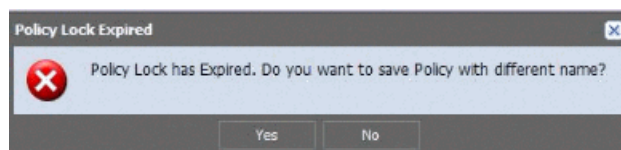
If the locked policy is inactive for the set timeout value (default 5 minutes), just 1 minute before the timeout interval expires, the following message appears, as shown in [Figure 197 on page 399](#). If the policy lock timeout interval expires for multiple locked policies, the same warning message appears for each locked policy. To understand the configuration of timeout value and session timeout value, see [“Managing Policy Locks” on page 401](#).

Figure 197: Inactivity Timeout Error



Click **Yes** to extend the locking period. If you click **No**, and if there is activity on the policy within the last minute of the lock's life, the timer will be reset and the lock will not be released. If you ignore the message, when the policy lock timeout interval expires 1 minute later, you are prompted to either save the edited policy with a different name or lose the changes, as shown in [Figure 198 on page 399](#).

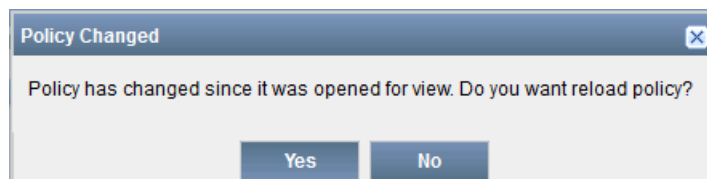
Figure 198: Policy Lock Expired Message



If you click **Yes** to save the edited policy with a different name, the following window appears. If you navigate away from the locked policy, you will get an option to save the edited policy with different name.

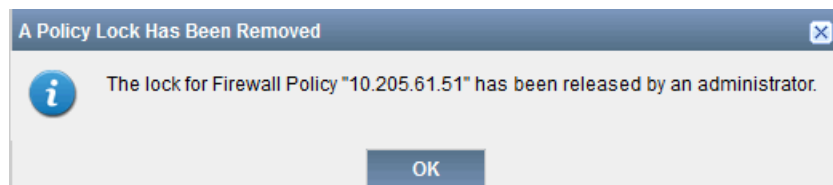
After editing a locked policy, if you move to another policy without saving your edited policy, or if you unlock the policy without saving, the following warning message appears, as shown in [Figure 199 on page 399](#).

Figure 199: Unsaved Changes Warning Message

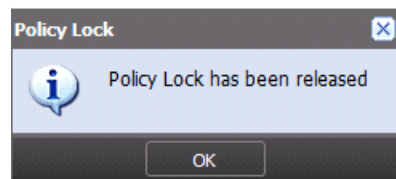


If Security Director administrator releases the lock, you will receive the following warning message, as shown in [Figure 200 on page 399](#).

Figure 200: Policy Unlock by Admin Message



If you do not edit the locked policy and the policy lock timeout expires, the following warning message appears, as shown in [Figure 201 on page 400](#).

**Figure 201: Policy Lock Release Message**

The policy is locked and released for the following policy operations. Also, these operations are disabled for a policy, if the policy is locked by some other user.

- Modify
- Assign devices
- Rollback
- Delete

**NOTE:**

- You can unlock the policy by logging out of the application or when the policy lock timeout expires. You can unlock your policies even if they are not edited.
- If the browser crashes when the policy is still locked, the policy is unlocked only after timeout interval expires.
- If there is an object conflict resolution during a migration, import, or rollback, and if you are editing any objects, you will receive a save as option for the edited objects. The behavior is the same when you import addresses from CSV.
- Policy lock is not released under the following scenario:
  - If you save or discard you changes to the locked policy.
  - if you do not make any changes to the locked policy and navigate to another policy.
- It is recommended to configure the session time longer than the lock timeout value.
- You can create address objects and address group inline.

**Related Documentation**

- [Publishing IPS Policies on page 405](#)
- [Managing IPS Policies on page 409](#)

## Managing Policy Locks

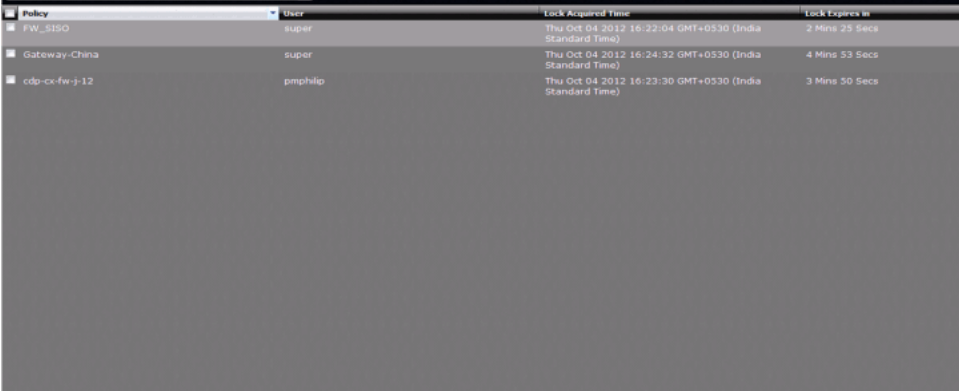
All the locked policies can be viewed in a single page. This page is available for a user having Manage Policy Locks tasks assigned. This page shows all the locks only if the user has Unlock task assigned, other wise user will see only his locks. To view the locked policies:

1. Select **Security Director > IPS Policy > Manage Policy Locks**.

The Manage Policy Locks page appears showing only those locks that can be managed by the current user. The page contains the following fields:

- Policy name
- User (IP Address)
- Lock acquired time
- Time for lock expiry

Figure 202: IPS Policy: Manage Policy Locks



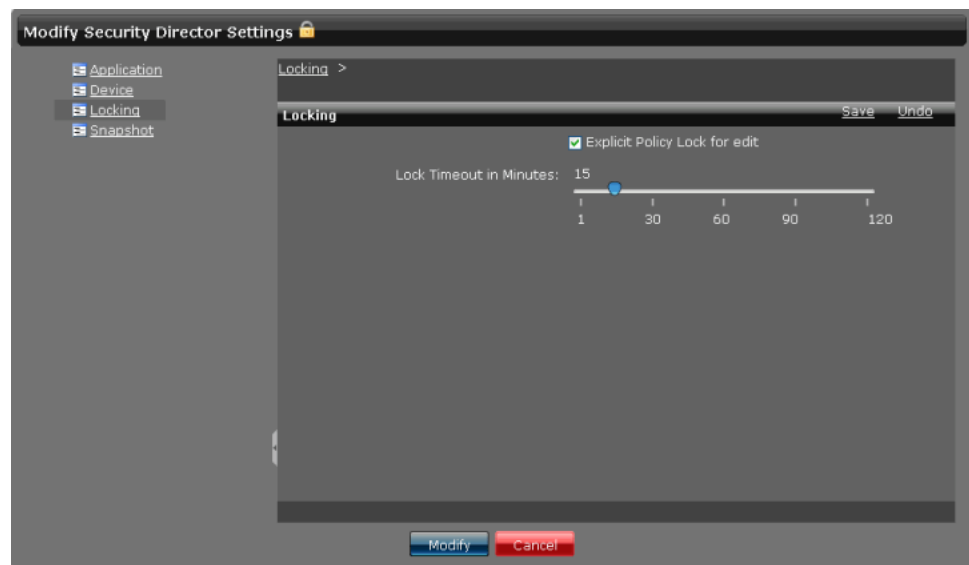
Policy	User	Lock Acquired Time	Lock Expires In
FW_3150	super	Thu Oct 04 2012 16:22:04 GMT+0530 (India Standard Time)	2 Mins 25 Secs
Gateway-China	super	Thu Oct 04 2012 16:24:32 GMT+0530 (India Standard Time)	4 Mins 53 Secs
cdp-cx-fw-j-12	pmphilo	Thu Oct 04 2012 16:23:30 GMT+0530 (India Standard Time)	3 Mins 50 Secs

2. Right-click the policy that you want to unlock, and press **Unlock**. You can select policies that are locked by you and unlock them. To unlock your policies, you do not need any administrator privileges. To unlock policies locked by other users, you must have the task **LOCK** assigned to you.

User with administrator privileges can configure the lock settings. To configure the lock settings:

1. Click **Application Switcher**, and go to **Network Application Platform > Administration > Manage Applications**.
2. Right-click the **Security Director** application, and select **Modify Application Settings**. The following page appears, as shown in [Figure 203 on page 402](#).

Figure 203: Modify Security Director Settings



3. Under the Locking option, you can configure the locking timeout value in minutes. The minimum value that you can configure is 2 minutes and the maximum 120 minutes. By default, the timeout value is configured for 5 minutes.
4. By default, the Explicit Policy Lock for edit option is enabled. You can disable this option, if you do not want to lock the policies before editing. When this option is disabled, policies can be edited by any user. The first user gets the preference of saving the changes for a policy. The next save on the same version of a policy results in the user being asked to save policy with new name.



**NOTE:** Acquiring a policy lock or releasing a lock is audit logged. Release locking will show the reason for the release, for example, an explicit release, on save, discard, timeout, or administrator release. Administrator changes of the lock configuration are also audit logged. To see the audit logs, from the Security Director task bar, select Audit Logs.

#### Related Documentation

- [Creating IPS Policies on page 392](#)
- [Publishing IPS Policies on page 405](#)
- [Managing IPS Policies on page 409](#)

## Ordering the Rules in a IPS Policy

To reorder the rules in a IPS policy:

1. Select **Security Director > IPS Policy**.

The Policy Tabular view appears.

2. Select the IPS policy whose rules you want to reorder.

The rules of the IPS policy are displayed in the right pane.

3. Select a rule that you want to reorder and click the appropriate icon on the top of the right pane.

Icon Name	Description
Move Rule Up	Moves the rule one level up in the hierarchy.
Move Rule Down	Moves the rule one level down in the hierarchy.
Move Rule to Top	Moves the rule to the top of the hierarchy.
Move Rule to Bottom	Moves the rule to the bottom of the hierarchy.

The rule is now positioned accordingly. When the IPS policy is provisioned, the rules are provisioned to the devices in the order you have specified.

#### Related Documentation

- [Creating IPS Policies on page 392](#)
- [Adding Rules to an IPS Policy on page 403](#)
- [Publishing IPS Policies on page 405](#)
- [Managing IPS Policies on page 409](#)

## Adding Rules to an IPS Policy

To add rules to an IPS policy:

1. Select **Security Director > IPS Policy**.

The IPS Policy tabular view appears.

2. From the left pane, click the IPS policy to which you want to add rules.

The right pane displays the existing rules of the IPS policy.

3. Click the **+** icon to add a rule and select the type of the rule you want to add (IPS or Exempt rule). The newly added rules blink a different color for a few seconds. A new rule is added to the bottom row.

4. Click the **Name** field in the rule and change the name of the rule.

5. Click the **Source Zone** field in the rule and select the appropriate zone from the list of zones.

6. Click the **Source Address** field in the rule.

The address selector appears.

7. From the Available column, select the addresses you want to associate the rule to. You can select all addresses by clicking **Page** and clear them all by clicking **None**.

8. Click the right arrow in the address selector. There are two options available such as Include Selected and Exclude Selected. If you select **Include Selected**, all the addresses selected are sent to the device. If you select the **Exclude Selected**, except the selected addresses, all other configurations are moved to the device.

The selected addresses are now moved to the Selected column.

9. Click **OK**.
10. Click the **Destination Zone** field in the rule and select the appropriate zone from the list of zones.
11. Click the **Destination Address** field in the rule.

The address selector appears.

12. Select the addresses you want to associate the rule to, from the Available column. You can select all addresses by clicking **Page** and unselect them all by clicking **None**.
13. Click the right arrow in the address selector.

The selected addresses are now moved to the Selected column.

14. Click **OK**.
15. Click the **Service** field in the rule.

The service selector appears.

16. Select the services you want to associate the rule to, from the Available column.
17. Click the right arrow in the service selector.

The selected services are now moved to the Selected column.

18. Click **OK**.
19. Click the **IPS Signature** column in the rule.

The IPS Signature Selector window appears. You can select and add IPS signatures from this window.

20. Click **Update** in the IPS Signature Selector window when you select the IPS signatures for the rule.
21. Click **Action** column in the rule and select the appropriate action for the rule.
22. Click **Notification** column in the rule.

A drop-down menu with all notification options appears. To add appropriate notification options:

- a. Click the check box next to the Attack Logging field if you want to log the attacks.
  - b. Click the check box next to the Alert Flag field if you want to flag attacks.
  - c. Click the check box next to the Log Packets if you want to log the packets.
  - d. Click **OK**.
23. Click **IP Action** column in the rule.

A drop-down menu with all IP action option appears.



- a. Select the appropriate option from the IP Action drop-down menu.
  - b. Select the appropriate option from the IP Target drop-down menu.
  - c. Enter the value of the timeout interval in the Timeout Value field.
  - d. Click **Log Taken** and **Log Creation** fields, if you want to maintain a log of the IP actions performed.
  - e. Click **OK**.
24. Click **Additional** column in the rule.
- a. Select the appropriate severity from the Severity drop-down menu.
  - b. Click the check box next to the Terminal field.
  - c. Click **OK**.
25. Click the **Description** column and enter a description for the rule.
26. Click **Save**.

**NOTE:**

- For exempt rules, Action and IPS Options (Notification, IP Action, and Additional) are not available.
- If you have any cut or copied rules or rule groups, you will have Paste Rules links to paste the rules or rule groups. The pasting options are available only for the predefined rule groups.

**Related Documentation**

- [Creating IPS Policies on page 392](#)
- [Ordering the Rules in a IPS Policy on page 402](#)
- [Publishing IPS Policies on page 405](#)
- [Managing IPS Policies on page 409](#)

## Publishing IPS Policies

To publish an IPS policy:

1. Select **Security Director > IPS Management > Publish IPS Policy**.

The Services page appears with all the IPS policies. It also displays the publish states of the IPS policies.

2. Select the check box next to the IPS policy that you want to publish.
3. Select the **Schedule at a later time** check box if you want to schedule and publish the configuration later, as shown in [Figure 204 on page 406](#).

Figure 204: IPS Policy Publish Page

IPS Policy > Publish IPS Policy

Select: All | None Type to Search Service

Name	Publish State	Description
<input checked="" type="checkbox"/> All Devices Policy	Published	Predefined Policy for all devices
<input type="checkbox"/> GP-1	Published	

☒ Schedule at a later time

Date and Time: 11/02/12 12:39 PM UTC+05:30

Back Next Publish Publish and Update Cancel

- Click **Next**.

The Affected Devices page displays the devices on which this IPS policy will be published, as shown in [Figure 205 on page 406](#).

Figure 205: Policy Publish: Affected Devices Page

Affected Devices

Type to Search Devices

Name	Managed Status	Connection Status	Services	Configuration
tongzhou	In Sync	Up	x1	<a href="#">View</a>

Page 1 of 1

Displaying 1 - 1 of 1 Devices | Show 20

☒ Schedule at a later time

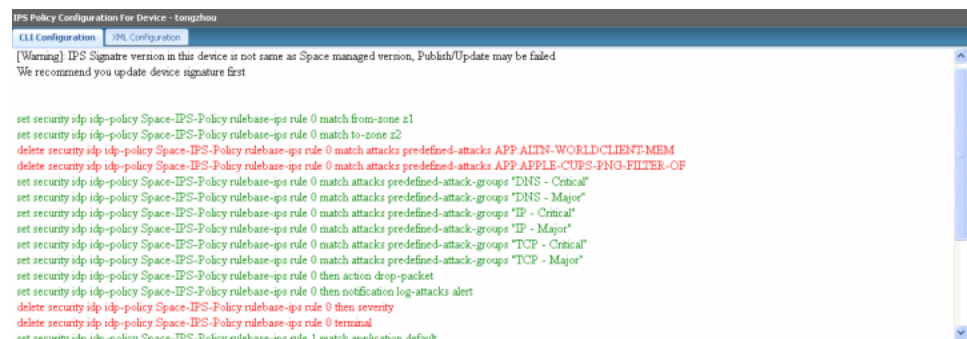
Date and Time: 03/13/12 2:40 PM IST

Back Publish Publish and Update Cancel

- If you want to preview the configuration changes that will be pushed to the device, click **View** in the Configuration column that corresponds to the device. The Configuration Preview progress bar is shown while the configuration to be pushed to the device is generated.

