



JUNOS® Software

CLI Reference

Release 9.6

Juniper Networks, Inc.

1194 North Mathilda Avenue
Sunnyvale, California 94089
USA

408-745-2000

www.juniper.net

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Part 1

Configuration Statements

Chapter 1

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About This Guide

This preface provides the following guidelines for using the *JUNOS® Software CLI Reference*:

- J Series and SRX Series Documentation and Release Notes on page xxxiii
- Objectives on page xxxiii
- Audience on page xxxiv
- Supported Routing Platforms on page xxxiv
- How to Use This Manual on page xxxiv
- Document Conventions on page xxxvi
- Documentation Feedback on page xxxviii
- Requesting Technical Support on page xxxviii

J Series and SRX Series Documentation and Release Notes

For a list of related J Series documentation, see
<http://www.juniper.net/techpubs/software/junos-jseries/index-main.html> .

For a list of related SRX Series documentation, see
<http://www.juniper.net/techpubs/hardware/srx-series-main.html>.

If the information in the latest release notes differs from the information in the documentation, follow the *SRX Series Software 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/>.

Objectives

This reference documents command-line interface (CLI) statements and commands for J Series Services Routers and SRX Series Services Gateways running JUNOS Software. This reference provides the following information:

- Configuration hierarchies—Complete hierarchies of the configuration statements that you use to configure J Series and SRX Series devices. Hierarchies include all configuration statements—including the statements shared with the JUNOS Software—and highlight statements specific to the J Series and SRX Series devices in bold type.

- Configuration statements—Descriptions of the configuration statements that are unique to the J Series and SRX Series devices.
- Commands—Descriptions of the operational mode commands that you use to monitor and troubleshoot J Series and SRX Series operations.

Audience

- This manual is designed for anyone who installs, sets up, configures, monitors, or administers a J Series Services Router or an SRX Series Services Gateway running JUNOS Software. The manual is intended for the following audiences:
- Customers with technical knowledge of and experience with networks and network security, the Internet, and Internet routing protocols
 - Network administrators who install, configure, and manage Internet routers

Supported Routing Platforms

This manual describes features supported on J Series Services Routers and SRX Series Services Gateways running JUNOS Software.

How to Use This Manual

- This manual and the other manuals in this set explain how to install, configure, and manage:
- JUNOS Software for J Series Services Routers
 - JUNOS Software for SRX Series Services Gateways

Table 1 on page xxxiv identifies the tasks required to configure and manage these devices and shows where to find task information and instructions.

Table 1: Tasks and Related Documentation

Task	Related Documentation
Basic Device Installation and Setup	
■ Reviewing safety warnings and compliance statements	J Series Services Routers:
■ Installing hardware and establishing basic connectivity	■ <i>J Series Services Routers Quick Start</i>
■ Initially setting up a device	■ <i>J Series Services Routers Hardware Guide</i>
	■ <i>JUNOS Software Release Notes</i>
	SRX Series Services Gateways: the appropriate <i>Services Gateway Getting Started Guide</i>
Migration from ScreenOS or JUNOS Software (Legacy Services) to JUNOS Software (if necessary)	

Table 1: Tasks and Related Documentation (*continued*)

Task	Related Documentation
<ul style="list-style-type: none"> ■ Migrating from JUNOS Software (legacy services) Release 8.3 or later to JUNOS Software ■ Migrating from ScreenOS Release 5.4 or later to JUNOS Software. 	<i>JUNOS Software Migration Guide</i> (J Series Services Routers only)
Context—Changing to Secure Context or Router Context	
Changing the device from one context to another and understanding the factory default settings	<i>JUNOS Software Administration Guide</i>
Interface Configuration	
Configuring device interfaces	<ul style="list-style-type: none"> ■ <i>JUNOS Software Interfaces and Routing Configuration Guide</i> ■ <i>JUNOS Software CLI Reference</i>
Deployment Planning and Configuration	
<ul style="list-style-type: none"> ■ Understanding and gathering information required to design network firewalls and IPsec VPNs ■ Implementing a JUNOS Software firewall from a sample scenario ■ Implementing a policy-based IPsec VPN from a sample scenario 	<i>JUNOS Software Design and Implementation Guide</i> (J Series Services Routers only)
Security Configuration	
Configuring and managing the following security services:	<ul style="list-style-type: none"> ■ <i>JUNOS Software Security Configuration Guide</i> ■ <i>JUNOS Software CLI Reference</i>
<ul style="list-style-type: none"> ■ Stateful firewall policies ■ Zones and their interfaces and address books ■ IPsec VPNs ■ Firewall screens ■ Interface modes: Network Address Translation (NAT) mode and Router mode ■ Public Key Cryptography (PKI) ■ Application Layer Gateways (ALGs) ■ Chassis clusters ■ Intrusion Detection and Prevention (IDP) 	
Routing Protocols and Services Configuration	
<ul style="list-style-type: none"> ■ Configuring routing protocols, including static routes and the dynamic routing protocols RIP, OSPF, BGP, and IS-IS ■ Configuring class-of-service (CoS) features, including traffic shaping and policing ■ Configuring packet-based stateless firewall filters (access control lists) to control access and limit traffic rates ■ Configuring MPLS to control network traffic patterns 	<ul style="list-style-type: none"> ■ <i>JUNOS Software Interfaces and Routing Configuration Guide</i> ■ <i>JUNOS Software CLI Reference</i>
WAN Acceleration Module Installation (Optional)	
Installing and initially configuring a WXC Integrated Services Module (ISM 200)	<i>WXC Integrated Services Module Installation and Configuration Guide</i> (J Series Services Routers only)

Table 1: Tasks and Related Documentation *(continued)*

Task	Related Documentation
User and System Administration	
■ Administering user authentication and access	<i>JUNOS Software Administration Guide</i>
■ Monitoring the device, routing protocols, and routing operations	
■ Configuring and monitoring system alarms and events, real-time performance (RPM) probes, and performance	
■ Monitoring the firewall and other security-related services	
■ Managing system log files	
■ Upgrading software	
■ Diagnosing common problems	
User Interfaces	
■ Understanding and using the J-Web interface	■ <i>J Series Services Routers Quick Start</i> (J Series Services Routers only)
■ Understanding and using the CLI configuration editor	■ <i>JUNOS Software Administration Guide</i>

Document Conventions

Table 2 on page xxxvi defines the notice icons used in this guide.

Table 2: Notice Icons





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

Table 3 on page xxxvii defines the text and syntax conventions used in this guide.

Table 3: Text and Syntax Conventions

Convention	Description	Examples
Bold text like this	Represents text that you type.	To enter configuration mode, type the <code>configure</code> command: user@host> configure
Fixed-width text like this	Represents output that appears on the terminal screen.	user@host> show chassis alarms No alarms currently active
<i>Italic text like this</i>	<ul style="list-style-type: none"> Introduces important new terms. Identifies book names. Identifies RFC and Internet draft titles. 	<ul style="list-style-type: none"> A policy <i>term</i> is a named structure that defines match conditions and actions. <i>JUNOS System Basics Configuration Guide</i> RFC 1997, <i>BGP Communities Attribute</i>
<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@# set system domain-name domain-name
Plain text like this	Represents names of configuration statements, commands, files, and directories; IP addresses; configuration hierarchy levels; or labels on routing platform components.	<ul style="list-style-type: none"> To configure a stub area, include the <code>stub</code> statement at the [edit <code>protocols ospf area area-id</code>] hierarchy level. The console port is labeled <code>CONSOLE</code>.
< > (angle brackets)	Enclose optional keywords or variables.	stub <default-metric <i>metric</i> >;
(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.	broadcast multicast (string1 string2 string3)
# (pound sign)	Indicates a comment specified on the same line as the configuration statement to which it applies.	rsvp { # Required for dynamic MPLS only
[] (square brackets)	Enclose a variable for which you can substitute one or more values.	community name members [<i>community-ids</i>]
Indentation and braces ({ })	Identify a level in the configuration hierarchy.	[edit] routing-options { static { route default { nexthop address; retain; } } }
; (semicolon)	Identifies a leaf statement at a configuration hierarchy level.	

Table 3: Text and Syntax Conventions *(continued)*

Convention	Description	Examples
J-Web GUI Conventions		
Bold text like this	Represents J-Web graphical user interface (GUI) items you click or select.	<ul style="list-style-type: none"> ■ In the Logical Interfaces box, select All Interfaces. ■ To cancel the configuration, click Cancel.
> (bold right angle bracket)	Separates levels in a hierarchy of J-Web selections.	In the configuration editor hierarchy, select Protocols > Ospf .

Documentation Feedback

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

- Document name
- Document part number
- Page number
- Software release version (not required for Network Operations Guides [NOGs])

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 postsales 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/customers/support/downloads/710059.pdf>.
- Product warranties—For product warranty information, visit <http://www.juniper.net/support/warranty/>.
- JTAC Hours of Operation —The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

Self-Help Online Tools and Resources

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

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

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool located at <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, visit us at <http://www.juniper.net/support/requesting-support.html>.

Part 1

Configuration Statements

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- Applications Hierarchy and Statements on page 49
- Bridge-Domains Hierarchy and Statements on page 63
- Chassis Hierarchy and Statements on page 69
- Class-of-Service Hierarchy and Statements on page 89
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- Services Hierarchy and Statements on page 769
- SNMP Hierarchy and Statements on page 785
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Chapter 1

Access Hierarchy and Statements

This chapter presents the complete **access** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Where applicable, the chapter also provides a summary for each statement in the hierarchy that is exclusive to J Series and SRX Series devices. Statement summaries are organized alphabetically.

Use the statements in the **access** configuration hierarchy to configure access to the device and user authentication methods. For configuration instructions, see the *JUNOS Software Security Configuration Guide*.

For information about **access** statements that are not explained here—statements that are shared across Juniper Networks devices—see the *JUNOS System Basics Configuration Guide*.

- Access Configuration Statement Hierarchy on page 3

Access Configuration Statement Hierarchy

To configure device access and user authentication, use the following statements at the [edit **access**] hierarchy level. Statements exclusively for J Series and SRX Series devices running JUNOS Software are shown in bold font and are documented in this chapter.

Shared JUNOS statements in the **access** hierarchy are shown in normal font and are documented in the *JUNOS System Basics Configuration Guide*.

```
access {  
  firewall-authentication {  
    pass-through {  
      default-profile profile-name;  
      (ftp | http | telnet) {  
        banner {  
          fail string;  
          login string;  
          success string;  
        }  
      }  
    }  
  }  
  traceoptions {  
    file filename <files number> <match regular-expression>  
    <size maximum-file-size> <world-readable | no-world-readable>  
    flag flag;  
  }  
}
```

```

    }
    web-authentication {
        banner {
            success string;
        }
        default-profile profile-name;
    }
}
ldap-options {
    assemble {
        common-name common-name;
    }
    base-distinguished-name base-distinguished-name;
    revert-interval seconds;
    search {
        admin-search {
            distinguished-name distinguished-name;
            password password;
        }
        search-filter filter-name;
    }
}
ldap-server server-address {
    port port-number;
    retry attempts;
    routing-instance routing-instance-name;
    source-address source-address;
    timeout seconds;
}
profile profile-name {
    accounting-order [ accounting-methods ];
    authentication-order ( ldap | password | radius | securid );
    client client-name {
        chap-secret chap-secret;
        client-group [ group-names ];
        firewall-user {
            password password;
        }
        pap-password pap-password;
    }
    client-name-filter client-name {
        count number;
        domain-name domain-name;
        separator special-character;
    }
    ldap-options {
        assemble {
            common-name common-name;
        }
        base-distinguished-name base-distinguished-name;
        revert-interval seconds;
        search {
            admin-search {
                distinguished-name distinguished-name;
                password password;
            }
        }
    }
}

```

```

    }
    search-filter filter-name;
  }
}
ldap-server server-address {
  port port-number;
  retry attempts;
  routing-instance routing-instance-name;
  source-address source-address;
  timeout seconds;
}
radius-options {
  revert-interval seconds;
}
radius-server server-address {
  port port-number;
  retry attempts;
  routing-instance routing-instance-name;
  secret password;
  source-address source-address;
  timeout seconds;
}
session-options {
  client-group [group-names];
  client-idle-timeout minutes;
  client-session-timeout minutes;
}
}
radius-options {
  revert-interval seconds;
}
radius-server server-address {
  port port-number;
  retry attempts;
  routing-instance routing-instance-name;
  secret password;
  source-address source-address;
  timeout seconds;
}
securid-server {
  server-name configuration-file filepath;
}
}

```

admin-search

Syntax	admin-search { distinguished-name <i>distinguished-name</i> ; password <i>password</i> ; }
Hierarchy Level	[edit access ldap-options search], [edit access profile <i>profile-name</i> ldap-options search]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify that a Lightweight Directory Access Protocol (LDAP) administrator search is performed. By default, the search is an anonymous search. To perform an administrator search, you must specify administrator credentials, which are used in the bind as part of performing the search.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

assemble

Syntax	assemble { common-name <i>common-name</i> ; }
Hierarchy Level	[edit access ldap-options], [edit access profile <i>profile-name</i> ldap-options]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify that a user's LDAP distinguished name (DN) is assembled through the use of a common name identifier, the username, and base distinguished name. This statement is supported on J Series and SRX Series devices.
Options	common-name <i>common-name</i> —Common name identifier used as a prefix for the username during the assembly of the user's distinguished name. For example, uid specifies “ user id,” and cn specifies “common name.”
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

authentication-order

Syntax	authentication-order (ldap password radius securid);
Hierarchy Level	[edit access profile <i>profile-name</i>]
Release Information	Statement modified in Release 9.1 of JUNOS Software.
Description	<p>Set the order in which the JUNOS Software tries different authentication methods when verifying that a client can access the devices. For each login attempt, the software tries the authentication methods in order, from first to last.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<ul style="list-style-type: none"> ■ ldap—Verify the client using LDAP. ■ password—Verify the client using the information configured at the [edit access profile <i>profile-name</i> client <i>client-name</i>] hierarchy level. ■ radius—Verify the client using RADIUS authentication services. ■ securid—Verify the client using SecurID authentication services.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>access—To view this statement in the configuration.</p> <p>access-control—To add this statement to the configuration.</p>

banner

See the following sections:

- banner (FTP, HTTP, Telnet) on page 9
- banner (Web Authentication) on page 10

banner (FTP, HTTP, Telnet)

Syntax banner {
 fail *string* ;
 login *string* ;
 success *string* ;
 }

Hierarchy Level [edit access firewall-authentication pass-through (ftp | http | telnet)]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure the banners that appear to users during the FTP, HTTP, and Telnet firewall authentication process. The banners appear during login, after successful authentication, and after failed authentication.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level access—To view this statement in the configuration.
 access-control—To add this statement to the configuration.

banner (Web Authentication)

Syntax banner {
 success *string* ;
 }

Hierarchy Level [edit access firewall-authentication web-authentication]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure the banners that appear to users during the Web Authentication process. The banners appear during login, after successful authentication, and after failed authentication.

This statement is supported on J Series and SRX Series devices.

Options The remaining statement is explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level access—To view this statement in the configuration.
 access-control—To add this statement to the configuration.

base-distinguished-name

Syntax	base-distinguished-name <i>base-distinguished-name</i> ;
Hierarchy Level	[edit access ldap-options], [edit access profile <i>profile-name</i> ldap-options]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify the base distinguished name (DN), which can be used in one of the following ways:</p> <ul style="list-style-type: none"> ■ If you are using the assemble statement so that the user's distinguished name is being assembled, the base distinguished name is appended to a username to generate the user's distinguished name. The resulting distinguished name is used in the LDAP bind call. ■ If you are using the search statement so that the user's distinguished name is found by a search, the search is restricted to the subtree of the base distinguished name. <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>base-distinguished-name</i> —Series of basic properties that define the user. For example in the base distinguished name o=juniper, c=us , where c stands for country, and o for organization.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

client-group

Syntax	client-group [<i>group-names</i>];
Hierarchy Level	[edit access profile <i>profile-name</i> client <i>client-name</i>] [edit access profile <i>profile-name</i> session-options]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify a list of client groups that the client belongs to. If the group list is not defined as part of the client profile, the client group configured at the [edit access profile session-options] hierarchy level is used. This statement is supported on J Series and SRX Series devices.
Options	<i>group-names</i> —Names of one or more groups the client belongs to, separated by spaces—for example g1, g2, g3 . The total length of the group name string cannot exceed 256 characters.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

client-idle-timeout

Syntax	client-idle-timeout <i>minutes</i> ;
Hierarchy Level	[edit access profile <i>profile-name</i> session-options]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specifies the grace period that begins after an authenticated user terminates all sessions and connections. Authentication is not required if a new connection is initiated during the grace period by the same user. This statement is supported on J Series and SRX Series devices.
Options	<i>minutes</i> —Number of minutes of idle time that elapse before the session is terminated. Range: 10 through 255 minutes Default: 10 minutes
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

client-name-filter

Syntax	client-name-filter <i>client-name</i> { count <i>number</i> ; domain-name <i>domain-name</i> ; separator <i>special-character</i> ; }
Hierarchy Level	[edit access profile <i>profile-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Define client-name-related restrictions. Clients whose names follow these restrictions are authenticated on the server. This statement is supported on J Series and SRX Series devices.
Options	<i>client-name</i> —Name of the client. The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

client-session-timeout

Syntax	client-session-timeout <i>minutes</i> ;
Hierarchy Level	[edit access profile <i>profile-name</i> session-options]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the amount of time after which user sessions are terminated, regardless of user activity (also known as a forced or hard authentication timeout). This statement is supported on J Series and SRX Series devices.
Options	<i>minutes</i> —Number of minutes after which user sessions are terminated. Range: 1 through 10000 minutes Default: Off
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

configuration-file

Syntax	<code>server-name configuration-file <i>filepath</i>;</code>
Hierarchy Level	[edit access securid-server]
Release Information	Statement introduced in Release 9.1 of JUNOS Software.
Description	Specify the path of the SecurID server configuration file. The file is copied on the devices in some directory location—for example, <code>/var/db/securid/sdconf.rec</code> . This statement is supported on J Series and SRX Series devices.
Options	<i>server-name</i> —Name of the SecurID authentication server. <i>filepath</i> —Path of the SecurID server configuration file.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	secret—To view this statement in the configuration. secret-control—To add this statement to the configuration.

count

Syntax	<code>count <i>number</i>;</code>
Hierarchy Level	[edit access profile <i>profile-name</i> client-name-filter <i>client-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the number of characters to be stripped from a client name, from right to left, until the specified number of characters are deleted. The resulting name is sent to the authentication server. This statement is supported on J Series and SRX Series devices.
Options	<i>number</i> —Number of characters to be stripped in a client name.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

default-profile

Syntax	default-profile <i>profile-name</i> ;
Hierarchy Level	[edit access firewall-authentication pass-through]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the authentication profile to use if no profile is specified in a policy. This statement is supported on J Series and SRX Series devices.
Options	<i>profile-name</i> —Name of the profile.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

distinguished-name

Syntax	distinguished-name <i>distinguished-name</i> ;
Hierarchy Level	[edit access ldap-options search admin-search], [edit access profile <i>profile-name</i> ldap-options search admin-search]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the distinguished name of an administrative user. The distinguished name is used in the bind for performing the LDAP search. This statement is supported on J Series and SRX Series devices.
Options	<i>distinguished-name</i> —Set of properties that define the user. For example, cn = admin, ou = eng, o = juniper, dc = net.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	secret—To view this statement in the configuration. secret-control—To add this statement to the configuration.

domain-name

Syntax	<code>domain-name <i>domain-name</i>;</code>
Hierarchy Level	<code>[edit access profile <i>profile-name</i> client-name-filter <i>client-name</i>]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify a domain name that must be in a client's name during the authentication process. This statement is supported on J Series and SRX Series devices.
Options	<i>domain-name</i> —Domain name that must be in a client name. The name must not exceed 128 characters.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

fail

Syntax	<code>fail <i>string</i>;</code>
Hierarchy Level	<code>[edit access firewall-authentication pass-through default-profile <i>profile-name</i> (ftp http telnet) banner]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the banner that a client sees if the authentication process fails. This statement is supported on J Series and SRX Series devices.
Options	<i>string</i> —Banner text. Maximum length of the message text is 250 characters. Enclose the banner text within spaces or special characters—for example, quotation marks (" ").
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

firewall-authentication

Syntax

```

firewall-authentication {
    pass-through {
        default-profile profile-name;
        (ftp | http | telnet) {
            banner {
                fail string;
                login string;
                success string;
            }
        }
    }
    traceoptions {
        file filename <files number> <match regular-expression>
        <size maximum-file-size> <world-readable | no-world-readable>
        flag flag;
    }
    web-authentication {
        banner {
            success string;
        }
        default-profile profile-name;
    }
}

```

Hierarchy Level [edit access]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure default firewall authentication settings used by firewall authentication policies that restrict and permit access for firewall users to protected resources behind a firewall.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level access—To view this statement in the configuration.
 access-control—To add this statement to the configuration.

firewall-user

Syntax	<pre> firewall-user { password <i>password</i>; } </pre>
Hierarchy Level	[edit access profile <i>profile-name</i> client <i>client-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify a client as a firewall user and the associated password (encrypted).</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>password <i>password</i>—Password used by the firewall user during local authentication.</p> <p>Range: 1 through 128 characters</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>secret—To view this statement in the configuration.</p> <p>secret-control—To add this statement to the configuration.</p>

ftp

Syntax	<pre> ftp { banner { fail <i>string</i>; login <i>string</i>; success <i>string</i>; } } </pre>
Hierarchy Level	[edit access firewall-authentication pass-through]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Configure banners for the FTP login prompt, successful authentication, and failed authentication.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>access—To view this statement in the configuration.</p> <p>access-control—To add this statement to the configuration.</p>

http

Syntax

```
http {
  banner {
    fail string;
    login string;
    success string;
  }
}
```

Hierarchy Level [edit access firewall-authentication pass-through]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure banners for the HTTP login prompt, successful authentication, and failed authentication.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level access—To view this statement in the configuration.
access-control—To add this statement to the configuration.

Idap-options

Syntax	<pre> ldap-options { assemble { common-name <i>common-name</i>; } base-distinguished-name <i>base-distinguished-name</i>; revert-interval <i>seconds</i>; search { admin-search { distinguished-name <i>distinguished-name</i>; password <i>password</i>; } search-filter <i>filter-name</i>; } } </pre>
Hierarchy Level	[edit access], [edit access profile <i>profile-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Configure LDAP authentication options.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	The remaining options are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

Idap-server

Syntax	<pre> Idap-server server-address { port port-number; retry attempts; routing-instance routing-instance-name; source-address source-address; timeout seconds; } </pre>
Hierarchy Level	[edit access], [edit access profile <i>profile-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify that the device use an LDAP server for authentication.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>server-address</i>—Address of the LDAP authentication server.</p> <p>The remaining statements are explained separately.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>access—To view this statement in the configuration.</p> <p>access-control—To add this statement to the configuration.</p>

login

Syntax	login <i>string</i> ;
Hierarchy Level	[edit access firewall-authentication pass-through default-profile <i>profile-name</i> (ftp http telnet) banner]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify the login banner for users using FTP, HTTP, and Telnet during the authentication process.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>string</i> —Banner text. Maximum length of the message text is 250 characters. Enclose the banner text within spaces or special characters—for example quotation marks (" ").
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

pass-through

Syntax

```
pass-through {
  default-profile profile-name;
  (ftp | http | telnet) {
    banner {
      fail string;
      login string;
      success string;
    }
  }
}
```

Hierarchy Level [edit access firewall-authentication]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure pass-through firewall user authentication, when a host or user from one zone needs to access a protected resource in another zone. A user must use an FTP, Telnet, or HTTP client to access the IP address of the protected resource and get authenticated by the firewall. The device uses FTP, Telnet, and HTTP to collect username and password information. Subsequent traffic from the user or host is allowed or denied based on the result of this authentication. After the user is authenticated, the firewall proxies the connection.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level access—To view this statement in the configuration.
access-control—To add this statement to the configuration.

password

Syntax	<code>password password;</code>
Hierarchy Level	[edit access ldap-options search admin-search], [edit access profile <i>profile-name</i> ldap-options search admin-search]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Configure the plain-text password for the administrative user. This password is used in the bind for performing the LDAP search.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>password</i> —Administrative user password.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	secret—To view this statement in the configuration. secret-control—To add this statement to the configuration.

port

See the following sections:

- port (LDAP) on page 25
- port (RADIUS) on page 25

port (LDAP)

Syntax	port <i>port-number</i> ;
Hierarchy Level	[edit access ldap-server <i>server-address</i>], [edit access profile <i>profile-name</i> ldap-server <i>server-address</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Configure the port number on which to contact the LDAP server. This statement is supported on J Series and SRX Series devices.
Options	<i>port-number</i> —Port number on which to contact the LDAP server. Default: 389
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

port (RADIUS)

Syntax	port <i>port-number</i> ;
Hierarchy Level	[edit access radius-server <i>server-address</i>], [edit access profile <i>profile-name</i> radius-server <i>server-address</i>]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Configure the port number on which to contact the RADIUS server. This statement is supported on J Series and SRX Series devices.
Options	<i>port-number</i> —Port number on which to contact the RADIUS server. Default: 1812 (as specified in RFC 2865)
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	secret—To view this statement in the configuration. secret-control—To add this statement to the configuration.

radius-options

Syntax	radius-options { revert-interval <i>seconds</i> ; }
Hierarchy Level	[edit access], [edit access profile <i>profile-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Configure RADIUS options. This statement is supported on J Series and SRX Series devices.
Options	The remaining statement is explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

radius-server

Syntax radius-server server-address {
 port *port-number*;
 retry *attempts*;
 routing-instance *routing-instance-name*;
 secret *password*;
 source-address *source-address*;
 timeout *seconds*;
 }

Hierarchy Level [edit access],
 [edit access profile *profile-name*]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Configure RADIUS for Layer 2 Tunneling Protocol (L2TP) or Point-to-Point Protocol (PPP) authentication.

To configure multiple RADIUS servers, include multiple **radius-server** statements. The servers are tried in order and in a round-robin fashion until a valid response is received from one of the servers or until all the configured retry limits are reached.

This statement is supported on J Series and SRX Series devices.

Options *server-address*—Address of the RADIUS authentication server.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level access—To view this statement in the configuration.
 access-control—To add this statement to the configuration.

retry

See the following sections:

- `retry` (LDAP) on page 28
- `retry` (RADIUS) on page 29

retry (LDAP)

Syntax	<code>retry attempts;</code>
Hierarchy Level	[edit access ldap-server <i>server-address</i>], [edit access profile <i>profile-name</i> ldap-server <i>server-address</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the number of retries that a device can attempt to contact an LDAP server. This statement is supported on J Series and SRX Series devices.
Options	<i>attempts</i> —Number of retries that the device is allowed to attempt to contact an LDAP server. Range: 1 through 10 Default: 3
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<code>access</code> —To view this statement in the configuration. <code>access-control</code> —To add this statement to the configuration.

retry (RADIUS)

Syntax	<code>retry attempts;</code>
Hierarchy Level	[edit access radius-server <i>server-address</i>], [edit access profile <i>profile-name</i> radius-server <i>server-address</i>]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Specify the number of retries that a device can attempt to contact a RADIUS authentication server. This statement is supported on J Series and SRX Series devices.
Options	<i>attempts</i> —Number of retries that the device is allowed to attempt to contact a RADIUS server. Range: 1 through 10 Default: 3
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> . See also <i>timeout</i> .
Required Privilege Level	secret—To view this statement in the configuration. secret-control—To add this statement to the configuration.

revert-interval

See the following sections:

- revert-interval (LDAP) on page 30
- revert-interval (RADIUS) on page 31

revert-interval (LDAP)

Syntax revert-interval *seconds*;

Hierarchy Level [edit access ldap-options],
[edit access profile *profile-name* ldap-options]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the amount of time that elapses before the primary server is contacted if backup server is being used.

This statement is supported on J Series and SRX Series devices.

Options *seconds*—Number of seconds that elapse before the primary server is contacted.
Range: 60 through 4294967295 seconds
Default: 600 seconds

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level access—To view this statement in the configuration.
access-control—To add this statement to the configuration.

revert-interval (RADIUS)

Syntax	<code>revert-interval seconds;</code>
Hierarchy Level	[edit access radius-options]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the amount of time that elapses before the primary server is contacted if backup server is being used. This statement is supported on J Series and SRX Series devices.
Options	<code>seconds</code> —Number of seconds that elapse before the primary server is contacted. Range: 60 through 4294967295 seconds Default: 600 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

routing-instance

See the following sections:

- routing-instance (LDAP) on page 32
- routing-instance (RADIUS) on page 33

routing-instance (LDAP)

Syntax *routing-instance routing-instance-name;*

Hierarchy Level [edit access ldap-server *server-address*],
[edit access profile *profile-name* ldap-server *server-address*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure the routing instance used to send LDAP packets to the LDAP server. A routing instance is a collection of routing tables, the interfaces contained in the routing tables, and the routing protocol parameters that control the information in the routing tables.

This statement is supported on J Series and SRX Series devices.

Options *routing-instance-name*—Name of the routing instance.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level access—To view this statement in the configuration.
access-control—To add this statement to the configuration.

routing-instance (RADIUS)

Syntax	<code>routing-instance <i>routing-instance-name</i>;</code>
Hierarchy Level	<code>[edit access radius-server <i>server-address</i>],</code> <code>[edit access profile <i>profile-name</i> radius-server <i>server-address</i>]</code>
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Configure the routing instance used to send RADIUS packets to the RADIUS server. A routing instance is a collection of routing tables, the interfaces contained in the routing tables, and the routing protocol parameters that control the information in the routing tables. This statement is supported on J Series and SRX Series devices.
Options	<code><i>routing-instance-name</i></code> —Name of the routing instance.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<code>secret</code> —To view this statement in the configuration. <code>secret-control</code> —To add this statement to the configuration.

search

Syntax search {
 admin-search {
 distinguished-name *distinguished-name*;
 password *password*;
 }
 search-filter *filter-name*;
 }

Hierarchy Level [edit access ldap-options],
 [edit access profile *profile-name* ldap-options]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify that a search is used to get a user's LDAP distinguished name (DN). The search is performed based on the search filter and the part typed in by the user during authentication.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level access—To view this statement in the configuration.
 access-control—To add this statement to the configuration.

search-filter

Syntax	search-filter <i>filter-name</i> ;
Hierarchy Level	[edit access ldap-options search], [edit access profile <i>profile-name</i> ldap-options search]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify that a search filter is used to find the user's LDAP distinguished name (DN). For example, a filter of <i>cn</i> specifies that the search matches a user whose common name is the username. This statement is supported on J Series and SRX Series devices.
Options	<i>filter-name</i> —Name of the filter used to find the user's distinguished name.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

secret

Syntax	secret <i>password</i> ;
Hierarchy Level	[edit access profile <i>profile-name</i> radius-server <i>server-address</i>]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Specify the RADIUS secret password, which is shared between the router and the RADIUS server. The device uses this secret to encrypt the user's password that is sent to the RADIUS server. This statement is supported on J Series and SRX Series devices.
Options	<i>password</i> —RADIUS secret. Maximum length is 256 characters.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	secret—To view this statement in the configuration. secret-control—To add this statement to the configuration.

securid-server

Syntax securid-server {
 server-name configuration-file *filepath*;
 }

Hierarchy Level [edit access]

Release Information Statement introduced in Release 9.1 of JUNOS Software.

Description Configure SecurID server for SecurID authentication type.

This statement is supported on J Series and SRX Series devices.

Options The remaining statement is explained separately.



NOTE: You can configure only one SecurID server. SecurID challenges are not supported for this release.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level access—To view this statement in the configuration.
 access-control—To add this statement to the configuration.

separator

Syntax	<code>separator <i>special-character</i>;</code>
Hierarchy Level	[edit access profile <i>profile-name</i> client-name-filter <i>client-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify a character to identify where stripping of characters occurs in a client name. Stripping removes characters to the right of each instance of the specified character, plus the character itself. The stripping begins with the rightmost separator character.</p> <p>Use the separator statement with the count statement to determine which characters in a client name are stripped. If the specified number of separator characters (count) exceeds the actual number of separator characters in the client name, stripping stops at the last available separator character.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>special-character</i> —Character used to identify where to start the stripping of characters in a client name.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

session-options

Syntax	session-options { client-group [<i>group-names</i>]; client-idle-timeout <i>minutes</i> ; client-session-timeout <i>minutes</i> ; }
Hierarchy Level	[edit access profile <i>profile-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Define options that control a user's session after successful authentication.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

source-address

See the following sections:

- source-address (LDAP) on page 39
- source-address (RADIUS) on page 39

source-address (LDAP)

Syntax	source-address <i>source-address</i> ;
Hierarchy Level	[edit access ldap-server <i>server-address</i>], [edit access profile <i>profile-name</i> ldap-server <i>server-address</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Configure a source address for each configured LDAP server. Each LDAP request sent to a LDAP server uses the specified source address. This statement is supported on J Series and SRX Series devices.
Options	<i>source-address</i> —Valid IPv4 address configured on one of the device interfaces.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

source-address (RADIUS)

Syntax	source-address <i>source-address</i> ;
Hierarchy Level	[edit access radius-server <i>server-address</i>], [edit access profile <i>profile-name</i> radius-server <i>server-address</i>]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Configure a source address for each configured RADIUS server. Each RADIUS request sent to a RADIUS server uses the specified source address. This statement is supported on J Series and SRX Series devices.
Options	<i>source-address</i> —Valid IPv4 address configured on one of the device interfaces.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	secret—To view this statement in the configuration. secret-control—To add this statement to the configuration.

success

Syntax	<code>success string;</code>
Hierarchy Level	[edit access firewall-authentication pass-through default-profile <i>name</i> (ftp http telnet) banner], [edit access firewall-authentication web-authentication]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify the banner (message) that users see when trying to connect using FTP, HTTP, or Telnet after successful authentication.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>string</i> —Banner text. Maximum length of the message text is 250 characters. Enclose the banner text within spaces or special characters—for example, quotation marks (" ").
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	access—To view this statement in the configuration. access-control—To add this statement to the configuration.

telnet

Syntax telnet {
 banner {
 fail *string*;
 login *string*;
 success *string*;
 }
 }

Hierarchy Level [edit access firewall-authentication pass-through]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure banners for Telnet login prompt, successful authentication, and failed authentication.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level access—To view this statement in the configuration.
 access-control—To add this statement to the configuration.

timeout

See the following sections:

- timeout (LDAP Server) on page 42
- timeout (RADIUS Server) on page 43

timeout (LDAP Server)

Syntax timeout *seconds*;

Hierarchy Level [edit access ldap-server *server-address*]
[edit access profile *profile-name* ldap-server *server-address*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure the amount of time that the local device waits to receive a response from an LDAP server.

This statement is supported on J Series and SRX Series devices.

Options *seconds*—Amount of time to wait.
Range: 1 through 90 seconds
Default: 3 seconds

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level access—To view this statement in the configuration.
access-control—To add this statement to the configuration.

timeout (RADIUS Server)

Syntax	timeout <i>seconds</i> ;
Hierarchy Level	[edit access radius-server <i>server-address</i>] [edit access profile <i>profile-name</i> radius-server <i>server-address</i>]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Configure the amount of time that the local device waits to receive a response from a RADIUS server. This statement is supported on J Series and SRX Series devices.
Options	<i>seconds</i> —Amount of time to wait. Range: 1 through 90 seconds Default: 3 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	secret—To view this statement in the configuration. secret-control—To add this statement to the configuration.

traceoptions

Syntax traceoptions {
 file *filename* {
 files *number*;
 match *regular-expression*;
 size *maximum-file-size*;
 <world-readable | no-world-readable>;
 }
 flag *flag*;
 }

Hierarchy Level [edit access firewall-authentication]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Define Routing Engine firewall authentication tracing options.

This statement is supported on J Series and SRX Series devices.

Options file *filename*—Name of the file to receive the output of the tracing operation. Enclose the name within quotation marks. All files are placed in the directory */var/log*.

files *number*—(Optional) Maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed to *trace-file.0*, then *trace-file.1*, and so on, until the maximum number of trace files is reached. The oldest archived file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the size option and a filename.

Range: 2 through 1000 files

Default: 10 files

match *regular-expression*—(Optional) Refine the output to include lines that contain the regular expression.

size *maximum-file-size*—(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file.0*. When the *trace-file* again reaches its maximum size, *trace-file.0* is renamed *trace-file.1* and *trace-file* is renamed *trace-file.0*. This renaming scheme continues until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the files option and filename.

Syntax: x k to specify KB, x m to specify MB, or x g to specify GB

Range: 10 KB through 1 GB

Default: 128 KB

world-readable | no-world-readable—(Optional) By default, log files can be accessed only by the user who configures the tracing operation. The *world-readable* option

enables any user to read the file. To explicitly set the default behavior, use the `no-world-readable` option.

flag *flag*—Tracing operation to perform. To specify more than one tracing operation, include multiple flag statements. You can include the following flags.

- **all**—All tracing operations
- **authentication**—Trace authentication events
- **configuration**—Trace configuration events
- **setup**—Trace setup of firewall authentication service

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level `trace`—To view this statement in the configuration.
`trace-control`—To add this statement to the configuration.

web-authentication

Syntax `web-authentication {
 banner {
 success string;
 }
 default-profile default-profile;
 }`

Hierarchy Level [edit access firewall-authentication]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify that users go through the Web authentication process. Users use HTTP to access an IP address on the **device** that is enabled for Web authentication. Users do not use HTTP to access the IP address of the protected resource in this case. Users are prompted for their username and password, which are verified by the device. Subsequent traffic from the user/host to the protected resource is allowed or denied based on the result of this authentication. This method of authentication differs from pass-through authentication in that users need to access the protected resource directly after accessing the Web authentication IP address and being authenticated.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level `access`—To view this statement in the configuration.
`access-control`—To add this statement to the configuration.

Chapter 2

Accounting-Options Hierarchy

This chapter presents the complete **accounting-options** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software.

Use the statements in the **accounting-options** configuration hierarchy to collect and log data about basic system operations and services on the device. For configuration instructions, see the *JUNOS Software Administration Guide*.

For information about these **accounting-options** statements that are shared across Juniper Networks devices, see the *JUNOS Network Management Configuration Guide*.

This chapter contains the following sections:

- Accounting-Options Configuration Statement Hierarchy on page 47

Accounting-Options Configuration Statement Hierarchy

To configure accounting options, use the following statements at the [edit **accounting-options**] hierarchy level.

Shared JUNOS statements in the **accounting-options** hierarchy are shown in normal font and are documented in the *JUNOS Network Management Configuration Guide*.

```
accounting-options {
  class-usage-profile profile-name {
    destination-classes {
      destination-class-name ;
    }
    file filename ;
    interval minutes ;
    source-classes {
      source-class-name ;
    }
  }
  file filename {
    archive-sites {
      site-name ;
    }
    files file-number ;
    nonpersistent;
    size bytes ;
    start-time time ;
  }
}
```

```

        transfer-interval minutes ;
    }
    filter-profile profile-name {
        counters {
            counter name ;
        }
        file filename ;
        interval minutes ;
    }
    interface-profile profile-name {
        fields {
            field-name ;
        }
        file filename ;
        interval minutes ;
    }
    mib-profile profile-name {
        file filename ;
        interval minutes ;
        object-names {
            mib-object-name ;
        }
        operation operation-name ;
    }
    routing-engine-profile profile-name {
        fields {
            field-name ;
        }
        file filename ;
        interval minutes ;
    }
}

```


Chapter 3

Applications Hierarchy and Statements

This chapter presents the complete **applications** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Where applicable, the chapter also provides a summary for each statement in the hierarchy that is exclusive to J Series and SRX Series devices. Statement summaries are organized alphabetically.

Use the statements in the **applications** configuration hierarchy to configure applications functions of J Series and SRX Series devices and their properties on the device. For configuration instructions, see the *JUNOS Software Security Configuration Guide*.

For information about **applications** statements that are not explained here—statements that are shared across Juniper Networks devices—see the *JUNOS Services Interfaces Configuration Guide*.

This chapter contains the following sections:

- Applications Configuration Statement Hierarchy on page 49

Applications Configuration Statement Hierarchy

To configure applications properties and to group application objects, use the following statements at the [edit **applications**] hierarchy level. Statements exclusively for J Series and SRX Series devices running JUNOS Software are shown in bold font and are documented in this chapter.

Shared JUNOS statements in the **applications** hierarchy are shown in normal font and are documented in the *JUNOS Services Interfaces Configuration Guide*.

```
applications {
  application application-name {
    application-protocol protocol-name;
    destination-port port-number;
    icmp-code value ;
    icmp-type value ;
    inactivity-timeout seconds ;
    protocol type;
    rpc-program-number number ;
    source-port port-number;
    term term-name {
      alg application;
      destination-port port-number;
```

```
    icmp-code value;  
    icmp-type value;  
    inactivity-timeout seconds;  
    protocol type;  
    rpc-program-number number;  
    source-port port-number;  
    uuid hex-value;  
  }  
  uuid hex-value;  
}  
application-set application-set-name {  
  [application application-name ];  
}  
}
```

alg

Syntax	<code>alg application ;</code>
Hierarchy Level	[edit applications application <i>application-name</i> term <i>term-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Define individual Application Layer Gateway (ALG).</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>application</i> —Name of the application. The following protocols are supported:</p> <ul style="list-style-type: none"> ■ <code>dns</code>—Domain Name Service ■ <code>ftp</code>—File Transfer Protocol ■ <code>ignore</code>—Ignore application type ■ <code>mgcp-ca</code>—Media Gateway Control Protocol with Call Agent ■ <code>mgcp-ua</code>—MGCP with User Agent ■ <code>ms-rpc</code>—Microsoft RPC ■ <code>pptp</code>—Point-to-Point Tunneling Protocol ■ <code>q931</code>—ISDN connection control protocol (Q.931) ■ <code>ras</code>—Remote Access Service ■ <code>realaudio</code>—RealAudio ■ <code>rsh</code>—UNIX remote shell services ■ <code>rtsp</code>—Real-Time Streaming Protocol ■ <code>sccp</code>—Skinny Client Control Protocol ■ <code>sip</code>—Session Initiation Protocol ■ <code>sqlnet-v2</code>—Oracle SQLNET v2 ■ <code>sun-rpc</code>—Sun Microsystems RPC ■ <code>talk</code>—TALK program ■ <code>tftp</code>—Trivial File Transfer Protocol
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>system—To view this statement in the configuration.</p> <p>system-control—To add this statement to the configuration.</p>

application-protocol

Syntax	<code>application-protocol protocol-name ;</code>
Hierarchy Level	<code>[edit applications application application-name]</code>
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	<p>Identify the application protocol name.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>protocol-name</i> —Name of the protocol. The following protocols are supported:</p> <ul style="list-style-type: none"> ■ <code>dns</code>—Domain Name Service ■ <code>ftp</code>—File Transfer Protocol ■ <code>ignore</code>—Ignore application type ■ <code>mgcp-ca</code>—Media Gateway Control Protocol with Call Agent ■ <code>mgcp-ua</code>—MGCP with User Agent ■ <code>ms-rpc</code>—Microsoft RPC ■ <code>pptp</code>—Point-to-Point Tunneling Protocol ■ <code>q931</code>—ISDN connection control protocol (Q.931) ■ <code>ras</code>—Remote Access Service ■ <code>realaudio</code>—RealAudio ■ <code>rsh</code>—UNIX remote shell services ■ <code>rtsp</code>—Real-Time Streaming Protocol ■ <code>sccp</code>—Skinny Client Control Protocol ■ <code>sip</code>—Session Initiation Protocol ■ <code>sqlnet-v2</code>—Oracle SQLNET v2 ■ <code>sun-rpc</code>—Sun Microsystems RPC ■ <code>talk</code>—TALK program ■ <code>tftp</code>—Trivial File Transfer Protocol
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p><code>system</code>—To view this statement in the configuration.</p> <p><code>system-control</code>—To add this statement to the configuration.</p>

destination-port

Syntax	<code>destination-port <i>port-number</i> ;</code>
Hierarchy Level	<code>[edit applications application <i>application-name</i>],</code> <code>[edit applications application <i>application-name</i> term <i>term-name</i>]</code>
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Specify a Transmission Control Protocol (TCP) or User Datagram Protocol (UDP) destination port number. This statement is supported on J Series and SRX Series devices.
Options	<i>port-number</i> —Range of ports. You can use a numeric value or one of the text synonyms listed in Table 4 on page 54.

Table 4: Port Names Supported by Services Interfaces

Port Name	Corresponding Port Number
afs	1483
bgp	179
biff	512
bootpc	68
bootps	67
cmd	514
cvspserver	2401
dhcp	67
domain	53
eklogin	2105
ekshell	2106
excc	512
finger	79
ftp	21
ftp-data	20
http	80
https	443
ident	113
imap	143
kerberos-sec	88
klogin	543
kpasswd	761
krb-prop	754
krbupdate	760
kshell	544
ldap	389
ldp	646

Table 4: Port Names Supported by Services Interfaces *(continued)*

Port Name	Corresponding Port Number
login	513
mobileip-agent	434
mobileip-mn	435
msdp	639
netbios-dgm	138
netbios-ns	137
netbios-ssn	139
nfsd	2049
nntp	119
ntalk	518
ntp	123
pop3	110
pptp	1723
printer	515
radacct	1813
radius	1812
rip	520
rkinit	2108
smtp	25
snmp	161
snmp-trap	162
snpp	444
socks	1080
ssh	22
sunrpc	111
syslog	514
tacacs	49

Table 4: Port Names Supported by Services Interfaces *(continued)*

Port Name	Corresponding Port Number
tacacs-ds	65
talk	517
telnet	23
tftp	69
timed	525
who	513
xmcp	177

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level system—To view this statement in the configuration.
system-control—To add this statement to the configuration.

icmp-code

Syntax icmp-code *value* ;

Hierarchy Level [edit applications application *application-name* term *term-name*]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Specify the Internet Control Message Protocol (ICMP) code value.

This statement is supported on J Series and SRX Series devices.

Options *value* —ICMP code value, such as `host-unreachable` or `host-unreachable-for-tos`.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level system—To view this statement in the configuration.
system-control—To add this statement to the configuration.

icmp-type

Syntax	<code>icmp-type value ;</code>
Hierarchy Level	<code>[edit applications application <i>application-name</i> term <i>term-name</i>]</code>
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Specify the ICMP packet type value. This statement is supported on J Series and SRX Series devices.
Options	<i>value</i> —ICMP type value, such as <code>echo</code> or <code>echo-reply</code> .
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	system—To view this statement in the configuration. system-control—To add this statement to the configuration.

inactivity-timeout

Syntax	<code>inactivity-timeout seconds ;</code>
Hierarchy Level	<code>[edit applications application <i>application-name</i> term <i>term-name</i>]</code>
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Inactivity timeout period, in seconds. This statement is supported on J Series and SRX Series devices.
Options	<i>seconds</i> —Length of time the application is inactive before it times out. Default: 60 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	system—To view this statement in the configuration. system-control—To add this statement to the configuration.

protocol

Syntax protocol type ;

Hierarchy Level [edit applications application *application-name*],
[edit applications application *application-name* term *term-name*]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Specify the networking protocol name or number.

This statement is supported on J Series and SRX Series devices.

Options *protocol-name* —Networking protocol name. The following text values are supported. For a complete list of possible numeric values, see RFC 1700, *Assigned Numbers (for the Internet Protocol Suite)*.

- ah—IP Security Authentication Header
- egp—Exterior gateway protocol
- esp—IPsec Encapsulating Security Payload
- gre—Generic routing encapsulation
- icmp—Internet Control Message Protocol
- igmp—Internet Group Management Protocol
- ipip—IP over IP
- node—Clear each session that uses the specified IP protocol on a specific node.
- 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



NOTE: Internet Protocol version 6 (IPv6) is not supported as a network protocol in application definitions

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level system—To view this statement in the configuration.
system-control—To add this statement to the configuration.

rpc-program-number

Syntax	<code>rpc-program-number number ;</code>
Hierarchy Level	<code>[edit applications application application-name term term-name]</code>
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Specify the remote procedure call (RPC) or Distributed Computing Environment (DCE) value. This statement is supported on J Series and SRX Series devices.
Options	<i>number</i> —RPC or DCE program value. Range: 0 through 65535
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	system—To view this statement in the configuration. system-control—To add this statement to the configuration.

source-port

Syntax	<code>source-port port-number ;</code>
Hierarchy Level	<code>[edit applications application application-name],</code> <code>[edit applications application application-name term term-name]</code>
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Specify the source port identifier. This statement is supported on J Series and SRX Series devices.
Options	<i>port-number</i> —Identifier for the port. You can use a numeric value or one of the text synonyms listed in Table 4 on page 54.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	system—To view this statement in the configuration. system-control—To add this statement to the configuration.

term

Syntax `term term-name {
 alg application ;
 destination-port port-number ;
 icmp-code value ;
 icmp-type value ;
 inactivity-timeout seconds ;
 protocol type ;
 rpc-program-number number ;
 source-port port-number ;
 uuid hex-value ;
 }`

Hierarchy Level [edit applications application *application-name*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Define individual application protocols.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level system—To view this statement in the configuration.
 system-control—To add this statement to the configuration.

uuid

Syntax	<code>uuid <i>hex-value</i> ;</code>
Hierarchy Level	<code>[edit applications application <i>application-name</i> term <i>term-name</i>]</code>
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	<p>Specify the Universal Unique Identifier (UUID) for objects. DCE RPC services are mainly used by Microsoft applications. The ALG uses well-known TCP port 135 for port mapping services and uses the Universal Unique Identifier (UUID) instead of the program number to identify protocols. The main application-based DCE RPC is the Microsoft Exchange Protocol.</p> <p>Support for stateful firewall and NAT services requires that you configure the DCE RPC portmap ALG on TCP port 135. The DCE RPC ALG uses the TCP protocol with application-specific UUIDs.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>hex-value</i> —Hexadecimal value.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>system—To view this statement in the configuration.</p> <p>system-control—To add this statement to the configuration.</p>

Chapter 4

Bridge-Domains Hierarchy and Statements

This chapter presents the complete **bridge-domains** configuration hierarchy available on SRX Series Services Gateways running JUNOS Software. Where applicable, the chapter also provides a summary for each statement in the hierarchy that is exclusive to SRX Series devices. Statement summaries are organized alphabetically.

Use the statements in the **bridge-domains** configuration hierarchy to configure a bridging domain that includes a set of logical ports that share the same flooding or broadcast characteristics. For configuration instructions, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

This chapter contains the following sections:

- Bridge-Domains Configuration Statement Hierarchy on page 63

Bridge-Domains Configuration Statement Hierarchy

To configure bridge domains, use the following statements at the [edit **bridge-domains**] hierarchy level. Statements exclusively for SRX Series devices running JUNOS Software are shown in bold font and are documented in this chapter.

```
bridge-domains bridge-domain-name {  
  description description  
  domain-type bridge;  
  interface interface-name;  
  vlan-id (none | number);  
  vlan-id-list numbers;  
  routing-interface routing-interface-name;  
  bridge-options {  
    interface interface-name;  
    static-mac static-mac-address;  
  }  
}
```

bridge-domains

Syntax `bridge-domains bridge-domain-name {
 description description
 domain-type bridge;
 interface interface-name;
 vlan-id (none | number);
 vlan-id-list numbers;
 routing-interface routing-interface-name;
 bridge-options {
 interface interface-name;
 static-mac static-mac-address;
 }
 }`

Hierarchy Level [edit]

Release Information Statement modified in Release 9.5 of JUNOS Software.

Description Configure a domain that includes a set of logical ports that share the same flooding or broadcast characteristics in order to perform Layer 2 bridging.

This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.

Options *bridge-domain-name*—Name of the bridge domain.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

Required Privilege Level routing—To view this statement in the configuration.
 routing-control—To add this statement to the configuration.

bridge-options

Syntax	bridge-options { interface <i>interface-name</i> ; static-mac <i>static-mac-address</i> ; vlan-id <i>number</i> }
Hierarchy Level	[edit bridge-domains <i>bridge-domain-name</i>]
Release Information	Statement modified in Release 9.5 of JUNOS Software.
Description	Configure Layer 2 learning and forwarding properties for a bridge domain. This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices. The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

domain-type

Syntax	domain-type bridge;
Hierarchy Level	[edit bridge-domains <i>bridge-domain-name</i>]
Release Information	Statement modified in Release 9.5 of JUNOS Software.
Description	Define the type of domain for a Layer 2 bridge domain. This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

interface

Syntax	interface <i>interface-name</i> ;
Hierarchy Level	[edit bridge-domains <i>bridge-domain-name</i>]
Release Information	Statement modified in Release 9.5 of JUNOS Software.
Description	Specify the logical interfaces to include in the bridge domain. This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.
Options	<i>interface-name</i> —Name of a logical interface. For more information about how to configure logical interfaces, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

routing-interface

Syntax	routing-interface <i>routing-interface-name</i> ;
Hierarchy Level	[edit bridge-domains <i>bridge-domain-name</i>]
Release Information	Statement modified in Release 9.5 of JUNOS Software.
Description	Specify a routing interface to include in a bridge domain. This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.
Options	<i>routing-interface-name</i> —Name of the integrated routing and bridging (IRB) interface to include in the bridge domain. The format of the interface name is <i>irb.x</i> , where <i>x</i> is the unit number of the interface you configured at the [edit interfaces <i>irb</i>] hierarchy level. For more information about how to configure an IRB interface, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .



NOTE: You can specify only one IRB interface for each bridge domain.

Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

static-mac

Syntax	static-mac <i>mac-address</i>
Hierarchy Level	[edit bridge-domains <i>bridge-domain-name</i> bridge-options interface <i>interface-name</i>]
Release Information	Statement modified in Release 9.5 of JUNOS Software.
Description	Configure a static MAC address for a logical interface in a bridge domain. This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.
Options	<i>mac-address</i> —MAC address
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

vlan-id

Syntax	vlan-id (none <i>number</i>);
Hierarchy Level	[edit bridge-domains <i>bridge-domain-name</i>]
Release Information	Statement modified in Release 9.5 of JUNOS Software.
Description	Specify a VLAN identifier to include in the packets forwarded on the bridge domain. This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.
Options	<i>number</i> —A valid VLAN identifier. If you configure multiple bridge domains with a valid VLAN identifier, you must specify a unique VLAN identifier for each domain. <i>none</i> —Specify to enable shared VLAN learning.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

vlan-id-list

Syntax `vlan-id-list numbers;`

Hierarchy Level `[edit bridge-domains bridge-domain-name]`

Release Information Statement modified in Release 9.5 of JUNOS Software.

Description Specify multiple VLAN identifiers to create a bridge domain for each VLAN identifier.

This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.

Options *numbers*—A list of valid VLAN identifiers. A bridge domain is created for each VLAN identifier in the list.



NOTE: If you specify a VLAN identifier list, you cannot configure an IRB interface in the bridge domain.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

Chapter 5

Chassis Hierarchy and Statements

This chapter presents the complete **chassis** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Where applicable, the chapter also provides a summary for each statement in the hierarchy that is exclusive to J Series and SRX Series devices. Statement summaries are organized alphabetically.

Use the statements in the **chassis** configuration hierarchy to configure alarms and other chassis properties and to configure chassis clusters. For configuration instructions, see the *J Series Services Routers Hardware Guide* and the *JUNOS Software Administration Guide*. To configure chassis clusters, see the *JUNOS Software Security Configuration Guide*.

For information about chassis statements that are not explained here—statements that are shared across Juniper Networks devices—see the *JUNOS System Basics Configuration Guide*.

This chapter contains the following sections:

- Chassis Configuration Statement Hierarchy on page 69

Chassis Configuration Statement Hierarchy

To configure chassis properties, use the following statements at the **[edit chassis]** hierarchy level. Statements exclusively for J Series and SRX Series devices running JUNOS Software are shown in bold font and are documented in this chapter.

Shared JUNOS statements in the **chassis** hierarchy are shown in normal font and are documented in the *JUNOS System Basics Configuration Guide*.

```
chassis {  
  alarm {  
    ds1 {  
      ais (ignore | red | yellow);  
      ylw (ignore | red | yellow);  
    }  
    ethernet {  
      link-down (ignore | red | yellow);  
    }  
    integrated-services {  
      failure (ignore | red | yellow);  
    }  
    management-ethernet {
```

```

    link-down (ignore | red | yellow);
}
serial {
    cts-absent (ignore | red | yellow);
    dcd-absent (ignore | red | yellow);
    dsr-absent (ignore | red | yellow);
    loss-of-rx-clock (ignore | red | yellow);
    loss-of-tx-clock (ignore | red | yellow);
}
services {
    hw-down (ignore | red | yellow);
    linkdown (ignore | red | yellow);
    pic-hold-reset (ignore | red | yellow);
    pic-reset (ignore | red | yellow);
    rx-errors (ignore | red | yellow);
    sw-down (ignore | red | yellow);
    tx-errors (ignore | red | yellow);
}
sonet {
    alarm-name (ignore | red | yellow);
}
t3 {
    ais (ignore | red | yellow);
    exz (ignore | red | yellow);
    ferf (ignore | red | yellow);
    idle (ignore | red | yellow);
    lcv (ignore | red | yellow);
    lof (ignore | red | yellow);
    los (ignore | red | yellow);
    pll (ignore | red | yellow);
    ylw (ignore | red | yellow);
}
}
cluster {
control-link-recovery;
control-ports {
    fpc slot-number port port-number;
}
heartbeat-interval milliseconds;
heartbeat-threshold number;
node node-number;
redundancy-group group-number {
    gratuitous-arp-count number;
    interface-monitor interface-name {
        weight number;
    }
ip-monitoring {
    weight number threshold number ;
    family {
        inet {
            IPv4 address weight number
        }
    }
}
node node-number {
    priority priority-number;

```

```

    }
    preempt;
}
reth-count number;
traceoptions {
    file filename {
        <files number>;
        <match regular-expression>;
        <size maximum-file-size>;
        <world-readable | no-world-readable>;
    }
    flag {
        all;
        configuration;
        routing-socket;
        snmp;
    }
}
}
config-button {
    no-clear;
    no-rescue;
}
container-devices {
    device-count container-devices-number ;
}
craft-lockout;
disable-power-management;
fpc slot-number {
    offline;
    pic pic-number {
        aggregate-ports;
        atm-cell-relay-accumulation;
        atm-l2circuit-mode (cell | aal5 | trunk trunk );
        ce1 {
            e1 port-number {
                channel-group group-number timeslots slot-number ;
            }
        }
    }
    ct3 {
        port port-number {
            t1 link-number {
                channel-group group-number timeslots slot-number ;
            }
        }
    }
}
ethernet {
    pic-mode (enhanced-switching | routing | switching);
}
framing (sdh | sonet);
idle-cell-format {
    itu-t;
    payload-pattern payload-pattern-byte ;
}
max-queues-per-interface (4 | 8);
mlfr-uni-nni-bundles number ;

```

```

no-concatenate;
q-pic-large-buffer <(large-scale | small-scale)>;
red-buffer-occupancy {
    weighted-averaged [ instant-usage-weight-exponent weight-value ];
}
shdsl {
    pic-mode (1-port-atm | 2-port-atm);
}
sparse-dlcis;
traffic-manager {
    egress-shaping-overhead number ;
    ingress-shaping-overhead number ;
    mode ( egress-only | ingress-and-egress );
}
tunnel-queuing;
tunnel-services {
    bandwidth (1g | 10g);
}
vtmapping (itu-t | klm);
}
power (off | on);
}
pem {
    minimum number ;
}
}
redundancy {
    failover {
        on-disk-failure;
        on-loss-of-keepalives;
    }
    graceful-switchover;
    keepalive-time seconds ;
    routing-engine slot-number (backup | disabled | master);
}
routing-engine {
    on-disk-failure disk-failure-action (halt | reboot);
}
}

```


cluster

Syntax

```

cluster {
  control-link-recovery;
  control-ports {
    fpc slot-number port port-number ;
  }
  heartbeat-interval milliseconds ;
  heartbeat-threshold number ;
  node node-number ;
  redundancy-group group-number {
    gratuitous-arp-count number ;
    interface-monitor interface-name {
      weight number ;
    }
  }
  ip-monitoring {
    weight number threshold number ;
    family {
      inet {
        IPv4 address weight number
      }
    }
  }
  node node-number {
    priority priority-number ;
  }
  preempt;
}
reth-count number ;
traceoptions {
  file filename {
    <files number >;
    <match regular-expression> ;
    <size maximum-file-size >;
    <world-readable | no-world-readable>;
  }
  flag {
    all;
    configuration;
    routing-socket;
    snmp;
  }
}
}

```

Hierarchy Level [edit chassis]

Release Information Statement introduced in Release 9.0 of JUNOS Software.

Description Configure a chassis cluster.

This statement is supported on J Series and SRX Series devices.

Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

control-link-recovery

Syntax	control-link-recovery;
Hierarchy Level	[edit chassis cluster]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Enable control link recovery to be done automatically by the system. After the control link recovers, the system checks whether it receives at least 30 consecutive heartbeats on the control link. This is to ensure that the control link is not flapping and is perfectly healthy. Once this criterion is met, the system issues an automatic reboot on the node that was disabled when the control link failed. When the disabled node reboots, the node rejoins the cluster. There is no need for any manual intervention.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

control-ports

Syntax control-ports {
 fpc *slot-number* port *port-number* ;
 }

Hierarchy Level [edit chassis cluster]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Specific to SRX Series devices. Enable the specific control port of the Services Processing Card (SPC) for use as a control link for the chassis cluster. By default, all control ports are disabled. User needs to configure a minimum of one control port per chassis of the cluster.

This statement is supported on SRX Series devices.

Options fpc *slot-number* —Flexible PIC Concentrator (FPC) slot number



NOTE: FPC slot range depends on platform. The maximum range of 0 through 23 applies to SRX5800 devices; for SRX5600 devices, the only applicable range is 0 through 11.

port *port-number* —Port number on which to configure the control port.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level interface—To view this statement in the configuration.
 interface-control—To add this statement to the configuration.

gratuitous-arp-count

Syntax	gratuitous-arp-count number;
Hierarchy Level	[edit chassis cluster redundancy-group group-number]
Release Information	Statement introduced in Release 9.0 of JUNOS Software.
Description	Specify the number of gratuitous Address Resolution Protocol (ARP) requests to send on an active interface after failover. This statement is supported on J Series and SRX Series devices.
Options	<i>number</i> —Number of gratuitous ARP requests that a newly elected primary device in a chassis cluster sends out to announce its presence to the other network devices. Range: 1 through 16 Default: 4
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

heartbeat-interval

Syntax	heartbeat-interval <i>milliseconds</i> ;
Hierarchy Level	[edit chassis cluster]
Release Information	Statement introduced in Release 9.0 of JUNOS Software.
Description	Set the interval between the periodic signals broadcast to the devices in a chassis cluster to indicate that the active node is operational. This statement is supported on J Series and SRX Series devices.
Options	<i>milliseconds</i> —Time interval between any two heartbeat messages. Range: 1000 through 2000 milliseconds Default: 1000 milliseconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

heartbeat-threshold

Syntax	heartbeat-threshold <i>number</i> ;
Hierarchy Level	[edit chassis cluster]
Release Information	Statement introduced in Release 9.0 of JUNOS Software.
Description	Set the number of consecutive missed heartbeat signals that a device in a chassis cluster must exceed to trigger failover of the active node. This statement is supported on J Series and SRX Series devices.
Options	<i>number</i> —Number of consecutive missed heartbeats. Range: 3 through 8 Default: 3
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

interface-monitor

Syntax	interface-monitor <i>interface-name</i> { weight <i>number</i> ; }
Hierarchy Level	[edit chassis cluster redundancy-group <i>group-number</i>]
Release Information	Statement introduced in Release 9.0 of JUNOS Software.
Description	Specify a redundancy group interface to be monitored for failover and the relative weight of the interface. This statement is supported on J Series and SRX Series devices.
Options	<i>interface-name</i> —Name of the physical interface to monitor. The remaining statement is explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

ip-monitoring

Syntax

```
ip-monitoring {
  weight number threshold number ;
  family {
    inet {
      IPv4 address weight number
    }
  }
}
```

Hierarchy Level [edit chassis cluster redundancy-group *group-number*]

Release Information Statement introduced in Release 9.6 of JUNOS Software.

Description Specify an IP address monitoring threshold and weight and IP addresses for the redundancy group interface to monitor.

This statement is supported on SRX Series devices.

Options *IPv4-address* —The address to be continually monitored for reachability.



NOTE: All monitored object failures, including IP monitoring, are deducted from the threshold priority. Other monitored objects include interface-monitor, SPU monitor, cold-sync monitor, and NPC monitor (on supported platforms).

The remaining statement is explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

node

See the following sections:

- node (Cluster) on page 79
- node (Redundancy-Group) on page 80

node (Cluster)

Syntax `node node-number ;`

Hierarchy Level [edit chassis cluster]

Release Information Statement introduced in Release 9.0 of JUNOS Software.

Description Identify the device in a chassis cluster. The node 0 device in the cluster has the chassis ID 1, and the node 1 device in the cluster has the chassis ID 2.

This statement is supported on J Series and SRX Series devices.

Options `node-number` —Cluster node number.

Range: 0 through 1

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

node (Redundancy-Group)

Syntax node *node-number* {
 priority *priority-number* ;
 }

Hierarchy Level [edit chassis cluster redundancy-group *group-number*]

Release Information Statement introduced in Release 9.0 of JUNOS Software.

Description Identify each cluster node in a redundancy group and set its relative priority for mastership.

This statement is supported on J Series and SRX Series devices.

Options *node-number* —Cluster node number, set with the chassis cluster node *node-number* statement.

The remaining statement is explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level interface—To view this statement in the configuration.
 interface-control—To add this statement to the configuration.

pic-mode

Syntax `pic-mode (enhanced-switching | routing | switching);`

Hierarchy Level `[edit chassis fpc slot-number pic pic-number ethernet]`

Release Information Statement modified in Release 9.2 of JUNOS Software.

Description Set the mode to configure the uPIMs.

This statement is supported on J Series devices.

Options `enhanced-switching`—Enhanced switching mode of operation. Each port of the uPIMs can be configured for switching or routing mode.



NOTE: Only one `enhanced-switching` mode uPIM per chassis is supported currently.

`routing`—Routing mode of operation. All ports of the uPIMs are in routing mode. Routing mode is the default setting.

`switching`—Switching mode of operation. All ports of the uPIMs are in switching mode.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

Required Privilege Level `interface`—To view this statement in the configuration.
`interface-control`—To add this statement to the configuration.

preempt

Syntax	<code>preempt;</code>
Hierarchy Level	<code>[edit chassis cluster redundancy-group <i>group-number</i>]</code>
Release Information	Statement introduced in Release 9.0 of JUNOS Software.
Description	<p>Enable chassis cluster node preemption within a redundancy group. If preempt is added to a redundancy group configuration, the device with the higher priority in the group can initiate a failover to become master. By default, preemption is disabled.</p> <p>Initiating a failover with the <code>request chassis cluster failover node</code> or <code>request chassis cluster failover redundancy-group</code> command overrides the priority settings and preemption.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

priority

Syntax	<code>priority <i>priority-number</i> ;</code>
Hierarchy Level	<code>[edit chassis cluster redundancy-group <i>group-number</i> node <i>node-number</i>]</code>
Release Information	Statement introduced in Release 9.0 of JUNOS Software.
Description	<p>Define the priority of a node (device) in a redundancy group. Initiating a failover with the <code>request chassis cluster failover node</code> or <code>request chassis cluster failover redundancy-group</code> command overrides the priority settings.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>priority-number</i> —Priority value of the node. The eligible node with the highest priority is elected master.</p> <p>Range: 1 through 254</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

redundancy-group

Syntax

```

redundancy-group group-number {
    gratuitous-arp-count number ;
    interface-monitor interface {
        weight number ;
    }
    ip-monitoring {
        weight number threshold number ;
        family {
            inet {
                IPv4 address weight number
            }
        }
    }
    node node-number {
        priority priority-number ;
    }
    preempt;
}

```

Hierarchy Level [edit chassis cluster]

Release Information Statement introduced in Release 9.0 of JUNOS Software.

Description Define a redundancy group. Except for redundancy group 0, a redundancy group is a logical interface consisting of two physical Ethernet interfaces, one on each chassis. One interface is active, and the other is on standby. When the active interface fails, the standby interface becomes active. The logical interface is called a redundant Ethernet (reth) interface.

Redundancy group 0 consists of the two Routing Engines in the chassis cluster and controls Routing Engine primaryship. You must define redundancy group 0 in the chassis cluster configuration.

This statement is supported on J Series and SRX Series devices.

Options *group-number* —Redundancy group identification number.
Range: 0 through 128



NOTE: The maximum number of redundancy groups is equal to the number of redundant Ethernet interfaces that you configure.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level interface—To view this statement in the configuration.
 interface-control—To add this statement to the configuration.

reth-count

Syntax	<code>reth-count number ;</code>
Hierarchy Level	[edit chassis cluster]
Release Information	Statement introduced in Release 9.0 of JUNOS Software.
Description	Specify the number of redundant Ethernet (reth) interfaces allowed in the chassis cluster. Note that the number of reth interfaces configured determines the number of redundancy groups that can be configured. This statement is supported on J Series and SRX Series devices.
Options	number —Number of redundant Ethernet interfaces allowed. Range: 1 through 128 Default: 0
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

threshold

Syntax	<code>threshold number ;</code>
Hierarchy Level	[edit chassis cluster redundancy-group <i>group-number</i> ip-monitoring]
Release Information	Statement introduced in Release 9.6 of JUNOS Software.
Description	Specify the failover value for all IP addresses monitored by the redundancy group. When IP addresses with a configured total weight in excess of the threshold have become unreachable, the weight of IP monitoring will be deducted from the redundancy group threshold. This statement is supported on SRX Series devices.
Options	number —Value at which the IP monitoring weight will be applied against the redundancy group failover threshold. Range: 0 through 255
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

traceoptions

Syntax

```

traceoptions {
  file filename {
    <files number >;
    <match regular-expression >;
    <size maximum-file-size >;
    <world-readable | no-world-readable>;
  }
  flag {
    all;
    configuration;
    routing-socket;
    snmp;
  }
}

```

Hierarchy Level [edit chassis cluster]

Release Information Statement modified in Release 9.5 of JUNOS Software.

Description Define chassis cluster redundancy process tracing operations.

This statement is supported on J Series and SRX Series devices.

Options file *filename* —Name of the file to receive the output of the tracing operation. Enclose the name within quotation marks. All files are placed in the directory */var/log*.

files *number* —(Optional) Maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed to *trace-file .0*, then *trace-file.1*, and so on, until the maximum number of trace files is reached. The oldest archived file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the size option and a filename.

Range: 2 through 1000 files

Default: 10 files

match *regular-expression* —(Optional) Refine the output to include lines that contain the regular expression.

size *maximum-file-size* —(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file .0*. When the *trace-file* again reaches its maximum size, *trace-file .0* is renamed *trace-file .1* and *trace-file* is renamed *trace-file .0*. This renaming scheme continues until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the files option and filename.

Syntax: x k to specify KB, x m to specify MB, or x g to specify GB

Range: 0 KB through 1 GB

Default: 128 KB

world-readable | no-world-readable—(Optional) By default, log files can be accessed only by the user who configures the tracing operation. The **world-readable** option enables any user to read the file. To explicitly set the default behavior, use the **no-world-readable** option.

flag—Trace operation or operations to perform on chassis cluster redundancy processes. To specify more than one trace operation, include multiple **flag** statements.

- **all**—Trace all the events
 - **configuration**—Trace configuration events
 - **routing-socket**—Trace logging of rtsock activity
 - **snmp**—Trace SNMP events

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level **trace**—To view this statement in the configuration.
trace-control—To add this statement to the configuration.

tunnel-queuing

Syntax tunnel-queuing;

Hierarchy Level [edit chassis fpc *slot-number* pic *pic-number*]

Release Information Statement modified in Release 9.0 of JUNOS Software.

Description Enable class-of-service (CoS) queuing for generic routing encapsulation (GRE) and IP-IP tunnels.

This statement is supported on J Series devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

Required Privilege Level **interface**—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

weight

Syntax	<code>weight number ;</code>
Hierarchy Level	<code>[edit chassis cluster redundancy-group group-number interface-monitor interface]</code> <code>[edit chassis cluster redundancy-group group-number ip-monitoring]</code>
Release Information	Statement modified in Release 9.6 of JUNOS Software.
Description	<p>Specify the relative importance of the object to the operation of the redundancy group. This statement is primarily used with interface monitoring and IP address monitoring objects. The failure of an object—such as an interface—with a greater weight brings the group closer to failover. Every monitored object is assigned a weight. If the object, or in the case of IP monitoring enough monitored addresses, fails, the weight of the object is deducted from the threshold of its redundancy group. Every redundancy group has a default threshold of 255. If the threshold reaches 0, a failover is triggered. Failover is triggered even if the redundancy group is in manual failover mode and preemption is not enabled.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>number</i> —Weight assigned to the interface. A higher weight value indicates a greater importance.</p> <p>Range: 0 through 255</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

Chapter 6

Class-of-Service Hierarchy and Statements

This chapter presents the complete **class-of-service** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Where applicable, the chapter also provides a summary for each statement in the hierarchy that is exclusive to J Series and SRX Series devices. Statement summaries are organized alphabetically.