The CLI Configuration tab appears by default. You can view the configuration details in CLI format, as shown in [Figure 206 on page 407](#).

Figure 206: Policy Publish: CLI Configuration



6. View the XML format of the configuration by clicking the **XML Configuration** tab, as shown in Figure 207 on page 407.

Figure 207: Policy Publish: XML Configuration



7. Click **Back**.
8. Click **Publish** if you want only to publish the configuration.

A new job is created and the job ID appears in the Job Information dialog box.

9. Click **Publish and Update** if you want both to publish and to update the devices with the configuration.

The IPS policy is now moved into the Published state if the configuration is published to all devices involved in the IPS policy. If the configuration is not published to all devices involved in the IPS policy, the IPS policy is placed in the Partially Published state. If an IPS policy is created but not published, the IPS policy is placed in the Unpublished state. If any modifications are made to IPS policy configuration after it is published, the IPS policy is placed in the Republish Required state. You can view the states of the policies by mousing over them. When an address object in the Global domain referenced by a policy in the D1 domain changes, the state of the policy is changed to Republish Required. This occurs though the changes are in the address object, which is in the other domain, and is not same as the policy domain. This applies to all the objects referenced by all the services.

A new job is created and the job ID appears in the Job Information dialog box.

10. Click the job ID to view more information about the job created. This action redirects you to the Job Management workspace. In the Job Management workspace, the commit check status and the compile status are both checked at the device end. The state is changed to either success or failure, depending on the compile status of the configuration. There is a timeout window of 15 minutes for the compile status. If the compilation takes longer than 15 minutes, the job fails with a warning message.

If you get an error message during the publish, or if the IPS policy publish fails, go to the Job Management workspace and view the relevant job ID to see why the publish failed. Also, during the compile, detailed job view captures the compile progress.

In the Job Details window, use the available filter box to search for any device by filter name, tag name, or IP address. Filtering works only for currently available devices. Search with the first character of the tag name to search by tag name. If you search with any middle characters, the search fails.

During the publish and update, the disabled rules and objects are not deleted. Disabled rules are updated as inactive configuration. This is an optional setting. You can choose to push the disabled rules to a device by selecting **Update disabled rules to device** option in Security Director application setting, under Platform. By default, Update disabled rules to device option is disabled. For the pushed disabled rules to work after the upgrade, Security Director must import the policy again and the application firewall signature must be downloaded prior to the import.

If you are having the disabled rules on the device, as shown in the following example:

```
set security policies from-zone untrust to-zone trust policy Device-Zone-5 match
destination-address any
set security policies from-zone untrust to-zone trust policy Device-Zone-5 match
application any
set security policies from-zone untrust to-zone trust policy Device-Zone-5 then
deny
deactivate security policies from-zone untrust to-zone trust policy Device-Zone-5
```

When you import this rules, Security Director sets the state as disabled. If a particular node in the CLI is deactivated, that node is not imported into the Security Director.

If you import a rule, as shown in the following example, Security Director will not set the application service.

```
set security policies from-zone trust to-zone untrust policy Device-Zone-2
description "Rule With Infranet All Traffic Auth"
set security policies from-zone trust to-zone untrust policy Device-Zone-2 match
source-address any
set security policies from-zone trust to-zone untrust policy Device-Zone-2 match
destination-address any
set security policies from-zone trust to-zone untrust policy Device-Zone-2 match
application any
set security policies from-zone trust to-zone untrust policy Device-Zone-2 then
permit application-services idp
set security policies from-zone trust to-zone untrust policy Device-Zone-2 then
permit application-services uac-policy captive-portal captiveportal_65573
deactivate security policies from-zone trust to-zone untrust policy Device-Zone-2
then permit application-services
```

Security Director does not support inactive nodes and the inactive rules. If the objects in the rule are not defined, Security Director provides a warning message, at the time of import, listing the objects that are not defined.



NOTE:

- You can also publish an IPS policy by right-clicking the IPS policy in the IPS Policy tabular view and selecting Publish Policy. You are redirected to the Affected Devices page.
- You can search for a specific device on which the policy is published by entering the search criteria in the Search field, in the top-right corner of the Services page. You can search the devices by their name, IP address, and device tags.
- If the IPS policy is to be published on a large number of devices, the devices are displayed across multiple pages. You can use the pagination and display options available on the lower ribbon, just below the list of devices, to view all devices on which the policy is published.
- When you configure Packet Capture on a device that does not have the sensor setting, Security Director shows a warning message in the IPS publish window.
- If a device does not have a license or has an expired license, a warning message appears during the publish and update of the IPS policy. However, the CLI is still generated.
- The publish fails if you have two addresses in a rule with a same name, one from the Global domain and the other from the child domain.
- You can publish or update the group policy of the global domain from another domain. In this case, policy is published or updated to only those devices which are part of the another domain. However, if you publish or update the group policy in the global domain, the policy is published or updated to all the devices including the devices from the another domain.

- Related Documentation**
- [Creating IPS Policies on page 392](#)
  - [Managing IPS Policies on page 409](#)

## Managing IPS Policies

You can delete, enable, and disable rules in an IPS policy, in advanced mode.

To open the IPS Policies page:

- Select **Security Director > IPS Policy**.

The IPS Policy Tabular view appears.

You can perform the following tasks in the IPS Policies space. These tasks are only permitted when firewall policy is set to IPS Advanced mode.

1. [Deleting IPS Policy Rules on page 410](#)
2. [Enabling or Disabling Rules in an IPS Policy on page 410](#)
3. [Cloning a Rule in an IPS Policy on page 411](#)
4. [Grouping Rules in an IPS Policy on page 411](#)
5. [Expanding/Collapsing All Rules in an IPS Policy on page 411](#)
6. [Cutting/Copying And Pasting Rules or Rule Groups in an IPS Policy on page 412](#)
7. [Adding Rules to an IPS Policy on page 412](#)
8. [Rule Operations on the Filtered Rules on page 413](#)

## Deleting IPS Policy Rules

To delete rules in an IPS policy:

1. Select **Security Director > IPS Management**.

The IPS Policy tabular view appears.

2. Select the device policy from which you want to delete IPS policy rules.

The right pane displays the device rules for which IPS policy is enabled.

3. Select the check box next to the IPS or exempt rule you want to delete.
4. Click the **Delete** icon.
5. Click **Save**.

## Enabling or Disabling Rules in an IPS Policy

To enable or disable rules in an IPS policy:

1. Select **Security Director > IPS Management**.

The IPS Policy tabular view appears.

2. Select the IPS policy whose rules you want to enable or disable.

The rules of the firewall policy are displayed in the right pane.

3. Select the check boxes next to the rules that you want to enable or disable.
4. Click the **Enable** or **Disable** icon.
5. Click **Save**.

## Cloning a Rule in an IPS Policy

To clone a rule in an IPS policy:

1. Select **Security Director > IPS Policy**.

The IPS Policy tabular view appears.

2. Select the IPS policy whose rule you want to clone.

The rules of the IPS policy appears in the right pane.

3. Select the check box next to the rule that you want to clone.
4. Right-click and select **Clone**.

## Grouping Rules in an IPS Policy

To group rules in an IPS policy:

1. Select **Security Director > IPS Policy**.

The Policy tabular view appears.

2. Select the IPS policy whose IPS rules you want to group.

The rules of the IPS policy are displayed in the right pane.

3. Select the check boxes next to the rules you want to group.
4. Right-click the rules and select **Rule Group > Create Rule Group**.

The Create Rule Group pop-up window appears.

5. Enter a name for the rule group in the Name field.
6. Enter a description for the rule group in the Description field.
7. Click **Create**.



**NOTE:** When the rule group is created, you can add rules in the rule group, modify the rule group name, move the rule into another rule group, ungroup rules, and ungroup rule groups using appropriate options.

## Expanding/Collapsing All Rules in an IPS Policy

To expand or collapse all rules in an IPS policy:

1. Select **Security Director > IPS Policy**.

The IPS Policy tabular view appears.

2. Select the IPS policy whose rules you want to expand.

By default, IPS policy rules in collapsed state are displayed in the right pane.

3. Click the **Expand All RuleGroups** icon, and all rules corresponding to that particular policy are expanded.
4. Click the **Collapse All RuleGroups** icon to collapse all rules.

## Cutting/Copying And Pasting Rules or Rule Groups in an IPS Policy

To cut or copy and paste rules or rule groups in an IPS policy:

1. On the right pane, select the device rule or rule group that you want to cut or copy. Right-click the selected device rule or rule group, and select **Cut** or **Copy**. If Cut is selected, related rule or rule group is removed from the right pane view.

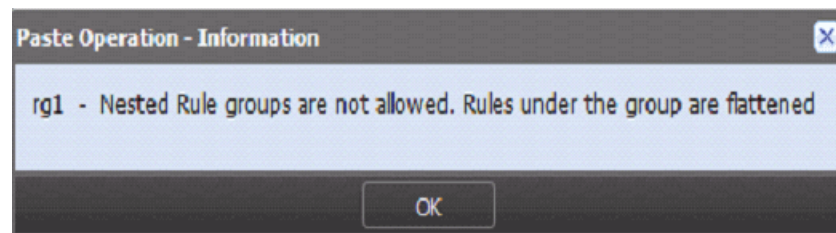
You can copy the rules without locking a policy. However, you must lock the policy for the cut operation. You can select the combination of rules or rule groups for cutting or copying operation. However, a rule group and one or more rules inside the same rule group cannot be copied or cut simultaneously.

2. On the left pane, select the IPS policy in which you want to paste the rule or rule group. On the right pane, right-click the rule or rule group that you want to paste. You can paste the rule or rule group before or after the selected rule or rule group by choosing the **Paste Before** or **Paste After** option, respectively.

If you are cutting and pasting rules across different policies, you must first save the cut operation in the current policy before moving to another policy for pasting. Otherwise, an error message is displayed, giving you the option either save or discard the changes.

Security Director does not support nested rule grouping. If you paste a rule group in another custom rule group, an error message is displayed, giving you the option to proceed by flattening the copied rule group, as shown in [Figure 208 on page 412](#).

Figure 208: Nested Rule Groups Paste Operation Warning Message



## Adding Rules to an IPS Policy

You can add the rules before or after the IPS rule or exempt rule. To add rules:

1. Select **Security Director > IPS Policy**.  
The Policy tabular view appears.
2. Select the IPS rule to which you want to add rules, right-click, and select **Add Rules Before** or **Add Rules After**.

You will get an option to add rules before the IPS rule or Exempt rule, or after the IPS rule or Exempt rule.



## Rule Operations on the Filtered Rules

You can perform various rule operations on the filtered list of rules. For example, consider a policy having seven rules such as *a*, *b*, *c*, *d*, *e*, *f*, and *g* in an order inside a rule group. After filtering, if only second and sixth rules are filtered, that is only rules *b* and *f*, [Table 37 on page 413](#) explains the various rule operations on the filtered rules.

**Table 37: Various Rule Operation on the Filtered Rules**

Rule Operation	Description
Add rule before	<p>To add a new rule before an existing rule, select the existing rule in the filtered list and add the new rule above it.</p> <p>For example, if you perform this operation by selecting the sixth rule that is <i>f</i>, the seventh rule must be added before the sixth rule, in the filtered list. The rule <i>f</i> must be moved down to the seventh place in the full list.</p>
Add rule after	<p>To add a new rule after an existing rule, select the existing rule in the filtered list and add the new rule below it.</p> <p>For example, If you perform this operation by selecting the second rule that is <i>b</i> in the filtered list, the seventh rule must be added after the second rule. This rule is added at the third place in the full list.</p>
Paste before	<p>To paste a copied rule before an existing rule, select the existing rule in the filtered list and paste the copied rule above it.</p> <p>For example, If you perform this operation by selecting the sixth rule that is <i>f</i> in the filtered list, the copied rule must be added after the sixth rule. The rule <i>f</i> must be moved down to the seventh place in the full list.</p>
Paste after	<p>To paste a copied rule after an existing rule, select the existing rule in the filtered list and paste the copied rule below it.</p> <p>For example, If you perform this operation by selecting the second rule that is <i>b</i> in the filtered list, the copied rule must be added after the second rule. The new rule is added at the third place in the full list.</p>
Clone	<p>To clone a selected rule, select the existing rule you want to clone in the filtered list. The cloned rule will be added above the selected rule.</p> <p>For example, If you perform this operation by selecting the sixth rule that is <i>f</i> in the filtered list, the cloned rule must be added after the sixth rule, at the seventh place. The rule <i>g</i> must be moved down to the eighth place in the full list. This can be checked by clearing the filter from the search box.</p>
Move rule to top	<p>To move a rule to the top of a list, select the rule you want to move in the filtered list and move rule to the top. If you move a rule from a filtered list to the top of that list, the selected rule is also moved to the top of the full list.</p> <p>For example, If you perform this operation by selecting the sixth rule <i>f</i> in the filtered list, the rule <i>f</i> must be moved to the top in the rule group, at first place in the original list. This can be checked by clearing the filter from the search box.</p> <p>This option is disabled for the top rule in the full list.</p>

Table 37: Various Rule Operation on the Filtered Rules (*continued*)

Rule Operation	Description
Move rule to bottom	<p>To move a rule to the bottom of the list, select the rule you want to move in the filtered list and move rule to the bottom. If you move a rule from a filtered list to the bottom of that list, the selected rule is also moved to the bottom of the full list.</p> <p>For example, If you perform this operation by selecting the second rule <i>b</i> in the filtered list, the rule <i>b</i> must be moved to the bottom in the rule group, at the seventh place in the full list. This can be checked by clearing the filter from the search box.</p> <p>This option is disabled for the last rule in the full list.</p>
Move rule up	<p>To move a rule up one position in the list, select the rule you want to move in the filtered list and move rule up one position.</p> <p>For example, If you perform this operation by selecting the sixth rule <i>f</i> in the filtered list, the rule <i>f</i> must be moved before the second rule <i>b</i> in the filtered list. This rule is moved to the second place in the rule group in the full list.</p> <p>This option is disabled for the top rule in the full list.</p>
Move rule down	<p>To move a rule down one position in the list, select the rule you want to move in the filtered list and move rule down one position.</p> <p>For example, If you perform this operation by selecting the second rule <i>b</i> in the filtered list, the rule <i>b</i> must be moved after the sixth rule <i>f</i> in the filtered list. This rule is moved to the sixth rule in the rule group in the full list.</p> <p>This option is disabled for the last rule in the full list.</p>

- Related Documentation**
- [Creating IPS Policies on page 392](#)
  - [Ordering the Rules in a IPS Policy on page 402](#)
  - [Adding Rules to an IPS Policy on page 403](#)
  - [Publishing IPS Policies on page 405](#)

## PART 14

# Devices

- [Devices on page 417](#)



## CHAPTER 28

# Devices

- [Creating a Security Zone for a Device on page 417](#)
- [Managing Security Zones on page 420](#)
- [Creating a Screen for a Device on page 422](#)
- [Managing Screens on page 426](#)
- [Creating Security Logs on page 428](#)
- [Creating a Static Route for a Device on page 432](#)
- [Managing Static Routes on page 436](#)
- [Creating a Routing Instance for a Device on page 438](#)
- [Managing Routing Instances on page 441](#)
- [Managing Physical Interfaces on page 443](#)
- [Modifying a Syslog on page 448](#)

### Creating a Security Zone for a Device

---

You can create a new security zone or screen for a device in conjugation with the Junos Space Network Application Platform. The Security Director Device Configuration page fetches the DMI configuration value from the Network Application Platform and provides the GUI for making the modifications on the Device Configuration page. Once you finish the modifications, the changes are ported back to the Network Application Platform.

To create a new security zone:

1. Select **Security Director > Devices > Device Management**.  
The Device Management page appears.
2. Right-click a device and select **Device Configuration > Modify Configuration**.  
The View/Edit Configuration page appears.
3. Under the Security section, click **Zones**.  
The Zones main page appears, showing the existing zones, as shown in [Figure 209 on page 418](#).

Figure 209: Device Configuration—Zones Main Page

Name	Interfaces	Screen	Description
HugeConfig		ipv6_Screen	U r huge n ugly
UTM			
VPN-1			
VPN-6			
am_lab			
corp_lab			
dmz	st0.2		
finjan-uplink			
fw-traffic-logging			
hs_lab			
iccu_mgmt_dev			
junos-host			
liberty			
newZone	ge-0/0/10.0	protect-root-trust	des
newZoneAfterUpgrade			
old-lab-space			
pm_lab			
srikant			test
trust	tap.0	rbalugu test	
untrust	ge-0/0/1.100		

- To add a new zone, click the plus sign (+).

The Create Zone page appears, as shown in [Figure 210 on page 419](#).

Figure 210: Device Configuration—Create Zone Page

**Create Zone**

**General Information**

Name\*: zone-crt

Description:

Application Tracking: ☒

**Interfaces**

Available	Selected
Filter <input type="text"/> <input type="button" value="Search"/> <input type="button" value="Info"/> <b>Select: Page None</b>	<b>Select: Page None</b>
fxp0.0	ge-11/0/3.0
ge-2/0/0.0	ge-9/0/3.0
ge-9/0/0.0	

**Traffic Control Options**

Ok Cancel

5. In the Name field, enter the name of the new zone. The asterisk indicates that it is a mandatory field.
6. In the Description field, enter a description for the new zone.
7. By default, the Application Tracking check box is not selected. To maintain the statistics on a device for its application usage, and to provide the application activity update message through the system log, select the **Application Tracking** check box.
8. Under the Interfaces section, in the Available column, select the required interfaces and move them to the Selected column.  
You can search for any interface in the Search field of the Available column.
9. Expand the Traffic Control Options section to configure the following parameters:
  - To send an RST for non-SYNC packets that do not match the TCP session, select the **Send TCP reset for non-SYN packet outside existing session** check box.
  - From the Screens drop-down box, select the available screens.
10. Expand the Host Inbound Traffic section to configure the following parameters:
  - Expand the System Services section to select the list of system services. From the Available column, select the required services and move them to the Selected column.

By default, the Permit-List radio button is selected. This permits all the services listed in the Selected column. If you select the Except-List radio button, all other services except the services listed in the Selected column are allowed.

- Expand the Protocols section to select the required protocols. From the Available column, select the required protocols and move them to the Selected column.

By default, the Permit-List radio button is selected. This permits all the protocols listed in the Selected column. If you select the Except-List radio button, all other protocols except the protocols listed in the Selected column are allowed.

11. Expand the Interface Services and Protocols section to configure the allowed system services and protocols.
12. Click **Ok**.

A new zone is created and added to the device.

#### Related Documentation

- [Managing Security Zones on page 420](#)

---

## Managing Security Zones

You can modify, delete, activate, and deactivate the security zones that are listed on the Zones main page.

To manage the zones, right-click the zone or select the required options from the toolbar.

You can perform the following management tasks on the Zones page.

- [Modifying a Security Zone on page 420](#)
- [Deleting a Security Zone on page 421](#)
- [Deactivating a Security Zone on page 422](#)
- [Activating a Security Zone on page 422](#)

### Modifying a Security Zone

To modify a security zone:

1. Select **Security Director > Devices > Device Management**.

The Device Management page appears.

2. Right-click a device and select **Device Configuration > Modify Configuration**.

The View/Edit Configuration page appears.

3. Under Security, click **Zones**.

The Zones main page appears.

4. Select the zone that you want to modify, and click the pencil icon or right-click the zone and select **Edit**.

The Modify Zone page appears, as shown in [Figure 211 on page 421](#).



Figure 211: Modify Zone Page

**Modify Zone -- active-directory-services**

**General Information**

Name\*: active-directory-services

Description:

Application Tracking:

**Interfaces**

Available		Selected
Filter		
fxp0.0		
ge-11/0/3.0		
ge-2/0/0.0		
ge-9/0/0.0	+	
ge-9/0/3.0	-	

**Traffic Control Options**

Ok Cancel

5. On the Modify Zone page, you can modify the required values.
6. To modify the selected zone, click **Ok**.

## Deleting a Security Zone

To delete a security zone:

1. Select **Security Director > Devices > Device Management**.  
The Device Management page appears.
2. Right-click a device and select **Device Configuration > Modify Configuration**.  
The View/Edit Configuration page appears.
3. Under Security, click **Zones**.  
The Zones main page appears.
4. Select the zone that you want to delete, and click the minus sign (-) or right-click the zone and select **Delete**.  
A confirmation message appears before the zone is deleted. You can select multiple zones for deletion.
5. To confirm the deletion, click **Ok**.

## Deactivating a Security Zone

To deactivate a security zone:

1. Select **Security Director > Devices > Device Management**.  
The Device Management page appears.
2. Right-click a device and select **Device Configuration > Modify Configuration**.  
The View/Edit Configuration page appears.
3. Under Security, click **Zones**.  
The Zones main page appears.
4. Select the zone that you want to deactivate, right-click it, and select **Deactivate**.  
The deactivated zone is greyed out and not available for any selection.

## Activating a Security Zone

To activate a deactivated zone:

1. Select **Security Director > Devices > Device Management**.  
The Device Management page appears.
2. Right-click a device and select **Device Configuration > Modify Configuration**.  
The View/Edit Configuration page appears.
3. Under Security, click **Zones**.  
The Zones main page appears.
4. Select the deactivated zone that you want to activate, right-click it, and select **Activate**.  
The zone is activated and available for any selection.

**Related Documentation**

- [Creating a Security Zone for a Device on page 417](#)

## Creating a Screen for a Device

---

To create a new screen:

1. Select **Security Director > Devices > Device Management**.  
The Device Management page appears.
2. Right-click a device and select **Device Configuration > Modify Configuration**.  
The View/Edit Configuration page appears.
3. Under the Security section, click **Screens**.  
The Screens main page appears, showing the existing screens.

4. To add a new screen, click the plus sign (+).

The Create Screen page appears, as shown in [Figure 212 on page 423](#).

**Figure 212: Device Configuration—Create Screen Page**

The screenshot shows a 'Create Screen' dialog box. It has a title bar with the text 'Create Screen' and a close button. The main content area is divided into sections. The first section is 'Basic Information', which contains a 'Name\*' text box, a 'Description' text box, and a checkbox labeled 'Generate alarms without dropping packets'. Below this are four expandable sections: 'Denial of Service', 'Anomalies', 'Flood Defense', and 'Reconnaissance', each with a minus sign icon. At the bottom of the dialog are 'Ok' and 'Cancel' buttons.

5. Under the Basic Information section, configure the following parameters:
  - In the Name field, enter the name of the new screen. This is a mandatory field.
  - In the Description field, enter a description for the new screen.
  - To direct the device to generate an alarm when detecting an attack but not to block the attack, select the **Generate alarms without dropping packets** check box.
6. Expand the Denial of Service section to configure the following parameters:
  - To enable the land attack protection option, select the **Land Attack Protection** check box.

Land attacks occur when an attacker sends spoofed SYN packets containing the IP address of the victim as both the destination and source IP address.

- To enable the teardrop protection option, select the **Teardrop attack protection** check box.

Teardrop attacks exploit the reassembly of fragmented IP packets.

- To enable the ICMP fragment protection option, select the **ICMP fragment protection** check box.

Because ICMP packets contain very short messages, there is no legitimate reason for ICMP packets to be fragmented. If an ICMP packet is so large that it must be fragmented, something is amiss.

- To enable the ping of death attack protection option, select the **Ping of death attack protection** check box.

A ping of death occurs when sent IP packets exceed the maximum legal length (65,535 bytes).

- To enable the large (size > 1024) ICMP packet protection option, select the **Large size ICMP packet protection** check box.
- To enable IP fragment blocking, select the **Block fragment traffic** check box.
- To enable the SYN-ACK-ACK proxy protection screen option, select the **SYN-ACK-ACK- proxy protection** check box.
- To enable the WinNuke attack protection option, select the **WinNuke attack protection** check box.

WinNuke is a DoS attack targeting any computer on the Internet running Windows.

7. Expand the Anomalies section to configure the following parameters:

Under the IP Packet Header section, configure the following parameters:

- To enable the IP with bad option IDs screen option, select the **Bad option** check box.
- To enable IP with security options, select the **Security** check box.

This provides a way for hosts to send security.

- To enable the unknown protocol protection option, select the **Unknown protocol protection** check box.
- To specify the complete route list for a packet to take on its journey from source to destination, select the **Strict source route** check box.
- To enable the IP with source route option, select the **Source route** check box.
- To enable the IP with the timestamp option, select the **Timestamp** check box.

This records the time (in Coordinated Universal Time, or UTC) when each network device receives the packet during its trip from the point of origin to its destination.

- To enable the IP with stream option, select the **Stream** check box.

This provides a way for the 16-bit SATNET stream identifier to be carried through networks that do not support the stream concept.

- To enable the IP with loose source route option, select the **Loose source route** check box.

This specifies a partial route list for a packet to take on its journey from source to destination.

- To enable the IP with record route option, select the **Record route** check box.

Under the TCP Segment Header section, configure the following parameters:

- To enable the SYN fragment option, select the **SYN Fragment Protection** check box.
- To enable the SYN and FIN flags set option, select the **SYN and FIN Flags Set Protection** check box.
- To enable the FIN flag without ACK and FIN flag set options, select the **FIN Flag without ACK Flag Set Protection** check box.
- To enable the TCP packet without flag set option, select the **TCP Packet without Flag Set Protection** check box.

A normal TCP segment header has at least one flag control set.

8. Expand the Flood Defense section, and configure the following parameters:

- To limit the sessions from the same source IP, enter the number of allowed sessions in the Limit sessions from the same source field.
- To limit the sessions from the same destination IP, enter the number of allowed sessions in the Limit sessions from the same destination field.

Under ICMP/UDP protection, configure the following parameters:

- To enable the ICMP flood protection option, select the **ICMP flood protection** check box.

An ICMP flood typically occurs when ICMP echo requests use all resources in responding, such that valid network traffic can no longer be processed.

- To enable the UDP flood protection option, select the **UDP flood protection** check box.

UDP flooding occurs when an attacker sends IP packets containing UDP datagrams with the purpose of slowing down the resources, such that valid connections can no longer be handled.

Under the SYN flood protection section, configure the following parameter:

- To enable the SYN flood protection option, select the **SYN Flood Protection** check box.

9. Expand the Reconnaissance section, and configure the following parameters:

- To enable IP address spoofing, select the **IP spoofing** check box.

IP spoofing is when a bogus source address is inserted in the packet header to make the packet appear to come from a trusted source.

- To enable IP address sweep, select the **IP sweep** check box.

An IP address sweep is launched with the intent of triggering responses from active hosts.

- To configure the device detect and prevent TCP sweep attack, select the **TCP Sweep** check box.
- To configure the device detect and prevent UDP sweep attack, select the **UDP Sweep** check box.
- To enable port scanning, select the **Port scan** check box.

The purpose of this attack is to scan available services to locate one or more ports that respond, thus identifying a service to target.

10. To create a new screen, click **Ok**.

#### Related Documentation

- [Managing Screens on page 426](#)

---

## Managing Screens

You can modify, delete, activate, and deactivate the screens that are listed on the Screens main page.

To manage screens, right-click the screen or select the required options from the toolbar.

You can perform the following management tasks on the Screens page.

- [Modifying a Screen on page 426](#)
- [Deleting a Screen on page 427](#)
- [Deactivating a Screen on page 428](#)
- [Activating a Screen on page 428](#)

## Modifying a Screen

To modify a screen:

1. Select **Security Director > Devices > Device Management**.

The Device Management page appears.

2. Right-click a device and select **Device Configuration > Modify Configuration**.

The View/Edit Configuration page appears.

3. Under Security, click **Screens**.

The Screens main page appears.

4. Select the screen that you want to modify, and click the pencil icon or right-click the screen and select **Edit**.

The Modify Screen page appears as shown in [Figure 213 on page 427](#)

Figure 213: Modify Screen Page

Modify Screen -- scr-test

**Basic Information**

Name\*: scr-test

Description:

Generate alarms without dropping packets: ☒

**Denial of Service**

☐ Land Attack Protection

☐ Teardrop attack protection

☐ ICMP fragment protection

☐ Ping of death attack protection

☐ Large size ICMP packet protection

☐ Block fragment traffic

☐ SYN-ACK-ACK proxy protection

☐ WinNuke attack protection:

**Anomalies**

☐ IP Packet Header

☐ Bad option

☐ Security

☐ Unknown protocol

Ok Cancel

The Modify Screen page appears.

5. On the Modify Screen page, you can modify the required values.
6. To modify the selected screen, click **Ok**.

## Deleting a Screen

To delete a screen:

1. Select **Security Director > Devices > Device Management**.

The Device Management page appears.

2. Right-click a device and select **Device Configuration > Modify Configuration**.

The View/Edit Configuration page appears.

3. Under Security, click **Screen**.

The Screens main page appears.

4. Select the screen that you want to delete, and click the minus sign (-) or right-click the screen and select **Delete**.

A confirmation message appears before the screen is deleted. You can select multiple screens for deletion.

5. To confirm the deletion, click **Ok**.

## Deactivating a Screen

To deactivate a screen:

1. Select **Security Director > Devices > Device Management**.  
The Device Management page appears.
2. Right-click a device, and select **Device Configuration > Modify Configuration**.  
The View/Edit Configuration page appears.
3. Under Security, click **Screens**.  
The Screens main page appears.
4. Select the screen that you want to deactivate, right-click it, and select **Deactivate**.  
The deactivated screen is greyed out and not available for any selection.

## Activating a Screen

To activate a deactivated screen:

1. Select **Security Director > Devices > Device Management**.  
The Device Management page appears.
2. Right-click a device, and select **Device Configuration > Modify Configuration**.  
The View/Edit Configuration page appears.
3. Under Security, click **Screens**.  
The Screens main page appears.
4. Select the deactivated screen that you want to activate, right-click it, and select **Activate**.  
The screen is activated and available for any selection.

**Related Documentation** • [Creating a Screen for a Device on page 422](#)

---

## Creating Security Logs

To configure security logging:

1. Select **Security Director > Devices > Device Management**.  
The Device Management page appears.
2. Right-click a device and select **Device Configuration > Modify Configuration**.



The View/Edit Configuration page appears.

3. Under the Security section, click **Security Logging**.

The Create Security Logging page appears, as shown in [Figure 214 on page 429](#).

**Figure 214: Device Configuration—Create Security Logging Page**

The screenshot shows the 'Create Security Logging' configuration window. It is divided into three main sections: General Settings, Stream, and File. The General Settings section contains several configuration options: a 'Mode' dropdown menu, a 'Source Address' text field, a 'Format' dropdown menu, a 'Rate-Cap' text field with a unit of 'logs/second', a 'Disable Logging' checkbox, a 'UTC-Timestamp' checkbox, and an 'Event-rate' text field with a unit of 'logs/second'. The Stream section features a table with columns for Name, Host, Port, Severity, Category, and Format. The File section includes fields for File Name, File Path, File Size (with a unit of 'megabytes'), and Max No. Of files. At the bottom of the window are 'Ok' and 'Cancel' buttons.

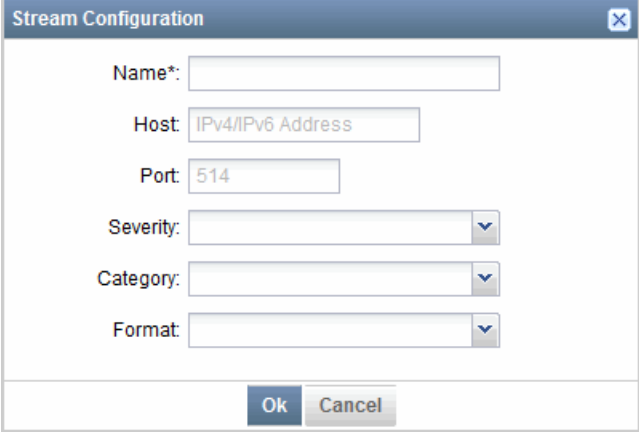
4. Under the General Settings section, configure the following parameters:
  - From the Mode list, select the mode of logging as stream or event.
  - To specify a source IP address or the IP address used when exporting security logs, enter the IP address in the Source Address field.
  - From the Format list, select the logging format as syslog, sd-syslog, or binary.
  - To limit the rate per second at which data plane logs are generated, enter the rate value in the Rate-Cap field.
  - To disable security logging for a device, select the **Disable Logging** check box.
  - To use Coordinated Universal Time (UTC) for security log timestamps, select the **UTC-Timestamp** check box.
  - To limit the rate per second at which logs are streamed, enter the event rate in the Event-rate field.
5. Under the Stream section, configure the following parameters:

To create a new stream configuration:

- Click the plus sign (+).