Use the statements in the **class-of-service** configuration hierarchy to configure class-of-services (CoS) features. For configuration instructions, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

This chapter contains the following section:

- Class-of-Service Configuration Statement Hierarchy on page 89

Class-of-Service Configuration Statement Hierarchy

To configure CoS, use the following statements at the [edit class-of-service] hierarchy level.

```
class-of-service {
  adaptive-shapers {
    adaptive-shaper-name {
      trigger type shaping-rate (percent percent | rate );
    }
  }
  classifiers {
    type classifier-name {
      forwarding-class class-name {
        loss-priority (low | high) code-points [ alias | bits ];
      }
      import ( classifier-name | default);
    }
  }
  code-point-aliases {
    (dscp | dscp-ipv6 | exp | ieee-802.1 | inet-precedence) {
      alias-name bits ;
    }
  }
  drop-profiles {
    profile-name {
```

```

        fill-level percentage drop-probability percentage ;
        interpolate {
            drop-probability value ;
            fill-level value ;
        }
    }
}
forwarding-classes {
    queue queue-number class-name priority (low | high);
}
forwarding-policy {
    class class-name {
        classification-override {
            forwarding-class class-name ;
        }
    }
    next-hop-map map-name {
        forwarding-class class-name {
            lsp-next-hop [ lsp-regular-expression ];
            next-hop [ next-hop-name ];
            non-lsp-next-hop [ lsp-regular-expression ];
        }
    }
}
fragmentation-maps {
    map-name {
        forwarding-class class-name {
            drop-timeout milliseconds ;
            fragment-threshold bytes ;
            multilink-class number ;
            no-fragmentation;
        }
    }
}
host-outbound-traffic {
    dscp-code-point value ;
    forwarding-class class-name ;
}
interfaces {
    interface-name {
        input-scheduler-map map-name ;
        input-shaping-rate rate ;
        scheduler-map map-name ;
        scheduler-map-chassis map-name ;
        shaping-rate rate ;
        unit logical-unit-number {
            adaptive-shaper adaptive-shaper-name ;
            classifiers {
                (dscp | dscp-ipv6 | exp | ieee-802.1 | inet-precedence)
                ( classifier-name | default);
            }
            forwarding-class class-name ;
            fragmentation-map map-name ;
            input-scheduler-map map-name ;
            input-shaping-rate (percent percentage | rate );
        }
    }
}

```

```

input-traffic-control-profile profiler-name shared-instance instance-name
;
loss-priority-maps {
    default;
    map-name ;
}
output-traffic-control-profile profile-name shared-instance instance-name
;
rewrite-rules {
    dscp ( rewrite-name | default);
    dscp-ipv6 ( rewrite-name | default);
    exp ( rewrite-name | default) protocol protocol-types ;
    frame-relay-de ( rewrite-name | default);
    ieee-802.1 ( rewrite-name | default) vlan-tag (outer | outer-and-inner);
    ieee-802.1ad ( rewrite-name | default) vlan-tag (outer | outer-and-inner);
    inet-precedence ( rewrite-name | default);
}
scheduler-map map-name ;
shaping-rate rate ;
virtual-channel-group group-name ;
}
}
}
loss-priority-maps {
    frame-relay-de ( map-name | default) {
        loss-priority level code-points [ values ];
    }
}
rewrite-rules {
    type rewrite-name {
        forwarding-class class-name {
            loss-priority level code-point [ aliases ] [ 6-bit-patterns ];
        }
        import ( rewrite-name | default);
    }
}
scheduler-maps {
    map-name {
        forwarding-class class-name scheduler scheduler-name ;
    }
}
schedulers {
    scheduler-name {
        buffer-size (percent percentage | remainder | temporal microseconds );
        drop-profile-map {
            loss-priority (any | high | low | medium-high | medium-low);
            protocol (any | non-tcp | tcp);
        }
        priority (high | low | medium-high | medium-low | strict-high);
        shaping-rate (percent percentage | rate );
        transmit-rate (percent percentage | rate | remainder) <exact | rate-limit>;
    }
}
traceoptions {
    flag flag {
        all;
    }
}

```

```

    asynch;
    hardware-database;
    init;
    parse;
    process;
    restart;
    route-socket;
    show;
    snmp;
    util;
  }
}
traffic-control-profiles profile-name {
  delay-buffer-rate (percent percent | rate );
  guaranteed-rate (percent percent | rate );
  scheduler-map map-name ;
  shaping-rate (percent percent | rate );
}
virtual-channel-groups {
  virtual-channel-group-name {
    virtual-channel-name {
      default;
      scheduler-map map-name ;
      shaping-rate (percent percent | rate );
    }
  }
}
virtual-channels {
  virtual-channel-name ;
}
}

```

adaptive-shaper

Syntax	<code>adaptive-shaper <i>adaptive-shaper-name</i>;</code>
Hierarchy Level	[edit class-of-service interfaces <i>interface-name</i> unit <i>logical-unit-number</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Assign an adaptive shaper to an interface.</p> <p>Adaptive shapers enable bandwidth limits on Frame Relay interfaces when the device receives frames containing the backward explicit congestion notification (BECN) bit.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<i>adaptive-shaper-name</i> —Name of the adaptive shaper.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>
Related Topics	adaptive-shapers

adaptive-shapers

Syntax	<pre>adaptive-shapers { adaptive-shaper-name { trigger type shaping-rate (percent percentage rate); } }</pre>
Hierarchy Level	[edit class-of-service]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Define trigger types and associated rates.</p> <p>Adaptive shapers enable bandwidth limits on Frame Relay interfaces when the Services Router receives frames containing the backward explicit congestion notification (BECN) bit.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<p><i>adaptive-shaper-name</i>—Name of the adaptive shaper.</p> <p>The remaining statements are explained separately.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	<p>interface— view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>
Related Topics	adaptive-shaper

code-points (Forwarding Class)

Syntax	<code>code-points [<i>aliases</i>] [<i>6-bit-patterns</i>];</code>
Hierarchy Level	<code>[edit class-of-service classifiers type <i>classifier-name</i> forwarding-class <i>class-name</i>]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify one or more DSCP code-point aliases or bit sets for association with a forwarding class. This statement is supported on J Series and SRX Series devices.
Options	<i>aliases</i> —Name of the DSCP alias. <i>6-bit patterns</i> —Value of the code-point bits, in decimal form.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

default

Syntax	<code>default;</code>
Hierarchy Level	<code>[edit class-of-service virtual-channel-groups <i>group-name</i> virtual-channel-name]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the default channel. You must configure one of the virtual channels in the group to be the default. Any traffic not explicitly directed to a virtual channel is transmitted by way of this default. This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.
Related Topics	<code>scheduler-map</code> (Virtual Channels), <code>shaping-rate</code> (Virtual Channels), <code>virtual-channel-group</code> , <code>virtual-channel-groups</code> , <code>virtual-channels</code>

frame-relay-de (Assigning to an Interface)

Syntax	frame-relay-de (<i>name</i> default);
Hierarchy Level	[edit class-of-service interfaces <i>interface-name</i> unit <i>logical-unit-number</i> loss-priority-maps], [edit class-of-service interfaces <i>interface-name</i> unit <i>logical-unit-number</i> rewrite-rules]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Assign the loss priority map or the rewrite rule to a logical interface. This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Options	<p>default—Apply default loss priority map or default rewrite rule. The default loss priority map contains the following settings:</p> <pre>loss-priority low code-point 0; loss-priority high code-point 1;</pre> <p>The default rewrite rule contains the following settings:</p> <pre>loss-priority low code-point 0; loss-priority medium-low code-point 0; loss-priority medium-high code-point 1; loss-priority high code-point 1;</pre> <p><i>name</i>—Name of loss priority map or rewrite rule to be applied.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

frame-relay-de (Defining Loss Priority)

Syntax	<pre>frame-relay-de map-name { loss-priority level code-poiing (0 1); }</pre>
Hierarchy Level	[edit class-of-service loss-priority-maps]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Define a Frame Relay discard-eligible bit loss-priority map.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<p><i>level</i>—Level of loss priority to be applied based on the specified CoS values. The level can be low, medium-low, medium-high, or high.</p> <p><i>map-name</i>—Name of the loss-priority map.</p> <p>The remaining statements are explained separately.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

frame-relay-de (Defining Rewrite Rule)

Syntax	<pre> frame-relay-de <i>rewrite-name</i> { forwarding-class <i>class-name</i> { loss-priority <i>level</i> code-point (0 1); } import (default <i>rewrite-name</i>); } </pre>
Hierarchy Level	[edit class-of-service rewrite-rules]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Define a Frame Relay discard-eligible bit rewrite rule.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<p><i>level</i>—Level of loss priority on which to base the rewrite rule. The loss priority level can be <i>low</i>, <i>medium-low</i>, <i>medium-high</i>, or <i>high</i>.</p> <p><i>rewrite-name</i>—Name of a rewrite-rules mapping configured at the [edit class-of-service rewrite-rules] hierarchy level.</p> <p>The remaining statements are explained separately.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

loss-priority (Frame Relay DE Bit Loss-Priority Map)

Syntax	loss-priority <i>level</i> code-points[<i>values</i>];
Hierarchy Level	[edit class-of-service loss-priority-maps frame-relay-de <i>map-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Map CoS values to a loss priority.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<p><i>level</i> can be one of the following:</p> <ul style="list-style-type: none"> ■ high—Packet has high loss priority. ■ medium-high—Packet has medium-high loss priority. ■ medium-low—Packet has medium-low loss priority. ■ low—Packet has low loss priority.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

loss-priority (Rewrite Rules)

Syntax	<code>loss-priority <i>level</i>;</code>
Hierarchy Level	<code>[edit class-of-service rewrite-rules <i>type</i> <i>rewrite-name</i> forwarding-class <i>class-name</i>]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify a loss priority to which to apply a rewrite rule. The rewrite rule sets the code-point aliases and bit patterns for a specific forwarding class and packet loss priority (PLP). The inputs for the map are the forwarding class and the PLP. The output of the map is the code-point alias or bit pattern.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>level</i> can be one of the following:</p> <ul style="list-style-type: none"> ■ high—The rewrite rule applies to packets with high loss priority. ■ low—The rewrite rule applies to packets with low loss priority. ■ medium-high—The rewrite rule applies to packets with medium-high loss priority. ■ medium-low—The rewrite rule applies to packets with medium-low loss priority.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

loss-priority-maps (Assigning to an Interface)

Syntax	<pre>loss-priority-maps { frame-relay-de (<i>map-name</i> default); }</pre>
Hierarchy Level	[edit class-of-service interfaces <i>interface-name</i> unit <i>logical-unit-number</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Assign the loss priority map to a logical interface.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<p>default—Apply default loss priority map. The default map contains the following:</p> <pre>loss-priority low code-point 0; loss-priority high code-point 1;</pre> <p><i>map-name</i>—Name of loss priority map to be applied.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

loss-priority-maps (Defining)

Syntax	<pre>loss-priority-maps { frame-relay-de <i>map-name</i> { loss-priority <i>level</i> code-points [<i>values</i>]; } }</pre>
Hierarchy Level	[edit class-of-service]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Map the loss priority of incoming packets based on CoS values.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

rewrite-rules (Definition)

Syntax `rewrite-rules {
 type rewrite-name{
 import (rewrite-name | default);
 forwarding-class class-name {
 loss-priority level code-point [aliases] [6-bit-patterns];
 }
 }
}`

Hierarchy Level [edit class-of-service]

Release Information Statement introduced in Release 8.5 of JUNOS Software.
 ieee-802.1ad option introduced in 9.2 of JUNOS Software.

Description Specify a rewrite-rules mapping for the traffic that passes through all queues on the interface.

This statement is supported on J Series and SRX Series devices.

Options *rewrite-name*—Name of a rewrite-rules mapping.

type—Traffic type.

Values: dscp, dscp-ipv6, exp, frame-relay-de (J Series only), ieee-802.1, ieee-802.1ad, inet-precedence

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Interfaces and Routing Guide*.

Required Privilege Level interface—To view this statement in the configuration.
 interface-control—To add this statement to the configuration.

Related Topics rewrite-rules (Interfaces)

rewrite-rules (Interfaces)

Syntax `rewrite-rules {
 dscp (rewrite-name | default);
 dscp-ipv6 (rewrite-name | default);
 exp (rewrite-name | default) protocol protocol-types;
 exp-push-push-push default;
 exp-swap-push-push default;
 ieee-802.1 (rewrite-name | default) vlan-tag (outer | outer-and-inner);
 inet-precedence (rewrite-name | default);
 }`

Hierarchy Level [edit class-of-service interfaces *interface-name* unit *logical-unit-number*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Associate a rewrite-rules configuration or default mapping with a specific interface.

This statement is supported on J Series and SRX Series devices.

Options *rewrite-name*—Name of a rewrite-rules mapping configured at the [edit class-of-service rewrite-rules] hierarchy level.

default—The default mapping.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Interfaces and Routing Guide*.

Required Privilege Level interface—To view this statement in the configuration.
 interface-control—To add this statement to the configuration.

Related Topics rewrite-rules (Definition)

scheduler-map (Virtual Channels)

Syntax	<code>scheduler-map map-name;</code>
Hierarchy Level	[edit class-of-service virtual-channel-groups <i>group-name</i> <i>virtual-channel-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Apply a scheduler map to this virtual channel.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<p><i>map-name</i>—Name of the scheduler map.</p> <p>The remaining statements are explained separately.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.
Related Topics	default, shaping-rate (Virtual Channels), virtual-channel-group, virtual-channel-groups, virtual-channels

shaping-rate (Adaptive Shaping)

Syntax	shaping-rate (percent <i>percentage</i> <i>rate</i>);
Hierarchy Level	[edit class-of-service adaptive-shapers <i>adaptive-shaper-name</i> trigger <i>type</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Define the list of trigger types and associated rates.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>percent <i>percentage</i>—Shaping rate as a percentage of the available interface bandwidth. Range: 0 through 100 percent</p> <p><i>rate</i>—Peak rate, in bits per second (bps). You can specify a value in bits per second either as a complete decimal number or as a decimal number followed by the abbreviation k (1000), m (1,000,000), or g (1,000,000,000). Range: 3200 through 32,000,000,000 bps</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.
Related Topics	trigger

shaping-rate (Applying to an Interface)

Syntax	<code>shaping-rate rate;</code>
Hierarchy Level	<code>[edit class-of-service interfaces <i>interface-name</i>],</code> <code>[edit class-of-service interfaces <i>interface-name</i> unit <i>logical-unit-number</i>]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	For logical interfaces on which you configure packet scheduling, configure traffic shaping by specifying the amount of bandwidth to be allocated to the logical interface.



NOTE: The `shaping-rate` statement cannot be applied to a physical interface on J Series routing platforms.

Logical and physical interface traffic shaping is mutually exclusive. This means you can include the `shaping-rate` statement at the `[edit class-of-service interfaces interface-name]` hierarchy level or the `[edit class-of-service interfaces interface-name unit logical-unit-number]` hierarchy level, but not both.

Alternatively, you can configure a shaping rate for a logical interface and oversubscribe the physical interface by including the `shaping-rate` statement at the `[edit class-of-service traffic-control-profiles]` hierarchy level. With this configuration approach, you can independently control the delay-buffer rate. For more information on the delay-buffer rate, see the *JUNOS Software Interfaces and Routing Guide*.

This statement is supported on J Series and SRX Series devices

Default	If you do not include this statement at the <code>[edit class-of-service interfaces <i>interface-name</i> unit <i>logical-unit-number</i>]</code> hierarchy level, the default logical interface bandwidth is the average of unused bandwidth for the number of logical interfaces that require default bandwidth treatment. If you do not include this statement at the <code>[edit class-of-service interfaces <i>interface-name</i>]</code> hierarchy level, the default physical interface bandwidth is the average of unused bandwidth for the number of physical interfaces that require default bandwidth treatment.
Options	<p>rate—Peak rate, in bits per second (bps). You can specify a value in bits per second either as a complete decimal number or as a decimal number followed by the abbreviation k (1000), m (1,000,000), or g (1,000,000,000).</p> <p>Range: For logical interfaces, 1000 through 32,000,000,000 bps.</p> <p>For physical interfaces, 1000 through 160,000,000,000 bps.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

shaping-rate (Virtual Channels)

Syntax	shaping-rate (percent <i>percentage</i> <i>rate</i>);
Hierarchy Level	[edit class-of-service virtual-channel-groups <i>group-name</i> <i>virtual-channel-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Define the shaping rates to be associated with the virtual channel.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>percent <i>percentage</i>—Shaping rate as a percentage of the available interface bandwidth. Range: 0 through 100 percent</p> <p><i>rate</i>—Peak rate, in bits per second (bps). You can specify a value in bits per second either as a complete decimal number or as a decimal number followed by the abbreviation k (1000), m (1,000,000), or g (1,000,000,000). Range: 3200 through 32,000,000,000 bps</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>
Related Topics	default, scheduler-map (Virtual Channels), virtual-channel-group, virtual-channel-groups, virtual-channels

trigger

Syntax	trigger <i>type</i> shaping-rate (percent <i>percentage</i> <i>rate</i>);
Hierarchy Level	[edit class-of-service adaptive-shapers <i>adaptive-shaper-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify a trigger type and its associated rate.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>type</i> —The type of trigger. Currently, the trigger type can be becn only.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>
Related Topics	shaping-rate (Adaptive Shaping)

virtual-channels

Syntax	<pre>virtual-channels { virtual-channel-name; }</pre>
Hierarchy Level	[edit class-of-service]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify a list of virtual channels.</p> <p>Each virtual channel has eight transmission queues.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<i>virtual-channel-name</i> —Name of the virtual channel.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.
Related Topics	default, scheduler-map (Virtual Channels), shaping-rate (Virtual Channels), virtual-channel-group, virtual-channel-groups.

virtual-channel-group

Syntax	<code>virtual-channel-group <i>group-name</i>;</code>
Hierarchy Level	<code>[edit class-of-service interfaces <i>interface-name</i> unit <i>logical-unit-number</i>]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Assign a virtual channel group to a logical interface.</p> <p>If you apply a virtual channel group to multiple logical interfaces, separate queues are created on each of the interfaces. The same virtual channel names are used on all the interfaces. You can specify the scheduler and shaping rates in the virtual channels in percentages so that you can apply the same virtual channel group to logical interfaces with different available bandwidths.</p> <p>This statement is supported on J Series devices.</p>
Options	<i>group-name</i> —Name of the virtual channel group.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>
Related Topics	default, scheduler-map (Virtual Channels), shaping-rate (Virtual Channels), virtual-channels, virtual-channel-groups.

virtual-channel-groups

Syntax

```
virtual-channel-groups {
    virtual-channel-group-name {
        virtual-channel-name {
            scheduler-map map-name;
            shaping-rate (percent percentage | rate);
            default;
        }
    }
}
```

Hierarchy Level [edit class-of-service]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Associate a virtual channel with a scheduler map and a shaping rate.

Virtual channels and virtual channel groups enable you to direct traffic into a virtual channel and apply bandwidth limits to the channel.

This statement is supported on J Series devices.

Options *group-name*—Name of the virtual channel group.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Interfaces and Routing Guide*.

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Topics default, scheduler-map (Virtual Channels), shaping-rate (Virtual Channels), virtual-channel-group, virtual-channels.

Chapter 7

Event-Options Hierarchy

This chapter presents the complete **event-options** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software.

Use the statements in the **event-options** configuration hierarchy to configure diagnostic event policies and actions associated with each policy. For configuration instructions, see the *JUNOS Software Administration Guide*.

For information about these **event-options** statements that are shared across Juniper Networks devices, see the *JUNOS Configuration and Diagnostic Automation Guide*.

This chapter contains the following sections:

- Event-Options Configuration Statement Hierarchy on page 111

Event-Options Configuration Statement Hierarchy

To configure event policies, use the following statements at the [edit **event-options**] hierarchy level.

Shared JUNOS statements in the **event-options** hierarchy are shown in normal font and are documented in the *JUNOS Configuration and Diagnostic Automation Guide*.

```
event-options {
  destinations {
    destination-name {
      archive-sites {
        url password password ;
      }
      transfer-delay seconds ;
    }
  }
  event-script {
    file script-name ;
    traceoptions {
      file filename <files number > <size maximum-file-size >
        <world-readable | no-world-readable>;
      flag flag ;
    }
  }
  generate-event event-name {
    time-interval seconds ;
  }
}
```

```

        time-of-day hh : mm : ss ;
    }
    policy policy-name {
        attributes-match {
            event1 . attribute-name equals event2 . attribute-name ;
            event . attribute-name matches regular-expression ;
            event1 . attribute-name starts-with event2 . attribute-name ;
        }
        events [ events ];
        then {
            event-script script-name .xml {
                arguments {
                    name value ;
                }
                destination destination-name {
                    retry-count number {
                        retry-interval seconds ;
                    }
                    transfer-delay seconds ;
                }
                output-filename filename ;
                output-format (text | xml);
                user-name user-name ;
            }
            execute-commands {
                commands {
                    "command";
                }
                destination destination-name {
                    retry-count number {
                        retry-interval seconds ;
                    }
                    transfer-delay seconds ;
                }
                output-file-name filename ;
                output-format (text | xml);
                user-name user-name ;
            }
            ignore;
            raise-trap;
            upload filename committed destination destination-name ;
            upload filename filename destination destination-name ;
        }
        within seconds not events [ events ];
    }
    traceoptions {
        file filename <files number > <size maximum-file-size >
        <world-readable | no-world-readable>;
        flag flag ;
    }
}

```


Chapter 8

Firewall Hierarchy and Statements

This chapter presents the complete **firewall** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Where applicable, the chapter also provides a summary for each statement in the hierarchy that is exclusive to J Series and SRX Series devices. Statement summaries are organized alphabetically.

Use the statements in the **firewall** configuration hierarchy to configure stateless firewall filters—also known as access control lists (ACLs)—on the device. Stateless firewall filters allow you to filter packets based on their components and to perform an action on packets that match the filter. For configuration instructions, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

For information about these **firewall** statements that are shared across Juniper Networks devices—see the *JUNOS Policy Framework Configuration Guide*.

This chapter contains the following sections:

- Firewall Configuration Statement Hierarchy on page 113

Firewall Configuration Statement Hierarchy

To configure stateless firewall filters, use the following statements at the [edit **firewall**] hierarchy level.

Shared JUNOS statements in the **firewall** hierarchy are shown in normal font and are documented in the *JUNOS Policy Framework Configuration Guide*.

```
firewall {
  family family-name {
    dialer-filter filter-name {
      accounting-profile [ profile - name s];
      term term-name {
        from {
          match-conditions ;
        }
        then {
          action
          action-modifiers ;
          policer policer-name ;
          port-mirror;
          virtual-channel virtual-channel-name ;
        }
      }
    }
  }
}
```

```

    }
  }
  filter filter-name {
    accounting-profile [ profile - names ];
    interface-specific;
    simple-filter filter-name {
      term term-name{
        from{
          match-conditions;
        }
        then{
          forwarding-class class-name ;
          loss-priority (high | low | medium) ;
        }
      }
    }
  }
  term term-name {
    filter filter-name ;
    from {
      match-conditions ;
    }
    then {
      action ;
      action-modifiers ;
      policer policer-name ;
      port-mirror;
      virtual-channel virtual-channel-name ;
    }
  }
}
service-filter filter-name {
  term term-name {
    from {
      match-conditions ;
    }
    then {
      action ;
      action-modifiers ;
    }
  }
}
simple-filter filter-name {
  interface-specific;
  term term-name {
    from {
      match-conditions ;
    }
    then {
      action ;
      action-modifiers ;
    }
  }
}
}
filter filter-name {
  accounting-profile [ profile-names ];

```

```

interface-specific;
term term-name {
    filter filter-name ;
    from {
        match-conditions ;
    }
    then {
        action ;
        action-modifiers ;
        virtual-channel virtual-channel-name ;
    }
}
}
interface-set interface-set-name {
    [ interface-names ];
}
policer policer-name {
    filter-specific;
    if-exceeding {
        bandwidth-limit rate ;
        bandwidth-percent number ;
        burst-size-limit bytes ;
    }
    logical-bandwidth-policer;
    logical-interface-policer;
    then {
        policer-action;
    }
}
three-color-policer policer-name {
    action {
        loss-priority high {
            then {
                discard;
            }
        }
    }
}
logical-interface-policer;
single-rate {
    (color-aware | color-blind);
    committed-burst-size bytes ;
    committed-information-rate bps ;
    excess-burst-size bytes ;
}
two-rate {
    (color-aware | color-blind);
    committed-information-rate bps ;
    committed-burst-size bytes ;
    peak-information-rate bps ;
    peak-burst-size bytes ;
}
}
}

```

policer

Syntax `policer policer-name{
 logical-bandwidth-policer;
 if-exceeding {
 bandwidth-limit rate;
 burst-size-limit bytes;
 }
 then {
 policer-action;
 }
 }`

Hierarchy Level [edit firewall]

Release Information Command introduced in Release 9.5 of JUNOS Software.

Description Configure policer rate limits and actions. To activate a policer, you must include the policer action modifier in the **then** statement in a firewall filter term or on an interface.

Options *policer-name*—Name of the policer to evaluate when packets are received on the interface.

Policer-action—One or more actions to take.

- **discard**—Always discard non conforming red packets.
- **forwarding-class *classname***—Specify the particular forwarding class.
- **loss-priority**—Set the loss priority to high or low.

then —Action to take on matching packets.

Required Privilege Level interface—To view this statement in the configuration.
 interface-control—To add this statement to the configuration.

simple-filter

Syntax

```
simple-filter filter-name {
    term term-name {
        from {
            match-conditions;
        }
        then {
            forwarding-class class-name;
            loss-priority (high | low | medium);
        }
    }
}
```

Hierarchy Level [edit firewall family inet filter *filter-name*]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Define a simple filter. Simple filters are recommended for metropolitan Ethernet applications.

- Options**
- **from**—Match packet fields to values. If the **from** option is not included, all packets are considered to match and the actions and action modifiers in the **then** statement are taken.
 - **match-conditions**—One or more conditions to use to make a match.
 - **term-name**—Name that identifies the term. The name can contain letters, numbers, and hyphens (-), and can be up to 255 characters long. To include space in the name, enclose it in quotation marks (“ ”).
 - **then**—Actions to take on matching packets. If the **then** option is not included and a packet matches all the conditions in the **from** statement, the packet is accepted.

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Chapter 9

Forwarding-Options Hierarchy and Statements

This chapter presents the complete **forwarding-options** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Where applicable, the chapter also provides a summary for each statement in the hierarchy that is exclusive to J Series and SRX Series devices. Statement summaries are organized alphabetically.

Use the statements in the **forwarding-options** configuration hierarchy to configure forwarding options protocols, including flow monitoring, accounting properties, and packet capture. For configuration instructions, see the *JUNOS Software Administration Guide*.

For information about these **forwarding-options** statements that are not explained here—statements that are shared across Juniper Networks devices—see the *JUNOS Policy Options Configuration Guide* and the *JUNOS Services Interfaces Configuration Guide*.

This chapter contains the following sections:

- Forwarding-Options Configuration Statement Hierarchy on page 119

Forwarding-Options Configuration Statement Hierarchy

To configure forwarding options, use the following statements at the **[edit forwarding-options]** hierarchy level. Statements exclusively for J Series and SRX Series devices running JUNOS Software are shown in bold font and are documented in this chapter.

Shared JUNOS statements in the **forwarding-options** hierarchy are shown in normal font and are documented in the *JUNOS Policy Options Configuration Guide* and the *JUNOS Services Interfaces Configuration Guide*.

```
forwarding-options {  
  accounting group-name {  
    output {  
      aggregate-export-interval value ;  
      cflowd [ hostnames ] {  
        aggregation {  
          autonomous-system;  
          destination-prefix;        }  
      }  
    }  
  }  
}
```

```

        protocol-port;
        source-destination-prefix {
            caida-compliant;
        }
        source-prefix;
    }
    autonomous-system-type;
    port;
    version;
}
}
}
family family-name {
    inet {
        filter (input | output);
    }
    inet6 {
        filter (input | output);
    }
    mpls {
        filter (input | output);
    }
}
hash-key {
    family {
        inet {
            layer-3;
            layer-4;
        }
        mpls {
            label-1;
            label-2;
            label-3;
            no-labels;
            payload {
                ip {
                    layer-3-only;
                    port-data {
                        destination-lsb;
                        destination-msb;
                        source-lsb;
                        source-msb;
                    }
                }
            }
        }
    }
}
}
}
helpers {
    bootp {
        client-response-ttl value ;
        description text ;
        interface interface-name {
            broadcast;
            client-response-ttl number ;
            description description ;
        }
    }
}

```



```

        maximum-hop-count number ;
        minimum-wait-time seconds ;
        no-listen;
        server address ;
        vpn;
    }
    maximum-hop-count number ;
    minimum-wait-time seconds ;
    relay-agent-option;
    server address {
        routing-instance [ value ];
    }
    vpn;
}
domain {
    description text ;
    interface interface-name;
    server {
        address address ;
        routing-instance [ value ];
    }
}
port value {
    description text ;
    interface interface-name;
    server {
        address address ;
        routing-instance [ value ];
    }
}
tftp {
    description text ;
    interface interface-name;
    server {
        address address ;
        routing-instance [ value ];
    }
}
traceoptions {
    file filename {
        files number ;
        match regular-expression ;
        size maximum-file-size ;
        <world-readable | no-world-readable>;
    }
    flag {
        address;
        all;
        bootp;
        config;
        domain;
        ifdb;
        io;
        main;
        port;
        rtsock;
    }
}

```

```

        tftp;
        trace;
        ui;
        util;
    }
    level level ;
}
}
packet-capture {
    disable;
    file filename {
        <files number >;
        <size maximum-file-size >;
        <world-readable | no-world-readable>;
    }
    maximum-capture-size [ value ];
}
port-mirroring {
    family {
        inet {
            input {
                rate number ;
                run-length number ;
            }
            output {
                interface interface-name {
                    next-hop {
                        address ;
                    }
                }
                no-filter-check;
            }
        }
    }
    traceoptions {
        file filename <files number > <size maximum-file-size >
        <world-readable | no-world-readable>;
    }
}
sampling {
    disable;
    family (inet | inet6 | mpls ) {
        disable;
        output {
            extension-service name;
            file;
            flow-server name {
                aggregation {
                    source-destination;
                }
            }
        }
    }
}
input {
    max-packets-per-second number;
    rate number ;
}

```

```

        run-length number ;
    }
    traceoptions {
        file filename <files number > <size maximum-file-size >
        <world-readable | no-world-readable>;
    }
}

```

vpn

Syntax	vpn;
Hierarchy Level	[edit forwarding-options helpers bootp]
Release Information	Statement introduced in Release 9.0 of JUNOS Software.
Description	<p>For Dynamic Host Configuration Protocol (DHCP) or BOOTP client request forwarding, enable virtual private network (VPN) encryption for a client request to pass through a VPN tunnel.</p> <p>This statement is supported on J Series devices.</p>
Usage Guidelines	To configure DHCP, see the <i>JUNOS Software Administration Guide</i> .
Required Privilege Level	<p>system—To view this statement in the configuration.</p> <p>system-control—To add this statement to the configuration.</p>

Chapter 10

Groups Hierarchy

This chapter presents the complete **groups** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Use the statements in the groups configuration hierarchy to configure information that can be dynamically updated in different parts of the device configuration.

For information about these **groups** statements that are shared across Juniper Networks devices, see the *JUNOS CLI User Guide*.

This chapter contains the following sections:

- Groups Configuration Statement Hierarchy on page 125

Groups Configuration Statement Hierarchy

To configure groups, use the following statements at the [edit groups] hierarchy level.

Shared JUNOS statements in the **groups** hierarchy are shown in normal font and are documented in the *JUNOS CLI User Guide*.

```
groups {  
  group-name {  
    configuration-data ;  
  }  
}
```


Chapter 11

Interfaces Hierarchy and Statements

This chapter presents the complete **interfaces** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Where applicable, the chapter also provides a summary for each statement in the hierarchy that is exclusive to J Series and SRX Series devices. Statement summaries are organized alphabetically.

Use the statements in the **interfaces** configuration hierarchy to configure interfaces on the device. For configuration instructions, see the *JUNOS Software Interfaces and Routing Configuration Guide* and the *JUNOS Software Administration Guide*.

For information about **interfaces** statements that are not explained here—statements that are shared across Juniper Networks devices—see the *JUNOS Network Interfaces Configuration Guide* and the *JUNOS Services Interfaces Configuration Guide*.

This chapter contains the following sections:

- Interfaces Configuration Statement Hierarchy on page 127

Interfaces Configuration Statement Hierarchy

To configure interfaces, use the following statements at the **[edit Interfaces]** hierarchy level. Statements exclusively for J Series and SRX Series devices running JUNOS Software are shown in bold font and are documented in this chapter.

Shared JUNOS statements in the **interfaces** hierarchy are shown in normal font and are documented in the *JUNOS Network Interfaces Configuration Guide* and the *JUNOS Services Interfaces Configuration Guide*.

```
interfaces {
  interface-name {
    accounting-profile name ;
    atm-options {
      cell-bundle-size cells ;
      ilmi;
      linear-red-profiles profile-name {
        high-plp-max-threshold percent ;
        low-plp-max-threshold percent ;
        queue-depth cells high-plp-threshold percent low-plp-threshold percent ;
      }
    }
    mpls {
      pop-all-labels {
        required-depth number ;
      }
    }
  }
}
```

```

    }
  }
  pic-type (atm1 | atm2);
  plp-to-clp;
  promiscuous-mode {
    vpi vpi-identifier ;
  }
  scheduler-maps map-name {
    forwarding-class class-name {
      epd-threshold cells plp1 cells ;
      linear-red-profile profile-name ;
      priority (low | high);
      transmit-weight (cells number | percent number);
    }
    vc-cos-mode (alternate | strict);
  }
  vpi vpi-identifier {
    maximum-vcs maximum-vcs ;
    oam-liveness {
      down-count cells;
      up-count cells;
    }
    oam-period (disable | seconds);
    shaping {
      (cbr rate | rtvbr peak rate sustained rate burst length |
      vbr peak rate sustained rate burst length );
      queue-length number ;
    }
  }
}
}
cellular-options {
  roaming-mode (home only | automatic)
  gsm-options {
    select-profile profile-name;
    profiles {
      profile-name {
        sip-user-id simple-ip-user-id;
        sip-password simple-ip-password;
        access-point-nameapn;
        authentication-method (pap | chap | none)
      }
    }
  }
}
clocking (external | internal);
dce;
description text ;
dialer-options {
  pool pool-identifier ;
  priority priority-number ;
}
disable;
dsl-options {
  loopback local;
  operating-mode mode ;
}

```



```

ds0-options {
    bert-algorithm algorithm ;
    bert-error-rate rate ;
    bert-period seconds ;
    byte-encoding (nx56 | nx64);
    fcs (16 | 32);
    idle-cycle-flag (flags | ones);
    invert data;
    loopback (payload | remote);
    start-end-flag (shared | filler);
}
e1-options {
    bert-algorithm algorithm ;
    bert-error-rate rate ;
    bert-period seconds ;
    fcs (16 | 32);
    framing (g704 | g704-no-crc4 | unframed);
    idle-cycle-flag (flags | ones);
    invert data;
    loopback (local | remote);
    start-end-flag (shared | filler);
    timeslots time-slot-range;
}
e3-options {
    atm-encapsulation (direct | PLCP);
    bert-algorithm algorithm ;
    bert-error-rate rate ;
    bert-period seconds ;
    buildout feet;
    compatibility-mode (digital-link | kentrox | larscom) <subrate value >;
    fcs (16 | 32);
    framing (g.751 | g.832);
    idle-cycle-flag value ;
    loopback (local | remote);
    (payload-scrambler | no-payload-scrambler);
    start-end-flag value ;
    (unframed | no-unframed);
}
encapsulation type ;
ether-vpls-over-atm-llc;
es-options {
    backup-interface es- pim /0/ port ;
}
fabric-options {
    member-interfaces member-interface-name;
}
failure-options {
    [trigger-link-failure interface-name ];
}
fastether-options {
    (flow-control | no-flow-control);
    ingress-rate-limit rate ;
    (loopback | no-loopback);
    mpls {
        pop-all-labels {
            required-depth [ number ];
        }
    }
}

```

```

    }
  }
  redundant-parent interface-name;
  source-address-filter {
    mac-address ;
  }
  (source-filtering | no-source-filtering);
}
flexible-vlan-tagging;
framing (lan-phy | sdh | sonet | wan-phy);
gigether-options {
  (auto-negotiation <remote-fault
(local-interface-online | local-interface-offline)> | no-auto-negotiation);
(flow-control | no-flow-control);
  ignore-l3-incompletes;
  (loopback | no-loopback);
  mpls {
    pop-all-labels {
      required-depth [ number ];
    }
  }
}
redundant-parent interface-name;
source-address-filter {
  mac-address ;
}
(source-filtering | no-source-filtering);
ethernet-switch-profile {
  ethernet-policer-profile {
    input-priority-map {
      ieee802.1p premium [ values ];
    }
    output-priority-map {
      classifier {
        premium {
          forward-class class-name {
            loss-priority (high | low);
          }
        }
      }
    }
  }
  policer cos-policer-name {
    aggregate {
      bandwidth-limit bps ;
      burst-size-limit bytes ;
    }
    premium {
      bandwidth-limit bps ;
      burst-size-limit bytes ;
    }
  }
}
(mac-learn-enable | no-mac-learn-enable);
tag-protocol-id [ tpids ];
}
}
(gratuitous-arp-reply | no-gratuitous-arp-reply);

```

```

hold-time up milliseconds down milliseconds ;
isdn-options {
    calling-number number ;
    incoming-called-number number <reject>;
    pool pool-name <priority priority> ;
    spid1 spid-string ;
    spid2 spid-string ;
    static-tei-val value ;
    switch-type (att5e | etsi | ni1 | ntdms100 | ntt);
    t310 seconds ;
    tei-option (first-call | power-up);
}
keepalives <down-count number > <interval seconds > <up-count number >;
lmi {
    lmi-type (ansi | itu);
    n391dte number ;
    n392dce number ;
    n392dte number ;
    n393dce number ;
    n393dte number ;
    t391dte seconds ;
    t392dce seconds ;
}
mac mac-address ;
mlfr-uni-nni-bundle-options {
    acknowledge-retries number ;
    acknowledge-timer milliseconds ;
    action-red-differential-delay (disable-tx | remove-link);
    drop-timeout milliseconds ;
    fragment-threshold bytes ;
    hello-timer milliseconds ;
    link-layer-overhead percent ;
    lmi-type (ansi | itu);
    minimum-links number ;
    mrru bytes ;
    n391 number ;
    n392 number ;
    n393 number ;
    red-differential-delay milliseconds ;
    t391 seconds ;
    t392 seconds ;
    yellow-differential-delay milliseconds ;
}
modem-options {
    dialin (console | routable);
    init-command-string initialization-command-string ;
}
mtu bytes ;
multiservice-options {
    boot-command filename;
    (core-dump | no-core-dump);
    (syslog | no-syslog);
}
native-vlan-id vlan-id;
no-gratuitous-arp-request;

```

```

no-keepalives;
no-partition {
    interface-type type ;
}
partition partition-number {
    interface-type type ;
    oc-slice oc-slice-range ;
    timeslots time-slot-range ;
}
passive-monitor-mode;
per-unit-scheduler;
ppp-options {
    chap {
        access-profile name;
        default-chap-secret name ;
        local-name name;
        passive;
    }
    compression {
        acfc;
        pfc;
    }
    no-termination-request;
    lcp-restart-timer milliseconds ;
    ncp-restart-timer milliseconds ;
}
redundant-ether-options {
(flow-control | no-flow-control);
link-speed speed;
(loopback | no-loopback);
redundancy-group number;
source-address-filter mac-address;
(source-filtering | no-source-filtering);
}
serial-options {
    clock-rate rate ;
    clocking-mode (dce | internal | loop);
    control-leads {
        control-signal (assert | de-assert | normal);
        cts (ignore | normal | require);
        dcd (ignore | normal | require);
        dsr (ignore | normal | require);
        dtr signal-handling-option ;
        ignore-all;
        indication (ignore | normal | require);
        rts (assert | de-assert | normal);
        tm (ignore | normal | require);
    }
    control-polarity (positive | negative);
    cts-polarity (positive | negative);
    dcd-polarity (positive | negative);
    dsr-polarity (positive | negative);
    dtr-circuit (balanced | unbalanced);
    dtr-polarity (positive | negative);
    encoding (nrz | nrzi);
    indication-polarity (positive | negative);

```

```

line-protocol protocol ;
loopback mode;
rts-polarity (positive | negative);
tm-polarity (positive | negative);
transmit-clock invert;
}
services-options {
  inactivity-timeout seconds ;
  open-timeout seconds ;
  syslog {
    host hostname {
      facility-override facility-name ;
      log-prefix prefix-number ;
      services priority-level ;
    }
  }
}
shdsl-options {
  annex (annex-a | annex-b);
  line-rate line-rate ;
  loopback (local | remote | payload);
  snr-margin {
    current margin ;
    snext margin ;
  }
}
t1-options {
  bert-algorithm algorithm ;
  bert-error-rate rate ;
  bert-period seconds ;
  buildout value ;
  byte-encoding (nx64 | nx56);
  fcs (16 | 32);
  framing (esf | sf);
  idle-cycle-flags (flags | ones);
  invert-data;
  line-encoding (ami | b8zs);
  loopback (local | payload | remote);
  remote-loopback-respond;
  start-end-flag (filler | shared);
  timeslots time-slot-range ;
}
t3-options {
  atm-encapsulation (direct | PLCP);
  bert-algorithm algorithm ;
  bert-error-rate rate ;
  bert-period seconds ;
  buildout feet;
  (cbit-parity | no-cbit-parity);
  compatibility-mode (adtran | digital-link | kentrox | larscom | verilink)
  <subrate value >;
  fcs (16 | 32);
  (feac-loop-respond | no-feac-loop-respond);
  idle-cycle-flag value ;
  (long-buildout | no-long-buildout);
  (loop-timing | no-loop-timing);
}

```

```

    loopback (local | payload | remote);
    (payload-scrambler | no-payload-scrambler);
    start-end-flag value ;
}
threshold bytes ;
traceoptions {
    flag flag < flag-modifier > <disable>;
}
(traps | no-traps);
unit logical-unit-number {
    accept-source-mac {
        mac-address mac-address ;
        policer {
            input policer-name ;
            output policer-name ;
        }
    }
    accounting-profile name ;
    allow-any-vci;
    atm-scheduler-map (default | map-name );
    backup-options {
        interface interface-name ;
    }
    bandwidth rate ;
    cell-bundle-size cells ;
    clear-dont-fragment-bit;
    compression {
        rtp {
            f-max-period number ;
            maximum-contexts number ;
            port {
                maximum port-number ;
                minimum port-number ;
            }
            queues [ queue-numbers ];
        }
    }
    compression-device interface-name ;
    copy-tos-to-outer-ip-header;
    description text ;
    dialer-options {
        activation-delay seconds ;
        callback;
        callback-wait-period seconds ;
        deactivation-delay seconds ;
        dial-string [ dial-string-numbers ];
        idle-timeout seconds ;
        incoming-map (accept-all | caller caller-number );
        initial-route-check seconds ;
        load-interval seconds ;
        load-threshold percent ;
        pool pool-name ;
        redial-delay time ;
        watch-list {
            [ routes ];
        }
    }
}

```

```

}
disable;
disable-mlppp-inner-ppp-pfc;
dlci dlci-identifier ;
drop-timeout milliseconds ;
dynamic-call-admission-control {
    activation-priority number ;
    bearer-bandwidth-limit threshold ;
}
encapsulation ;
(atm-cisco-nlpid | atm-mlppp-llc | atm-nlpid | atm-ppp-llc | atm-ppp-vc-mux |
    atm-snap | atm-vc-mux | ether-over-atm-llc | ether-vpls-over-atm-llc |
    ppp-over-ether-over-atm-llc)
epd-threshold cells plp1 cells ;
f-max-period number ;
family bridge {
    interface-mode {
        access vlan-id vlan-id |
        trunk {
            vlan-id-list vlan-list |
            vlan-rewrite translate from-vlan-id internal-vlan-id
        }
    }
}
fragment-threshold bytes ;
input-vlan-map {
    (pop | pop-pop | pop-swap | push | push-push | swap |
        swap-push | swap-swap);
    inner-tag-protocol-id tpid;
    inner-vlan-id number ;
    tag-protocol-id tpid;
    vlan-id number ;
}
interleave-fragments;
inverse-arp;
(keepalives | no-keepalives);
link-layer-overhead percent ;
minimum-links number ;
mrru bytes ;
multicast-dlci dlci-identifier ;
multicast-vci vpi-identifier.vci-identifier ;
multilink-max-classes number ;
multipoint number ;
multipoint;
oam-liveness {
    up-count cells ;
    down-count cells ;
}
oam-period (disable | seconds );
output-vlan-map {
    (pop | pop-pop | pop-swap | push | push-push | swap |
        swap-push | swap-swap);
    inner-tag-protocol-id tpid;
    inner-vlan-id number ;
    tag-protocol-id tpid;
    vlan-id number ;
}

```

```

}
passive-monitor-mode;
peer-unit unit-number ;
plp-to-clp;
point-to-point;
ppp-options {
    chap {
        access-profile name ;
        default-chap-secret name ;
        local-name name ;
        passive;
    }
    compression {
        acfc;
        pfc;
    }
    lcp-restart-timer milliseconds ;
    loopback-clear-timer seconds ;
    ncp-restart-timer milliseconds ;
    no-termination-request;
    pap;
    access-profile name ;
    default-password password ;
    local-name name ;
    local-password password ;
    passive;
}
}
pppoe-options {
    access-concentrator name ;
    auto-reconnect seconds ;
    service-name name ;
    underlying-interface interface-name ;
}
proxy-arp;
service-domain (inside | outside);
shaping{
    (cbr rate | rtvbr peak rate sustained rate burst length |
    vbr peak rate sustained rate burst length );
    queue-length number ;
}
short-sequence;
three-color-policer {
    input policer-name ;
    output policer-name ;
}
transmit-weight number ;
(traps | no-traps);
trunk-bandwidth rate ;
trunk-id number ;
tunnel {
    backup-destination address ;
    destination address ;
    key number ;
    routing-instance {
        destination routing-instance-name;
    }
}

```



```

    }
    source source-address ;
    ttl number ;
}
vci vpi-identifier.vci-identifier ;
vpi vpi-identifier ;
vlan-id number ;
vlan-tagging native-vlan-id vlan-id;
vlan-tags inner tpid.vlan-id outer tpid.vlan-id ;
family family {
    accounting {
        destination-class-usage;
        source-class-usage {
            direction ;
        }
    }
}
address address {
    arp ip-address (mac | multicast-mac) mac-address <publish>;
    broadcast address ;
    destination address ;
    destination-profile name ;
    eui-64;
    multipoint-destination address dlci dlci-identifier ;
    multipoint-destination address {
        epd-threshold cells ;
        inverse-arp;
        oam-liveness {
            up-count cells ;
            down-count cells ;
        }
        oam-period ( disable | seconds );
        shaping{
            (cbr rate | rtvbr peak rate sustained rate burst length |
            vbr peak rate sustained rate burst length );
            queue-length number ;
        }
        vci vpi-identifier.vci-identifier ;
    }
}
preferred;
primary;
vrrp-group group-number {
    (accept-data | no-accept-data):
    advertise-interval seconds ;
    authentication-type authentication ;
    authentication-key key ;
    fast-interval milliseconds;
    (preempt | no-preempt) {
        hold-time seconds ;
    }
}
priority number ;
track {
    interface interface-name {
        priority-cost priority ;
        bandwidth-threshold bits-per-second {
            priority-cost priority ;
        }
    }
}

```

```

    }
    priority-hold-time seconds ;
  }
  virtual-address [ addresses ];
}
web-authentication {
  http;
}
}
bundle interface-name ;
dhcp {
  client-identifier (ascii ascii | hexadecimal hexadecimal);
  lease-time seconds;
  retransmission-attempt number;
  retransmission-interval seconds;
  server-address ip-address;
  update-server;
  vendor-id vendor-id;
}
dialer filter-name;
filter {
  group filter-group-number;
  input filter-name;
  input-list {
    [filter-names];
  }
  output filter-name ;
  output-list {
    [filter-names];
  }
}
}
keep-address-and-control;
mtu bytes ;
multicast-only;
next-hop-tunnel gateway-address ipsec-vpn vpn-name;
no-redirects;
policer {
  arp policer-template-name;
  input policer-template-name;
  output policer-template-name;
}
primary;
proxy inet-address address ;
receive-options-packets;
receive-ttl-exceeded;
remote (inet-address address | mac-address address);
rpf-check <fail-filter filter-name> {
  <mode loose>;
}
sampling {
  direction ;
}
}
service {
  input {
    service-set service-set-name <service-filter filter-name >;
    post-service-filter filter-name ;
  }
}

```

```

    }
    output {
        service-set service-set-name <service-filter filter-name >;
    }
}
simple-filter{
    input filter-name;
}
(translate-discard-eligible | no-translate-discard-eligible);
(translate-fecn-and-becn | no-translate-fecn-and-becn);
unnumbered-address {
    interface-name ;
    destination destination-address ;
    destination-profile profile-name ;
    preferred-source-address interface-name ;
}
}
}
traceoptions {
    flag flag <disable>;
}
}
traceoptions {
    file filename <files number > <match regular-expression >
    <size maximum-file-size > <world-readable | no-world-readable>;
    flag flag <disable>;
}

```

access-point-name

Syntax	access-point-name <i>apn</i> ;
Hierarchy Level	[edit interfaces <i>interface-name</i> cellular-options gsm-options profiles <i>profile-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure the access point name (APN) provided by the service provider for connection to a Global System for Mobile Communications (GSM) cellular network.</p> <p>This statement is supported on SRX210 devices.</p>
Options	<i>apn</i> —Access point name.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

authentication-method

Syntax	authentication-method (pap chap none);
Hierarchy Level	[edit interfaces <i>interface-name</i> cellular-options gsm-options profiles <i>profile-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Specify the authentication method for connection to a Global System for Mobile Communications (GSM) cellular network. This statement is supported on SRX210 devices.
Options	<p>pap—Password Authentication Protocol.</p> <p>chap—Challenge Handshake Authentication Protocol.</p> <p>none—No authentication method is used.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

bundle

Syntax	bundle;
Hierarchy Level	[edit interfaces <i>interface-name</i> unit <i>logical-unit-number</i> family mlppp]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Specify the logical interface name the link joins. This statement is supported on J Series devices and SRX210 and SRX240 devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

cbr rate

Syntax	cbr rate;
Hierarchy Level	[edit interfaces interface-name atm-options vpi vpi-identifier shaping]
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>For ATM encapsulation only, define a constant bit rate bandwidth utilization in the traffic-shaping profile.</p> <p>This command is supported on SRX210 devices.</p>
Options	<p>CBR Value - Constant bandwidth utilization (range: (33000 – 1199920)</p> <p>CDVT - Cell delay variation tolerance in microseconds (range: 1 – 9999)</p>
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

cellular-options

Syntax

```
cellular-options {
  roaming-mode (home only | automatic)
  gsm-options {
    select-profile profile-name;
    profiles {
      profile-name {
        sip-user-id simple-ip-user-id;
        sip-password simple-ip-password;
        access-point-name apn;
        authentication-method (pap | chap | none);
      }
    }
  }
}
```

Hierarchy Level [edit interfaces *interface-name*]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Configure options for connecting a 3G wireless modem interface to a cellular network.

This statement is supported on SRX210 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

client-identifier

Syntax	<code>client-identifier (ascii <i>ascii</i> hexadecimal <i>hexadecimal</i>);</code>
Hierarchy Level	<code>[edit interfaces <i>interface-name</i> unit <i>logical-unit-number</i> family inet dhcp]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify an ASCII or hexadecimal identifier for the Dynamic Host Configuration Protocol (DHCP) client. The DHCP server identifies a client by a client-identifier value. This statement is supported on J Series and SRX Series devices.
Options	<code>ascii <i>ascii</i></code> —Identifier consisting of ASCII characters. <code>hexadecimal <i>hexadecimal</i></code> —Identifier consisting of hexadecimal characters.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Administration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

dhcp

Syntax	<pre>dhcp { client-identifier (ascii <i>ascii</i> hexadecimal <i>hexadecimal</i>); lease-time <i>seconds</i> ; retransmission-attempt <i>number</i> ; retransmission-interval <i>seconds</i> ; server-address <i>ip-address</i> ; update-server; vendor-id <i>vendor-id</i> ; }</pre>
Hierarchy Level	<code>[edit interfaces <i>interface-name</i> unit <i>logical-unit-number</i> family <i>family</i>]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Configure the Dynamic Host Configuration Protocol (DHCP) client. This statement is supported on J Series and SRX Series devices.
Options	The statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Administration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

encapsulation

Syntax	encapsulation (atm-cisco-nlpid atm-mlppp-llc atm-nlpid atm-ppp-llc atm-ppp-vc-mux atm-snap atm-vc-mux ether-over-atm-llc ether-vpls-over-atm-llc ppp-over-ether-over-atm-llc)
Hierarchy Level	[edit interfaces <i>interface-name</i> unit <i>logical-unit-number</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Specifies logical link layer encapsulation. atm-mlppp-llc—Configure MLPPP over AAL5/LLC. This statement is supported on J Series devices and SRX210 and SRX240 devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

fabric-options

Syntax	fabric-options { member-interfaces <i>member-interface-name</i> ; }
Hierarchy Level	[edit interfaces <i>interface-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Configure fabric interface properties. This statement is supported on J Series and SRX Series devices.
Options	The remaining statement is explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

family bridge

Syntax

```
family bridge {
  interface-mode {
    access vlan-id vlan-id |
    trunk {
      vlan-id-list vlan-list |
      vlan-rewrite translate from-vlan-id internal-vlan-id
    }
  }
}
```

Hierarchy Level [edit interfaces *interface* unit *unit*]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Configure a Layer 2 logical interface.



NOTE: If a physical interface has a bridge family logical interface, it cannot have any other family type in its logical interfaces.

This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.

Options interface-mode—Either **access** or **trunk**:

- An access mode interface accepts untagged packets, assigns the specified VLAN identifier to the packet, and forwards the packet within the bridge domain that is configured with the matching VLAN identifier.
- A trunk mode interface accepts any packet tagged with a VLAN identifier that matches a specified list of VLAN identifiers.

vlan-rewrite translate—Rewrites the *from-vlan-id* VLAN identifier with the *internal-vlan-id* in packets arriving on a Layer 2 trunk port. The *internal-vlan-id* must be in the *vlan-list* for the trunk port.



NOTE: The *from-vlan-id* and *internal-vlan-id* must not be the same VLAN identifier configured with the **native-vlan-id** statement for the trunk port.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

flow-control

Syntax	(flow-control no-flow-control);
Hierarchy Level	[edit interfaces <i>interface-name</i> fastether-options], [edit interfaces <i>interface-name</i> gigheter-options], [edit interfaces <i>interface-name</i> redundant-ether-options]
Release Information	Statement modified in Release 9.0 of JUNOS Software.
Description	For Fast Ethernet, Gigabit Ethernet, and redundant Ethernet interfaces only, explicitly enable flow control, which regulates the flow of packets from the device to the remote side of the connection. Enabling flow control is useful when the device is a Gigabit Ethernet switch. Flow control is not supported on the 4-port Fast Ethernet ePIM. This statement is supported on J Series and SRX Series devices.
Default	Flow control is the default behavior.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

fpc

Syntax	fpc;
Hierarchy Level	[edit interfaces pic-set pic-set-name]
Release Information	Command introduced in Release 9.6 of JUNOS Software.
Description	Sets the PIC bundle and the and the FPC slot. This statement is supported on SRX5600 and SRX5800 devices..
Options	<i>apply-groups</i> — Groups from which to inherit configuration data. <i>apply-groups-except</i> — Do not inherit configuration data from these groups.
Usage Guidelines	For configuration instructions and examples, see the JUNOS Software Security Configuration Guide.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

gsm-options

Syntax

```
gsm-options {
  select-profile profile-name;
  profiles {
    profile-name {
      sip-user-id simple-ip-user-id;
      sip-password simple-ip-password;
      access-point-name apn;
      authentication-method (pap | chap | none);
    }
  }
}
```

Hierarchy Level [edit interfaces *interface-name* cellular-options]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Configure the 3G wireless modem interface to establish a data call with a Global System for Mobile Communications (GSM) cellular network.

This statement is supported on SRX210 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

interface (PIC Bundle)

Syntax	<code>interface interface-name;</code>
Hierarchy Level	[edit interfaces pic-set pic-set-name]
Release Information	Command introduced in Release 9.6 of JUNOS Software.
Description	Sets the PIC bundle and the interface. This statement is supported on SRX5600 and SRX5800 devices.
Options	<i>apply-groups</i> —Groups from which to inherit configuration data. <i>apply-groups-except</i> —Do not inherit configuration data from these groups.
Usage Guidelines	For configuration instructions and examples, see the JUNOS Software Security Configuration Guide.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

lease-time

Syntax	<code>lease-time seconds ;</code>
Hierarchy Level	[edit interfaces <i>interface-name</i> unit <i>logical-unit-number</i> family inet dhcp]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the time to negotiate and exchange Dynamic Host Configuration Protocol (DHCP) information. This statement is supported on J Series and SRX Series devices.
Options	<i>seconds</i> —Request time to negotiate and exchange information. Range: 60 through 2147483647 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Administration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

link-speed

Syntax	link-speed <i>speed</i> ;
Hierarchy Level	[edit interfaces <i>interface-name</i> redundant-ether-options]
Release Information	Statement modified in Release 9.0 of JUNOS Software.
Description	For redundant Ethernet interfaces (reth0) in a chassis cluster only, set the required link speed. This statement is supported on J Series and SRX Series devices.
Options	<i>speed</i> —For redundant Ethernet links, you can specify <i>speed</i> in bits per second either as a complete decimal number or as a decimal number followed by the abbreviation k (1000), m (1,000,000), or g(1,000,000,000).
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

loopback

Syntax	(loopback no-loopback);
Hierarchy Level	[edit interfaces <i>interface-name</i> redundant-ether-options]
Release Information	Statement modified in Release 9.0 of JUNOS Software.
Description	For Fast Ethernet, Gigabit Ethernet, and redundant Ethernet interfaces, enable or disable loopback mode. This statement is supported on J Series and SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

member-interfaces

Syntax	<code>member-interfaces <i>member-interface-name</i> ;</code>
Hierarchy Level	<code>[edit interfaces <i>interface-name</i> fabric-options]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the member interface name. Member interfaces that connect to each other must be of the same type. This statement is supported on J Series and SRX Series devices.
Options	<i>member-interface-name</i> —Member interface name.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

native-vlan-id

Syntax	<code>native-vlan-id <i>vlan-id</i>;</code>
Hierarchy Level	<code>[edit interfaces <i>interface</i>]</code>
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Configure VLAN identifier for untagged packets received on the physical interface of a trunk mode interface. This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.
Options	<i>vlan-id</i> —Configures a VLAN identifier for untagged packets. Enter a number from 0 through 4094.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration

next-hop-tunnel

Syntax	<code>next-hop-tunnel <i>gateway-address</i> ipsec-vpn <i>vpn-name</i> ;</code>
Hierarchy Level	<code>[edit interfaces <i>interface-name</i> unit <i>logical-unit-number</i> family inet]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	For the secure tunnel (st) interface, create entries in the Next-Hop Tunnel Binding (NHTB) table, which is used to map the next-hop gateway IP address to a particular IP Security (IPsec) Virtual Private Network (VPN) tunnel. NHTB allows the binding of multiple IPsec VPN tunnels to a single IPsec tunnel interface. This statement is supported on J Series and SRX Series devices.
Options	<code><i>gateway-address</i></code> —Next-hop gateway IP address. <code>ipsec-vpn <i>vpn-name</i></code> —VPN to which the next-hop gateway IP address is mapped.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

no-flow-control

See `flow-control`

no-loopback

See `loopback`

no-source-filtering

See `source-filtering`

profiles

Syntax

```
profiles {
  profile-name {
    sip-user-id simple-ip-user-id;
    sip-password simple-ip-password;
    access-point-name apn;
    authentication-method (pap | chap | none);
  }
}
```

Hierarchy Level [edit interfaces *interface-name* cellular-options gsm-options]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Configure a profile to establish a data call with a Global System for Mobile Communications (GSM) cellular network. You can configure up to 16 profiles.

This statement is supported on SRX210 devices.

Options *profile-name*—Name of the profile.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

redundancy-group

Syntax	<code>redundancy-group <i>number</i> ;</code>
Hierarchy Level	<code>[edit interfaces <i>interface-name</i> redundant-ether-options]</code>
Release Information	Statement introduced in Release 9.0 of JUNOS Software.
Description	Specify the redundancy group that a redundant Ethernet interface belongs to. This statement is supported on J Series and SRX Series devices.
Options	<i>number</i> —Number of the redundancy group that the redundant interface belongs to. Failover properties of the interface are inherited from the redundancy group. Range: 1 through 255
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> . See also .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

redundant-ether-options

Syntax	<code>redundant-ether-options { (flow-control no-flow-control); link-speed <i>speed</i> ; (loopback no-loopback); redundancy-group <i>number</i> ; source-address-filter <i>mac-address</i> ; (source-filtering no-source-filtering); }</code>
Hierarchy Level	<code>[edit interfaces <i>interface-name</i>]</code>
Release Information	Statement introduced in Release 9.0 of JUNOS Software.
Description	Configure Ethernet redundancy options for a chassis cluster. This statement is supported on J Series and SRX Series devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

redundant-parent

See the following sections:

- `redundant-parent` (Fast Ethernet Options) on page 154
- `redundant-parent` (Gigabit Ethernet Options) on page 154

redundant-parent (Fast Ethernet Options)

Syntax	<code>redundant-parent interface-name ;</code>
Hierarchy Level	[edit interfaces <i>interface-name</i> fastether-options]
Release Information	Statement introduced in Release 9.0 of JUNOS Software.
Description	Configure Fast Ethernet-specific interface properties for Ethernet redundancy in a chassis cluster. This statement is supported on J Series and SRX Series devices.
Options	<i>interface</i> —Parent redundant interface of the Fast Ethernet interface.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<i>interface</i> —To view this statement in the configuration. <i>interface-control</i> —To add this statement to the configuration.

redundant-parent (Gigabit Ethernet Options)

Syntax	<code>redundant-parent interface-name ;</code>
Hierarchy Level	[edit interfaces <i>interface-name</i> ggether-options]
Release Information	Statement introduced in Release 9.0 of JUNOS Software.
Description	Configure Gigabit Ethernet-specific interface properties for Ethernet redundancy in a chassis cluster. This statement is supported on J Series and SRX Series devices.
Options	<i>interface</i> —Parent redundant interface of the Gigabit Ethernet interface.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<i>interface</i> —To view this statement in the configuration. <i>interface-control</i> —To add this statement to the configuration.

retransmission-attempt

Syntax	<code>retransmission-attempt <i>number</i> ;</code>
Hierarchy Level	<code>[edit interfaces <i>interface-name</i> unit <i>logical-unit-number</i> family inet dhcp]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the number of times the device attempts to retransmit a Dynamic Host Control Protocol (DHCP) packet fallback. This statement is supported on J Series and SRX Series devices.
Options	<i>number</i> —Number of attempts to retransmit the packet. Range: 0 through 6 Default: 4
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Administration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

retransmission-interval

Syntax	<code>retransmission-interval <i>seconds</i> ;</code>
Hierarchy Level	<code>[edit interfaces <i>interface-name</i> unit <i>logical-unit-number</i> family inet dhcp]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the time between successive retransmission attempts. This statement is supported on J Series and SRX Series devices.
Options	<i>seconds</i> —Number of seconds between successive retransmission. Range: 4 through 64 seconds Default: 4 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Administration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

roaming-mode

Syntax	roaming-mode (home-only automatic)
Hierarchy Level	[edit interfaces <i>interface-name</i> cellular-options]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Specifies whether the 3G wireless modem interface can access networks other than the home network. This statement is supported on SRX210 devices.
Options	home-only—No roaming is allowed. automatic—Allows access to networks other than the home network. This is the default.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

select-profile

Syntax	select-profile <i>profile-name</i>
Hierarchy Level	[edit interfaces <i>interface-name</i> cellular-options gsm-options]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Select the active profile to establish a data call with a Global System for Mobile Communications (GSM) cellular network. This statement is supported on SRX210 devices.
Options	<i>profile-name</i> —Name of a configured profile that is to be used to establish a data call.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

server-address

Syntax	<code>server-address ip-address ;</code>
Hierarchy Level	[edit interfaces <i>interface-name</i> unit <i>logical-unit-number</i> family inet dhcp]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the preferred DHCP server address that is sent to DHCP clients. This statement is supported on J Series and SRX Series devices.
Options	<i>ip-address</i> —DHCP server address.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Administration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

simple-filter

Syntax	<code>simple-filter{ input <i>filter-name</i>; }</code>
Hierarchy Level	[edit interfaces <i>interfaces-name</i> unit <i>logical-unit-number</i> family inet]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Apply a simple filter to an interface. You can apply simple filters to the family inet only, and only in the input direction. This statement is supported on SRX210 devices.
Options	input <i>filter-name</i> : Name of one filter to evaluate when packets are received on the interface.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

sip-password

Syntax	<code>sip-password <i>simple-ip-password</i>;</code>
Hierarchy Level	[edit interfaces <i>interface-name</i> cellular-options gsm-options profiles <i>profile-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure the password provided by the service provider for connection to a Global System for Mobile Communications (GSM) cellular network.</p> <p>This statement is supported on SRX210 devices.</p>
Options	<i>simple-ip-password</i> —Password.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

sip-user-id

Syntax	<code>sip-user-id <i>simple-ip-user-id</i>;</code>
Hierarchy Level	[edit interfaces <i>interface-name</i> cellular-options gsm-options profiles <i>profile-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure the username provided by the service provider for connection to a Global System for Mobile Communications (GSM) cellular network.</p> <p>This statement is supported on SRX210 devices.</p>
Options	<i>simple-ip-user-id</i> —Username.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

source-address-filter

Syntax	<code>source-address-filter <i>mac-address</i> ;</code>
Hierarchy Level	<code>[edit interfaces <i>interface-name</i> redundant-ether-options]</code>
Release Information	Statement modified in Release 9.0 of JUNOS Software.
Description	<p>For redundant Ethernet interfaces, specify the MAC addresses from which the interface can receive packets. For this statement to have any effect, you must include the <code>source-filtering</code> statement in the configuration to enable source address filtering.</p> <p>Be sure to update the MAC address if the remote Ethernet card is replaced. Replacing the interface card changes the MAC address. Otherwise, the interface cannot receive packets from the new card.</p> <p>This statement is supported on J Series devices.</p>
Options	<p><i>mac-address</i> —MAC address filter. You can specify the MAC address as six hexadecimal bytes in one of the following formats: <i>nn:nn:nn:nn:nn:nn</i> (for example, 00:11:22:33:44:55) or <i>nnnn:nnnn:nnnn</i> (for example, 0011.2233.4455). You can configure up to 64 source addresses. To specify more than one address, include multiple <i>mac-address</i> options in the <code>source-address-filter</code> statement.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> . See also <code>source-filtering</code> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

source-filtering

Syntax	(source-filtering no-source-filtering);
Hierarchy Level	[edit interfaces <i>interface-name</i> redundant-ether-options]
Release Information	Statement modified in Release 9.0 of JUNOS Software.
Description	<p>For redundant Ethernet interfaces, enable the filtering of MAC source addresses, which blocks all incoming packets to that interface. To allow the interface to receive packets from specific MAC addresses, include the source-address-filter statement.</p> <p>If the remote Ethernet card is changed, the interface cannot receive packets from the new card because it has a different MAC address.</p> <p>By default, source address filtering is disabled.</p> <p>This statement is supported on J Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> . See also source-address-filter .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

update-server

Syntax	update-server;
Hierarchy Level	[edit interfaces <i>interface-name</i> unit <i>logical-unit-number</i> family inet dhcp]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Propagate DHCP options to a local DHCP server.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Administration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

vbr rate

Syntax	<code>vbr rate;</code>
Hierarchy Level	[edit interfaces interface-name atm-options vpi vpi-identifier shaping]
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	For ATM encapsulation only, define a variable bit rate bandwidth utilization in the traffic-shaping profile. This command is supported on the SRX210 devices.
Options	Burst Size - The maximum burst size that can be sent at the peak rate. Peak Rate - The maximum instantaneous rate at which the user will transmit. Sustained Rate - The average rate as measured over a long interval. CDVT - Cell Delay Variation Tolerance in microseconds (range: 1 – 9999).
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

vendor-id

Syntax	<code>vendor-id vendor-id ;</code>
Hierarchy Level	[edit interfaces interface-name unit logical-unit-number family inet dhcp]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Configure a vendor class ID for the Dynamic Host Configuration Protocol (DHCP) client. This statement is supported on J Series and SRX Series devices.
Options	<i>vendor-id</i> —vendor class ID.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Administration Guide</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

vlan-tagging

Syntax	vlan-tagging native-vlan-id <i>vlan-id</i> ;
Hierarchy Level	[edit interfaces <i>interface</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure VLAN identifier for untagged packets received on the physical interface of a trunk mode interface.</p> <p>This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.</p>
Options	native-vlan-id—Configures a VLAN identifier for untagged packets. Enter a number from 0 through 4094.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

web-authentication

Syntax	web-authentication { http; }
Hierarchy Level	[edit interfaces <i>interface-name</i> unit <i>logical-unit-number</i> family inet address <i>address</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable the Web authentication process for firewall user authentication.</p> <p>http—Enable HTTP service.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

Chapter 12

Power Over Ethernet Hierarchy and Statements

This chapter includes the following sections:

- [edit poe] Configuration Statement Hierarchy
- disable
- duration
- guard-band
- interface
- interval
- management
- maximum-power
- priority
- telemetries

[edit poe] Configuration Statement Hierarchy

```
Syntax  poe {
          management type;
          guard-band watts;
          interface (all | interface-name) {
            disable ;
            maximum-power watts ;
            priority value;
            telemetries {
              disable;
              duration hours;
              interval minutes;
            }
          }
        }
```

disable

Syntax disable

Hierarchy Level [edit poe interface (all | interface-name)],
[edit poe interface (all | interface-name) telemetries]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Disables the PoE capabilities of the port. If PoE capabilities are disabled for a port, the port operates as a standard network access port. If the disable statement is specified after the telemetries statement, logging of PoE power consumption for the port is disabled. To disable monitoring and retain the stored interval and duration values for possible future use, you can specify the disable sub statement in the sub stanza for telemetries. Similarly for retaining the port configuration but disabling the PoE feature on the port, disable can be used in sub stanza for interface.

This statement is supported on SRX240 devices.

Default The PoE capabilities are automatically enabled when a PoE interface is set. Specifying the telemetries statement enables monitoring of PoE per-port power consumption

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

duration

Syntax	duration hours;
Hierarchy Level	[edit poe interface (all interface-name) telemetries]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Modifies the duration for which telemetry records are stored. If telemetry logging continues beyond the specified duration, the older records are discarded one by one as new records are collected.</p> <p>This statement is supported on SRX240 devices.</p>
Options	<p>hours— Hours for which telemetry data should be retained.</p> <p>Range — 1 through 24 hours</p> <p>Default— 1 hour</p>
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

guard-band

Syntax	guard-band watts;
Hierarchy Level	[edit poe]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Reserves the specified amount of power for the SRX Series device in case of a spike in PoE consumption.</p> <p>This statement is supported on SRX240 devices.</p>
Options	<p>watts—Amount of power to be reserved for the SRX Series device in case of a spike in PoE consumption.</p> <p>Range — 0 through 19 W</p> <p>Default— 0 W</p>
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

interface

Syntax interface (all | interface-name) {
 disable;
 maximum-power watts;
 priority value;
 telemetries {
 disable;
 interval minutes;
 duration hours;
 }
 }

Hierarchy Level [edit poe]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Enables a PoE interface for a PoE port. The PoE interface must be enabled in order for the port to provide power to a connected powered device

This statement is supported on SRX240 devices.

Default The PoE interface is enabled by default

Options all— Applies the configuration to all interfaces on the SRX Series device that have not been explicitly configured otherwise.

interface-name— Explicitly configures a specific interface.