The Stream Configuration page appears, as shown in [Figure 215 on page 430](#).

**Figure 215: Security Logging—Stream Configuration Page**



The image shows a 'Stream Configuration' dialog box with the following fields and controls:

- Name\*:** A text input field.
- Host:** A text input field with a placeholder 'IPv4/IPv6 Address'.
- Port:** A text input field with the value '514'.
- Severity:** A dropdown menu.
- Category:** A dropdown menu.
- Format:** A dropdown menu.
- Buttons:** 'Ok' and 'Cancel' buttons at the bottom.

- In the Stream Name field, enter the name of the new stream configuration.
- In the Host field, enter the IPv4 or IPv6 address.
- In the Port field, enter the port number.
- In the Severity list, select one of the following available required severity types:
  - Emergency
  - Alert
  - Critical
  - Error
  - Warning
  - Notice
  - Info
  - Debug
- In the Category list, select the type of category as all or content-security.
- In the Format list, select the type of format as syslog, sd-syslog, welf, or binary.
- To create a new stream, click **Ok**.

You can modify or delete the existing streams. To modify or edit a stream, select the stream and click the pencil icon. To delete a stream, select the stream and click the minus sign (-).

6. Expand the File section and configure the following parameters:

- In the File Name field, enter a filename for the log data file.
  - In the File Path field, enter the path where the log file is saved.
  - In the File Size field, enter the maximum size of the log file in megabytes.
  - In the Max No. Of files field, enter the maximum number of log files to create for each session.
7. Expand the Cache section, and configure the following parameters:
    - In the Limit field, enter the maximum number of log entries to store in the cache memory. The default value is 10,000 entries.
  8. To restrict the device from logging certain configurations, you can create different exclude configurations.

To create a new exclude configuration:

- Under the Exclude section, click the plus sign (+).

The Exclude Configuration page appears, as shown in [Figure 216 on page 431](#).

**Figure 216: Security Logging—Exclude Configuration Page**

The screenshot shows the 'Exclude Configuration' dialog box. It includes the following fields and sections:

- Name\*:** A text input field.
- Destination:** A section containing:
  - IP Address:** A text input field with placeholder text 'IPv4/IPv6 Address'.
  - Port:** A text input field.
- Source:** A section containing:
  - IP Address:** A text input field with placeholder text 'IPv4/IPv6 Address'.
  - Port:** A text input field.
- Other Filters:** A section containing:
  - Event Id:** A text input field.
  - Failure:** A checkbox.
  - Interface:** A text input field.
  - Policy Name:** A text input field.
  - Process:** A text input field.
  - Protocol:** A text input field.
  - Success:** A checkbox.
  - User Name:** A text input field.
- Buttons:** 'Ok' and 'Cancel' buttons at the bottom right.

- In the Name field, enter the name of a new exclude configuration.
- Under the Destination section, in the IP Address field, enter the destination IP address in IPv4 or IPv6 address format. The audit log does not include security alarms from the specified destination IP address.

In the Port field, enter the destination IP address port.

- Under the Source section, in the IP Address field, enter the source IP address in IPv4 or IPv6 address format. The audit log does not include security alarms from the specified source IP address.

In the Port field, enter the source IP address port.

- Under the Other Filters section, configure the following parameters:
  - In the Event Id field, enter the event ID of the security event. The audit log does not include security alarms for this event ID.
  - To restrict the logging of failed events, select the **Failure** check box.
  - In the Interface field, enter the name of the interface. The audit log does not include security alarms from the specified interface.
  - In the Policy Name field, enter the policy name.
  - In the Process field, specify the name of the process that is generating the events.
  - In the Protocol field, enter the protocol name.
  - To restrict the logging of successful events, select the **Success** check box.
  - In the User Name field, enter the name of the authenticated user. All security events that are enabled by this user are not generated in the audit log.
- To create a new exclude configuration, click **Ok**.

9. To create a new security log, click **Ok**.



**NOTE:** Security logging is not supported for the logical systems devices.

---

**Related  
Documentation**

- [Modifying a Syslog on page 448](#)

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## Creating a Static Route for a Device

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To create a new static route:

1. Select **Security Director > Devices > Device Management**.

The Device Management page appears.

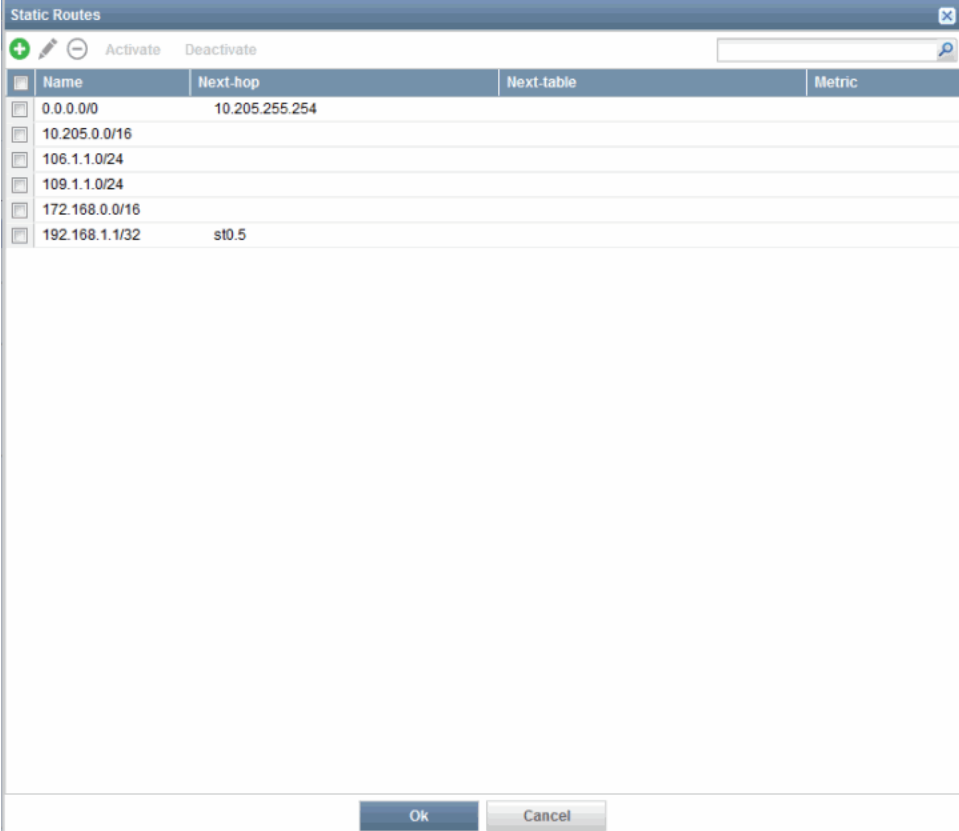
2. Right-click a device and select **Device Configuration > Modify Configuration**.

The View/Edit Configuration page appears.

3. Under the Routing section, click **Static Routes**.

The Static Routes main page appears, showing the existing static routes, as shown in [Figure 217 on page 433](#).

Figure 217: Device Configuration—Static Routes Main Page



The image shows a 'Static Routes' configuration window. At the top, there are icons for adding (+), editing (pencil), and deleting (-) routes, along with 'Activate' and 'Deactivate' buttons. Below this is a search bar. The main area contains a table with the following data:

	Name	Next-hop	Next-table	Metric
<input type="checkbox"/>	0.0.0.0/0	10.205.255.254		
<input type="checkbox"/>	10.205.0.0/16			
<input type="checkbox"/>	106.1.1.0/24			
<input type="checkbox"/>	109.1.1.0/24			
<input type="checkbox"/>	172.168.0.0/16			
<input type="checkbox"/>	192.168.1.1/32	st0.5		

At the bottom of the window are 'Ok' and 'Cancel' buttons.

4. To create a new static route, click the plus sign (+).

The Create Static Route page appears, as shown in [Figure 218 on page 434](#).

Figure 218: Static Routes—Create Static Route Page

The screenshot shows the 'Create Static Route' dialog box. The 'Basic Information' section has 'IPv4' selected. The 'Prefix' field contains 'IPv4 Address' and the 'Suffix' field is empty. The 'Next Hop' section has a list box with 'IP Address/Interface' and a plus sign icon. Below this are sections for 'Qualified Next Hop', 'Next Table', and 'Advanced Options'. The 'Ok' and 'Cancel' buttons are at the bottom right.

5. In the Prefix field, enter the IPv4 address.
6. In the Suffix field, enter the route suffix.
7. Under the Next Hop section, configure the IP address and interface for a next hop to a destination.
  - To configure the next hop, click the plus sign (+).  
The Next Hop page appears.
  - In the IP Address field, enter the IPv4 address.
  - From the Interface list, select the required interface.
  - To configure the next hop, click **Ok**.  
You can configure multiple next hops for a single prefix.
8. Under the Qualified Next Hop section, configure the following parameters:
  - To configure the qualified next hop, click the plus sign (+).  
The Qualified Next Hop page appears.
  - In the IP Address field, enter the IPv4 address.
  - From the Interface list, select the required interface.

- In the Metric field, enter the metric of the qualified next hop.
- In the Preference field, enter the preference of the qualified next hop.
- To configure the qualified next hop, click **Ok**.

Qualified next hops allow you to associate one or more properties with a particular next-hop address.

9. Under the Next Table section, from the Next Table list, select a routing table as a next hop to another table.
10. Under the Advanced Options section, configure the following parameters:
  - In the Preference field, enter the route preference.
  - In the Metric field, enter the metric associated with the forwarding next hop.
  - To drop the packets to the destination without sending back an ICMP message, select the **Discard** check box.
  - Select any one of the following options after Resolve Choices::
    - resolve—To allow resolution of indirectly connected next hops.
    - no-resolve—To not allow resolution of indirectly connected next hops.
    - None—No action.
  - Select any one of the following options after Readvertise Choices:
    - readvertise—To mark the route as eligible to be readvertised.
    - no-readvertise—To not mark the route as eligible to be readvertised.
    - None—No action.
  - Select any one of the following options after Retain Choices:
    - retain—To always keep the route in the forwarding table.
    - no-retain—To not keep the route in the forwarding table.
    - None—No action.
  - Select any one of the following options after Install Choices:
    - install—To add a route into the forwarding table.
    - no-install—To not to add a route to the forwarding table.
    - None—No action.
11. To create a new static route for a device, click **Ok**.

#### Related Documentation

- [Managing Static Routes on page 436](#)

## Managing Static Routes

---

You can modify, delete, activate, and deactivate the static routes that are listed on the Static Routes main page.

To manage a static route, right-click the static route or select the required options from the toolbar.

You can perform the following management tasks on the Static Routes page:

- [Modifying a Static Route on page 436](#)
- [Deleting a Static Route on page 437](#)
- [Deactivating a Static Route on page 438](#)
- [Activating a Static Route on page 438](#)

### Modifying a Static Route

To modify a static route:

1. Select **Security Director > Devices > Device Management**.

The Device Management page appears.

2. Right-click a device and select **Device Configuration > Modify Configuration**.

The View/Edit Configuration page appears.

3. Under the Security section, click **Static Routes**.

The Static Routes main page appears.

4. Select the static route that you want to modify, and click the pencil icon or right-click and select **Edit**.

The Modify Static Route page appears, as shown in [Figure 219 on page 437](#)



Figure 219: Modify Static Route Page

**Modify Static Route -- 11.11.11.1/32**

**Basic Information**

☒ IPv4
 ☐ IPv6

Prefix: 11.11.11.1

Suffix\*: 32

**Next Hop**

IP Address/Interface
st0.6

**Qualified Next Hop**

IP Address/Interface	Preference	Metric
----------------------	------------	--------

**Next Table**

Next Table:

**Advanced Options**

Preference:

Metric:

Discard: ☐

Resolve Choices: ☐ resolve ☐ no-resolve ☒ None

Retain Choices: ☐ retain ☐ no-retain ☒ None

Install Choices: ☐ install ☐ no-install ☒ None

- On the Modify Static Route page, you can modify the required values. However, you cannot modify the basic information such as IP address, prefix, and suffix.
- To modify the selected static route, click **Ok**.

## Deleting a Static Route

To delete a static route:

- Select **Security Director > Devices > Device Management**.  
The Device Management page appears.
- Right-click a device and select **Device Configuration > Modify Configuration**.  
The View/Edit Configuration page appears.
- Under the Routing section, click **Static Routes**.  
The Static Routes main page appears.
- Select the static route that you want to delete, and click the minus sign (-) or right-click the static route and select **Delete**.

A confirmation message appears before the static route is deleted. You can select multiple static routes for deletion.

5. To confirm the deletion, click **Ok**.

## Deactivating a Static Route

To deactivate a static route:

1. Select **Security Director > Devices > Device Management**.

The Device Management page appears.

2. Right-click a device and select **Device Configuration > Modify Configuration**.

The View/Edit Configuration page appears.

3. Under the Routing section, click **Static Routes**.

The Static Routes main page appears.

4. Select the static route that you want to deactivate, right-click it, and select **Deactivate**.

The deactivated static route is greyed out and not available for any selection.

## Activating a Static Route

To activate a deactivated static route:

1. Select **Security Director > Devices > Device Management**.

The Device Management page appears.

2. Right-click a device and select **Device Configuration > Modify Configuration**.

The View/Edit Configuration page appears.

3. Under Routing, click **Static Routes**.

The Static Routes main page appears.

4. Select the deactivated static route that you want to activate, right-click it and select **Activate**.

The static route is activated and available for any selection.

**Related Documentation** • [Creating a Static Route for a Device on page 432](#)

---

## Creating a Routing Instance for a Device

To create a new routing instance for a device:

1. Select **Security Director > Devices > Device Management**.

The Device Management page appears.

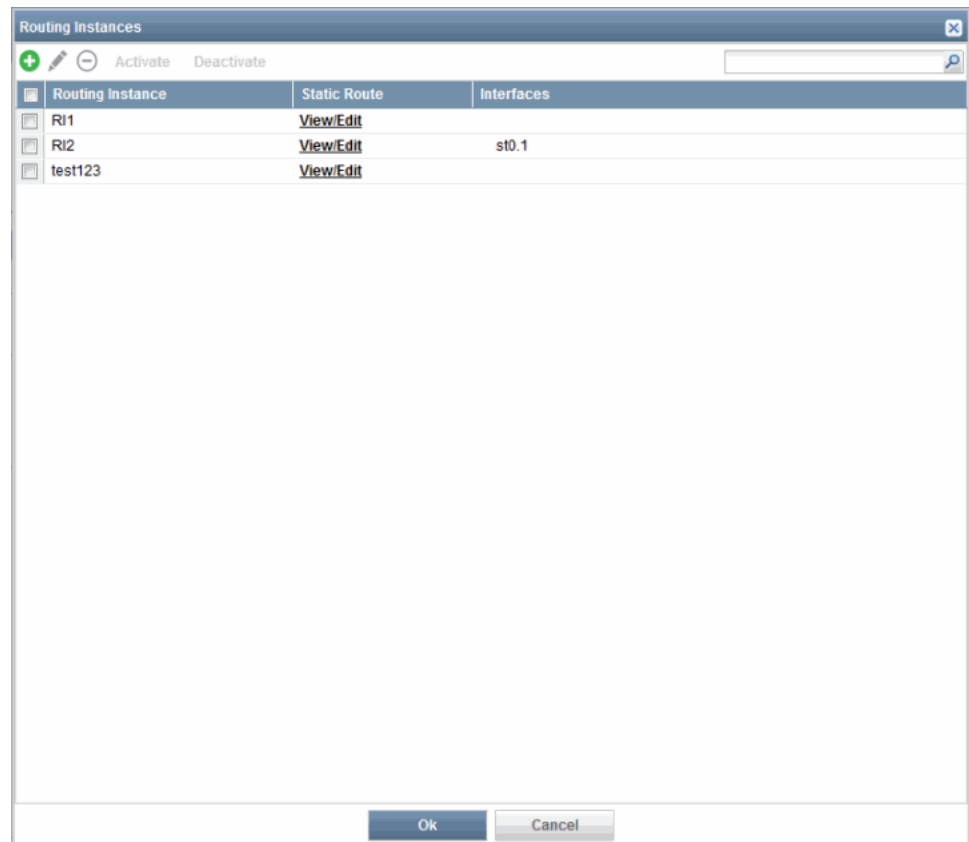
2. Right-click a device and select **Device Configuration > Modify Configuration**.

The View/Edit Configuration page appears.

3. Under the Routing section, click **Routing Instances**.

The Routing Instances main page appears showing the existing screens, as shown in [Figure 220 on page 439](#).

**Figure 220: Device Configuration—Routing Instances Main Page**



4. To create a new routing instance, click the plus sign (+).

The Create Routing Instance page appears, as shown in [Figure 221 on page 440](#).

Figure 221: Create Routing Instance Page

**Create Routing Instance**

**General Settings**

Name\*:

Description:

**Interfaces**

Available		Selected
Filter <input type="text"/>	Select: Page   None	Select: Page   None
ge-0/0/0.0		
ge-0/0/1.0		
ge-0/0/2.0		
	→	
	←	

Ok Cancel

5. In the Name field, enter the name of the routing instance.
6. In the Description field, enter a description for the routing instance.
7. Under the Interfaces section, select the required interfaces from the Available column and copy them to the Selected column.
8. Click **Ok**.

A new routing instance is created.

You can view, edit, or create static routes for each routing instance from the Routing Instance page.

To create a static route for a routing instance:

1. On the Routing Instances page, click **View/Edit** for the required routing instance.  
The Static Routes page for that routing instance appears.
2. To create a new static route for that routing instance, click the plus sign (+).

The Create Static Route page appears. For more information on creating a new static route, see [“Creating a Static Route for a Device” on page 432](#).

You can also manage the static routes created for a routing instance. For more information on managing a static route, see [“Managing Static Routes” on page 436](#).

3. To come back to the Routing Instances page from the Static Routes page, click **Back**.



**NOTE:** You must first save the newly created routing instance before adding a static route to the routing instance.

#### Related Documentation

- [Managing Routing Instances on page 441](#)

## Managing Routing Instances

You can modify, delete, activate, and deactivate the routing instances that are listed on the Routing Instances main page.

To manage a routing instance, right-click the routing instance or select the required options from the toolbar.

You can perform the following management tasks on the Routing Instances.

- [Modifying a Routing Instance on page 441](#)
- [Deleting a Routing Instance on page 442](#)
- [Deactivating a Routing Instance on page 443](#)
- [Activating a Routing Instance on page 443](#)

### Modifying a Routing Instance

To modify a routing instance:

1. Select **Security Director > Devices > Device Management**.  
The Device Management page appears.
2. Right-click a device and select **Device Configuration > Modify Configuration**.  
The View/Edit Configuration page appears.
3. Under Routing, click **Routing Instances**.  
The Routing Instances main page appears.
4. Select the routing instance that you want to modify, and click the pencil icon or right-click and select **Edit**.

The Modify Routing Instance page appears, as shown in [Figure 222 on page 442](#)

Figure 222: Modify Routing Instance Page

**Modify Routing Instance -- RI-33**

**General Settings**

Name\*: RI-33

Description:

**Interfaces**

Available	Selected
ge-0/0/0.0	
ge-0/0/1.0	
ge-0/0/10.0	
ge-0/0/11.0	
ge-0/0/12.0	
ge-0/0/13.0	
ge-0/0/14.0	
ge-0/0/15.0	
ge-0/0/2.0	
ge-0/0/3.0	
ge-0/0/4.0	
ge-0/0/5.0	

Ok Cancel

- On the Modify Routing Instance page, you can modify the required values.
- To modify the selected routing instance, click **Ok**.

## Deleting a Routing Instance

To delete a routing instance:

- Select **Security Director > Devices > Device Management**.  
The Device Management page appears.
- Right-click a device and select **Device Configuration > Modify Configuration**.  
The View/Edit Configuration page appears.
- Under Routing, click **Routing Instances**.  
The Routing Instances main page appears.
- Select the routing instance that you want to delete, and click the minus sign (-) or right-click the instance and select **Delete**.  
A confirmation message appears before the routing instance is deleted.
- To confirm the deletion, click **Ok**.

## Deactivating a Routing Instance

To deactivate a routing instance:

1. Select **Security Director > Devices > Device Management**.  
The Device Management page appears.
2. Right-click a device and select **Device Configuration > Modify Configuration**.  
The View/Edit Configuration page appears.
3. Under Routing, click **Static Routes**.  
The Static Routes main page appears.
4. Select the static route that you want to deactivate, right-click it, and select **Deactivate**.  
The deactivated routing instance is greyed out and not available for any selection.

## Activating a Routing Instance

To activate a deactivated routing instance:

1. Select **Security Director > Devices > Device Management**.  
The Device Management page appears.
2. Right-click a device and select **Device Configuration > Modify Configuration**.  
The View/Edit Configuration page appears.
3. Under Routing, click **Routing Instances**.  
The Routing Instances main page appears.
4. Select the deactivated routing instance that you want to activate, right-click it, and select **Activate**.  
The routing instance is activated and available for any selection.

**Related Documentation**

- [Creating a Routing Instance for a Device on page 438](#)

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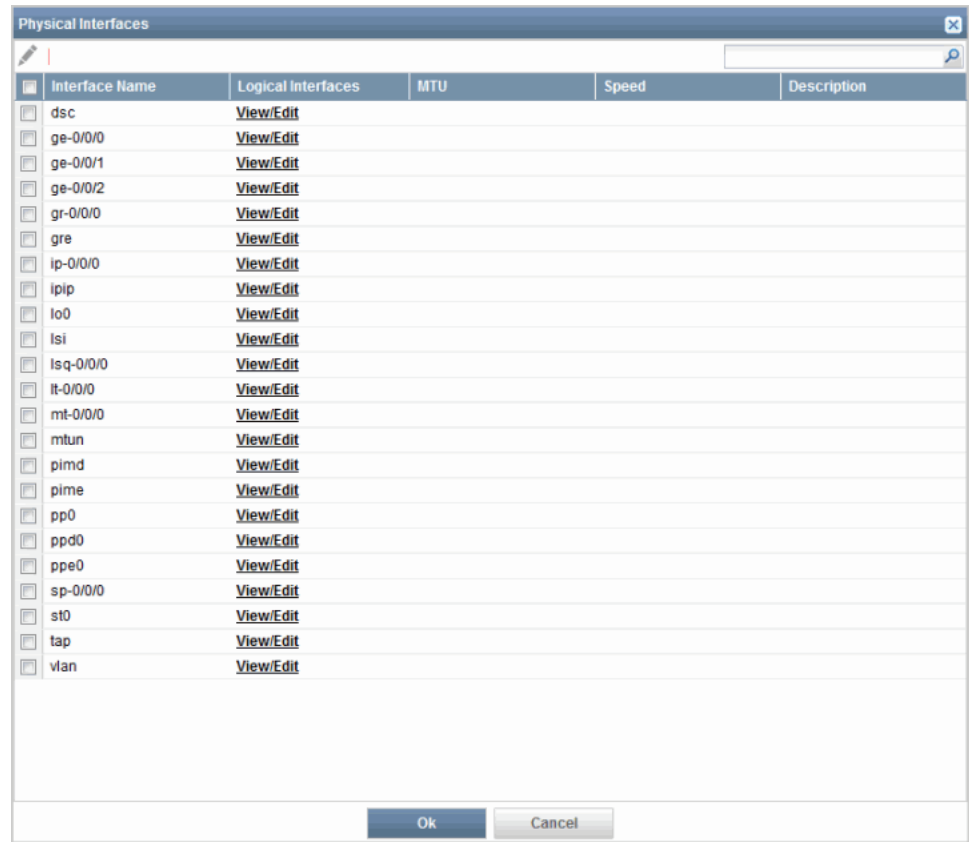
## Managing Physical Interfaces

To modify the selected physical interface:

1. Select **Security Director > Devices > Device Management**.  
The Device Management page appears.
2. Right-click a device and select **Device Configuration > Modify Configuration**.  
The View/Edit Configuration page appears.
3. Under the Routing section, click **Physical Interfaces**.

The Physical Interfaces main page appears, showing the existing physical interfaces, as shown in [Figure 223 on page 444](#).

Figure 223: Device Configuration—Physical Interfaces Main Page



	Interface Name	Logical Interfaces	MTU	Speed	Description
<input type="checkbox"/>	dsc	<a href="#">View/Edit</a>			
<input type="checkbox"/>	ge-0/0/0	<a href="#">View/Edit</a>			
<input type="checkbox"/>	ge-0/0/1	<a href="#">View/Edit</a>			
<input type="checkbox"/>	ge-0/0/2	<a href="#">View/Edit</a>			
<input type="checkbox"/>	gr-0/0/0	<a href="#">View/Edit</a>			
<input type="checkbox"/>	gre	<a href="#">View/Edit</a>			
<input type="checkbox"/>	ip-0/0/0	<a href="#">View/Edit</a>			
<input type="checkbox"/>	ipip	<a href="#">View/Edit</a>			
<input type="checkbox"/>	lo0	<a href="#">View/Edit</a>			
<input type="checkbox"/>	lsi	<a href="#">View/Edit</a>			
<input type="checkbox"/>	lsq-0/0/0	<a href="#">View/Edit</a>			
<input type="checkbox"/>	lt-0/0/0	<a href="#">View/Edit</a>			
<input type="checkbox"/>	mt-0/0/0	<a href="#">View/Edit</a>			
<input type="checkbox"/>	mtun	<a href="#">View/Edit</a>			
<input type="checkbox"/>	pimd	<a href="#">View/Edit</a>			
<input type="checkbox"/>	pime	<a href="#">View/Edit</a>			
<input type="checkbox"/>	pp0	<a href="#">View/Edit</a>			
<input type="checkbox"/>	ppd0	<a href="#">View/Edit</a>			
<input type="checkbox"/>	ppe0	<a href="#">View/Edit</a>			
<input type="checkbox"/>	sp-0/0/0	<a href="#">View/Edit</a>			
<input type="checkbox"/>	st0	<a href="#">View/Edit</a>			
<input type="checkbox"/>	tap	<a href="#">View/Edit</a>			
<input type="checkbox"/>	vian	<a href="#">View/Edit</a>			

4. Select the required interface and click the pencil icon, or right-click it and select **Edit**.

The Modify Physical Interface page appears, as shown in [Figure 224 on page 445](#).



Figure 224: Modify Physical Interface Page

Modify Physical Interface -- ge-0/0/1

**Basic Information**

Description:

MTU:  bytes

Speed:

**Advanced Options**

Enable vlan-Tagging: ☐

Ok Cancel

5. In the Description field, enter a description of the interface.
6. In the MTU field, enter the maximum transmit packet size in bytes.
7. From the Speed list, select the required link speed.
8. To enable the 802.1q VLAN tagging support option, select the **Enable-vlan-Tagging** check box.
9. To complete the modification, click **Ok**.

You can view, edit, or create a logical interface for each of the interfaces listed on the Physical Interfaces page.

To view, edit, or create a logical interface:

1. On the Physical Interfaces page, in the Logical Interfaces column, click **View/Edit** for the required interface.  
  
The Logical Interfaces page for that particular interface appears, listing the existing logical interfaces.
2. To create a new logical interface, click the plus sign (+).

The Create Logical Interface page appears, as shown in [Figure 225 on page 446](#)

Figure 225: Create Logical Interface Page

The screenshot shows a 'Create Logical Interface of fxp2' dialog box. It is divided into three main sections: 'Basic Information', 'IPv4 Address', and 'IPv6 Address'. The 'Basic Information' section includes a 'Name\*' field, a 'Description' text area, and a 'Vlan Id' field. The 'IPv4 Address' and 'IPv6 Address' sections each contain a table with three columns: 'IP Address', 'Primary', and 'Preferred'. Each table has a plus sign icon to add a new entry. At the bottom of the dialog are 'Ok' and 'Cancel' buttons.

3. Under the Basic Information section, configure the following parameters:
  - In the Name field, enter the new logical interface unit name.
  - In the Description field, enter a description.
  - In the Vlan Id field, enter the virtual LAN identifier value for 802.1q VLAN tags.
4. To configure the IPv4 address, under the IPv4 Address section, click the plus sign (+).  
 Configure the following parameters:
  - In the Prefix field, enter the IPv4 address as **IP prefix**.
  - In the Suffix field, enter the IP suffix value.
  - To configure this address to be the primary address of the protocol on the interface, select the **Primary** check box.

If the logical unit has more than one address, the primary address is used by default as the source address when packet transfer originates from the interface and the destination address does not indicate the subnet.

  - To configure this address to be the preferred address on the interface, select the **Preferred** check box.

If you configure more than one address on the same subnet, the preferred source address is chosen by default as the source address when you initiate frame transfers to destinations on the subnet.

- To complete the configuration, click **Ok**.
5. To configure the IPv6 address, under the IPv6 Address section, click the plus sign (+).  
Configure the following parameters:
    - In the Prefix field, enter the IPv6 address as **IP prefix**.
    - In the Suffix field, enter the IP suffix value.
    - To use this address as a primary address, select the **Primary** check box.
    - To use this address as a preferred address, select the **Preferred** check box.
    - To complete the configuration, click **Ok**.
  6. To complete the configuration of a new logical interface, click **Ok**.

To go back to the Physical Interfaces page from the Logical Interfaces page, click **Back**. You can edit, delete, activate, or deactivate any logical interfaces that are listed in the Logical Interfaces page.

**Related  
Documentation**

- [Creating a Static Route for a Device on page 432](#)
- [Managing Static Routes on page 436](#)
- [Creating a Routing Instance for a Device on page 438](#)
- [Managing Routing Instances on page 441](#)

## Modifying a Syslog

To modify a syslog:

1. Under the Security section, click **Syslog**.

The Modify Syslog page appears, as shown in [Figure 226 on page 448](#).

**Figure 226: Device Configuration—Modify Syslog Page**

**Modify Syslog**

**General Settings**

Time-format: ☐

Source Address:

Log-Rotate-Frequency:

Allow-duplicates: ☐

**Host**

Name	Contents	Match	Advanced Options
messages	any - any;		
default-log-messages	any - info;	{requested 'commit' operation}   (copying configuration to juniper.save)   (commit complete)   {AdminStatus}   {FRU power}   {FRU removal}   {FRU insertion}   {link UP}   {transitioned}   {transferred}   {transfer-file}   {license add}   {license delete}   {package -X update}   {package -X delete}   GRES	Structured Data : true

**File**

Name	Contents	Match	Advanced Options
messages	any - any;		
default-log-messages	any - info;	{requested 'commit' operation}   (copying configuration to juniper.save)   (commit complete)   {AdminStatus}   {FRU power}   {FRU removal}   {FRU insertion}   {link UP}   {transitioned}   {transferred}   {transfer-file}   {license add}   {license delete}   {package -X update}   {package -X delete}   GRES	Structured Data : true

Ok Cancel

2. In the General Settings section, configure the following parameters:
  - To include the additional information in the system log time stamp, select the **Time-format** check box.
  - In the Source Address field, specify the source address for log messages.
  - In the Log-Rotate-Frequency field, specify the interval for checking log file size and archiving messages.
  - To allow the repeated messages in the system log output files, select the **Allow-duplicates** check box.
3. You can send system logging information to one or more destinations. To send a security log to a remote server:

Under the Host section, configure the following parameters:

- To create a new host, click the plus sign (+).

The Host Configuration page appears, as shown in [Figure 227 on page 449](#).

**Figure 227: Modify Syslog–Host Configuration Page**

The screenshot shows the 'Host Configuration' dialog box. It includes a 'Name\*' field with a dropdown menu, a 'Match' text area, a 'Contents' section with a table for logging configuration, and an 'Advanced Options' section with checkboxes for 'Allow duplicates', 'Explicit priority', and 'Facility override', and a 'Log prefix' text field. The 'Contents' section shows a table with 'Facility' and 'Severity' columns. The 'Advanced Options' section has checkboxes for 'Allow duplicates', 'Explicit priority', and 'Facility override', and a 'Log prefix' text field. The dialog box has 'Ok' and 'Cancel' buttons at the bottom.

- From the Host Name list, select the host name to notify.
- Under the Contents section, to configure the logging of system messages to the system console:
  - Click the plus signs (+), and the Contents page appears.
  - To specify the class of messages to log, from the Facility list, select the message class.
  - From the Severity list, select the message severity. Messages with severities of the specified level and higher are logged.
  - To configure the Contents section, click **Ok**.
- To allow the repeated messages in the system log output files, select the **Allow-duplicates** check box.
- To include the priority and facility in messages, select the **Explicit priority** check box.
- To select an alternate facility to substitute for the default facilities, from the Facility override list, select the alternate facility.
- In the Log prefix field, specify a text string to include in each message directed to a remote destination.