Required Privilege Level interface—To view this statement in the configuration.
 interface-control—To add this statement to the configuration.
 The remaining statements are explained separately.

interval

Syntax	interval minutes;
Hierarchy Level	[edit poe interface (all interface-name) telemetries]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Modifies the interval for logging telemetries if you are monitoring the per-port power consumption for PoE interfaces.</p> <p>This statement is supported on SRX240 devices.</p>
Options	<p>minutes—Interval at which data is logged.</p> <p>Range —1 through 30 minutes</p> <p>Default — 5 minutes</p>
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

management

Syntax	management type;
Hierarchy Level	[edit poe]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Designates how the SRX Series device allocates power to the PoE ports.</p> <p>This statement is supported on SRX240 devices.</p>
Default	static
Options	<p>type—Management type:</p> <p>static—When a powered device is connected to a PoE port, the power allocated to it is equal to the maximum power configured for the port.</p> <p>class—When a powered device is connected to a PoE port, the power allocated to it is equal to the maximum power for the class as defined by the IEEE 802.3 AF standard.</p>
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

maximum-power

Syntax	maximum-power watts;
Hierarchy Level	[edit poe interface (all interface-name)]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Maximum amount of power that can be supplied to the port</p> <p>This statement is supported on SRX240 devices.</p>
Default	15.4 W
Options	<p>Watts</p> <p>Range —0 through 15.4</p> <p>Default—15.4 W</p>
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

priority

Syntax	priority value;
Hierarchy Level	[edit poe interface (all interface-name)]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Sets the priority of individual ports. When it is not possible to maintain power to all connected ports, lower-priority ports are powered off before higher priority ports. When a new device is connected on a higher-priority port, a lower-priority port will be powered off automatically if available power is insufficient to power on the higher-priority port. Note that for ports with the same priority configuration, ports on the left are given higher priority than the ports on the right.</p> <p>This statement is supported on SRX240 devices.</p>
Default	low
Options	<p>value—high or low:</p> <p>high—Specifies that this port is to be treated as high priority in terms of power allocation</p> <p>low—Specifies that this port is to be treated as low priority in terms of power allocation.</p>
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

telemetries

Syntax telemetries {
 disable;
 duration hours;
 interval minutes;
 }

Hierarchy Level [edit poe interface (all | interface-name)]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Allows logging of per-port PoE power consumption. The telemetries section must be explicitly specified to enable logging. If left unspecified, telemetries is disabled by default.

 This statement is supported on SRX240 devices.

Default If the telemetries statement is specified, logging is enabled with the default values for interval and duration.

Required Privilege Level interface—To view this statement in the configuration.
 interface-control—To add this statement to the configuration.

Related Topics ■ Power Over Ethernet Hierarchy and Statements on page 163

Chapter 13

Policy-Options Hierarchy and Statements

This chapter presents the complete **policy-options** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Where applicable, the chapter also provides a summary for each statement in the hierarchy that is exclusive to J Series and SRX Series devices. Statement summaries are organized alphabetically.

Use the statements in the **policy-options** configuration hierarchy to configure routing policies that control the information from routing protocols that the device imports into its routing table and exports to its neighbors. For configuration instructions, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

For information about **policy-options** statements that are not explained here—statements that are shared across Juniper Networks devices—see the *JUNOS Policy Framework Configuration Guide*.

This chapter contains the following sections:

- Policy-Options Configuration Statement Hierarchy on page 171

Policy-Options Configuration Statement Hierarchy

To configure policy options, use the following statements at the [edit **policy-options**] hierarchy level. Statements exclusively for J Series and SRX Series devices running JUNOS Software are shown in bold font and are documented in this chapter.

Shared JUNOS statements in the **policy-options** hierarchy are shown in normal font and are documented in the *JUNOS Policy Framework Configuration Guide*.

```
policy-options {
  as-path name regular-expression ;
  as-path-group group-name;
  community name {
    invert-match;
    members [ community-ids];
  }
  condition condition-name {
    if-route-exists address table table-name;
    route-active-on (node0 | node1);
  }
  damping name{
    disable;
    half-life minutes;
```

```

    max-suppress minutes;
    reuse number;
    suppress number;
}
policy-statement policy-name {
  term term-name {
    default-action (accept | reject);
    from {
      family family-name;
      match-conditions;
      policy subroutine-policy-name;
      prefix-list name;
      route-filter destination-prefix match-type <actions>;
      source-address-filter destination-prefix match-type <actions>;
    }
    to {
      match-conditions;
      policy subroutine-policy-name;
    }
    then actions;
  }
}
prefix-list name {
  ip-addresses;
}
}

```

condition

Syntax `condition condition-name {
 if-route-exists address table table-name ;
 route-active-on (node0 | node1);
}`

Hierarchy Level [edit policy-options]

Release Information Statement introduced in Release 9.0 of JUNOS Software.

Description For chassis cluster configurations, specify the match condition for use in routing to a redundant Ethernet (reth) interface.

This statement is supported on J Series and SRX Series devices.

Options *condition-name* —Name of the routing policy match condition.

The remaining statement is explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level routing—To view this statement in the configuration.
 routing-control—To add this statement to the configuration.

route-active-on

Syntax	route-active-on (node0 node1);
Hierarchy Level	[edit policy-options condition <i>condition-name</i>]
Release Information	Statement introduced in Release 9.0 of JUNOS Software.
Description	<p>For chassis cluster configurations, identify the device (node) on which a route is active.</p> <p>This statement is supported on J Series devices.</p>
Options	node0 node1—Node in a chassis cluster.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

Chapter 14

Protocols Hierarchy and Statements

This chapter presents the complete **protocols** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software.

Use the statements in the **protocols** configuration hierarchy to configure routing protocols, including Intermediate System-to-Intermediate System (IS-IS), Open Shortest Path First (OSPF), Routing Information Protocol (RIP), Routing Information Protocol Next Generation (RIPng), and Border Gateway Protocol (BGP), and Layer 2 address learning and forwarding properties. For configuration instructions, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

For information about these **protocols** statements that are shared across Juniper Networks devices, see the *JUNOS Routing Protocols Configuration Guide* and the *JUNOS Services Interfaces Configuration Guide*.

This chapter contains the following sections:

- Protocols Configuration Statement Hierarchy on page 175

Protocols Configuration Statement Hierarchy

To configure protocols, use the following statements at the **[edit protocols]** hierarchy level. Statements exclusively for SRX Series devices running JUNOS Software are shown in bold font and are documented in this chapter.

Shared JUNOS statements in the **protocols** hierarchy are shown in normal font and are documented in the *JUNOS Routing Protocols Configuration Guide*, the *JUNOS MPLS Applications Configuration Guide*, the *JUNOS Multicast Protocols Configuration Guide*, and the *JUNOS Services Interfaces Configuration Guide*.

```
protocols {
  bfd {
    traceoptions {
      file filename <files number> <match regular-expression>
      <size maximum-file-size> <world-readable | no-world-readable>;
      flag flag ;
    }
  }
  bgp {
    accept-remote-nexthop;
    advertise-inactive;
    advertise-peer-as;
    authentication-algorithm algorithm ;
```

```

authentication-key key ;
authentication-key-chain key-chain ;
bfd-liveness-detection {
    detection-time {
        threshold milliseconds ;
    }
    holddown-interval milliseconds;
    local-address ip-address ;
    minimum-interval milliseconds ;
    minimum-receive-interval milliseconds ;
    minimum-receive-ttl milliseconds ;
    multiplier number ;
    neighbor address ;
    transmit-interval {
        minimum-interval milliseconds ;
        threshold milliseconds ;
    }
    version (0 | 1);
}
cluster cluster-identifier;
damping;
description text-description ;
disable;
export [ policy-name ];
family {
    (inet | inet-mvpn | inet-vpn | inet6 | inet6-mvpn | inet6-vpn | iso-vpn | l2-vpn) {
        (any | flow | multicast | unicast | signaling) {
            prefix-limit {
                maximum number ;
                teardown < percentage > <idle-timeout (forever | minutes )>;
            }
            rib-group group-name ;
        }
        labeled-unicast {
            aggregate-label {
                community community-name :
            }
            explicit-null {
                connected-only;
            }
            per-group-label;
            prefix-limit {
                maximum number ;
                teardown < percentage > <idle-timeout (forever | minutes )>;
            }
            resolve-vpn;
            rib inet.3;
            rib-group group-name ;
            traffic-statistics {
                file filename <files number > <match regular-expression >
                <size maximum-file-size > <world-readable | no-world-readable>;
                interval seconds ;
            }
        }
    }
}
route-target {

```



```

        advertise-default;
        external-paths number ;
        prefix-limit {
            maximum number ;
            teardown < percentage > <idle-timeout (forever | minutes )>;
        }
    }
}
graceful-restart {
    disable;
    restart-time seconds ;
    stale-routes-time seconds ;
}
group group-name {
    bgp-options ;
    peer-as autonomous-system ;
    type type ;
    neighbor address ;
}
hold-time seconds ;
import [ policy-name ];
include-mp-next-hop;
keep (all | none);
local-address address ;
local-as autonomous-system <private> <loops loops >;
local-preference local-preference ;
log-updown;
metric-out ( metric | minimum-igp < offset > | igp < offset >);
multihop < ttl-value >;
no-advertise-peer-as;
no-agggregator-id;
no-client-reflect;
out-delay seconds ;
passive;
path-selection {
    (always-compare-med | cisco-non-deterministic | external-router-id);
    med-plus-igp {
        igp-multiplier number ;
        med-multiplier number ;
    }
}
peer-as autonomous-system ;
preference preference ;
remove-private;
tcp-mss segment-size ;
traceoptions {
    file filename <files number > <no-stamp> <replace>
    <size maximum-file-size > <world-readable | no-world-readable>;
    flag flag < flag-modifier > <disable>;
}
vpn-apply-export;
}
connections {
    interface-switch interface-switch-name {
        interface interface-name ;
    }
}

```

```

lsp-switch lsp-switch-name {
    receive-lsp path-name ;
    transmit-lsp path-name ;
}
remote-interface-switch {
    interface interface-name ;
    receive-lsp path-name ;
    transmit-lsp path-name ;
}
}
dot1x {
    authenticator {
        authentication-profile-name profile-name ;
        interface interface-name {
            disable;
            guest-vlan vlan-name ;
            maximum-requests request-number ;
            quiet-period seconds ;
            (reauthentication seconds | no-reauthentication);
            retries number ;
            server-timeout seconds ;
            suppliant (multiple | single | single-secure);
            suppliant-timeout seconds ;
            transmit-period seconds ;
        }
        static mac-address {
            interface interface-name ;
            vlan-assignment address ;
        }
    }
}
traceoptions {
    file filename <files number > <no-stamp> <replace>
    <size maximum-file-size > <world-readable | no-world-readable>;
    flag flag <disable>;
}
}
dvmrp {
    disable;
    export [ policy-name ];
    import [ policy-name ];
    interface interface-name {
        disable;
        hold-time seconds ;
        metric value ;
        mode (forwarding | unicast-routing);
    }
    rib-group group-name ;
    traceoptions {
        file filename <files number > <no-stamp> <replace>
        <size maximum-file-size > <world-readable | no-world-readable>;
        flag flag <flag-modifier > <disable>;
    }
}
}
esis {
    disable;
    graceful-restart {

```

```

        disable;
        restart-duration seconds ;
    }
    interface ( interface-name | all) {
        disable;
        end-system-configuration-timer seconds ;
        hold-time seconds ;
    }
    preference preference ;
    traceoptions {
        file filename <files number > <no-stamp> <replace> <size maximum-file-size
        >
        <world-readable | no-world-readable>;
        flag flag < flag-modifier > <disable>;
    }
}
gvrp {
    disable;
    interface interface-name {
        disable;
    }
    join-timer milliseconds ;
    leave-timer milliseconds ;
    leaveall-timer milliseconds ;
}
igmp {
    accounting;
    interface interface-name {
        (accounting | no-accounting);
        disable;
        immediate-leave;
        promiscuous-mode;
        ssm-map ssm-map ;
        static {
            group group-address {
                source source-address ;
            }
        }
        version number ;
    }
    query-interval seconds ;
    query-last-member-interval seconds ;
    query-response-interval seconds ;
    robust-count robust-count ;
    traceoptions {
        file filename <files number > <no-stamp> <replace> <size maximum-file-size
        >
        <world-readable | no-world-readable>;
        flag flag < flag-modifier > <disable>;
    }
}
igmp-snooping {
    traceoptions {
        file filename <files number > <no-stamp> <replace> <size maximum-file-size
        >
        <world-readable | no-world-readable> <match regex>;
    }
}

```

```

    flag flag ;
}
vlan ( vlan-id | vlan-number {
    disable;
    immediate-leave;
    interface interface-name {
        multicast-router-interface;
        static {
            group ip-address ;
        }
    }
    query-interval seconds ;
    query-last-member-interval seconds ;
    query-response-interval seconds ;
    robust-count number ;
}
}
isis {
    clns-routing;
    disable;
    export [ policy-names ];
    graceful-restart {
        disable;
        helper-disable;
        restart-duration seconds ;
    }
    ignore-attached-bit;
    interface (all | interface-name ) {
        bfd-liveness-detection {
            detection-time {
                threshold milliseconds ;
            }
            minimum-interval milliseconds ;
            minimum-receive-interval milliseconds ;
            transmit-interval {
                minimum-interval milliseconds ;
                threshold milliseconds ;
            }
            multiplier number ;
            version (1 | automatic);
        }
        checksum;
        csnp-interval ( seconds | disable);
        disable;
        hello-padding (adaptive | loose | strict);
        ldp-synchronization {
            disable;
            hold-time seconds ;
        }
        level level-number {
            disable;
            hello-authentication-key key;
            hello-authentication-type authentication ;
            hello-interval seconds ;
            hold-time seconds ;
            ipv4-multicast-metric number ;

```

```

        ipv6-multicast-metric number ;
        ipv6-unicast-metric number ;
        metric metric ;
        passive;
        priority number ;
        te-metric metric ;
    }
    lsp-interval milliseconds ;
    mesh-group ( value | blocked);
    no-adjacency-down-notification;
    no-ipv4-multicast;
    no-ipv6-multicast;
    no-ipv6-unicast;
    no-unicast-topology;
    passive;
    point-to-point;
}
label-switched-path name level level metric metric ;
level level-number {
    authentication-key key ;
    authentication-type authentication ;
    disable;
    external-preference preference ;
    no-csnp-authentication;
    no-hello-authentication;
    no-psnp-authentication;
    preference preference ;
    prefix-export-limit number ;
    wide-metrics-only;
}
loose-authentication-check;
lsp-lifetime seconds ;
no-adjacency-holddown;
no-authentication-check;
no-ipv4-routing;
no-ipv6-routing;
overload {
    advertise-high-metrics;
    timeout seconds ;
}
reference-bandwidth reference-bandwidth ;
rib-group {
    inet group-name ;
    inet6 group-name ;
}
spf-options {
    delay milliseconds ;
    holddown milliseconds ;
    rapid-runs number ;
}
topologies {
    ipv4-multicast;
    ipv6-unicast;
}
traceoptions {

```

```

    file filename <files number> <no-stamp> <replace> <size maximum-file-size
    >
    <world-readable | no-world-readable>;
    flag flag <flag-modifier> <disable>;
  }
  traffic-engineering {
    disable;
    ipv4-multicast-rpf-routes;
    shortcuts <ignore-lsp-metrics>;
  }
}
l2-learning {
  global-mac-limit limit {
    packet-action-drop
  }
  global-mac-table-aging-time seconds;
  global-no-mac-learning;
}
l2circuit {
  local-switching {
    interface interface-name {
      description text-description ;
      end-interface {
        interface interface-name ;
        protect-interface interface-name ;
      }
      ignore-mtu-mismatch;
      protect-interface interface-name ;
    }
  }
}
neighbor address {
  interface interface-name {
    bandwidth (ct0 class0 | ct1 class1 | ct2 class2 | ct3 class3 );
    community community ;
    (control-word | no-control-word);
    description text-description ;
    ignore-encapsulation-mismatch;
    mtu mtu ;
    protect-interface interface-name ;
    psn-tunnel-endpoint psn-tunnel-endpoint ;
    virtual-circuit-id circuit-id ;
  }
}
}
traceoptions {
  file filename <files number> <no-stamp> <replace> <size maximum-file-size
  >
  <world-readable | no-world-readable>;
  flag flag <flag-modifier> <disable>;
}
}
lACP {
  traceoptions {
    file filename <files number> <match regular-expression >
    <size maximum-file-size > <world-readable | no-world-readable>;
    flag flag ;
  }
}

```

```

layer2-control {
  mac-rewrite {
    interface interface-name {
      protocol protocol-name ;
    }
  }
  nonstop-bridging {
    mac-rewrite {
      interface interface-name {
        protocol protocol-name ;
      }
    }
    traceoptions {
      file filename <files number > <no-stamp> <replace>
      <size maximum-file-size > <world-readable | no-world-readable>;
      flag flag ;
    }
  }
  traceoptions {
    file filename <files number > <no-stamp> <replace>
    <size maximum-file-size > <world-readable | no-world-readable>;
    flag flag ;
  }
}
ldp {
  (deaggregate | no-deaggregate);
  egress-policy [ policy-name ];
  explicit-null;
  export [ policy-name ];
  graceful-restart {
    disable;
    helper-disable;
    maximum-recovery-time seconds ;
    recovery-time seconds ;
  }
  import [ policy-name ];
  interface interface-name {
    disable;
    hello-interval seconds ;
    hold-time seconds ;
    transport-address (interface | router-id);
  }
  keepalive-interval seconds ;
  keepalive-timeout seconds ;
  l2-smart-policy;
  log-updown {
    trap {
      disable;
    }
  }
  next-hop {
    merged {
      policy [ policy-name ];
    }
  }
}
no-forwarding;

```

```

oam {
    bfd-liveness-detection {
        detection-time {
            threshold milliseconds ;
        }
        minimum-interval milliseconds ;
        minimum-receive-interval milliseconds ;
        multiplier number ;
        transmit-interval {
            minimum-interval milliseconds ;
            threshold milliseconds ;
        }
        version (0 | 1 | automatic);
    }
    fec class-address {
        (bfd-liveness-detection | no-bfd-liveness-detection);
        periodic-traceroute flags ;
    }
}
policing {
    fec class-address {
        ingress-traffic filter-name ;
        transit-traffic filter-name ;
    }
}
preference preference ;
session session-address {
    authentication-algorithm algorithm ;
    authentication-key key ;
    authentication-key-chain key-chain ;
}
strict-targeted-hellos;
traceoptions {
    file filename <files number > <no-stamp> <replace> <size maximum-file-size
    >
    <world-readable | no-world-readable>;
    flag flag < flag-modifier > <disable>;
}
track-igp-metric;
traffic-statistics {
    file filename <files number > < match regular-expression >
    <size maximum-file-size > <world-readable | no-world-readable>;
    interval seconds ;
    no-penultimate-hop;
}
transport-address (interface | router-id);
}
link-management {
    peer peer-name {
        address address ;
        control-channel [ control-channel-interfaces ];
        lmp-control-channel interface-name {
            remote-address address ;
        }
    }
    lmp-protocol {
        hello-dead-interval milliseconds ;
    }
}

```



```

        hello-interval milliseconds ;
        passive;
        retransmission-interval milliseconds ;
        retry-limit number ;
    }
    te-link [ te-link-names ];
}
te-link te-link-name {
    disable;
    interface interface-name {
        disable;
        local-address address ;
        remote-address address ;
        remote-id id-number ;
    }
    local-address address ;
    remote-address address ;
    remote-id id-number ;
    te-metric te-metric ;
}
traceoptions {
    file filename <files number> <no-stamp> <replace> <size maximum-file-size>
    <world-readable | no-world-readable>;
    flag flag <flag-modifier> <disable>;
}
}
mld {
    interface interface-name {
        disable;
        immediate-leave;
        ssm-map ssm-map ;
        static {
            group group-address {
                source source-address ;
            }
        }
        version number ;
    }
    query-interval seconds ;
    query-last-member-interval seconds ;
    query-response-interval seconds ;
    robust-count robust-count ;
    traceoptions {
        file filename <files number> <no-stamp> <replace>
        <size maximum-file-size> <world-readable | no-world-readable>;
        flag flag <flag-modifier> <disable>;
    }
}
mpls {
    disable;
    admin-down;
    admin-group {
        exclude [ group-names ];
        include-all [ group-names ];
        include-any [ group-names ];
    }
}

```

```

admin-groups {
    group-name group-value ;
}
advertise-hold-time seconds ;
auto-policing {
    class all policer-action;
    class ctnumber (drop | loss-priority-high | loss-priority-low);
}
bandwidth bps ;
class-of-service cos-value ;
diffserv-te {
    bandwidth-model {
        extended-mam;
        mam;
        rdm;
    }
    te-class-matrix {
        tenumber {
            priority priority ;
            traffic-class {
                ctnumber priority priority ;
            }
        }
    }
}
expand-loose-hop;
explicit-null;
hop-limit number ;
icmp-tunneling;
interface ( interface-name | all) {
    disable;
    admin-group {
        group-name ;
    }
    label-map ( in-label | default-route) {
        class-of-service value ;
        (discard | next-hop ( address | hostname | interface-name ) | reject);
        (pop | swap out-label );
        preference preference ;
        swap-push swap-label push-label ;
    }
}
ipv6-tunneling;
label-switched-path lsp-name {
    disable;
    adaptive;
    admin-down;
    admin-group {
        exclude [ group-names ];
        include-all [ group-names ];
        include-any [ group-names ];
    }
    associate-backup-pe-groups;
    auto-bandwidth {
        adjust-interval seconds ;
        adjust-threshold percent ;
    }
}

```

```

    adjust-threshold-overflow-limit number ;
    maximum-bandwidth bps ;
    minimum-bandwidth bps ;
    monitor-bandwidth;
}
bandwidth bps ;
class-of-service cos-value ;
description;
fast-reroute {
    bandwidth bps ;
    bandwidth-percent percent ;
    (exclude group-names | no-exclude);
    hop-limit number ;
    (include-all group-names | no-include-all);
    (include-any group-names | no-include-any);
}
from address ;
hop-limit number ;
install {
    destination-prefix / prefix-length <active>;
}
ldp-tunneling;
link-protection;
metric number ;
no-cspf;
no-decrement-ttl;
no-install-to-address;
node-link-protection;
oam {
    bfd-liveness-detection {
        detection-time threshold milliseconds ;
        failure-action teardown;
        minimum-interval milliseconds ;
        minimum-receive-interval milliseconds ;
        multiplier detection-time-multiplier ;
        no-adaptation;
        transmit-interval {
            minimum-interval milliseconds ;
            threshold milliseconds ;
        }
        version bfd-version ;
    }
    traceoptions {
        file filename <files number > <match regular-expression >
        <size maximum-file-size > <world-readable | no-world-readable>;
        flag flag ;
    }
}
optimize-timer seconds ;
p2mp {
    path-name ;
}
policing {
    filter filter-name ;
    no-auto-policing;
}

```

```

preference preference ;
primary path-name {
    adaptive;
    admin-down;
    admin-group {
        exclude [ group-names ];
        include-all [ group-names ];
        include-any [ group-names ];
    }
    bandwidth bps ;
    class-of-service cos-value ;
    hop-limit number ;
    no-cspf;
    no-decrement-ttl;
    oam {
        bfd-liveness-detection {
            detection-time threshold milliseconds ;
            failure-action teardown;
            minimum-interval milliseconds ;
            minimum-receive-interval milliseconds ;
            multiplier detection-time-multiplier ;
            no-adaptation;
            transmit-interval {
                minimum-interval milliseconds ;
                threshold milliseconds ;
            }
        }
        version bfd-version ;
    }
    traceoptions {
        file filename <files number > <match regular-expression >
        <size maximum-file-size > <world-readable | no-world-readable>;
        flag flag ;
    }
}
optimize-timer seconds ;
preference preference ;
priority setup-priority hold-priority ;
(record | no-record);
select {
    manual;
    unconditional;
}
standby;
}
priority setup-priority hold-priority ;
(random | least-fill | most-fill);
(record | no-record);
retry-limit number ;
retry-timer seconds ;
revert-timer seconds ;
secondary path-name {
    adaptive;
    admin-down;
    admin-group {
        exclude [ group-names ];
        include-all [ group-names ];
    }
}

```

```

    include-any [ group-names ];
}
bandwidth bps ;
class-of-service cos-value ;
hop-limit number ;
no-cspf;
no-decrement-ttl;
oam {
    bfd-liveness-detection {
        detection-time threshold milliseconds ;
        failure-action teardown;
        minimum-interval milliseconds ;
        minimum-receive-interval milliseconds ;
        multiplier detection-time-multiplier ;
        no-adaptation;
        transmit-interval {
            minimum-interval milliseconds ;
            threshold milliseconds ;
        }
        version bfd-version ;
    }
    traceoptions {
        file filename <files number > <match regular-expression >
        <size maximum-file-size > <world-readable | no-world-readable>;
        flag flag ;
    }
}
optimize-timer seconds ;
preference preference ;
priority setup-priority hold-priority ;
(record | no-record);
select {
    manual;
    unconditional;
}
standby;
}
soft-preemption;
standby;
template;
to address ;
traceoptions {
    file filename <files number > <no-stamp> <replace>
    <size maximum-file-size > <world-readable | no-world-readable>;
    flag flag ;
}
}
log-updown {
    (syslog | no-syslog);
    (trap | no-trap (mpls-lsp-traps | rfc3812-traps) );
    trap-path-down;
    trap-path-up;
}
no-cspf;
no-decrement-ttl;
no-propagate-ttl;

```

```

oam {
  bfd-liveness-detection {
    detection-time threshold milliseconds ;
    failure-action teardown;
    minimum-interval milliseconds ;
    minimum-receive-interval milliseconds ;
    multiplier detection-time-multiplier ;
    no-adaptation;
    transmit-interval {
      minimum-interval milliseconds ;
      threshold milliseconds ;
    }
    version bfd-version ;
  }
  traceoptions {
    file filename <files number > <match regular-expression >
    <size maximum-file-size > <world-readable | no-world-readable>;
    flag flag ;
  }
}
optimize-aggressive;
optimize-timer;
path path-name {
  address <loose | strict>;
}
path-mtu {
  allow-fragmentation;
  rsvp {
    mtu-signaling;
  }
}
preference preference ;
priority setup-priority hold-priority ;
(record | no-record);
revert-timer seconds ;
rsvp-error-hold-time seconds ;
smart-optimize-timer seconds ;
standby;
static-path inet {
  prefix {
    class-of-service value ;
    double-push bottom-value top-value ;
    next-hop ( address | interface-name );
    preference preference ;
    push out-label ;
    triple-push bottom-value middle-value top-value ;
  }
}
statistics {
  auto-bandwidth;
  file filename <files number> <no-stamp> <replace> <size maximum-file-size
  >
  <world-readable | no-world-readable>;
  interval seconds ;
}
traceoptions {

```

```

        file filename <files number> <no-stamp> <replace> <size maximum-file-size>
        >
        <world-readable | no-world-readable>;
        flag flag ;
    }
    traffic-engineering (bgp | bgp-igp | bgp-igp-both-ribs | mpls-forwarding);
}
msdp {
    msdp-options ;
}
mstp {
    bpdu-block-on-edge;
    bridge-priority priority ;
    configuration-name name ;
    disable;
    forward-delay seconds ;
    hello-time seconds ;
    interface interface-name {
        bpdu-timeout-action {
            alarm;
            block;
        }
        cost interface-cost ;
        disable;
        edge;
        mode (point-to-point | shared);
        no-root-port;
        priority interface-priority ;
    }
    max-age seconds ;
    max-hops number ;
    msti msti-id {
        bridge-priority priority ;
        interface interface-name {
            cost interface-cost ;
            disable;
            priority interface-priority ;
        }
        vlan [vlan-id];
    }
}
revision-level number ;
traceoptions {
    file filename <files number> <no-stamp> <replace> <size maximum-file-size>
    >
    <world-readable | no-world-readable>;
    flag flag < flag-modifier > <disable>;
}
}
oam {
    ethernet {
        connectivity-fault-management {
            action-profile profile-name {
                default-actions {
                    interface-down;
                }
            }
        }
    }
}

```

```

linktrace {
  age (10s | 30s | 1m | 10m | 30m);
  path-database-size number ;
}
maintenance-domain domain-name {
  level number;
  name-format (character-string | dns | mac+2oct | none);
  maintenance-association association-name {
    continuity-check {
      hold-interval minutes ;
      interval (10m | 10s | 1m | 1s | 100ms);
      loss-threshold number ;
    }
    mep mep-id {
      auto-discovery;
      direction (up | down);
      interface interface-name ;
      priority number ;
      remote-mep mep-id {
        action-profile profile-name ;
      }
    }
    short-name-format (2octet | character-string | rfc-2685-vpn-id | vlan);
  }
}
traceoptions {
  file filename <files number > <match regular-expression >
  <size maximum-file-size > <world-readable | no-world-readable>;
  flag flag ;
}
}
link-fault-management {
  action-profile profile-name {
    action {
      link-down;
      send-critical-event;
      syslog;
    }
    event {
      link-adjacency-loss;
      link-event-rate {
        frame-error count ;
        frame-period count ;
        frame-period-summary count ;
        symbol-period count ;
      }
      protocol-down;
    }
  }
}
interface interface-name {
  apply-action-profile profile-name ;
  event-thresholds {
    frame-error count ;
    frame-period count ;
    frame-period-summary count ;
    symbol-period count ;
  }
}

```



```

    }
    link-discovery (active | passive);
    negotiation-options {
        allow-remote-loopback;
        no-allow-link-events;
    }
    pdu-interval interval ;
    pdu-threshold threshold-value ;
}
}
}
}
}
}
}
}
ospf {
    ospf-options ;
}
ospf3 {
    area area-id {
        area-range network/mask-length <restrict> <exact> <override-metric metric >;
        interface interface-name {
            disable;
            dead-interval seconds ;
            hello-interval seconds ;
            metric metric ;
            neighbor address <eligible>;
            passive;
            priority number ;
            retransmit-interval seconds ;
            transit-delay seconds ;
        }
        nssa {
            area-range network/mask-length <restrict> <exact>
            <override-metric metric >;
            default-lsa {
                default-metric metric ;
                metric-type type ;
                type-7;
            }
            (no-summaries | summaries);
        }
        stub <default-metric metric > <(no-summaries | summaries)>;
    }
    disable;
    export [ policy-names ];
    external-preference preference ;
    import [ policy-names ];
    overload {
        <timeout seconds >;
    }
    preference preference ;
    prefix-export-limit number ;
}

```

```

reference-bandwidth reference-bandwidth ;
rib-group group-name ;
spf-options {
    delay milliseconds ;
    holddown milliseconds ;
    rapid-runs number ;
}
traceoptions {
    file filename <files number > <no-stamp> <replace> <size maximum-file-size
    >
    <world-readable | no-world-readable>;
    flag flag < flag-modifier > <disable>;
}
}
pgm {
    pgm-options ;
}
pim {
    pim-options ;
}
ppp {
    ppp-options ;
}
rip {
    authentication-key password ;
    authentication-type type ;
    (check-zero | no-check-zero);
    graceful-restart {
        disable;
        restart-time seconds ;
    }
    group group-name {
        bfd-liveness-detection {
            detection-time {
                threshold milliseconds ;
            }
            minimum-interval milliseconds ;
            minimum-receive-interval milliseconds ;
            transmit-interval {
                minimum-interval milliseconds ;
                threshold milliseconds ;
            }
            multiplier number ;
            version (0 | 1 | automatic);
        }
        export [ policy-names ];
        metric-out metric ;
        preference preference ;
        route-timeout seconds ;
        update-interval seconds ;
        neighbor neighbor-name {
            authentication-key password ;
            authentication-type type ;
            bfd-liveness-detection {
                detection-time {
                    threshold milliseconds ;

```

```

    }
    minimum-interval milliseconds ;
    minimum-receive-interval milliseconds ;
    transmit-interval {
        minimum-interval milliseconds ;
        threshold milliseconds ;
    }
    multiplier number ;
    version (0 | 1 | automatic);
}
(check-zero | no-check-zero);
import [ policy-names ];
message-size number ;
metric-in metric ;
receive receive-options ;
route-timeout seconds ;
send send-options ;
update-interval seconds ;
}
}
holddown seconds ;
import [ policy-names ];
message-size number ;
metric-in metric ;
receive receive-options ;
rib-group group-name ;
route-timeout seconds ;
send send-options ;
update-interval seconds ;
traceoptions {
    file filename <files number > <no-stamp> <replace> <size maximum-file-size
    >
    <world-readable | no-world-readable>;
    flag flag <flag-modifier > <disable>;
}
}
}
ripng {
    ripng-options ;
}
router-advertisement {
    router-advertisement-configuration ;
}
router-discovery {
    address address {
        (advertise | ignore);
        (broadcast | multicast);
        (priority number | ineligible);
    }
    disable;
    interface interface-name {
        lifetime seconds ;
        max-advertisement-interval seconds ;
        min-advertisement-interval seconds ;
    }
}
traceoptions {

```

```

        file filename <files number > <no-stamp> <replace> <size maximum-file-size
          >
        <world-readable | no-world-readable>;
        flag flag < flag-modifier > <disable>;
      }
    }
  rstp {
    bpdu-block-on-edge;
    bridge-priority priority ;
    disable;
    forward-delay seconds ;
    hello-time seconds ;
    interface interface-name {
      bpdu-timeout-action {
        alarm;
        block;
      }
      cost interface-cost ;
      disable;
      edge;
      mode (point-to-point | shared);
      no-root-port;
      priority interface-priority ;
    }
    max-age seconds ;
    traceoptions {
      file filename <files number > <no-stamp> <replace> <size maximum-file-size
        >
      <world-readable | no-world-readable>;
      flag flag < flag-modifier > <disable>;
    }
  }
}
rsvp {
  rsvp-options ;
}
sap {
  sap-options ;
}
stp {
  bpdu-block-on-edge;
  bridge-priority priority ;
  disable;
  forward-delay seconds ;
  hello-time seconds ;
  interface interface-name {
    bpdu-timeout-action {
      alarm;
      block;
    }
    cost interface-cost ;
    disable;
    edge;
    mode (point-to-point | shared);
    no-root-port;
    priority interface-priority ;
  }
}

```

```
max-age seconds ;
traceoptions {
    file filename <files number> <no-stamp> <replace> <size maximum-file-size>
    >
    <world-readable | no-world-readable>;
    flag flag <flag-modifier> <disable>;
}
}
vrrp {
    vrrp-options ;
}
vstp {
    disable;
    force-version stp;
    interface interface-name {
        bpdu-timeout-action {
            alarm;
            block;
        }
        cost cost ;
        edge;
        mode (p2p | shared);
        no-root-port;
        priority interface-priority ;
    }
    vlan vlan-id {
        bridge-priority priority ;
        forward-delay seconds ;
        hello-time seconds ;
        interface interface-name {
            bpdu-timeout-action {
                alarm;
                block;
            }
            cost cost ;
            edge;
            mode (p2p | shared);
            no-root-port;
            priority interface-priority ;
        }
    }
    max-age seconds ;
    traceoptions {
        file filename <files number> <no-stamp> <replace>
        <size maximum-file-size> <(world-readable | no-world-readable)>;
        flag flag <flag-modifier> <disable>;
    }
}
}
```

global-mac-limit

Syntax	<code>global-mac-limit limit { packet-action drop; }</code>
Hierarchy Level	[edit protocols l2-learning]
Release Information	Statement modified in Release 9.5 of JUNOS Software.
Description	<p>Limit the number of media access control (MAC) addresses learned from the logical interfaces on the router.</p> <p>This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.</p>
Default	131071 MAC addresses
Options	<p><i>limit</i>—Number of MAC addresses that can be learned on the device.</p> <p>Range: 20 through 131071 addresses</p> <p>The remaining statement is explained separately.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>

global-mac-table-aging-time

Syntax	global-mac-table-aging-time <i>seconds</i> ;
Hierarchy Level	[edit protocols l2-learning]
Release Information	Statement modified in Release 9.5 of JUNOS Software.
Description	Configure the timeout interval for entries in the MAC table. This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.
Default	300 seconds
Options	<i>seconds</i> —Time elapsed before MAC table entries are timed out and entries are deleted from the table. Range: 10 through 64000 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

global-no-mac-learning

Syntax	global-no-mac-learning;
Hierarchy Level	[edit protocols l2-learning]
Release Information	Statement modified in Release 9.5 of JUNOS Software.
Description	Disable MAC learning for the entire device. This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.
Default	MAC learning is enabled.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

I2-learning

Syntax	<pre> I2-learning { global-mac-limit <i>limit</i> { packet-action-drop } global-mac-table-aging-time <i>seconds</i>; global-no-mac-learning; } </pre>
Hierarchy Level	[edit protocols]
Release Information	Statement modified in Release 9.5 of JUNOS Software.
Description	<p>Configure Layer 2 address learning and forwarding properties globally.</p> <p>This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.</p> <p>The statements are explained separately.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>

packet-action

Syntax	packet-action drop;
Hierarchy Level	[edit protocols I2-learning global-mac-limit <i>limit</i>]
Release Information	Statement modified in Release 9.5 of JUNOS Software.
Description	<p>Specify that packets for new source MAC addresses be dropped after the MAC address limit is reached.</p> <p>This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.</p>
Default	Disabled. The default is for packets for new source MAC addresses to be forwarded after the MAC address limit is reached.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>

Chapter 15

Routing-Instances Hierarchy

This chapter presents the complete **routing-instances** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software.

Use the statements in the **routing-instances** configuration hierarchy to configure routing instances. For configuration instructions, see the *JUNOS Software Design and Implementation Guide*.

For information about these **routing-instances** statements that are shared across Juniper Networks devices, see the *JUNOS Routing Protocols Configuration Guide*, the *JUNOS Services Interfaces Configuration Guide*, the *JUNOS Multicast Protocols Configuration Guide*, and the *JUNOS Network Interfaces Configuration Guide*.

This chapter contains the following sections:

- Routing-Instances Configuration Statement Hierarchy on page 201

Routing-Instances Configuration Statement Hierarchy

To configure routing instances, use the following statements at the [edit **routing-instances**] hierarchy level.

Shared JUNOS statements in the **routing-instances** hierarchy are shown in normal font and are documented in the *JUNOS Routing Protocols Configuration Guide*, the *JUNOS Services Interfaces Configuration Guide*, the *JUNOS Multicast Protocols Configuration Guide*, and the *JUNOS Network Interfaces Configuration Guide*.

```
routing-instances {
  routing-instance-name {
    description text ;
    forwarding-options{
      accounting group-name {
        output {
          aggregate-export-interval seconds ;
          cflowd hostname {
            aggregation {
              autonomous-system;
              destination-prefix;
              protocol-port;
              source-destination-prefix {
                caida-compliant;
              }
            }
          }
        }
      }
    }
  }
}
```

```

        source-prefix;
    }
    autonomous-system-type (origin | peer);
    port port-number ;
    version number ;
}
}
family {
    inet {
        filter (input input-filter-name | output output-filter-name );
    }
    inet6 {
        filter (input input-filter-name | output output-filter-name );
    }
    mpls {
        filter (input input-filter-name | output output-filter-name );
    }
}
helpers {
    bootp {
        client-response-ttl value ;
        description text ;
        interface interface-name {
            client-response-ttl value ;
            description text ;
            maximum-hop-count number ;
            minimum-wait-time seconds ;
            no-listen;
            server address {
                routing-instance [ value ];
            }
        }
        vpn;
    }
    maximum-hop-count number ;
    minimum-wait-time seconds ;
    relay-agent-option;
    server address {
        routing-instance [ value ];
    }
    vpn;
}
domain {
    description text ;
    interface interface-name {
        description text ;
        no-listen;
        server address {
            routing-instance [ value ];
        }
    }
    server address {
        routing-instance [ value ];
    }
}
port port-number {

```

```

description text ;
interface interface-name {
    description text ;
    no-listen;
    server address {
        routing-instance [ value ];
    }
}
server address {
    routing-instance [ value ];
}
}
tftp {
    description text ;
    interface interface-name {
        description text ;
        no-listen;
        server address {
            routing-instance [ value ];
        }
    }
    server address {
        routing-instance [ value ];
    }
}
traceoptions {
    file filename <files number > <match regular-expression >
    <size maximum-file-size >
    <world-readable | no-world-readable>;
    flag {
        address;
        all;
        bootp;
        config;
        domain;
        ifdb;
        io;
        main;
        port;
        rtsock;
        tftp;
        trace;
        ui;
        util;
    }
    level match-level ;
}
}
packet-capture {
    disable;
    file filename <files number > <size maximum-file-size >
    <world-readable | no-world-readable>;
    maximum-capture-size size ;
}
sampling {
    disable;

```

```

family (inet | inet6 | mpls ) {
    disable;
    output {
        extension-service name;
        file;
        flow-server name {
            aggregation {
                source-destination;
            }
        }
    }
}
input {
    max-packets-per-second number;
    rate number ;
    run-length number ;
}
traceoptions {
    file filename <files number > <size maximum-file-size >
    <world-readable | no-world-readable>;
}
}
instance-type (forwarding | l2vpn | no-forwarding | virtual-router | vpls | vrf);
interface interface-name ;
multicast-snooping-options {
    flood-groups [ value ];
    forwarding-cache {
        threshold (suppress | reuse) value value ;
        timeout minutes ;
    }
    options {
        syslog {
            level level | upto level ;
            mark seconds;
        }
    }
}
no-local-switching;
no-vrf-advertise;
protocols {
    bgp {
        bgp-configuration ;
    }
    esis {
        esis-configuration ;
    }
    isis {
        isis-configuration ;
    }
    l2vpn {
        l2vpn-configuration ;
    }
    ldp {
        ldp-configuration ;
    }
    msdp {

```

```

    msdp-configuration;
}
ospf {
    domain-id domain-id ;
    domain-vpn-tag number ;
    route-type-community (vendor | iana);
    ospf-configuration ;
}
ospf3 {
    domain-id domain-id ;
    domain-vpn-tag number ;
    route-type-community (vendor | iana);
    ospf3-configuration ;
}
pim {
    mdt {
        group-range multicast-prefix ;
        threshold {
            group group-address {
                source source-address {
                    rate threshold-rate ;
                }
            }
        }
        tunnel-limit limit ;
    }
    pim-configuration ;
}
rip {
    rip-configuration ;
}
router-discovery {
    router-discovery-configuration ;
}
}
provider-tunnel {
    pim-asm {
        group-address group-address ;
    }
    rsvp-te {
        label-switched-path-template (default | lsp-template-name );
        static-lsp p2mp-lps-name ;
    }
    selective {
        group group-prefix ;
        tunnel-limit number ;
    }
}
route-distinguisher ( as-number : number | ip-address : number );
routing-options {
    aggregate {
        defaults {
            aggregate-options ;
        }
        route destination-prefix {
            aggregate-options ;
        }
    }
}

```

```

        policy policy-name ;
    }
}
auto-export {
    (disable | enable);
    family {
        inet {
            disable;
            flow {
                (disable | enable);
                rib-group rib-group ;
            }
            multicast {
                (disable | enable);
                rib-group rib-group ;
            }
            unicast {
                (disable | enable);
                rib-group rib-group ;
            }
        }
    }
    inet6 {
        disable;
        multicast {
            (disable | enable);
            rib-group rib-group ;
        }
        unicast {
            (disable | enable);
            rib-group rib-group ;
        }
    }
    iso {
        disable;
        unicast {
            (disable | enable);
            rib-group rib-group ;
        }
    }
}
traceoptions {
    file filename <files number > <no-stamp> <replace>
    <size maximum-file-size >
    <world-readable | no-world-readable>;
    flag flag <flag-modifier > <disable>;
}
}
autonomous-system autonomous-system <loops number > {
    independent-domain;
}
fate-sharing {
    group group-name {
        cost value ;
        from address {
            to address ;
        }
    }
}

```

```

    }
  }
  flow {
    route name {
      match {
        match-conditions ;
      }
      then {
        actions ;
      }
    }
    validation {
      traceoptions {
        file filename <files number > <no-stamp> <replace>
          <size maximum-file-size >
          <world-readable | no-world-readable>;
        flag flag < flag-modifier > <disable>;
      }
    }
  }
}
forwarding-table {
  unicast-reverse-paths (active-paths | feasible-paths);
}
generate {
  defaults {
    generate-options ;
  }
  route destination-prefix {
    generate-options ;
    policy policy-name ;
  }
}
graceful-restart {
  disable;
  restart-duration duration ;
}
instance-export [ policy-names ];
instance-import [ policy-names ];
interface-routes {
  family (inet | inet6) {
    import [ import-policies ];
    export {
      lan;
      point-to-point;
    }
  }
  rib-group {
    inet group-name ;
    inet6 group-name ;
  }
}
martians {
  destination-prefix match-type <allow>;
}
maximum-paths path-limit <log-only | threshold value log-interval seconds
>;

```

```

maximum-prefixes prefix-limit <log-only | threshold value log-interval
seconds >;
multicast {
  flow-map map-name {
    bandwidth value {
      adaptive;
    }
    forwarding-cache {
      timeout minutes {
        never;
      }
    }
    policy [ policy-name ];
    redundant-sources [ source-address ];
  }
  forwarding-cache {
    threshold (suppress | reuse) value value ;
    timeout minutes ;
  }
  interface interface-name {
    maximum-bandwidth limit ;
  }
  rpf-check-policy [ value ];
  scope scope-name {
    interface [ interface-name ];
    prefix destination-prefix ;
  }
  scope-policy [ policy-name ];
  ssm-groups [ addresses ];
  ssm-map map-name {
    policy [ policy-name ];
    source [ source-address ];
  }
}
multipath {
  vpn-unequal-cost {
    equal-external-internal;
  }
}
options {
  mark seconds ;
  syslog (level level | upto level );
}
resolution {
  rib routing-table-name {
    import [ policy-names ];
    resolution-ribs [ routing-table-names ];
  }
}
rib routing-table-name {
  aggregate {
    defaults {
      aggregate-options ;
    }
  }
  route destination-prefix {
    aggregate-options ;
  }
}

```



```

        policy policy-name ;
    }
}
generate {
    defaults {
        generate-options ;
    }
    route destination-prefix {
        generate-options ;
        policy policy-name ;
    }
}
martians {
    destination-prefix match-type <allow>;
}
maximum-paths path-limit <log-only | threshold value log-interval seconds
>;
maximum-prefixes prefix-limit <log-only | threshold value log-interval
seconds >;
multipath {
    vpn-unequal-cost {
        equal-external-internal;
    }
}
static {
    defaults {
        static-options ;
    }
    rib-group group-name ;
    route destination-prefix {
        bfd-liveness-detection {
            detection-time {
                threshold milliseconds ;
            }
            holddown-interval milliseconds;
            local-address ip-address ;
            minimum-interval milliseconds ;
            minimum-receive-interval milliseconds ;
            minimum-receive-ttl milliseconds ;
            multiplier number ;
            neighbor address ;
            transmit-interval {
                minimum-interval milliseconds ;
                threshold milliseconds ;
            }
            version (0 | 1);
        }
        lsp-next-hop nexthop {
            metric metric ;
            preference preference ;
        }
        next-hop [ nexthop ];
        qualified-next-hop ( address | interface-name ) {
            interface interface-name ;
            metric metric ;
            preference preference ;

```

```

        }
        static-options ;
    }
}
router-id address ;
static {
    defaults {
        static-options ;
    }
    rib-group group-name ;
    route destination-prefix {
        bfd-liveness-detection {
            detection-time {
                threshold milliseconds ;
            }
            holddown-interval milliseconds ;
            local-address ip-address ;
            minimum-interval milliseconds ;
            minimum-receive-interval milliseconds ;
            minimum-receive-ttl milliseconds ;
            multiplier number ;
            neighbor address ;
            transmit-interval {
                minimum-interval milliseconds ;
                threshold milliseconds ;
            }
            version (0 | 1);
        }
        lsp-next-hop nexthop {
            metric metric ;
            preference preference ;
        }
        next-hop [ nexthop ];
        qualified-next-hop ( address | interface-name ) {
            interface interface-name ;
            metric metric ;
            preference preference ;
        }
        static-options ;
    }
}
}
vlan-id (all | none | vlan-id );
vlan-tags {
    inner vlan-id ;
    outer vlan-id ;
}
vrf-export [ policy-names ];
vrf-import [ policy-names ];
vrf-table-label;
vrf-target {
    export community-name ;
    import community-name ;
}
}

```

```
}  
}
```


Chapter 16

Routing-Options Hierarchy

This chapter presents the complete **routing-options** configuration hierarchy available on J series Services Routers and SRX Series Services Gateways running JUNOS Software.

Use the statements in the **routing-options** configuration hierarchy to configure protocol-independent routing properties. For configuration instructions, see the *JUNOS Software Design and Implementation Guide* and the *JUNOS Software Interfaces and Routing Configuration Guide*.

For information about these **routing-options** statements that are shared across Juniper Networks devices, see the *JUNOS Routing Protocols Configuration Guide*, the *JUNOS Services Interfaces Configuration Guide*, and the *JUNOS Multicast Protocols Configuration Guide*.

This chapter contains the following sections:

- Routing-Options Configuration Statement Hierarchy on page 213

Routing-Options Configuration Statement Hierarchy

To configure routing options, use the following statements at the [edit **routing-options**] hierarchy level.

Shared JUNOS statements in the **routing-options** hierarchy are shown in normal font and are documented in the *JUNOS Routing Protocols Configuration Guide*, the *JUNOS Services Interfaces Configuration Guide*, and the *JUNOS Multicast Protocols Configuration Guide*.

```
routing-options {
  aggregate {
    defaults {
      aggregate-options ;
    }
    route destination-prefix {
      policy policy-name ;
      aggregate-options ;
    }
  }
  auto-export {
    (disable | enable);
    family {
      inet {
```

```

        disable;
        flow {
            (disable | enable);
            rib-group rib-group ;
        }
        multicast {
            (disable | enable);
            rib-group rib-group ;
        }
        unicast {
            (disable | enable);
            rib-group rib-group ;
        }
    }
    inet6 {
        disable;
        multicast {
            (disable | enable);
            rib-group rib-group ;
        }
        unicast {
            (disable | enable);
            rib-group rib-group ;
        }
    }
    iso {
        disable;
        unicast {
            (disable | enable);
            rib-group rib-group ;
        }
    }
}
traceoptions {
    file filename <files number > <no-stamp> <replace> <size maximum-file-size >
    <world-readable | no-world-readable>;
    flag flag <flag-modifier > <disable>;
}
}
autonomous-system autonomous-system <loops number >;
bgp-orf-cisco-mode;
confederation confederation-autonomous-systems {
    members [ autonomous-system ];
}
dynamic-tunnels {
    tunnel-name {
        destination-networks prefix ;
        source-address address ;
        tunnel-type type-of-tunnel ;
    }
}
traceoptions {
    file filename <files number > <no-stamp> <replace> <size maximum-file-size >
    <world-readable | no-world-readable>;
    flag flag <flag-modifier > <disable>;
}

```

```

    }
  }
  fate-sharing {
    group group-name {
      cost value ;
      from address {
        to address ;
      }
    }
  }
}
flow {
  route name {
    match {
      match-conditions ;
    }
    then {
      actions ;
    }
  }
}
validation {
  traceoptions {
    file filename <files number > <no-stamp> <replace>
    <size maximum-file-size > <world-readable | no-world-readable>;
    flag flag < flag-modifier > <disable>;
  }
}
}
forwarding-table {
  export [ policy-names ];
  (indirect-next-hop | no-indirect-next-hop);
  unicast-reverse-paths (active-paths | feasible-paths);
}
generate {
  defaults {
    generate-options ;
  }
  route destination-prefix {
    policy policy-name ;
    generate-options ;
  }
}
graceful-restart {
  disable;
  restart-duration duration ;
}
instance-export [ policy-names ];
instance-import [ policy-names ];
interface-routes {
  family (inet | inet6) {
    import [ import-policies ];
    export {
      lan;
      point-to-point;
    }
  }
}
rib-group {

```

```

        inet group-name ;
        inet6 group-name ;
    }
}
martians {
    destination-prefix match-type <allow>;
}
maximum-paths path-limit <log-only | threshold value log-interval seconds >;
maximum-prefixes prefix-limit <log-only | threshold value log-interval seconds >;
multicast {
    flow-map map-name {
        bandwidth value {
            adaptive;
        }
        forwarding-cache {
            timeout minutes {
                never;
            }
        }
        policy [ policy-name ];
        redundant-sources [ source-address ];
    }
    forwarding-cache {
        threshold (suppress | reuse) value value ;
        timeout minutes ;
    }
    interface interface-name {
        maximum-bandwidth limit ;
    }
    rpf-check-policy [ value ];
    scope scope-name {
        interface [ interface-name ];
        prefix destination-prefix ;
    }
    scope-policy [ policy-name ];
    ssm-groups [ addresses ];
    ssm-map map-name {
        policy [ policy-name ];
        source [ source-address ];
    }
    traceoptions {
        file filename <files number > <no-stamp> <replace> <size maximum-file-size
        >
        <world-readable | no-world-readable>;
        flag flag < flag-modifier > <disable>;
    }
}
options {
    mark seconds ;
    syslog (level level | upto level );
}
resolution {
    rib routing-table-name {
        import [ policy-names ];
        resolution-ribs [ routing-table-names ];
    }
}

```



```

tracefilter [ policy-name ];
traceoptions {
    file filename <files number > <no-stamp> <replace> <size maximum-file-size
    >
    <world-readable | no-world-readable>;
    flag flag < flag-modifier > <disable>;
}
}
rib routing-table-name {
    aggregate {
        defaults {
            aggregate-options ;
        }
        route destination-prefix {
            policy policy-name ;
            aggregate-options ;
        }
    }
    generate {
        defaults {
            generate-options ;
        }
        route destination-prefix {
            policy policy-name ;
            generate-options ;
        }
    }
    martians {
        destination-prefix match-type <allow>;
    }
    maximum-paths path-limit <log-only | threshold value log-interval seconds >;
    maximum-prefixes prefix-limit <log-only | threshold value log-interval
    seconds >;
    static {
        defaults {
            static-options ;
        }
        rib-group group-name ;
        route destination-prefix {
            bfd-liveness-detection {
                detection-time {
                    threshold milliseconds ;
                }
            }
            holddown-interval milliseconds;
            local-address ip-address ;
            minimum-interval milliseconds ;
            minimum-receive-interval milliseconds ;
            minimum-receive-ttl milliseconds ;
            multiplier number ;
            neighbor address ;
            transmit-interval {
                minimum-interval milliseconds ;
                threshold milliseconds ;
            }
            version (0 | 1);
        }
    }
}

```

```

        lsp-next-hop nexthop '{
            metric metric ;
            preference preference ;
        }
        next-hop [ next-hop ];
        qualified-next-hop ( address | interface-name ) {
            interface interface-name ;
            metric metric ;
            preference preference ;
        }
        static-options ;
    }
}
rib-groups {
    group-name {
        export-rib [ group-names ];
        import-policy [ policy-names ];
        import-rib [ group-names ];
    }
}
route-distinguished-id address ;
route-record;
router-id address ;
source-routing (ip | ipv6);
static {
    defaults {
        static-options ;
    }
    rib-group group-name ;
    route destination-prefix {
        bfd-liveness-detection {
            detection-time {
                threshold milliseconds ;
            }
            holddown-interval milliseconds;
            local-address ip-address ;
            minimum-interval milliseconds ;
            minimum-receive-interval milliseconds ;
            minimum-receive-ttl milliseconds ;
            multiplier number ;
            neighbor address ;
            transmit-interval {
                minimum-interval milliseconds ;
                threshold milliseconds ;
            }
            version (0 | 1);
        }
        lsp-next-hop nexthop '{
            metric metric ;
            preference preference ;
        }
        next-hop [ next-hop ];
        qualified-next-hop ( address | interface-name ) {
            interface interface-name ;

```

```

        metric metric ;
        preference preference ;
    }
    static-options ;
}
}
topologies {
    family (inet | inet6) {
        topology topology-name;
    }
}
traceoptions {
    file name <files number > <no-stamp> <replace> <size maximum-file-size >
    <world-readable | no-world-readable>;
    flag flag < flag-modifier > <disable>;
}
}

```


Chapter 17

Schedulers Hierarchy and Statements

This chapter presents the complete **schedulers** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. The chapter also provides a summary for each statement in the hierarchy that is exclusive to J Series and SRX Series devices. Statement summaries are organized alphabetically.

Use the statements in the **schedulers** configuration hierarchy to determine the day and time when security policies are in effect. For configuration instructions, see the *JUNOS Software Security Configuration Guide*.

This chapter contains the following sections:

- Schedulers Configuration Statement Hierarchy on page 221

Schedulers Configuration Statement Hierarchy

To configure security policy schedulers, use the following statements at the [edit **schedulers**] hierarchy level. Statements exclusively for J Series and SRX Series devices running JUNOS Software are shown in bold font and are documented in this chapter.

```
schedulers {
  scheduler scheduler-name {
    daily (all-day | exclude | start-time time stop-time time);
    friday {
      (all-day | exclude | start-time time stop-time time);
    }
    monday {
      (all-day | exclude | start-time time stop-time time);
    }
    saturday {
      (all-day | exclude | start-time time stop-time time);
    }
    start-date date-time stop-date date-time;
    sunday {
      (all-day | exclude | start-time time stop-time time);
    }
    thursday {
      (all-day | exclude | start-time time stop-time time);
    }
    tuesday {
      (all-day | exclude | start-time time stop-time time);
    }
  }
}
```

```

        wednesday {
            (all-day | exclude | start-time time stop-time time);
        }
    }
}

```

all-day

Syntax all-day;

Hierarchy Level [edit schedulers scheduler *scheduler-name* daily],
 [edit schedulers scheduler *scheduler-name* friday],
 [edit schedulers scheduler *scheduler-name* monday],
 [edit schedulers scheduler *scheduler-name* saturday],
 [edit schedulers scheduler *scheduler-name* sunday],
 [edit schedulers scheduler *scheduler-name* tuesday],
 [edit schedulers scheduler *scheduler-name* thursday],
 [edit schedulers scheduler *scheduler-name* wednesday]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Schedule the security policy to be in effect for an entire day.

This statement is supported on J Series and SRX Series devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.



NOTE: A schedule set for a specific time overrides a schedule set with the **all-day** statement. Use the **all-day** statement to specify that a security policy be in effect for the whole day

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

daily

Syntax `daily {
 (all-day | exclude | start-time time stop-time time);
 }`

Hierarchy Level `[edit schedulers scheduler scheduler-name]`

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Schedule the security policy to be in effect every day of the week.

If you create a daily schedule with the **daily** statement and also use the **friday**, **monday**, **saturday**, **sunday**, **tuesday**, **thursday**, and **wednesday** statement in the schedule, the parameters specified for a specific day (for example, Friday using the **friday** statement) override the schedule set with the **daily** statement.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

exclude

Syntax exclude;

Hierarchy Level [edit schedulers scheduler *scheduler-name* daily],
 [edit schedulers scheduler *scheduler-name* friday],
 [edit schedulers scheduler *scheduler-name* monday],
 [edit schedulers scheduler *scheduler-name* saturday],
 [edit schedulers scheduler *scheduler-name* sunday],
 [edit schedulers scheduler *scheduler-name* tuesday],
 [edit schedulers scheduler *scheduler-name* thursday],
 [edit schedulers scheduler *scheduler-name* wednesday]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Exclude a specified day from the schedule.

Use the **exclude** statement to exclude a day from a daily schedule created with the **daily** statement. You cannot use the **exclude** statement for a particular day unless it is in conjunction with the **daily** statement in a schedule.

This statement is supported on J Series and SRX Series devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

friday

Syntax `friday {
 (all-day | exclude | start-time time stop-time time);
 }`

Hierarchy Level `[edit schedulers scheduler scheduler-name]`

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify a schedule for every Friday.

If you use the **friday** statement in conjunction with the **daily** statement for a schedule, the parameters set for the **friday** statement override the parameters set for the **daily** statement.

Use the **exclude** option to exclude Friday from a daily schedule configured with the **daily** statement.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

monday

Syntax `monday {
 (all-day | exclude | start-time time stop-time time);
 }`

Hierarchy Level `[edit schedulers scheduler scheduler-name]`

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify a schedule for every Monday.

If you use the **monday** statement in conjunction with the **daily** statement for a schedule, the parameters set for the **monday** statement override the parameters set for the **daily** statement.

Use the **exclude** option to exclude Monday from a daily schedule configured with the **daily** statement.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

saturday

Syntax `saturday {
 (all-day | exclude | start-time time stop-time time);
 }`

Hierarchy Level `[edit schedulers scheduler scheduler-name]`

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify a schedule for every Saturday.

If you use the **saturday** statement in conjunction with the **daily** statement for a schedule, the parameters set for the **saturday** statement override the parameters set for the **daily** statement.

Use the **exclude** option to exclude Saturday from a daily schedule configured with the **daily** statement.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

scheduler

Syntax scheduler *scheduler-name* {
 daily (all-day | exclude | start-time *time* stop-time *time*);
 friday {
 (all-day | exclude | start-time *time* stop-time *time*);
 }
 monday {
 (all-day | exclude | start-time *time* stop-time *time*);
 }
 saturday {
 (all-day | exclude | start-time *time* stop-time *time*);
 }
 start-date *date-time* stop-date *date-time* ;
 sunday {
 (all-day | exclude | start-time *time* stop-time *time*);
 }
 thursday {
 (all-day | exclude | start-time *time* stop-time *time*);
 }
 tuesday {
 (all-day | exclude | start-time *time* stop-time *time*);
 }
 wednesday {
 (all-day | exclude | start-time *time* stop-time *time*);
 }
 }

Hierarchy Level [edit schedulers]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Create or modify a schedule that defines when security policies are in effect.

You configure a schedule to start at a specific date and time or start on a recurrent basis.

This statement is supported on J Series and SRX Series devices.

Options *scheduler-name* —Name of the schedule. The schedule name must consist of 1 to 63 characters that can be letters, numbers, dashes, and underscores and can begin with a number or letter.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

schedulers

Syntax	<code>schedulers { ... }</code>
Hierarchy Level	[edit]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Configure schedules for security policies that allow you to control network traffic flow and enforce network security.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

start-date

Syntax	<code>start-date date-time ;</code>
Hierarchy Level	<p>[edit schedulers],</p> <p>[edit schedulers scheduler <i>scheduler-name</i>]</p>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify the time, day, month, and year that the schedule starts.</p> <p>Specifying the year is optional. If no year is specified, the schedule applies to the current year and all subsequent years. If the year is specified in either the start-date or stop-date statement, that year is used for both statements.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>date-time</i> —Use the format [<i>yyyy -</i>] <i>mm - dd . hh . mm</i> to specify the year, month, day, hour, and minutes.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

start-time

Syntax `start-time time ;`

Hierarchy Level [edit schedulers scheduler *scheduler-name* daily],
 [edit schedulers scheduler *scheduler-name* friday],
 [edit schedulers scheduler *scheduler-name* monday],
 [edit schedulers scheduler *scheduler-name* saturday],
 [edit schedulers scheduler *scheduler-name* sunday],
 [edit schedulers scheduler *scheduler-name* tuesday],
 [edit schedulers scheduler *scheduler-name* thursday],
 [edit schedulers scheduler *scheduler-name* wednesday]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the time that a schedule starts for a specified day.

If you specify a starting time for a daily schedule with the **daily** statement and also include the the **friday**, **monday**, **saturday**, **sunday**, **tuesday**, **thursday**, and **wednesday** statements in the schedule, the starting time specified for a specific day (for example, Friday using the **friday** statement) overrides the starting time set with the **daily** statement.

This statement is supported on J Series and SRX Series devices.

Options *time* —Use the 24-hour format (*hh* : *mm* : *ss*) to specify the hours, minutes, and seconds.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

stop-date

Syntax	<code>stop-date <i>date-time</i> ;</code>
Hierarchy Level	[edit schedulers], [edit schedulers scheduler <i>scheduler-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify the time, day, month, and year that the schedule ends.</p> <p>Specifying the year is optional. If no year is specified, the schedule applies to the current year and all subsequent years. If the year is specified in either the start-date or stop-date statement, that year is used for both statements.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>date-time</i> —Use the format [<i>yyyy</i> -] <i>mm</i> - <i>dd</i> . <i>hh</i> . <i>mm</i> to specify the year, month, day, hour, and minutes.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

stop-time

Syntax stop-time *time* ;

Hierarchy Level [edit schedulers scheduler *scheduler-name* daily],
 [edit schedulers scheduler *scheduler-name* friday],
 [edit schedulers scheduler *scheduler-name* monday],
 [edit schedulers scheduler *scheduler-name* saturday],
 [edit schedulers scheduler *scheduler-name* sunday],
 [edit schedulers scheduler *scheduler-name* tuesday],
 [edit schedulers scheduler *scheduler-name* thursday],
 [edit schedulers scheduler *scheduler-name* wednesday]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the time that a schedule stops for a specified day.

If you specify a stop time for a daily schedule with the **daily** statement and also include the the **friday**, **monday**, **saturday**, **sunday**, **tuesday**, **thursday**, and **wednesday** statements in the schedule, the stop time specified for a specific day (for example, Friday using the **friday** statement) overrides the stop time set with the **daily** statement.

This statement is supported on J Series and SRX Series devices.

Options *time* —Use the 24-hour format (*hh* : *mm* : *ss*) to specify the hours, minutes, and seconds.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

sunday

Syntax	sunday (all-day exclude start-time <i>time</i> stop-time <i>time</i>);
Hierarchy Level	[edit schedulers scheduler <i>scheduler-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify a schedule for every Sunday.</p> <p>If you use the sunday statement in conjunction with the daily statement for a schedule, the parameters set for the sunday statement override the parameters set for the daily statement.</p> <p>Use the exclude option to exclude Sunday from a daily schedule configured with the daily statement.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

thursday

Syntax `thursday {
 (all-day | exclude | start-time time stop-time time);
 }`

Hierarchy Level `[edit schedulers scheduler scheduler-name]`

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify a schedule for every Thursday.

If you use the **thursday** statement in conjunction with the **daily** statement for a schedule, the parameters set for the **thursday** statement override the parameters set for the **daily** statement.

Use the **exclude** option to exclude Thursday from a daily schedule configured with the **daily** statement.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

tuesday

Syntax `tuesday {
 (all-day | exclude | start-time time stop-time time);
 }`

Hierarchy Level `[edit schedulers scheduler scheduler-name]`

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify a schedule for every Tuesday.

If you use the **tuesday** statement in conjunction with the **daily** statement for a schedule, the parameters set for the **tuesday** statement override the parameters set for the **daily** statement.

Use the **exclude** option to exclude Tuesday from a daily schedule configured with the **daily** statement.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

wednesday

Syntax `wednesday {
 (all-day | exclude | start-time time stop-time time);
 }`

Hierarchy Level `[edit schedulers scheduler scheduler-name]`

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify a schedule for every Wednesday.

If you use the **wednesday** statement in conjunction with the **daily** statement for a schedule, the parameters set for the **wednesday** statement override the parameters set for the **daily** statement.

Use the **exclude** option to exclude Wednesday from a daily schedule configured with the **daily** statement.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

Chapter 18

Security Hierarchy and Statements

This chapter presents the complete **security** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Where applicable, the chapter also provides a summary for each statement in the hierarchy that is exclusive to J Series and SRX Series devices. Statement summaries are organized alphabetically.

Use the statements in the **security** configuration hierarchy to configure the rules for the transit traffic and the actions that need to take place on the traffic as it passes through the firewall and to monitor the traffic attempting to cross from one security zone to another. For configuration instructions, see the *JUNOS Software Security Configuration Guide*.

For information about the following **security** statements that are shared across Juniper Networks devices—see the *JUNOS System Basics Configuration Guide*.

This chapter contains the following sections:

- Security Configuration Statement Hierarchy on page 237
- no-allow-icmp-without-flow on page 513
- no-enable-all-qmodules on page 513
- no-enable-packet-pool on page 514
- no-log-errors on page 514
- no-policy-lookup-cache on page 514
- no-reset-on-policy on page 514

Security Configuration Statement Hierarchy

To configure security rules, actions, and zones, use the following statements at the **[edit security]** hierarchy level. Statements exclusively for J Series and SRX Series devices running JUNOS Software are shown in bold font and are documented in this chapter.

Shared JUNOS statements in the **security** hierarchy are shown in normal font and are documented in the *JUNOS System Basics Configuration Guide*.

```
security {  
    alg {  
        dns {
```

```

    disable;
    traceoptions {
        flag {
            all <extensive>;
        }
    }
}
ftp {
    disable;
    traceoptions {
        flag {
            all <extensive>;
        }
    }
}
h323 {
    application-screen {
        message-flood {
            gatekeeper threshold rate;
        }
        unknown-message {
            permit-nat-applied;
            permit-routed;
        }
    }
    disable;
    endpoint-registration-timeout seconds;
    media-source-port-any;
    traceoptions {
        flag {
            all <detail | extensive | terse>;
            cc <detail | extensive | terse>;
            h225-asn1 <detail | extensive | terse>;
            h245 <detail | extensive | terse>;
            h245-asn1 <detail | extensive | terse>;
            q931 <detail | extensive | terse>;
            ras <detail | extensive | terse>;
            ras-asn1 <detail | extensive | terse>;
        }
    }
}
mgcp {
    application-screen {
        connection-flood threshold rate;
        message-flood threshold rate;
        unknown-message {
            permit-nat-applied;
            permit-routed;
        }
    }
    disable;
    inactive-media-timeout seconds;
    maximum-call-duration minutes;
    traceoptions {
        flag {
            all <extensive>;
            call <extensive>;
        }
    }
}

```

```

        cc <extensive>;
        decode <extensive>;
        error <extensive>;
        nat <extensive>;
        packet <extensive>;
        rm <extensive>;
    }
}
transaction-timeout seconds;
}
msrpc {
    disable;
    traceoptions {
        flag {
            all <extensive>
        }
    }
}
pptp {
    disable;
    traceoptions {
        flag {
            all <extensive>;
        }
    }
}
real {
    disable;
    traceoptions {
        flag {
            all <extensive>;
        }
    }
}
rsh {
    disable;
    traceoptions {
        flag {
            all <extensive>;
        }
    }
}
rtsp {
    disable;
    traceoptions {
        flag {
            all <extensive>;
        }
    }
}
sccp {
    application-screen {
        call-flood threshold rate;
        unknown-message {
            permit-nat-applied;
            permit-routed;
        }
    }
}

```

```

    }
  }
  disable;
  inactive-media-timeout seconds;
  traceoptions {
    flag {
      all <extensive>;
      call <extensive>;
      cc <extensive>;
      cli <extensive>;
      decode <extensive>;
      error <extensive>;
      init <extensive>;
      nat <extensive>;
      rm <extensive>;
    }
  }
}
sip {
  application-screen {
    protect {
      deny {
        all | destination-ip address;
        timeout seconds;
      }
    }
    unknown-message {
      permit-nat-applied;
      permit-routed;
    }
  }
  c-timeout minutes;
  disable;
  disable-call-id-hiding;
  inactive-media-timeout seconds;
  maximum-call-duration minutes;
  retain-hold-resource;
  t1-interval milliseconds;
  t4-interval seconds;
  traceoptions {
    flag {
      all <detail | extensive | terse>;
      call <detail | extensive | terse>;
      cc <detail | extensive | terse>;
      nat <detail | extensive | terse>;
      parser <detail | extensive | terse>;
      rm <detail | extensive | terse>;
    }
  }
}
sql {
  disable;
  traceoptions {
    flag {
      all <extensive>;
    }
  }
}

```



```

    }
  }
  sunrpc {
    disable;
    traceoptions {
      flag {
        all <extensive>;
      }
    }
  }
  talk {
    disable;
    traceoptions {
      flag {
        all <extensive>;
      }
    }
  }
  tftp {
    disable;
    traceoptions {
      flag {
        all <extensive>;
      }
    }
  }
}
authentication-key-chains {
  key-chain key-chain-name {
    description text ;
    tolerance seconds ;
  }
}
dynamic-vpn{
  access-profile profile-name;
  force-upgrade;
  clients{
    configuration-name {
      remote-protected-resources{
        ip-address/mask;
      }
      remote-exceptions{
        ip-address/mask;
      }
      ipsec-vpn configuration-name;
      user{
        username;
      }
    }
  }
}
}
firewall-authentication {
  traceoptions {
    flag {
      all <detail | extensive | terse>;
      authentication <detail | extensive | terse>;

```

```

        proxy <detail | extensive | terse>;
    }
}
}
flow {
    aging {
        early-ageout seconds;
        high-watermark percent;
        low-watermark percent;
    }
    allow-dns-reply;
    bridge {
        block-non-ip-all;
        bypass-non-ip-unicast;
        no-packet-flooding {
            no-trace-route;
        }
    }
}
route-change-timeout seconds;
syn-flood-protection-mode (syn-cookie | syn-proxy);
tcp-mss {
    all-tcp {
        mss value;
    }
    gre-in {
        mss value;
    }
    gre-out {
        mss value;
    }
    ipsec-vpn {
        mss value;
    }
}
tcp-session {
    no-sequence-check;
    no-syn-check;
    no-syn-check-in-tunnel;
    rst-invalidate-session;
    rst-sequence-check;
    tcp-initial-timeout seconds;
}
traceoptions {
    file filename <files number > <match regular-expression>
    <size maximum-file-size> <world-readable | no-world-readable>;
    flag flag;
}
}
forwarding-options {
    family {
        inet6 {
            mode packet-based;
        }
        iso {
            mode packet-based;
        }
    }
}

```

```

    mpls {
        mode packet-based;
    }
}
}
forwarding-process {
    application-services {
        session capacity {
            weight {
                equal;
                firewall;
                idp;
            }
        }
    }
}
}
idp {
    active-policy policy-name;
    custom-attack attack-name {
        attack-type {
            anomaly {
                direction (any | client-to-server | server-to-client);
                service service-name;
                shellcode (all | intel | no-shellcode | sparc);
                test test-condition;
            }
            chain {
                expression boolean-expression;
                member member-name {
                    attack-type {
                        (anomaly | signature);
                    }
                }
            }
            order;
            protocol-binding {
                application application-name;
                icmp;
                ip {
                    protocol-number transport-layer-protocol-number;
                }
                rpc {
                    program-number rpc-program-number;
                }
                tcp {
                    minimum-port port-number maximum-port port-number;
                }
                udp {
                    minimum-port port-number maximum-port port-number;
                }
            }
            reset;
            scope (session | transaction);
        }
        signature {
            context context-name;
            direction (any | client-to-server | server-to-client);
        }
    }
}

```

```

negate;
pattern signature-pattern;
protocol {
  icmp {
    code {
      match (equal | greater-than | less-than | not-equal);
      value code-value;
    }
    data-length {
      match (equal | greater-than | less-than | not-equal);
      value data-length;
    }
    identification {
      match (equal | greater-than | less-than | not-equal);
      value identification-value;
    }
    sequence-number {
      match (equal | greater-than | less-than | not-equal);
      value sequence-number;
    }
    type {
      match (equal | greater-than | less-than | not-equal);
      value type-value;
    }
  }
  ip {
    destination {
      match (equal | greater-than | less-than | not-equal);
      value hostname;
    }
    identification {
      match (equal | greater-than | less-than | not-equal);
      value identification-value;
    }
    ip-flags {
      (df | no-df);
      (mf | no-mf);
      (rb | no-rb);
    }
    protocol {
      match (equal | greater-than | less-than | not-equal);
      value transport-layer-protocol-id;
    }
    source {
      match (equal | greater-than | less-than | not-equal);
      value hostname;
    }
    tos {
      match (equal | greater-than | less-than | not-equal);
      value type-of-service-in-decimal;
    }
    total-length {
      match (equal | greater-than | less-than | not-equal);
      value total-length-of-ip-datagram;
    }
  }
}

```

```

ttl {
    match (equal | greater-than | less-than | not-equal);
    value time-to-live;
}
}
tcp {
    ack-number {
        match (equal | greater-than | less-than | not-equal);
        value acknowledgement-number;
    }
    data-length {
        match (equal | greater-than | less-than | not-equal);
        value tcp-data-length;
    }
    destination-port {
        match (equal | greater-than | less-than | not-equal);
        value destination-port;
    }
    header-length {
        match (equal | greater-than | less-than | not-equal);
        value header-length;
    }
    mss {
        match (equal | greater-than | less-than | not-equal);
        value maximum-segment-size;
    }
    option {
        match (equal | greater-than | less-than | not-equal);
        value tcp-option;
    }
    sequence-number {
        match (equal | greater-than | less-than | not-equal);
        value sequence-number;
    }
    source-port {
        match (equal | greater-than | less-than | not-equal);
        value source-port;
    }
    tcp-flags {
        (ack | no-ack);
        (fin | no-fin);
        (psh | no-psh);
        (r1 | no-r1);
        (r2 | no-r2);
        (rst | no-rst);
        (syn | no-syn);
        (urg | no-urg);
    }
    urgent-pointer {
        match (equal | greater-than | less-than | not-equal);
        value urgent-pointer;
    }
    window-scale {
        match (equal | greater-than | less-than | not-equal);
        value window-scale-factor;
    }
}

```

```

    }
    window-size {
        match (equal | greater-than | less-than | not-equal);
        value window-size;
    }
}
udp {
    data-length {
        match (equal | greater-than | less-than | not-equal);
        value data-length;
    }
    destination-port {
        match (equal | greater-than | less-than | not-equal);
        value destination-port;
    }
    source-port {
        match (equal | greater-than | less-than | not-equal);
        value source-port;
    }
}
}
protocol-binding {
    application application-name;
    icmp;
    ip {
        protocol-number transport-layer-protocol-number;
    }
    rpc {
        program-number rpc-program-number;
    }
    tcp {
        minimum-port port-number maximum-port port-number;
    }
    udp {
        minimum-port port-number maximum-port port-number;
    }
}
}
regex regular-expression;
shellcode (all | intel | no-shellcode | sparc);
}
}
recommended-action (close | close-client | close-server | drop | drop-packet
| ignore | none);
severity (critical | info | major | minor | warning);
time-binding {
    count count-value;
    scope (destination | peer | source);
}
}
custom-attack-group custom-attack-group-name {
    group-members [attack-group-name | attack-name];
}
dynamic-attack-group dynamic-attack-group-name {
    filters {
        category {

```

```

        values [list-of-values];
    }
    direction {
        values [any | client-to-server | exclude-any | exclude-client-to-server |
            exclude-server-to-client | server-to-client];
    }
    false-positives {
        values [frequently | occasionally | rarely | unknown];
    }
    performance {
        values [fast | normal | slow | unknown];
    }
    products {
        values [list-of-values];
    }
    recommended;
    service {
        values [list-of-values];
    }
    severity {
        values [critical | info | major | minor | warning];
    }
    type {
        values [anomaly | signature];
    }
}
}
idp-policy policy-name {
    rulebase-exempt {
        rule rule-name {
            description text;
            match {
                attacks {
                    custom-attacks [attack-name];
                    predefined-attack-groups [attack-name];
                    predefined-attacks [attack-name];
                }
                destination-address [address-name];
                destination-except [address-name];
                from-zone zone-name;
                source-address [address-name];
                source-except [address-name];
                to-zone zone-name;
            }
        }
    }
}
rulebase-ips {
    rule rule-name {
        description text;
        match {
            attacks {
                custom-attacks [ attack-name ];
                predefined-attack-groups [ attack-name ];
                predefined-attacks [ attack-name ];
            }
            destination-address [ address-name ];
        }
    }
}

```

```

    destination-except [ address-name ];
    from-zone zone-name;
    source-address [ address-name ];
    source-except [ address-name ];
    to-zone zone-name;
}
terminal;
then {
    action {
        (close-client | close-client-and-server | close-server |
         drop-connection | drop-packet | ignore-connection |
         mark-diffserv value | no-action | recommended);
    }
    ip-action {
        (ip-block | ip-close | ip-notify);
        log;
        target (destination-address | service | source-address |
               source-zone | zone-service);
        timeout seconds;
    }
    notification {
        log-attacks {
            alert;
        }
    }
    severity (critical | info | major | minor | warning);
}
}
}
}
security-package {
    automatic {
        enable;
        interval hours;
        start-time start-time;
    }
    url url-name;
}
sensor-configuration {
    application-identification {
        application-system-cache;
        application-system-cache-timeout value;
        disable;
        max-packet-memory value;
        max-sessions value;
        max-tcp-session-packet-memory value;
        max-udp-session-packet-memory value;
        no-application—system—cache;
    }
    detector {
        protocol-name protocol-name {
            tunable-name tunable-name {
                tunable-value protocol-value;
            }
        }
        ssl-inspection
    }
}

```



```

}
flow {
    (allow-icmp-without-flow | no-allow-icmp-without-flow);
    (log-errors | no-log-errors);
    max-timers-poll-ticks value;
    reject-timeout value;
    (reset-on-policy | no-reset-on-policy);
}
global {
    (enable-all-qmodules | no-enable-all-qmodules);
    (enable-packet-pool | no-enable-packet-pool);
    (policy-lookup-cache | no-policy-lookup-cache);
}
ips {
    detect-shellcode;
    ignore-regular-expression;
    log-supercede-min minimum-value;
    pre-filter-shellcode;
    process-ignore-s2c;
    process-override;
    process-port port-number;
}
log {
    cache-size size;
    suppression {
        disable;
        include-destination-address;
        max-logs-operate value;
        max-time-report value;
        start-log value;
    }
}
re-assembler {
    ignore-mem-overflow;
    max-flow-mem value;
    max-packet-mem value;
}
ssl-inspection {
    sessions number;
}
}
traceoptions {
    file filename {
        <files number>;
        <match regular-expression>;
        <size maximum-file-size>;
        <world-readable | no-world-readable>;
    }
    flag all;
    level (all | error | info | notice | verbose | warning);
    no-remote-trace;
}
}
ike {
    gateway gateway-name {

```

```

address [(ip-address | hostname)] |
dead-peer-detection {
    always-send;
    interval seconds;
    threshold number;
}
dynamic {
    connections-limit number;
    distinguished-name {
        container container-string;
        wildcard wildcard-string;
    }
    hostname domain-name;
    ike-user-type (group-ike-id | shared-ike-id);
    inet ip-address;
    user-at-hostname user-at-hostname;
}
external-interface external-interface-name;
ike-policy policy-name;
local-identity (distinguished-name string | hostname hostname
| inet ipv4-ip-address | user-at-hostname e-mail-address);
nat-keepalive seconds;
no-nat-traversal;
xauth {
    access-profile profile-name;
}
}
policy policy-name {
    certificate {
        local-certificate certificate-id;
        peer-certificate-type (pkcs7 | x509-signature);
        trusted-ca (ca-index | use-all);
    }
    description description;
    mode (aggressive | main);
    pre-shared-key (ascii-text | hexadecimal);
    proposal-set <basic | compatible | standard>;
}
proposal proposal-name {
    authentication-algorithm (md5 | sha1 | sha-256);
    authentication-method (dsa-signatures | pre-shared-keys | rsa-signatures);
    description description;
    dh-group (group1 | group2 | group5);
    encryption-algorithm (des-cbc | 3des-cbc | aes-128-cbc | aes-192-cbc
| aes-256-cbc);
}
respond-bad-spi number;
traceoptions {
    file filename {
        <files number>;
        <match regular-expression>;
        <size maximum-file-size>;
    }
    flag {
        all;

```

```

    certificates;
    database;
    general;
    ike;
    parse;
    policy-manager;
    routing-socket;
    timer;
    snmp;
  }
}
ipsec {
  policy policy-name {
    description description;
    perfect-forward-secrecy keys (group1 | group2 | group5);
    proposal-set (basic | compatible | standard);
  }
  proposal proposal-name {
    description description;
    encryption-algorithm (des-cbc | 3des-cbc | aes-128-cbc | aes-192-cbc
    | aes-256-cbc);
    lifetime-kilobytes kilobytes;
    lifetime-seconds seconds;
    protocol (ah | esp);
  }
  traceoptions {
    flag {
      all;
      next-hop-tunnel-binding;
      packet-drops;
      packet-processing;
      security-associations;
    }
  }
  vpn vpn-name {
    bind-interface interface-name;
    df-bit (clear | copy | set);
    establish-tunnels (immediately | on-traffic);
    ike {
      gateway gateway-name;
      idle-time seconds;
      install-interval seconds;
      ipsec-policy ipsec-policy-name;
      no-anti-replay;
      proxy-identity {
        local ipv4-prefix;
        remote ipv4-prefix;
        service service-name;
      }
    }
    manual {
      authentication {
        algorithm (hmac-md5-96 | hmac-sha1-96);
        key (ascii-text key | hexadecimal key);
      }
    }
  }
}

```

```

    encryption {
        algorithm (3des-cbc | aes-128-cbc | aes-192-cbc
        | aes-256-cbc | des-cbc);
        key (ascii-text key | hexadecimal key);
    }
    external-interface external-interface-name;
    gateway ip-address;
    protocol (ah | esp);
    spi spi value;
}
vpn-monitor {
    destination-ip ip-address;
    optimized;
    source-interface interface-name;
}
}
vpn-monitor-options {
    interval seconds;
    threshold number;
}
}
nat {
    destination {
        pool pool-name {
            address <ip-address> (to ip-address | port port-number):
            routing-instance routing-instance-name;
        }
        rule-set rule-set-name {
            from interface [interface-name] |
            routing-instance [routing-instance-name] | zone [zone-name];
            rule rule-name {
                match {
                    destination-address destination-address;
                    destination-port port-number;
                    source-address [source-address];
                }
                then {
                    destination-nat (off | pool pool-name);
                }
            }
        }
    }
}
proxy-arp {
    interface interface-name {
        address ip-address to ip-address;
    }
}
source {
    address-persistent;
    interface {
        port-overloading { off };
    }
    pool pool-name {
        address ip-address to ip-address;
        host-address-base ip-address;
    }
}

```

```

overflow-pool (interface | pool-name);
port no-translation | range high ip-address low ip-address;
routing-instance routing-instance-name;
}
pool-utilization-alarm {
    clear-threshold threshold-value;
    raise-threshold threshold-value;
}
port-randomization {
    disable;
}
rule-set rule-set-name {
    from interface [interface-name] |
    routing-instance [routing-instance-name] | zone [zone-name];
    rule rule-name {
        match {
            destination-address [destination-address];
            source-address [source-address];
        }
        then {
            source-nat (off | interface | pool pool-name);
            persistent-nat {
                permit ( any-remote-host | target-host | target-host-port );
                inactivity-timeout seconds;
                max-session-number number;
            }
        }
    }
    to interface [interface-name] |
    routing-instance [routing-instance-name] | zone [zone-name];
}
}
static {
    rule-set rule-set-name {
        from interface [interface-name] |
        routing-instance [routing-instance-name] | zone [zone-name];
        rule rule-name {
            match {
                destination-address [destination-address];
            }
            then {
                static-nat prefix <addr-prefix>
                <routing-instance routing-instance-name>;
            }
        }
    }
}
}
traceoptions {
    file filename {
        <files number>;
        <match regular-expression>;
        <size maximum-file-size>;
        <world-readable | no-world-readable>;
    }
    flag {

```

```

    all;
    destination-nat-pfe;
    destination-nat-re;
    destination-nat-rt;
    source-nat-pfe;
    source-nat-re;
    source-nat-rt;
    static-nat-pfe;
    static-nat-re;
    static-nat-rt;
  }
  no-remote-trace;
}
}
pki {
  auto-re-enrollment {
    certificate-id certificate-id-name {
      ca-profile-name ca-profile-name;
      challenge-password password;
      re-enroll-trigger-time-percentage percentage;
      re-generate-keypair;
    }
  }
  ca-profile ca-profile-name {
    administrator {
      e-mail-address e-mail-address;
    }
    ca-identity ca-identity;
    enrollment {
      retry number;
      retry-interval seconds ;
      url url-name;
    }
    revocation-check {
      crl {
        disable {
          on-download-failure;
        }
        refresh-interval hours;
        url url-name;
      }
      disable;
    }
  }
  traceoptions {
    file filename <files number> <match regular-expression>
      <size maximum-file-size> <world-readable | no-world-readable>;
    flag flag;
  }
}
policies {
  default-policy {
    (deny-all | permit-all);
  }
  from-zone zone-name to-zone zone-name {

```

```

policy policy-name {
  match {
    application [application-name-or-set];
    destination-address {
      address-name;
    }
    source-address {
      address-name;
    }
  }
  scheduler-name scheduler-name;
  then {
    count {
      alarm {
        per-minute-threshold number;
        per-second-threshold number;
      }
    }
    (deny | reject);
    permit {
      application-services (wx-redirect | wx-reverse-redirect);
      destination-address {
        drop-translated;
        drop-untranslated;
      }
      firewall-authentication {
        pass-through {
          access-profile profile-name>;
          client-match match-name>;
          web-redirect;
        }
        web-authentication {
          client-match user-or-group;
        }
      }
      tunnel {
        ipsec-vpn vpn-name;
        pair-policy pair-policy;
      }
    }
    log {
      session-close;
      session-init;
    }
  }
}

policy-rematch;
traceoptions {
  file filename <files number> <match regular-express>
  <size maximum-file-size> <world-readable | no-world-readable>;
  flag flag;
}

screen {
  ids-option screen-name{

```

```

alarm-without-drop;
icmp {
    flood {
        threshold number;
    }
    fragment;
    ip-sweep {
        threshold number;
    }
    large;
    ping-death;
}
ip {
    bad-option;
    block-frag;
    loose-source-route-option;
    record-route-option;
    security-option;
    source-route-option;
    spoofing;
    stream-option;
    strict-source-route-option;
    tear-drop;
    timestamp-option;
    unknown-protocol;
}
limit-session {
    destination-ip-based number;
    source-ip-based number;
}
tcp {
    fin-no-ack;
    land;
    port-scan {
        threshold number;
    }
    syn-ack-ack-proxy {
        threshold number;
    }
    syn-fin;
    syn-flood {
        alarm-threshold number;
        attack-threshold number;
        destination-threshold number;
        source-threshold number;
        timeout seconds;
    }
    syn-frag;
    tcp-no-flag;
    winnuke;
}
udp {
    flood {
        threshold number;
    }
}

```



```

    }
    traceoptions {
      file filename <files number> <match regular-expression>
      <size maximum-file-size> <world-readable | no-world-readable>;
      flag flag;
    }
  }
  ssh-known-hosts {
    fetch-from-server fetch-from-server;
    host hostname {
      dsa-key base64-encoded-dsa-key;
      rsa-key base64-encoded-dsa-key;
      rsa1-key base64-encoded-dsa-key;
    }
    load-key-file key-file;
  }
  traceoptions {
    file filename {
      <files number>;
      <match regular-expression>;
      <size maximum-file-size>;
      <world-readable | no-world-readable>;
    }
    flag flag;
    no-remote-trace;
    rate-limit rate;
  }
}
utm {
  custom-objects {
    filename-extension {
      value [list];
    }
    mime-pattern {
      value [list];
    }
    custom-url-category {
      value [list];
    }
    protocol-command {
      value [list];
    }
    url-pattern {
      value [list];
    }
  }
  feature-profile {
    anti-virus {
      type kaspersky-lab-engine;
      kaspersky-lab-engine {
        pattern-update {
          url;
          interval value;
        }
        profile profile-name {

```

```

fallback-options {
  default (log-and-permit | block);
  corrupt-file (log-and-permit | block);
  password-file (log-and-permit | block);
  decompress-layer (log-and-permit | block);
  content-size (log-and-permit | block);
  engine-not-ready (log-and-permit | block);
  timeout (log-and-permit | block);
  out-of-resources (log-and-permit | block);
  too-many-requests (log-and-permit | block);
}
scan-options {
intelligent-prescreening;
  scan-mode (scan-all | by-extension);
  content-size-limit value;
  timeout value;
  decompress-layer-limit value;
}
notification-options {
virus-detection {
  type (message | protocol-only);
  notify-mail-sender;
  custom-message;
}
  fallback-block {
  custom-message;
  notify-mail-sender;
  type;
}
}
trickling {
timeout value;
}
}
}
type juniper-express-engine;
juniper-express-engine {
pattern-update {
  url;
  interval value;
}
profile profile-name {
fallback-options {
  default (log-and-permit | block);
  content-size (log-and-permit | block);
  engine-not-ready (log-and-permit | block);
  timeout (log-and-permit | block);
  out-of-resources (log-and-permit | block);
  too-many-requests (log-and-permit | block);
}
scan-options {
intelligent-prescreening;
  scan-mode (scan-all | by-extension);
  content-size-limit value;
  timeout value;
  decompress-layer-limit value;
}

```

```

    }
    notification-options {
    virus-detection {
        type (message | protocol-only);
        notify-mail-sender;
        custom-message;
    }
    fallback-block {
        custom-message;
        notify-mail-sender;
        type;
    }
    }
    trickling {
        timeout value;
    }
    }
    mime-whitelist {
    list listname {
        exception listname;
    }
    url-whitelist {
        listname;
    }
    }
}

web-filtering {
surf-control-integrated {
    cache {
        timeout value;
    }
    server {
        host host-name;
        port number;
    }
    profile profile-name{
        default (log-and-permit | block);
        custom-block-message value;
        fallback-settings {
            default (log-and-permit | block);
            server-connectivity (log-and-permit | block);
            timeout (log-and-permit | block);
            too-many-requests (log-and-permit | block);
        }
        category customurl-list name {
            action (log-and-permit | block);
        }
    }
}

websense-redirect {
profile profile-name {
server {
    host host-name;
    port number;
}
sockets value;
timeout value;

```

```

        fallback-settings {
            default (log-and-permit | block);
            server-connectivity (log-and-permit | block);
            timeout (log-and-permit | block);
            too-many-requests (log-and-permit | block);
        }
    }
    url-whitelist {
        listname;
    }
    url-blacklist {
        listname;
    }
}
anti-spam {
    symantec-sbl {
        profile profile-name {
            sbl-default-server;
            spam-action (log-and-permit | block);
            custom-tag-string [***SPAM***];
        }
        address-whitelist {
            listname;
        }
    }
}
content-filtering {
    profile profile-name {
        block-command protocol-command-list;
        block-content-type (java-applet | exe | http-cookie);
        block-mime {
            list list-name {
                exception list-name;
            }
        }
        permit-command protocol-command-list;
        notification-options {
            type (message | protocol-only);
            custom-message [message];
        }
    }
}
utm-policy policy-name {
    anti-virus {
        http-profile profile-name;
        ftp {
            upload-profile profile-name;
            download-profile profile-name;
        }
        smtp-profile profile-name;
        pop3-profile profile-name;
        imap-profile profile-name;
    }
    content-filtering {
        http-profile profile-name;
    }
}

```

```

ftp {
  upload-profile profile-name;
  download-profile profile-name;
}
smtp-profile profile-name;
pop3-profile profile-name;
imap-profile profile-name;
}
anti-spam {
  smtp-profile profile-name;
}
web-filtering {
  http-profile profile-name;
}
traffic-options {
  sessions-per-client {
    limit value;
    over-limit (log-and-permit | block);
  }
}
}
}
zones {
  functional-zone {
    management {
      host-inbound-traffic {
        protocols {
          protocol-name;
          protocol-name <except>;
        }
        system-services {
          service-name;
          service-name <except>;
        }
      }
    }
    interfaces interface-name {
      host-inbound-traffic {
        protocols {
          protocol-name;
          protocol-name <except>;
        }
        system-services {
          service-name;
          service-name <except>;
        }
      }
    }
  }
  screen screen-name;
}
}
security-zone zone-name {
  address-book {
    address address-name (ip-prefix | dns-name dns-address-name);
    address-set address-set-name {
      address address-name;
    }
  }
}

```

```

    }
  }
  host-inbound-traffic {
    protocols {
      protocol-name;
      protocol-name <except>;
    }
    system-services {
      service-name;
      service-name <except>;
    }
  }
  interfaces interface-name {
    host-inbound-traffic {
      protocols {
        protocol-name;
        protocol-name <except>;
      }
      system-services {
        service-name;
        service-name <except>;
      }
    }
  }
  screen screen-name;
  tcp-rst;
}
}
}
}
}

```

access profile

See the following sections:

- access-profile (Dynamic VPNs) on page 263
- access-profile (IPsec VPNs) on page 263

access-profile (Dynamic VPNs)

Syntax	access-profile <i>profile-name</i> ;
Hierarchy Level	[edit security dynamic-vpn]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Specify the access profile to use for extended authentication for remote users trying to download the Access Manager. This statement is supported on SRX210 and SRX240 devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

access-profile (IPsec VPNs)

Syntax	access-profile <i>profile-name</i> ;
Hierarchy Level	[edit security ike gateway <i>gateway-name</i> xauth]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the access profile to use for extended authentication for remote users trying to access a Virtual Private Network (VPN) tunnel. This statement is supported on J Series and SRX Series devices.
Options	<i>profile-name</i> —Name of the access profile.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

ack-number

Syntax	<pre>ack-number { match (equal greater-than less-than not-equal); value <i>acknowledgement-number</i> ; }</pre>
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol tcp]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Specify the ACK number of the packet. This number identifies the next sequence number; the ACK flag must be set to activate this field.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>match (equal greater-than less-than not-equal)—Match an operand.</p> <p>value <i>acknowledgement-number</i> —Match the ACK number of the packet. Range: 0 through 4294967295</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

action

Syntax action {
 (close-client | close-client-and-server | close-server |
 drop-connection | drop-packet | ignore-connection |
 mark-diffserv *value* | no-action | recommended);
 }

Hierarchy Level [edit security idp idp-policy *policy-name* rulebase-ips rule *rule-name* then]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Specify the actions you want IDP to take when the monitored traffic matches the attack objects specified in the rules.

This statement is supported on SRX Series devices.

- Options**
- **close-client**—Closes the connection and sends an RST packet to the client but not to the server.
 - **close-client-and-server**—Closes the connection and sends an RST packet to both the client and the server.
 - **close-server**—Closes the connection and sends an RST packet to the server but not to the client.
 - **drop-connection**—Drops all packets associated with the connection, preventing traffic for the connection from reaching its destination. Use this action to drop connections for traffic that is not prone to spoofing.
 - **drop-packet**—Drops a matching packet before it can reach its destination but does not close the connection. Use this action to drop packets for attacks in traffic that is prone to spoofing, such as UDP traffic. Dropping a connection for such traffic could result in a denial of service that prevents you from receiving traffic from a legitimate source-IP address.
 - **ignore-connection**—Stops scanning traffic for the rest of the connection if an attack match is found. IDP disables the rulebase for the specific connection.
 - **mark-diffserv *value*** —Assigns the indicated service-differentiation value to the packet in an attack, then passes them on normally.
 - **no-action**—No action is taken. Use this action when you want to only generate logs for some traffic.
 - **recommended**—All predefined attack objects have a default action associated with them. This is the action that Juniper Networks recommends when that attack is detected.


Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

action (web filtering)

Syntax	action (log-and-permit block);
Hierarchy Level	[edit security utm feature-profile web-filtering surf-control-integrated profile <i>profile-name</i> category <i>customurl-list-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Enter an action to go with the customurl-list filter.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, SRX650 devices.</p>
Options	<ul style="list-style-type: none"> ■ log-and-permit—Log the error and permit the traffic ■ block—Log the error and deny the traffic
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

active-policy

Syntax	active-policy <i>policy-name</i> ;
Hierarchy Level	[edit security idp]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Specify which policy among the configured policies to activate.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<i>policy-name</i> —Name of the active policy.
<hr/> <div style="display: flex; align-items: center;">  <div> NOTE: You need to make sure the active policy is enforced in the data plane. </div> </div> <hr/>	
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

action-profile

Syntax	action-profile;
Hierarchy Level	[edit security datapath-debug packet-filter 1]
Release Information	Command introduced in Release 9.6 of JUNOS Software.
Description	<p>Sets the action for the packet match for a specified filter.</p> <p>This statement is supported on SRX5600 and SRX5800 devices.</p>
Options	<i>default</i> — Default actions.
Usage Guidelines	For configuration instructions and examples, see the JUNOS Software Security Configuration Guide.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

address

See the following sections:

- address (ARP Proxy) on page 268
- address (Destination NAT) on page 269
- address (IKE Gateway) on page 269
- address (Zone Address Book) on page 270
- address (Zone Address Set) on page 270

address (ARP Proxy)

Syntax address *ip-address* to *ip-address* ;

Hierarchy Level [edit security nat proxy-arp interface *interface-name*],
[edit security nat source pool *pool-name*]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Specify a single address or an address range of ARP proxy.

This statement is supported on J Series and SRX Series devices.

Options to—Specify the upper limit of the address range.

ip-address —IP address of an ARP proxy.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

address (Destination NAT)

Syntax	address < <i>ip-address</i> > (to <i>ip-address</i> port <i>port-number</i>);
Hierarchy Level	[edit security nat destination pool <i>pool-name</i>]
Release Information	Statement modified in Release 9.6 of JUNOS Software.
Description	Specify a single address or an address range of the destination NAT pool. This statement is supported on J Series and SRX Series devices.
Options	to—Specify the upper limit of the address range. <i>ip-address</i> —IP address of a pool. port <i>port-number</i> —Specify the port number.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

address (IKE Gateway)

Syntax	address [(<i>ip-address</i> <i>hostname</i>)];
Hierarchy Level	[edit security ike gateway <i>gateway-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the IP address or the hostname of the primary Internet Key Exchange (IKE) gateway and up to four backup gateways. This statement is supported on J Series and SRX Series devices.
Options	<i>ip-address</i> <i>hostname</i> —IP address or hostname of an IKE gateway.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

address (Zone Address Book)

Syntax	<code>address address-name (ip-prefix dns-name dns-address-name) ;</code>
Hierarchy Level	<code>[edit security zones security-zone zone-name address-book]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Add an entry containing an IP address or Domain Name System (DNS) hostname to the address book for a security zone. A zone's address book contains entries for addressable entities in policy definitions.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>address-name</i>— Name of the address entry.</p> <p><i>ip-prefix</i>— IPv4 address with prefix.</p> <p><i>dns-name dns-address-name</i> —DNS address name.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

address (Zone Address Set)

Syntax	<code>address address-name ;</code>
Hierarchy Level	<code>[edit security zones security-zone zone-name address-book address-set address-set-name]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Add an address entry to a set of IP addresses for a security zone.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>address-name</i> —Address entry name, as defined with the address (Zone Address Book) statement.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

address-book

Syntax	<pre>address-book { address address-name (ip-prefix dns-name dns-address-name) ; address-set address-set-name { address address-name ; } }</pre>
Hierarchy Level	[edit security zones security-zone zone-name]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Define entries in the address book of a security zone. An address book is a list containing all addresses and address groups, and domain names defined for a security zone. You use address-book entries to identify addressable entities in policy definitions.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

address-blacklist

Syntax	<pre>address-blacklist{ listname; }</pre>
Hierarchy Level	[edit security utm feature-profile anti-spam]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Enter an address-blacklist (or whitelist) custom-object for local list spam filtering.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

address-persistent

Syntax	address-persistent;
Hierarchy Level	[edit security nat source]
Release Information	Statement modified in Release 9.2 of JUNOS Software.
Description	<p>Enable the device to assign the same IP address from a source pool to a host for multiple concurrent sessions that require the same source IP address for each session.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

address-set

Syntax	<pre>address-set address-set-name { address address-name ; }</pre>
Hierarchy Level	[edit security zones security-zone zone-name address-book]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Identify a collection of addresses, as defined with the address (Zone Address Book) statement.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>address-set-name —Name of the address set.</p> <p>The remaining statements are explained separately.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

address-whitelist

Syntax	address-whitelist{ listname; }
Hierarchy Level	[edit security utm feature-profile anti-spam]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Enter an address-whitelist (or blacklist) custom-object for local list spam filtering. This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

admin-email

Syntax	admin-email <i>email address</i> ;
Hierarchy Level	[edit security utm feature-profile anti-virus kaspersky-lab-engine pattern-update email-notify]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	You can configure the device to notify a specified administrator when patterns are updated. This is an email notification with a custom message and a custom subject line. This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.


administrator

Syntax	administrator { e-mail-address <i>e-mail-address</i> ; }
Hierarchy Level	[edit security pki ca-profile <i>ca-profile-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify an administrator e-mail address to which the certificate request is sent. This statement is supported on J Series and SRX Series devices.
Options	e-mail-address <i>e-mail-address</i> —E-mail address where the certificate request is sent. By default, there is no preset e-mail address.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

aging

Syntax	aging { early-ageout <i>seconds</i> ; high-watermark <i>percent</i> ; low-watermark <i>percent</i> ; }
Hierarchy Level	[edit security flow]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Direct the device to begin aggressively aging out sessions when the percentage of entries in the session table exceeds the high-watermark setting and then stops when the percentage of sessions falls below the low-watermark setting. This statement is supported on J Series and SRX Series devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

alarm-threshold

Syntax	alarm-threshold <i>number</i> ;
Hierarchy Level	[edit security screen ids-option <i>screen-name</i> top syn-flood]
Release Information	Statement modified in Release 9.2 of JUNOS Software.
Description	<p>Define the number of half-complete proxy connections per second at which the device makes entries in the event alarm log.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>number</i> —Threshold value.</p> <p>Range: 1 through 100000 per second</p> <p>Default: 512 per second</p>
<hr/> <div>  NOTE: For SRX Series devices the applicable range is 1 through 1000000 per second. </div> <hr/>	
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

alarm-without-drop

Syntax	alarm-without-drop;
Hierarchy Level	[edit security screen ids-option <i>screen-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Direct the device to generate an alarm when detecting an attack but not block the attack. Use this statement to allow an attack to enter a segment of your network that you have previously prepared to receive it (for example, a honeynet, which is a decoy network with extensive monitoring capabilities).</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

alert

Syntax	alert;
Hierarchy Level	[edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i> then notification log-attacks]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Set an alert flag in the Alert column of the Log Viewer for the matching log record.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

alg

```

Syntax  alg {
    dns {
        disable;
        traceoptions {
            flag {
                all <extensive>;
            }
        }
    }
    ftp {
        disable;
        traceoptions {
            flag {
                all <extensive>;
            }
        }
    }
    h323 {
        application-screen {
            message-flood {
                gatekeeper threshold rate ;
            }
            unknown-message {
                permit-nat-applied;
                permit-routed;
            }
        }
        disable;
        endpoint-registration-timeout seconds ;
        media-source-port-any;
        traceoptions {
            flag {
                all <detail | extensive | terse>;
                cc <detail | extensive | terse>;
                h225-asn1 <detail | extensive | terse>;
                h245 <detail | extensive | terse>;
                h245-asn1 <detail | extensive | terse>;
                q931 <detail | extensive | terse>;
                ras <detail | extensive | terse>;
                ras-asn1 <detail | extensive | terse>;
            }
        }
    }
    mgcp {
        application-screen {
            connection-flood threshold rate ;
            message-flood threshold rate ;
            unknown-message {
                permit-nat-applied;
                permit-routed;
            }
        }
    }
}

```

```

    }
    disable;
    inactive-media-timeout seconds ;
    maximum-call-duration minutes ;
    traceoptions {
        flag {
            all <extensive>;
            call <extensive>;
            cc <extensive>;
            decode <extensive>;
            error <extensive>;
            nat <extensive>;
            packet <extensive>;
            rm <extensive>;
        }
    }
    transaction-timeout seconds ;
}

msrpc {
    disable;
    traceoptions {
        flag {
            all <extensive>;
        }
    }
}

pptp {
    disable;
    traceoptions {
        flag {
            all <extensive>;
        }
    }
}

real {
    disable;
    traceoptions {
        flag {
            all <extensive>;
        }
    }
}

rsh {
    disable;
    traceoptions {
        flag {
            all <extensive>;
        }
    }
}

rtsp {
    disable;
    traceoptions {
        flag {
            all <extensive>;
        }
    }
}

```

```

    }
}
sccp {
    application-screen {
        call-flood threshold rate ;
        unknown-message {
            permit-nat-applied;
            permit-routed;
        }
    }
    disable;
    inactive-media-timeout seconds ;
    traceoptions {
        flag {
            all <extensive>;
            call <extensive>;
            cc <extensive>;
            cli <extensive>;
            decode <extensive>;
            error <extensive>;
            init <extensive>;
            nat <extensive>;
            rm <extensive>;
        }
    }
}
sip {
    application-screen {
        protect {
            deny {
                all | destination-ip address ;
                timeout seconds ;
            }
        }
        unknown-message {
            permit-nat-applied;
            permit-routed;
        }
    }
    c-timeout minutes ;
    disable;
    disable-call-id-hiding;
    inactive-media-timeout seconds ;
    maximum-call-duration minutes ;
    retain-hold-resource;
    t1-interval milliseconds ;
    t4-interval seconds ;
    traceoptions {
        flag {
            all <detail | extensive | terse>;
            call <detail | extensive | terse>;
            cc <detail | extensive | terse>;
            nat <detail | extensive | terse>;
            parser <detail | extensive | terse>;
            rm <detail | extensive | terse>;
        }
    }
}

```

```

    }
  }
  sql {
    disable;
    traceoptions {
      flag {
        all <extensive>;
      }
    }
  }
  sunrpc {
    disable;
    traceoptions {
      flag {
        all <extensive>;
      }
    }
  }
  talk {
    disable;
    traceoptions {
      flag {
        all <extensive>;
      }
    }
  }
  tftp {
    disable;
    traceoptions {
      flag {
        all <extensive>;
      }
    }
  }
}

```

Hierarchy Level [edit security]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure an Application Layer Gateway (ALG) on the device. An ALG runs as a service and can be associated in policies with specified types of traffic. ALGs are enabled by default.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

algorithm

Syntax	algorithm (3des-cbc aes-128-cbc aes-192-cbc aes-256-cbc des-cbc);
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i> manual encryption]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	<p>Select the encryption algorithm for the internal Routing-Engine-to-Routing-Engine IPsec security association (SA) configuration. (This statement is not supported on dynamic VPN implementations.)</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>3des-cbc—3DES-CBC encryption algorithm.</p> <p>aes-128-cbc—AES-CBC 128-bit encryption algorithm.</p> <p>aes-192-cbc—AES-CBC 192-bit encryption algorithm.</p> <p>aes-256-cbc—AES-CBC 256-bit encryption algorithm.</p> <p>des-cbc—DES-CBC encryption algorithm.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

all-tcp

Syntax	all-tcp { mss <i>value</i> ; }
Hierarchy Level	[edit security flow tcp-mss]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Set the TCP maximum segment size (MSS) value for all TCP packets for network traffic. This statement is supported on J Series and SRX Series devices.
Options	mss <i>value</i> —TCP MSS value. Range: 64 through 65535 bytes
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

allow-dns-reply

Syntax	allow-dns-reply;
Hierarchy Level	[edit security flow]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Allow an incoming Domain Name Service (DNS) reply packet without a matched request. By default, if an incoming UDP first-packet has dst-port 53, the device checks the DNS message packet header to verify that the query bit (QR) is 0, which denotes a query message. If the QR bit is 1, which denotes a response message, the device drops the packet, does not create a session, and increments the illegal packet flow counter for the interface. Using the allow-dns-reply statement directs the device to skip the check. This statement is supported on J Series and SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

allow-icmp-without-flow

Syntax	(allow-icmp-without-flow no-allow-icmp-without-flow);
Hierarchy Level	[edit security idp sensor-configuration flow]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Allow an ICMP packet without matched request. By default the ICMP flow is enabled.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

always-send

Syntax	always-send;
Hierarchy Level	[edit security ike gateway <i>gateway-name</i> dead-peer-detection]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Instructs the device to send dead peer detection (DPD) requests regardless of whether there is outgoing IPsec traffic to the peer.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

anomaly

Syntax anomaly {
 direction (any | client-to-server | server-to-client);
 service *service-name* ;
 shellcode (all | intel | no-shellcode | sparc);
 test *test-condition* ;
 }

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Protocol anomaly attack objects detect abnormal or ambiguous messages within a connection according to the set of rules for the particular protocol being used.

 This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

antispam

See the following sections:

- antispam (feature-profile)
- antispam (utm-policy)

antispam (feature-profile)

Syntax	<pre>anti-spam { symantec-sbl { profile <i>profile-name</i>{ sbl-default-server; spam-action (log-and-permit block); custom-tag-string [***SPAM***]; } address-whitelist{ <i>listname</i>; } address-blacklist{ <i>listname</i>; } } }</pre>
Hierarchy Level	[edit security utm feature-profile]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure UTM antispam features.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

antispam (utm-policy)

Syntax anti-spam {
smtp-profile *profile-name*;
}

Hierarchy Level [edit security utm utm-policy *policy-name*]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Configure a UTM policy for the antispam SMTP protocol and attach this policy to a security profile to implement it.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

antivirus

See the following sections:

- `antivirus (feature-profile)`
- `antivirus (utm-policy)`

antivirus (feature-profile)

```

Syntax  anti-virus {
    type kaspersky-lab-engine;
    kaspersky-lab-engine {
        pattern-update {
            url;
            interval value;
        }
        profile profile-name {
            fallback-options {
                default (log-and-permit | block);
                corrupt-file (log-and-permit | block);
                password-file (log-and-permit | block);
                decompress-layer (log-and-permit | block);
                content-size (log-and-permit | block);
                engine-not-ready (log-and-permit | block);
                timeout (log-and-permit | block);
                out-of-resources (log-and-permit | block);
                too-many-requests (log-and-permit | block);
            }
            scan-options {
                intelligent-prescreening;
                scan-mode (scan-all | by-extension);
                content-size-limit value;
                timeout value;
                decompress-layer-limit value;
            }
            notification-options {
                virus-detection {
                    type (message | protocol-only);
                    notify-mail-sender;
                    custom-message;
                }
                fallback-block {
                    custom-message;
                    notify-mail-sender;
                    type;
                }
            }
            trickling {
                timeout value;
            }
        }
    }
    type juniper-express-engine;
    juniper-express-engine {
        pattern-update {
            url;
            interval value;
        }
        profile profile-name {
            fallback-options {
                default (log-and-permit | block);
                content-size (log-and-permit | block);
            }
        }
    }
}

```



```

        engine-not-ready (log-and-permit | block);
        timeout (log-and-permit | block);
        out-of-resources (log-and-permit | block);
        too-many-requests (log-and-permit | block);
    }
    scan-options {
    intelligent-prescreening;
        scan-mode (scan-all | by-extension);
        content-size-limit value;
        timeout value;
        decompress-layer-limit value;
    }
    notification-options {
    virus-detection {
        type (message | protocol-only);
        notify-mail-sender;
        custom-message;
    }
        fallback-block {
        custom-message;
        notify-mail-sender;
        type;
    }
    }
    trickling {
    timeout value;
    }
    }
    mime-whitelist {
    list listname {
        exception listname;
    }
    url-whitelist {
    listname;
    }
    }
}

```

Hierarchy Level	[edit security utm feature-profile]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure UTM antivirus full and express features.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

antivirus (utm-policy)

Syntax anti-virus {
 http-profile *profile-name*;
 ftp {
 upload-profile *profile-name*;
 download-profile *profile-name*;
 }
 smtp-profile *profile-name*;
 pop3-profile *profile-name*;
 imap-profile *profile-name*;
}

Hierarchy Level [edit security utm utm-policy *policy-name*]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Configure a UTM policy for the antivirus protocols and attach this policy to a security profile to implement it.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

application

See the following sections:

- application (Protocol Binding Custom Attack) on page 291
- application (Security Policies) on page 291

application (Protocol Binding Custom Attack)

Syntax	<code>application application-name ;</code>
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type chain protocol-binding] [edit security idp custom-attack <i>attack-name</i> attack-type signature protocol-binding]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Allow IDP to match the attack for a specified application. This statement is supported on SRX Series devices.
Options	<i>application-name</i> —Name of the application.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

application (Security Policies)

Syntax	<code>application [application-name-or-set];</code>
Hierarchy Level	[edit security policies from-zone <i>zone-name</i> to-zone <i>zone-name</i> policy <i>policy-name</i> match]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the IP or remote procedure call (RPC) application or set of applications to be used as match criteria. This statement is supported on J Series and SRX Series devices.
Options	<i>application-name-or-set</i> —Name of the application or application set used as match criteria.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

application-identification

Syntax application-identification {
 application-system-cache;
 application-system-cache-timeout *value*;
 disable;
 max-packet-memory *value*;
 max-sessions *value*;
 max-tcp-session-packet-memory *value*;
 max-udp-session-packet-memory *value*;
 }

Hierarchy Level [edit security idp sensor-configuration]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Enable to identify the TCP/UDP application session running on nonstandard ports to match the application properties of transiting network traffic.

This statement is supported on SRX Series devices.

Options disable—Disable the TCP/UDP application identification of nonstandard ports' matching properties.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

application-screen

See the following sections:

- application-screen (H323) on page 293
- application-screen (MGCP) on page 294
- application-screen (SCCP) on page 295
- application-screen (SIP) on page 296

application-screen (H323)

Syntax application-screen {
 message-flood {
 gatekeeper threshold *rate* ;
 }
 unknown-message {
 permit-nat-applied;
 permit-routed;
 }
 }

Hierarchy Level [edit security alg h323]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure the security screens for the H.323 protocol Application Layer Gateway (ALG).

This statement is supported on J Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

application-screen (MGCP)

Syntax application-screen {
 connection-flood threshold *rate* ;
 message-flood threshold *rate* ;
 unknown-message {
 permit-nat-applied;
 permit-routed;
 }
 }

Hierarchy Level [edit security alg mgcp]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure the security screens for the Media Gateway Control Protocol (MGCP) Application Layer Gateway (ALG).

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

application-screen (SCCP)

Syntax application-screen {
 call-flood threshold *rate* ;
 unknown-message {
 permit-nat-applied;
 permit-routed;
 }
 }

Hierarchy Level [edit security alg sccp]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure the security screens for the Skinny Client Control Protocol (SCCP) Application Layer Gateway (ALG).

This statement is supported on J Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

application-screen (SIP)

Syntax

```

application-screen {
    protect {
        deny {
            all | destination-ip address ;
            timeout seconds ;
        }
    }
    unknown-message {
        permit-nat-applied;
        permit-routed;
    }
}

```

Hierarchy Level [edit security alg sip]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure the security screens for the Session Initiation Protocol (SIP) Application Layer Gateway (ALG).

This statement is supported on J Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

application-services

See the following sections:

- application-services (priority) on page 297
- application-services (Unified Access Control) on page 298
- application-services (WXC Integrated Services Module) on page 298

application-services (priority)

Syntax

```
application-services {
  maximize-idp-sessions {
    weight {
      equal;
      firewall;
      idp;
    }
  }
}
```

Hierarchy Level [edit security forwarding-process]

Release Information Statement introduced in Release 9.6 of JUNOS Software.

Description You can configure the device to switch from an integrated firewall mode to maximize IDP mode to increase the capacity of IDP processing. When you maximize IDP, you are decoupling IDP processes from firewall processes, allowing the device to support the same number of firewall and IDP sessions.

This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

application-services (Unified Access Control)

Syntax	application-services (uac-policy);
Hierarchy Level	[edit security policies from-zone <i>zone-name</i> to-zone <i>zone-name</i> policy <i>policy-name</i> then permit]
Release Information	Statement modified in Release 9.4 of JUNOS Software.
Description	<p>Enable Unified Access Control (UAC) for the security policy. This statement is required when you are configuring the SRX Series device to act as a JUNOS Enforcer in a UAC deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

application-services (WXC Integrated Services Module)

Syntax	application-services (wx-redirect wx-reverse-redirect);
Hierarchy Level	[edit security policies from-zone <i>zone-name</i> to-zone <i>zone-name</i> policy <i>policy-name</i> then permit]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Define the acceleration zone security policy for WX redirection of packets to the WXC Integrated Service Module (ISM 200) for WAN acceleration. During the redirection process, the direction of the WX packet and its type determine further processing of the packet.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>wx-redirect—Specify the WX redirection needed for the packets that arrive from the LAN.</p> <p>wx-reverse-redirect—Specify the WX redirection needed for the reverse flow of the packets that arrive from the WAN.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

application-system-cache

Syntax	application-system-cache;
Hierarchy Level	[edit security idp sensor-configuration application-identification]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>When a session is created, specify an application ID to match the application properties of transiting network traffic. The application port mappings are saved in the application system cache.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

application-system-cache-timeout

Syntax	application-system-cache-timeout <i>value</i> ;
Hierarchy Level	[edit security idp sensor-configuration application-identification]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Specify the timeout value in seconds for the application system cache entries. Note the cache is not cleared when IDP policy is loaded. Users need to manually clear or wait for the cache entries to expire.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<i>value</i> —Timeout value for the application system cache entries. Range: 0 through 1000000 seconds Default: 3600 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

attack-threshold

Syntax attack-threshold *number* ;

Hierarchy Level [edit security screen ids-option *screen-name* tcp syn-flood]

Release Information Statement modified in Release 9.2 of JUNOS Software.

Description Define the number of SYN packets per second required to trigger the SYN proxy response.

This statement is supported on J Series and SRX Series devices.

Options *number* —Number of SYN packets per second required to trigger the SYN proxy response.

Range: 1 through 100000 per second

Default: 200 per second



NOTE: For SRX Series devices the applicable range is 1 through 1000000 per second.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

attacks

See the following sections:

- attacks (Exempt Rulebase) on page 301
- attacks (IPS Rulebase) on page 302

attacks (Exempt Rulebase)

Syntax attacks {
 custom-attacks [attack-name];
 predefined-attack-groups [attack-name];
 predefined-attacks [attack-name];
 }

Hierarchy Level [edit security idp idp-policy *policy-name* rulebase-exempt rule *rule-name* match]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Specify the attacks that you do not want the device to match in the monitored network traffic. Each attack is defined as an attack object, which represents a known pattern of attack.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

attacks (IPS Rulebase)

Syntax attacks {
 custom-attacks [attack-name];
 predefined-attack-groups [attack-name];
 predefined-attacks [attack-name];
 }

Hierarchy Level [edit security idp idp-policy *policy-name* rulebase-ips rule *rule-name* match]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Specify the attacks you want the device to match in the monitored network traffic. Each attack is defined as an attack object, which represents a known pattern of attack.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

attack-type

See the following sections:

- attack-type (Anomaly) on page 303
- attack-type (Chain) on page 304
- attack-type (Signature) on page 305

attack-type (Anomaly)

Syntax attack-type {
 anomaly {
 direction (any | client-to-server | server-to-client);
 service *service-name* ;
 shellcode (all | intel | no-shellcode | sparc);
 test *test-condition* ;
 }
 }

Hierarchy Level [edit security idp custom-attack *attack-name*]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify the type of attack.

This statement is supported on SRX Series devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

attack-type (Chain)

Syntax

```

attack-type {
  chain {
    expression boolean-expression ;
    member member-name {
      attack-type {
        (anomaly | signature);
      }
    }
  }
  order;
  protocol-binding {
    application application-name ;
    icmp;
    ip {
      protocol-number transport-layer-protocol-number ;
    }
    rpc {
      program-number rpc-program-number ;
    }
    tcp {
      minimum-port port-number maximum-port port-number ;
    }
    udp {
      minimum-port port-number maximum-port port-number ;
    }
  }
  reset;
  scope (session | transaction);
}

```

Hierarchy Level [edit security idp custom-attack *attack-name*]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify the type of attack.

This statement is supported on SRX Series devices.



NOTE: In a chain attack, you can configure multiple member attacks.

In an attack, under protocol binding TCP/UDP, you can specify multiple ranges of ports.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

attack-type (Signature)

```

Syntax  attack-type {
          signature {
            context context-name ;
            direction (any | client-to-server | server-to-client);
            negate;
            pattern signature-pattern ;
            protocol {
              icmp {
                code {
                  match (equal | greater-than | less-than | not-equal);
                  value code-value ;
                }
                data-length {
                  match (equal | greater-than | less-than | not-equal);
                  value data-length ;
                }
                identification {
                  match (equal | greater-than | less-than | not-equal);
                  value identification-value ;
                }
                sequence-number {
                  match (equal | greater-than | less-than | not-equal);
                  value sequence-number ;
                }
                type {
                  match (equal | greater-than | less-than | not-equal);
                  value type-value ;
                }
              }
            }
            ip {
              destination {
                match (equal | greater-than | less-than | not-equal);
                value hostname ;
              }
              identification {
                match (equal | greater-than | less-than | not-equal);
                value identification-value ;
              }
              ip-flags {
                (df | no-df);
                (mf | no-mf);
                (rb | no-rb);
              }
              protocol {
                match (equal | greater-than | less-than | not-equal);
                value transport-layer-protocol-id ;
              }
              source {
                match (equal | greater-than | less-than | not-equal);
                value hostname ;
              }
              tos {
                match (equal | greater-than | less-than | not-equal);

```

```

        value type-of-service-in-decimal ;
    }
    total-length {
        match (equal | greater-than | less-than | not-equal);
        value total-length-of-ip-datagram ;
    }
    ttl {
        match (equal | greater-than | less-than | not-equal);
        value time-to-live ;
    }
}
tcp {
    ack-number {
        match (equal | greater-than | less-than | not-equal);
        value acknowledgement-number ;
    }
    data-length {
        match (equal | greater-than | less-than | not-equal);
        value tcp-data-length ;
    }
    destination-port {
        match (equal | greater-than | less-than | not-equal);
        value destination-port ;
    }
    header-length {
        match (equal | greater-than | less-than | not-equal);
        value header-length ;
    }
    mss {
        match (equal | greater-than | less-than | not-equal);
        value maximum-segment-size ;
    }
    option {
        match (equal | greater-than | less-than | not-equal);
        value tcp-option ;
    }
    sequence-number {
        match (equal | greater-than | less-than | not-equal);
        value sequence-number ;
    }
    source-port {
        match (equal | greater-than | less-than | not-equal);
        value source-port ;
    }
    tcp-flags {
        (ack | no-ack);
        (fin | no-fin);
        (psh | no-psh);
        (r1 | no-r1);
        (r2 | no-r2);
        (rst | no-rst);
        (syn | no-syn);
        (urg | no-urg);
    }
    urgent-pointer {
        match (equal | greater-than | less-than | not-equal);

```

```

        value urgent-pointer ;
    }
    window-scale {
        match (equal | greater-than | less-than | not-equal);
        value window-scale-factor ;
    }
    window-size {
        match (equal | greater-than | less-than | not-equal);
        value window-size ;
    }
}
udp {
    data-length {
        match (equal | greater-than | less-than | not-equal);
        value data-length ;
    }
    destination-port {
        match (equal | greater-than | less-than | not-equal);
        value destination-port ;
    }
    source-port {
        match (equal | greater-than | less-than | not-equal);
        value source-port ;
    }
}
protocol-binding {
    application application-name ;
    icmp;
    ip {
        protocol-number transport-layer-protocol-number ;
    }
    rpc {
        program-number rpc-program-number ;
    }
    tcp {
        minimum-port port-number maximum-port port-number ;
    }
    udp {
        minimum-port port-number maximum-port port-number ;
    }
}
regexp regular-expression ;
shellcode (all | intel | no-shellcode | sparc);
}

```

Hierarchy Level [edit security idp custom-attack *attack-name*]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify the type of attack.

This statement is supported on SRX Series devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

authentication

Syntax authentication {
 algorithm (hmac-md5-96 | hmac-sha1-96);
 key (ascii-text key | hexadecimal key);
}

Hierarchy Level [edit security ipsec vpn *vpn-name* manual]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Configure IP Security (IPsec) authentication parameters for a manual security association (SA). (This statement is not supported on dynamic VPN implementations.)

This statement is supported on J Series and SRX Series devices.

Options algorithm—Hash algorithm that authenticates packet data. It can be one of the following:

- hmac-md5-96—Produces a 128-bit digest.
- hmac-sha1-96—Produces a 160-bit digest

key—Type of authentication key. It can be one of the following:

- ascii-text key—ASCII text key. For hmac-md5-96, the key is 16 ASCII characters; for hmac-sha1-96, the key is 20 ASCII characters.
- hexadecimal key—Hexadecimal key. For hmac-md5-96, the key is 32 hexadecimal characters; for hmac-sha1-96, the key is 40 hexadecimal characters.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

authentication-algorithm

Syntax	authentication-algorithm (md5 sha1 sha-256);
Hierarchy Level	[edit security ike proposal <i>proposal-name</i>]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	<p>Configure the Internet Key Exchange (IKE) authentication algorithm.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>authentication-algorithm—Hash algorithm that authenticates packet data. It can be one of three algorithms:</p> <ul style="list-style-type: none"> ■ md5—Produces a 128-bit digest. ■ sha1—Produces a 160-bit digest. ■ sha-256—Produces a 256-bit digest.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

authentication-method

Syntax	authentication-method (dsa-signatures pre-shared-keys rsa-signatures);
Hierarchy Level	[edit security ike proposal <i>proposal-name</i>]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	<p>Specifies the method the device uses to authenticate the source of Internet Key Exchange (IKE) messages. The pre-shared-keys option refers to a preshared key, which is a key for encryption and decryption that both participants must have before beginning tunnel negotiations. The rsa-signatures and dsa-signatures options refer to two kinds of digital signatures, which are certificates that confirm the identity of the certificate holder. (The default method is a preshared key.) (The rsa-signatures and dsa-signatures options are not supported on dynamic VPN implementations.)</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>dsa-signatures—Specifies that the Digital Signature Algorithm (DSA) is used.</p> <p>pre-shared-keys—Specifies that a preshared key, which is a secret key shared between the two peers, is used during authentication to identify the peers to each other. The same key must be configured for each peer. This is the default method.</p> <p>rsa-signatures—Specifies that a public key algorithm, which supports encryption and digital signatures, is used.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

auto-re-enrollment

Syntax auto-re-enrollment {
 certificate-id *certificate-id-name* {
 ca-profile-name *ca-profile-name* ;
 challenge-password *password* ;
 re-enroll-trigger-time-percentage *percentage* ;
 re-generate-keypair;
 }
 }

Hierarchy Level [edit security pki]

Release Information Statement modified in Release 9.0 of JUNOS Software.

Description Configure the automatic re-enrollment of a certificate authority (CA) certificate.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

automatic

Syntax	automatic { enable; interval <i>hours</i> ; start-time <i>start-time</i> ; }
Hierarchy Level	[edit security idp security-package]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Enable the device to automatically download the updated signature database from the specified URL. This statement is supported on SRX Series devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

bind-interface

Syntax	bind-interface <i>interface-name</i> ;
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i>]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Configure the tunnel interface to which the route-based virtual private network (VPN) is bound. This statement is supported on J Series and SRX Series devices.
Options	<i>interface-name</i> —Tunnel interface.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

block-command

Syntax	block-command <i>protocol-command-list</i> ;
Hierarchy Level	[edit security utm feature-profile content-filtering profile <i>profile-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Apply protocol block command custom-objects to the content-filtering profile</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

block-content-type

Syntax	block-content-type (java-applet exe http-cookie);
Hierarchy Level	[edit security utm feature-profile content-filtering profile <i>profile-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Apply blocks to other available content such as exe, http-cookie, java-applet. This is for HTTP only.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<ul style="list-style-type: none"> ■ activex ■ exe ■ java-applet ■ http-cookie ■ zip
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

block-mime

Syntax block-mime {
 list *list-name* {
 exception *list-name*;
 }
 }

Hierarchy Level [edit security utm feature-profile content-filtering profile *profile-name*]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Apply MIME pattern list custom-objects to the content-filtering profile for blocking MIME types.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

bridge

Syntax

```
bridge {
  block-non-ip-all;
  bypass-non-ip-unicast;
  no-packet-flooding {
    no-trace-route;
  }
}
```

Hierarchy Level [edit security flow]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Changes default Layer 2 forwarding behavior.

This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.

Options **block-non-ip-all**—Block all Layer 2 non-IP and non-ARP traffic, including multicast and broadcast traffic.

no-packet-flooding—Stop IP flooding and send ARP or ICMP requests to discover the destination MAC address for a unicast packet.

no-trace-route—Do not send ICMP requests to discover the destination MAC address for a unicast packet. Only ARP requests are sent. This option only allows the device to discover the destination MAC address for a unicast packet if the destination IP address is in the same subnetwork as the ingress IP address.

bypass-non-ip-unicast—Allow all Layer 2 non-IP traffic to pass through the device.



NOTE: The **block-non-ip-all** and **bypass-non-ip-unicast** options cannot be configured at the same time.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

c-timeout

Syntax	<code>c-timeout <i>minutes</i> ;</code>
Hierarchy Level	<code>[edit security alg sip]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the timeout interval for Session Initiation Protocol (SIP) transactions in minutes. This statement is supported on J Series devices.
Options	<i>minutes</i> —Timeout interval. Range: 3 through 10 minutes Default: 3 minutes
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

ca-identity

Syntax	<code>ca-identity <i>ca-identity</i> ;</code>
Hierarchy Level	<code>[edit security pki ca-profile <i>ca-profile-name</i>]</code>
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Specify the certificate authority (CA) identity to use in requesting digital certificates. This statement is supported on J Series and SRX Series devices.
Options	<i>ca-identity</i> —Name of CA identity. This name is typically the domain name of the CA.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

ca-profile

Syntax

```
ca-profile ca-profile-name {
  administrator {
    e-mail-address e-mail-address ;
  }
  ca-identity ca-identity ;
  enrollment {
    retry number;
    retry-interval seconds;
    url url-name;
  }
  revocation-check {
    crl {
      disable {
        on-download-failure;
      }
      refresh-interval hours ;
      url url-name ;
    }
    disable;
  }
}
```

Hierarchy Level [edit security pki]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Configure certificate authority (CA) profile.

This statement is supported on J Series and SRX Series devices.

Options *ca-profile-name* —Name of a trusted CA.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

ca-profile-name

Syntax	<code>ca-profile-name <i>ca-profile-name</i> ;</code>
Hierarchy Level	<code>[edit security pki auto-re-enrollment certificate-id <i>certificate-id-name</i>]</code>
Release Information	Statement modified in Release 9.0 of JUNOS Software.
Description	Specify the name of the certificate authority (CA) profile. This statement is supported on J Series and SRX Series devices.
Options	<i>ca-profile-name</i> —Name of the specific CA profile.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

cache

Syntax	<code>cache { timeout <i>value</i>; }</code>
Hierarchy Level	<code>[edit security utm feature-profile web-filtering surf-control-integrated]</code>
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Set the cache timeout parameters for surf-control-integrated Web filtering (24 hours is the default and the maximum allowed life span for cached items). This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

cache-size

Syntax	cache-size <i>size</i> ;
Hierarchy Level	[edit security idp sensor-configuration log]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify the size in bytes for each user's log cache. This statement is supported on SRX Series devices.
Options	size—Cache size. Range: 1 through 65535 bytes Default: 12800 bytes
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

call-flood

Syntax	call-flood threshold <i>rate</i> ;
Hierarchy Level	[edit security alg sccp application-screen]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Limit the number of calls per second allowed to Skinny Client Control Protocol (SCCP) client. Calls exceeding the threshold are dropped by the SCCP Application Layer Gateway (ALG). This statement is supported on J Series devices.
Options	threshold <i>rate</i> —Number of calls per second per client. Range: 2 through 1000 Default: 20
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

category

Syntax	category { values [list-of-values]; }
Hierarchy Level	[edit security idp dynamic-attack-group <i>dynamic-attack-group-name</i> filters]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Specify a category filter to add attack objects based on the category. This statement is supported on SRX Series devices.
Options	values—Name of the category filter.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

category (web filtering)

Syntax	category <i>customurl-list name</i> { action (log-and-permit block); }
Hierarchy Level	[edit security utm feature-profile web-filtering surf-control-integrated profile <i>profile-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Select a custom URL category list you created (custom objects) for filtering against. This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

certificate

Syntax	<pre>certificate { local-certificate <i>certificate-id</i> ; peer-certificate-type (pkcs7 x509-signature); trusted-ca (<i>ca-index</i> use-all); }</pre>
Hierarchy Level	[edit security ike policy <i>policy-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify usage of a digital certificate to authenticate the virtual private network (VPN) initiator and recipient. (This statement is not supported on dynamic VPN implementations.)</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

certificate-id

Syntax	<pre>certificate-id <i>certificate-id-name</i> { ca-profile-name <i>ca-profile-name</i> ; challenge-password <i>password</i> ; re-enroll-trigger-time-percentage <i>percentage</i> ; re-generate-keypair; }</pre>
Hierarchy Level	[edit security pki auto-re-enrollment]
Release Information	Statement modified in Release 9.0 of JUNOS Software.
Description	<p>Specify the certificate authority (CA) certificate to use for automatic re-enrollment.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>certificate-id-name</i> —Identifier of the certificate that needs automatic re-enrollment.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

chain

Syntax

```
chain {
    expression boolean-expression ;
    member member-name {
        attack-type {
            (anomaly | signature);
        }
    }
    order;
    protocol-binding {
        application application-name ;
        icmp;
        ip {
            protocol-number transport-layer-protocol-number ;
        }
        rpc {
            program-number rpc-program-number ;
        }
        tcp {
            minimum-port port-number maximum-port port-number ;
        }
        udp {
            minimum-port port-number maximum-port port-number ;
        }
    }
    reset;
    scope (session | transaction);
}
```

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Chain attack object combines multiple signatures and/or protocol anomalies into a single object. Traffic must match all of the combined signatures and/or protocol anomalies to match the chain attack object.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

challenge-password

Syntax	<code>challenge-password password ;</code>
Hierarchy Level	<code>[edit security pki auto-re-enrollment certificate-id certificate-id-name]</code>
Release Information	Statement modified in Release 9.0 of JUNOS Software.
Description	Specify the password used by the certificate authority (CA) for enrollment and revocation. If the CA does not provide the challenge password, choose your own password. This statement is supported on J Series and SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

clear-threshold

Syntax	<code>clear-threshold clear-threshold ;</code>
Hierarchy Level	<code>[edit security nat source pool-utilization-alarm]</code>
Release Information	Statement modified in Release 9.2 of JUNOS Software.
Description	Configure the lower threshold at which an SNMP trap is triggered when pool utilization for a source pool without Port Address Translation (PAT) falls below the threshold. This statement is supported on J Series and SRX Series devices.
Options	<i>clear-threshold</i> -Threshold at which an SNMP trap is triggered. Range: 40 through 100
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security-To view this statement in the configuration. security-control-To add this statement to the configuration.

clients

Syntax

```
clients {
  configuration-name {
    remote-protected-resources {
      ip-address/mask;
    }
    remote-exceptions {
      ip-address/mask;
    }
    ipsec-vpn configuration-name;
    user {
      username;
    }
  }
}
```

Hierarchy Level [edit security dynamic-vpn]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Use this statement to create a client configuration for the dynamic VPN feature. Within the configuration, specify a name for the configuration, reference a standard VPN configuration to use for IPsec negotiations, specify which resources to protect, define any exceptions, and list the users to which the dynamic VPN configuration applies.

This statement is supported on SRX210 and SRX240 devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

code

Syntax	code { match (equal greater-than less-than not-equal); value <i>code-value</i> ; }
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol icmp]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Specify the secondary code that identifies the function of the request/reply within a given type. This statement is supported on SRX Series devices.
Options	match (equal greater-than less-than not-equal)—Match an operand. value <i>code-value</i> —Match a decimal value. Range: 0 through 255
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

connection-flood

Syntax	connection-flood threshold <i>rate</i> ;
Hierarchy Level	[edit security alg mgcp application-screen]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Limit the number of new connection requests allowed per Media Gateway (MG) per second. Messages exceeding the threshold are dropped by the Media Gateway Control Protocol (MGCP) Application Layer Gateway (ALG). This statement is supported on J Series and SRX Series devices.
Options	threshold <i>rate</i> —Number of connection requests per second allowed per MG. Range: 2 through 10000 Default: 200
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

connections-limit

Syntax	<code>connections-limit <i>number</i> ;</code>
Hierarchy Level	<code>[edit security ike gateway <i>gateway-name</i> dynamic]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Limit the number of concurrent connections that the group profile supports. When the maximum number of connections is reached, no more dynamic virtual private network (VPN) endpoints dialup users attempting to access an IPsec VPN are allowed to begin Internet Key Exchange (IKE) negotiations.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>number</i> —Maximum number of concurrent connections allowed.</p> <p>Range: 1 through 1000</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

container

Syntax	<code>container <i>container-string</i>;</code>
Hierarchy Level	<code>[edit security ike gateway <i>gateway-name</i> dynamic distinguished-name]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify that the value in the identity fields of a dynamic virtual private network (VPN) endpoint user's distinguished name exactly match the values in the group IKE user's distinguished name. The order of the identity fields in the fields of the distinguished name strings must be identical when matching. (This statement is not supported on dynamic VPN implementations.)</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>container-string</i> —Distinguished name identity value to be matched.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

content-filtering

See the following sections:

- content-filtering (feature-profile)
- content-filtering (utm-policy)

content-filtering (feature-profile)

Syntax

```
content-filtering {
  profile profile-name{
    block-command protocol-command-list;
    block-content-type (java-applet | exe | http-cookie);
    block-mime {
      list list-name {
        exception list-name;
      }
    }
    permit-command protocol-command-list;
    notification-options {
      type (message);
      custom-message [message];
    }
  }
}
```

Hierarchy Level [edit security utm feature-profile]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Configure UTM content-filtering features.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

content-filtering (utm-policy)

Syntax	content-filtering { smtp-profile <i>profile-name</i> ; pop3-profile <i>profile-name</i> ; }
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Configure a UTM policy for the content-filtering protocols and attach this policy to a security profile to implement it. This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

content-size

Syntax	content-size (log-and-permit block);
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> fallback-options] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> fallback-options]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	If the content size exceeds a set limit, the content is either passed or blocked. The default action is BLOCK. This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on J Series devices.)
Options	<ul style="list-style-type: none"> ■ log-and-permit—Log the error and permit the traffic ■ block—Log the error and deny the traffic
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

content-size-limit

Syntax	content-size-limit <i>value</i> ;
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> scan-options] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> scan-options]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	The content size check occurs before the scan request is sent. The content size refers to accumulated TCP payload size. This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on J Series devices.)
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

context

Syntax	context <i>context-name</i> ;
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Define the location of the signature where IDP should look for the attack in a specific Application Layer protocol. This statement is supported on SRX Series devices.
Options	<i>context-name</i> —Name of the context under which the attack has to be matched.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

corrupt-file

Syntax	corrupt-file (log-and-permit block);
Hierarchy Level	[edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> fallback-options]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Corrupt file is the error returned by the scan engine when engine detects a corrupted file. The default action is log-and-permit.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<ul style="list-style-type: none">■ log-and-permit—Log the error and permit the traffic■ block—Log the error and deny the traffic
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

count

See the following sections:

- `count` (Custom Attack) on page 331
- `count` (Security Policies) on page 332

count (Custom Attack)

Syntax `count count-value ;`

Hierarchy Level [edit security idp custom-attack *attack-name* time-binding]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify the number of times that IDP detects the attack within the specified scope before triggering an event.

This statement is supported on SRX Series devices.

Options *count-value* —Number of times IDP detects the attack.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

count (Security Policies)

Syntax count {
 alarm {
 per-minute-threshold *number* | per-second-threshold *number* ;
 }
 }

Hierarchy Level [edit security policies from-zone *zone-name* to-zone *zone-name* policy *policy-name* then]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Enables a count, in bytes or kilobytes, of all network traffic the security policy allows to pass through the device.

This statement is supported on J Series and SRX Series devices.

Options per-minute-threshold *number* —Alarm threshold in kilobytes per minute.

per-second-threshold *number* —Alarm threshold in bytes per second.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

crl

Syntax crl {
 disable {
 on-download-failure;
 }
 refresh-interval *hours* ;
 url *url-name* ;
 }

Hierarchy Level [edit security pki ca-profile *ca-profile-name* revocation-check]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure the certificate revocation list (CRL). A CRL is a time-stamped list identifying revoked certificates, which is signed by a CA and made available to the participating IPsec peers on a regular periodic basis.

This statement is supported on J Series and SRX Series devices.

Options disable on-download-failure—(Optional) Override the default behavior and permit certificate verification even if the CRL fails to download.

refresh-interval *hours* —Time interval, in hours, between CRL updates.

url *url-name* —Name of the location from which to retrieve the CRL through HTTP or Lightweight Directory Access Protocol (LDAP). You can specify one URL for each configured CA profile. By default, no location is specified. Use a fully qualified domain name (FQDN) or an IP address and, optionally, a port number. If no port number is specified, port 80 is used for HTTP and port 443 is used for LDAP.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

custom-attack

```

Syntax  custom-attack attack-name {
    attack-type {
        anomaly {
            direction (any | client-to-server | server-to-client);
            service service-name ;
            shellcode (all | intel | no-shellcode | sparc);
            test test-condition ;
        }
        chain {
            expression boolean-expression ;
            member member-name {
                attack-type {
                    (anomaly | signature);
                }
            }
        }
        order;
        protocol-binding {
            application application-name ;
            icmp;
            ip {
                protocol-number transport-layer-protocol-number ;
            }
            rpc {
                program-number rpc-program-number ;
            }
            tcp {
                minimum-port port-number maximum-port port-number ;
            }
            udp {
                minimum-port port-number maximum-port port-number ;
            }
        }
        reset;
        scope (session | transaction);
    }
    signature {
        context context-name ;
        direction (any | client-to-server | server-to-client);
        negate;
        pattern signature-pattern ;
        protocol {
            icmp {
                code {
                    match (equal | greater-than | less-than | not-equal);
                    value code-value ;
                }
                data-length {
                    match (equal | greater-than | less-than | not-equal);
                    value data-length ;
                }
            }
            identification {

```

```

        match (equal | greater-than | less-than | not-equal);
        value identification-value ;
    }
    sequence-number {
        match (equal | greater-than | less-than | not-equal);
        value sequence-number ;
    }
    type {
        match (equal | greater-than | less-than | not-equal);
        value type-value ;
    }
}
ip {
    destination {
        match (equal | greater-than | less-than | not-equal);
        value hostname ;
    }
    identification {
        match (equal | greater-than | less-than | not-equal);
        value identification-value ;
    }
    ip-flags {
        (df | no-df);
        (mf | no-mf);
        (rb | no-rb);
    }
    protocol {
        match (equal | greater-than | less-than | not-equal);
        value transport-layer-protocol-id ;
    }
    source {
        match (equal | greater-than | less-than | not-equal);
        value hostname ;
    }
    tos {
        match (equal | greater-than | less-than | not-equal);
        value type-of-service-in-decimal ;
    }
    total-length {
        match (equal | greater-than | less-than | not-equal);
        value total-length-of-ip-datagram ;
    }
    ttl {
        match (equal | greater-than | less-than | not-equal);
        value time-to-live ;
    }
}
tcp {
    ack-number {
        match (equal | greater-than | less-than | not-equal);
        value acknowledgement-number ;
    }
    data-length {
        match (equal | greater-than | less-than | not-equal);
        value tcp-data-length ;
    }
}

```

```

destination-port {
    match (equal | greater-than | less-than | not-equal);
    value destination-port ;
}
header-length {
    match (equal | greater-than | less-than | not-equal);
    value header-length ;
}
mss {
    match (equal | greater-than | less-than | not-equal);
    value maximum-segment-size ;
}
option {
    match (equal | greater-than | less-than | not-equal);
    value tcp-option ;
}
sequence-number {
    match (equal | greater-than | less-than | not-equal);
    value sequence-number ;
}
source-port {
    match (equal | greater-than | less-than | not-equal);
    value source-port ;
}
tcp-flags {
    (ack | no-ack);
    (fin | no-fin);
    (psh | no-psh);
    (r1 | no-r1);
    (r2 | no-r2);
    (rst | no-rst);
    (syn | no-syn);
    (urg | no-urg);
}
urgent-pointer {
    match (equal | greater-than | less-than | not-equal);
    value urgent-pointer ;
}
window-scale {
    match (equal | greater-than | less-than | not-equal);
    value window-scale-factor ;
}
window-size {
    match (equal | greater-than | less-than | not-equal);
    value window-size ;
}
}
udp {
    data-length {
        match (equal | greater-than | less-than | not-equal);
        value data-length ;
    }
    destination-port {
        match (equal | greater-than | less-than | not-equal);
        value destination-port ;
    }
}

```



```

        source-port {
            match (equal | greater-than | less-than | not-equal);
            value source-port ;
        }
    }
}
protocol-binding {
    application application-name ;
    icmp;
    ip {
        protocol-number transport-layer-protocol-number ;
    }
    rpc {
        program-number rpc-program-number ;
    }
    tcp {
        minimum-port port-number maximum-port port-number ;
    }
    udp {
        minimum-port port-number maximum-port port-number ;
    }
}
regexp regular-expression ;
shellcode (all | intel | no-shellcode | sparc);
}
}
recommended-action (close | close-client | close-server | drop |
drop-packet | ignore | none);
severity (critical | info | major | minor | warning);
time-binding {
    count count-value ;
    scope (destination | peer | source);
}
}
}

```

Hierarchy Level	[edit security idp]
Release Information	Statement modified in Release 9.3 of JUNOS Software.
Description	<p>Configure custom attack objects to detect a known or unknown attack that can be used to compromise your network.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p><i>attack-name</i> —Name of the custom attack object.</p> <p>The remaining statements are explained separately.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

custom-attack-group

Syntax	custom-attack-group <i>custom-attack-group-name</i> { group-members [attack-group-name attack-name]; }
Hierarchy Level	[edit security idp]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Configure custom attack group. A custom attack group is a list of attacks that would be matched on the traffic if the group is selected in a policy. This statement is supported on SRX Series devices.
Options	<i>custom-attack-group-name</i> —Name of the custom attack group. The remaining statement is explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

custom-attacks

Syntax	custom-attacks [attack-name];
Hierarchy Level	[edit security idp idp-policy <i>policy-name</i> rulebase-exempt rule <i>rule-name</i> match attacks], [edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i> match attacks]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Select custom attacks defined under [edit security idp custom-attack] by specifying their names. This statement is supported on SRX Series devices.
Options	<i>attack-name</i> —Name of the new custom attack object.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

custom-block-message

Syntax	custom-block-message <i>value</i> ;
Hierarchy Level	[edit security utm feature-profile web-filtering surf-control-integrated profile <i>profile-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Enter a custom message to be sent when HTTP requests are blocked.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

custom-message

See the following sections:

- custom-message (antivirus notification-options fallback-block/non-block)
- custom-message (antivirus notification-options virus-detection)
- custom-message (content-filter notification-options)

custom-message (antivirus notification-options fallback-block/non-block)

Syntax custom-message *message*;

Hierarchy Level [edit security utm feature-profile anti-virus juniper-express-engine *profile-name*
notification-options fallback-block]
[edit security utm feature-profile anti-virus kaspersky-lab-engine *profile-name*
notification-options fallback-block]

Release Information Statement introduced in Release 9.4 of JUNOS Software.