- In the Match field, specify a text string that must appear in a message for the message to be logged to a destination.
  - In the Port field, enter the port number.
  - In the Source Address field, specify the source address for log messages.
  - To write system log messages to the log file in structured-data format, select the **Structured data** check box.
  - To create a new host configuration, click **Ok**.
4. To send a security log to a file:

Under the File section, configure the following parameters:

- To create a new file to log the system messages, click the plus sign (+).

The File Configuration page appears, as shown in [Figure 228 on page 450](#).

**Figure 228: Modify Syslog–File Configuration Page**

The screenshot shows the 'File Configuration' dialog box. It has a title bar with the text 'File Configuration' and a close button. The main area contains the following elements:

- Name\*:** A text input field.
- Match:** A large text area for specifying a text string.
- Contents:** A section with a plus icon, a pencil icon, and a minus icon. Below these icons is a table with two columns: 'Facility' and 'Severity'.
- Advanced Options:** A section with two checkboxes: 'Explicit priority' and 'Structured data'.
- Buttons:** 'Ok' and 'Cancel' buttons at the bottom right.

- In the File Name field, enter the name of file to log the data.
- Under the Content section, configure the following parameters:
  - Click the plus signs (+), and the Contents page appears.
  - To specify the class of messages to log, from the Facility list, select the message class.
  - From the Severity list, select the message severity. Messages with severities of the specified level and higher are logged.
  - To configure the Contents section, click **Ok**.
- To include the priority and facility in messages, select the **Explicit priority** check box.

- In the Match field, specify a text string that must appear in a message for the message to be logged to a destination.
  - To write system log messages to the log file in structured-data format, select the **Structured data** check box.
  - To create a new file configuration, click **Ok**.
5. To configure the logging of system messages to user terminals:
- Under the User section, configure the following parameters:
- To configure a new user, click the plus sign (+).

The User Configuration page appears, as shown in [Figure 229 on page 451](#).

**Figure 229: Modify Syslog–User Configuration Page**

The screenshot shows the 'User Configuration' dialog box. It includes a 'Name\*' field, a 'Match' text area, and a 'Contents' section. The 'Contents' section contains a table with two columns: 'Facility' and 'Severity'. Above the table are icons for adding (+), editing (pencil), and deleting (-). Below the table is an 'Allow duplicates' checkbox. At the bottom of the dialog are 'Ok' and 'Cancel' buttons.

- In the User Name field, enter the name of the user to notify.
  - Under the Content section, configure the following parameters:
    - Click the plus signs (+), and the Contents page appears.
    - To specify the class of messages to log, from the Facility list, select the message class.
    - From the Severity list, select the message severity. Messages with severities of the specified level and higher are logged.
    - To configure the Contents section, click **Ok**.
  - To allow the repeated messages in the system log output files, select the **Allow-duplicates** check box.
  - In the Match field, specify a text string that must appear in a message for the message to be logged to a destination.
  - To create a new user, click **Ok**.
6. To configure the system to send syslog, click **Ok**.

**Related Documentation**

- [Creating Security Logs on page 428](#)



## PART 15

# Security Director Devices

- [Security Director Devices on page 455](#)



## CHAPTER 29

# Security Director Devices

- Updating Devices with Pending Services on page 455
- Importing Firewall, NAT, and IPS Policies from a Device to Security Director on page 460
- NSM Migration on page 467
- Managing Consolidated Configurations on page 473

## Updating Devices with Pending Services

To update a device with pending services:

1. Select **Security Director > Security Director Devices**.

The Security Director Devices page appears, as shown in [Figure 230 on page 455](#).

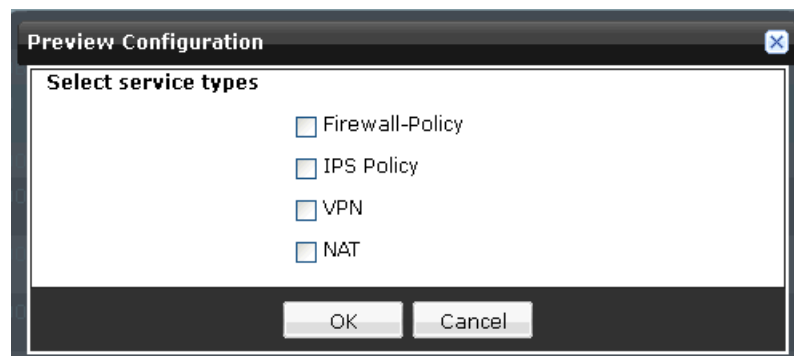
**Figure 230: Security Director Devices Page**

Name	OS Version	Platform	Last Updat...	IP Address	Connection	Configuration Status	Schema Ver...	Management	Consolidated Config...	Assigned S...	Pending Ser...	Installed Ser...
<input checked="" type="checkbox"/> NAT(Node-178) (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist			
<input type="checkbox"/> 10.205.50.213	12.1X45-D10	SRX220H		10.205.50.213	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist	TestNat		
<input type="checkbox"/> Node-178 (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist			
<input type="checkbox"/> IPS-LSYS1(Node-178) (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist			
<input type="checkbox"/> NAT-LSYS1(Node-178) (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist			
<input type="checkbox"/> Firewall-LSYS1(Node-178) (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist	TestNat		
<input type="checkbox"/> SRX5600-2	12.1X45-D10	SRX3400		10.205.61.41	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist	SRX-0000 -2_4 SRX-0000 -2_4		
<input type="checkbox"/> Firewall-LSYS1(Node-178) (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	SD Changed	Does Not Exist	999 999 v2		
<input type="checkbox"/> SysDevice1(SRX-5600-2)	12.1X45-D10	SRX3400		10.205.61.41	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist	TestNat		
<input type="checkbox"/> VPN-LSYS1(Node-178) (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist			
<input type="checkbox"/> scale-10.205.61.33	12.1R1.9	SRX5600		10.205.61.33	Up	In Sync	12.1R1.9	Unmanaged	Does Not Exist	to do		
<input type="checkbox"/> NAT(Node-178) (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist			
<input type="checkbox"/> sr-211	12.1X45-D15.2	SRX1400		10.205.50.211	Up	Unknown	12.1X45-D15.2	Unmanaged	Does Not Exist			

2. Select the check box next to the device on which you want to update the pending services.
3. Click **Update**.

The Update page appears, as shown in [Figure 231 on page 456](#).

Figure 231: Update Window



4. Select the type of service you want to update on the device in the Select Service Types pane. Once you select the type of service, the selected service is saved for your username and every time you log-in, by default, this service will be selected to update. You can retain the same service or select any other services.
5. Select the **Schedule at a later time** check box if you want to schedule the update at a later date and time.
6. Click **Update**.

If you make any changes to a device, which is outside of changes managed by Security Director, the Management Status for that device is shown as Device Changed. You can check the status of the device in the Security Director Devices workspace by right-clicking the device and select **View Device Change**. To make the device status back to In-Sync, you must right click the device and select **Update**.

In the Select service types, you must select only services that are changed, and update the device. Do not select all the services when the CLI changes are related only to a particular service. Once you update from Security Director, the device status must be changed to In-Sync.



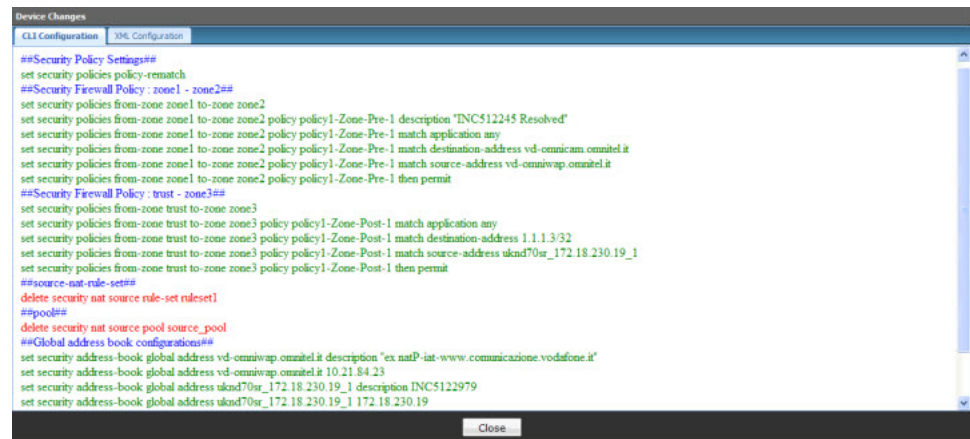
**NOTE:** If you make changes with NAT and firewall policies through the device CLI, and while updating the device you must select both firewall policy and NAT policy in the Select service types window. If you select either firewall policy or NAT policy alone for update, the device status remains Device Changed and will not be changed to In-Sync after the update.

To view the description entered for the device:

1. In the Manage Security Devices page, right-click the device for which policies are published, and select **Preview Configuration**.
2. The Preview Configuration window appears. Select the service type and click **OK**.

The publish window appears showing the descriptions for the policy rules and objects in the CLI to be pushed to the device, as shown in [Figure 232 on page 457](#).

Figure 232: Device Changes Page Showing Device Comments



**NOTE:** Descriptions entered for the address or service or NAT pool objects used in the firewall or NAT policies, and descriptions for NAT or firewall policy rules, are also pushed to the device. This feature is supported for devices running Junos OS Release 12.1 and later.



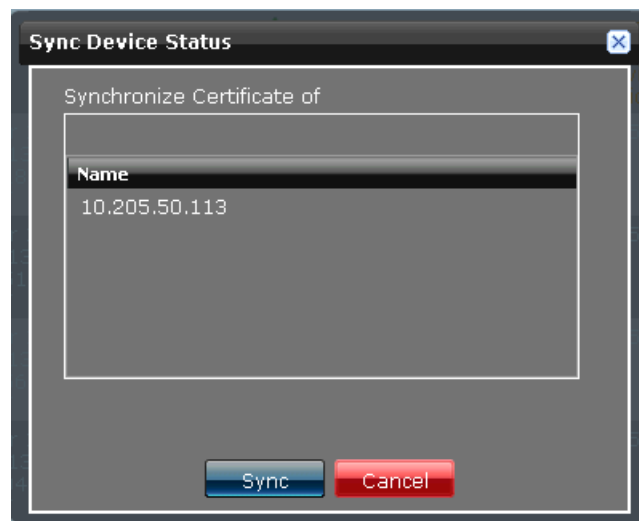
**NOTE:** A warning message appears when the management status for any device is changed to Device Changed.

To refresh the certificate for any device:

1. In the Update Device page, select the device for which you want to refresh the certificate. Right-click and select **Refresh certificate list** option.

You can select one or more devices to refresh the certificate. The Sync Device Status page appears, as shown in [Figure 233 on page 458](#).

Figure 233: Sync Device Status Page



2. Select the device(s) for certificate synchronization and click **Sync**.
3. A job ID is created. You can click the job ID to get the status of the certificate synchronization.



**NOTE:** The certificate synchronization is not applicable for logical systems.

Security Director allows you to rerun updates on failed devices. The Job Management framework gives you the option of retrying a job on all or a subset of the main objects, such as devices. You can retry a job more than once. The failed objects list reflects the jobs you choose to retry. You can retry only on the update devices jobs and not on any other jobs. You can retry a failed update job only if you have Update Device permission under Security Director Devices section of RBAC. Also, you must trigger a new update in case there are issues in reaching the device while updating a service.

For example, Job 1 fails on devices A, B, C, and D, and it succeeds on devices E, F, G, and H. Job 2 retries Job 1. For Job 2, you can select devices A, B, C, and D to be retried.

If you choose only to retry devices A and, device A might succeed while device B fails again. Job 3 retries Job 2. For Job 3, you can choose to retry device B. Job 4 retries Job 1. For Job 4, you can choose to retry all the failed devices: A, B, C, and D.

For more detailed information about retrying failed updates, consult the following links:

- For the online help content on the device, click **Security Director > Jobs > Job Management** help.
- For the document about Junos Space on web, see the *Junos Space Network Application Platform User Guide*.

All the assigned services of firewall, NAT, IPS, and VPN are listed in the Assigned Services column. When a device is assigned to any Firewall policy (this includes for NAT, IPS and

VPN), the policy name is shown in this column. The All Device Policy of firewall is not shown as an assigned service, because this service, by nature, is applicable to all the devices.

All the installed services of firewall, NAT, IPS, and VPN that are currently updated on the device are listed in the Installed Services column. When any service is published and updated to the device (this includes for firewall, NAT, IPS and VPN), the policy name is shown in Installed Services column. Versioning information is added for the services listed under the Pending Services and Installed Services columns. The versioning information is available only for firewall and NAT policies.

Search options are available for the Assigned Services, Pending Services, and Installed Services columns, and for the type of services. The following search criteria are applicable for the search option that is available on the Security Director Devices page:

- Searching with an OR combination is not supported.
- Searching with compound negate is not supported.
- Compound search queries with AND and negate are supported.

Use the following keywords to search for a particular service:

- For an assigned service name, use the *assignedServices* keyword.

For example, use *assignedServices:storesrx* to list all the devices that are assigned to the *storesrx* firewall policy.

Use *-assignedServices:storesrx* to list all the devices that are not assigned to the *storesrx* firewall policy.

- For an assigned service type, use the *assignedServiceTypes* keyword. This finds all devices having minimum one firewall policy use. This keyword applies to firewall, NAT, IPS, and VPN policies.

For example, use *-assignedServiceTypes:FWPolicy* to list all the devices that are not assigned to any firewall policy.

Use *-assignedServiceTypes:FWPolicy AND assignedServiceTypes:NAT* to list all the devices that are not assigned to any firewall policy but that are assigned to any NAT policy.

- For pending service name, use the *pendingServices* keyword.

For example, use *pendingServices:(storesrx)* to find all devices where *storesrx* is published and the update is pending.

Use *-pendingServices:(storesrx)* To find all the devices that do not have policies with name having text *storesrx* published.

- For pending service type, use the *pendingServiceTypes* keyword. This keyword applies to firewall, NAT, IPS, and VPN services.

For example, use *pendingServiceTypes:FWPolicy* to list all the devices that have any firewall policy as a pending service.

The keyword *pendingServiceTypes:FWPolicy AND pendingServiceTypes:NAT* to list all the devices that have firewall and NAT policies as pending services.

- For installed service name, use the *installedServices* keyword.

For example, use *installedServices:storesrx* to list all the devices with firewall policy *storesrx* updated on it.

Use *-installedServices:storesrx* to find all devices where *storesrx* is not updated.

- For installed service type, use the *installedServiceTypes* keyword. This keyword applies to firewall, NAT, IPS, and VPN policies.

You can export all the columns on the Security Director Devices page to a CSV file. To export the columns to the CSV file, click **Export to CSV** option from the Actions drop-down list. You cannot select a device or devices and export only those devices to a CSV file. However, you can apply filters to the list of devices and export the filtered data to a CSV file.

You can also export the job details of publish or preview and update jobs to a CSV file. The messages columns will also be captured in the exported CSV file. A filter option is available for all the columns in the Job Management workspace.

Security Director does not allow deletion of all the firewall policies in the device. The Update job fails if all the firewall policies are deleted in the device. You cannot enable or disable this parameter in the device and Security Director does not allow deletion of all firewall policies from the device.

Update fails under the following scenarios:

- Update empty firewall rules to the device
- Delete all the existing rules from the device

The warning messages are displayed during the update and preview workflow if all the firewall policies are removed from the device. For the preview workflow *Device Update job will fail because the Update will remove all Firewall Policies from the device. Security Director does not support deleting all Firewall Policies.* warning message is displayed. For the update workflow *Device Update failed because all Firewall Policies would have been deleted on device update. Security Director does not allow deleting all Firewall policies.* warning message is displayed.

#### Related Documentation

- [Importing Firewall, NAT, and IPS Policies from a Device to Security Director on page 460](#)
- [NSM Migration on page 467](#)
- [Managing Consolidated Configurations on page 473](#)

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## Importing Firewall, NAT, and IPS Policies from a Device to Security Director

Security Director enables you to import firewall, NAT, and IPS policies from a device. All objects supported by Security Director are imported during the policy import process. Rules that contain objects not supported by Security Director are imported with the



disabled rule state. You can import IPS policies along with the firewall policies, however, you cannot import IPS policies alone. For IPS, only the active policies are imported. After import, Security Director creates a policy with IPS mode set to Advanced. If you are using predefined device templates, any policy rules with an IPS mode as Basic is migrated as Advanced mode in the imported policy.