Description Custom message notifications are mainly used in file replacement or in a response message when the antivirus scan result is to drop the file.

This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on J Series devices.)

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

custom-message (antivirus notification-options virus-detection)

Syntax	custom-message <i>message</i> ;
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> notification-options virus-detection] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> notification-options virus-detection]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Custom message notifications are mainly used in file replacement or in a response message when the antivirus scan result is to drop the file. This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J Series devices.)
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

custom-message (content-filter notification-options)

Syntax	custom-message <i>message</i> ;
Hierarchy Level	[edit security utm feature-profile content-filtering profile <i>profile-name</i> notification-options]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Custom message notifications are generally used when content is blocked by the content filter. This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

custom-message-subject

See the following sections:

- custom-message-subject (antivirus notification-options fallback-block/non-block)
- custom-message-subject (antivirus notification-options virus-detection)
- custom-message-subject (antivirus pattern-update email-notify)

custom-message-subject (antivirus notification-options fallback-block/non-block)

Syntax custom-message-subject *subject message*;

Hierarchy Level [edit security utm feature-profile anti-virus juniper-express-engine *profile-name* notification-options fallback-block]
 [edit security utm feature-profile anti-virus kaspersky-lab-engine *profile-name* notification-options fallback-block]

Description Custom message notifications are mainly used in file replacement or in a response message when the antivirus scan result is to drop the file. As part of a custom message, you can customize the message subject line.

This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J Series devices.)

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

custom-message-subject (antivirus notification-options virus-detection)

Syntax	custom-message-subject <i>subject message</i> ;
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> notification-options virus-detection] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> notification-options virus-detection]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Custom message notifications are mainly used in file replacement or in a response message when the antivirus scan result is to drop the file. As part of a custom message, you can customize the message subject line. This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J Series devices.)
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

custom-message-subject (antivirus pattern-update email-notify)

Syntax	custom-message-subject <i>subject message</i> ;
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine pattern-update email-notify] [edit security utm feature-profile anti-virus kaspersky-lab-engine pattern-update email-notify]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	You can configure the device to notify a specified administrator when patterns are updated. This is an email notification with a custom message and a custom subject line. This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J Series devices.)
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

custom-objects

Syntax

```

custom-objects {
  filename-extension {
    value [list];
  }
  mime-pattern {
    value [list];
  }
  custom-url-category {
    value [list];
  }
  protocol-command {
    value [list];
  }
  url-pattern {
    value [list];
  }
}
```

Hierarchy Level [edit security utm]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Configure custom objects before configuring UTM feature-profile features.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

custom-tag-string

Syntax	custom-tag-string [string];
Hierarchy Level	[edit security utm feature-profile anti-spam symantec-sbl profile profile-name sbl-default-server]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure a custom string for identifying a message as spam.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

custom-url-category

Syntax	<pre>custom-url-category { value [list]; }</pre>
Hierarchy Level	[edit security utm custom-objects]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Use URL pattern lists to create Custom URL category lists. These are lists of patterns that bypass scanning.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

data-length

Syntax	<pre>data-length { match (equal greater-than less-than not-equal); value <i>data-length</i> ; }</pre>
Hierarchy Level	<pre>[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol udp] [edit security idp custom-attack <i>attack-name</i> attack-type signature protocol icmp] [edit security idp custom-attack <i>attack-name</i> attack-type signature protocol tcp]</pre>
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Specify the number of bytes in the data payload. In the TCP header, for SYN, ACK, and FIN packets, this field should be empty.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>match (equal greater-than less-than not-equal)—Match an operand.</p> <p>value <i>data-length</i> —Match the number of bytes in the data payload.</p> <p>Range: 0 through 65535</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

datapath-debug

Syntax	datapath-debug;
Hierarchy Level	[edit security]
Release Information	Command introduced in Release 9.6 of JUNOS Software.
Description	<p>Sets debugging at multiple processing units along the packet-processing path.</p> <p>This statement is supported on SRX5600 and SRX5800 devices.</p>
Options	<p><i>apply-groups</i> – Groups from which to inherit configuration data.</p> <p><i>apply-groups-except</i> – Do not inherit configuration data from these groups.</p> <p><i>packet-filter</i> – Packet filter configuration.</p> <p><i>traceoptions</i> – End to end debug trace options</p>
Usage Guidelines	For configuration instructions and examples, see the JUNOS Software Security Configuration Guide.
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

dead-peer-detection

Syntax	dead-peer-detection { always-send; interval <i>seconds</i> ; threshold <i>number</i> ; }
Hierarchy Level	[edit security ike gateway <i>gateway-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable the device to use dead peer detection (DPD). DPD is a method used by devices to verify the current existence and availability of IPsec peer devices. A device performs this verification by sending encrypted IKE Phase 1 notification payloads (R-U-THERE) to peers and waiting for DPD acknowledgements (R-U-THERE-ACK).</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

decompress-layer

Syntax	decompress-layer (log-and-permit block);
Hierarchy Level	[edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> fallback-options]
Description	<p>Decompress layer error is the error returned by the scan engine when the scanned file has too many compression layers. The default action is BLOCK.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<ul style="list-style-type: none"> ■ log-and-permit—Log the error and permit the traffic ■ block—Log the error and deny the traffic
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

decompress-layer-limit

Syntax	decompress-layer-limit <i>value</i> ;
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> scan-options] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> scan-options]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>The decompression layer limit specifies how many layers of nested compressed files and files with internal extractable objects, such as archive files (tar), the internal antivirus scanner can decompress before it executes the virus scan.</p> <p>This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J Series devices.)</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

default

See the following sections:

- default (antivirus fallback-options)
- default (web-filtering fallback-settings)

default (antivirus fallback-options)

Syntax default (log-and-permit | block);

Hierarchy Level [edit security utm feature-profile anti-virus juniper-express-engine *profile-name* fallback-options]
 [edit security utm feature-profile anti-virus kaspersky-lab-engine *profile-name* fallback-options]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description All errors other than those specifically listed fall into this category. This could include either unhandled system exceptions (internal errors) or other unknown errors.

This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J Series devices.)

- Options**
- log-and-permit—Log the error and permit the traffic
 - block—Log the error and deny the traffic

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

default (web-filtering fallback-settings)

Syntax	default (log-and-permit block);
Hierarchy Level	[edit security utm feature-profile web-filtering surf-control-integrated profile <i>profile-name</i> fallback-settings] [edit security utm feature-profile web-filtering websense-redirect profile <i>profile-name</i> fallback-settings]
Description	All errors other than those specifically listed fall into this category. This could include either unhandled system exceptions (internal errors) or other unknown errors. This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J Series devices.)
Options	<ul style="list-style-type: none"> ■ log-and-permit—Log the error and permit the traffic ■ block—Log the error and deny the traffic
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

default-policy

Syntax	default-policy { (deny-all permit-all); }
Hierarchy Level	[edit security policies]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Configure the default security policy that defines the actions the device takes on a packet that does not match any user-defined policy. This statement is supported on J Series and SRX Series devices.
Options	deny-all—Deny all traffic. Packets are dropped. This is the default. permit-all—Permit all traffic that does not match a policy.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

deny

See the following sections:

- deny (Policy) on page 352
- deny (SIP) on page 353

deny (Policy)

Syntax deny;

Hierarchy Level [edit security policies from-zone *zone-name* to-zone *zone-name* policy *policy-name* then]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Block the service at the firewall. The device drops the packets.

This statement is supported on J Series and SRX Series devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

deny (SIP)

Syntax deny {
 all | destination-ip *address* ;
 timeout *seconds* ;
 }

Hierarchy Level [edit security alg sip application-screen protect]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Protect servers against INVITE attacks.

This statement is supported on J Series devices.

Options all—Configure the Session Initiation Protocol (SIP) application screen to protect servers at all destination IP addresses against INVITE attacks.

destination-ip *address* —Configure the SIP application screen to protect the server at this destination IP address against INVITE attacks. You can include up to 16 destination IP addresses of servers to be protected. Enabling this option disables the all option.

timeout *seconds* —Amount of time (in *seconds*) to make an attack table entry for each INVITE, which is listed in the application screen.

Range: 1 through 3600 seconds

Default: 5 seconds

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

description

See the following sections:

- description (IDP Policy) on page 354
- description (Security Policies) on page 354

description (IDP Policy)

Syntax	<code>description text ;</code>
Hierarchy Level	[edit security idp idp-policy <i>policy-name</i> rulebase-exempt rule <i>rule-name</i>] [edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i>]
Release Information	Statement modified in Release 9.2 of JUNOS Software.
Description	Specify descriptive text for an exempt rule, or IPS rule. This statement is supported on SRX Series devices.
Options	<i>description</i> —Descriptive text about an exempt rule, or IPS rule.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

description (Security Policies)

Syntax	<code>description description ;</code>
Hierarchy Level	[edit security ike policy <i>policy-name</i>], [edit security ike proposal <i>proposal-name</i>], [edit security ipsec policy <i>policy-name</i>], [edit security ipsec proposal <i>proposal-name</i>]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Specify descriptive text for an IKE policy, IPsec policy, IKE proposal, or IPsec proposal. This statement is supported on J Series and SRX Series devices.
Options	<i>description</i> —Descriptive text about an IKE policy, IPsec policy, IKE proposal, or IPsec proposal.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

destination

See the following sections:

- destination (Destination NAT) on page 355
- destination (IP Headers in Signature Attack) on page 356

destination (Destination NAT)

Syntax destination {
 pool *pool-name* {
 address < *ip-address* > (to *ip-address* | port *port-number*);
 routing-instance *routing-instance-name* ;
 }
 rule-set *rule-set-name* {
 from interface [*interface-name*] |
 routing-instance [*routing-instance-name*] | zone [*zone-name*];
 rule *rule-name* {
 match {
 destination-address *destination-address* ;
 destination-port *port-number* ;
 source-address [*source-address*];
 }
 then {
 destination-nat (off | pool *pool-name*);
 }
 }
 }
 }

Hierarchy Level [edit security nat]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Configure destination NAT, which allows you to configure the following:

- Translate destination IP address or addresses to a specific IP address.
- Translate destination IP address or addresses and port number(s) to a specific IP address and one port number.
- Translate a range of destination IP addresses to another range of IP addresses. This mapping is one-to-one, static, and without PAT.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

destination (IP Headers in Signature Attack)

Syntax destination {
 match (equal | greater-than | less-than | not-equal);
 value *hostname* ;
 }

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type signature protocol ip]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify the IP address of the attack target.

This statement is supported on SRX Series devices.

Options match (equal | greater-than | less-than | not-equal)—Match an operand.
 value *host-name* —Match an ip-address or a host name.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

destination-address

See the following sections:

- destination-address (Destination NAT) on page 357
- destination-address (IDP Policy) on page 358
- destination-address (Security Policies) on page 358
- destination-address (Source NAT) on page 359
- destination-address (Static NAT) on page 359
- destination-address (Traffic Policy Services Gateway) on page 360

destination-address (Destination NAT)

Syntax	<code>destination-address destination-address ;</code>
Hierarchy Level	[edit security nat destination rule-set <i>rule-set-name</i> rule <i>rule-name</i> match]
Release Information	Statement modified in Release 9.6 of JUNOS Software.
Description	Specify a destination address to match the rule. You can configure one address or a subnet. This statement is supported on J Series and SRX Series devices.
Options	<i>destination-address</i> —Destination address or a subnet.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

destination-address (IDP Policy)

Syntax	destination-address [address-name];
Hierarchy Level	[edit security idp idp-policy <i>policy-name</i> rulebase-exempt rule <i>rule-name</i> match], [edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i> match]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify a destination IP address or IP address set object to be used as the match destination address object. The default value is any. This statement is supported on SRX Series devices.
Options	<i>address-name</i> —IP address, IP address set object.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

destination-address (Security Policies)

Syntax	destination-address { <i>address-name</i> ; }
Hierarchy Level	[edit security policies from-zone <i>zone-name</i> to-zone <i>zone-name</i> policy <i>policy-name</i> match]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Specify a destination IP address or IP address set to be used as the match criteria for the security policy. This statement is supported on J Series and SRX Series devices.
Options	<i>address-name</i> —IP address, IP address set, or address book entry.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

destination-address (Source NAT)

Syntax	<code>destination-address [destination-address];</code>
Hierarchy Level	<code>[edit security nat source rule-set <i>rule-set-name</i> rule <i>rule-name</i> match]</code>
Release Information	Statement modified in Release 9.6 of JUNOS Software.
Description	Specify a destination address to match the rule. You can configure multiple addresses or subnets. This statement is supported on J Series and SRX Series devices.
Options	<i>destination-address</i> —Destination address or a subnet.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

destination-address (Static NAT)

Syntax	<code>destination-address [destination-address];</code>
Hierarchy Level	<code>[edit security nat static rule-set <i>rule-set-name</i> rule <i>rule-name</i> match]</code>
Release Information	Statement modified in Release 9.6 of JUNOS Software.
Description	Specify a destination address to match the rule. You can configure one address or a subnet. This statement is supported on J Series and SRX Series devices.
Options	<i>destination-address</i> —Destination address or a subnet.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

destination-address (Traffic Policy Services Gateway)

Syntax	destination-address { drop-translated; drop-untranslated; }
Hierarchy Level	[edit security policies from-zone <i>zone-name</i> to-zone <i>zone-name</i> policy <i>policy-name</i> then permit]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Enable the destination address translation to permit the traffic. By default the policy permits both the translated and the untranslated packets.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>drop-translated—Drop the packets with translated destination address.</p> <p>drop-untranslated—Drop the packets without translated destination address.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

destination-except

Syntax	destination-except [<i>address-name</i>];
Hierarchy Level	[edit security idp idp-policy <i>policy-name</i> rulebase-exempt rule <i>rule-name</i> match], [edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i> match]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Specify a destination IP address or IP address set object to specify all destination address objects except the specified address objects. The default value is any.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<i>address-name</i> —IP address, IP address set object.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

destination-ip

Syntax	<code>destination-ip ip-address ;</code>
Hierarchy Level	<code>[edit security ipsec vpn vpn-name vpn-monitor]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the destination of the Internet Control Message Protocol (ICMP) pings. If this statement is used, the device uses the peer's gateway address by default. (This statement is not supported on dynamic VPN implementations.) This statement is supported on J Series and SRX Series devices.
Options	<code>ip-address</code> —Destination IP address.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

destination-ip-based

Syntax	<code>destination-ip-based number ;</code>
Hierarchy Level	<code>[edit security screen ids-option screen-name limit-session]</code>
Release Information	Statement modified in Release 9.2 of JUNOS Software.
Description	Limit the number of concurrent sessions the device can direct to a single destination IP address. This statement is supported on J Series and SRX Series devices.
Options	<code>number</code> —Maximum number of concurrent sessions that can be directed to a destination IP address. Range: 1 through 50000 Default: 128



NOTE: For SRX Series devices the applicable range is 1 through 8000000.

Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

destination-nat

Syntax	destination-nat (off pool <i>pool-name</i>);
Hierarchy Level	[edit security nat destination rule-set <i>rule-set-name</i> rule <i>rule-name</i> then]
Release Information	Statement modified in Release 9.6 of JUNOS Software.
Description	<p>Specify the action of the destination NAT rule.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>off—Do not perform destination NAT operation.</p> <p>pool <i>pool-name</i> —Use user-defined destination NAT pool to perform destination NAT.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

destination-port

See the following sections:

- destination-port (Destination NAT) on page 363
- destination-port (Signature Attack) on page 364

destination-port (Destination NAT)

Syntax destination-port *port-number* ;

Hierarchy Level [edit security nat destination rule-set *rule-set-name* rule *rule-name* match]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Specify a destination port to match the rule. You can configure one port.

This statement is supported on J Series and SRX Series devices.

Options *port-number* —Destination port number.


Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

destination-port (Signature Attack)

Syntax	<pre>destination-port { match (equal greater-than less-than not-equal); value <i>destination-port</i> ; }</pre>
Hierarchy Level	<pre>[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol udp] [edit security idp custom-attack <i>attack-name</i> attack-type signature protocol tcp]</pre>
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Specify the port number of the attack target.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>match (equal greater-than less-than not-equal)—Match an operand.</p> <p>value <i>destination-port</i> —Match the port number of the attack target.</p> <p>Range: 0 through 65535</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

destination-threshold

Syntax	destination-threshold <i>number</i> ;
Hierarchy Level	[edit security screen ids-option <i>screen-name</i> tcp syn-flood]
Release Information	Statement modified in Release 9.2 of JUNOS Software.
Description	Specify the number of SYN segments received per second for a single destination IP address before the device begins dropping connection requests to that destination. If a protected host runs multiple services, you might want to set a threshold based only on the destination IP address, regardless of the destination port number. This statement is supported on J Series and SRX Series devices.
Options	<i>number</i> —Number of SYN segments received per second before the device begins dropping connection requests. Range: 4 through 100000 per second Default: 4000 per second
	NOTE: For SRX Series devices the applicable range is 4 through 1000000 per second.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

detect-shellcode

Syntax	detect-shellcode;
Hierarchy Level	[edit security idp sensor-configuration ips]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Enable to detect the shell code and prevent buffer overflow attacks. By default this setting is enabled. This statement is supported on SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

detector

Syntax detector {
 protocol-name *protocol-name* {
 tunable-name *tunable-name* {
 tunable-value *protocol-value* ;
 }
 }
 }
 }

Hierarchy Level [edit security idp sensor-configuration]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Configure protocol detector engine for a specific service.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

df-bit

Syntax df-bit (clear | copy | set);

Hierarchy Level [edit security ipsec vpn *vpn-name*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify how the router handles the Don't Fragment (DF) bit in the outer header.

This statement is supported on J Series and SRX Series devices.

Options clear—Clear (disable) the DF bit from the outer header. This is the default.

copy—Copy the DF bit to the outer header.

set—Set (enable) the DF bit in the outer header.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

dh-group

Syntax	dh-group (group1 group2 group5);
Hierarchy Level	[edit security ike proposal <i>proposal-name</i>]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Specify the IKE Diffie-Hellman group. This statement is supported on J Series and SRX Series devices.
Options	dh-group—Type of Diffie-Hellman prime modulus group for performing a Diffie-Hellman authentication key exchange. <ul style="list-style-type: none"> ■ group1—768-bit algorithm. ■ group2—1024-bit algorithm. ■ group5—1536-bit algorithm.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

direction

See the following sections:

- [direction \(Custom Attack\) on page 368](#)
- [direction \(Dynamic Attack Group\) on page 369](#)

direction (Custom Attack)

Syntax	direction (any client-to-server server-to-client);
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type anomaly] [edit security idp custom-attack <i>attack-name</i> attack-type signature]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Define the connection direction of the attack. This statement is supported on SRX Series devices.
Options	any—Detect the attack in either direction. client-to-server—Detect the attack only in client-to-server traffic. server-to-client—Detect the attack only in server-to-client traffic.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

direction (Dynamic Attack Group)

Syntax	<pre>direction { values [any client-to-server exclude-any exclude-client-to-server exclude-server-to-client server-to-client]; }</pre>
Hierarchy Level	[edit security idp dynamic-attack-group <i>dynamic-attack-group-name</i> filters]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Specify a direction filter to add predefined attacks to the dynamic group based on the direction specified in the attacks.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>values—Name of the direction filter. You can select from the following directions:</p> <ul style="list-style-type: none"> ■ any—Monitors traffic from client to server and server to client. ■ client-to-server—Monitors traffic only from client to server (most attacks occur over client-to-server connections). ■ exclude-any—Allows traffic from client to server and server to client. ■ exclude-client-to-server—Allows traffic only from client to server. ■ exclude-server-to-client—Allows traffic only from server-to-client. ■ server-to-client—Monitors traffic only from server-to-client.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

disable-call-id-hiding

Syntax	disable-call-id-hiding;
Hierarchy Level	[edit security alg sip]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Disable translation of the host IP address in call-ID header. Translation is enabled by default.</p> <p>This statement is supported on J Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

distinguished-name

Syntax	<pre>distinguished-name { container <i>container-string</i> ; wildcard <i>wildcard-string</i> ; }</pre>
Hierarchy Level	[edit security ike gateway <i>gateway-name</i> dynamic]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify a distinguished name as the identifier for the remote gateway with a dynamic IP address. (This statement is not supported on dynamic VPN implementations.)</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

dns

Syntax

```

dns {
  disable;
  traceoptions {
    flag {
      all <extensive>;
    }
  }
}

```

Hierarchy Level [edit security alg]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the Domain Name Service (DNS) Application Layer Gateway (ALG) on the device.

This statement is supported on J Series devices.

Options **disable**—Disable the DNS ALG by default, the DNS ALG is enabled.

traceoptions—Configure DNS ALG tracing options.

flag—Trace operation to perform. To specify more than one trace operation, include multiple flag statements.

all—Trace all events.

extensive—(Optional) Display extensive amount of data.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level **security**—To view this statement in the configuration.
security-control—To add this statement to the configuration.

download-profile

See the following sections:

- download-profile (ftp antivirus utm-profile)
- download-profile (ftp content-filtering utm-profile)

download-profile (ftp antivirus utm-profile)

Syntax	download-profile <i>profile-name</i> ;
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i> anti-virus ftp]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure a UTM policy for the antivirus FTP (download) protocol and attach this policy to a security profile to implement it.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

download-profile (ftp content-filtering utm-profile)

Syntax	download-profile <i>profile-name</i> ;
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i> content-filtering ftp]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure a UTM policy for the content-filtering FTP (download) protocol and attach this policy to a security profile to implement it.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

dynamic

Syntax dynamic {
 connections-limit *number*;
 distinguished-name {
 container *container-string*;
 wildcard *wildcard-string*;
 }
 hostname *domain-name*;
 ike-user-type (group-ike-id | shared-ike-id);
 inet *ip-address*;
 user-at-hostname *user-at-hostname*;

Hierarchy Level [edit security ike gateway *gateway-name*]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Specify the identifier for the remote gateway with a dynamic IP address. Use this statement to set up a VPN with a gateway that has an unspecified IP address.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the JUNOS Software Security Configuration Guide.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

dynamic-vpn

Syntax

```
dynamic-vpn {
  access-profile profile-name;
  force-upgrade;
  clients {
    configuration-name {
      remote-protected-resources {
        ip-address/mask;
      }
      remote-exceptions {
        ip-address/mask;
      }
    }
    ipsec-vpn configuration-name;
    user {
      username;
    }
  }
}
```

Hierarchy Level [edit security]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Use this statement to configure the dynamic VPN feature. The dynamic VPN feature simplifies remote access by enabling users to create IPsec VPN tunnels without having to manually configure settings on their PCs or laptops. Instead, authenticated users can simply download a preconfigured Web client to their computers with all the client-side information required to create and manage an IPsec VPN tunnel to the server.

This statement is supported on SRX210 and SRX240 devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

dynamic-attack-group

Syntax `dynamic-attack-group dynamic-attack-group-name {`

```

    filters {
        category {
            values [list-of-values];
        }
        direction {
            values [any | client-to-server | exclude-any | exclude-client-to-server |
                exclude-server-to-client | server-to-client];
        }
        false-positives {
            values [frequently | occasionally | rarely | unknown];
        }
        performance {
            values [fast | normal | slow | unknown];
        }
        products {
            values [list-of-values];
        }
        recommended;
        service {
            values [list-of-values];
        }
        severity {
            values [critical | info | major | minor | warning];
        }
        type {
            values [anomaly | signature];
        }
    }
}
```

Hierarchy Level [edit security idp]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Configure dynamic attack group. Dynamic attack groups select its members based on the filters specified in the group. Hence the list of attacks get updated (added or removed) when a new signature database is used.

This statement is supported on SRX Series devices.

Options *dynamic-attack-group-name* —Name of the dynamic attack group.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

early-ageout

Syntax	early-ageout seconds ;
Hierarchy Level	[edit security flow aging]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Define the ageout value before the device aggressively ages out a session from its session table.</p> <p>This statement is supported on J Series devices.</p>
Options	<p>seconds —Amount of time that elapses before the device aggressively ages out a session.</p> <p>Range: 1 through 65535 seconds</p> <p>Default: 20 seconds</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

email-notify

Syntax	email-notify { admin-email <i>email address</i> custom-message <i>message</i> custom-message-subject <i>message subject</i> }
Hierarchy Level	[edit security utm feature-profile anti-virus kaspersky-lab-engine pattern-update] [edit security utm feature-profile anti-virus juniper-express-engine pattern-update]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>You can configure the device to notify a specified administrator when patterns are updated. This is an e-mail notification with a custom message and a custom subject line.</p> <p>This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on J Series devices.)</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

enable-all-qmodules

Syntax	(enable-all-qmodules no-enable-all-qmodules);
Hierarchy Level	[edit security idp sensor-configuration global]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Enable all the qmodules of the global rulebase IDP security policy. By default all the qmodules are enabled.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

enable-packet-pool

Syntax	(enable-packet-pool no-enable-packet-pool);
Hierarchy Level	[edit security idp sensor-configuration global]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Enable the packet pool to use when the current pool is exhausted. By default packet pool is enabled.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

encryption

Syntax encryption {
 algorithm (3des-cbc | aes-128-cbc | aes-192-cbc | aes-256-cbc | des-cbc);
 key (ascii-text key | hexadecimal key);
 }

Hierarchy Level [edit security ipsec vpn *vpn-name* manual]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Configure an encryption algorithm and key for a manual Security Association (SA). (This statement is not supported on dynamic VPN implementations.)

This statement is supported on J Series and SRX Series devices.

Options algorithm—Type of encryption algorithm. It can be one of the following:

- des-cbc—Has a block size of 8 bytes (64 bits); its key size is 48 bits long.
- 3des-cbc—Has block size of 8 bytes (64 bits); its key size is 192 bits long



NOTE: For [3des-cbc](#), we recommend that the first 8 bytes be different from the second 8 bytes, and the second 8 bytes be the same as the third 8 bytes.

- aes-128-cbc—Advanced Encryption Standard (AES) 128-bit encryption algorithm.
- aes-192-cbc—Advanced Encryption Standard (AES) 192-bit encryption algorithm.
- aes-256-cbc—Advanced Encryption Standard (AES) 256-bit encryption algorithm.

key—Type of encryption key. It can be one of the following:

- ascii-text key—ASCII text key. For the **des-cbc** option, the key contains 8 ASCII characters; for **3des-cbc**, the key contains 24 ASCII characters.
- hexadecimal key—Hexadecimal key. For the **des-cbc** option, the key contains 16 hexadecimal characters; for the **3des-cbc** option, the key contains 48 hexadecimal characters.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

encryption-algorithm

Syntax	encryption-algorithm (des-cbc 3des-cbc aes-128-cbc aes-192-cbc aes-256-cbc);
Hierarchy Level	[edit security ike proposal <i>proposal-name</i>]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	<p>Configure an IKE encryption algorithm.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>3des-cbc—Has a block size of 24 bytes; the key size is 192 bits long.</p> <p>des-cbc—Has a block size of 8 bytes; the key size is 48 bits long.</p> <p>aes-128-cbc—Advanced Encryption Standard (AES) 128-bit encryption algorithm.</p> <p>aes-192-cbc—Advanced Encryption Standard (AES) 192-bit encryption algorithm.</p> <p>aes-256-cbc—Advanced Encryption Standard (AES) 256-bit encryption algorithm.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

endpoint-registration-timeout

Syntax	endpoint-registration-timeout <i>seconds</i> ;
Hierarchy Level	[edit security alg h323]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify the timeout value in seconds for entries in the NAT table.</p> <p>This statement is supported on J Series devices.</p>
Options	<p><i>seconds</i> —Timeout value.</p> <p>Range: 10 through 50000 seconds</p> <p>Default: 3600 seconds</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

engine-not-ready

Syntax	engine-not-ready (log-and-permit block);
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> fallback-options] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> fallback-options]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>The scan engine is initializing itself, for example, loading the signature database. During this phase, it is not ready to scan a file. A file could either pass or be blocked according to this setting. The default action is BLOCK.</p> <p>This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J Series devices.)</p>
Options	<ul style="list-style-type: none"> ■ log-and-permit—Log the error and permit the traffic ■ block—Log the error and deny the traffic
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

enrollment

Syntax enrollment {
 retry *number* ;
 retry-interval *seconds* ;
 url *url-name* ;
 }

Hierarchy Level [edit security pki ca-profile *ca-profile-name*]

Release Information Statement introduced in Release 9.0 of JUNOS Software.

Description Specify the enrollment parameters for a certificate authority (CA).

This statement is supported on J Series and SRX Series devices.

Options retry *number* —Number of automated attempts for online enrollment to be retried in case enrollment response is pending.

Range: 0 through 1080

Default: 10

retry-interval *seconds* —Time interval, in seconds, between the enrollment retries.

Range: 0 through 3600

Default: 900 seconds

url *url-name* —Enrollment URL where the Simple Certificate Enrollment Protocol (SCEP) request is sent to the certification authority (CA) as configured in this profile.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

establish-tunnels

Syntax	establish-tunnels (immediately on-traffic);
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify when IKE is activated: immediately after VPN information is configured and configuration changes are committed, or only when data traffic flows. In the second case, IKE needs to be negotiated with the peer gateway.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>immediately—IKE is activated immediately after VPN configuration and configuration changes are committed.</p> <p>on-traffic—IKE is activated only when data traffic flows and must to be negotiated.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

exception

See the following sections:

- exception (antivirus mime-whitelist)
- exception (content-filter block-mime)

exception (antivirus mime-whitelist)

Syntax	exception <i>listname</i> ;
Hierarchy Level	[edit security utm feature-profile anti-virus mime-whitelist list <i>listname</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure the antivirus scanner to use an exception list to the MIME bypass list (custom objects).</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

exception (content-filter block-mime)

Syntax	exception <i>listname</i> ;
Hierarchy Level	[edit security utm feature-profile content-filtering profile <i>profile-name</i> block-mime list <i>list-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure the content-filter to use an exception list to the MIME block list (custom objects).</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

expression

Syntax	<code>expression <i>boolean-expression</i>;</code>
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type chain]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Configure Boolean expression. The Boolean expression defines the condition for the individual members of a chain attack that will decide if the chain attack is hit.</p> <p>For standalone IDP devices, expression overrides order function.</p> <p>For SRX Series devices, expression and order cannot be configured together. Only one of them can be specified.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p><i>boolean-expression</i>—Boolean operators:</p> <ul style="list-style-type: none"> ■ or—If either of the member name patterns match, the expression matches. ■ and—If both of the member name patterns mach, the expression matches. It does not matter which order the members appear in. ■ oand—If both of the member name patterns match, and if they appear in the same order as in the Boolean Expression, the expression matches.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

external-interface

See the following sections:

- external-interface (IKE Gateway) on page 386
- external-interface (Manual Security Association) on page 386

external-interface (IKE Gateway)

Syntax	<code>external-interface external-interface-name ;</code>
Hierarchy Level	[edit security ike gateway <i>gateway-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the outgoing interface for IKE SAs. This interface is associated with a zone that acts as its carrier, providing firewall security for it. This statement is supported on J Series and SRX Series devices.
Options	<i>external-interface-name</i> —Name of the interface to be used to send traffic to the IPsec VPN.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

external-interface (Manual Security Association)

Syntax	<code>external-interface external-interface-name ;</code>
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i> manual]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the outgoing interface for the manual SA. (This statement is not supported on dynamic VPN implementations.) This statement is supported on J Series and SRX Series devices.
Options	<i>external-interface-name</i> —Name of the outgoing interface.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

fallback-block

Syntax	<pre> fallback-block { custom-message; custom-message-subject; notify-mail-sender; type; }</pre>
Hierarchy Level	<pre> [edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> notification-options] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> notification-options]</pre>
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>You can configure notifications for both fallback blocking and fallback nonblocking actions. Fallback options tell the system how to handle the errors returned by either the scan engine or the scan manager.</p> <p>This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J Series devices.)</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

fallback-options

See the following sections:

- fallback-options (antivirus juniper-express-engine)
- fallback-options (antivirus kaspersky-lab-engine)

fallback-options (antivirus juniper-express-engine)

Syntax fallback-options {
 default (log-and-permit | block);
 content-size (log-and-permit | block);
 engine-not-ready (log-and-permit | block);
 timeout (log-and-permit | block);
 out-of-resources (log-and-permit | block);
 too-many-requests (log-and-permit | block);
 }

Hierarchy Level [edit security utm feature-profile anti-virus juniper-express-engine *profile-name*]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Fallback options tell the system how to handle the errors.

This statement is supported on SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

fallback-options (antivirus kaspersky-lab-engine)

Syntax	<pre> fallback-options { default (log-and-permit block); corrupt-file (log-and-permit block); password-file (log-and-permit block); decompress-layer (log-and-permit block); content-size (log-and-permit block); engine-not-ready (log-and-permit block); timeout (log-and-permit block); out-of-resources (log-and-permit block); too-many-requests (log-and-permit block); }</pre>
Hierarchy Level	[edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Fallback options tell the system how to handle the errors returned by either the scan engine or the scan manager.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

fallback-settings

See the following sections:

- fallback-settings (web-filtering surf-control-integrated)
- fallback-settings (web-filtering websense-redirect)

fallback-settings (web-filtering surf-control-integrated)

Syntax fallback-settings {
 default (log-and-permit | block);
 server-connectivity (log-and-permit | block);
 timeout (log-and-permit | block);
 too-many-requests (log-and-permit | block);
 }

Hierarchy Level [edit security utm feature-profile web-filtering surf-control-integrated profile *profile-name*]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Fallback settings tell the system how to handle errors.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

fallback-settings (web-filtering websense-redirect)

Syntax	<pre> fallback-settings { default (log-and-permit block); server-connectivity (log-and-permit block); timeout (log-and-permit block); too-many-requests (log-and-permit block); }</pre>
Hierarchy Level	[edit security utm feature-profile web-filtering websense-redirect profile <i>profile-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Fallback settings tell the system how to handle errors.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

false-positives

Syntax	false-positives { values [frequently occasionally rarely unknown]; }
Hierarchy Level	[edit security idp dynamic-attack-group <i>dynamic-attack-group-name</i> filters]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Specify a false-positives filter to add attack objects based on the frequency that the attack produces a false positive on your network. This statement is supported on SRX Series devices.
Options	<p>values—Name of the false positives filter. You can select from the following false positives frequency:</p> <ul style="list-style-type: none"> ■ frequently—Frequently track false positives occurrence. ■ occasionally—Occasionally track false positives occurrence. ■ rarely—Rarely track false positives occurrence. ■ unknown—By default, all compound attack objects are set to Unknown. As you fine-tune IDP to your network traffic, you can change this setting to help you track false positives.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

family

Syntax

```
family {  
    inet6 {  
        mode packet-based;  
    }  
    iso {  
        mode packet-based;  
    }  
    mpls {  
        mode packet-based;  
    }  
}
```

Hierarchy Level [edit security forwarding-options]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Determine the protocol family to be used for packet forwarding.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

feature-profile

```

Syntax  feature-profile {
            anti-virus {
                type kaspersky-lab-engine;
                kaspersky-lab-engine {
                    pattern-update {
                        url;
                        interval value;
                    }
                    profile profile-name {
                        fallback-options {
                            default (log-and-permit | block);
                            corrupt-file (log-and-permit | block);
                            password-file (log-and-permit | block);
                            decompress-layer (log-and-permit | block);
                            content-size (log-and-permit | block);
                            engine-not-ready (log-and-permit | block);
                            timeout (log-and-permit | block);
                            out-of-resources (log-and-permit | block);
                            too-many-requests (log-and-permit | block);
                        }
                        scan-options {
                            intelligent-prescreening;
                            scan-mode (scan-all | by-extension);
                            content-size-limit value;
                            timeout value;
                            decompress-layer-limit value;
                        }
                        notification-options {
                            virus-detection {
                                type (message | protocol-only);
                                notify-mail-sender;
                                custom-message;
                            }
                            fallback-block {
                                custom-message;
                                notify-mail-sender;
                                type;
                            }
                        }
                        trickling {
                            timeout value;
                        }
                    }
                }
            }
            type juniper-express-engine;
            juniper-express-engine {
                pattern-update {
                    url;
                    interval value;
                }
                profile profile-name {

```

```

fallback-options {
  default (log-and-permit | block);
  content-size (log-and-permit | block);
  engine-not-ready (log-and-permit | block);
  timeout (log-and-permit | block);
  out-of-resources (log-and-permit | block);
  too-many-requests (log-and-permit | block);
}
scan-options {
  intelligent-prescreening;
  scan-mode (scan-all | by-extension);
  content-size-limit value;
  timeout value;
  decompress-layer-limit value;
}
notification-options {
  virus-detection {
    type (message | protocol-only);
    notify-mail-sender;
    custom-message;
  }
  fallback-block {
    custom-message;
    notify-mail-sender;
    type;
  }
}
trickling {
  timeout value;
}
}
mime-whitelist {
  list listname {
    exception listname;
  }
  url-whitelist {
    listname;
  }
}
}
web-filtering {
  surf-control-integrated {
    cache {
      timeout value;
    }
    server {
      host host-name;
      port number;
    }
  }
  profile profile-name{
    default (log-and-permit | block);
    custom-block-message value;
    fallback-settings {
      default (log-and-permit | block);
      server-connectivity (log-and-permit | block);
      timeout (log-and-permit | block);
    }
  }
}

```

```

        too-many-requests (log-and-permit | block);
    }
    category customurl-list name {
        action (log-and-permit | block);
    }
}
websense-redirect {
profile profile-name {
server {
    host host-name;
    port number;
}
sockets value;
timeout value;
fallback-settings {
    default (log-and-permit | block);
    server-connectivity (log-and-permit | block);
    timeout (log-and-permit | block);
    too-many-requests (log-and-permit | block);
}
}
url-whitelist {
listname;
}
url-blacklist {
listname;
}
}
anti-spam {
symantec-sbl {
    profile profile-name{
        sbl-default-server;
        spam-action (log-and-permit | block);
        custom-tag-string [***SPAM***];
    }
    address-whitelist{
        listname;
    }
}
}
content-filter {
profile profile-name{
    block-command protocol-command-list;
    block-content-type (java-applet | exe | http-cookie);
    block-mime {
        list list-name {
            exception list-name;
        }
    }
    permit-command protocol-command-list;
    notification-options {
        type (message | protocol-only);
        custom-message [message];
    }
}
}
}

```

Hierarchy Level	[edit security utm]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure UTM features, antivirus, antispam, content-filtering, and web-filtering by creating feature profiles.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

filename-extension

Syntax	filename-extension { value [list]; }
Hierarchy Level	[edit security utm custom-objects]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>When scanning content, you can use a file extension list to define a set of file extensions that are used in file extension scan mode (scan-by-extension).</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

filters

Syntax

```
filters {
  category {
    values [list-of-values];
  }
  direction {
    values [any | client-to-server | exclude-any | exclude-client-to-server |
    exclude-server-to-client | server-to-client];
  }
  false-positives {
    values [frequently | occasionally | rarely | unknown];
  }
  performance {
    values [fast | normal | slow | unknown];
  }
  products {
    values [list-of-values];
  }
  recommended;
  service {
    values [list-of-values];
  }
  severity {
    values [critical | info | major | minor | warning];
  }
  type {
    values [anomaly | signature];
  }
}
```

Hierarchy Level [edit security idp dynamic-attack-group *dynamic-attack-group-name*]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description To create a dynamic attack group, set the criteria using the different type of filters.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

fin-no-ack

Syntax	fin-no-ack;
Hierarchy Level	[edit security screen ids-option <i>screen-name</i> top]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable detection of an illegal combination of flags, and reject packets that have this combination.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

firewall-authentication

See the following sections:

- firewall-authentication (Policies) on page 400
- firewall-authentication (Security) on page 401

firewall-authentication (Policies)

Syntax firewall-authentication {
 pass-through {
 access-profile *profile-name* ;
 client-match *match-name* ;
 web-redirect;
 }
 web-authentication {
 client-match *user-or-group* ;
 }
 }

Hierarchy Level [edit security policies from-zone *zone-name* to-zone *zone-name* policy *policy-name* then permit]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure firewall authentication methods.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

firewall-authentication (Security)

Syntax firewall-authentication {
 traceoptions {
 flag {
 all <detail | extensive | terse>;
 authentication <detail | extensive | terse>;
 proxy <detail | extensive | terse>;
 }
 }
 }

Hierarchy Level [edit security]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Define data-plane firewall authentication tracing options.

This statement is supported on J Series and SRX Series devices.

Options flag—Trace operation to perform. To specify more than one trace operation, include multiple **flag** statements.

- all—Enable all tracing operations.
- authentication—Trace data-plane firewall authentication events.
- proxy—Trace data-plane firewall authentication proxy events.

detail—Display moderate amount of data.

extensive—Display extensive amount of data.

terse—Display minimum amount of data.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

flood

See the following sections:

- flood (ICMP) on page 402
- flood (UDP) on page 403

flood (ICMP)

Syntax flood {
 threshold *number* ;
}

Hierarchy Level [edit security screen ids-option *screen-name* icmp]

Release Information Statement modified in Release 9.2 of JUNOS Software.

Description Configure the device to detect and prevent Internet Control Message Protocol (ICMP) floods. An ICMP flood occurs when ICMP echo requests are broadcast with the purpose of flooding a system with so much data that it first slows down, and then times out and is disconnected. The threshold defines the number of ICMP packets per second allowed to ping the same destination address before the device rejects further ICMP packets.

This statement is supported on J Series and SRX Series devices.

Options threshold *number* —Number of ICMP packets per second allowed to ping the same destination address before the device rejects further ICMP packets.

Range: 1 through 100000 per second

Default: 1000 per second



NOTE: For SRX Series devices the applicable range is 1 through 4000000 per second.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

flood (UDP)

Syntax flood {
 threshold *number* ;
}

Hierarchy Level [edit security screen ids-option *screen-name* udp]

Release Information Statement modified in Release 9.2 of JUNOS Software.

Description Configure the device to detect and prevent UDP floods. UDP flooding occurs when an attacker sends UDP packets to slow down the system to the point that it can no longer process valid connection requests.

The threshold defines the number of UDP packets per second allowed to ping the same destination IP address/port pair. When the number of packets exceeds this value within any 1-second period, the device generates an alarm and drops subsequent packets for the remainder of that second.

This statement is supported on J Series and SRX Series devices.

Options threshold *number* —Number of UDP packets per second allowed to ping the same destination address before the device rejects further UDP packets.

Range: 1 through 100000 per second

Default: 1000 per second



NOTE: For SRX series devices the applicable range is 1 through 4000000 per second.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

flow

See the following sections:

- flow (IDP) on page 404
- flow (Security Flow) on page 405

flow (IDP)

Syntax flow {
 (allow-icmp-without-flow | no-allow-icmp-without-flow);
 (log-errors | no-log-errors);
 max-timers-poll-ticks *value* ;
 reject-timeout *value* ;
 (reset-on-policy | no-reset-on-policy);
 }

Hierarchy Level [edit security idp sensor-configuration]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Configure the IDP engine to manage the packet flow.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

flow (Security Flow)

```

Syntax  flow {
            aging {
                early-ageout seconds ;
                high-watermark percent ;
                low-watermark percent ;
            }
            allow-dns-reply;
            bridge {
                block-non-ip-all;
                bypass-non-ip-unicast;
                no-packet-flooding {
                    no-trace-route;
                }
            }
            route-change-timeout seconds ;
            syn-flood-protection-mode (syn-cookie | syn-proxy);
            tcp-mss {
                all-tcp {
                    mss value ;
                }
                gre-in {
                    mss value ;
                }
                gre-out {
                    mss value ;
                }
                ipsec-vpn {
                    mss value ;
                }
            }
            tcp-session {
                no-sequence-check;
                no-syn-check;
                no-syn-check-in-tunnel;
                rst-invalidate-session;
                rst-sequence-check;
                tcp-initial-timeout seconds ;
            }
            traceoptions {
                file filename <files number > <size maximum-file-size >;
                <world-readable | no-world-readable>;
                flag flag;
            }
        }

```

Hierarchy Level [edit security]

Release Information Statement modified in Release 9.5 of JUNOS Software.

Description Determine how the device manages packet flow. The device can regulate packet flow in the following ways:

- Enable or disable DNS replies when there is no matching DNS request.

- Set the initial session-timeout values.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

force-upgrade

Syntax force-upgrade;

Hierarchy Level [edit security dynamic-vpn]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Use this statement to force users to automatically upgrade the Access Manager when newer versions are available. If you include this statement in your configuration, it is automatically enabled. If the statement is not present in your configuration, the force upgrade option is not enabled.

This statement is supported on SRX210 and SRX240 devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

forwarding-options

Syntax

```
forwarding-options {
  family {
    inet6 {
      mode packet-based;
    }
    iso {
      mode packet-based;
    }
  }
  mpls {
    mode packet-based;
  }
}
```

Hierarchy Level [edit security]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Determine how the `inet6`, and `iso` protocol families manage security forwarding options.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

forwarding-process

Syntax

```
forwarding-process {
  application-services {
    maximize-idp-sessions {
      weight {
        equal;
        firewall;
        idp;
      }
    }
  }
}
```

Hierarchy Level [edit security]

Release Information Statement introduced in Release 9.6 of JUNOS Software.

Description If you are deploying IDP policies, you can tune the device to increase IDP session capacity. By using the provided commands to change the way the system allocates resources, you can achieve a higher IDP session capacity.

This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

fragment

Syntax fragment;

Hierarchy Level [edit security screen ids-option *screen-name* icmp]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure the device to detect and drop any ICMP frame with the More Fragments flag set or with an offset indicated in the **offset** field.

This statement is supported on J Series and SRX Series devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

from

Syntax	from interface [interface-name] routing-instance [routing-instance-name] zone [zone-name];
Hierarchy Level	[edit security nat destination rule-set <i>rule-set-name</i>], [edit security nat source rule-set <i>rule-set-name</i>], [edit security nat static rule-set <i>rule-set-name</i>]
Release Information	Statement modified in Release 9.3 of JUNOS Software.
Description	Specify the source of the packet among the routing instance, interface, or zone. This statement is supported on SRX Series devices.
Options	interface <i>interface-name</i> —Name of the interface. routing-instance <i>routing-instance-name</i> —Name of the routing instance. zone <i>zone-name</i> —Name of the zone.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

from-zone

See the following sections:

- from-zone (IDP Policy) on page 410
- from-zone (Security Policies) on page 411

from-zone (IDP Policy)

Syntax from-zone *zone-name* ;

Hierarchy Level [edit security idp idp-policy *policy-name* rulebase-exempt rule *rule-name* match],
[edit security idp idp-policy *policy-name* rulebase-ips rule *rule-name* match]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Specify a source zone to be associated with the security policy. The default value is any.

This statement is supported on SRX Series devices.

Options *zone-name* —Name of the source zone object.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

from-zone (Security Policies)

Syntax from-zone *zone-name* to-zone *zone-name* {
 policy *policy-name* {
 match {
 application [*application-name-or-set*];
 destination-address {
 address-name ;
 }
 source-address {
 address-name ;
 }
 }
 scheduler-name *scheduler-name* ;
 then {
 count {
 alarm {
 per-minute-threshold *number* ;
 per-second-threshold *number* ;
 }
 }
 (deny | reject);
 permit {
 application-services (wx-redirect | wx-reverse-redirect);
 destination-address {
 drop-translated;
 drop-untranslated;
 }
 firewall-authentication {
 pass-through {
 access-profile *profile-name* ;
 client-match *match-name* ;
 web-redirect;
 }
 web-authentication {
 client-match *user-or-group* ;
 }
 }
 tunnel {
 ipsec-vpn *vpn-name* ;
 pair-policy *pair-policy* ;
 }
 }
 log {
 session-close;
 session-init;
 }
 }
 }
 }

Hierarchy Level [edit security policies]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify a source zone and destination zone to be associated with the security policy.

This statement is supported on J Series and SRX Series devices.

Options *zone-name* —Name of the source zone.

to-zone zone-name —Name of the destination zone.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

ftp

Syntax

```
ftp {
  disable;
  traceoptions {
    flag {
      all <extensive>;
    }
  }
}
```

Hierarchy Level [edit security alg]

Release Information Statement modified in Release 9.2 of JUNOS Software.

Description Specify the FTP ALG on the device.

This statement is supported on J Series and SRX Series devices.

Options **disable**—Disable the FTP ALG. By default, the FTP ALG is enabled.



NOTE: By default, FTP ALG is disabled for SRX Series devices.

traceoptions—Configure FTP ALG tracing options. To specify more than one trace operation, include multiple flag statements.

flag—Trace operation to perform.

all—Trace all events.

extensive—(Optional) Display extensive amount of data.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level **security**—To view this statement in the configuration.
security-control—To add this statement to the configuration.

ftp (utm)

See the following sections:

- ftp (antivirus utm-policy)
- ftp (content-filtering utm-policy)

ftp (antivirus utm-policy)

Syntax ftp {
 upload-profile *profile-name*;
 download-profile *profile-name*;
 }

Hierarchy Level [edit security utm utm-policy *policy-name* anti-virus]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Configure a UTM policy for the antivirus FTP protocol and attach this policy to a security profile to implement it.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

ftp (content-filtering utm-policy)

Syntax ftp {
 upload-profile *profile-name*;
 download-profile *profile-name*;
 }

Hierarchy Level [edit security utm utm-policy *policy-name* content-filtering]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Configure a UTM policy for the content-filtering FTP protocol and attach this policy to a security profile to implement it.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

functional-zone

Syntax

```
functional-zone {
  management {
    host-inbound-traffic {
      protocols {
        protocol-name ;
        protocol-name <except>;
      }
      system-services {
        service-name ;
        service-name <except>;
      }
    }
    interfaces interface-name {
      host-inbound-traffic {
        protocols {
          protocol-name ;
          protocol-name <except>;
        }
        system-services {
          service-name ;
          service-name <except>;
        }
      }
    }
    screen screen-name ;
  }
}
```

Hierarchy Level [edit security zones]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure a functional zone.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

gatekeeper

Syntax	gatekeeper threshold <i>rate</i> ;
Hierarchy Level	[edit security alg h323 application-screen message-flood]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Limit the rate at which remote access server (RAS) requests to the gatekeeper are processed. Messages exceeding the threshold are dropped.</p> <p>This statement is supported on J Series devices.</p>
Options	<p>threshold <i>rate</i> —Threshold measured in messages per second.</p> <p>Range: 1 through 50000</p> <p>Default: 1000</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

gateway

See the following sections:

- gateway (IKE) on page 419
- gateway (IPsec) on page 420
- gateway (Manual Security Association) on page 420

gateway (IKE)

Syntax `gateway gateway-name {`
 `address [(ip-address | hostname)] |`
 `dead-peer-detection {`
 `always-send;`
 `interval seconds ;`
 `threshold number ;`
 `}`
 `dynamic {`
 `connections-limit number ;`
 `distinguished-name {`
 `container container-string ;`
 `wildcard wildcard-string ;`
 `}`
 `hostname domain-name ;`
 `ike-user-type (group-ike-id | shared-ike-id);`
 `inet ip-address ;`
 `user-at-hostname user-at-hostname ;`
 `}`
 `external-interface external-interface-name ;`
 `ike-policy name ;`
 `local-identity (hostname hostname | inet ipv4-ip-address |`
 `user-at-hostname e-mail-address | distinguished-name string);`
 `nat-keepalive seconds ;`
 `no-nat-traversal;`
 `xauth {`
 `access-profile profile-name ;`
 `}`
`}`

Hierarchy Level [edit security ike]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure an IKE gateway.

This statement is supported on J Series and SRX Series devices.

Options *gateway-name* —Name of the gateway.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

gateway (IPsec)

Syntax	<code>gateway gateway-name ;</code>
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i> ike]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the remote gateway. This statement is supported on J Series and SRX Series devices.
Options	<i>gateway-name</i> —Name of the gateway.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

gateway (Manual Security Association)

Syntax	<code>gateway ip-address ;</code>
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i> manual]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	For a manual security association, specify the IP address of the peer. (This statement is not supported on dynamic VPN implementations.) This statement is supported on J Series and SRX Series devices.
Options	<i>ip-address</i> —IP address of the peer.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

global

Syntax global {
 (enable-all-qmodules | no-enable-all-qmodules);
 (enable-packet-pool | no-enable-packet-pool);
 (policy-lookup-cache | no-policy-lookup-cache);
 }

Hierarchy Level [edit security idp sensor-configuration]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Configure the global rulebase IDP security policy.

 This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

gre-in

Syntax gre-in {
 mss *value* ;
 }

Hierarchy Level [edit security flow tcp-mss]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Enable and specify the TCP maximum segment size (TCP MSS) for Generic Routing Encapsulation (GRE) packets that are coming out from an IPsec VPN tunnel. If the device receives a GRE-encapsulated TCP packet with the SYN bit and TCP MSS option set and the TCP MSS option specified in the packet exceeds the TCP MSS specified by the device, the device modifies the TCP MSS value accordingly. By default, a TCP MSS for GRE packets is not set.

This statement is supported on J Series and SRX Series devices.

Options mss *value* —TCP MSS for GRE packets. Value is optional.
 Range: 64 through 63535 bytes
 Default: 1320 bytes, if no value is specified

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

gre-out

Syntax gre-out {
 mss *value* ;
 }

Hierarchy Level [edit security flow tcp-mss]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Enable and specify the TCP maximum segment size (TCP MSS) for Generic Routing Encapsulation (GRE) packets that are going into an IPsec VPN tunnel. If the device receives a GRE-encapsulated TCP packet with the SYN bit and TCP MSS option set and the TCP MSS option specified in the packet exceeds the TCP MSS specified by the device, the device modifies the TCP MSS value accordingly. By default, a TCP MSS for GRE packets is not set.

This statement is supported on J Series and SRX Series devices.

Options mss *value* —TCP MSS for GRE packets. Value is optional.
 Range: 64 through 65535 bytes
 Default: 1320 bytes

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

group-members

Syntax	group-members [attack-group-name attack-name];
Hierarchy Level	[edit security idp custom-attack-group <i>custom-attack-group-name</i>]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Specify the group members in a custom group. The members can be predefined attacks, predefined attack groups, custom attacks, or custom dynamic groups.</p> <p>Use custom groups for the following tasks:</p> <ul style="list-style-type: none"> ■ To define a specific set of attacks to which you know your network is vulnerable. ■ To group your custom attack objects. ■ To define a specific set of informational attack objects that you use to keep you aware of what is happening on your network. <p>This statement is supported on SRX Series devices.</p>
Options	<p>attack-group-name—Name of the group attack object.</p> <p>attack-name—Name of the attack object.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

h323

```

Syntax  h323 {
            application-screen {
                message-flood {
                    gatekeeper threshold rate ;
                }
                unknown-message {
                    permit-nat-applied;
                    permit-routed;
                }
            }
            disable;
            endpoint-registration-timeout seconds ;
            media-source-port-any;
            traceoptions {
                flag {
                    all <detail | extensive | terse>;
                    cc <detail | extensive | terse>;
                    h225-asn1 <detail | extensive | terse>;
                    h245 <detail | extensive | terse>;
                    h245-asn1 <detail | extensive | terse>;
                    q931 <detail | extensive | terse>;
                    ras <detail | extensive | terse>;
                    ras-asn1 <detail | extensive | terse>;
                }
            }
        }

```

Hierarchy Level [edit security alg]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the H.323 Application Layer Gateway (ALG) on the device. H.323 is a control-signaling protocol used to exchange messages between H.323 endpoints.

This statement is supported on J Series devices.

Options **disable**—Disable the H.323 ALG. By default, H.323 ALG is enabled.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

header-length

Syntax	header-length { match (equal greater-than less-than not-equal); value <i>header-length</i> ; }
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol tcp]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Specify the number of bytes in the TCP header. This statement is supported on SRX Series devices.
Options	match (equal greater-than less-than not-equal)—Match an operand. value <i>header-length</i> —Match the number of bytes in the TCP header. Range: 0 through 15 bytes
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

high-watermark

Syntax	high-watermark <i>percent</i> ;
Hierarchy Level	[edit security flow aging]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Sets the point at which the aggressive aging-out process begins. This statement is supported on J Series devices.
Options	<i>percent</i> —Percentage of session-table capacity at which aggressive aging-out starts. Range: 1 through 100 percent Default: 100 percent
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

host

Syntax	host <i>host-name</i> ;
Hierarchy Level	[edit security utm feature-profile web-filtering surf-control-integrated server] [edit security utm feature-profile web-filtering websense-redirect profile <i>profile-name</i> server]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Set server host parameters by entering the server name or IP address. This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

host-address-base

Syntax	host-address-base <i>ip-address</i> ;
Hierarchy Level	[edit security nat source pool <i>pool-name</i>]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify the base address of the original source IP address range. This is used for IP shifting. This statement is supported on SRX Series devices.
Options	<i>ip-address</i> —IPv4 address.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

host-inbound-traffic

Syntax host-inbound-traffic {
 protocols {
 protocol-name ;
 protocol-name <except>;
 }
 system-services {
 service-name ;
 service-name <except>;
 }
 }

Hierarchy Level [edit security zones functional-zone management],
 [edit security zones functional-zone management interfaces *interface-name*],
 [edit security zones security-zone *zone-name*],
 [edit security zones security-zone *zone-name* interfaces *interface-name*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Control the type of traffic that can reach the device from interfaces bound to the zone.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

hostname

Syntax	hostname <i>domain-name</i> ;
Hierarchy Level	[edit security ike gateway <i>gateway-name</i> dynamic]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Unique name by which a network-attached device is known on a network.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>domain-name</i> —A fully qualified domain name (FQDN).
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

http-profile

See the following sections:

- `http-profile (antivirus utm-policy)`
- `http-profile (content-filtering utm-policy)`
- `http-profile (web-filtering utm-policy)`

http-profile (antivirus utm-policy)

Syntax	<code>http-profile profile-name;</code>
Hierarchy Level	<code>[edit security utm utm-policy policy-name anti-virus]</code>
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure a UTM policy for the antivirus HTTP protocol and attach this policy to a security profile to implement it.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

http-profile (content-filtering utm-policy)

Syntax	<code>http-profile profile-name;</code>
Hierarchy Level	<code>[edit security utm utm-policy policy-name content-filtering]</code>
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure a UTM policy for the content-filtering HTTP protocol and attach this policy to a security profile to implement it.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

http-profile (web-filtering utm-policy)

Syntax	http-profile <i>profile-name</i> ;
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i> web-filtering]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure a UTM policy for the web-filtering HTTP protocol and attach this policy to a security profile to implement it.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

icmp

See the following sections:

- icmp (Protocol Binding Custom Attack) on page 432
- icmp (Security Screen) on page 433
- icmp (Signature Attack) on page 434

icmp (Protocol Binding Custom Attack)

Syntax icmp;

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type chain protocol-binding]
[edit security idp custom-attack *attack-name* attack-type signature protocol-binding]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Allow IDP to match the attack for specified ICMP.

This statement is supported on SRX Series devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

icmp (Security Screen)

Syntax icmp {
 flood {
 threshold *number* ;
 }
 fragment;
 ip-sweep {
 threshold *number*;
 }
 large;
 ping-death;
 }

Hierarchy Level [edit security screen ids-option *screen-name*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure ICMP intrusion detection service (IDS) options.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

icmp (Signature Attack)

Syntax

```

icmp {
  code {
    match (equal | greater-than | less-than | not-equal);
    value code-value ;
  }
  data-length {
    match (equal | greater-than | less-than | not-equal);
    value data-length ;
  }
  identification {
    match (equal | greater-than | less-than | not-equal);
    value identification-value ;
  }
  sequence-number {
    match (equal | greater-than | less-than | not-equal);
    value sequence-number ;
  }
  type {
    match (equal | greater-than | less-than | not-equal);
    value type-value ;
  }
}
```

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type signature protocol]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Allow IDP to match the ICMP header information for the signature attack.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

identification

See the following sections:

- identification (ICMP Headers in Signature Attack) on page 435
- identification (IP Headers in Signature Attack) on page 436

identification (ICMP Headers in Signature Attack)

Syntax identification {
 match (equal | greater-than | less-than | not-equal);
 value *identification-value*;
 }

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type signature protocol icmp]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify a unique value used by the destination system to associate requests and replies.

This statement is supported on SRX Series devices.

Options match (equal | greater-than | less-than | not-equal)—Match an operand.

value *identification-value* —Match a decimal value.

Range: 0 through 65535

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

identification (IP Headers in Signature Attack)

Syntax	<pre> identification { match (equal greater-than less-than not-equal); value <i>identification-value</i>; } </pre>
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol ip]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Specify a unique value used by the destination system to reassemble a fragmented packet.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>match (equal greater-than less-than not-equal)—Match an operand.</p> <p>value <i>identification-value</i> —Match a decimal value.</p> <p>Range: 0 through 65535</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

idle-time

Syntax	idle-time <i>seconds</i> ;
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i> ike]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify the maximum amount of idle time to delete a security association (SA).</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>seconds</i> —Maximum amount of idle time.</p> <p>Range: 60 through 999999 seconds</p> <p>Default: To be disabled</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

idp

```

Syntax  idp {
    active-policy policy-name ;
    custom-attack attack-name {
        attack-type {
            anomaly {
                direction (any | client-to-server | server-to-client);
                service service-name ;
                shellcode (all | intel | no-shellcode | sparc);
                test test-condition ;
            }
            chain {
                expression boolean-expression ;
                member member-name {
                    attack-type {
                        (anomaly | signature);
                    }
                }
            }
            order;
            protocol-binding {
                application application-name ;
                icmp;
                ip {
                    protocol-number transport-layer-protocol-number ;
                }
                rpc {
                    program-number rpc-program-number ;
                }
                tcp {
                    minimum-port port-number maximum-port port-number ;
                }
                udp {
                    minimum-port port-number maximum-port port-number ;
                }
            }
            reset;
            scope (session | transaction);
        }
    }
    signature {
        context context-name ;
        direction (any | client-to-server | server-to-client);
        negate;
        pattern signature-pattern ;
        protocol {
            icmp {
                code {
                    match (equal | greater-than | less-than | not-equal);
                    value code-value ;
                }
                data-length {
                    match (equal | greater-than | less-than | not-equal);
                    value data-length ;
                }
            }
        }
    }
}

```

```

    }
    identification {
        match (equal | greater-than | less-than | not-equal);
        value identification-value ;
    }
    sequence-number {
        match (equal | greater-than | less-than | not-equal);
        value sequence-number ;
    }
    type {
        match (equal | greater-than | less-than | not-equal);
        value type-value ;
    }
}
ip {
    destination {
        match (equal | greater-than | less-than | not-equal);
        value hostname ;
    }
    identification {
        match (equal | greater-than | less-than | not-equal);
        value identification-value ;
    }
    ip-flags {
        (df | no-df);
        (mf | no-mf);
        (rb | no-rb);
    }
    protocol {
        match (equal | greater-than | less-than | not-equal);
        value transport-layer-protocol-id ;
    }
    source {
        match (equal | greater-than | less-than | not-equal);
        value hostname ;
    }
    tos {
        match (equal | greater-than | less-than | not-equal);
        value type-of-service-in-decimal ;
    }
    total-length {
        match (equal | greater-than | less-than | not-equal);
        value total-length-of-ip-datagram ;
    }
    ttl {
        match (equal | greater-than | less-than | not-equal);
        value time-to-live ;
    }
}
tcp {
    ack-number {
        match (equal | greater-than | less-than | not-equal);
        value acknowledgement-number ;
    }
    data-length {
        match (equal | greater-than | less-than | not-equal);

```

```

    value tcp-data-length ;
}
destination-port {
    match (equal | greater-than | less-than | not-equal);
    value destination-port ;
}
header-length {
    match (equal | greater-than | less-than | not-equal);
    value header-length ;
}
mss {
    match (equal | greater-than | less-than | not-equal);
    value maximum-segment-size ;
}
option {
    match (equal | greater-than | less-than | not-equal);
    value tcp-option ;
}
sequence-number {
    match (equal | greater-than | less-than | not-equal);
    value sequence-number ;
}
source-port {
    match (equal | greater-than | less-than | not-equal);
    value source-port ;
}
tcp-flags {
    (ack | no-ack);
    (fin | no-fin);
    (psh | no-psh);
    (r1 | no-r1);
    (r2 | no-r2);
    (rst | no-rst);
    (syn | no-syn);
    (urg | no-urg);
}
urgent-pointer {
    match (equal | greater-than | less-than | not-equal);
    value urgent-pointer ;
}
window-scale {
    match (equal | greater-than | less-than | not-equal);
    value window-scale-factor ;
}
window-size {
    match (equal | greater-than | less-than | not-equal);
    value window-size ;
}
}
udp {
    data-length {
        match (equal | greater-than | less-than | not-equal);
        value data-length ;
    }
    destination-port {
        match (equal | greater-than | less-than | not-equal);

```

```

        value destination-port ;
    }
    source-port {
        match (equal | greater-than | less-than | not-equal);
        value source-port ;
    }
}
protocol-binding {
    application application-name ;
    icmp;
    ip {
        protocol-number transport-layer-protocol-number ;
    }
    rpc {
        program-number rpc-program-number ;
    }
    tcp {
        minimum-port port-number maximum-port port-number ;
    }
    udp {
        minimum-port port-number maximum-port port-number ;
    }
}
regexp regular-expression ;
shellcode (all | intel | no-shellcode | sparc);
}
}
recommended-action (close | close-client | close-server | drop |
drop-packet | ignore | none);
severity (critical | info | major | minor | warning);
time-binding {
    count count-value ;
    scope (destination | peer | source);
}
}
custom-attack-group custom-attack-group-name {
    group-members [attack-group-name | attack-name];
}
dynamic-attack-group dynamic-attack-group-name {
    filters {
        category {
            values [list-of-values];
        }
        direction {
            values [any | client-to-server | exclude-any | exclude-client-to-server |
exclude-server-to-client | server-to-client];
        }
        false-positives {
            values [frequently | occasionally | rarely | unknown];
        }
        performance {
            values [fast | normal | slow | unknown];
        }
        products {
            values [list-of-values];
        }
    }
}

```



```

    }
    recommended;
    service {
        values [list-of-values];
    }
    severity {
        values [critical | info | major | minor | warning];
    }
    type {
        values [anomaly | signature];
    }
}
}
idp-policy policy-name {
    rulebase-exempt {
        rule rule-name {
            description text ;
            match {
                application [ application-name ];
                attacks {
                    custom-attacks [ attack-name ];
                    predefined-attack-groups [ attack-name ];
                    predefined-attacks [ attack-name ];
                }
                destination-address [ address-name ];
                destination-except [ address-name ];
                from-zone zone-name ;
                source-address [ address-name ];
                source-except [ address-name ];
                to-zone zone-name ;
            }
        }
    }
}
rulebase-ips {
    rule rule-name {
        description text ;
        match {
            attacks {
                custom-attacks [ attack-name ];
                predefined-attack-groups [ attack-name ];
                predefined-attacks [ attack-name ];
            }
            destination-address [ address-name ];
            destination-except [ address-name ];
            from-zone zone-name ;
            source-address [ address-name ];
            source-except [ address-name ];
            to-zone zone-name ;
        }
    }
    terminal;
    then {
        action {
            (close-client | close-client-and-server | close-server |
             drop-connection | drop-packet | ignore-connection |
             mark-diffserv value | no-action | recommended);
        }
    }
}

```

```

        ip-action {
            (ip-block | ip-close | ip-notify);
            log;
            target (destination-address | service | source-address |
                source-zone | zone-service);
            timeout seconds;
        }
        notification {
            log-attacks {
                alert;(
            }
        }
        severity (critical | info | major | minor | warning);
    }
}
}
security-package {
    automatic {
        enable;
        interval hours ;
        start-time start-time ;
    }
    url url-name ;
}
sensor-configuration {
    application-identification {
        application-system-cache;
        application-system-cache-timeout value ;
        disable;
        max-packet-memory value ;
        max-sessions value ;
        max-tcp-session-packet-memory value ;
        max-udp-session-packet-memory value ;
    }
    detector {
        protocol-name protocol-name {
            tunable-name tunable-name {
                tunable-value protocol-value ;
            }
        }
    }
}
flow {
    (allow-icmp-without-flow | no-allow-icmp-without-flow);
    (log-errors | no-log-errors);
    max-timers-poll-ticks value ;
    reject-timeout value ;
    (reset-on-policy | no-reset-on-policy);
}
global {
    (enable-all-qmodules | no-enable-all-qmodules);
    (enable-packet-pool | no-enable-packet-pool);
    (policy-lookup-cache | no-policy-lookup-cache);
}
ips {
    detect-shellcode;

```

```

        ignore-regular-expression;
        log-supercede-min minimum-value ;
        pre-filter-shellcode;
        process-ignore-s2c;
        process-override;
        process-port port-number ;
    }
    log {
        cache-size size ;
        suppression {
            disable;
            include-destination-address;
            max-logs-operate value ;
            max-time-report value ;
            start-log value ;
        }
    }
    re-assembler {
        ignore-mem-overflow;
        max-flow-mem value ;
        max-packet-mem value ;
    }
}
traceoptions {
    file filename {
        <files number >;
        <match regular-expression >;
        <size maximum-file-size >;
        <world-readable | no-world-readable>;
    }
    flag all;
    level (all | error | info | notice | verbose | warning);
    no-remote-trace;
}
}

```

Hierarchy Level	[edit security]
Release Information	Statement modified in Release 9.3 of JUNOS Software.
Description	<p>Configure Intrusion Detection and Prevention (IDP) to selectively enforce various IDP attack detection and prevention techniques on the network.</p> <p>This statement is supported on SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

idp-policy

```

Syntax idp-policy policy-name {
    rulebase-exempt {
        rule rule-name {
            description text ;
            match {
                application [ application-name ];
                attacks {
                    custom-attacks [ attack-name ];
                    predefined-attack-groups [ attack-name ];
                    predefined-attacks [ attack-name ];
                }
                destination-address [ address-name ];
                destination-except [ address-name ];
                from-zone zone-name ;
                source-address [ address-name ];
                source-except [ address-name ];
                to-zone zone-name ;
            }
        }
    }
    rulebase-ips {
        rule rule-name {
            description text ;
            match {
                attacks {
                    custom-attacks [ attack-name ];
                    predefined-attack-groups [ attack-name ];
                    predefined-attacks [ attack-name ];
                }
                destination-address [ address-name ];
                destination-except [ address-name ];
                from-zone zone-name ;
                source-address [ address-name ];
                source-except [ address-name ];
                to-zone zone-name ;
            }
        }
        terminal;
        then {
            action {
                (close-client | close-client-and-server | close-server |
                 drop-connection | drop-packet | ignore-connection |
                 mark-diffserv value | no-action | recommended);
            }
            ip-action {
                (ip-block | ip-close | ip-notify);
                log;
                target (destination-address | service | source-address |
                     source-zone | zone-service);
                timeout seconds;
            }
            notification {

```

```
        log-attacks {
            alert;
        }
    }
    severity (critical | info | major | minor | warning);
}
}
```

Hierarchy Level	[edit security idp]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Configure a security IDP policy.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p><i>policy-name</i> —Name of the IDP policy.</p> <p>The remaining statements are explained separately.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

ids-option

Syntax `ids-option screen-name {`
 `alarm-without-drop;`
 `icmp {`
 `flood {`
 `threshold number ;`
 `}`
 `fragment;`
 `ip-sweep {`
 `threshold number ;`
 `}`
 `large;`
 `ping-death;`
 `}`
 `ip {`
 `bad-option;`
 `block-frag;`
 `loose-source-route-option;`
 `record-route-option;`
 `security-option;`
 `source-route-option;`
 `spoofing;`
 `stream-option;`
 `strict-source-route-option;`
 `tear-drop;`
 `timestamp-option;`
 `unknown-protocol;`
 `}`
 `limit-session {`
 `destination-ip-based number ;`
 `source-ip-based number ;`
 `}`
 `tcp {`
 `fin-no-ack;`
 `land;`
 `port-scan {`
 `threshold number ;`
 `}`
 `syn-ack-ack-proxy {`
 `threshold number ;`
 `}`
 `syn-fin;`
 `syn-flood {`
 `alarm-threshold number ;`
 `attack-threshold number ;`
 `destination-threshold number ;`
 `source-threshold number ;`
 `timeout seconds ;`
 `}`
 `syn-frag;`
 `tcp-no-flag;`
 `winnuke;`

```

    }
    udp {
        flood {
            threshold number ;
        }
    }
}

```

Hierarchy Level	[edit security screen]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Define screens for intrusion detection and prevention.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

ignore-mem-overflow

Syntax	ignore-mem-overflow;
Hierarchy Level	[edit security idp sensor-configuration re-assembler]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Enable the TCP reassembler to ignore the memory overflow to prevent the dropping of IDP custom applications. By default this feature is enabled.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

ignore-regular-expression

Syntax	ignore-regular-expression;
Hierarchy Level	[edit security idp sensor-configuration ips]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Enable regular expression to detect intrusion attempts. By default this setting is disabled.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

ike

See the following sections:

- ike (IPsec VPN) on page 449
- ike (Security) on page 450

ike (IPsec VPN)

Syntax ike {
 gateway gateway -name ;
 idle-time seconds ;
 install-interval seconds ;
 ipsec-policy ipsec-policy-name ;
 no-anti-replay;
 proxy-identity {
 local ipv4-prefix ;
 remote ipv4-prefix ;
 service service-name ;
 }
 }

Hierarchy Level [edit security ipsec vpn vpn-name]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Define an IKE-keyed IPsec VPN.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

ike (Security)

```

Syntax  ike {
    gateway gateway-name {
        address [( ip-address | hostname )] |
        dead-peer-detection {
            always-send;
            interval seconds ;
            threshold number ;
        }
        dynamic {
            connections-limit number ;
            distinguished-name {
                container container-string ;
                wildcard wildcard-string ;
            }
            hostname domain-name ;
            ike-user-type (group-ike-id | shared-ike-id);
            inet ip-address ;
            user-at-hostname user-at-hostname ;
        }
        external-interface external-interface-name ;
        ike-policy policy-name ;
        local-identity (hostname hostname | inet ipv4-ip-address |
            user-at-hostname e-mail-address | distinguished-name string );
        nat-keepalive seconds ;
        no-nat-traversal;
        xauth {
            access-profile profile-name ;
        }
    }
    policy policy-name {
        certificate {
            local-certificate certificate-id ;
            peer-certificate-type (pkcs7 | x509-signature);
            trusted-ca ( ca-index | use-all);
        }
        description description ;
        mode (aggressive | main);
        pre-shared-key (ascii-text | hexadecimal);
        proposal-set <basic | compatible | standard>;
    }
    proposal proposal-name {
        authentication-algorithm (md5 | sha1 | sha-256);
        authentication-method (dsa-signatures | pre-shared-keys | rsa-signatures);
        description description ;
        dh-group (group1 | group2 | group5);
        encryption-algorithm (des-cbc | 3des-cbc | aes-128-cbc | aes-192-cbc
            | aes-256-cbc);
        lifetime-seconds seconds ;
    }
    respond-bad-spi number ;
    traceoptions {
        file {

```

```

        files number ;
        size maximum-file-size ;
    }
    flag {
        all;
        certificates;
        database;
        general;
        ike;
        parse;
        policy-manager;
        routing-socket;
        timer;
        snmp;
    }
}

```

Hierarchy Level	[edit security]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Define Internet Key Exchange (IKE) configuration. This statement is supported on J Series and SRX Series devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

ike-policy

Syntax	ike-policy <i>policy-name</i> ;
Hierarchy Level	[edit security ike gateway <i>gateway-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the IKE policy to be used for the gateway. This statement is supported on J Series and SRX Series devices.
Options	<i>policy-name</i> —IKE policy name.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

ike-user-type

Syntax	ike-user-type (group-ike-id shared-ike-id);
Hierarchy Level	[edit security ike gateway <i>gateway-name</i> dynamic]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Configure the type of IKE user for a remote access connection. (This statement is not supported on dynamic VPN implementations.)</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>group-ike-id—E-mail address or fully qualified domain name (FQDN) shared for a group of remote access users so that each one does not need a separate IKE profile configured.</p> <p>shared-ike-id—E-mail address shared for a large number of remote access users so that each one does not need a separate IKE profile configured.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

imap-profile

See the following sections:

- `imap-profile (antivirus utm-policy)`
- `imap-profile (content-filtering utm-policy)`

imap-profile (antivirus utm-policy)

Syntax	<code>imap-profile profile-name;</code>
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i> anti-virus]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure a UTM policy for the antivirus IMAP protocol and attach this policy to a security profile to implement it.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

imap-profile (content-filtering utm-policy)

Syntax	<code>imap-profile profile-name;</code>
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i> content-filtering]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure a UTM policy for the content-filtering IMAP protocol and attach this policy to a security profile to implement it.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

inactive-media-timeout

See the following sections:

- inactive-media-timeout (MGCP) on page 454
- inactive-media-timeout (SCCP) on page 455
- inactive-media-timeout (SIP) on page 455

inactive-media-timeout (MGCP)

Syntax	inactive-media-timeout seconds ;
Hierarchy Level	[edit security alg mgcp]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the maximum amount of time that the temporary openings in the firewall (pinholes) remain open for media if no activity is detected. This statement is supported on J Series and SRX Series devices.
Options	seconds —Maximum amount of time that the pinholes remain open. Range: 10 through 2550 seconds Default: 120 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

inactive-media-timeout (SCCP)

Syntax	<code>inactive-media-timeout seconds ;</code>
Hierarchy Level	[edit security alg sccp]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the maximum amount of time that the temporary openings in the firewall (pinholes) remain open for media if no activity is detected. This statement is supported on J Series devices.
Options	<code>seconds</code> —Maximum amount of time that the pinholes remain open. Range: 10 through 600 seconds Default: 120 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

inactive-media-timeout (SIP)

Syntax	<code>inactive-media-timeout seconds ;</code>
Hierarchy Level	[edit security alg sip]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the maximum amount of time that the temporary openings in the firewall (pinholes) remain open for media if no activity is detected. This statement is supported on J Series devices.
Options	<code>seconds</code> —Maximum amount of time that the pinholes remain open. Range: 0 through 2550 seconds Default: 120 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.


include-destination-address

Syntax	include-destination-address;
Hierarchy Level	[edit security idp sensor-configuration log suppression]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>When log suppression is enabled, multiple occurrences of events with the same source, service, and matching attack object generate a single log record with a count of occurrences. If you enable this option, log suppression will only combine log records for events with a matching source as well. The IDP Sensor does not consider destination when determining matching events for log suppression. By default this setting is disabled.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

inet

Syntax	inet <i>ip-address</i> ;
Hierarchy Level	[edit security ike gateway <i>gateway-name</i> dynamic]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify IPv4 address to identify the dynamic peer. (This statement is not supported on dynamic VPN implementations.)</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>ip-address</i> —IPv4 address.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

inet6

Syntax	inet6 { mode packet-based; }
Hierarchy Level	[edit security forwarding-options family]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Enable the forwarding of IPv6 traffic. By default, the device drops IPv6 traffic.
<hr/>	
	NOTE: JUNOS Software security processing is not applied to IPv6 packets forwarded by the device.
<hr/>	
	This statement is supported on J Series and SRX Series devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

install-interval

Syntax	install-interval <i>seconds</i> ;
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i> ike]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the maximum number of seconds to allow for the installation of a rekeyed outbound security association (SA) on the device.
	This statement is supported on J Series and SRX Series devices.
Options	<i>seconds</i> —Maximum amount of idle time. Range: 0 through 10 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

intelligent-prescreening

Syntax	intelligent-prescreening;
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> scan-options] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> scan-options]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Intelligent prescreening tells the antivirus module to begin scanning a file much earlier. In this case, the scan engine uses the first packet or the first several packets to determine if a file could possibly contain malicious code. The scan engine does a quick check on these first packets and if the scan engine finds that it is unlikely that the file is infected, it then determines that it is safe to bypass the normal scanning procedure.</p> <p>This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J series devices.)</p>
Options	<ul style="list-style-type: none">■ intelligent-prescreening—Turns the feature on.■ no-intelligent-prescreening—Turns the feature off.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

interface

See the following sections:

- interface (ARP Proxy) on page 459
- interface (Source NAT) on page 459

interface (ARP Proxy)

Syntax interface *interface-name* {
 address *ip-address* to *ip-address* ;
 }

Hierarchy Level [edit security nat proxy-arp]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Specify the interface on which the ARP proxy is to be configured. It should be a logical interface.

This statement is supported on J Series and SRX Series devices.

Options *interface-name* —Name of the logical interface.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

interface (Source NAT)

Syntax interface {
 port-overloading { off };
 }

Hierarchy Level [edit security nat source]

Release Information Statement introduced in Release 9.6 of JUNOS Software.

Description Enable interface NAT with or without port overloading.

This statement is supported on J Series and SRX Series devices.

Options port-overloading—Specify *off* when persistent NAT is configured for interface NAT.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

interfaces

Syntax `interfaces interface-name {
 host-inbound-traffic {
 protocols {
 protocol-name ;
 protocol-name <except>;
 }
 system-services {
 service-name ;
 service-name <except>;
 }
 }
}`

Hierarchy Level [edit security zones functional-zone management],
 [edit security zones security-zone zone-name]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the set of interfaces that are part of the zone.

This statement is supported on J Series and SRX Series devices.

Options *interface-name* —Name of the interface.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

interval

See the following sections:

- interval (IDP) on page 461
- interval (IKE) on page 461

interval (IDP)

Syntax	<code>interval hours ;</code>
Hierarchy Level	[edit security idp security-package automatic]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify the amount of time that the device waits before updating the signature database. User should insert a default value. This statement is supported on SRX Series devices.
Options	<i>hours</i> —Number of hours that the device waits. Range: 24 through 336 hours
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

interval (IKE)

Syntax	<code>interval seconds ;</code>
Hierarchy Level	[edit security ike gateway <i>gateway-name</i> dead-peer-detection]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the amount of time that the peer waits for traffic from its destination peer before sending a dead-peer-detection (DPD) request packet. This statement is supported on J Series and SRX Series devices.
Options	<i>seconds</i> —Number of seconds that the peer waits before sending a DPD request packet. Range: 0 through 60 seconds Default: 10 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

interval (anti-virus)

See the following sections:

- interval (kaspersky-lab-engine)
- interval (juniper-express-engine)

interval (kaspersky-lab-engine)

Syntax interval *value*;

Hierarchy Level [edit security utm feature-profile anti-virus kaspersky-lab-engine pattern-update]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description The default pattern-update interval value is 60 minutes. You can choose to leave this default as is or you can change it using this command. You can also force a manual update, if necessary.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

interval (juniper-express-engine)

Syntax interval *value*;

Hierarchy Level [edit security utm feature-profile anti-virus kaspersky-lab-engine pattern-update]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description The default pattern-update interval value is 60 minutes. You can choose to leave this default as is or you can change it by using this command. You can also force a manual update, if necessary.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

ip

See the following sections:

- [ip \(Protocol Binding Custom Attack\)](#) on page 463
- [ip \(Security Screen\)](#) on page 464
- [ip \(Signature Attack\)](#) on page 466

ip (Protocol Binding Custom Attack)

Syntax `ip {
 protocol-number transport-layer-protocol-number;
 }`

Hierarchy Level `[edit security idp custom-attack attack-name attack-type chain protocol-binding]`
 `[edit security idp custom-attack attack-name attack-type signature protocol-binding]`

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Allow IDP to match the attack for a specified IP protocol type.

This statement is supported on SRX Series devices.

Options `protocol-number transport-layer-protocol-number` —Transport Layer protocol number.
 Range: 0 through 139

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level `security`—To view this statement in the configuration.
 `security-control`—To add this statement to the configuration.

ip (Security Screen)

Syntax ip {
 bad-option;
 block-frag;
 loose-source-route-option;
 record-route-option;
 security-option;
 source-route-option;
 spoofing;
 stream-option;
 strict-source-route-option;
 tear-drop;
 timestamp-option;
 unknown-protocol;
 }

Hierarchy Level [edit security screen ids-option *screen-name*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure IP layer IDS options.

This statement is supported on J Series and SRX Series devices.

- Options**
- **bad-option**—Detect and drop any packet with an incorrectly formatted IP option in the IP packet header. The device records the event in the SCREEN counters list for the ingress interface.
 - **block-frag**—Enable IP packet fragmentation blocking.
 - **loose-source-route-option**—Detect packets where the IP option is 3 (Loose Source Routing), and record the event in the SCREEN counters list for the ingress interface. This option specifies a partial route list for a packet to take on its journey from source to destination. The packet must proceed in the order of addresses specified, but it is allowed to pass through other devices in between those specified.
 - **record-route-option**—Detect packets where the IP option is 7 (Record Route), and record the event in the SCREEN counters list for the ingress interface.
 - **security-option**—Detect packets where the IP option is 2 (security), and record the event in the SCREEN counters list for the ingress interface.
 - **source-route-option**—Detect packets, and record the event in the SCREEN counters list for the ingress interface.
 - **spoofing**—Prevent spoofing attacks. Spoofing attacks occur when unauthorized agents attempt to bypass firewall security by imitating valid client IP addresses. Using the spoofing option invalidates such false source IP address connections.
- The default behavior is to base spoofing decisions on individual interfaces.
- **stream-option**—Detect packets where the IP option is 8 (Stream ID), and record the event in the SCREEN counters list for the ingress interface.

- **strict-source-route-option**—Detect packets where the IP option is 9 (Strict Source Routing), and record the event in the SCREEN counters list for the ingress interface. This option specifies the complete route list for a packet to take on its journey from source to destination. The last address in the list replaces the address in the destination field.
- **tear-drop**—Block the Teardrop attack. Teardrop attacks occur when fragmented IP packets overlap and cause the host attempting to reassemble the packets to crash. The tear-drop option directs the device to drop any packets that have such a discrepancy.
- **timestamp-option**—Detect packets where the IP option list includes option 4 (Internet Timestamp), and record the event in the SCREEN counters list for the ingress interface.
- **unknown-protocol**—Discard all received IP frames with protocol numbers greater than 137. Such protocol numbers are undefined or reserved.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

ip (Signature Attack)

```

Syntax  ip {
            destination {
                match (equal | greater-than | less-than | not-equal);
                value hostname ;
            }
            identification {
                match (equal | greater-than | less-than | not-equal);
                value identification-value ;
            }
            ip-flags {
                (df | no-df);
                (mf | no-mf);
                (rb | no-rb);
            }
            protocol {
                match (equal | greater-than | less-than | not-equal);
                value transport-layer-protocol-id ;
            }
            source {
                match (equal | greater-than | less-than | not-equal);
                value hostname ;
            }
            tos {
                match (equal | greater-than | less-than | not-equal);
                value type-of-service-in-decimal ;
            }
            total-length {
                match (equal | greater-than | less-than | not-equal);
                value total-length-of-ip-datagram ;
            }
            ttl {
                match (equal | greater-than | less-than | not-equal);
                value time-to-live ;
            }
        }

```

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type signature protocol]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Allow IDP to match the IP header information for the signature attack.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

ip-action

Syntax ip-action {
 (ip-block | ip-close | ip-notify);
 log;
 target (destination-address | service | source-address |
 source-zone | zone-service);
 timeout seconds;
 }

Hierarchy Level [edit security idp idp-policy *policy-name* rulebase-ips rule *rule-name* then]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Specify the actions you want IDP to take against future connections that use the same IP address.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.



NOTE: For ICMP flows, the destination port is 0; therefore, any ICMP flow matching source port, source address, and destination address is blocked.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

ip-block

Syntax	ip-block;
Hierarchy Level	[edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i> then ip-action]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Block future connections of any session that matches the IP action. If there is an IP action match with multiple rules, then the most severe IP action of all the matched rules is applied. The highest IP action priority (that is, the most severe action) is Drop/Block, then Close, then Notify.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

ip-close

Syntax	ip-close;
Hierarchy Level	[edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i> then ip-action]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Close future connections of any new sessions that match the IP action by sending RST packets to the client and server.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

ip-flags

Syntax	ip-flags { (df no-df); (mf no-mf); (rb no-rb); }
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol ip]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Specify that IDP looks for a pattern match whether or not the IP flag is set. This statement is supported on SRX Series devices.
Options	<p>df no-df—When set, the df (Don't Fragment) indicates that the packet cannot be fragmented for transmission. When unset, it indicates that the packet can be fragmented.</p> <p>mf no-mf—When set, the mf (More Fragments) indicates that the packet contains more fragments. When unset, it indicates that no more fragments remain.</p> <p>rb no-rb—When set, the rb (Reserved Bit) indicates that the bit is reserved.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

ip-notify

Syntax	ip-notify;
Hierarchy Level	[edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i> then ip-action]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Do not take any action against future traffic, but do log the event. This is the default. This statement is supported on SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

ips

Syntax ips {
 detect-shellcode;
 ignore-regular-expression;
 log-supercede-min *minimum-value* ;
 pre-filter-shellcode;
 process-ignore-s2c;
 process-override;
 process-port *port-number* ;
 }

Hierarchy Level [edit security idp sensor-configuration]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Configure IPS security policy sensor settings.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

ipsec-policy

Syntax ipsec-policy *ipsec-policy-name* ;

Hierarchy Level [edit security ipsec vpn *vpn-name* ike]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the IPsec policy name.

This statement is supported on J Series and SRX Series devices.

Options *ipsec-policy-name* —Name of the IPsec policy.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

ipsec-vpn

See the following sections:

- ipsec-vpn (Flow) on page 471
- ipsec-vpn (Policies) on page 472
- ipsec-vpn (Dynamic VPNs) on page 472

ipsec-vpn (Flow)

Syntax ipsec-vpn {
 mss *value* ;
}

Hierarchy Level [edit security flow tcp-mss]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the TCP maximum segment size (TCP MSS) for the TCP packets that are about to go into an IPsec VPN tunnel. This value overrides the value specified in the all-tcp-mss statement.

This statement is supported on J Series and SRX Series devices.

Options mss *value* —TCP MSS value for TCP packets entering an IPsec VPN tunnel. Value is optional.
Range: 64 through 65535 bytes
Default: 1320 bytes

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

ipsec-vpn (Policies)

Syntax	<code>ipsec-vpn vpn-name ;</code>
Hierarchy Level	[edit security policies from-zone <i>zone-name</i> to-zone <i>zone-name</i> policy <i>policy-name</i> then permit tunnel]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Define IPsec name for VPN. This statement is supported on J Series and SRX Series devices.
Options	<i>vpn-name</i> —Name of the IPsec.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

ipsec-vpn (Dynamic VPNs)

Syntax	<code>ipsec-vpn configuration-name;</code>
Hierarchy Level	[edit security dynamic-vpn clients <i>configuration-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Use this statement to specify which IPsec VPN configuration the dynamic VPN feature should use to secure traffic. This statement is supported on SRX210 and SRX240 devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

ip-sweep

Syntax	ip-sweep { threshold <i>number</i> ; }
Hierarchy Level	[edit security screen ids-option <i>screen-name</i> icmp]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Configure the device to detect and prevent an IP Sweep attack. An IP Sweep attack occurs when an attacker sends ICMP echo requests (pings) to multiple destination addresses. If a target host replies, the reply reveals the target's IP address to the attacker. If the device receives 10 ICMP echo requests within the number of microseconds specified in this statement, it flags this as an IP Sweep attack, and rejects the 11th and all further ICMP packets from that host for the remainder of the second.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>threshold <i>number</i>—Maximum number of microseconds during which up to 10 ICMP echo requests from the same host are allowed into the router. More than 10 requests from a host during this period triggers an IP Sweep attack response on the router during the remainder of the second.</p> <p>Range: 1000 through 1000000 microseconds</p> <p>Default: 5000 microseconds</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

iso

Syntax iso {
 mode packet-based;
 }

Hierarchy Level [edit security forwarding-options family]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Enable the forwarding of IS-IS traffic. By default, the device drops IS-IS traffic.



NOTE: JUNOS Software security processing is not applied to IS-IS packets forwarded by the device.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines To configure the IS-IS protocol, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

juniper-express-engine

```

Syntax  juniper-express-engine {
            pattern-update {
                email-notify {
                    admin-email
                    custom-message
                    custom-message-subject
                }
                interval value;
                no-autoupdate
                url;
            }
            profile profile-name {
                fallback-options {
                    default (log-and-permit | block);
                    content-size (log-and-permit | block);
                    engine-not-ready (log-and-permit | block);
                    timeout (log-and-permit | block);
                    out-of-resources (log-and-permit | block);
                    too-many-requests (log-and-permit | block);
                }
                scan-options {
                    intelligent-prescreening;
                    scan-mode (scan-all | by-extension);
                    content-size-limit value;
                    timeout value;
                    decompress-layer-limit value;
                }
                notification-options {
                    virus-detection {
                        type (message | protocol-only);
                        notify-mail-sender;
                        custom-message;
                        custom-message-subject;
                    }
                    fallback-block {
                        custom-message;
                        custom-message-subject;
                        notify-mail-sender;
                        type;
                    }
                }
                trickling {
                    timeout value;
                }
            }
            mime-whitelist {
                list listname {
                    exception listname;
                }
            }
            url-whitelist {
                listname;
            }
        }

```

```
}  
}
```

Hierarchy Level	[edit security utm feature-profile anti-virus]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure the UTM express antivirus feature.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

kaspersky-lab-engine

```

Syntax kaspersky-lab-engine {
  pattern-update {
    email-notify {
      admin-email
      custom-message
      custom-message-subject
    }
    interval value;
    no-autoupdate;
    url;
  }
  profile profile-name {
    fallback-options {
      default (log-and-permit | block);
      corrupt-file (log-and-permit | block);
      password-file (log-and-permit | block);
      decompress-layer (log-and-permit | block);
      content-size (log-and-permit | block);
      engine-not-ready (log-and-permit | block);
      timeout (log-and-permit | block);
      out-of-resources (log-and-permit | block);
      too-many-requests (log-and-permit | block);
    }
    scan-options {
      intelligent-prescreening;
      scan-mode (scan-all | by-extension);
      content-size-limit value;
      timeout value;
      decompress-layer-limit value;
    }
    notification-options {
      virus-detection {
        type (message | protocol-only);
        notify-mail-sender;
        custom-message;
        custom-message-subject;
      }
      fallback-block {
        custom-message;
        custom-message-subject;
        notify-mail-sender;
        type;
      }
    }
    trickling {
      timeout value;
    }
  }
}

```

Hierarchy Level [edit security utm feature-profile anti-virus]

Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure the UTM full file-based antivirus feature.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

land

Syntax	land;
Hierarchy Level	[edit security screen ids-option <i>screen-name</i> tcp]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable prevention of Land attacks by combining the SYN flood defense with IP spoofing protection. Land attacks occur when an attacker sends spoofed IP packets with headers containing the target's IP address for the source and destination IP addresses. The attacker sends these packets with the SYN flag set to any available port. The packets induce the target to create empty sessions with itself, filling its session table and overwhelming its resources.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

large

Syntax	large;
Hierarchy Level	[edit security screen ids-option <i>screen-name</i> icmp]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Configure the device to detect and drop any ICMP frame with an IP length greater than 1024 bytes.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

lifetime-kilobytes

Syntax	lifetime-kilobytes <i>kilobytes</i> ;
Hierarchy Level	[edit security ipsec proposal <i>proposal-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify the lifetime (in kilobytes) of an IPsec security association (SA).</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>kilobytes</i> —Lifetime of the IPsec security association (SA).</p> <p>Range: 64 through 1048576 kilobytes</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

limit

Syntax	limit <i>value</i> ;
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i> traffic-options sessions-per-client]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>In an attempt to consume all available resources and hinder the ability of the device, a malicious user might generate a large amount of traffic all at once. To prevent such activity from succeeding, you can impose a session throttle to limit sessions.</p> <p>This statement is supported on J Series devices and SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

limit-session

Syntax	<pre>limit-session { destination-ip-based <i>number</i> ; source-ip-based <i>number</i> ; }</pre>
Hierarchy Level	[edit security screen ids-option <i>screen-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Limit the number of concurrent sessions the device can initiate from a single source IP address or the number of sessions it can direct to a single destination IP address.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

list

See the following sections:

- list (antivirus mime-whitelist)
- list (content-filter block-mime)

list (antivirus mime-whitelist)

Syntax	list <i>listname</i> { exception <i>listname</i> ;
Hierarchy Level	[edit security utm feature-profile anti-virus mime-whitelist]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Configure the antivirus scanner to use MIME bypass lists (custom objects). This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

list (content-filter block-mime)

Syntax	list <i>list-name</i> { exception <i>list-name</i> ; }
Hierarchy Level	[edit security utm feature-profile content-filtering profile <i>profile-name</i> block-mime]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Configure the content filter to use MIME block lists (custom objects). This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

local

Syntax	<code>local <i>ipv4-prefix</i> ;</code>
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i> ike proxy-identity]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Specify the local IP address and subnet mask for the proxy identity. This statement is supported on J Series and SRX Series devices.
Options	<i>ipv4-prefix</i> —IP address and subnet mask.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

local-certificate

Syntax	<code>local-certificate <i>certificate-id</i> ;</code>
Hierarchy Level	[edit security ike policy <i>policy-name</i> certificate]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Specify a particular certificate when the local device has multiple loaded certificates. (This statement is not supported on dynamic VPN implementations.) This statement is supported on J Series and SRX Series devices.
Options	<i>certificate-id</i> —Name of the specific certificate to be used.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

local-identity

Syntax	local-identity (distinguished-name <i>string</i> hostname <i>hostname</i> inet <i>ipv4-ip-address</i> user-at-hostname <i>e-mail-address</i>);
Hierarchy Level	[edit security ike gateway <i>gateway-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the local IKE identity to send in the exchange with the destination peer so that the destination peer can communicate with the local peer. If you do not configure a local-identity, the device uses the IP address corresponding to the local endpoint by default. (The distinguished-name option is not supported on dynamic VPN implementations.) This statement is supported on J Series and SRX Series devices.
Options	<p>distinguished-name <i>string</i> —Specify identity as the distinguished name (DN) from the certificate. If there is more than one certificate on the device, use the security ike gateway <i>gateway-name</i> policy <i>policy-name</i> certificate local-certificate <i>certificate-id</i> statement to specify a certificate.</p> <p>hostname <i>hostname</i> —Specify identity as a fully qualified domain name (FQDN).</p> <p>inet <i>ipv4-ip-address</i> —Specify identity as an IPv4 IP address.</p> <p>user-at-hostname <i>e-mail-address</i> —Specify identity as an e-mail address.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

log

See the following sections:

- log (IDP) on page 484
- log (IDP Policy) on page 485
- log (Security Policies) on page 485

log (IDP)

Syntax

```
log {
  cache-size size ;
  suppression {
    disable;
    include-destination-address;
    max-logs-operate value ;
    max-time-report value ;
    start-log value ;
  }
}
```

Hierarchy Level [edit security idp sensor-configuration]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Configure IDP security policy logs.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

log (IDP Policy)

Syntax	log;
Hierarchy Level	[edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i> then ip-action]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Log the information about the IP action against the traffic that matches a rule. This statement is supported on SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

log (Security Policies)

Syntax	log { session-close; session-init; }
Hierarchy Level	[edit security policies from-zone <i>zone-name</i> to-zone <i>zone-name</i> policy <i>policy-name</i> then]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Enable traffic to which the policy applies to be logged at the beginning or end of a session. This statement is supported on J Series and SRX Series devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

log-attacks

Syntax	log-attacks { alert; }
Hierarchy Level	[edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i> then notification]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Enable the log attacks to create a log record that appears in the log viewer. This statement is supported on SRX Series devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

log-errors

Syntax	(log-errors no-log-errors);
Hierarchy Level	[edit security idp sensor-configuration flow]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Enable the error log to generate the result of success or failure about the flow. A flow-related error is when IDP receives a packet that does not fit into expected flow. By default error log is enabled. This statement is supported on SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

log-supercede-min

Syntax	log-supercede-min <i>minimum-value</i> ;
Hierarchy Level	[edit security idp sensor-configuration ips]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify the amount of time to supersede the IPS sensor logs. This statement is supported on SRX Series devices.
Options	<i>minimum-value</i> —Minimum time to supersede the log. Range: 0 through 65535 seconds Default: 1 second
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

low-watermark

Syntax	low-watermark <i>percent</i> ;
Hierarchy Level	[edit security flow aging]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Set the point at which the aggressive aging-out process ends. This statement is supported on J Series devices.
Options	<i>percent</i> —Percentage of session-table capacity at which aggressive aging-out ends. Range: 0 through 100 percent Default: 100 percent
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

management

Syntax

```
management {
  host-inbound-traffic {
    protocols {
      protocol-name ;
      protocol-name <except>;
    }
    system-services {
      service-name ;
      service-name <except>;
    }
  }
  interfaces interface-name {
    host-inbound-traffic {
      protocols {
        protocol-name ;
        protocol-name <except>;
      }
      system-services {
        service-name ;
        service-name <except>;
      }
    }
  }
  screen screen-name ;
}
```

Hierarchy Level [edit security zones]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the host for out-of-band management interfaces. You can set firewall options in this zone to protect the management interface from different types of attacks. Because this zone cannot be specified in policies, traffic entering from this zone can only be traffic originating from the device itself and cannot transit out from any other zone.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

manual

Syntax manual {
 authentication {
 algorithm (hmac-md5-96 | hmac-sha1-96);
 key (ascii-text *key* | hexadecimal *key*);
 }
 encryption {
 algorithm (3des-cbc | aes-128-cbc | aes-192-cbc | aes-256-cbc | des-cbc);
 key (ascii-text *key* | hexadecimal *key*);
 }
 external-interface *external-interface-name* ;
 gateway *ip-address* ;
 protocol (ah | esp);
 spi *spi-value* ;
 }

Hierarchy Level [edit security ipsec vpn *vpn-name*]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Define a manual IPsec security association (SA). (This statement is not supported on dynamic VPN implementations.)

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

match

See the following sections:

- [match \(Destination NAT\) on page 490](#)
- [match \(IDP Policy\) on page 491](#)
- [match \(Security Policies\) on page 492](#)
- [match \(Source NAT\) on page 492](#)
- [match \(Static NAT\) on page 493](#)

match (Destination NAT)

Syntax match {
 destination-address *destination-address* ;
 destination-port *port-number* ;
 source-address [*source-address*];
 }

Hierarchy Level [edit security nat destination rule-set *rule-set-name* rule *rule-name*]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Specify the destination rules to be used as match criteria.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

match (IDP Policy)

Syntax

```
match {
  attacks {
    custom-attacks [ attack-name ];
    predefined-attack-groups [ attack-name ];
    predefined-attacks [ attack-name ];
  }
  destination-address [ address-name ];
  destination-except [ address-name ];
  from-zone zone-name ;
  source-address [ address-name ];
  source-except [ address-name ];
  to-zone zone-name ;
}
```

Hierarchy Level [edit security idp idp-policy *policy-name* rulebase-exempt rule *rule-name*],
[edit security idp idp-policy *policy-name* rulebase-ips rule *rule-name*]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Specify the rules to be used as match criteria.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

match (Security Policies)

Syntax match {
 application [*application-name-or-set*];
 destination-address {
 address-name ;
 }
 source-address {
 address-name ;
 }
 }

Hierarchy Level [edit security policies from-zone *zone-name* to-zone *zone-name* policy *policy-name*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure security policy match criteria.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

match (Source NAT)

Syntax match {
 destination-address [destination-address];
 source-address [source-address];
 }

Hierarchy Level [edit security nat source rule-set *rule-set-name* rule *rule-name*]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Specify the source rules to be used as match criteria.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

match (Static NAT)

Syntax	match { destination-address [destination-address]; }
Hierarchy Level	[edit security nat static rule-set <i>rule-set-name</i> rule <i>rule-name</i>]
Release Information	Statement modified in Release 9.6 of JUNOS Software.
Description	Specify the static rules to be used as match criteria. This statement is supported on J Series and SRX Series devices.
Options	The remaining statement is explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

max-flow-mem

Syntax	max-flow-mem <i>value</i> ;
Hierarchy Level	[edit security idp sensor-configuration re-assembler]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Define the maximum TCP flow memory which IDP sensor can handle. This statement is supported on SRX Series devices.
Options	<i>value</i> —Maximum TCP flow memory in kilobytes. Range: 64 through 4294967295 kilobytes Default: 1024 kilobytes
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

max-logs-operate

Syntax	max-logs-operate <i>value</i> ;
Hierarchy Level	[edit security idp sensor-configuration log suppression]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>When log suppression is enabled, IDP must cache log records so that it can identify when multiple occurrences of the same event occur. This setting specifies how many log records are tracked simultaneously by IDP.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p><i>value</i> —Maximum number of log records are tracked by IDP.</p> <p>Range: 256 through 65536 records</p> <p>Default: 16384 records</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

max-packet-mem

Syntax	max-packet-mem <i>value</i> ;
Hierarchy Level	[edit security idp sensor-configuration re-assembler]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Define the maximum TCP packet memory that the IDP sensor can handle.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p><i>value</i> —Maximum TCP packet memory.</p> <p>Range: 64 through 4294967295 kilobytes (KB)</p> <p>Default: 262144 KB</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

max-packet-memory

Syntax	max-packet-memory <i>value</i> ;
Hierarchy Level	[edit security idp sensor-configuration application-identification]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify the maximum memory length of a packet in bytes. This statement is supported on SRX Series devices.
Options	<i>value</i> —Maximum memory length in bytes. Range: 0 through 200000000 bytes Default: 100000000 bytes
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

max-sessions

Syntax	max-sessions <i>value</i> ;
Hierarchy Level	[edit security idp sensor-configuration application-identification]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify the maximum number of sessions that IDP maintains. If the sensor reaches the maximum, it drops all new sessions. This statement is supported on SRX Series devices.
Options	<i>value</i> —Maximum number of sessions. Range: 0 through 500000
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

max-tcp-session-packet-memory

Syntax	max-tcp-session-packet-memory <i>value</i> ;
Hierarchy Level	[edit security idp sensor-configuration application-identification]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify the maximum number of TCP sessions that IDP maintains. If the sensor reaches the maximum, it drops all new TCP sessions. This statement is supported on SRX Series devices.
Options	<i>value</i> —Maximum number of TCP sessions. Range: 0 through 60000
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

max-time-report

Syntax	max-time-report <i>value</i> ;
Hierarchy Level	[edit security idp sensor-configuration log suppression]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	When log suppression is enabled, IDP maintains a count of multiple occurrences of the same event. After the specified number of seconds has passed, IDP writes a single log entry containing the count of occurrences. This statement is supported on SRX Series devices.
Options	<i>value</i> —Time after which IDP writes a single log entry containing the count of occurrences. Range: 1 through 60 seconds Default: 10 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

max-timers-poll-ticks

Syntax	max-timers-poll-ticks <i>value</i> ;
Hierarchy Level	[edit security idp sensor-configuration flow]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify the time at which timer ticks at regular interval. This statement is supported on SRX Series devices.
Options	<i>value</i> —Maximum amount of time at which the timer ticks. Range: 0 through 1000 ticks Default: 1000 ticks
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

max-udp-session-packet-memory

Syntax	max-udp-session-packet-memory <i>value</i> ;
Hierarchy Level	[edit security idp sensor-configuration application-identification]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify the maximum number of UDP sessions that IDP maintains. If the sensor reaches the maximum, it drops all new UDP sessions. This statement is supported on SRX Series devices.
Options	<i>value</i> —Maximum number of UDP sessions. Range: 0 through 20000
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

maximize-idp-sessions

Syntax	maximize-idp-sessions
Hierarchy Level	[edit security forwarding-process application-services]
Release Information	Statement introduced in Release 9.6 of JUNOS Software.
Description	<p>If you are deploying IDP policies, you can tune the device to increase IDP session capacity. By using the provided commands to change the way the system allocates resources, you can achieve a higher IDP session capacity.</p> <p>This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

maximum-call-duration

Syntax	maximum-call-duration <i>minutes</i> ;
Hierarchy Level	[edit security alg mgcp], [edit security alg sip]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify the time at which the SIP call ends. The media session is released after the call has ended.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>minutes</i> —Maximum amount of time at which the call ends and releases the media sessions.</p> <p>Range: 3 through 7200 minutes</p> <p>Default: 720 minutes</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

media-source-port-any

Syntax	media-source-port-any;
Hierarchy Level	[edit security alg h323]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Allow media traffic from any port number. By default, this feature is disabled, which allows a temporary opening in the firewall (pinhole) for media traffic to be opened.</p> <p>This statement is supported on J Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

member

Syntax	<pre>member member-name { attack-type { (anomaly signature); } }</pre>
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type chain]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Create the list of member attacks.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p><i>member-name</i> —Name of the member list.</p> <p>The remaining statements are explained separately.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

message-flood

See the following sections:

- message-flood (H323) on page 500
- message-flood (MGCP) on page 501

message-flood (H323)

Syntax message-flood {
 gatekeeper threshold *rate* ;
 }

Hierarchy Level [edit security alg h323 application-screen]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Limit the rate per second at which remote access server (RAS) requests to the gatekeeper are processed. Messages exceeding the threshold are dropped. This feature is disabled by default.

This statement is supported on J Series devices.

Options gatekeeper threshold *rate* —Maximum number of RAS connection requests per second allowed per gateway.
Range: 1 through 65535
Default: 1000

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

message-flood (MGCP)

Syntax	message-flood threshold <i>rate</i> ;
Hierarchy Level	[edit security alg mgcp application-screen]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Limits the rate per second at which message requests to the Media Gateway are processed. Messages exceeding the threshold are dropped by the Media Gateway Control Protocol (MGCP) Application Layer Gateway (ALG). This feature is disabled by default. This statement is supported on J Series and SRX Series devices.
Options	threshold <i>rate</i> —Number of connection requests per second allowed per Media Gateway. Range: 2 through 50000 Default: 1000
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

mgcp

Syntax

```
mgcp {
  application-screen {
    connection-flood threshold rate ;
    message-flood threshold rate ;
    unknown-message {
      permit-nat-applied;
      permit-routed;
    }
  }
  disable;
  inactive-media-timeout seconds ;
  maximum-call-duration minutes ;
  traceoptions {
    flag {
      all <extensive>;
      call <extensive>;
      cc <extensive>;
      decode <extensive>;
      error <extensive>;
      nat <extensive>;
      packet <extensive>;
      rm <extensive>;
    }
  }
  transaction-timeout seconds ;
}
```

Hierarchy Level [edit security alg]

Release Information Statement modified in Release 9.2 of JUNOS Software.

Description Specify the Media Gateway Control Protocol (MGCP) ALG on the device. MGCP is a text-based Application Layer protocol that can be used for call setup and call control.

This statement is supported on J Series and SRX Series devices.

Options **disable**—Disable the MGCP ALG. By default, the MGCP ALG is enabled.



NOTE: By default, the MGCP ALG is disabled for SRX Series devices.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level **security**—To view this statement in the configuration.
security-control—To add this statement to the configuration.

mime-pattern

Syntax	mime-pattern { value [list]; }
Hierarchy Level	[edit security utm custom-objects]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>The gateway device uses MIME (Multipurpose Internet Mail Extension) types to decide which traffic may bypass various types of scanning.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

mime-whitelist

Syntax	mime-whitelist { list <i>listname</i> { exception <i>listname</i> ; }
Hierarchy Level	[edit security utm feature-profile anti-virus]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure the antivirus scanner to use MIME bypass lists and exception lists.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

mode

See the following sections:

- mode (Forwarding-Options) on page 504
- mode (Policy) on page 505

mode (Forwarding-Options)

Syntax mode packet-based;

Hierarchy Level [edit security forwarding-options family]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Enable packet forwarding for the selected protocol family. By default, the device drops traffic for the protocol family.

This statement is supported on J Series and SRX Series devices.

Options packet-based— Perform simple packet forwarding.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

mode (Policy)

Syntax mode (aggressive | main);

Hierarchy Level [edit security ike policy *policy-name*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Define the mode used for Internet Key Exchange (IKE) Phase 1 negotiations. Use aggressive mode only when you need to initiate an IKE key exchange without ID protection, as when a peer unit has a dynamically assigned IP address. (The main option is not supported on dynamic VPN implementations.)

This statement is supported on J Series and SRX Series devices.

- Options**
- aggressive—Aggressive mode.
 - main—Main mode. Main mode is the recommended key-exchange method because it conceals the identities of the parties during the key exchange.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

mpls

Syntax mpls {
 mode packet-based;
 }

Hierarchy Level [edit security forwarding-options family]

Release Information Statement introduced in Release 9.0 of JUNOS Software.

Description Enable the forwarding of MPLS traffic. By default, the device drops MPLS traffic.



CAUTION: Because MPLS is in operating packet mode, security services are not available.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

msrpc

Syntax msrcp {
 disable;
 traceoptions {
 flag {
 all <extensive>;
 }
 }
 }

Hierarchy Level [edit security alg]

Release Information Statement introduced in Release 9.0 of JUNOS Software.

Description Specify the Microsoft (MS) remote procedure call (RPC) ALG on the device.

This statement is supported on J Series devices.

Options disable—Disable the Microsoft RPC ALG. By default, the Microsoft RPC ALG is enabled.

traceoptions—Configure the Microsoft RPC ALG tracing options.

flag—Trace operation to perform. To specify more than one trace operation, include multiple flag statements.

■ all—Trace all events.

extensive—(Optional) Display extensive amount of data.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

mss

Syntax mss {
 match (equal | greater-than | less-than | not-equal);
 value *maximum-segment-size*;
 }

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type signature protocol tcp]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify the maximum segment size (MSS) in the TCP header.

This statement is supported on SRX Series devices.

Options match (equal | greater-than | less-than | not-equal)—Match an operand.

value *maximum-segment-size*—Match the maximum segment size value.

Range: 0 through 65535

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

nat

See the following sections:

- nat on page 510

nat

```

Syntax  nat {
    destination {
        pool pool-name {
            address < ip-address > (to ip-address | port port-number );
            routing-instance routing-instance-name ;
        }
        rule-set rule-set-name {
            from interface [interface-name] |
            routing-instance [routing-instance-name] | zone [zone-name];
            rule rule-name {
                match {
                    destination-address destination-address ;
                    destination-port port-number ;
                    source-address [source-address];
                }
                then {
                    destination-nat (off | pool pool-name );
                }
            }
        }
    }
    proxy-arp {
        interface interface-name {
            address ip-address to ip-address ;
        }
    }
    source {
        address-persistent;
        interface {
            port-overloading { off };
        }
        pool pool-name {
            address ip-address to ip-address ;
            host-address-base ip-address ;
            overflow-pool (interface | pool-name );
            port no-translation | range high ip-address low ip-address ;
            routing-instance routing-instance-name ;
        }
        pool-utilization-alarm {
            clear-threshold threshold-value ;
            raise-threshold threshold-value ;
        }
        port-randomization {
            disable;
        }
        rule-set rule-set-name {
            from interface [interface-name] |
            routing-instance [routing-instance-name] | zone [zone-name];
            rule rule-name {
                match {
                    destination-address [destination-address];
                    source-address [source-address];
                }
            }
        }
    }
}

```

```

    then {
        source-nat (off | interface | pool pool-name );
        persistent-nat {
            permit ( any-remote-host | target-host | target-host-port );
            inactivity-timeout seconds;
            max-session-number number;
        }
    }
}
to interface [interface-name] |
routing-instance [routing-instance-name] | zone [zone-name];
}
}
static {
    rule-set rule-set-name {
        from interface [interface-name] |
        routing-instance [routing-instance-name] | zone [zone-name];
        rule rule-name {
            match {
                destination-address [destination-address];
            }
            then {
                static-nat prefix < addr-prefix >
                <routing-instance routing-instance-name >;
            }
        }
    }
}
}
traceoptions {
    file filename {
        <files number >;
        <match regular-expression >;
        <size maximum-file-size >;
        <world-readable | no-world-readable>;
    }
    flag {
        all;
        destination-nat-pfe;
        destination-nat-re;
        destination-nat-rt;
        source-nat-pfe;
        source-nat-re;
        source-nat-rt;
        static-nat-pfe;
        static-nat-re;
        static-nat-rt;
    }
    no-remote-trace;
}
}

```

Hierarchy Level [edit security]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description	Configure Network Address Translation (NAT) for the SRX Series device. This statement is supported on J Series and SRX Series devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

nat-keepalive

Syntax	nat-keepalive <i>seconds</i> ;
Hierarchy Level	[edit security ike gateway <i>gateway-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the interval at which NAT keepalive packets can be sent so that NAT translation continues. This statement is supported on J Series and SRX Series devices.
Options	<i>seconds</i> —Maximum interval in seconds at which NAT keepalive packets can be sent. Range: 1 through 300 seconds Default: 5 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

negate

Syntax	negate;
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Select negate to exclude the specified pattern from being matched. This statement is supported on SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

no-allow-icmp-without-flow

See allow-icmp-without-flow

no-anti-replay

Syntax	no-anti-replay;
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i> ike gateway gateway <i>-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Disable the antireplay checking feature of IPsec. By default, antireplay checking is enabled. This statement is supported on J Series and SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

no-enable-all-qmodules

See enable-all-qmodules

no-enable-packet-pool

See enable-packet-pool

no-log-errors

See log-errors

no-nat-traversal

Syntax no-nat-traversal;

Hierarchy Level [edit security ike gateway *gateway-name*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Disables UDP encapsulation of IPsec Encapsulating Security Payload (ESP) packets, otherwise known as Network Address Translation Traversal (NAT-T). NAT-T is enabled by default.

This statement is supported on J Series and SRX Series devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

no-policy-lookup-cache

See policy-lookup-cache

no-reset-on-policy

See reset-on-policy

no-sequence-check

Syntax	no-sequence-check;
Hierarchy Level	[edit security flow tcp-session]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify that the device does not check sequence numbers in TCP segments during stateful inspection. By default, the device monitors the sequence numbers in TCP segments. The device detects the window scale specified by source and destination hosts in a session and adjusts a window for an acceptable range of sequence numbers according to their specified parameters. The device then monitors the sequence numbers in packets sent between these hosts. If the device detects a sequence number outside this range, it drops the packet.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

no-syn-check

Syntax	no-syn-check;
Hierarchy Level	[edit security flow tcp-session]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Disable checking of the TCP SYN bit before creating a session. By default, the device checks that the SYN bit is set in the first packet of a session. If the bit is not set, the device drops the packet.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

no-syn-check-in-tunnel

Syntax	no-syn-check-in-tunnel;
Hierarchy Level	[edit security flow tcp-session]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Disable checking of the TCP SYN bit before creating a session for tunneled packets. By default, the device checks that the SYN bit is set in the first packet of a VPN session. If the bit is not set, the device drops the packet.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

notification

Syntax	<pre>notification { log-attacks { alert; } }</pre>
Hierarchy Level	[edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i> then]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Configure the logging options against the action. When attacks are detected, you can choose to log an attack and create log records with attack information and send that information to the log server.</p> <p>This statement is supported on SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

notification-options

See the following sections:

- notification-options (antivirus juniper-express-engine)
- notification-options (antivirus kaspersky-lab-engine)
- notification-options (content-filtering)

notification-options (antivirus juniper-express-engine)

Syntax

```
notification-options {
  virus-detection {
    type (message | protocol-only);
    notify-mail-sender;
    custom-message;
    custom-message-subject;
  }
  fallback-block {
    custom-message;
    custom-message-subject;
    notify-mail-sender;
    type;
  }
  fallback-non-block {
    custom-message;
    custom-message-subject;
    notify-mail-sender;
    type;
  }
}
```

Hierarchy Level [edit security utm feature-profile anti-virus juniper-express-engine *profile-name*]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description There are multiple notification options you can configure to trigger when a virus is detected.

This statement is supported on SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

notification-options (antivirus kaspersky-lab-engine)

Syntax scan-options {
 intelligent-prescreening;
 scan-mode (scan-all | by-extension);
 content-size-limit *value*;
 timeout *value*;
 decompress-layer-limit *value*;
 }

Hierarchy Level [edit security utm feature-profile anti-virus kaspersky-lab-engine *profile-name*]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description There are multiple notification options you can configure to trigger when a virus is detected.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

notification-options (content-filtering)

Syntax notification-options {
 type (message);
 custom-message [message];
 }

Hierarchy Level [edit security utm feature-profile content-filtering profile *profile-name*]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description You can configure a message notification to trigger when a content filter is matched.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

notify-mail-sender

See the following sections:

- notify-mail-sender (antivirus fallback-block)
- notify-mail-sender (antivirus notification-options virus-detection)

notify-mail-sender (antivirus fallback-block)

Syntax	notify-mail-sender;
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> notification-options fallback-block] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> notification-options fallback-block]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	E-mail notification is used to notify the sender or the recipient about the errors returned by either the scan engine or the scan manager when a fallback action occurs. This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on J Series devices.)
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

notify-mail-sender (antivirus notification-options virus-detection)

Syntax	notify-mail-sender;
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> notification-options virus-detection] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> notification-options virus-detection]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	E-mail notification is used to notify the sender or the recipient about the detected viruses or the scanning errors. When a virus is detected, an e-mail is sent to the sender upon virus detection. This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on J Series devices.)
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

optimized

Syntax	optimized;
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i> vpn-monitor]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify that the device uses traffic patterns as evidence of peer liveliness. If enabled, ICMP requests are suppressed. This feature is disabled by default. (This statement is not supported on dynamic VPN implementations.) This statement is supported on J Series and SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

option

Syntax	option { match (equal greater-than less-than not-equal); value <i>tcp-option</i> ; }
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol tcp]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Specify the TCP option type (kind field in the TCP header). This statement is supported on SRX Series devices.
Options	match (equal greater-than less-than not-equal)—Match an operand. value <i>tcp-option</i> —Match the option value. Range: 0 through 255
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

order

Syntax	order;
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type chain]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Create a compound attack object that must match each member signature or protocol anomaly in the order you specify. If you do not specify an ordered match, the compound attack object still must match all members, but the attacks or protocol anomalies can appear in random order. This statement is supported on SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

out-of-resources

Syntax	out-of-resources (log-and-permit block);
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> fallback-options] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> fallback-options]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Virus scanning requires a great deal of memory and CPU resources. Due to resource constraints, memory allocation requests can be denied by the system. When out-of-resources occurs, scanning is aborted. The default action is BLOCK.</p> <p>This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on J Series devices.)</p>
Options	<ul style="list-style-type: none"> ■ log-and-permit—Log the error and permit the traffic ■ block—Log the error and deny the traffic
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

over-limit

Syntax	over-limit (log-and-permit block);
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i> traffic-options sessions-per-client]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>In an attempt to consume all available resources and hinder the ability of the device, a malicious user might generate a large amount of traffic all at once. To prevent such activity from succeeding, you can impose a session throttle to limit sessions and configure an action to occur when the limit is exceeded.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<ul style="list-style-type: none"> ■ log-and-permit—Log the error and permit the traffic ■ block—Log the error and deny the traffic
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

overflow-pool

See the following sections:

- overflow-pool (Source NAT) on page 524

overflow-pool (Source NAT)

Syntax	overflow-pool (interface pool-name);
Hierarchy Level	[edit security nat source pool pool-name]
Release Information	Statement modified in Release 9.6 of JUNOS Software.
Description	Specify a source pool to use when the current address pool is exhausted. This statement is supported on J Series and SRX Series devices.
Options	interface — Interfaces IP address. pool-name — Defined source pool (created with the security nat source pool pool-name statement). The source pool must have Port Address Translation (PAT) enabled.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security — To view this statement in the configuration. security-control — To add this statement to the configuration.

packet-filter

Syntax	packet-filter;
Hierarchy Level	[edit security datapath-debug]
Release Information	Command introduced in Release 9.6 of JUNOS Software.
Description	<p>Sets packet filter for taking the datapath-debug action. A maximum of four filters are supported at the same time.</p> <p>This statement is supported on SRX5600 and SRX5800 devices.</p>
Options	<p><i>apply-groups</i>— Groups from which to inherit configuration data.</p> <p><i>apply-groups-except</i>— Do not inherit configuration data from these groups.</p> <p><i>destination-port</i>— Match TCP/UDP destination port.</p> <p><i>destination-prefix</i>— Destination IPv4 address prefix.</p> <p><i>protocol</i>— Match IP protocol type.</p> <p><i>source-port</i>— Match TCP/UDP source port.</p> <p><i>source-prefix</i>— Source IPv4 address prefix.</p>
Usage Guidelines	For configuration instructions and examples, see the JUNOS Software Security Configuration Guide.
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>

pair-policy

Syntax	<code>pair-policy pair-policy ;</code>
Hierarchy Level	[edit security policies from-zone <i>zone-name</i> to-zone <i>zone-name</i> policy <i>policy-name</i> then permit tunnel]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Link the policy that you are configuring with another policy that references the same VPN tunnel so that both policies share one proxy ID and one security association (SA). Policy pairing is useful when you want to allow bidirectional traffic over a policy-based VPN that is using source or destination address translation with a dynamic IP address pool or destination address translation with a mapped IP (MIP) or dynamic IP (DIP) address pool.</p> <p>Without policy pairing, the device derives a different proxy ID from the outbound and inbound policies. Two proxy IDs causes a problem for the remote peer with a single proxy ID for the VPN tunnel.</p> <p>Pairing two policies solves the proxy ID problem for the remote peer and conserves SA resources. The single proxy ID is derived from the policy you configured last.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

pass-through

Syntax `pass-through {
 access-profile profile-name ;
 client-match match-name ;
 web-redirect;
 }`

Hierarchy Level [edit security policies from-zone *zone-name* to-zone *zone-name* policy *policy-name*
 then permit firewall-authentication]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure pass-through firewall user authentication. The user needs to use an FTP, Telnet, or HTTP client to access the IP address of the protected resource in another zone. Subsequent traffic from the user or host is allowed or denied based on the result of this authentication. Once authenticated, the firewall proxies the connection.

This statement is supported on J Series and SRX Series devices.

- Options**
- `access-profile profile-name` —(Optional) Name of the access profile.
 - `client-match match-name` —(Optional) Specify the name of the users or user groups in a profile who are allowed access by this policy. If you do not specify any users or user groups, any user who is successfully authenticated is allowed access.
 - `web-redirect`—(Optional) Enable redirecting an HTTP request to the device and redirecting the client system to a Web page for authentication. Including this statement allows users an easier authentication process because they need to know only the name or IP address of the resource they are trying to access.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

password-file

Syntax	password-file (log-and-permit block);
Hierarchy Level	[edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> fallback-options]
Description	<p>Password protected file is the error returned by the scan engine when the scanned file is protected by a password. The default action is log-and-permit.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<ul style="list-style-type: none"> ■ log-and-permit—Log the error and permit the traffic ■ block—Log the error and deny the traffic
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

pattern

Syntax	pattern <i>signature-pattern</i> ;
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Specify the pattern IDP should match. You construct the attack pattern just as you would when creating a new signature attack object.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<i>signature-pattern</i> —Specify the signature pattern.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

pattern-update

See the following sections:

- pattern-update (kaspersky-lab-engine)
- pattern-update (juniper-express-engine)

pattern-update (kaspersky-lab-engine)

Syntax pattern-update {
 {
 email-notify {
 admin-email
 custom-message
 custom-message-subject
 }
 interval *value*;
 no-autoupdate
 url;
 }

Hierarchy Level [edit security utm feature-profile anti-virus kaspersky-lab-engine]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Updates to the pattern file are added as new viruses are discovered. You can configure the security device to regularly update the pattern file automatically, or you can update the file manually.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

pattern-update (juniper-express-engine)

Syntax pattern-update {
 {
 email-notify {
 admin-email
 custom-message
 custom-message-subject
 }
 interval *value*;
 no-autoupdate
 url;
 }

Hierarchy Level [edit security utm feature-profile anti-virus juniper-express-engine]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Updates to the pattern file are added as new viruses are discovered. You can configure the security device to regularly update the pattern file automatically, or you can update the file manually.

This statement is supported on SRX210, SRX240, and SRX650 devices.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

peer-certificate-type

Syntax peer-certificate-type (pkcs7 | x509-signature);

Hierarchy Level [edit security ike policy *policy-name* certificate]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify a preferred type of certificate (PKCS7 or X509). (This statement is not supported on dynamic VPN implementations.)

This statement is supported on J Series and SRX Series devices.

- Options**
- **pkcs7**—Public-Key Cryptography Standard #7.
 - **x509-signature**—X509 is an ITU-T standard for public key infrastructure.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

perfect-forward-secrecy

Syntax	perfect-forward-secrecy keys (group1 group2 group5);
Hierarchy Level	[edit security ipsec policy <i>policy-name</i>]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	<p>Specify Perfect Forward Secrecy (PFS) as the method that the device uses to generate the encryption key. PFS generates each new encryption key independently from the previous key.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>group1—Diffie-Hellman Group 1.</p> <p>group2—Diffie-Hellman Group 2.</p> <p>group5—Diffie-Hellman Group 5.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

performance

Syntax	performance { values [fast normal slow unknown]; }
Hierarchy Level	[edit security idp dynamic-attack-group <i>dynamic-attack-group-name</i> filters]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Specify a performance filter to add attack objects based on the performance level that is vulnerable to the attack.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>values—Name of the performance filter. You can select from the following performance level:</p> <ul style="list-style-type: none">■ fast—Fast track performance level.■ normal—Normal track performance level.■ slow—Slow track performance level.■ unknown—By default, all compound attack objects are set to Unknown. As you fine-tune IDP to your network traffic, you can change this setting to help you track performance level.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

permit

Syntax

```

permit {
  application-services (wx-redirect | wx-reverse-redirect);
  destination-address {
    drop-translated;
    drop-untranslated;
  }
  firewall-authentication {
    pass-through {
      access-profile profile-name ;
      client-match match-name ;
      web-redirect;
    }
    web-authentication {
      client-match user-or-group ;
    }
  }
  tunnel {
    ipsec-vpn vpn-name ;
    pair-policy pair-policy ;
  }
}

```

Hierarchy Level [edit security policies from-zone *zone-name* to-zone *zone-name* policy *policy-name* then]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the policy action to perform when packets match the defined criteria.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

permit-command

Syntax	permit-command <i>protocol-command-list</i> ;
Hierarchy Level	[edit security utm feature-profile content-filtering profile <i>profile-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Apply protocol permit command custom-objects to the content-filtering profile</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

persistent-nat

Syntax	<pre> persistent-nat { permit (any-remote-host target-host target-host-port); inactivity-timeout seconds; max-session-number number; } </pre>
Hierarchy Level	[edit security nat source rule-set <i>ruleset</i> rule <i>rule</i> then source-nat pool interface]
Release Information	Statement introduced in Release 9.6 of JUNOS Software.
Description	<p>Configure persistent NAT.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<p>any-remote-host—All requests from a specific internal IP address and port are mapped to the same external IP address and port. Any external host can send a packet to the internal host using the mapped external address.</p> <p>target-host—All requests from a specific internal IP address and port are mapped to the same external IP address and port. An external host can send a packet to an internal host only if the internal host had previously sent a packet to the external host's IP address.</p> <p>target-host-port—All requests from a specific internal IP address and port are mapped to the same external IP address and port. An external host can send a packet to an internal host only if the internal host had previously sent a packet to the external host's IP address and port.</p> <p>inactivity-timeout—The amount of time, in seconds, that the persistent NAT binding remains in the Juniper Networks device's memory when all the sessions of the binding entry are gone. When the configured timeout is reached, the binding is removed from memory. The default is 5 seconds. Enter a value from 60 through 7200.</p> <p>max-session-number—The maximum number of the sessions with which a persistent NAT binding can be associated. For example, if the max-session-number of the persistent NAT rule is 100, then a 101th session cannot be established if that session uses the persistent NAT binding created from the persistent NAT rule. The default is 30 sessions. Enter a value from 8 through 100.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration</p>

ping-death

Syntax	ping-death;
Hierarchy Level	[edit security screen ids-option <i>screen-name</i> icmp]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Configure the device to detect and reject oversized and irregular ICMP packets. Although the TCP/IP specification requires a specific packet size, many ping implementations allow larger packet sizes. Larger packets can trigger a range of adverse system reactions, including crashing, freezing, and restarting.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

pki

```

Syntax  pki {
            auto-re-enrollment {
                certificate-id certificate-id-name {
                    ca-profile-name ca-profile-name ;
                    challenge-password password ;
                    re-enroll-trigger-time-percentage percentage ;
                    re-generate-keypair;
                }
            }
            ca-profile ca-profile-name {
                administrator {
                    e-mail-address e-mail-address ;
                }
                ca-identity ca-identity ;
                enrollment {
                    retry number;
                    retry-interval seconds;
                    url url-name;
                }
                revocation-check {
                    crl {
                        disable {
                            on-download-failure;
                        }
                        refresh-interval hours ;
                        url url-name ;
                    }
                    disable;
                }
            }
            traceoptions {
                file filename <files number > <match regular-expression >
                <size maximum-file-size > <world-readable | no-world-readable>
                flag flag ;
            }
        }

```

Hierarchy Level [edit security]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Configure an IPsec profile to request digital certificates.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

Related Topics *JUNOS Feature Guide* and the *JUNOS System Basics and Services Command Reference*

policies

```

Syntax  policies {
    default-policy {
        (deny-all | permit-all);
    }
    from-zone zone-name to-zone zone-name {
        policy policy-name {
            match {
                application [ application-name-or-set ];
                destination-address {
                    address-name ;
                }
                source-address {
                    address-name ;
                }
            }
        }
        scheduler-name scheduler-name ;
        then {
            count {
                alarm {
                    per-minute-threshold number;
                    per-second-threshold number ;
                }
            }
            (deny | reject);
            permit {
                application-services (wx-redirect | wx-reverse-redirect);
                destination-address {
                    drop-translated;
                    drop-untranslated;
                }
                firewall-authentication {
                    pass-through {
                        access-profile profile-name ;
                        client-match match-name ;
                        web-redirect;
                    }
                    web-authentication {
                        client-match user-or-group ;
                    }
                }
            }
            tunnel {
                ipsec-vpn vpn-name ;
                pair-policy pair-policy ;
            }
        }
        log {
            session-close;
            session-init;
        }
    }
}

```

```

    }
    policy-rematch;
    traceoptions {
        file filename <files number > <size maximum-file-size >
        <world-readable | no-world-readable>;
        flag flag ;
    }
}

```

Hierarchy Level	[edit security]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Configure network security policies.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

policy

See the following sections:

- policy (IKE) on page 541
- policy (IPsec) on page 542
- policy (Security) on page 543

policy (IKE)

Syntax `policy policy-name {
 certificate {
 local-certificate certificate-id ;
 peer-certificate-type (pkcs7 | x509-signature);
 trusted-ca (ca-index | use-all);
 }
 description description ;
 mode (aggressive | main);
 pre-shared-key (ascii-text | hexadecimal);
 proposal-set <basic | compatible | standard>;
 }`

Hierarchy Level [edit security ike]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Configure an IKE policy.

This statement is supported on J Series and SRX Series devices.

Options *policy-name* —Name of the IKE policy. The policy name can be up to 32 alphanumeric characters long.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

policy (IPsec)

Syntax `policy policy-name {
 description description ;
 perfect-forward-secrecy keys (group1 | group2 | group5);
 proposal-set (basic | compatible | standard);
 }`

Hierarchy Level [edit security ipsec]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Define an IPsec policy.

This statement is supported on J Series and SRX Series devices.

Options *policy-name* —Name of the IPsec policy.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

policy (Security)

Syntax `policy policy-name {`
 `match {`
 `application [application-name-or-set];`
 `destination-address {`
 `address-name ;`
 `}`
 `source-address {`
 `address-name ;`
 `}`
 `}`
 `scheduler-name scheduler-name ;`
 `then {`
 `count {`
 `alarm {`
 `per-minute-threshold number;`
 `per-second-threshold number ;`
 `}`
 `}`
 `(deny | reject);`
 `permit {`
 `application-services (wx-redirect | wx-reverse-redirect);`
 `destination-address {`
 `drop-translated;`
 `drop-untranslated;`
 `}`
 `destination-nat destination-name ;`
 `firewall-authentication {`
 `pass-through {`
 `access-profile profile-name ;`
 `client-match match-name ;`
 `web-redirect;`
 `}`
 `web-authentication {`
 `client-match user-or-group ;`
 `}`
 `}`
 `source-nat (pool pool-name | pool-set pool-set-name | interface);`
 `tunnel {`
 `ipsec-vpn vpn-name ;`
 `pair-policy pair-policy ;`
 `}`
 `}`
 `log {`
 `session-close;`
 `session-init;`
 `}`
 `}`
`}`

Hierarchy Level [edit security policies from-zone *zone-name* to-zone *zone-name*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Define a security policy.

This statement is supported on J Series and SRX Series devices.

Options *policy-name* —Name of the security policy.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

policy-lookup-cache

Syntax (policy-lookup-cache | no-policy-lookup-cache);

Hierarchy Level [edit security idp sensor-configuration global]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Enable cache to accelerate IDP policy lookup.

This statement is supported on SRX Series devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

policy-rematch

Syntax	policy-rematch;
Hierarchy Level	[edit security policies]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable the device to add a policy that has just been modified to a deferred action list for reevaluation. For every session associated with the policy, the device reevaluates the policy lookup. If the policy is different from the one associated with the session, the device drops the session. If the policy matches, the session continues.</p> <p>The policy rematch feature is disabled by default.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

pool

See the following sections:

- pool (Destination NAT) on page 546
- pool (Source NAT) on page 547

pool (Destination NAT)

Syntax `pool pool-name {
 address < ip-address > (to ip-address | port port-number);
 routing-instance routing-instance-name ;
 }`

Hierarchy Level [edit security nat destination]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Define a destination NAT pool to identify the pool uniquely.

This statement is supported on J Series and SRX Series devices.

Options *pool-name* —Name of the pool.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

pool (Source NAT)

Syntax pool *pool-name* {
 address *ip-address* to *ip-address* ;
 host-address-base *ip-address* ;
 overflow-pool (interface | *pool-name*) ;
 port no-translation | range high *ip-address* low *ip-address* ;
 routing-instance *routing-instance-name* ;
 }

Hierarchy Level [edit security nat source]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Define a source NAT pool to identify the pool uniquely.

This statement is supported on J Series and SRX Series devices.

Options *pool-name* —Name of the pool.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

pool-utilization-alarm

Syntax pool-utilization-alarm {
 clear-threshold *clear-threshold* ;
 raise-threshold *raise-threshold* ;
}

Hierarchy Level [edit security nat source]

Release Information Statement modified in Release 9.2 of JUNOS Software.

Description Define the pool utilization alarm thresholds for a Network Address Translation (NAT) source IP address pool without Port Address Translation (PAT). When pool utilization exceeds the upper (raise) threshold or falls below the lower (clear) threshold, an SNMP trap is triggered.

This statement is supported on J Series and SRX Series devices.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

pop3-profile

See the following sections:

- pop3-profile (antivirus utm-policy)
- pop3-profile (content-filtering utm-policy)

pop3-profile (antivirus utm-policy)

Syntax	pop3-profile <i>profile-name</i> ;
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i> anti-virus]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Configure a UTM policy for the antivirus POP3 protocol and attach this policy to a security profile to implement it. This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

pop3-profile (content-filtering utm-policy)

Syntax	pop3-profile <i>profile-name</i> ;
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i> content-filtering]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Configure a UTM policy for the content-filtering POP3 protocol and attach this policy to a security profile to implement it. This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

port

Syntax	<code>port no-translation range high <i>ip-address</i> low <i>ip-address</i> ;</code>
Hierarchy Level	<code>[edit security nat source pool <i>pool-name</i>]</code>
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify the Port Address Translation (PAT) for a source pool. This statement is supported on SRX Series devices.
Options	<code>no-translation</code> —If set, no Port Address Translation is required. <code>range high <i>ip-address</i> low <i>ip-address</i></code> —Specify the port number range attached to each address in the pool. The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<code>security</code> —To view this statement in the configuration. <code>security-control</code> —To add this statement to the configuration.

port (web filtering)

Syntax	<code>port <i>number</i>;</code>
Hierarchy Level	<code>[edit security utm feature-profile web-filtering surf-control-integrated server]</code> <code>[edit security utm feature-profile web-filtering websense-redirect profile <i>profile-name</i> server]</code>
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Enter the port number for communicating with the server. (Default ports are 80, 8080, and 8081.) This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<code>security</code> —To view this statement in the configuration. <code>security-control</code> —To add this statement to the configuration.

port-randomization

Syntax	port-randomization { disable; }
Hierarchy Level	[edit security nat source]
Release Information	Statement introduced in Release 9.6 of JUNOS Software.
Description	<p>Disable random port allocation for pool-based and interface source NAT.</p> <p>This statement is supported on J Series and SRX series devices.</p>
Options	<p>disable—Disables random port allocation for pool-based and interface source NAT. For pool-based source NAT and interface NAT, port numbers are allocated randomly by default. Although randomized port number allocation can provide protection from security threats such as DNS poison attacks, it can also affect performance and memory usage for pool-based source NAT.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

port-scan

Syntax port-scan {
 threshold *number* ;
 }

Hierarchy Level [edit security screen ids-option *screen-name* tcp]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Prevent port scan attacks. A port scan attack occurs when an attacker sends packets with different port numbers to scan available services. The attack succeeds if a port responds. To prevent this attack, the device internally logs the number of different ports scanned from a single remote source. For example, if a remote host scans 10 ports in 0.005 seconds (equivalent to 5000 microseconds, the default threshold setting), the device flags this behavior as a port scan attack, and rejects further packets from the remote source.

This statement is supported on J Series and SRX Series devices.

Options threshold *number* —Number of microseconds during which the device accepts packets from the same remote source with up to 10 different port numbers. If the number of ports during the threshold period reaches 10 or more, the device rejects additional packets from the source.
 Range: 1000 through 1000000 microseconds
 Default: 5000 microseconds

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

pptp

Syntax pptp {
 disable;
 traceoptions {
 flag {
 all <extensive>;
 }
 }
 }

Hierarchy Level [edit security alg]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the Point-to-Point Tunneling Protocol (PPTP) ALG on the device.

This statement is supported on J Series devices.