You can select a list of policies to be imported to Security Director. Security Director displays a summary of the rules and objects used in the policies to be imported. After you verify the information and resolve any conflicts, the policies are imported from the device to Security Director. Every time a new import is initiated, Security Director creates a new policy, even if a policy with that name was imported previously. In such a case, Security Director names the new policy based on the results of the duplicate name resolution.



#### NOTE:

- Imported policies are created without any device assigned to them. To use these policies, you must associate a device with the policy.
- If you import any disabled rule, Security Director configures them as inactive state. If any node in the disabled rule is in the inactive rule, such node is not imported by Security Director. In the next device update, such nodes are deleted.
- Prior to importing IPS and Application Firewall configurations into Security Director, the IPS or Application Firewall Signatures must be downloaded on to the Junos Space.

To import a firewall, NAT, or IPS policy:

1. Select **Security Director > Security Director Devices**.

The Manage Security Devices page appears, as shown in [Figure 234 on page 461](#).

**Figure 234: Manage Security Devices Page**

Security Director Devices > Update Device									
Actions									
Name	OS Version	Platform	Last Update	IP Address	Connection	Configuration Status	Schema Ver...	Management	Consolidated Config...
NAT(Node-178) (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist
10.205.50.213	12.1X45-D10	SRX3400		10.205.50.213	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist
Node-178 (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist
IPS(LSYS1(Node-178) (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist
NAT(LSYS1(Node-178) (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist
FW(policy(Node-178) (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist
SRX5600-2	12.1X45-D10	SRX3400		10.205.61.41	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist
Firewall(LSYS1(Node-178) (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	BD Changed	Does Not Exist
TestDevice1(SRX-5600-2)	12.1X45-D10	SRX3400		10.205.61.41	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist
VPN(LSYS1(Node-178) (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist
scale-10.205.61.33	12.1R1.9	SRX5600		10.205.61.33	Up	In Sync	12.1R1.9	Unmanaged	Does Not Exist
NAT(Node-178) (Cluster)	12.1X45-D10	SRX3400		10.205.50.178	Up	In Sync	12.1X45-D10	Unmanaged	Does Not Exist
sn-211	12.1X45-D15.2	SRX1400		10.205.50.211	Up	Unknown	12.1X45-D15.2	Unmanaged	Does Not Exist

2. Select the device for which you want to import the policy. Right-click on the device, and then click **Import**.

The Service Import Summary page appears, as shown in [Figure 235 on page 462](#).

**Figure 235: Service Import Summary Page**

Policy	Policy Type	Rules	Errors	Summary
<input type="checkbox"/> NAT Policies <input checked="" type="checkbox"/> md-h26-41	Device	9	0	
<input type="checkbox"/> Firewall Policies <input checked="" type="checkbox"/> md-h26-41	Device	3	0	

This page provides the following information:

- Policy name and type (firewall, NAT, or IPS)
- Number of rules with errors or warnings
- Summary showing:
  - Number of addresses, services, or NAT pool objects
  - Rules with unsupported objects

3. Select the policy that you want to import, and click **Next**.

If conflicts are present, the Object Conflict Resolution page appears, as shown in [Figure 236 on page 462](#).

**Figure 236: Object Conflict Resolution Page**

Name	Value	Imported Value	Action	New Name
HOST_v4	192.168.1.10	192.168.1.1	Rename Object	HOST_v4_1
HOST_v6	2FOE:2E00::0000:0022:F376:#3rab3f	2001:db8:85a3:8d3:1319:8a2e:370:7348	Rename Object	HOST_v6_1
ADDR-GROUP-v4	[HOST_v4, HOST_v6]	[HOST_v4_1, 10.159.2.0/25, DNS]	Rename Object	ADDR-GRO_1
IPS-Host	4.3.3.1	1.1.1.1	Rename Object	IPS-Host_1
IPS-Address-Group	[IPS-Host, HOST_v4]	[IPS-Host, IPS-Host-1, IPS-Host-2, IPS-Host-3, IPS-Host-4]	Rename Object	IPS-Address_1
TCP-2967	1. one_Rp, Protocol: TCP, Source Port: 1-65535, Destination Port: 2967, Inactiv...	1. TCP-2967, Protocol: TCP, Source Port: 1-65535, Destination Port: 2967, Inactiv...	Rename Object	TCP-2967_1
icmp_App	1. 10, ICMP Code: 1, ICMP Type: 23 2. 11, ICMP Code: 0, ICMP Type: 29	1. icmp, ICMP Code: 0, ICMP Type: 11 2. icmp, ICMP Code: 0, ICMP Type: 4, 1...	Rename Object	ICMP_App_1
CUSTOM-APP-GROUP-1	icmp_App TCP-2967	icmp_App Unreachable TCP-2967 TCP-445 UDP-1434	Rename Object	CUSTOM-AP_1
IPS-Service-6	1. one_Rp, ALG: Rp, Protocol: TCP, Source Port: 32, Destination Port: 21, Inactiv...	1. IPS-Service-6, ICMP Code: 124, ICMP Type: 123	Rename Object	IPS-Service_1
IPS-Service-Group	IPS-Service-6	IPS-Service-1 IPS-Service-2 IPS-Service-3 IPS-Service-4 IPS-Service-5 IPS-Service...	Rename Object	IPS-Service_1
Severity-Info	Name: Severity-Info, Type: signature, Severity: Info, Definition type: Custom, Ra...	Name: Severity-Info_1, Type: signature, Severity: Info, Definition type: Custom...	Rename Object	Severity-In_1
static-cust-obj	Name: static-cust-obj, Type: static, Numbers: HTTP:ASCX:DOOPS:HEBROOT	Name: static-cust-obj_1, Type: static, Numbers: Severity-Info	Rename Object	static-cust-fal
dynamic-false-positives	Name: dynamic-false-positives, Type: dynamic, Filters: true, any, Critical, Major	Name: dynamic-false-positives_1, Type: dynamic, Filters: frequently, occasionally...	Rename Object	dynamic-fal

An object conflict occurs when the name of the object to be imported matches an existing object, but the definition of the object does not match. You can use the available Tooltip view to see more information for Value, Imported Value, and Action

columns. To see the tooltip for an object, mouse over its value, imported value, or action columns.

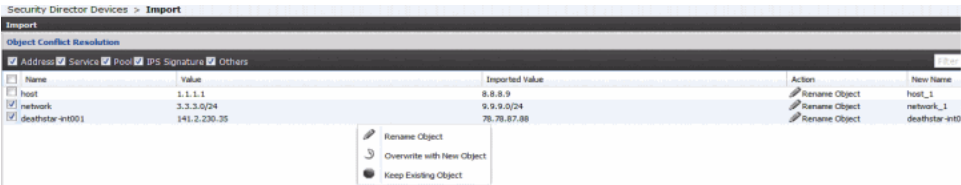
Conflicting objects can be address, service, NAT pool objects, IPS Signature, static group, or dynamic group. The inactive rules on the device are disabled in the imported policy and the unused objects, such as unused IPS signatures are removed during the IPS import. Security Director imports attacks that are used in the policy. The unused attacks such as address or service, are deleted by the Security Director in the next policy publish. You can take the following actions for the conflicting objects from the action column:

- Keep the existing object, and ignore the new object.
- Overwrite the existing object with the new object.
- Accept the proposed name, or enter a new name.

Once the initial naming conflict has been resolved, the object conflict resolution checks for further conflicts with the new name and definition until conflict is completely resolved.

You can select more than one conflicting object to perform the action. Select one or more conflicting object, right-click and select required action, as shown in [Figure 237 on page 463](#).

Figure 237: Same Action Applied to Two Conflicting Objects



The same action is applied to all the selected conflicting objects.

4. After all object conflicts are resolved, click **Next**. A summary of the import process appears, along with the conflict resolution page, as shown in [Figure 238 on page 463](#).

Figure 238: Policy Import Status Page



To print the summary report, click **Print Report** at the beginning of the page.



**NOTE:** If Security Director finds further conflicts, the Object Conflict Resolution page is refreshed to display the new conflicts.

- Click **Finish** to initiate the import process. After the import is complete, a comprehensive report for each policy imported is provided, as shown in [Figure 239 on page 464](#).

**Figure 239: Firewall Policy Final Import Status Page**

Task	Status	Details
Reading import Files	In Progress	Started at Oct 3, 2012 4:02:54 PM UTC+05:30
Reading import Files	Success	Finished at Oct 3, 2012 4:02:54 PM UTC+05:30
Importing Addresses	In Progress	Started at Oct 3, 2012 4:02:54 PM UTC+05:30
Importing Addresses	Success	Finished at Oct 3, 2012 4:02:54 PM UTC+05:30
Importing Services	In Progress	Started at Oct 3, 2012 4:02:54 PM UTC+05:30
Importing Services	Success	Finished at Oct 3, 2012 4:02:54 PM UTC+05:30
Importing Nat Prefixes	In Progress	Started at Oct 3, 2012 4:02:54 PM UTC+05:30
Importing Nat Prefixes	Success	Finished at Oct 3, 2012 4:02:54 PM UTC+05:30
Importing Nat Pools	In Progress	Started at Oct 3, 2012 4:02:54 PM UTC+05:30
Importing Nat Pools	Success	Finished at Oct 3, 2012 4:02:54 PM UTC+05:30
Importing Nat Policy	In Progress	Importing 10.205.119.23 Started at Oct 3, 2012 4:02:55 PM UTC+05:30
Importing Nat Policy	Success	Imported as 10.205.119.23 Finished at Oct 3, 2012 4:02:55 PM UTC+05:30
Summary		<a href="#">Summary Report</a>

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Close

- Click **Summary Report** to view the import summary as shown in [Figure 238 on page 463](#).
- Go to the Firewall Policy workspace to view the imported policies. At this point Security Director will have created a device policy without associating any devices with it. At this point you can continue to import policy objects for all other devices as many number of times as required. All imported device policies will show up as device policies.

Go to the NAT Policy workspace to view the imported policies. All imported device policies show up as group policies in Security Director. At this point you can continue to import policy objects for all other devices. You can perform all normal NAT policy functions on these imported policies.

When you import a device, all the new objects are created in the current domain. If there is an object by name A1 in the global domain and you are importing a device in D1 domain, and the device also has A1 object, the A1 object from the global domain is used if there are no conflicts. The behavior is same when you import a device in the global domain. However, if there is a conflict, Security Director does not allow the overwrite of A1 object in the global domain. In such cases, you have the following options as a resolution:

- Create a new object in D1 domain

- Reuse existing object from global domain

If you are importing a device in the global domain, overwrite existing object is allowed. The overwrite existing object option is allowed only for the conflicting objects from the current domain where the device import operation is triggered.

If the A1 object is present in both global and D1 domains, and in the device as well, the following points explain the usage of such objects:

- The A1 object, which is the final object created in Security Director, is checked for equality with the object from the device. If they are equal, Security Director object is reused. For example, if the object A1 is created in the global after the another object A1 is created in D1 domain, the object from the global domain is reused. Otherwise, the object from D1 domain is reused.
- If the final created object in Security Director is not equal to the object from the device, the object which is created first in Security Director is checked for equality with the object from the device. IF they are equal, Security Director object is reused.
- If the objects A1 from both global and D1 domains are not equal to the object from the device, there is a conflict resolution. During the conflict resolution, the object from the current domain, in which the import device operation is triggered, is taken for a resolution with the object from the device. All the tree options such as creating a new object, overwriting an existing object, and ignore.

The behavior is same during the NSM migration as well.

In Security Director, firewall rules are not disabled if IPS policy, policy-based VPN, or AppFW is configured during the device import.

Security Director imports IPS on or off state in firewall rule. By default, after the import, firewall policy mode for IPS will be in *not configured* state. If the device configuration has an active IPS policy, the mode is set to Advanced after the import. If the mode is not set to Advanced, such active policies are not selected by Security Director.

Firewall rules configured with application signature that include predefined, and custom signature are imported. If the imported firewall rules have signatures not available in Security Director, such firewall rules will be in disabled state after the import. The reason for the disabled state is given in the Description field along with the information on the missing application signature.

If a device firewall policy is imported to Security Director, it automatically creates rule groups based on the zone pair. If a zone pair contains more than 300 rules, based on the auto group feature, the rule groups are broken into multiple rule groups each containing 200 rules. Group names for such groups are decided based on the following logic:

The configuration that is imported from the configuration group is imported to Security Director and pushed to the device as an effective configuration. At the time of publish, a warning message is displayed.



**NOTE:** If the VPN was created outside of Security Director (CLI and so on), the VPN is not imported. Firewall rules can point to VPNs that were created outside of Security Director (CLI and so on), and can be used in any Security Director rule with a tunnel action.

The following are application firewall import criteria in firewall rule:

- Multiple firewall rules can share the same application firewall rule set.
- Application firewall rule set name is automatically generated during policy publish. You cannot customize the application firewall rule set names.
- Application firewall rule set can contain both blacklisted and whitelisted applications.
- <ZONE-NAME>-Intra (in case *from zone* and *to zone* are same)
- <SRX ZONE NAME>-to-<DST ZONE NAME>
- <SRX ZONE NAME>-to-<DST ZONE NAME>-X

X is a counter that allows multiple groups when a policy count exceeds 200.

For Security Director managed devices, if you make any changes to a device, which is outside of changes managed by Security Director, the Management Status for that device is shown as Device Changed. Right-click the device and select **View Device Change** to see the changes for the device. To import the changes alone, right-click the device and select **Import Device Changes**. This imports the changes alone from the device and the same workflow of import occurs for OCR.

**NOTE:**

- In Junos OS Release 12.1 and later releases, comments are imported during the policy import process.
- You can also import similar logical systems policies to other devices.
- The following rules are not supported by NAT. After the import, Security Director will disable these rules.
  - Persistent NAT for source-nat interface
  - Persistent NAT for source-nat pool
  - IPv6 to IPv4 translation with the destination address 2001:470:b:227::1/96
  - Matching Protocol in source and destination rule (supported only for Junos OS Release 11.4 and later releases)
  - Matching address object for source and destination address in source, or destination, or static NAT rules
- Security Director does not assign devices to the imported policies. You must explicitly assign devices once the import is complete.
- From Security Director Release 12.2 and later, Security Director categorizes the zone-based rules in firewall policies, after importing from a device, into logical rule groups based on zone pairs. For the rules between different from or to zones, the rules are grouped under rule group name *Interzone: ZoneA to ZoneB*, and if from or to zones are same, rules are grouped under rule group name *Intrazone: Zonename*.  
  
If the number of rules within the rule group exceeds 200, Security Director splits the rule groups and appends *-n* with each rule group name, where *n* is a digit greater than or equal to zero (last group name can have upto 299 rules).
- Security Director supports import of scheduler objects.
- The same OCR is generated when you import UTM policies. If there is a global configuration, device profile is created and you must manually assign devices to that profile. If not manually assigned, those device profiles will be deleted.
- The import is disabled in the Global domain for a device in the child domain.

Related Documentation

- [NSM Migration on page 467](#)

## NSM Migration

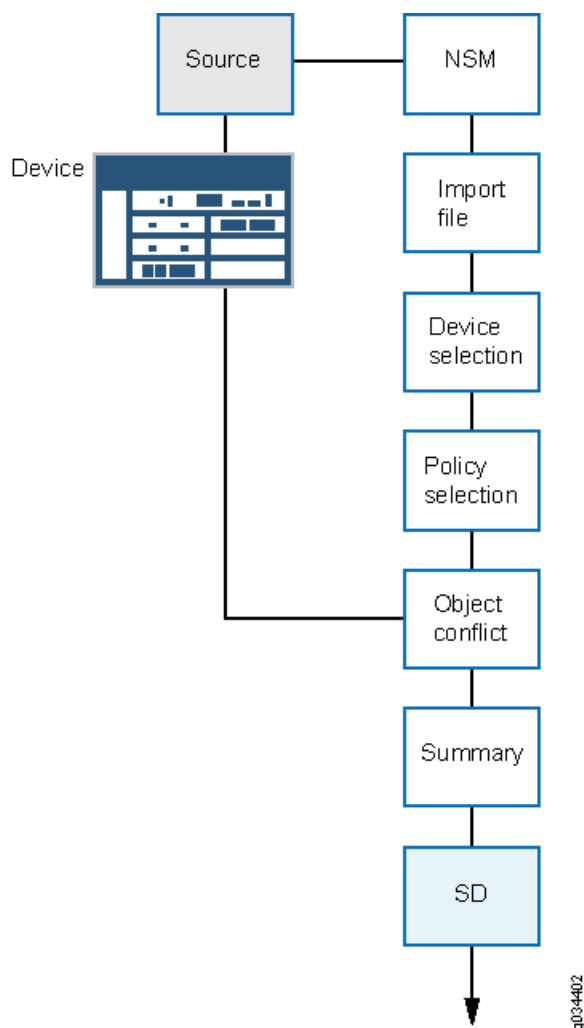
You can migrate firewall and NAT policies from Network and Security Manager (NSM) for a set of devices. All objects supported by Security Director (addresses, services,

address group, service group) can be imported with the policy, with the exception of polymorphic objects. Rules referring to these objects are disabled after the migration.