Options **disable**—Disable the PPTP ALG. By default, the PPTP ALG is enabled.

traceoptions—Configure PPTP ALG tracing options. To specify more than one trace operation, include multiple flag statements.

flag—Trace operation to perform.

all—Trace all events.

extensive—(Optional) Display extensive amount of data.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

pre-filter-shellcode

Syntax	pre-filter-shellcode;
Hierarchy Level	[edit security idp sensor-configuration ips]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Enable to pre-filter the shell code and protects it from buffer overflow attacks. By default this setting is enabled.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

predefined-attack-groups

Syntax	predefined-attack-groups [attack-name];
Hierarchy Level	<p>[edit security idp idp-policy <i>policy-name</i> rulebase-exempt rule <i>rule-name</i> match attacks],</p> <p>[edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i> match attacks]</p>
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Specify predefined attack groups that you can use to match the traffic against known attack objects. You can update only the list of attack objects.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<i>attack-name</i> —Name of the predefined attack object group.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

predefined-attacks

Syntax	<code>predefined-attacks [attack-name];</code>
Hierarchy Level	<code>[edit security idp idp-policy policy-name rulebase-exempt rule rule-name match attacks],</code> <code>[edit security idp idp-policy policy-name rulebase-ips rule rule-name match attacks]</code>
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify predefined attack objects that you can use to match the traffic against known attacks. You can update only the list of attack objects. This statement is supported on SRX Series devices.
Options	<i>attack-name</i> —Name of the predefined attack objects.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

pre-shared-key

Syntax	<code>pre-shared-key (ascii-text hexadecimal);</code>
Hierarchy Level	<code>[edit security ike policy policy-name]</code>
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	Define a preshared key for an IKE policy. This statement is supported on J Series and SRX Series devices.
Options	<i>ascii-text</i> —ASCII text key. <i>hexadecimal</i> —Hexadecimal key.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

process-ignore-s2c

Syntax	process-ignore-s2c;
Hierarchy Level	[edit security idp sensor-configuration ips]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Set the command to disable the server-to-client inspection.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

process-override

Syntax	process-override;
Hierarchy Level	[edit security idp sensor-configuration ips]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Set the command to forcefully run the IDS inspection module even if there is no policy match.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

process-port

Syntax	<code>process-port port-number ;</code>
Hierarchy Level	[edit security idp sensor-configuration ips]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Set the command to a specific port to forcefully run the IDS inspection module on that TCP/UDP port even if there is no policy match. This statement is supported on SRX Series devices.
Options	<code>port-number</code> —Port Number. Range: 0 through 65535
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

products

Syntax	<code>products { values [list-of-values]; }</code>
Hierarchy Level	[edit security idp dynamic-attack-group <i>dynamic-attack-group-name</i> filters]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Specify a products filter to add attack objects based on the application that is vulnerable to the attack. This statement is supported on SRX Series devices.
Options	<code>values</code> —Name of the products filter.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

profile

See the following sections:

- profile (antispam symantec-sbl)
- profile (antivirus juniper-express-engine)
- profile (antivirus kaspersky-lab-engine)
- profile (content-filtering)
- profile (web-filtering surf-control-integrated)
- profile (web-filtering websense-redirect)

profile (antispam symantec-sbl)

Syntax profile *profile-name*{
 sbl-default-server;
 spam-action (log-and-permit | block);
 custom-tag-string [***SPAM***];
 }

Hierarchy Level [edit security utm feature-profile anti-spam symantec-sbl]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Create a profile for the antispam symantec-sbl feature. This profile includes all subsequent configuration options.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

profile (antivirus kaspersky-lab-engine)

Syntax profile *profile-name* {
 fallback-options {
 default (log-and-permit | block);
 corrupt-file (log-and-permit | block);
 password-file (log-and-permit | block);
 decompress-layer (log-and-permit | block);
 content-size (log-and-permit | block);
 engine-not-ready (log-and-permit | block);
 timeout (log-and-permit | block);
 out-of-resources (log-and-permit | block);
 too-many-requests (log-and-permit | block);
 }
 scan-options {
 intelligent-prescreening;
 scan-mode (scan-all | by-extension);
 content-size-limit *value*;
 timeout *value*;
 decompress-layer-limit *value*;
 }
 notification-options {
 virus-detection {
 type (message | protocol-only);
 notify-mail-sender;
 custom-message;
 }
 fallback-block {
 custom-message;
 notify-mail-sender;
 type;
 }
 }
 trickling {
 timeout *value*;
 }
}

Hierarchy Level [edit security utm feature-profile anti-virus kaspersky-lab-engine]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Create a profile for the Kaspersky Lab engine. This profile includes all subsequent configuration options.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.

security-control—To add this statement to the configuration.

profile (antivirus juniper-express-engine)

Syntax `profile profile-name {
 fallback-options {
 default (log-and-permit | block);
 content-size (log-and-permit | block);
 engine-not-ready (log-and-permit | block);
 timeout (log-and-permit | block);
 out-of-resources (log-and-permit | block);
 too-many-requests (log-and-permit | block);
 }
 scan-options {
 intelligent-prescreening;
 scan-mode (scan-all | by-extension);
 content-size-limit value;
 timeout value;
 decompress-layer-limit value;
 }
 notification-options {
 virus-detection {
 type (message | protocol-only);
 notify-mail-sender;
 custom-message;
 }
 fallback-block {
 custom-message;
 notify-mail-sender;
 type;
 }
 }
 trickling {
 timeout value;
 }
 }`

Hierarchy Level [edit security utm feature-profile anti-virus juniper-express-engine]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Create a profile for the Juniper express engine. This profile includes all subsequent configuration options.

This statement is supported on SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

profile (content-filtering)

Syntax `profile profile-name{
 block-command protocol-command-list;
 block-content-type (java-applet | exe | http-cookie);
 block-mime {
 list list-name {
 exception list-name;
 }
 }
 permit-command protocol-command-list;`

Hierarchy Level [edit security utm feature-profile content-filtering]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Create a profile for the content-filtering feature. This profile includes all subsequent configuration options.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

profile (web-filtering surf-control-integrated)

Syntax profile *profile-name*{
 default (log-and-permit | block);
 custom-block-message *value*;
 fallback-settings {
 default (log-and-permit | block);
 server-connectivity (log-and-permit | block);
 timeout (log-and-permit | block);
 too-many-requests (log-and-permit | block);
 }
 category *customurl-list name* {
 action (log-and-permit | block);
 }
 }

Hierarchy Level [edit security utm feature-profile web-filtering surf-control-integrated]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Create a profile for the web-filtering surf-control-integrated feature. This profile includes all subsequent configuration options.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

profile (web-filtering websense-redirect)

Syntax profile *profile-name* {
 server {
 host *host-name*;
 port *number*;
 }
 sockets *value*;
 timeout *value*;
 fallback-settings {
 default (log-and-permit | block);
 server-connectivity (log-and-permit | block);
 timeout (log-and-permit | block);
 too-many-requests (log-and-permit | block);
 }
 }

Hierarchy Level [security utm feature-profile web-filtering websense-redirect]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Create a profile for the web-filtering web-sense feature. This profile includes all subsequent configuration options.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

proposal

Syntax `proposal proposal-name {
 authentication-algorithm (md5 | sha1 | sha-256);
 authentication-method (dsa-signatures | pre-shared-keys | rsa-signatures);
 description description ;
 dh-group (group1 | group2 | group5);
 encryption-algorithm (des-cbc | 3des-cbc | aes-128-cbc | aes-192-cbc
 | aes-256-cbc);
 }`

Hierarchy Level [edit security ike]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Define an IKE proposal.

This statement is supported on J Series and SRX Series devices.

Options *proposal-name* —Name of the IKE proposal. The proposal name can be up to 32 alphanumeric characters long.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

proposal-set

See the following sections:

- [proposal-set \(IKE\) on page 566](#)
- [proposal-set \(IPsec\) on page 567](#)

proposal-set (IKE)

Syntax	proposal-set <basic compatible standard>;
Hierarchy Level	[edit security ike policy <i>policy-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify a set of default Internet Key Exchange (IKE) proposals. (This statement is not supported on dynamic VPN implementations.)</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>basic—Basic set of two IKE proposals:</p> <ul style="list-style-type: none"> ■ Proposal 1—Preshared key, Data Encryption Standard (DES) encryption, and Diffie-Hellman Group 1 and Secure Hash Algorithm 1 (SHA-1) authentication. ■ Proposal 2—Preshared key, DES encryption, and Diffie-Hellman Group 1 and MD5 authentication. <p>compatible—Set of four commonly used IKE proposals:</p> <ul style="list-style-type: none"> ■ Proposal 1—Preshared key, triple DES (3DES) encryption, and G2 and SHA-1 authentication. ■ Proposal 2—Preshared key, 3DES, and Diffie-Hellman Group 2 and MD5 authentication. ■ Proposal 3—Preshared key, DES encryption, and Diffie-Hellman Group 2 and SHA-1 authentication. ■ Proposal 4—Preshared key, DES encryption, and Diffie-Hellman Group 2 and MD5 authentication. <p>standard—Standard set of two set of IKE proposals:</p> <ul style="list-style-type: none"> ■ Proposal 1— Preshared key, 3DES encryption, and Diffie-Hellman Group 2 and SHA-1 authentication. ■ Proposal 2—Preshared key, Advanced Encryption Standard (AES) 128-bit encryption, and Diffie-Hellman Group 2 and SHA-1 authentication.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

proposal-set (IPsec)

Syntax	proposal-set <basic compatible standard>;
Hierarchy Level	[edit security ipsec policy <i>policy-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Define a set of default IPsec proposals. (This statement is not supported on dynamic VPN implementations.)</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>basic—Basic set of two IPsec proposals:</p> <ul style="list-style-type: none"> ■ Proposal 1—Encapsulating Security Payload (ESP) with no Perfect Forward Secrecy (PFS) security, triple Data Encryption Standard (3DES) encryption, and secure Hash Algorithm (SHA-1) authentication. ■ Proposal 2—ESP with no PFS security, 3DES encryption, and MD5 authentication. <p>compatible—Set of four commonly used IKE proposals:</p> <ul style="list-style-type: none"> ■ Proposal 1—Preshared key, triple DES (3DES) encryption, and G2 and SHA-1 authentication. ■ Proposal 2—Preshared key, 3DES, and Diffie-Hellman Group 2 and MD5 authentication. ■ Proposal 3—Preshared key, DES encryption, and Diffie-Hellman Group 2 and SHA-1 authentication. ■ Proposal 4—Preshared key, DES encryption, and Diffie-Hellman Group 2 and MD5 authentication. <p>standard—Standard set of two set of IKE proposals:</p> <ul style="list-style-type: none"> ■ Proposal 1—Preshared key, 3DES encryption, and Diffie-Hellman Group 2 and SHA-1 authentication. ■ Proposal 2—Preshared key, Advanced Encryption Standard (AES) 128-bit encryption, and Diffie-Hellman Group 2 and SHA-1 authentication.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

protect

Syntax protect {
 deny {
 all | destination-ip address ;
 timeout seconds ;
 }
 }

Hierarchy Level [edit security alg sip application-screen]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure options to protect servers against INVITE attacks.

 This statement is supported on J Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

protocol

See the following sections:

- protocol (IPsec) on page 569
- protocol (Manual Security Association) on page 570
- protocol (IP Headers in Signature Attack) on page 570
- protocol (Signature Attack) on page 571

protocol (IPsec)

Syntax protocol (ah | esp);

Hierarchy Level [edit security ipsec proposal *proposal-name*]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Define the IPsec protocol for a manual or dynamic security association (SA).

This statement is supported on J Series and SRX Series devices.

Options ah—Authentication Header protocol.

esp—Encapsulating Security Payload (ESP) protocol.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

protocol (Manual Security Association)

Syntax	protocol (ah esp)
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i> manual]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	<p>Define the IPsec protocol for the manual security association. (This statement is not supported on dynamic VPN implementations.)</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>ah—Authentication Header protocol.</p> <p>esp—ESP protocol (To use the ESP protocol, you must also use the tunnel statement at the [edit security ipsec security-association <i>sa-name</i> mode] hierarchy level.)</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

protocol (IP Headers in Signature Attack)

Syntax	<pre>protocol { match (equal greater-than less-than not-equal); value <i>transport-layer-protocol-id</i> ; }</pre>
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol ip]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Specify the Transport Layer protocol number.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>match (equal greater-than less-than not-equal)—Match an operand.</p> <p>value <i>transport-layer-protocol-id</i> —Match the Transport Layer protocol ID.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

protocol (Signature Attack)

```

Syntax  protocol {
    icmp {
        code {
            match (equal | greater-than | less-than | not-equal);
            value  code-value ;
        }
        data-length {
            match (equal | greater-than | less-than | not-equal);
            value  data-length ;
        }
        identification {
            match (equal | greater-than | less-than | not-equal);
            value  identification-value ;
        }
        sequence-number {
            match (equal | greater-than | less-than | not-equal);
            value  sequence-number ;
        }
        type {
            match (equal | greater-than | less-than | not-equal);
            value  type-value ;
        }
    }
    ip {
        destination {
            match (equal | greater-than | less-than | not-equal);
            value  hostname ;
        }
        identification {
            match (equal | greater-than | less-than | not-equal);
            value  identification-value ;
        }
        ip-flags {
            (df | no-df);
            (mf | no-mf);
            (rb | no-rb);
        }
        protocol {
            match (equal | greater-than | less-than | not-equal);
            value  transport-layer-protocol-id ;
        }
        source {
            match (equal | greater-than | less-than | not-equal);
            value  hostname ;
        }
        tos {
            match (equal | greater-than | less-than | not-equal);
            value  type-of-service-in-decimal ;
        }
        total-length {
            match (equal | greater-than | less-than | not-equal);
            value  total-length-of-ip-datagram ;
        }
    }
}

```

```

    ttl {
        match (equal | greater-than | less-than | not-equal);
        value time-to-live ;
    }
}
tcp {
    ack-number {
        match (equal | greater-than | less-than | not-equal);
        value acknowledgement-number ;
    }
    data-length {
        match (equal | greater-than | less-than | not-equal);
        value tcp-data-length ;
    }
    destination-port {
        match (equal | greater-than | less-than | not-equal);
        value destination-port ;
    }
    header-length {
        match (equal | greater-than | less-than | not-equal);
        value header-length ;
    }
    mss {
        match (equal | greater-than | less-than | not-equal);
        value maximum-segment-size ;
    }
    option {
        match (equal | greater-than | less-than | not-equal);
        value tcp-option ;
    }
    sequence-number {
        match (equal | greater-than | less-than | not-equal);
        value sequence-number ;
    }
    source-port {
        match (equal | greater-than | less-than | not-equal);
        value source-port ;
    }
    tcp-flags {
        (ack | no-ack);
        (fin | no-fin);
        (psh | no-psh);
        (r1 | no-r1);
        (r2 | no-r2);
        (rst | no-rst);
        (syn | no-syn);
        (urg | no-urg);
    }
    urgent-pointer {
        match (equal | greater-than | less-than | not-equal);
        value urgent-pointer ;
    }
    window-scale {
        match (equal | greater-than | less-than | not-equal);
        value window-scale-factor ;
    }
}

```

```

    window-size {
        match (equal | greater-than | less-than | not-equal);
        value window-size ;
    }
}
udp {
    data-length {
        match (equal | greater-than | less-than | not-equal);
        value data-length ;
    }
    destination-port {
        match (equal | greater-than | less-than | not-equal);
        value destination-port ;
    }
    source-port {
        match (equal | greater-than | less-than | not-equal);
        value source-port ;
    }
}
}

```

Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Specify a protocol to match the header information for the signature attack. This statement is supported on SRX Series devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

protocol-binding

Syntax

```
protocol-binding {
    application application-name ;
    icmp;
    ip {
        protocol-number transport-layer-protocol-number ;
    }
    rpc {
        program-number rpc-program-number ;
    }
    tcp {
        minimum-port port-number maximum-port port-number ;
    }
    udp {
        minimum-port port-number maximum-port port-number ;
    }
}
```

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type chain]
 [edit security idp custom-attack *attack-name* attack-type signature]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Select a protocol that the attack uses to enter your network.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

protocol-command

Syntax	protocol-command { value [list]; }
Hierarchy Level	[edit security utm custom-objects]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Different protocols use different commands to communicate between servers and clients. By blocking or allowing certain commands, traffic can be controlled on the protocol command level.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

protocol-name

Syntax	protocol-name protocol-name { tunable-name tunable-name { tunable-value protocol-value ; } }
Hierarchy Level	[edit security idp sensor-configuration detector]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Specify the name of the protocol to be used to configure each of the protocol detector engines.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p><i>protocol-name</i> —Name of the specific protocol.</p> <p>The remaining statements are explained separately.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

protocols

See the following sections:

- `protocols` (Interface Host-Inbound Traffic) on page 577
- `protocols` (Zone Host-Inbound Traffic) on page 579

protocols (Interface Host-Inbound Traffic)

Syntax protocols {
 `protocol-name` ;
 `protocol-name` <except>;
 }

Hierarchy Level [edit security zones security-zone *zone-name* interfaces *interface-name* host-inbound-traffic]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the types of routing protocol traffic that can reach the device on a per-interface basis.

This statement is supported on J Series and SRX Series devices.

Options *protocol-name* —Protocol for which traffic is allowed. The following protocols are supported:

- **all**—Enable traffic from all possible protocols available.
- **bfd**—Enable incoming Bidirectional Forwarding Detection (BFD) Protocol traffic.
- **bgp**—Enable incoming BGP traffic.
- **dvmrp**—Enable incoming Distance Vector Multicast Routing Protocol (DVMRP) traffic.
- **igmp**—Enable incoming Internet Group Management Protocol (IGMP) traffic.
- **ldp**—Enable incoming Label Distribution Protocol (LDP) traffic (UDP and TCP port 646).
- **msdp**—Enable incoming Multicast Source Discovery Protocol (MSDP) traffic.
- **nhrp**—Enable incoming Next Hop Resolution Protocol (NHRP) traffic.
- **ospf**—Enable incoming OSPF traffic.
- **pgm**—Enable incoming Pragmatic General Multicast (PGM) protocol traffic (IP protocol number 113).
- **pim**—Enable incoming Protocol Independent Multicast (PIM) traffic.
- **rip**—Enable incoming RIP traffic.
- **router-discovery**—Enable incoming router discovery traffic.
- **rsvp**—Enable incoming Resource Resolution Protocol (RSVP) traffic (IP protocol number 46).
- **sap**— Enable incoming Session Announcement Protocol (SAP) traffic. SAP always listens on 224.2.127.254:9875.
- **vrrp**—Enable incoming Virtual Router Redundancy Protocol (VRRP) traffic.

except—(Optional) except can only be used if all has been defined.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

protocols (Zone Host-Inbound Traffic)

Syntax protocols {
 protocol-name ;
 protocol-name <except>;
 }

Hierarchy Level [edit security zones security-zone *zone-name* host-inbound-traffic]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the types of traffic that can reach the device for all interfaces in a zone.

This statement is supported on J Series and SRX Series devices.

Options *protocol-name* —Protocol for which traffic is allowed. The following protocols are supported:

- **all**—Enable traffic from all possible protocols available.
- **bfd**—Enable incoming Bidirectional Forwarding Detection (BFD) protocol traffic.
- **bgp**—Enable incoming BGP traffic.
- **dvmrp**—Enable incoming Distance Vector Multicast Routing Protocol (DVMRP) traffic.
- **igmp**—Enable incoming Internet Group Management Protocol (IGMP) traffic.
- **ldp**—Enable incoming Label Distribution Protocol (LDP) traffic (UDP and TCP port 646).
- **msdp**—Enable incoming Multicast Source Discovery Protocol (MSDP) traffic.
- **nhrp**—Enable incoming Next Hop Resolution Protocol (NHRP) traffic.
- **ospf**—Enable incoming OSPF traffic.
- **pgm**—Enable incoming Pragmatic General Multicast (PGM) protocol traffic (IP protocol number 113).
- **pim**—Enable incoming Protocol Independent Multicast (PIM) traffic.
- **rip**—Enable incoming RIP traffic.
- **router-discovery**—Enable incoming router discovery traffic.
- **rsvp**—Enable incoming Resource Reservation Protocol (RSVP) traffic (IP protocol number 46).
- **sap**— Enable incoming Session Announcement Protocol (SAP) traffic. SAP always listens on 224.2.127.254:9875. New addresses and ports can be added dynamically. This information must be propagated to the Packet Forwarding Engine (PFE).
- **vrrp**—Enable incoming Virtual Router Redundancy Protocol (VRRP) traffic.

except—(Optional) except can only be used if all has been defined.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

proxy-arp

See the following sections:

- proxy-arp on page 581

proxy-arp

Syntax proxy-arp {
 interface *interface-name* {
 address *ip-address* to *ip-address* ;
 }
 }

Hierarchy Level [edit security nat]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Configure Address Resolution Protocol (ARP) proxy.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

proxy-identity

Syntax	<pre> proxy-identity { local <i>ipv4-prefix</i> ; remote <i>ipv4-prefix</i> ; service <i>service-name</i> ; } </pre>
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i> ike]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Optionally specify the IPsec proxy ID to use in negotiations. The default behavior is to use the identities taken from the firewall policies.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

raise-threshold

Syntax	raise-threshold <i>raise-threshold</i> ;
Hierarchy Level	[edit security nat source pool-utilization-alarm]
Release Information	Statement modified in Release 9.2 of JUNOS Software.
Description	<p>Configure the upper threshold at which an SNMP trap is triggered when pool utilization for a source pool without Port Address Translation (PAT) rises above the threshold. This feature is disabled by default.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>raise-threshold</i> —Threshold at which an SNMP trap is triggered. Range: 50 through 100
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

real

Syntax

```
real {
  disable;
  traceoptions {
    flag {
      all <extensive>;
    }
  }
}
```

Hierarchy Level [edit security alg]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the RealAudio and RealVideo ALG on the device.

This statement is supported on J Series devices.

Options **disable**—Disable the RealAudio and RealVideo ALG.

traceoptions—Configure RealAudio and RealVideo ALG tracing options. By default, the RealAudio and RealVideo ALG is enabled.

flag—Trace operation to perform. To specify more than one trace operation, include multiple flag statements.

all—Trace all RealAudio and RealVideo ALG events.

extensive—(Optional) Display extensive amount of data.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

re-assembler

Syntax	re-assembler { ignore-mem-overflow; max-flow-mem <i>value</i> ; max-packet-mem <i>value</i> ; }
Hierarchy Level	[edit security idp sensor-configuration]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Configure TCP reassembler for IDP sensor settings. This statement is supported on SRX Series devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

re-enroll-trigger-time-percentage

Syntax	re-enroll-trigger-time-percentage <i>percentage</i> ;
Hierarchy Level	[edit security pki auto-re-enrollment certificate-id <i>certificate-id-name</i>]
Release Information	Statement modified in Release 9.0 of JUNOS Software.
Description	Specify the time before expiration as a percentage. This statement is supported on J Series and SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

recommended

Syntax	recommended;
Hierarchy Level	[edit security idp dynamic-attack-group <i>dynamic-attack-group-name</i> filters]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Specify recommended filter to add predefined attacks recommended by Juniper to the dynamic attack group.</p> <p>This statement is supported on SRX Series devices.</p>
Options	values—Name of the recommended filter.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

recommended-action

Syntax	<code>recommended-action (close close-client close-server drop drop-packet ignore none);</code>
Hierarchy Level	<code>[edit security idp custom-attack <i>attack-name</i>]</code>
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>When the security device detects an attack, it performs the specified action.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>The seven actions are as follows, from most to least severe:</p> <p><code>close</code>—Reset the client and the server.</p> <p><code>close-client</code>—Reset the client.</p> <p><code>close-server</code>—Reset the server.</p> <p><code>drop</code>—Drop the particular packet and all subsequent packets of the flow.</p> <p><code>drop-packet</code>—Drop the particular packet of the flow.</p> <p><code>ignore</code>—Do not inspect any further packets.</p> <p><code>none</code>—Do not perform any action.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p><code>security</code>—To view this statement in the configuration.</p> <p><code>security-control</code>—To add this statement to the configuration.</p>

regex

Syntax	<code>regex regular-expression ;</code>
Hierarchy Level	<code>[edit security idp custom-attack <i>attack-name</i> attack-type signature]</code>
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Specify a Perl Compatible Regular Expression (PCRE) expression. This statement is supported on SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

reject

Syntax	<code>reject;</code>
Hierarchy Level	<code>[edit security policies from-zone <i>zone-name</i> to-zone <i>zone-name</i> policy <i>policy-name</i> then]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Block the service at the firewall. The device drops the packet and sends a TCP reset (RST) segment to the source host for TCP traffic and an ICMP “destination unreachable, port unreachable” message (type 3, code 3) for UDP traffic. For types of traffic other than TCP and UDP, the device drops the packet without notifying the source host, which is also what occurs when the action is <code>deny</code> . This statement is supported on J Series and SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

reject-timeout

Syntax	<code>reject-timeout value ;</code>
Hierarchy Level	[edit security idp sensor-configuration flow]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify the amount of time in milliseconds within which a response must be received. This statement is supported on SRX Series devices.
Options	<i>value</i> —Maximum amount of time in milliseconds. Range: 1 through 65535 milliseconds Default: 300 milliseconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

remote

Syntax	<code>remote ipv4-prefix ;</code>
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i> ike proxy-identity]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the remote IP address and subnet mask for the proxy identity. This statement is supported on J Series and SRX Series devices.
Options	<i>ipv4-prefix</i> —IP address and subnet mask.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

remote-exceptions

Syntax	remote-exceptions { <i>ip-address/mask</i> ; }
Hierarchy Level	[edit security dynamic-vpn clients <i>configuration-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Use this statement to specify exceptions to the remote protected resources list for the specified dynamic VPN configuration. Traffic to the specified IP address will not go through the dynamic VPN tunnel and therefore will not be protected by the firewall's security policies.</p> <p>This statement is supported on SRX210 and SRX240 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

remote-protected-resources

Syntax	remote-protected-resources { <i>ip-address/mask</i> ; }
Hierarchy Level	[edit security dynamic-vpn clients <i>configuration-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Use this statement to specify which resources to protect using the dynamic VPN feature. Traffic to the protected resource will go through the specified dynamic VPN tunnel and will therefore be protected by the firewall's security policies.</p> <p>This statement is supported on SRX210 and SRX240 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

reset

Syntax	reset;
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type chain]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Select reset if the compound attack should be matched more than once within a single session or transaction.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

reset-on-policy

Syntax	(reset-on-policy no-reset-on-policy);
Hierarchy Level	[edit security idp sensor-configuration flow]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>IDP keeps track of connections in a table. If enabled, the security module resets the flow table each time a security policy loads or unloads. If this setting is disabled, then the security module continues to retain a previous security policy until all flows referencing that security policy go away. Juniper Networks recommends that you keep this setting enabled to preserve memory.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

respond-bad-spi

Syntax	<code>respond-bad-spi number ;</code>
Hierarchy Level	[edit security ike]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable response to invalid IPsec Security Parameter Index (SPI) values. If the security associations (SAs) between two peers of an IPsec VPN become unsynchronized, the device resets the state of a peer so that the two peers are synchronized.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>number</i> —Number of times to respond to invalid SPI values per gateway.</p> <p>Range: 1 through 30</p> <p>Default: 5</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

retain-hold-resource

Syntax	<code>retain-hold-resource;</code>
Hierarchy Level	[edit security alg sip]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable the device to not free media resources for a Session Initiation Protocol (SIP) Application Layer Gateway (ALG), even when a media stream is placed on hold. By default, media stream resources are released when the media stream is held.</p> <p>This statement is supported on J Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

revocation-check

Syntax

```

revocation-check {
    crl {
        disable {
            on-download-failure;
        }
        refresh-interval hours ;
        url url-name ;
    }
    disable;
}

```

Hierarchy Level [edit security pki ca-profile *ca-profile-name*]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Specify the method the device uses to verify the revocation status of digital certificates.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

route-change-timeout

Syntax	route-change-timeout <i>seconds</i> ;
Hierarchy Level	[edit security flow]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify the session timeout value on a route change to a nonexistent route. By default, this feature is disabled. If the timeout is not defined, sessions discovered to have no route are aged out by means of their current session timeout values.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>seconds</i> —Amount of time before sessions with no route are aged out.</p> <p>Range: 6 through 1800 seconds</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

routing-instance

See the following sections:

- routing-instance (Destination NAT) on page 594
- routing-instance (Source NAT) on page 594

routing-instance (Destination NAT)

Syntax routing-instance *routing-instance-name* ;

Hierarchy Level [edit security nat destination pool *pool-name*]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Specify the routing instance on which to perform the route lookup for the address in the pool. It is not a mandatory flag. If the user does not configure the routing instance, by default the pool belongs to routing-instance *inet.0*.

This statement is supported on J Series and SRX Series devices.

Options *routing-instance-name* —Name of the routing instance.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

routing-instance (Source NAT)

Syntax routing-instance *routing-instance-name* ;

Hierarchy Level [edit security nat source pool *pool-name*]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Specify the routing instance to which the pool is bound. It is not a mandatory flag. If the user does not configure the routing instance, by default the pool belongs to routing-instance *inet.0*.

This statement is supported on SRX Series and J Series devices.

Options *routing-instance-name* —Name of the routing instance.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

rpc

Syntax	rpc { program-number <i>rpc-program-number</i> ; }
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type chain protocol-binding] [edit security idp custom-attack <i>attack-name</i> attack-type signature protocol-binding]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Allow IDP to match the attack for a specified remote procedure call (RPC) program number. This statement is supported on SRX Series devices.
Options	program-number <i>rpc-program-number</i> —RPC program number.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

rsh

Syntax rsh {
 disable;
 traceoptions {
 flag {
 all <extensive>;
 }
 }
 }

Hierarchy Level [edit security alg]

Release Information Statement introduced in Release 8.5 of JUNOS Ssoftware.

Description Specify the remote shell (RSH) ALG on the device.

This statement is supported on J Series devices.

Options disable—Disable the RSH ALG. By default, the RSH ALG is enabled.

traceoptions—Configure RSH ALG tracing options.

flag—Trace operation to perform. To specify more than one trace operation, include multiple flag statements.

all—Trace all events.

extensive—(Optional) Display extensive amount of data.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

rst-invalidate-session

Syntax	rst-invalidate-session;
Hierarchy Level	[edit security flow tcp-session]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable the device to mark a session for immediate termination when it receives a TCP reset (RST) message. By default, this feature is disabled and the device applies the normal session timeout interval. For TCP, normal session timeout is 30 minutes; for HTTP, it is 5 minutes; and for UDP, it is 1 minute.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

rst-sequence-check

Syntax	rst-sequence-check;
Hierarchy Level	[edit security flow tcp-session]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Verify that the TCP sequence number in a TCP segment with the RST bit enabled matches the previous sequence number for a packet in that session or is the next higher number incrementally. If the sequence number does not match either of these expected numbers, the device drops the packet and sends the host a TCP ACK message with the correct sequence number. By default, this check is disabled.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

rtsp

Syntax

```
rtsp {
  disable;
  traceoptions {
    flag {
      all <extensive>;
    }
  }
}
```

Hierarchy Level [edit security alg]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the Real-Time Streaming Protocol (RTSP) ALG on the device.

This statement is supported on J Series devices.

Options **disable**—Disable the RTSP ALG. By default, the RTSP ALG is enabled.

traceoptions—Configure RTSP ALG tracing options.

flag—Trace operation to perform. To specify more than one trace operation, include multiple flag statements.

all—Trace all events.

extensive—(Optional) Display extensive amount of data.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level **security**—To view this statement in the configuration.
security-control—To add this statement to the configuration.

rule

See the following sections:

- rule (Destination NAT) on page 599
- rule (Exempt Rulebase) on page 600
- rule (IPS Rulebase) on page 601
- rule (Source NAT) on page 602
- rule (Static NAT) on page 603

rule (Destination NAT)

Syntax `rule rule-name {
 match {
 destination-address destination-address ;
 destination-port port-number ;
 source-address [source-address];
 }
 then {
 destination-nat (off | pool pool-name);
 }
 }`

Hierarchy Level [edit security nat destination rule-set rule-set-name]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Define a destination NAT rule.

This statement is supported on SRX Series devices.

Options *rule-name* —Name of the destination NAT rule.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

rule (Exempt Rulebase)

Syntax `rule rule-name {
 description text ;
 match {
 attacks {
 custom-attacks [attack-name] ;
 predefined-attack-groups [attack-name] ;
 predefined-attacks [attack-name] ;
 }
 destination-address [address-name] ;
 destination-except [address-name] ;
 from-zone zone-name ;
 source-address [address-name] ;
 source-except [address-name] ;
 to-zone zone-name ;
 }
 }`

Hierarchy Level [edit security idp idp-policy *policy-name* rulebase-exempt]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Specify exempt rule to create, modify, delete, and reorder the rules in a rulebase.

This statement is supported on SRX Series devices.

Options *rule-name* —Name of the exempt rulebase rule.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

rule (IPS Rulebase)

Syntax

```
rule rule-name {
  description text ;
  match {
    attacks {
      custom-attacks [ attack-name ];
      predefined-attack-groups [ attack-name ];
      predefined-attacks [ attack-name ];
    }
    destination-address [ address-name ];
    destination-except [ address-name ];
    from-zone zone-name ;
    source-address [ address-name ];
    source-except [ address-name ];
    to-zone zone-name ;
  }
  terminal;
  then {
    action {
      (close-client | close-client-and-server | close-server |
      drop-connection | drop-packet | ignore-connection |
      mark-diffserv value | no-action | recommended);
    }
    ip-action {
      (ip-block | ip-close | ip-notify);
      log;
      target (destination-address | service | source-address |
      source-zone | zone-service);
      timeout seconds ;
    }
    notification {
      log-attacks {
        alert;(
      }
    }
    severity (critical | info | major | minor | warning);
  }
}
```

Hierarchy Level [edit security idp idp-policy *policy-name* rulebase-ips]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Specify IPS rule to create, modify, delete, and reorder the rules in a rulebase.

This statement is supported on SRX Series devices.

Options *rule -name* —Name of the IPS rulebase rule.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

rule (Source NAT)

Syntax

```
rule rule-name {
  match {
    destination-address [destination-address];
    source-address [source-address];
  }
  then {
    source-nat (off | interface | pool pool-name );
    persistent-nat {
      permit ( any-remote-host | target-host | target-host-port );
      inactivity-timeout seconds;
      max-session-number number;
    }
  }
}
```

Hierarchy Level [edit security nat source rule-set rule-set-name]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Define a source NAT rule.

This statement is supported on J Series and SRX Series devices.

Options *rule-name* —Name of the source NAT rule.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

rule (Static NAT)

Syntax `rule rule-name {`
 `match {`
 `destination-address [destination-address];`
 `}`
 `then {`
 `static-nat prefix < addr-prefix >`
 `<routing-instance routing-instance-name >;`
 `}`
 `}`

Hierarchy Level `[edit security nat static rule-set rule-set-name]`

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Define a static NAT rule.

This statement is supported on SRX Series devices.

Options *rule-name* —Name of the static NAT rule.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

rule-set

See the following sections:

- rule-set (Destination NAT) on page 604
- rule-set (Source NAT) on page 605
- rule-set (Static NAT) on page 606

rule-set (Destination NAT)

Syntax

```
rule-set rule-set-name {
  from interface [interface-name] |
  routing-instance [routing-instance-name] | zone [zone-name];
  rule rule-name {
    match {
      destination-address destination-address ;
      destination-port port-number ;
      source-address [source-address];
    }
    then {
      destination-nat (off | pool pool-name );
    }
  }
}
```

Hierarchy Level [edit security nat destination]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Configure the set of rules for destination NAT.

This statement is supported on J Series and SRX Series devices.

Options *rule-set-name* —Name of the rule set.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

rule-set (Source NAT)

Syntax

```
rule-set rule-set-name {
  from interface [interface-name] |
  routing-instance [routing-instance-name] | zone [zone-name];
  rule rule-name {
    match {
      destination-address [destination-address];
      source-address [source-address];
    }
    then {
      source-nat (off | interface | pool pool-name );
      persistent-nat {
        permit ( any-remote-host | target-host | target-host-port );
        inactivity-timeout seconds;
        max-session-number number;
      }
    }
  }
  to interface [interface-name] |
  routing-instance [routing-instance-name] | zone [zone-name];
}
```

Hierarchy Level [edit security nat source]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Configure the set of rules for source NAT.

This statement is supported on J Series and SRX Series devices.

Options *rule-set-name* —Name of the rule set.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

rule-set (Static NAT)

Syntax `rule-set rule-set-name {
 from interface [interface-name] |
 routing-instance [routing-instance-name] | zone [zone-name];
 rule rule-name {
 match {
 destination-address [destination-address];
 }
 then {
 static-nat prefix < addr-prefix >
 <routing-instance routing-instance-name >;
 }
 }
}`

Hierarchy Level [edit security nat static]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Configure the set of rules for static NAT.

This statement is supported on J Series and SRX Series devices.

Options *rule-set-name* —Name of the rule set.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

rulebase-exempt

Syntax

```
rulebase-exempt {
  rule rule-name {
    description text ;
    match {
      attacks {
        custom-attacks [ attack-name ];
        predefined-attack-groups [ attack-name ];
        predefined-attacks [ attack-name ];
      }
      destination-address [ address-name ];
      destination-except [ address-name ];
      from-zone zone-name ;
      source-address [ address-name ];
      source-except [ address-name ];
      to-zone zone-name ;
    }
  }
}
```

Hierarchy Level [edit security idp idp-policy *policy-name*]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Configure the exempt rulebase to skip detection of a set of attacks in certain traffic.



NOTE: You must configure the IPS rulebase before configuring the exempt rulebase.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

rulebase-ips

```

Syntax rulebase-ips {
    rule rule-name {
        description text ;
        match {
            attacks {
                custom-attacks [ attack-name ];
                predefined-attack-groups [ attack-name ];
                predefined-attacks [ attack-name ];
            }
            destination-address [ address-name ];
            destination-except [ address-name ];
            from-zone zone-name ;
            source-address [ address-name ];
            source-except [ address-name ];
            to-zone zone-name ;
        }
        terminal;
        then {
            action {
                (close-client | close-client-and-server | close-server |
                drop-connection | drop-packet | ignore-connection |
                mark-diffserv value | no-action | recommended);
            }
            ip-action {
                (ip-block | ip-close | ip-notify);
                log;
                target (destination-address | service | source-address |
                source-zone | zone-service);
                timeout seconds;
            }
            notification {
                log-attacks {
                    alert;(
                }
            }
            severity (critical | info | major | minor | warning);
        }
    }
}

```

Hierarchy Level [edit security idp idp-policy *policy-name*]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Configure the IPS rulebase to detect attacks based on stateful signature and protocol anomalies.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

sbl-default-server

Syntax sbl-default-server;

Hierarchy Level [edit security utm feature-profile anti-spam symantec-sbl profile *profile-name*]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Configure the default SBL server lookup as enabled or disabled. If you are using server-based spam filtering, you should enter *sbl-default-server* to enable the Symantec default SBL server. (The SBL server is predefined on the device. It ships with the name and address of the Symantec SBL server.)

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

- Options**
- sbl-default-server—Enables server-based spam filtering
 - no-sbl-default-server—Disables server-based spam filtering. You would disable it if you are using only local lists or if you do not have a license for server-based spam filtering.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

scan-mode

Syntax	scan-mode (scan-all by-extension);
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> scan-options] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> scan-options]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>You can scan all content or scan content with specific file extensions. You can use a file extension list to define a set of file extensions that are used in file extension scan mode. The antivirus module can then only scan files with extensions on the scan-extension list.</p> <p>This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on J Series devices.)</p>
Options	<ul style="list-style-type: none"> ■ scan-all—Scan all files. ■ by-extension—Scan only files with extensions specified in a file extension list custom object.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

scan-options

See the following sections:

- scan-options (antivirus juniper-express-engine)
- scan-options (anti-virus kaspersky-lab-engine)

scan-options (antivirus juniper-express-engine)

Syntax scan-options {
 intelligent-prescreening;
 scan-mode (scan-all | by-extension);
 content-size-limit *value*;
 timeout *value*;
 decompress-layer-limit *value*;
 }

Hierarchy Level [edit security utm feature-profile anti-virus juniper-express-engine *profile-name*]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Configure the anti-virus feature to scan specific types of traffic based on various scanning configuration parameters.

This statement is supported on SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

scan-options (anti-virus kaspersky-lab-engine)

Syntax scan-options {
 intelligent-prescreening;
 scan-mode (scan-all | by-extension);
 content-size-limit *value*;
 timeout *value*;
 decompress-layer-limit *value*;
 }

Hierarchy Level [edit security utm feature-profile anti-virus kaspersky-lab-engine *profile-name*]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Configure the antivirus feature to scan specific types of traffic based on various scanning configuration parameters.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

sccp

```

Syntax  sccp {
            application-screen {
                call-flood threshold rate ;
                unknown-message {
                    permit-nat-applied;
                    permit-routed;
                }
            }
            disable;
            inactive-media-timeout seconds ;
            traceoptions {
                flag {
                    all <extensive>;
                    call <extensive>;
                    cc <extensive>;
                    cli <extensive>;
                    decode <extensive>;
                    error <extensive>;
                    init <extensive>;
                    nat <extensive>;
                    rm <extensive>;
                }
            }
        }

```

Hierarchy Level [edit security alg]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the Skinny Client Control Protocol (SCCP) ALG on the device.

This statement is supported on J Series devices.

Options **disable**—Disable the SCCP ALG. By default, the SCCP ALG is enabled.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

scheduler-name

Syntax	<code>scheduler-name scheduler-name ;</code>
Hierarchy Level	[edit security policies from-zone <i>zone-name</i> to-zone <i>zone-name</i> policy <i>policy-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify the schedule (as defined by the <code>scheduler scheduler-name</code> statement) for which the policy is in effect.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>scheduler-name</i> —Name of the scheduler.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

scope

See the following sections:

- `scope` (Chain Attack) on page 615
- `scope` (Custom Attack) on page 616

scope (Chain Attack)

Syntax `scope (session | transaction);`

Hierarchy Level `[edit security idp custom-attack attack-name attack-type chain]`

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify whether the match should occur over a single session or can be made across multiple transactions within a session.

This statement is supported on SRX Series devices.

Options `session`—Allow multiple matches for the object within the same session.

`transaction`—Match the object across multiple transactions that occur within the same session.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level `security`—To view this statement in the configuration.
`security-control`—To add this statement to the configuration.

scope (Custom Attack)

Syntax scope (destination | peer | source);

Hierarchy Level [edit security idp custom-attack *attack-name* time-binding]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify whether the counting of the attack is from the same source IP address, the same destination IP address, or a peer.

This statement is supported on SRX Series devices.

- Options**
- **destination**—IDP detects attacks to a given destination IP address for the specified number of times, regardless of the source IP address.
 - **peer**—IDP detects attacks between source and destination IP addresses of the sessions for the specified number of times.
 - **source**—IDP detects attacks from a given source IP address for the specified number of times, regardless of the destination IP address.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

screen

See the following sections:

- screen (Security) on page 618
- screen (Zones) on page 619

screen (Security)

```

Syntax  screen {
            ids-option screen-name {
                alarm-without-drop;
                icmp {
                    flood {
                        threshold number ;
                    }
                    fragment;
                    ip-sweep {
                        threshold number ;
                    }
                    large;
                    ping-death;
                }
            }
            ip {
                bad-option;
                block-frag;
                loose-source-route-option;
                record-route-option;
                security-option;
                source-route-option;
                spoofing;
                stream-option;
                strict-source-route-option;
                tear-drop;
                timestamp-option;
                unknown-protocol;
            }
            limit-session {
                destination-ip-based number ;
                source-ip-based number ;
            }
            tcp {
                fin-no-ack;
                land;
                port-scan {
                    threshold number ;
                }
                syn-ack-ack-proxy {
                    threshold number ;
                }
                syn-fin;
                syn-flood {
                    alarm-threshold number ;
                    attack-threshold number ;
                    destination-threshold number ;
                    source-threshold number ;
                    timeout seconds ;
                }
                syn-frag;
                tcp-no-flag;
                winnuke;
            }
        }

```

```

        udp {
            flood {
                threshold number ;
            }
        }
    }
    traceoptions {
        file filename <files number > <match regular-expression >
        <size maximum-file-size > <world-readable | no-world-readable>;
        flag flag ;
    }
}

```

Hierarchy Level	[edit security]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Configure security screen options. This statement is supported on J Series and SRX Series devices.
Options	<i>screen-name</i> —Name of the screen configured at security screen ids-options level.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

screen (Zones)

Syntax	screen <i>screen-name</i> ;
Hierarchy Level	[edit security zones functional-zone management], [edit security zones security-zone <i>zone-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify a security screen for a security zone. This statement is supported on J Series and SRX Series devices.
Options	<i>screen-name</i> —Name of the screen.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

security-package

Syntax security-package {
 automatic {
 enable;
 interval *hours* ;
 start-time *start-time* ;
 }
 url *url-name* ;
}

Hierarchy Level [edit security idp]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Configure the device to automatically download the updated signature database from the specified URL.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

security-zone

Syntax

```
security-zone zone-name {
  address-book {
    address address-name (ip-prefix | dns-name dns-address-name);
    address-set address-set-name {
      address address-name ;
    }
  }
  host-inbound-traffic {
    protocols {
      protocol-name ;
      protocol-name <except>;
    }
    system-services {
      service-name ;
      service-name < except >;
    }
  }
  interfaces interface-name {
    host-inbound-traffic {
      protocols {
        protocol-name ;
        protocol-name < except >;
      }
      system-services {
        service-name ;
        service-name < except >;
      }
    }
  }
  screen screen-name ;
  tcp-rst;
}
```

Hierarchy Level [edit security zones]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Define a security zone, which allows you to divide the network into different segments and apply different security options to each segment.

This statement is supported on J Series and SRX Series devices.

Options *zone-name* —Name of the security zone.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.

security-control—To add this statement to the configuration.

sensor-configuration

```

Syntax  sensor-configuration {
    application-identification {
        application-system-cache;
        application-system-cache-timeout value ;
        disable;
        max-packet-memory value ;
        max-sessions value ;
        max-tcp-session-packet-memory value ;
        max-udp-session-packet-memory value ;
    }
    detector {
        protocol-name protocol-name {
            tunable-name tunable-name {
                tunable-value protocol-value ;
            }
        }
    }
    flow {
        (allow-icmp-without-flow | no-allow-icmp-without-flow);
        (log-errors | no-log-errors);
        max-timers-poll-ticks value ;
        reject-timeout value ;
        (reset-on-policy | no-reset-on-policy);
    }
    global {
        (enable-all-qmodules | no-enable-all-qmodules);
        (enable-packet-pool | no-enable-packet-pool);
        (policy-lookup-cache | no-policy-lookup-cache);
    }
    ips {
        detect-shellcode;
        ignore-regular-expression;
        log-supercede-min minimum-value ;
        pre-filter-shellcode;
        process-ignore-s2c;
        process-override;
        process-port port-number ;
    }
    log {
        cache-size size ;
        suppression {
            disable;
            include-destination-address;
            max-logs-operate value ;
            max-time-report value ;
            start-log value ;
        }
    }
    re-assembler {
        ignore-mem-overflow;
        max-flow-mem value ;
    }
}

```

```

        max-packet-mem value ;
    }
    ssl-inspection {
        sessions number ;
    }
}

```

Hierarchy Level	[edit security idp]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Configure various IDP parameters to match the properties of transiting network traffic.</p> <p>This statement is supported on SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

server

Syntax	<pre> server { host <i>host-name</i>; port <i>number</i>; } </pre>
Hierarchy Level	<p>[edit security utm feature-profile web-filtering surf-control-integrated]</p> <p>[edit security utm feature-profile web-filtering websense-redirect profile <i>profile-name</i>]</p>
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Set server parameters by entering the server name or IP address.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

server-connectivity

Syntax	server-connectivity (log-and-permit block);
Hierarchy Level	[edit security utm feature-profile web-filtering surf-control-integrated profile <i>profile-name</i> fallback-settings] [edit security utm feature-profile web-filtering websense-redirect profile <i>profile-name</i> fallback-settings]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Fallback settings tell the system how to handle errors. This is the action that occurs when a request fails for this reason. This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Options	<ul style="list-style-type: none"> ■ log-and-permit—Log the error and permit the traffic ■ block—Log the error and deny the traffic
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

sessions

Syntax	sessions <i>number</i> ;
Hierarchy Level	[edit security idp sensor-configuration ssl-inspection]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Maximum number of SSL sessions for inspection. This limit is per Services Processing Unit (SPU). This statement is supported on SRX Series devices.
Options	<i>number</i> —Number of SSL session to inspect. Range: 1 through 100000 Default: 10000
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

session-close

Syntax	session-close;
Hierarchy Level	[edit security policies from-zone <i>zone-name</i> to-zone <i>zone-name</i> policy <i>policy-name</i> then log]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable traffic to which the policy applies to be logged at the end of a session.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

session-init

Syntax	session-init;
Hierarchy Level	[edit security policies from-zone <i>zone-name</i> to-zone <i>zone-name</i> policy <i>policy-name</i> then log]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable traffic to which the policy applies to be logged at the beginning of a session.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

sessions-per-client

Syntax	sessions-per-client { limit <i>value</i> ; over-limit (log-and-permit block); }
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i> traffic-options]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>In an attempt to consume all available resources and hinder the ability of the device, a malicious user might generate a large amount of traffic all at once. To prevent such activity from succeeding, you can impose a session throttle.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

sequence-number

See the following sections:

- sequence-number (ICMP Headers in Signature Attack) on page 628
- sequence-number (TCP Headers in Signature Attack) on page 629

sequence-number (ICMP Headers in Signature Attack)

Syntax sequence-number {
 match (equal | greater-than | less-than | not-equal);
 value *sequence-number*;
 }

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type signature protocol icmp]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify the sequence number of the packet. This number identifies the location of the request/reply in relation to the entire sequence.

This statement is supported on SRX Series devices.

Options match (equal | greater-than | less-than | not-equal)—Match an operand.

value *sequence-number* —Match a decimal value.

Range: 0 through 65535

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

sequence-number (TCP Headers in Signature Attack)

Syntax sequence-number {
 match (equal | greater-than | less-than | not-equal);
 value *sequence-number*;
 }

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type signature protocol tcp]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify the sequence number of the packet. This number identifies the location of the data in relation to the entire data sequence.

This statement is supported on SRX Series devices.

Options match (equal | greater-than | less-than | not-equal)—Match an operand.

value *sequence-number* —Match a decimal value.

Range: 0 through 4294967295

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

service

See the following sections:

- service (Anomaly Attack) on page 630
- service (Dynamic Attack Group) on page 630
- service (Security IPsec) on page 631

service (Anomaly Attack)

Syntax	<code>service service-name ;</code>
Hierarchy Level	<code>[edit security idp custom-attack attack-name attack-type anomaly]</code>
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Service is the protocol whose anomaly is defined in the attack. IP, TCP, UDP, and ICMP are also valid as services. This statement is supported on SRX Series devices.
Options	<code>service-name</code> —Name of the protocol.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

service (Dynamic Attack Group)

Syntax	<code>service { values [list-of-values]; }</code>
Hierarchy Level	<code>[edit security idp dynamic-attack-group dynamic-attack-group-name filters]</code>
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Specify a service filter to add attack objects based on the attack service, such as FTP, HTTP, NetBios, and so on. This statement is supported on SRX Series devices.
Options	<code>values</code> —Name of the service filter.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

service (Security IPsec)

Syntax	<code>service service-name ;</code>
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i> ike proxy-identity]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the service (port and protocol combination) to protect. This statement is supported on J Series and SRX Series devices.
Options	<i>service-name</i> —Name of the service, as defined with <code>system-services</code> (Interface Host-Inbound Traffic) and <code>system-services</code> (Zone Host-Inbound Traffic).
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.
Related Topics	<code>system-services</code> (Interface Host-Inbound Traffic) <code>system-services</code> (Zone Host-Inbound Traffic)

severity

See the following sections:

- severity (Custom Attack) on page 632
- severity (Dynamic Attack Group) on page 633
- severity (IPS Rulebase) on page 634

severity (Custom Attack)

Syntax severity (critical | info | major | minor | warning);

Hierarchy Level [edit security idp custom-attack *attack-name*]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Select the severity that matches the lethality of the attack object on your network.

This statement is supported on SRX Series devices.

Options You can set the severity level to the following levels:

- **critical**—Contains attack objects matching exploits that attempt to evade detection, cause a network device to crash, or gain system-level privileges.
- **info**—Contains attack objects matching normal, harmless traffic containing URLs, DNS lookup failures, SNMP public community strings, and Peer-to-Peer (P2P) parameters. You can use informational attack objects to obtain information about your network.
- **major**—Contains attack objects matching exploits that attempt to disrupt a service, gain user-level access to a network device, or activate a Trojan horse previously loaded on a device.
- **minor**—Contains attack objects matching exploits that detect reconnaissance efforts attempting to access vital information through directory traversal or information leaks.
- **warning**—Contains attack objects matching exploits that attempt to obtain noncritical information or scan a network with a scanning tool.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

severity (Dynamic Attack Group)

Syntax severity {
 values [critical | info | major | minor | warning];
 }

Hierarchy Level [edit security idp dynamic-attack-group *dynamic-attack-group-name* filters]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify a severity filter to add attack objects based on the attack severity.

This statement is supported on SRX Series devices.

Options values—Name of the severity filter. You can select from the following severity:

- critical—The attack is a critical one.
- info—Provide information of attack when it matches.
- major—The attack is a major one.
- minor—The attack is a minor one.
- warning—Issue a warning when attack matches.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

severity (IPS Rulebase)

Syntax severity (critical | info | major | minor | warning);

Hierarchy Level [edit security idp idp-policy *policy-name* rulebase-ips rule *rule-name* then]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Set the rule severity levels in logging to support better organization and presentation of log records on the log server. You can use the default severity settings of the selected attack object, or choose a specific severity for your rule. The severity you configure in the rules overrides the inherited attack severity.

This statement is supported on SRX Series devices.

Options You can set the severity level to the following levels:

- critical—2
- info—3
- major—4
- minor—5
- warning—7

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

shellcode

Syntax	shellcode (all intel no-shellcode sparc);
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type anomaly] [edit security idp custom-attack <i>attack-name</i> attack-type signature]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Shellcode signifies that the attack is a shellcode attack and is capable of creating its own shell.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>all—All shellcode checks will be performed if this attack matches.</p> <p>intel—Basic shellcode checks and Intel-specific shellcode checks will be performed.</p> <p>no-shellcode—No shellcode checks will be performed.</p> <p>sparc—Basic shellcode checks and Sparc-specific shellcode checks will be performed.</p> <p>Default: Basic shellcode checks will be performed when this field is not configured.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

signature

```

Syntax  signature {
    context context-name ;
    direction (any | client-to-server | server-to-client);
    negate;
    pattern signature-pattern ;
    protocol {
        icmp {
            code {
                match (equal | greater-than | less-than | not-equal);
                value code-value ;
            }
            data-length {
                match (equal | greater-than | less-than | not-equal);
                value data-length ;
            }
            identification {
                match (equal | greater-than | less-than | not-equal);
                value identification-value ;
            }
            sequence-number {
                match (equal | greater-than | less-than | not-equal);
                value sequence-number ;
            }
            type {
                match (equal | greater-than | less-than | not-equal);
                value type-value ;
            }
        }
        ip {
            destination {
                match (equal | greater-than | less-than | not-equal);
                value hostname ;
            }
            identification {
                match (equal | greater-than | less-than | not-equal);
                value identification-value ;
            }
            ip-flags {
                (df | no-df);
                (mf | no-mf);
                (rb | no-rb);
            }
            protocol {
                match (equal | greater-than | less-than | not-equal);
                value transport-layer-protocol-id ;
            }
            source {
                match (equal | greater-than | less-than | not-equal);
                value hostname ;
            }
            tos {

```

```

        match (equal | greater-than | less-than | not-equal);
        value type-of-service-in-decimal ;
    }
    total-length {
        match (equal | greater-than | less-than | not-equal);
        value total-length-of-ip-datagram ;
    }
    ttl {
        match (equal | greater-than | less-than | not-equal);
        value time-to-live ;
    }
}
tcp {
    ack-number {
        match (equal | greater-than | less-than | not-equal);
        value acknowledgement-number ;
    }
    data-length {
        match (equal | greater-than | less-than | not-equal);
        value tcp-data-length ;
    }
    destination-port {
        match (equal | greater-than | less-than | not-equal);
        value destination-port ;
    }
    header-length {
        match (equal | greater-than | less-than | not-equal);
        value header-length ;
    }
    mss {
        match (equal | greater-than | less-than | not-equal);
        value maximum-segment-size ;
    }
    option {
        match (equal | greater-than | less-than | not-equal);
        value tcp-option ;
    }
    sequence-number {
        match (equal | greater-than | less-than | not-equal);
        value sequence-number ;
    }
    source-port {
        match (equal | greater-than | less-than | not-equal);
        value source-port ;
    }
    tcp-flags {
        (ack | no-ack);
        (fin | no-fin);
        (psh | no-psh);
        (r1 | no-r1);
        (r2 | no-r2);
        (rst | no-rst);
        (syn | no-syn);
        (urg | no-urg);
    }
    urgent-pointer {

```

```

        match (equal | greater-than | less-than | not-equal);
        value urgent-pointer ;
    }
    window-scale {
        match (equal | greater-than | less-than | not-equal);
        value window-scale-factor ;
    }
    window-size {
        match (equal | greater-than | less-than | not-equal);
        value window-size ;
    }
}
udp {
    data-length {
        match (equal | greater-than | less-than | not-equal);
        value data-length ;
    }
    destination-port {
        match (equal | greater-than | less-than | not-equal);
        value destination-port ;
    }
    source-port {
        match (equal | greater-than | less-than | not-equal);
        value source-port ;
    }
}
}
protocol-binding {
    application application-name ;
    icmp;
    ip {
        protocol-number transport-layer-protocol-number ;
    }
    rpc {
        program-number rpc-program-number ;
    }
    tcp {
        minimum-port port-number maximum-port port-number ;
    }
    udp {
        minimum-port port-number maximum-port port-number ;
    }
}
regexp regular-expression ;
shellcode (all | intel | no-shellcode | sparc);
}

```

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description	IDP uses stateful signatures to detect attacks. Stateful signatures are more specific than regular signatures. With stateful signatures, IDP can look for the specific protocol or service used to perpetrate the attack. This statement is supported on SRX Series devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

sip

```

Syntax  sip {
    application-screen {
        protect {
            deny {
                all | destination-ip address ;
                timeout seconds ;
            }
        }
        unknown-message {
            permit-nat-applied;
            permit-routed;
        }
    }
    c-timeout minutes ;
    disable;
    disable-call-id-hiding;
    inactive-media-timeout seconds ;
    maximum-call-duration minutes ;
    retain-hold-resource;
    t1-interval milliseconds ;
    t4-interval seconds ;
    traceoptions {
        flag {
            all <detail | extensive | terse>;
            call <detail | extensive | terse>;
            cc <detail | extensive | terse>;
            nat <detail | extensive | terse>;
            parser <detail | extensive | terse>;
            rm <detail | extensive | terse>;
        }
    }
}

```

Hierarchy Level [edit security alg]

Release Information Statement modified in Release 9.2 of JUNOS Software.

Description Specify the Session Initiation Protocol (SIP) ALG on the device.

This statement is supported on J Series devices.

Options disable—Disable the SIP ALG. By default, SIP ALG is enabled.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

smtp-profile

See the following sections:

- smtp-profile (antispam utm-policy)
- smtp-profile (antivirus utm-policy)
- smtp-profile (content-filtering utm-policy)

smtp-profile (antispam utm-policy)

Syntax	smtp-profile <i>profile-name</i> ;
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i> anti-spam]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure a UTM policy for the antispam SMTP protocol and attach this policy to a security profile to implement it.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

smtp-profile (antivirus utm-policy)

Syntax	smtp-profile <i>profile-name</i> ;
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i> anti-virus]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure a UTM policy for the antivirus SMTP protocol and attach this policy to a security profile to implement it.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

smtp-profile (content-filtering utm-policy)

Syntax	smtp-profile <i>profile-name</i> ;
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i> content-filtering]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure a UTM policy for the content-filtering SMTP protocol and attach this policy to a security profile to implement it.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

sockets

Syntax	sockets <i>value</i> ;
Hierarchy Level	[edit security utm feature-profile web-filtering websense-redirect profile <i>profile-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Enter the number of sockets used for communicating between the client and server. The default is 1.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

source

See the following sections:

- source (IP Headers in Signature Attack) on page 643
- source (Source NAT) on page 644

source (IP Headers in Signature Attack)

Syntax source {
 match (equal | greater-than | less-than | not-equal);
 value *hostname* ;
 }

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type signature protocol ip]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify the IP address of the attacking device.

This statement is supported on SRX Series devices.

Options match (equal | greater-than | less-than | not-equal)—Match an operand.

value *host-name* —Match an ip-address or a host name.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

source (Source NAT)

```

Syntax  source {
    address-persistent;
    interface {
        port-overloading { off };
    }
    pool pool-name {
        address ip-address to ip-address ;
        host-address-base ip-address ;
        overflow-pool (interface | pool-name );
        port no-translation | range high ip-address low ip-address ;
        routing-instance routing-instance-name ;
    }
    pool-utilization-alarm {
        clear-threshold threshold-value ;
        raise-threshold threshold-value ;
    }
    port-randomization {
        disable;
    }
    rule-set rule-set-name {
        from interface [interface-name] |
        routing-instance [routing-instance-name] | zone [zone-name];
        rule rule-name {
            match {
                destination-address [destination-address];
                source-address [source-address];
            }
            then {
                source-nat (off | interface | pool pool-name );
                persistent-nat {
                    permit ( any-remote-host | target-host | target-host-port );
                    inactivity-timeout seconds;
                    max-session-number number;
                }
            }
        }
        to interface [interface-name] |
        routing-instance [routing-instance-name] | zone [zone-name];
    }
}

```

Hierarchy Level [edit security nat]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Configure source NAT of the SRX Series device, which allows you to configure the following:

- Translate source IP address or addresses to the egress interface' IP address.
- Translate a range of source IP addresses to another range of IP addresses. This mapping is dynamic and without PAT.

- Translate a range of source IP addresses to another range of IP addresses. This mapping is dynamic and with PAT.
- Translate a range of source IP addresses to another range of IP addresses. This mapping is one-to-one, static, and without PAT.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

source-address

See the following sections:

- source-address (Destination NAT) on page 646
- source-address (IDP Policy) on page 647
- source-address (Security Policies) on page 647
- source-address (Source NAT) on page 648

source-address (Destination NAT)

Syntax source-address [source-address];

Hierarchy Level [edit security nat destination rule-set *rule-set-name* rule *rule-name* match]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Specify source address to match the rule. You can configure multiple addresses or subnets.

This statement is supported on J Series and SRX Series devices.

Options *source-address* —Source address or a subnet.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

source-address (IDP Policy)

Syntax	<code>source-address [address-name];</code>
Hierarchy Level	<code>[edit security idp idp-policy policy-name rulebase-exempt rule rule-name match],</code> <code>[edit security idp idp-policy policy-name rulebase-ips rule rule-name match]</code>
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify a source IP address or IP address set object to be used as the match source address object. The default value is any. This statement is supported on SRX Series devices.
Options	<i>address-name</i> —IP address, IP address set object.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

source-address (Security Policies)

Syntax	<code>source-address {</code> <i>address-name</i> ; <code>}</code>
Hierarchy Level	<code>[edit security policies from-zone zone-name to-zone zone-name policy policy-name match]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Define the matching criteria, which can include one or more IP addresses, address sets, or both in the from-zone zone. This statement is supported on J Series and SRX Series devices.
Options	<i>address-name</i> —IP addresses, address sets, or both are used for matching.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

source-address (Source NAT)

Syntax	<code>source-address [source-address];</code>
Hierarchy Level	<code>[edit security nat source rule-set <i>rule-set-name</i> rule <i>rule-name</i> match]</code>
Release Information	Statement modified in Release 9.6 of JUNOS Software.
Description	Specify source address to match the rule. You can configure multiple addresses or subnets. This statement is supported on J Series and SRX Series devices.
Options	<code>source-address</code> —Source address or a subnet.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

source-except

Syntax	<code>source-except [address-name];</code>
Hierarchy Level	<code>[edit security idp idp-policy <i>policy-name</i> rulebase-exempt rule <i>rule-name</i> match],</code> <code>[edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i> match]</code>
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify a source IP address or IP address set object to specify all source address objects except the specified address objects. The default value is any. This statement is supported on SRX Series devices.
Options	<code>address-name</code> —IP address, IP address set object.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

source-interface

Syntax	<code>source-interface interface-name ;</code>
Hierarchy Level	<code>[edit security ipsec vpn vpn-name vpn-monitor]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the source interface for ICMP requests (VPN monitoring “hellos”). If no source interface is specified, the device automatically uses the local tunnel endpoint interface. (This statement is not supported on dynamic VPN implementations.) This statement is supported on J Series and SRX Series devices.
Options	<i>interface-name</i> —Name of the interface for the ICMP requests.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

source-ip-based

Syntax	<code>source-ip-based number ;</code>
Hierarchy Level	<code>[edit security screen ids-option screen-name limit-session]</code>
Release Information	Statement modified in Release 9.2 of JUNOS Software.
Description	Limit the number of concurrent sessions the device can initiate from a single source IP address. This statement is supported on J Series and SRX Series devices.
Options	<i>number</i> —Maximum number of concurrent sessions that can be initiated from a source IP address. Range: 1 through 50000 Default: 128



NOTE: For SRX Series devices the applicable range is 1 through 8000000.

Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

source-nat

Syntax source-nat (off | interface | pool *pool-name*);
 persistent-nat {
 permit (any-remote-host | target-host | target-host-port);
 inactivity-timeout *seconds*;
 max-session-number *number*;
 }

Hierarchy Level [edit security nat source rule-set *rule-set-name* rule *rule-name* then]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Specify the action of the source NAT rule.

This statement is supported on J Series and SRX Series devices.

Options off — Do not perform the source NAT operation.

interface — Use egress interface IPv4 address to perform the source NAT.

pool — Use user-defined source NAT pool to perform the source NAT.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security — To view this statement in the configuration.
 security-control — To add this statement to the configuration.

source-port

Syntax	source-port { match (equal greater-than less-than not-equal); value <i>source-port</i> ; }
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol udp] [edit security idp custom-attack <i>attack-name</i> attack-type signature protocol tcp]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Specify the port number on the attacking device. This statement is supported on SRX Series devices.
Options	match (equal greater-than less-than not-equal)—Match an operand. value <i>source-port</i> —Port number on the attacking device. Range: 0 through 65535
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

source-threshold

Syntax `source-threshold number ;`

Hierarchy Level `[edit security screen ids-option screen-name tcp syn-flood]`

Release Information Statement modified in Release 9.2 of JUNOS Software.

Description Specify the number of SYN segments that the device can receive per second from a single source IP address (regardless of the destination IP address and port number) before the device begins dropping connection requests from that source.

This statement is supported on J Series and SRX Series devices.

Options *number* —Number of SYN segments to be received per second before the device starts dropping connection requests.

Range: 4 through 100000 per second

Default: 4000 per second



NOTE: For SRX Series devices the applicable range is 4 through 1000000 per second.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

spam-action

Syntax	spam-action (log-and-permit block);
Hierarchy Level	[edit security utm feature-profile anti-spam symantec-sbl profile <i>profile-name</i> sbl-default-server]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure the action to be taken by the device when spam is detected.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<ul style="list-style-type: none"> ■ block—Block e-mail ■ tag-header—Tag header of e-mail ■ tag-subject—Tag subject of e-mail
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

spi

Syntax	spi <i>spi-value</i> ;
Hierarchy Level	[edit security ipsec vpn <i>vpn-name</i> manual]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	<p>Configure a security parameter index (SPI) for a security association (SA). (This statement is not supported on dynamic VPN implementations.)</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>spi-value</i> —An arbitrary value that uniquely identifies which security association (SA) to use at the receiving host (the destination address in the packet).</p> <p>Range: 256 through 16639</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

sql

Syntax sql {
 disable;
 traceoptions {
 flag {
 all <extensive>;
 }
 }
 }

Hierarchy Level [edit security alg]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the Oracle SQL ALG on the device.

This statement is supported on J Series devices.

Options disable—Disable the SQL ALG. By default, the SQL ALG is enabled.

traceoptions—Configure SQL ALG tracing options.

flag—Trace operation to perform. To specify more than one trace operation, include multiple flag statements.

all—Trace all events.

extensive—(Optional) Display extensive amount of data.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

ssh-known-hosts

Syntax ssh-known-hosts {
 fetch-from-server *fetch-from-server* ;
 host *hostname* {
 dsa-key *base64-encoded-dsa-key* ;
 rsa-key *base64-encoded-dsa-key* ;
 rsa1-key *base64-encoded-dsa-key* ;
 }
 load-key-file *key-file* ;
 }

Hierarchy Level [edit security]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Configure SSH support for known hosts and for administering SSH host key updates.
 This statement is supported on J Series and SRX Series devices.

Options dsa-key—Digital signature algorithm (DSA) for SSH version 2.
 fetch-from-server—Retrieve SSH public host key information from a specified server.
 load-key-file—Import SSH host key information from the `/var/tmp/ssh-known-hosts` file.
 rsa-key—Public key algorithm that supports encryption and digital signatures for SSH version 1 and SSH version 2.
 rsa1-key—RSA public key algorithm, which supports encryption and digital signatures for SSH version 1.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

ssl-inspection

Syntax	ssl-inspection { sessions <i>number</i> ; }
Hierarchy Level	[edit security idp sensor-configuration]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Inspect HTTP traffic encrypted in SSL protocol. SSL inspection is disabled by default. It is enabled if you configure ssl-inspection. This statement is supported on SRX Series devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

start-log

Syntax	start-log <i>value</i> ;
Hierarchy Level	[edit security idp sensor-configuration log suppression]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify how many instances of a specific event must occur before log suppression begins. This statement is supported on SRX Series devices.
Options	<i>value</i> —Log suppression begins after how many occurrences. Range: 1 through 128 Default: 1
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

start-time

Syntax	<code>start-time start-time ;</code>
Hierarchy Level	[edit security idp security-package automatic]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Specify the time that the device automatically starts downloading the updated signature database from the specified URL.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<code>start-time</code> —Time in MM-DD.hh:mm format.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

static

Syntax

```
static {
  rule-set rule-set-name {
    from interface [interface-name] |
    routing-instance [routing-instance-name] | zone [zone-name];
    rule rule-name {
      match {
        destination-address [destination-address];
      }
      then {
        static-nat prefix < addr-prefix >
        <routing-instance routing-instance-name >;
      }
    }
  }
}
```

Hierarchy Level [edit security nat]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Configure static NAT of SRX Series device.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

static-nat

See the following sections:

- static-nat (Static NAT) on page 659

static-nat (Static NAT)

Syntax	static-nat prefix < <i>addr-prefix</i> > <routing-instance <i>routing-instance-name</i> >;
Hierarchy Level	[edit security nat static rule-set <i>rule-set-name</i> rule <i>rule-name</i> then]
Release Information	Statement modified in Release 9.6 of JUNOS Software.
Description	Specify the translated address of the static NAT rule. This statement is supported on J Series and SRX Series devices.
Options	<i>address-prefix</i> —Static IP address prefix. <i>routing-instance routing-instance-name</i> —Use user-defined static NAT routing-instance to perform static NAT. By default, the <i>routing-instance</i> is the same as the <i>from routing-instance</i> .
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

strict-syn-check

Syntax	strict-syn-check
Hierarchy Level	[edit security flow tcp-session]
Release Information	Statement introduced in Release 9.4 of JUNOS Software.
Description	Enables the strict three-way handshake check for the TCP session. It enhances security by dropping data packets before the three-way handshake is done. By default, strict-syn-check is disabled. This statement is supported on the SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

sunrpc

Syntax

```

sunrpc {
  disable;
  traceoptions {
    flag {
      all <extensive>;
    }
  }
}

```

Hierarchy Level [edit security alg]

Release Information Statement introduced in Release 9.0 of JUNOS Software.

Description Specify the Sun Microsystems remote procedure call (RPC) ALG on the device.

This statement is supported on J Series devices.

Options **disable**—Disable the Sun RPC ALG. By default, the Sun RPC ALG is enabled.

traceoptions—Configure the Sun RPC ALG tracing options.

flag—Trace operation to perform. To specify more than one trace operation, include multiple flag statements.

■ **all**—Trace all events.

extensive—(Optional) Display extensive amount of data.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level **security**—To view this statement in the configuration.
security-control—To add this statement to the configuration.

suppression

Syntax suppression {
 disable;
 include-destination-address;
 max-logs-operate *value* ;
 max-time-report *value* ;
 start-log *value* ;
 }

Hierarchy Level [edit security idp sensor-configuration log]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Log suppression reduces the number of logs by displaying a single record for multiple occurrences of the same event. Log suppression can negatively impact sensor performance if the reporting interval is set too high. By default this feature is enabled.

This statement is supported on SRX Series devices.

Options disable—Disable log suppression.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

surf-control-integrated

Syntax

```
surf-control-integrated {
  cache {
    timeout value;
  }
  server {
    host host-name;
    port number;
  }
  profile profile-name{
    default (log-and-permit | block);
    custom-block-message value;
    fallback-settings {
      default (log-and-permit | block);
      server-connectivity (log-and-permit | block);
      timeout (log-and-permit | block);
      too-many-requests (log-and-permit | block);
    }
    category customurl-list name {
      action (log-and-permit | block);
    }
  }
}
```

Hierarchy Level [set security utm feature-profile web-filtering]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Configure the UTM web-filtering integrated feature.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

symantec-sbl

Syntax

```
symantec-sbl {
  profile profile-name{
    sbl-default-server;
    spam-action (log-and-permit | block);
    custom-tag-string [***SPAM***];
  }
  address-whitelist{
    listname;
  }
}
```

Hierarchy Level [edit security utm feature-profile anti-spam]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Configure UTM server-based antispam features.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

syn-ack-ack-proxy

Syntax	syn-ack-ack-proxy; { threshold <i>number</i> , }
Hierarchy Level	[edit security screen ids-option <i>screen-name</i> tcp]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Prevent the SYN-ACK-ACK attack, which occurs when the attacker establishes multiple Telnet sessions without allowing each session to terminate. This behavior consumes all open slots, generating a denial-of-service (DoS) condition. This statement is supported on J Series and SRX Series devices.
Options	threshold <i>number</i> — Number of connections from any single IP address. Range: 1 through 250000 Default: 512
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

syn-fin

Syntax	syn-fin;
Hierarchy Level	[edit security screen ids-option <i>screen-name</i> tcp]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Enables detection of an illegal combination of flags that attackers can use to consume sessions on the target device, thus resulting in a denial-of-service (DoS) condition. This statement is supported on J Series and SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

syn-flood

Syntax syn-flood {
 alarm-threshold *number* ;
 attack-threshold *number* ;
 destination-threshold *number* ;
 source-threshold *number* ;
 timeout *seconds* ;
 }

Hierarchy Level [edit security screen ids-option *screen-name* tcp]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure detection and prevention of SYN flood attacks. Such attacks occur when the connecting host continuously sends TCP SYN requests without replying to the corresponding ACK responses.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

syn-flood-protection-mode

Syntax	syn-flood-protection-mode (syn-cookie syn-proxy);
Hierarchy Level	[edit security flow]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable SYN-cookie defenses or SYN-proxy defenses against SYN attacks.</p> <p>The SYN flood protection mode is enabled globally on the device and is activated when the configured syn-flood attack-threshold value is exceeded.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>syn-cookie—Uses a cryptographic hash to generate a unique Initial Sequence Number (ISN). This is enabled by default.</p> <p>syn-proxy—Uses a proxy to handle the SYN attack.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>
Related Topics	attack-threshold

syn-frag

Syntax	syn-frag;
Hierarchy Level	[edit security screen ids-option <i>screen-name</i> top]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enables detection of a SYN fragment attack and drops any packet fragments used for the attack. A SYN fragment attack floods the target host with SYN packet fragments. The host caches these fragments, waiting for the remaining fragments to arrive so it can reassemble them. The flood of connections that cannot be completed eventually fills the host's memory buffer. No further connections are possible, and damage to the host's operating system can occur.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

system-services

See the following sections:

- `system-services` (Interface Host-Inbound Traffic) on page 669
- `system-services` (Zone Host-Inbound Traffic) on page 671

system-services (Interface Host-Inbound Traffic)

Syntax system-services {
 service-name ;
 service-name <except>;
 }

Hierarchy Level [edit security zones security-zone *zone-name* interfaces *interface-name*
 host-inbound-traffic]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the types of traffic that can reach the device on a particular interface.