At any time, only a single migration from the NSM workflow can be triggered on Security Director. Migrating policies from NSM requires the NSM database to be exported in .xdiff format. You must copy this file to your local machine and provide the path of the .xdiff file to migrate policies from NSM to Security Director.

Figure 240 on page 468 shows the workflow of device import.

**Figure 240: High-Level Device Import Workflow**



You can migrate NSM database from the NSM Release 2010.3 to 2012.2 into Security Director.

The following features are supported during the NSM migration:

- Firewall policies with global rules (including support for the global address book)
- NAT policies with support for the global address book



- Nested address group support (Junos OS Release 11.2 and later releases)
- Negate address support in firewall rules
- Service offload support in firewall rules
- Source address or source port option in Static NAT
- Source port option in Source NAT

To import policies from NSM:

1. Select **Security Director > Security Director Devices > NSM Migration**.

The Upload NSM xdiff file to start migration window appears, as shown in [Figure 241 on page 469](#).

**Figure 241: NSM Xdiff File Upload Page**



**NOTE:** The supported NSM versions for the database import are 2010.3 through 2012.2.

2. Browse to the path where the .xdiff file is stored, and select the appropriate .xdiff file, generated from NSM. The .xdiff file is imported to the Security Director server.

The Devices page appears showing the name of the available devices, the Junos OS version of each device, and the platform.

**Figure 242: NSM Migration Devices Page**

Name	IP Address	OS Version	Platform	Domain
<input checked="" type="checkbox"/> SRX-119.8	10.205.119.8	11.2	srx240b	global
<input checked="" type="checkbox"/> nsm-srx220-2	10.205.90.213	11.2	srx220h	global

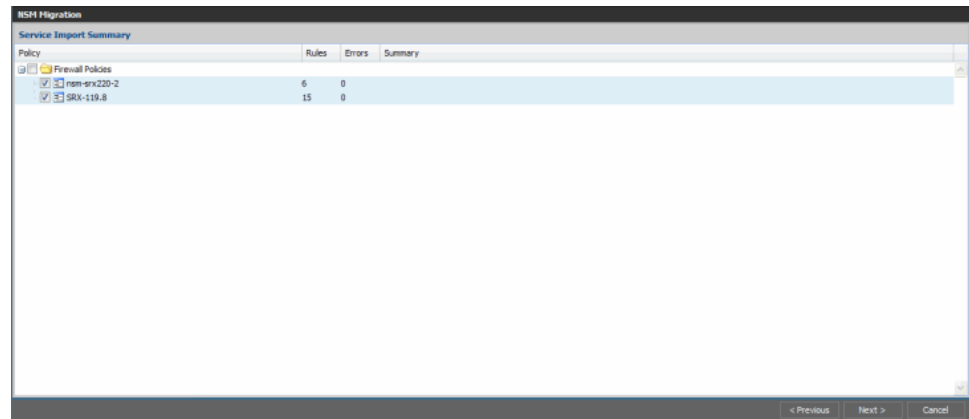


**NOTE:** NSM to Security Director migration is not supported for ScreenOS devices.

3. Select the devices for which you want to import the policies, and select **Next**.

The Service Import Summary page appears, as shown in [Figure 243 on page 470](#).

**Figure 243: Service Import Summary Page**



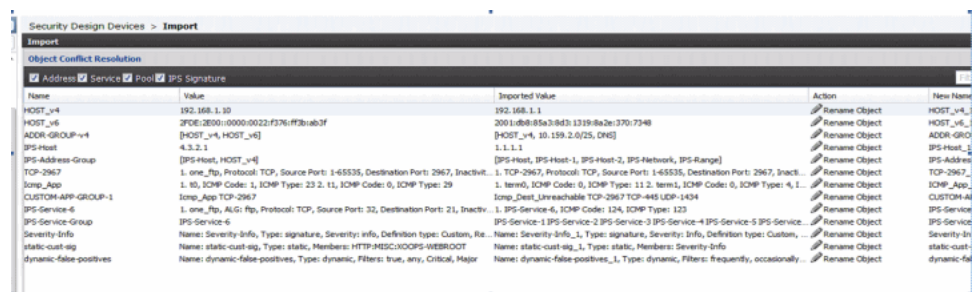
This page provides the following information:

- Policy name and type (firewall or NAT)
- Number of rules with errors or warnings
- Summary showing:
  - Number of addresses, services, or NAT pool objects
  - Rules with unsupported objects

4. Select the policy that you want to import, and click **Next**.

If conflicts are present, Object Conflict Resolution page appears, as shown in [Figure 244 on page 470](#).

**Figure 244: NSM—Object Conflict Resolution Page**



An object conflict occurs when the name of the object to be imported matches an existing object, but the definition of the object does not match.

Conflicting objects can be address, service, or NAT pool objects. You can take the following actions for the conflicting objects from the action column:

- Keep the existing object, and ignore the new object.
- Overwrite the existing object with the new object.

- Accept the proposed name, or enter a new name.

Once the initial naming conflict has been resolved, the object conflict resolution checks for further conflicts with the new name and definition until resolution is complete.

5. After all object conflicts are resolved, click **Next**. A summary of the import process appears, along with the conflict resolution page, as shown in [Figure 245 on page 471](#).

Figure 245: NSM Migration Status Page



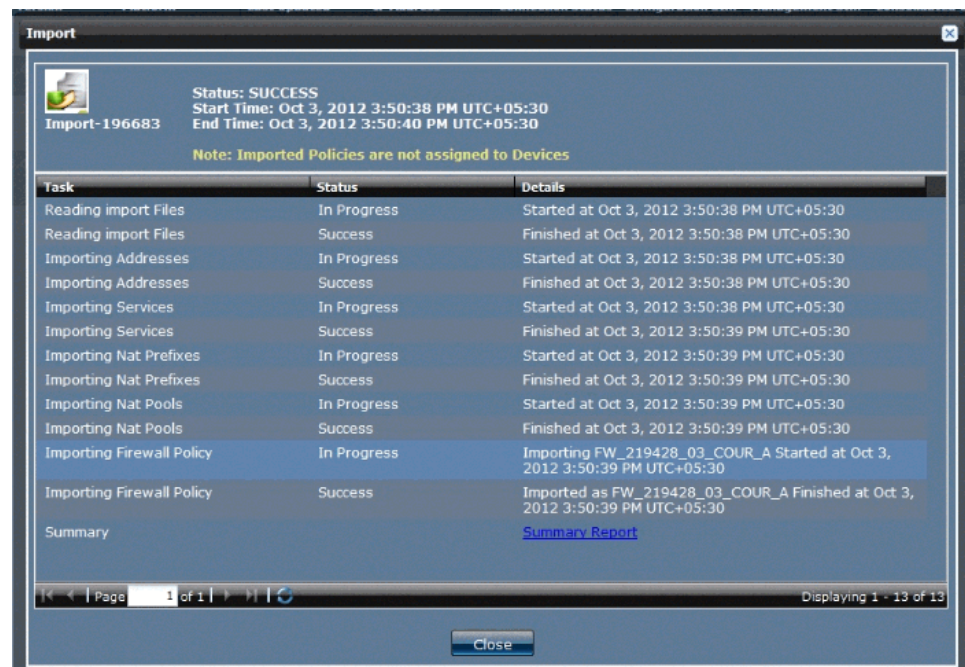
To print the summary report, click **Print Report** at the beginning of the page.



**NOTE:** If Security Director finds further conflicts, the Object Conflict Resolution page is refreshed to display the new conflicts.

6. Click **Finish** to initiate the import process. After the import is complete, a comprehensive report for each policy imported is provided, as shown in [Figure 246 on page 472](#).

Figure 246: NSM Migration Final Status Report Page



7. Click on **Summary Report** to view the import summary as shown in [Figure 245 on page 471](#)
8. Go to the Firewall Policy or NAT Policy workspace to view the imported policies. At this point Security Director will have created a group policy without associating any devices with it. At this point you can continue to import policy objects for all other devices. All imported device policies will show up as group policies in Security Director. You can perform all normal firewall, or NAT policy functions on these imported policies.

**NOTE:**

- If a group has more than 300 rules, Security Director automatically breaks the group into multiple rule groups each containing 200 rules. The only exception is that these groups are placed last in the list of groups. The size of the last group is calculated by the upper threshold of 300 rules and lower threshold of 100 rules.
- Security Director attaches \_DE to the device exception policies name. You cannot directly assign device exception policies to group policy. Assign devices to the device exception policies first, and then assign those devices to the group policies.
- Security Director supports import of scheduler objects from NSM.

**Related Documentation**

- [Importing Firewall, NAT, and IPS Policies from a Device to Security Director on page 460](#)

In Junos Space, different users can create change requests, configuration templates, and so forth for a particular device. A single reviewer can then view all of these configurations for multiple devices to decide which of them to deploy, and in which sequence. However, permissions for the Manage Consolidated Configurations task could be restricted to specific subtasks; for example, the person who generates a consolidated configuration might not have the permissions to approve the consolidated configuration for deployment.

- [Generating a Consolidated Configuration on page 473](#)

## Generating a Consolidated Configuration

- For the online help content on the device, click Security Director > Devices help.
- For the document on web, see *Junos Space Network Application Platform User Guide*.

The consolidated configuration status shown in the platform can also be seen from Security Director. To view the consolidated configuration status from Security Director, click **Security Director Devices**. The status is shown in the Consolidated Config Status column, as shown in [Figure 247 on page 473](#).

### Figure 247: Consolidated Config Status from Security Director

Security Director Devices												
Actions +												
0 Item Selected												
Item	Device	OS Version	Firmware	Last Updated	IP Address	Connection Status	Configuration Status	Schema Version	Management St.	Candidate Config Status	Assigned Serv...	Pending
10.205.50.113	Global	11.4R1.15.4	SRX1201		10.205.50.113	Up	In Sync	12.154R.1.5	In Sync	Does Not Exist		
10.205.50.211	Global	12.154R.010.2	SRX1400	Apr 9, 2014 11:24 PM EDT	10.205.50.211	Up	In Sync	12.154R.010.2	In Sync	Does Not Exist	Initial-group	
10.205.61.41	Global	12.1020140108_jm4_121_446_usaffix-6-623502	SRX3400		10.205.61.41	Up	In Sync	12.19R1.5 [Mismatch with device OS version]	SD Changed	Does Not Exist	Licensed/Pres Policy	Licensed/Pres Policy
10.205.61.41	Global	12.10210140108_jm4_121_446_usaffix-6-623502	SRX3400		10.205.61.41	Up	In Sync	12.19R1.5 [Mismatch with device OS version]	Unmanaged	Does Not Exist		
10.205.61.41	Global	12.10210140108_jm4_121_446_usaffix-6-623502	SRX3400		10.205.61.41	Up	In Sync	12.19R1.5 [Mismatch with device OS version]	Unmanaged	Does Not Exist		
10.205.61.41	Global	12.10210140108_jm4_121_446_usaffix-6-623502	SRX3400		10.205.61.41	Up	In Sync	12.19R1.5 [Mismatch with device OS version]	Unmanaged	Does Not Exist		
Node-7576-10.205.50.211	Global	12.154R.010.2	SRX1400		10.205.50.211	Up	In Sync	12.154R.010.2	Unmanaged	Does Not Exist		
Node-7576-10.205.50.211	Global	12.154R.010.2	SRX1400		10.205.50.211	Up	In Sync	12.154R.010.2	Unmanaged	Does Not Exist		
Node-7576-10.205.50.211	Global	12.154R.010.2	SRX1400		10.205.50.211	Up	In Sync	12.154R.010.2	Unmanaged	Does Not Exist		
Node-7576-10.205.50.211	Global	12.154R.010.2	SRX1400		10.205.50.211	Up	In Sync	12.154R.010.2	Unmanaged	Does Not Exist		
Node-7576-10.205.50.211	Global	12.154R.010.2	SRX1400		10.205.50.211	Up	In Sync	12.154R.010.2	Unmanaged	Does Not Exist		
Node-7576-10.205.50.211	Global	12.154R.010.2	SRX1400		10.205.50.211	Up	In Sync	12.154R.010.2	Unmanaged	Does Not Exist		
pmphip-119.1	Global	12.154R.015	SRX050	Apr 9, 2014 2:47:30 PM EDT	10.205.119.1	Up	In Sync	12.154R.015	In Sync	Does Not Exist	pmphip-119.1	
SRX-119	Global	10.4R2.7	SRX2408		10.205.119.9	Up	In Sync	12.19R1.5 [Mismatch with device OS version]	Unmanaged	Does Not Exist		

You can send Security Director changes to a Staged Configuration state in the Network Application Platform. To push the Security Director changes to Staged Configuration, right-click a device on the Security Director Devices and select Update Configuration in Platform. Once you push Security Director changes to staged configuration, the following tasks are triggered in Network Application Platform:

- Job is created.
- Change Request is created with respect to the current staged configuration.

After successfully updating the configuration in the Platform, the Change Requests of Security Director are available as part of Staged Configuration for a device in the Network Application Platform. Subsequent update to Staged Configuration pushes multiple Change Requests from Security Director incrementally.

The update to Staged Configuration on a cluster publishes the Change Requests to all its members. The change requests generated for the Staged Configuration of the current primary node is published to the other nonactive members of the cluster. You can deploy Staged Configuration on any cluster member from the Network Application Platform. This also addresses failovers before Staged Configuration is deployed. In the event of a failover, the Change Requests of Security Director are also available in the Staged Configuration of a new primary node.

When the staging configuration with the change requests of Security Director are deployed to the associated devices, the following state changes occur on the Security Director Devices page:

- Security Director marks the pending services whose configuration is part of the Staged Configuration as Installed.
- The Last Updated column for the device is updated.
- The Management Status column is changed to In Sync if all the service types are updated from the Staged Configuration.
- When the Staged Configuration of a cluster member is deployed, the Network Application Platform continues to maintain the Staged Configuration for other members of a cluster. If the Staged Configuration of other members is deployed again, the configuration might fail because of a conflicting change already present in the device. Therefore, on successful deployment of Staged Configuration on any member of a cluster, Security Director removes the Security Director specific Change Requests from the Staged Configuration of other members.

On Security Director Devices page, the Staged Configuration status of each device is shown in the Candidate Configuration column.

[Table 38 on page 475](#) shows different candidate configuration status at different configuration levels.

Table 38: Different Status of Candidate Configuration

CC Status	Description
Does Not Exist	After upgrading to Security Director Release 13.3, the old Security Director related CLIs and Candidate Configuration status are removed. The Candidate Configuration is shown as Does Not Exist.
Create	<p>After publishing the firewall policy, navigate to Security Director Devices page. Right-click the device and select <b>Update Configuration to Platform</b> option.</p> <p>Once the configuration is updated to Platform, job is created and the candidate configuration status is changed to Create.</p>
Approve	Approving a candidate configuration enables it to be deployed. Unapproved candidate configurations cannot be deployed.
Reject	Rejecting a candidate configuration prevents it from being deployed. Both approved and unapproved candidate configurations can be rejected.



## NOTE:

- If the Security Director policy is not published, it will not appear in the consolidated configuration. To update a policy through consolidated configuration, the policy must be published in Security Director. There is no workflow available to publish Security Director policies within the Junos Space Network Application Platform.
- When devices with prepared or approved consolidated configurations are updated from Security Director, the consolidated configuration status for such devices is reverted to the generated state. An associated warning is displayed during the update workflow.

**Related  
Documentation**

- [Updating Devices with Pending Services on page 455](#)





## PART 16

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- [Index on page 479](#)



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