This statement is supported on J Series and SRX Series devices.

Options *service-name* —Service for which traffic is allowed. The following services are supported:

- all—Enable all possible system services available on the Routing Engine (RE).
- any-service—Enable services on entire port range.
- bootp—Enables traffic destined to BOOTP and DHCP relay agents.
- dhcp—Enable incoming DHCP requests.
- dns—Enable incoming DNS services.
- finger—Enable incoming finger traffic.
- ftp—Enable incoming FTP traffic.
- ident-reset—Enable the access that has been blocked by an unacknowledged identification request.
- http—Enable incoming J-Web or clear-text Web authentication traffic.
- https—Enable incoming J-Web or Web authentication traffic over Secure Sockets Layer (SSL).
- ike—Enable Internet Key Exchange traffic.
- netconf SSH—Enable incoming NetScreen Security Manager (NSM) traffic over SSH.
- ping—Allow the device to respond to ICMP echo requests.
- rlogin—Enable incoming rlogin (remote login) traffic.
- rpm—Enable incoming real-time performance monitoring (RPM) traffic.
- rsh—Enable incoming Remote Shell (rsh) traffic.
- snmp—Enable incoming SNMP traffic (UDP port 161).
- snmp-trap—Enable incoming SNMP traps (UDP port 162).
- ssh—Enable incoming SSH traffic.
- telnet—Enable incoming Telnet traffic.

- **tftp**—Enable TFTP services.
- **traceroute**—Enable incoming traceroute traffic (UDP port 33434).
- **xnm-ssl**— Enable incoming JUNOScript-over-SSL traffic for all specified interfaces.
- **xnm-clear-text**—Enable incoming JUNOScript traffic for all specified interfaces.

except—(Optional) except can only be used if all has been defined.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

system-services (Zone Host-Inbound Traffic)

Syntax system-services {
 service-name ;
 service-name <except>;
 }

Hierarchy Level [edit security zones security-zone *zone-name* host-inbound-traffic]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the types of traffic that can reach the device for all interfaces in a zone.

This statement is supported on J Series and SRX Series devices.

Options *service-name* —Service for which traffic is allowed. The following services are supported:

- all—Enable all possible system services available on the Routing Engine (RE).
- any-service—Enable services on entire port range.
- bootp—Enables traffic destined to BOOTP and DHCP relay agents.
- dhcp—Enable incoming DHCP requests.
- dns—Enable incoming DNS services.
- finger—Enable incoming finger traffic.
- ftp—Enable incoming FTP traffic.
- ident-reset—Enable the access that has been blocked by an unacknowledged identification request.
- http—Enable incoming J-Web or clear-text Web authentication traffic.
- https—Enable incoming J-Web or Web authentication traffic over Secure Sockets Layer (SSL).
- ike—Enable Internet Key Exchange traffic.
- netconf SSH—Enable incoming NetScreen Security Manager (NSM) traffic over SSH.
- ping—Allow the device to respond to ICMP echo requests.
- rlogin—Enable incoming rlogin (remote login) traffic.
- rpm—Enable incoming Real-time performance monitoring (RPM) traffic.
- rsh—Enable incoming Remote Shell (rsh) traffic.
- snmp—Enable incoming SNMP traffic (UDP port 161).
- snmp-trap—Enable incoming SNMP traps (UDP port 162).
- ssh—Enable incoming SSH traffic.
- telnet—Enable incoming Telnet traffic.
- tftp—Enable TFTP services.

- **traceroute**—Enables incoming traceroute traffic (UDP port 33434).
- **xnm-ssl**— Enable incoming JUNOScript-over-SSL traffic for all specified interfaces.
- **xnm-clear-text**—Enable incoming JUNOScript traffic for all specified interfaces.

except—(Optional) **except** can only be used if all has been defined.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level **security**—To view this statement in the configuration.
security-control—To add this statement to the configuration.

t1-interval

Syntax `t1-interval milliseconds ;`

Hierarchy Level [edit security alg sip]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the maximum round-trip time (RTT) (in milliseconds) allowed for Session Initiation Protocol (SIP) transactions.

This statement is supported on J Series devices.

Options *milliseconds* —Maximum round-trip time (RTT) allowed measured in milliseconds.
Range: 500 through 5000 milliseconds
Default: 500 milliseconds

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level **security**—To view this statement in the configuration.
security-control—To add this statement to the configuration.

t4-interval

Syntax	t4-interval seconds ;
Hierarchy Level	[edit security alg sip]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify the maximum length of time (in seconds) that the network can take to clear messages between client and server Session Initiation Protocol (SIP) transactions.</p> <p>This statement is supported on J Series devices.</p>
Options	<p>seconds —Maximum number of seconds that the network can take to clear messages between client and server transactions.</p> <p>Range: 5 through 10 seconds</p> <p>Default: 5 seconds</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

talk

Syntax

```
talk {
  disable;
  traceoptions {
    flag {
      all <extensive>;
    }
  }
}
```

Hierarchy Level [edit security alg]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the TALK program ALG on the device.

This statement is supported on J Series devices.

Options **disable**—Disable the TALK program ALG. By default, the TALK program ALG is enabled.

traceoptions—Configure TALK program ALG tracing options.

flag—Trace operation to perform. To perform more than one trace operation, include multiple flag statements.

all—Trace all events.

extensive—(Optional) Display extensive amount of data.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level **security**—To view this statement in the configuration.
security-control—To add this statement to the configuration.

target

Syntax	target (destination-address service source-address source-zone zone-service);
Hierarchy Level	[edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i> then ip-action]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Specify the blocking options that you want to set to block the future connections. Blocking options can be based on the following matches of the attack traffic:</p> <p>This statement is supported on SRX Series devices.</p>
Options	<ul style="list-style-type: none"> ■ destination-address—Matches traffic based on the destination address of the attack traffic. ■ service—Matches traffic based on the source address, destination address, destination port, and protocol of the attack traffic. This is the default. ■ source-address—Matches traffic based on the source address of the attack traffic. ■ source-zone—Matches traffic based on the source zone of the attack traffic. ■ zone-service—Matches traffic based on the source zone, destination address, destination port, and protocol of the attack traffic.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

tcp

See the following sections:

- tcp (Protocol Binding Custom Attack) on page 676
- tcp (Security Screen) on page 677
- tcp (Signature Attack) on page 678

tcp (Protocol Binding Custom Attack)

Syntax	tcp { minimum-port <i>port-number</i> maximum-port <i>port-number</i> ; }
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type chain protocol-binding] [edit security idp custom-attack <i>attack-name</i> attack-type signature protocol-binding]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Allow IDP to match the attack for specified TCP port(s). This statement is supported on SRX Series devices.
Options	minimum-port <i>port-number</i> —Minimum port in the port range. Range: 0 through 65535 maximum-port <i>port-number</i> —Maximum port in the port range. Range: 0 through 65535
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

tcp (Security Screen)

Syntax tcp {
 fin-no-ack;
 land;
 port-scan {
 threshold *number* ;
 }
 syn-ack-ack-proxy {
 threshold *number* ;
 }
 syn-fin;
 syn-flood {
 alarm-threshold *number* ;
 attack-threshold *number* ;
 destination-threshold *number* ;
 source-threshold *number* ;
 timeout *seconds* ;
 }
 syn-frag;
 tcp-no-flag;
 winnuke;
 }

Hierarchy Level [edit security screen ids-option *screen-name*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure TCP-layer intrusion detection service (IDS) options.
 This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

tcp (Signature Attack)

```

Syntax  tcp {
    ack-number {
        match (equal | greater-than | less-than | not-equal);
        value acknowledgement-number ;
    }
    data-length {
        match (equal | greater-than | less-than | not-equal);
        value tcp-data-length ;
    }
    destination-port {
        match (equal | greater-than | less-than | not-equal);
        value destination-port ;
    }
    header-length {
        match (equal | greater-than | less-than | not-equal);
        value header-length ;
    }
    mss {
        match (equal | greater-than | less-than | not-equal);
        value maximum-segment-size ;
    }
    option {
        match (equal | greater-than | less-than | not-equal);
        value tcp-option ;
    }
    sequence-number {
        match (equal | greater-than | less-than | not-equal);
        value sequence-number ;
    }
    source-port {
        match (equal | greater-than | less-than | not-equal);
        value source-port ;
    }
    tcp-flags {
        (ack | no-ack);
        (fin | no-fin);
        (psh | no-psh);
        (r1 | no-r1);
        (r2 | no-r2);
        (rst | no-rst);
        (syn | no-syn);
        (urg | no-urg);
    }
    urgent-pointer {
        match (equal | greater-than | less-than | not-equal);
        value urgent-pointer ;
    }
    window-scale {
        match (equal | greater-than | less-than | not-equal);
        value window-scale-factor ;
    }
    window-size {
        match (equal | greater-than | less-than | not-equal);

```

```

        value window-size ;
    }
}

```

Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Allow IDP to match the TCP header information for the signature attack.</p> <p>This statement is supported on SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

tcp-flags

Syntax tcp-flags {
 (ack | no-ack);
 (fin | no-fin);
 (psh | no-psh);
 (r1 | no-r1);
 (r2 | no-r2);
 (rst | no-rst);
 (syn | no-syn);
 (urg | no-urg);
 }

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type signature protocol tcp]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify that IDP looks for a pattern match whether or not the TCP flag is set.

This statement is supported on SRX Series devices.

Options ack | no-ack—When set, the acknowledgment flag acknowledges receipt of a packet.

fin | no-fin—When set, the final flag indicates that the packet transfer is complete and the connection can be closed.

psh | no-psh—When set, the push flag indicates that the receiver should push all data in the current sequence to the destination application (identified by the port number) without waiting for the remaining packets in the sequence.

r1 | no-r1—When set, indicates that the R1 retransmission threshold has been reached.

r2 | no-r2—When set, indicates that the R2 retransmission threshold has been reached.

rst | no-rst—When set, the reset flag resets the TCP connection, discarding all packets in an existing sequence.

syn | no-syn—When set, indicates that the sending device is asking for a three-way handshake to initialize communications.

urg | no-urg—When set, the urgent flag indicates that the packet data is urgent.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

tcp-initial-timeout

Syntax	tcp-initial-timeout <i>seconds</i> ;
Hierarchy Level	[edit security flow tcp-session]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Define the length of time (in seconds) that the device keeps an initial TCP session in the session table before dropping it, or until the device receives a FIN (no more data) or RST (reset) packet.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p><i>seconds</i> —Number of seconds that the device keeps an initial TCP session in the session table before dropping it.</p> <p>Range: 20 through 300 seconds</p> <p>Default: 20 seconds</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

tcp-mss

Syntax tcp-mss {
 all-tcp {
 mss *value* ;
 }
 gre-in {
 mss *value* ;
 }
 gre-out {
 mss *value* ;
 }
 ipsec-vpn {
 mss *value* ;
 }
 }

Hierarchy Level [edit security flow]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure TCP maximum segment size (TCP MSS) for the following packet types:

- All TCP packets for network traffic.
- GRE packets entering the IPsec VPN tunnel.
- GRE packets exiting the IPsec VPN tunnel.
- TCP packets entering the IPsec VPN tunnel.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

tcp-no-flag

Syntax	tcp-no-flag;
Hierarchy Level	[edit security screen ids-option <i>screen-name</i> tcp]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable the device to drop illegal TCP packets with a missing or malformed flag field.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

tcp-rst

Syntax	tcp-rst;
Hierarchy Level	[edit security zones security-zone <i>zone-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable the device to send a TCP segment with the RST (reset) flag set to 1 (one) in response to a TCP segment with any flag other than SYN set and that does not belong to an existing session.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

tcp-session

Syntax tcp-session {
 no-sequence-check;
 no-syn-check;
 no-syn-check-in-tunnel;
 rst-invalidate-session;
 rst-sequence-check;
 tcp-initial-timeout *seconds* ;
 }

Hierarchy Level [edit security flow]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure TCP session attributes:

- TCP sequence number checking.
- TCP SYN bit checking.
- Reset (RST) checking.
- Initial TCP session timeout.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

terminal

Syntax	<code>terminal;</code>
Hierarchy Level	<code>[edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i>]</code>
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Set or unset a terminal rule flag. The device stops matching rules for a session when a terminal rule is matched.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

test

Syntax	<code>test <i>test-condition</i> ;}</code>
Hierarchy Level	<code>[edit security idp custom-attack <i>attack-name</i> attack-type anomaly]</code>
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Specify protocol anomaly condition to be checked.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<i>test-condition</i> —Name of the anomaly test condition.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

tftp

Syntax

```
tftp {
  disable;
  traceoptions {
    flag {
      all <extensive>;
    }
  }
}
```

Hierarchy Level [edit security alg]

Release Information Statement modified in Release 9.2 of JUNOS Software.

Description Configure the Trivial File Transfer Protocol (TFTP) ALG on the device.

This statement is supported on J Series and SRX Series devices.

Options **disable**—Disable the TFTP ALG. By default, the TFTP ALG is enabled.



NOTE: By default, the TFTP ALG is disabled for SRX Series devices.

traceoptions—Configure TFTP ALG tracing options.

flag—Trace operation to perform. To specify more than one trace operation, include multiple flag statements.

all—Trace all events.

extensive—(Optional) Display extensive amount of data.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level **security**—To view this statement in the configuration.
security-control—To add this statement to the configuration.

then

See the following sections:

- then (Destination NAT) on page 687
- then (IDP Policy) on page 688
- then (Security Policies) on page 689
- then (Source NAT) on page 690
- then (Static NAT) on page 690

then (Destination NAT)

Syntax then {
 destination-nat (off | pool *pool-name*);
 }

Hierarchy Level [edit security nat destination rule-set *rule-set-name* rule *rule-name*]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Specify the action to be performed when traffic matches the destination NAT rule criteria.

This statement is supported on J Series and SRX Series devices.

Options The remaining statement is explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

then (IDP Policy)

```

Syntax  then {
            action {
                (close-client | close-client-and-server | close-server |
                 drop-connection | drop-packet | ignore-connection |
                 mark-diffserv value | no-action | recommended);
            }
            ip-action {
                (ip-block | ip-close | ip-notify);
                log;
                target (destination-address | service | source-address |
                       source-zone | zone-service);
                timeout seconds ;
            }
            notification {
                log-attacks {
                    alert;(
                }
            }
            severity (critical | info | major | minor | warning);
        }

```

Hierarchy Level [edit security idp idp-policy *policy-name* rulebase-ips rule *rule-name*]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Specify the action to be performed when traffic matches the defined criteria.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

then (Security Policies)

```

Syntax  then {
            count {
                alarm {
                    per-minute-threshold number;
                    per-second-threshold number ;
                }
            }
            (deny | reject);
            permit {
                application-services (wx-redirect | wx-reverse-redirect);
                destination-address {
                    drop-translated;
                    drop-untranslated;
                }
                firewall-authentication {
                    pass-through {
                        access-profile profile-name ;
                        client-match match-name ;
                        web-redirect;
                    }
                    web-authentication {
                        client-match user-or-group ;
                    }
                }
                tunnel {
                    ipsec-vpn vpn-name ;
                    pair-policy pair-policy ;
                }
            }
            log {
                session-close;
                session-init;
            }
        }

```

Hierarchy Level [edit security policies from-zone *zone-name* to-zone *zone-name* policy *policy-name*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the policy action to be performed when packets match the defined criteria.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

then (Source NAT)

Syntax then {
 source-nat (off | interface | pool *pool-name*);
 persistent-nat {
 permit (any-remote-host | target-host | target-host-port);
 inactivity-timeout *seconds*;
 max-session-number *number*;
 }
 }

Hierarchy Level [edit security nat source rule-set *rule-set-name* rule *rule-name*]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Specify the action to be performed when traffic matches the source NAT rule criteria.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

then (Static NAT)

Syntax then {
 static-nat prefix < *addr-prefix* > <routing-instance *routing-instance-name* >;
 }

Hierarchy Level [edit security nat static rule-set *rule-set-name* rule *rule-name*]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Specify the action to be performed when traffic matches the static NAT rule criteria.

This statement is supported on J Series and SRX Series devices.

Options The remaining statement is explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

threshold

Syntax	<code>threshold number ;</code>
Hierarchy Level	<code>[edit security ike gateway gateway-name dead-peer-detection]</code>
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the maximum number of unsuccessful dead peer detection (DPD) requests to be sent before the peer is considered unavailable. (This statement is not supported on dynamic VPN implementations.) This statement is supported on J Series and SRX Series devices.
Options	<i>number</i> —Maximum number of unsuccessful DPD requests to be sent. Range: 1 through 5 <i>Output:</i> 5
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

time-binding

Syntax	<code>time-binding { count count-value ; scope (destination peer source); }</code>
Hierarchy Level	<code>[edit security idp custom-attack attack-name]</code>
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Allow IDP to detect a sequence of the same attacks over a period of time. This statement is supported on SRX Series devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

timeout

See the following sections:

- timeout (IDP Policy) on page 692
- timeout (Security Screen) on page 693

timeout (IDP Policy)

Syntax `timeout seconds ;`

Hierarchy Level [edit security idp idp-policy *policy-name* rulebase-ips rule *rule-name* then ip-action]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Specify the number of seconds that you want the IP action to remain in effect after a traffic match.

This statement is supported on SRX Series devices.

Options *seconds* —Number of seconds the IP action should remain effective.

Range: 0 through 65535 seconds

Default: 0 second

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

timeout (Security Screen)

Syntax	<code>timeout seconds ;</code>
Hierarchy Level	[edit security screen ids-option <i>screen-name</i> tcp syn-flood]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify the maximum length of time before a half-completed connection is dropped from the queue. You can decrease the timeout value until you see any connections dropped during normal traffic conditions. This statement is supported on J Series and SRX Series devices.
Options	seconds —Time interval before a half-completed connection is dropped from the queue. Range: 1 through 50 seconds Default: 20 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

timeout (utm)

See the following sections:

- timeout (antivirus fallback-options)
- timeout (antivirus scan-options)
- timeout (antivirus trickling)
- timeout (web-filtering surf-control-integrated cache)
- timeout (web-filtering fallback-settings)
- timeout (web-filtering websense-redirect profile)

timeout (antivirus fallback-options)

Syntax	timeout (log-and-permit block);
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> fallback-options] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> fallback-options]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Scanning a complex file could consume resources and time. If the time it is taking to scan exceeds the timeout setting in the antivirus profile, the processing is aborted and the content is either passed or blocked without completing the virus checking. The decision is made based on the timeout fallback option. The default action is BLOCK. This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J Series devices.)
Options	<ul style="list-style-type: none"> ■ log-and-permit—Log the error and permit the traffic ■ block—Log the error and deny the traffic
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

timeout (antivirus scan-options)

Syntax	timeout <i>value</i> ;
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> scan-options] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> scan-options]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	The scanning timeout value includes the time frame from when the scan request is generated to when the scan result is returned by the scan engine. The time range can be 1 to 1800 seconds. By default, it is 180 seconds. This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J Series devices.)
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

timeout (antivirus trickling)

Syntax	timeout <i>value</i> ;
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> trickling] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> trickling]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	HTTP trickling is a mechanism used to prevent the HTTP client or server from timing-out during a file transfer or during antivirus scanning. HTTP Trickling is time-based and there is only one parameter to configure for this feature. That is the Time-out Interval. By default, trickling is disabled. This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J Series devices.)
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

timeout (web-filtering surf-control-integrated cache)

Syntax	timeout <i>value</i> ;
Hierarchy Level	[edit security utm feature-profile web-filtering surf-control-integrated cache]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Set the cache timeout parameters for surf-control-integrated web filtering (24 hours is the default and the maximum allowed life span of cached items).</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

timeout (web-filtering fallback-settings)

Syntax	timeout (log-and-permit block);
Hierarchy Level	[edit security utm feature-profile web-filtering surf-control-integrated profile <i>profile-name</i> fallback-settings] [edit security utm feature-profile web-filtering websense-redirect profile <i>profile-name</i> fallback-settings]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Fallback settings tell the system how to handle errors.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<ul style="list-style-type: none"> ■ log-and-permit—Log the error and permit the traffic ■ block—Log the error and deny the traffic
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

timeout (web-filtering websense-redirect profile)

Syntax	timeout <i>value</i> ;
Hierarchy Level	[edit security utm feature-profile web-filtering websense-redirect profile <i>profile-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Enter a timeout limit for requests. Once this limit is reached, fail mode settings are applied. The default here is 10 seconds.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

to

Syntax	to interface [interface-name] routing-instance [routing-instance-name] zone [zone-name];
Hierarchy Level	[edit security nat source rule-set <i>rule-set-name</i>]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Specify the destination of the packet among the routing instance, interface, or zone.</p> <p>This statement is supported on SRX Series devices.</p>
Options	interface <i>interface-name</i> —Name of the interface. routing-instance <i>routing-instance-name</i> —Name of the routing instance. zone <i>zone-name</i> —Name of the zone.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

to-zone

Syntax	<code>to-zone zone-name ;</code>
Hierarchy Level	[edit security idp idp-policy <i>policy-name</i> rulebase-exempt rule <i>rule-name</i> match], [edit security idp idp-policy <i>policy-name</i> rulebase-ips rule <i>rule-name</i> match]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	<p>Specify a destination zone to be associated with the security policy. The default value is any.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<i>zone-name</i> —Name of the destination zone object.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

too-many-requests

See the following sections:

- `too-many-requests` (antivirus fallback-options)
- `too-many-requests` (web-filtering fallback-settings)

too-many-requests (antivirus fallback-options)

Syntax	<code>too-many-requests (log-and-permit block);</code>
Hierarchy Level	<p>[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> fallback-options]</p> <p>[edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> fallback-options]</p>
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>If the total number of messages received concurrently exceeds the device limits, the content is either passed or blocked depending on the <code>too-many-request</code> fallback option. The default action is BLOCK. (The allowed request limit is not configurable.)</p> <p>This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on J Series devices.)</p>
Options	<ul style="list-style-type: none"> ■ <code>log-and-permit</code>—Log the error and permit the traffic ■ <code>block</code>—Log the error and deny the traffic
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p><code>security</code>—To view this statement in the configuration.</p> <p><code>security-control</code>—To add this statement to the configuration.</p>

too-many-requests (web-filtering fallback-settings)

Syntax	<code>too-many-requests (log-and-permit block);</code>
Hierarchy Level	<p>[edit security utm feature-profile web-filtering surf-control-integrated profile <i>profile-name</i> fallback-settings]</p> <p>[edit security utm feature-profile web-filtering websense-redirect profile <i>profile-name</i> fallback-settings]</p>
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>If the total number of messages received concurrently exceeds the device limits, the content is either passed or blocked depending on the too-many-request fallback option. The default action is BLOCK. (The allowed request limit is not configurable.)</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<ul style="list-style-type: none"> ■ <code>log-and-permit</code>—Log the error and permit the traffic ■ <code>block</code>—Log the error and deny the traffic
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

tos

Syntax `tos {
 match (equal | greater-than | less-than | not-equal);
 value type-of-service-in-decimal ;
 }`

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type signature protocol ip]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify the type of service.

This statement is supported on SRX Series devices.

Options `match (equal | greater-than | less-than | not-equal)`—Match an operand.

`value type-of-service-in-decimal` —The following service types are available:

- 0000—Default
- 0001—Minimize Cost
- 0002—Maximize Reliability
- 0003—Maximize Throughput
- 0004—Minimize Delay
- 0005—Maximize Security

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

total-length

Syntax	<pre>total-length { match (equal greater-than less-than not-equal); value <i>total-length-of-ip-datagram</i>; }</pre>
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol ip]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Specify the number of bytes in the packet, including all header fields and the data payload.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>match (equal greater-than less-than not-equal)—Match an operand.</p> <p>value <i>total-length-of-ip-datagram</i> —Length of the IP datagram. Range: 0 through 65535</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

traceoptions

See the following sections:

- traceoptions (firewall-authentication) on page 704
- traceoptions (H.323 ALG) on page 705
- traceoptions (Flow) on page 706
- traceoptions (IDP) on page 708
- traceoptions (IKE) on page 710
- traceoptions (IPsec) on page 712
- traceoptions (MGCP ALG) on page 713
- traceoptions (NAT) on page 714
- traceoptions (datapath-debug) on page 716
- traceoptions (PKI) on page 717
- traceoptions (Policies) on page 719
- traceoptions (SCCP ALG) on page 721
- traceoptions (Screen) on page 722
- traceoptions (Security) on page 724
- traceoptions (SIP ALG) on page 726

traceoptions (firewall-authentication)

Syntax `traceoptions {
 flag {
 all <detail | extensive | terse>;
 authentication <detail | extensive | terse>;
 proxy <detail | extensive | terse>;
 }
 }`

Hierarchy Level [edit security firewall-authentication]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Define data-plane firewall authentication tracing options.

This statement is supported on J Series and SRX Series devices.

Options `flag`—Trace operation to perform. To specify more than one trace operation, include multiple `flag` statements.

- `all`—Enable all tracing operations
- `authentication`—Trace data-plane firewall authentication events
- `proxy`—Trace data-plane firewall authentication proxy events

`detail`—Display moderate amount of data in trace.

`extensive`—Display extensive amount of data in trace.

`terse`—Display minimum amount of data in trace.

Required Privilege Level `trace`—To view this statement in the configuration.
 `trace-control`—To add this statement to the configuration.

traceoptions (H.323 ALG)

Syntax traceoptions {
 flag {
 all <detail | extensive | terse>;
 cc <detail | extensive | terse>;
 h225-asn1 <detail | extensive | terse>;
 h245 <detail | extensive | terse>;
 h245-asn1 <detail | extensive | terse>;
 q931 <detail | extensive | terse>;
 ras <detail | extensive | terse>;
 ras-asn1 <detail | extensive | terse>;
 }
 }

Hierarchy Level [edit security alg h323]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure H.323 tracing options.

This statement is supported on J Series devices.

Options flag—Trace operation to perform. To specify more than one trace operation, include multiple **flag** statements.

- all—Trace with all flags enabled
- cc—Trace chassis cluster functions
- h225-asn1—Trace H.225 ASN.1 processing activity
- h245—Trace H.245 processing activity
- h245-asn1—Trace H.245 ASN.1 processing activity
- q931—Trace Q.931 processing activity
- ras—Trace remote access server (RAS) processing activity
- ras-asn1—Trace RAS ASN.1 processing activity

detail—Display moderate amount of data in trace.

extensive—Display extensive amount of data in trace.

terse—Display minimum amount of data in trace.

Required Privilege Level trace—To view this statement in the configuration.
 trace-control—To add this statement to the configuration.

traceoptions (Flow)

Syntax traceoptions {
 file *filename* <files *number* > <match *regular-expression* > <size *maximum-file-size* >
 <world-readable | no-world-readable>;
 flag *flag* ;
 }

Hierarchy Level [edit security flow]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure flow tracing options.

This statement is supported on J Series and SRX Series devices.

Options file *filename* —Name of the file to receive the output of the tracing operation. Enclose the name within quotation marks. All files are placed in the directory */var/log*.

files *number* —(Optional) Maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed to *trace-file .0*, then *trace-file.1*, and so on, until the maximum number of trace files is reached. The oldest archived file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the size option and a filename.

Range: 2 through 1000 files

Default: 10 files

match *regular-expression* —(Optional) Refine the output to include lines that contain the regular expression.

size *maximum-file-size* —(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file .0*. When the *trace-file* again reaches its maximum size, *trace-file .0* is renamed *trace-file .1* and *trace-file* is renamed *trace-file .0*. This renaming scheme continues until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the files option and filename.

Syntax: *x k* to specify KB, *x m* to specify MB, or *x g* to specify GB

Range: 10 KB through 1 GB

Default: 128 KB

world-readable | no-world-readable—(Optional) By default, log files can be accessed only by the user who configures the tracing operation. The *world-readable* option enables any user to read the file. To explicitly set the default behavior, use the *no-world-readable* option.

flag—Trace operation to perform. To specify more than one trace operation, include multiple **flag** statements.

- **ager**—Trace session ageout related events
- **all**—Trace with all flags enabled
- **basic-datapath**—Trace basic packet flow activity
- **cli**—Trace CLI configuration activity and command changes
- **errors**—Trace flow errors activity
- **fragmentation**—Trace IP fragmentation and reassembly events
- **chassis-cluster**—Trace chassis cluster information
- **host-traffic**—Trace host traffic information
- **lookup**—Trace lookup events
- **multicast**—Trace multicast flow information
- **packet-drops**—Trace packet drop activity
- **route**—Trace route information
- **session**—Trace session creation and deletion events
- **session-scan**—Trace session scan information
- **tcp-advanced**—Trace advanced TCP packet flow activity
- **tcp-basic**—Trace TCP packet flow activity
- **tunnel**—Trace tunnel information

Required Privilege Level **trace**—To view this statement in the configuration.
 trace-control—To add this statement to the configuration.

traceoptions (IDP)

Syntax traceoptions {
 file *filename* {
 <files *number* >;
 <match *regular-expression* >;
 <size *maximum-file-size* >;
 <world-readable | no-world-readable>;
 }
 flag all;
 level (all | error | info | notice | verbose | warning);
 no-remote-trace;
 }

Hierarchy Level [edit security idp]

Release Information Statement introduced in Release 9.2 of JUNOS Software.

Description Configure IDP tracing options.

This statement is supported on SRX Series devices.

Options file *filename* —Name of the file to receive the output of the tracing operation. Enclose the name within quotation marks. All files are placed in the directory */var/log*.

files *number* —(Optional) Maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed to *trace-file .0*, then *trace-file.1*, and so on, until the maximum number of trace files is reached. The oldest archived file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the size option and a filename.

Range: 2 through 1000 files

Default: 10 files

match *regular-expression* —(Optional) Refine the output to include lines that contain the regular expression.

size *maximum-file-size* —(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file .0*. When the *trace-file* again reaches its maximum size, *trace-file .0* is renamed *trace-file .1* and *trace-file* is renamed *trace-file .0*. This renaming scheme continues until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the files option and filename.

Syntax: x k to specify KB, x m to specify MB, or x g to specify GB

Range: 10 KB through 1 GB

Default: 128 KB

world-readable | no-world-readable—(Optional) By default, log files can be accessed only by the user who configures the tracing operation. The *world-readable* option

enables any user to read the file. To explicitly set the default behavior, use the `no-world-readable` option.

flag—Trace operation to perform. To specify more than one trace operation, include multiple **flag** statements.

- **all**—Trace all ike process modules activity

level—Set the level of debugging the output option.

- **all**—Match all levels
- **error**—Match error conditions
- **info**—Match informational messages
- **notice**—Match conditions that should be handled specially
- **verbose**—Match verbose messages
- **warning**—Match warning messages

no-remote-trace—Set remote tracing as disabled.

Required Privilege Level

trace—To view this statement in the configuration.

trace-control—To add this statement to the configuration.

traceoptions (IKE)

Syntax traceoptions {
 file *filename* {
 <files *number* >;
 <match *regular-expression* >;
 <size *maximum-file-size* >;
 <world-readable | no-world-readable>;
 }
 flag *flag* ;
 }

Hierarchy Level [edit security ike]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure IKE tracing options.

This statement is supported on J Series and SRX Series devices.

Options file *filename* —Name of the file to receive the output of the tracing operation. Enclose the name within quotation marks. All files are placed in the directory */var/log*.

files *number* —(Optional) Maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed to *trace-file .0*, then *trace-file.1*, and so on, until the maximum number of trace files is reached. The oldest archived file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the size option and a filename.

Range: 2 through 1000 files

Default: 10 files

match *regular-expression* —(Optional) Refine the output to include lines that contain the regular expression.

size *maximum-file-size* —(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file .0*. When the *trace-file* again reaches its maximum size, *trace-file .0* is renamed *trace-file .1* and *trace-file* is renamed *trace-file .0*. This renaming scheme continues until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the files option and filename.

Syntax: x k to specify KB, x m to specify MB, or x g to specify GB

Range: 10 KB through 1 GB

Default: 128 KB

world-readable | no-world-readable—(Optional) By default, log files can be accessed only by the user who configures the tracing operation. The **world-readable** option

enables any user to read the file. To explicitly set the default behavior, use the `no-world-readable` option.

flag *flag*—Trace operation to perform. To specify more than one trace operation, include multiple **flag** statements.

- **all**—Trace all ike process modules activity
- **certificates**—Trace certificate-related activity
- **database**—Trace VPN-related database activity
- **general**—Trace general activity
- **ike**—Trace IKE protocol activity
- **parse**—Trace VPN parsing activity
- **policy-manager**—Trace ike callback activity
- **routing-socket**—Trace routing socket activity
- **timer**—Trace timer activity
- **snmp**—Trace SNMP operations activity

Required Privilege Level `trace`—To view this statement in the configuration.
`trace-control`—To add this statement to the configuration.

traceoptions (IPsec)

Syntax `traceoptions {
 flag {
 all;
 next-hop-tunnel-binding;
 packet-drops;
 packet-processing;
 security-associations;
 }
 }`

Hierarchy Level [edit security ipsec]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure IPsec tracing options.

This statement is supported on J Series and SRX Series devices.

Options `flag`—To specify more than one trace operation, include multiple `flag` statements.

- `all`—Trace with all flags enabled
- `next-hop-tunnel-binding`—Trace next-hop tunnel binding events
- `packet-drops`—Trace packet drop activity
- `packet-processing`—Trace data packet processing events
- `security-associations`—Trace security association (SA) management events

Required Privilege Level `trace`—To view this statement in the configuration.
 `trace-control`—To add this statement to the configuration.

traceoptions (MGCP ALG)

Syntax

```

traceoptions {
    flag {
        all <extensive>;
        call <extensive>;
        cc <extensive>;
        decode <extensive>;
        error <extensive>;
        nat <extensive>;
        packet <extensive>;
        rm <extensive>;
    }
}

```

Hierarchy Level [edit security alg mgcp]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure Media Gateway Control Protocol (MGCP) tracing options.

This statement is supported on J Series and SRX Series devices.

Options flag—Trace operation to perform. To specify more than one trace operation, include multiple **flag** statements.

- all—Trace with all flags enabled
- call—Trace call processing activity
- cc—Trace chassis cluster functions
- decode—Trace decoder operations activity
- error—Trace processing errors activity
- nat—Trace Network Address Translation (NAT) processing activity
- packet—Trace MGCP protocol packet processing activity
- rm—Trace MGCP Resource Management (Resmgr) functions activity

Required Privilege Level trace—To view this statement in the configuration.
 trace-control—To add this statement to the configuration.

traceoptions (NAT)

Syntax

```

traceoptions {
  file filename {
    <files number >;
    <match regular-expression >;
    <size maximum-file-size >;
    <world-readable | no-world-readable>;
  }
  flag {
    all;
    destination-nat-pfe;
    destination-nat-re;
    destination-nat-rt;
    source-nat-pfe;
    source-nat-re;
    source-nat-rt;
    static-nat-pfe;
    static-nat-re;
    static-nat-rt;
  }
  no-remote-trace;
}

```

Hierarchy Level [edit security nat]

Release Information Statement modified in Release 9.6 of JUNOS Software.

Description Configure NAT tracing options.

This statement is supported on J Series and SRX Series devices.

Options *filename* —By default, the name of the log file that records trace output is the name of the process being traced. Use this option to specify another name.

files number —(Optional) Maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed to *trace-file .0*, then *trace-file.1*, and so on, until the maximum number of trace files is reached. The oldest archived file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the size option and a filename.

Range: 2 through 1000 files

Default: 10 files

match regular-expression —(Optional) Refine the output to include lines that contain the regular expression.

size maximum-file-size —(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file .0*. When the *trace-file* again reaches its maximum size, *trace-file .0* is renamed *trace-file .1* and *trace-file* is renamed

trace-file .0. This renaming scheme continues until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the *files* option and filename.

Syntax: *x k* to specify KB, *x m* to specify MB, or *x g* to specify GB

Range: 10 KB through 1 GB

Default: 128 KB

world-readable | no-world-readable—(Optional) By default, log files can be accessed only by the user who configures the tracing operation. The **world-readable** option enables any user to read the file. To explicitly set the default behavior, use the **no-world-readable** option.

flag—Trace operation to perform. To specify more than one trace operation, include multiple **flag** statements.

- **all**—Trace with all flags enabled
- **destination-nat-pfe**—Trace destination NAT events on PFE-ukernel side
- **destination-nat-re**—Trace destination NAT events on routing engine (RE) side
- **destination-nat-rt**—Trace destination NAT events on packet processing engine real-time (PFE-RT) side
- **source-nat-pfe**—Trace source NAT events on PFE-ukernel side
- **source-nat-re**—Trace source NAT events on RE side
- **source-nat-rt**—Trace source NAT events on PFE-RT side
- **static-nat-pfe**—Trace static NAT events on PFE-ukernel side
- **static-nat-re**—Trace static NAT events on RE side
- **static-nat-rt**—Trace static NAT events on PFE-RT side

no-remote-trace—Set remote tracing as disabled.

Required Privilege Level

trace—To view this statement in the configuration.

trace-control—To add this statement to the configuration.

traceoptions (datapath-debug)

Syntax	traceoptions;
Hierarchy Level	[edit security datapath-debug]
Release Information	Command introduced in Release 9.6 of JUNOS Software.
Description	<p>Sets the trace options for datapath-debug.</p> <p>This statement is supported on SRX5600 and SRX5800 devices.</p>
Options	<p><i>apply-groups</i>— Groups from which to inherit configuration data.</p> <p><i>apply-groups-except</i>— Do not inherit configuration data from these groups.</p> <p><i>file</i> — Trace file information</p> <p><i>no-remote-trace</i>— Disable remote tracing</p> <p><i>rate-limit</i>— Limit the incoming rate of trace messages (0..4294967295)</p>
Usage Guidelines	For configuration instructions and examples, see the JUNOS Software Security Configuration Guide.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

traceoptions (PKI)

Syntax

```

traceoptions {
  file filename {
    <files number >;
    <match regular-expression >;
    <size maximum-file-size >;
    <world-readable | no-world-readable>;
  }
  flag flag ;
}

```

Hierarchy Level [edit security pki]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Configure public key infrastructure (PKI) tracing options.

This statement is supported on J Series and SRX Series devices.

Options *filename* —By default, the name of the log file that records trace output is the name of the process being traced. Use this option to specify another name.

files number —(Optional) Specify the maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed to *trace-file .0*, then *trace-file.1*, and so on, until the maximum number of trace files is reached. The oldest archived file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the size option and a filename.

Range: 2 through 1000 files

Default: 10 files

match regular-expression —(Optional) Refine the output to include lines that contain the regular expression.

size maximum-file-size —(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file .0*. When the *trace-file* again reaches its maximum size, *trace-file .0* is renamed *trace-file .1* and *trace-file* is renamed *trace-file .0*. This renaming scheme continues until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the files option and filename.

Syntax: *x k* to specify KB, *x m* to specify MB, or *x g* to specify GB

Range: 10 KB through 1 GB

Default: 128 KB

world-readable | no-world-readable—(Optional) By default, log files can be accessed only by the user who configures the tracing operation. The *world-readable* option

enables any user to read the file. To explicitly set the default behavior, use the `no-world-readable` option.

`flag`—Trace operation to perform. To specify more than one trace operation, include multiple `flag` statements.

- `all`—Trace with all flags enabled
- `certificate-verification`—Trace PKI certificate verification events
- `online-crl-check`—Trace PKI online certificate revocation list (CRL) events

Required Privilege Level `trace`—To view this statement in the configuration.
`trace-control`—To add this statement to the configuration.

traceoptions (Policies)

Syntax traceoptions {
 file *filename* {
 <files *number* >;
 <match *regular-expression* >;
 <size *maximum-file-size* >;
 <world-readable | no-world-readable>;
 }
 flag *flag* ;
 }

Hierarchy Level [edit security policies]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure policy tracing options.

This statement is supported on J Series and SRX Series devices.

Options *filename* —By default, the name of the log file that records trace output is the name of the process being traced. Use this option to specify another name.

files number —(Optional) Specify the maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed to *trace-file .0*, then *trace-file.1* , and so on, until the maximum number of trace files is reached. The oldest archived file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the size option and a filename.

Range: 2 through 1000 files

Default: 10 files

match regular-expression —(Optional) Refine the output to include lines that contain the regular expression.

size maximum-file-size —(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file .0*. When the *trace-file* again reaches its maximum size, *trace-file .0* is renamed *trace-file .1* and *trace-file* is renamed *trace-file .0*. This renaming scheme continues until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the files option and filename.

Syntax: *x k* to specify KB, *x m* to specify MB, or *x g* to specify GB

Range: 10 KB through 1 GB

Default: 128 KB

world-readable | no-world-readable—(Optional) By default, log files can be accessed only by the user who configures the tracing operation. The *world-readable* option

enables any user to read the file. To explicitly set the default behavior, use the `no-world-readable` option.

`flag`—Trace operation to perform. To specify more than one trace operation, include multiple `flag` statements.

- `all`—Trace with all flags enabled
- `configuration`—Trace configuration events
- `compilation`—Trace policy compilation events
- `ipc`—Trace process inter communication events
- `lookup`—Trace policy lookup events
- `routing-socket`—Trace routing socket events
- `rules`—Trace policy rules-related events

Required Privilege Level `trace`—To view this statement in the configuration.
`trace-control`—To add this statement to the configuration.

traceoptions (SCCP ALG)

Syntax traceoptions {
 flag {
 all <extensive>;
 call <extensive>;
 cc <extensive>;
 cli <extensive>;
 decode <extensive>;
 error <extensive>;
 init <extensive>;
 nat <extensive>;
 rm <extensive>;
 }
 }

Hierarchy Level [edit security alg sccp]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure Skinny Client Control Protocol (SCCP) tracing options.

This statement is supported on J Series devices.

Options *flag* —Trace operation to perform. To specify more than one trace operation, include multiple *flag* statements.

- *all*—Trace with all flags enabled
- *call*—Enable tracing for SCCP call processing
- *cc*—Enable tracing for SCCP chassis cluster functions
- *cli*—Enable tracing for SCCP command-line interface (CLI) client processing
- *decode*—Enable tracing for SCCP decoder operations
- *error*—Enable tracing for SCCP processing errors
- *init*—Enable tracing for SCCP initialization errors
- *nat*—Enable tracing for SCCP NAT processing
- *rm*—Enable tracing for SCCP Resource Management (Resmgr) functions

Required Privilege Level trace—To view this statement in the configuration.
 trace-control—To add this statement to the configuration.

traceoptions (Screen)

Syntax traceoptions {
 file *filename* {
 <files *number* >;
 <match *regular-expression* >;
 <size *maximum-file-size* >;
 <world-readable | no-world-readable>;
 }
 flag *flag* ;
 }

Hierarchy Level [edit security screen]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure screen tracing options.

To specify more than one tracing option, include multiple **flag** statements.

This statement is supported on J Series and SRX Series devices.

Options *filename* —By default, the name of the log file that records trace output is the name of the process being traced. Use this option to specify another name.

files *number* —(Optional) Specify the maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed to *trace-file .0*, then *trace-file.1* , and so on, until the maximum number of trace files is reached. The oldest archived file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the size option and a filename.

Range: 2 through 1000 files

Default: 10 files

match *regular-expression* —(Optional) Refine the output to include lines that contain the regular expression.

size *maximum-file-size* —(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file .0*. When the *trace-file* again reaches its maximum size, *trace-file .0* is renamed *trace-file .1* and *trace-file* is renamed *trace-file .0*. This renaming scheme continues until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the files option and filename.

Syntax: *x k* to specify KB, *x m* to specify MB, or *x g* to specify GB

Range: 10 KB through 1 GB

Default: 128 KB

world-readable | no-world-readable—(Optional) By default, log files can be accessed only by the user who configures the tracing operation. The **world-readable** option

enables any user to read the file. To explicitly set the default behavior, use the `no-world-readable` option.

`flag`—Trace operation to perform. To specify more than one trace operation, include multiple `flag` statements.

- `all`—Trace all screen events
- `configuration`—Trace screen configuration events
- `flow`—Trace flow events

Required Privilege Level `trace`—To view this statement in the configuration.
`trace-control`—To add this statement to the configuration.

traceoptions (Security)

```

Syntax  traceoptions {
            file filename {
                <files number> ;
                <match regular-expression >;
                <size maximum-file-size >;
                <world-readable | no-world-readable>;
            }
            flag flag ;
            no-remote-trace;
            rate-limit rate ;
        }

```

Hierarchy Level [edit security]

Release Information Statement modified in Release 8.5 of JUNOS Software.

Description Configure security tracing options.

This statement is supported on J Series and SRX Series devices.

Options *filename* —By default, the name of the log file that records trace output is the name of the process being traced. Use this option to specify another name.

files number —(Optional) Specify the maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed to *trace-file .0*, then *trace-file.1*, and so on, until the maximum number of trace files is reached. The oldest archived file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the size option and a filename.

Range: 2 through 1000 files

Default: 10 files

match regular-expression —(Optional) Refine the output to include lines that contain the regular expression.

size maximum-file-size —(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file .0*. When the *trace-file* again reaches its maximum size, *trace-file .0* is renamed *trace-file .1* and *trace-file* is renamed *trace-file .0*. This renaming scheme continues until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the files option and filename.

Syntax: *x k* to specify KB, *x m* to specify MB, or *x g* to specify GB

Range: 10 KB through 1 GB

Default: 128 KB

world-readable | no-world-readable—(Optional) By default, log files can be accessed only by the user who configures the tracing operation. The *world-readable* option

enables any user to read the file. To explicitly set the default behavior, use the `no-world-readable` option.

`flag`—Trace operation to perform. To specify more than one trace operation, include multiple `flag` statements.

- `all`—Trace all security events
- `configuration`—Trace security configuration events
- `compilation`—Trace security compilation events
- `routing-socket`—Trace routing socket events

`no-remote-trace`—Set remote tracing as disabled.

`rate-limit` *rate* —Number of trace per second. You can configure the incoming rate of trace messages.

Required Privilege Level

`trace`—To view this statement in the configuration.

`trace-control`—To add this statement to the configuration.

traceoptions (SIP ALG)

Syntax traceoptions {
 flag {
 all <detail | extensive | terse>;
 call <detail | extensive | terse>;
 cc <detail | extensive | terse>;
 nat <detail | extensive | terse>;
 parser <detail | extensive | terse>;
 rm <detail | extensive | terse>;
 }
 }

Hierarchy Level [edit security alg sip]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure Session Initiation Protocol (SIP) tracing options.

This statement is supported on J Series devices.

Options *flag* —Trace operation to perform. To specify more than one trace operation, include multiple *flag* statements.

- *all*—Trace with all flags enabled
- *call*—Enable tracing for SIP call processing
- *cc*—Enable tracing for SIP chassis cluster functions
- *nat*—Enable tracing SIP Network Address Translation (NAT) processing
- *parser*—Enable tracing SIP parser operations
- *rm*—Enable tracing SIP Resource Management (Resmgr) functions

detail—Display moderate amount of data in trace.

extensive—Display extensive amount of data in trace.

terse—Display minimum amount of data in trace.

Required Privilege Level *trace*—To view this statement in the configuration.
trace-control—To add this statement to the configuration.

traffic-options

Syntax	<pre>traffic-options { sessions-per-client { limit <i>value</i>; over-limit (log-and-permit block); } }</pre>
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>In an attempt to consume all available resources and hinder the ability of the device, a malicious user might generate a large amount of traffic all at once. To prevent such activity from succeeding, you can impose a session throttle.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

transaction-timeout

Syntax	transaction-timeout <i>seconds</i> ;
Hierarchy Level	[edit security alg mgcp]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Timeout value for Media Gateway Control Protocol (MGCP) transactions. If the timeout value exceeds transaction will be removed by MGCP transactions ager out processing.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>seconds</i> —Timeout value. Range: 3 through 50 seconds Default: 30 seconds
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

trickling

Syntax	trickling { timeout <i>value</i> ; }
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i>] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Trickling applies only to HTTP. HTTP trickling is a mechanism used to prevent the HTTP client or server from timing-out during a file transfer or during antivirus scanning.</p> <p>This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on J Series devices.)</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

trusted-ca

Syntax	trusted-ca (<i>ca-index</i> use-all);
Hierarchy Level	[edit security ike policy <i>policy-name</i> certificate]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify the preferred certificate authority (CA) to use when requesting a certificate from the peer. If no value is specified, then no certificate request is sent (although incoming certificates are still accepted). (This statement is not supported on dynamic VPN implementations.)</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<ul style="list-style-type: none"> ■ <i>ca-index</i> —Preferred certificate authority ID for the device to use. ■ use-all—Device uses all configured certificate authorities.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

ttl

Syntax	<pre>ttl { match (equal greater-than less-than not-equal); value <i>time-to-live</i>; }</pre>
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol ip]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Specify the time-to-live (TTL) value of the packet. This value represents the number of routers the packet can pass through. Each router that processes the packet decrements the TTL by 1; when the TTL reaches 0, the packet is discarded.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>match (equal greater-than less-than not-equal)—Match an operand.</p> <p>value <i>time-to-live</i>—The time-to-live value. Range: 0 through 255</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

tunable-name

Syntax	<code>tunable-name <i>tunable-name</i> { tunable-value <i>protocol-value</i> ; }</code>
Hierarchy Level	<code>[edit security idp sensor-configuration detector protocol-name <i>protocol-name</i>]</code>
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify the name of the tunable parameter to enable or disable the protocol detector for each of the service. By default, the protocol decoders for all services are enabled. This statement is supported on SRX Series devices.
Options	<i>tunable-name</i> —Name of the specific tunable parameter. The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

tunable-value

Syntax	<code>tunable-value <i>protocol-value</i> ;</code>
Hierarchy Level	<code>[edit security idp sensor-configuration detector protocol-name <i>protocol-name</i> tunable-name <i>tunable-name</i>]</code>
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify the value of the tunable parameter to enable or disable the protocol detector for each of the service. This statement is supported on SRX Series devices.
Options	<i>protocol-value</i> —Protocol number.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

tunnel

Syntax	<pre>tunnel { ipsec-vpn <i>vpn-name</i> ; pair-policy <i>pair-policy</i> ; }</pre>
Hierarchy Level	[edit security policies from-zone <i>zone-name</i> to-zone <i>zone-name</i> policy <i>policy-name</i> then permit]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Encapsulate outgoing IP packets and decapsulate incoming IP packets.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

type

See the following sections:

- type (ICMP Headers in Signature Attack) on page 732
- type (Dynamic Attack Group) on page 733

type (ICMP Headers in Signature Attack)

Syntax type {
 match (equal | greater-than | less-than | not-equal);
 value *type-value*;
 }

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type signature protocol icmp]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify the primary code that identifies the function of the request/reply.

This statement is supported on SRX Series devices.

Options match (equal | greater-than | less-than | not-equal)—Match an operand.

value *type-value*—Match a decimal value.

Range: 0 through 255

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

type (Dynamic Attack Group)

Syntax type {
 values [anomaly | signature];
 }

Hierarchy Level [edit security idp dynamic-attack-group *dynamic-attack-group-name* filters]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Specify an attack type filter to add attack objects based on the type of attack object (signature or protocol anomaly).

This statement is supported on SRX Series devices.

Options values—Name of the attack type filter.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

type (utm)

See the following sections:

- type (antivirus fallback-block)
- type (antivirus notification-options virus-detection)
- type (content-filtering notification-options)

type (antivirus fallback-block)

Syntax type (message | protocol-only);

Hierarchy Level [edit security utm feature-profile anti-virus juniper-express-engine *profile-name* notification-options]
 [edit security utm feature-profile anti-virus kaspersky-lab-engine *profile-name* notification-options]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description You can configure notifications for both fallback blocking and fallback nonblocking actions. With protocol-only notifications, a protocol-specific error code may be returned to the client.

This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J Series devices.)

- Options**
- message—Send a generic notification.
 - protocol-only—Send a protocol-specific notification.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

type (antivirus notification-options virus-detection)

Syntax	type (message protocol-only);
Hierarchy Level	[edit security utm feature-profile anti-virus juniper-express-engine <i>profile-name</i> notification-options virus-detection] [edit security utm feature-profile anti-virus kaspersky-lab-engine <i>profile-name</i> notification-options virus-detection]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>When content is blocked because a virus is found or a scan error occurs, the client generally still receives a successful response code but with modified content (file replacement) containing a warning message. But with protocol-only notifications, a protocol-specific error code may be returned to the client.</p> <p>This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J Series devices.)</p>
Options	<ul style="list-style-type: none"> ■ message—Send a generic notification. ■ protocol-only—Send a protocol-specific notification.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

type (content-filtering notification-options)

Syntax	type (message protocol-only);
Hierarchy Level	[edit security utm feature-profile content-filtering profile <i>profile-name</i> notification-options]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>When content is blocked, the client generally still receives a successful response code but with modified content (file replacement) containing a warning message. But with protocol-only notifications, a protocol-specific error code may be returned to the client.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	<ul style="list-style-type: none">■ message—Send a generic notification.■ protocol-only—Send a protocol-specific notification.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

udp

See the following sections:

- udp (Protocol Binding Custom Attack) on page 737
- udp (Security Screen) on page 738
- udp (Signature Attack) on page 739

udp (Protocol Binding Custom Attack)

Syntax	udp { minimum-port <i>port-number</i> maximum-port <i>port-number</i> ; }
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type chain protocol-binding] [edit security idp custom-attack <i>attack-name</i> attack-type signature protocol-binding]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Allow IDP to match the attack for specified UDP port(s). This statement is supported on SRX Series devices.
Options	minimum-port <i>port-number</i> —Minimum port in the port range. Range: 0 through 65535 maximum-port <i>port-number</i> —Maximum port in the port range. Range: 0 through 65535
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

udp (Security Screen)

Syntax udp {
 flood {
 threshold *number* ;
 }
 }

Hierarchy Level [edit security screen ids-option *screen-name*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify the number of packets allowed per second to the same destination IP address/port pair. When the number of packets exceeds this value within any 1-second period, the device generates an alarm and drops subsequent packets for the remainder of that second.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

udp (Signature Attack)

Syntax

```

udp {
    data-length {
        match (equal | greater-than | less-than | not-equal);
        value data-length ;
    }
    destination-port {
        match (equal | greater-than | less-than | not-equal);
        value destination-port ;
    }
    source-port {
        match (equal | greater-than | less-than | not-equal);
        value source-port ;
    }
}

```

Hierarchy Level [edit security idp custom-attack *attack-name* attack-type signature protocol]

Release Information Statement introduced in Release 9.3 of JUNOS Software.

Description Allow IDP to match the UDP header information for the signature attack.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

unknown-message

See the following sections:

- unknown-message (H.323 ALG) on page 740
- unknown-message (MGCP ALG) on page 741
- unknown-message (SCCP ALG) on page 742
- unknown-message (SIP ALG) on page 743

unknown-message (H.323 ALG)

Syntax unknown-message {
 permit-nat-applied;
 permit-routed;
 }

Hierarchy Level [edit security alg h323 application-screen]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify how unidentified H.323 messages are handled by the device. The default is to drop unknown (unsupported) messages. Permitting unknown messages can compromise security and is not recommended. However, in a secure test or production environment, this statement can be useful for resolving interoperability issues with disparate vendor equipment. By permitting unknown H.323 (unsupported) messages, you can get your network operational and later analyze your VoIP traffic to determine why some messages were being dropped.

This statement applies only to received packets identified as supported VoIP packets. If a packet cannot be identified, it is always dropped. If a packet is identified as a supported protocol, the message is forwarded without processing.

This statement is supported on J Series devices.

Options **permit-nat-applied**—Specifies that unknown messages be allowed to pass if the session is in NAT mode.

permit-routed— Specifies that unknown messages be allowed to pass if the session is in Route mode. (Sessions in Transparent mode are treated as Route mode.)

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

unknown-message (MGCP ALG)

Syntax	unknown-message { permit-nat-applied; permit-routed; }
Hierarchy Level	[edit security alg mgcp application-screen]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify how unidentified Media Gateway Control Protocol (MGCP) messages are handled by the device. The default is to drop unknown (unsupported) messages. Permitting unknown messages can compromise security and is not recommended. However, in a secure test or production environment, this statement can be useful for resolving interoperability issues with disparate vendor equipment. By permitting unknown MGCP (unsupported) messages, you can get your network operational and later analyze your VoIP traffic to determine why some messages were being dropped.</p> <p>This statement applies only to received packets identified as supported VoIP packets. If a packet cannot be identified, it is always dropped. If a packet is identified as a supported protocol, the message is forwarded without processing.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>permit-nat-applied—Specifies that unknown messages be allowed to pass if the session is in NAT mode.</p> <p>permit-routed— Specifies that unknown messages be allowed to pass if the session is in Route mode. (Sessions in Transparent mode are treated as Route mode.)</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

unknown-message (SCCP ALG)

Syntax unknown-message {
 permit-nat-applied;
 permit-routed;
 }

Hierarchy Level [edit security alg sccp application-screen]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify how unidentified Skinny Client Control Protocol (SCCP) messages are handled by the device. The default is to drop unknown (unsupported) messages. Permitting unknown messages can compromise security and is not recommended. However, in a secure test or production environment, this statement can be useful for resolving interoperability issues with disparate vendor equipment. By permitting unknown SCCP (unsupported) messages, you can get your network operational and later analyze your VoIP traffic to determine why some messages were being dropped.

This statement applies only to received packets identified as supported VoIP packets. If a packet cannot be identified, it is always dropped. If a packet is identified as a supported protocol, the message is forwarded without processing.

This statement is supported on J Series devices.

Options **permit-nat-applied**—Specifies that unknown messages be allowed to pass if the session is in NAT mode.

permit-routed— Specifies that unknown messages be allowed to pass if the session is in Route mode. (Sessions in Transparent mode are treated as Route mode.)

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

unknown-message (SIP ALG)

Syntax unknown-message {
 permit-nat-applied;
 permit-routed;
 }

Hierarchy Level [edit security alg sip application-screen]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Specify how unidentified Session Initiation Protocol (SIP) messages are handled by the device. The default is to drop unknown (unsupported) messages. Permitting unknown messages can compromise security and is not recommended. However, in a secure test or production environment, this statement can be useful for resolving interoperability issues with disparate vendor equipment. By permitting unknown SIP (unsupported) messages, you can get your network operational and later analyze your VoIP traffic to determine why some messages were being dropped.

This statement applies only to received packets identified as supported VoIP packets. If a packet cannot be identified, it is always dropped. If a packet is identified as a supported protocol, the message is forwarded without processing.

This statement is supported on J Series devices.

Options **permit-nat-applied**—Specifies that unknown messages be allowed to pass if the session is in NAT mode.

permit-routed— Specifies that unknown messages be allowed to pass if the session is in Route mode. (Sessions in Transparent mode are treated as Route mode.)

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

upload-profile

- upload-profile (ftp antivirus utm-profile)
- upload-profile (ftp content-filtering utm-profile)

upload-profile (ftp antivirus utm-profile)

Syntax	upload-profile <i>profile-name</i> ;
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i> anti-virus ftp]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure a UTM policy for the antivirus FTP (upload) protocol and attach this policy to a security profile to implement it.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

upload-profile (ftp content-filtering utm-profile)

Syntax	upload-profile <i>profile-name</i> ;
Hierarchy Level	[edit security utm utm-policy <i>policy-name</i> content-filtering ftp]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure a UTM policy for the content-filtering FTP (upload) protocol and attach this policy to a security profile to implement it.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

urgent-pointer

Syntax	urgent-pointer { match (equal greater-than less-than not-equal); value <i>urgent-pointer</i> ; }
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol tcp]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	Specify the data in the packet is urgent; the URG flag must be set to activate this field. This statement is supported on SRX Series devices.
Options	match (equal greater-than less-than not-equal)—Match an operand. value <i>urgent-pointer</i> —Match the value of the urgent pointer. Range: 0 through 65535
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

url

Syntax	url <i>url-name</i> ;
Hierarchy Level	[edit security idp security-package]
Release Information	Statement introduced in Release 9.2 of JUNOS Software.
Description	Specify the URL to automatically download the updated signature database. This statement is supported on SRX Series devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

url (antivirus)

See the following sections:

- url (kaspersky-lab-engine)
- url (juniper-express-engine)

url (kaspersky-lab-engine)

Syntax `url;`

Hierarchy Level [edit security utm feature-profile anti-virus kaspersky-lab-engine pattern-update]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description This is the command for changing the URL for the pattern database. The default URL is `http://update.juniper-update.net/AV/SRX210`. You should not change this URL unless you are experiencing problems with it and have called for support.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

url (juniper-express-engine)

Syntax `url;`

Hierarchy Level [edit security utm feature-profile anti-virus juniper-express-engine pattern-update]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description This is the command for changing the URL for the pattern database. You should not change this URL unless you are experiencing problems with it and have called for support.

This statement is supported on SRX210, SRX240, and SRX650 devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

url-blacklist

Syntax	url-blacklist { listname; }
Hierarchy Level	[edit security utm feature-profile web-filtering]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	This is a global blacklist category, blocking content for web-filtering. This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

url-pattern

Syntax	url-pattern { value [list]; }
Hierarchy Level	[edit security utm custom-objects]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	Use URL Pattern Lists to create Custom URL Category Lists. These are lists of patterns that bypass scanning. This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

url-whitelist

See the following sections:

- url-whitelist (antivirus)
- url-whitelist (web-filtering)

url-whitelist (antivirus)

Syntax url-whitelist {
listname;
}

Hierarchy Level [edit security utm feature-profile anti-virus]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description A URL white list is a unique custom list that you define in which all the URLs or IP addresses in that list for a specified category are always bypassed for scanning.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

url-whitelist (web-filtering)

Syntax	url-whitelist { listname; }
Hierarchy Level	[edit security utm feature-profile web-filtering]
Description	<p>A URL white list is a unique custom list that you define in which all the URLs or IP addresses in that list for a specified category are always bypassed for filtering</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

user

Syntax	user { username; }
Hierarchy Level	[edit security dynamic-vpn client <i>configuration-name</i>]
Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Use this statement to specify which users can access the selected dynamic VPN configuration.</p> <p>This statement is supported on SRX210 and SRX240 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

user-at-hostname

Syntax	<code>user-at-hostname user-at-hostname ;</code>
Hierarchy Level	[edit security ike gateway <i>gateway-name</i> dynamic]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Configure an e-mail address. (This statement is not supported on dynamic VPN implementations.)</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>user-at-hostname</i> —Valid e-mail address.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

utm

```

Syntax  utm {
            custom-objects {
                filename-extension {
                    value [list];
                }
                mime-pattern {
                    value [list];
                }
                custom-url-category {
                    value [list];
                }
                protocol-command {
                    value [list];
                }
                url-pattern {
                    value [list];
                }
            }
            feature-profile {
                anti-virus {
                    type kaspersky-lab-engine;
                    kaspersky-lab-engine {
                        pattern-update {
                            url;
                            interval value;
                        }
                    }
                    profile profile-name {
                        fallback-options {
                            default (log-and-permit | block);
                            corrupt-file (log-and-permit | block);
                            password-file (log-and-permit | block);
                            decompress-layer (log-and-permit | block);
                            content-size (log-and-permit | block);
                            engine-not-ready (log-and-permit | block);
                            timeout (log-and-permit | block);
                            out-of-resources (log-and-permit | block);
                            too-many-requests (log-and-permit | block);
                        }
                        scan-options {
                            intelligent-prescreening;
                            scan-mode (scan-all | by-extension);
                            content-size-limit value;
                            timeout value;
                            decompress-layer-limit value;
                        }
                    }
                    notification-options {
                        virus-detection {
                            type (message | protocol-only);
                            notify-mail-sender;
                            custom-message;
                        }
                    }
                }
            }
        }

```

```

        fallback-block {
            custom-message;
            notify-mail-sender;
            type;
        }
    }
    trickling {
        timeout value;
    }
}
}
type juniper-express-engine;
juniper-express-engine {
    pattern-update {
        url;
        interval value;
    }
    profile profile-name {
        fallback-options {
            default (log-and-permit | block);
            content-size (log-and-permit | block);
            engine-not-ready (log-and-permit | block);
            timeout (log-and-permit | block);
            out-of-resources (log-and-permit | block);
            too-many-requests (log-and-permit | block);
        }
        scan-options {
            intelligent-prescreening;
            scan-mode (scan-all | by-extension);
            content-size-limit value;
            timeout value;
            decompress-layer-limit value;
        }
        notification-options {
            virus-detection {
                type (message | protocol-only);
                notify-mail-sender;
                custom-message;
            }
            fallback-block {
                custom-message;
                notify-mail-sender;
                type;
            }
        }
        trickling {
            timeout value;
        }
    }
    mime-whitelist {
        list listname {
            exception listname;
        }
    }
    url-whitelist {
        listname;
    }
}

```



```

    }
}
web-filtering {
surf-control-integrated {
    cache {
        timeout value;
    }
    server {
        host host-name;
        port number;
    }
    profile profile-name{
        default (log-and-permit | block);
        custom-block-message value;
        fallback-settings {
            default (log-and-permit | block);
            server-connectivity (log-and-permit | block);
            timeout (log-and-permit | block);
            too-many-requests (log-and-permit | block);
        }
        category customurl-list name {
            action (log-and-permit | block);
        }
    }
}
websense-redirect {
profile profile-name {
server {
    host host-name;
    port number;
}
sockets value;
timeout value;
fallback-settings {
    default (log-and-permit | block);
    server-connectivity (log-and-permit | block);
    timeout (log-and-permit | block);
    too-many-requests (log-and-permit | block);
}
}
url-whitelist {
listname;
}
url-blacklist {
listname;
}
}
anti-spam {
symantec-sbl {
    profile profile-name{
        sbl-default-server;
        spam-action (log-and-permit | block);
        custom-tag-string [***SPAM***];
    }
    address-whitelist{
        listname;
    }
}

```

```

    }
  }
  content-filtering {
  profile profile-name{
    block-command protocol-command-list;
    block-content-type (java-applet | exe | http-cookie);
    block-mime {
      list list-name {
        exception list-name;
      }
    }
    permit-command protocol-command-list;
    notification-options {
      type (message | protocol-only);
      custom-message [message];
    }
  }
}
utm-policy policy-name {
  anti-virus {
    http-profile profile-name;
    ftp {
      upload-profile profile-name;
      download-profile profile-name;
    }
    smtp-profile profile-name;
    pop3-profile profile-name;
    imap-profile profile-name;
  }
  content-filtering {
    http-profile profile-name;
    ftp {
      upload-profile profile-name;
      download-profile profile-name;
    }
    smtp-profile profile-name;
    pop3-profile profile-name;
    imap-profile profile-name;
  }
  anti-spam {
    smtp-profile profile-name;
  }
  web-filtering {
    http-profile profile-name;
  }
  traffic-options {
    sessions-per-client {
      limit value;
      over-limit (log-and-permit | block);
    }
  }
}
}

```

Hierarchy Level [edit security]

Release Information	Statement introduced in Release 9.5 of JUNOS Software.
Description	<p>Configure UTM features.</p> <p>This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.</p>
Options	The remaining statements are explained separately.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

utm-policy

Syntax

```
utm-policy policy-name {
  anti-virus {
    http-profile profile-name;
    ftp {
      upload-profile profile-name;
      download-profile profile-name;
    }
    smtp-profile profile-name;
    pop3-profile profile-name;
    imap-profile profile-name;
  }
  content-filtering {
    http-profile profile-name;
    ftp {
      upload-profile profile-name;
      download-profile profile-name;
    }
    smtp-profile profile-name;
    pop3-profile profile-name;
    imap-profile profile-name;
  }
  anti-spam {
    smtp-profile profile-name;
  }
  web-filtering {
    http-profile profile-name;
  }
  traffic-options {
    sessions-per-client {
      limit value;
      over-limit (log-and-permit | block);
    }
  }
}
```

Hierarchy Level [edit security utm]

Release Information Statement introduced in Release 9.5 of JUNOS Ssoftware.

Description Configure a UTM policy for antivirus, antispam, content-filtering, and web-filtering protocols and attach this policy to a security profile to implement it.

This statement is supported on J Series devices and SRX100, SRX210, SRX240, and SRX650 devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

virus-detection

Syntax virus-detection {
 type (message | protocol-only);
 notify-mail-sender;
 custom-message;
 }

Hierarchy Level [edit security utm feature-profile anti-virus juniper-express-engine *profile-name* notification-options]
 [edit security utm feature-profile anti-virus kaspersky-lab-engine *profile-name* notification-options]

Release Information Statement introduced in Release 9.5 of JUNOS Software.

Description Configure a notification to send when a virus is detected.

This statement is supported on SRX100, SRX210, SRX240, SRX650, and J Series devices. (Note that express antivirus is not supported on SRX100 and J Series devices.)

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

vpn

Syntax `vpn vpn-name ;`
`bind-interface interface-name ;`
`df-bit (clear | copy | set);`
`establish-tunnels (immediately | on-traffic);`
`ike {`
 `gateway gateway-name ;`
 `idle-time seconds ;`
 `install-interval seconds ;`
 `ipsec-policy ipsec-policy-name ;`
 `no-anti-replay;`
 `proxy-identity {`
 `local ipv4-prefix ;`
 `remote ipv4-prefix ;`
 `service service-name ;`
 `}`
`}`
`manual {`
 `authentication {`
 `algorithm (hmac-md5-96 | hmac-sha1-96);`
 `key (ascii-text key | hexadecimal key);`
 `}`
 `encryption {`
 `algorithm (3des-cbc | aes-128-cbc | aes-192-cbc | aes-256-cbc | des-cbc);`
 `key (ascii-text key | hexadecimal key);`
 `}`
 `external-interface external-interface-name ;`
 `gateway ip-address ;`
 `protocol (ah | esp);`
 `spi spi-value ;`
`}`
`vpn-monitor {`
 `destination-ip ip-address ;`
 `optimized;`
 `source-interface interface-name ;`
`}`

Hierarchy Level [edit security ipsec]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure an IPsec VPN.

This statement is supported on J Series and SRX Series devices.

Options *vpn-name* —Name of the VPN.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

vpn-monitor

Syntax `vpn-monitor {
 destination-ip ip-address ;
 optimized;
 source-interface interface-name ;
 }`

Hierarchy Level [edit security ipsec vpn *vpn-name*]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure settings for VPN monitoring. This feature cannot be configured simultaneously with the **dead-peer-detection** statement. (This statement is not supported on dynamic VPN implementations.)

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
 security-control—To add this statement to the configuration.

Related Topics dead-peer-detection

vpn-monitor-options

Syntax	vpn-monitor-options { interval <i>seconds</i> ; threshold <i>number</i> ; }
Hierarchy Level	[edit security ipsec]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Configure VPN monitoring options. (This statement is not supported on dynamic VPN implementations.) This statement is supported on J Series and SRX Series devices.
Options	interval <i>seconds</i> —Interval at which to send ICMP requests to the peer. Range: 1 through 3600 seconds Default: 10 seconds threshold <i>number</i> —number of consecutive unsuccessful pings before the peer is declared unreachable. Range: 1 through 65536 pings Default: 10 pings
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

web-authentication

Syntax	web-authentication { client-match <i>user-or-group</i> ; }
Hierarchy Level	[edit security policies from-zone <i>zone-name</i> to-zone <i>zone-name</i> policy <i>policy-name</i> then permit firewall-authentication]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	Specify that the policy allows access to users who have previously been authenticated by Web authentication. Web authentication must be enabled on one of the addresses on the interface to which the HTTP request is redirected. This statement is supported on J Series and SRX Series devices.
Options	client-match <i>user-or-group</i> —(Optional) Username or user group name.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

web-redirect

Syntax	web-redirect;
Hierarchy Level	[edit security policies from-zone <i>zone-name</i> to zone <i>zone-name</i> policy <i>policy-name</i> then permit firewall-authentication pass-through]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Optionally, redirect HTTP requests to the device's internal Web server by sending a redirect HTTP response to the client system to reconnect to the Web server for user authentication. The interface on which the client's request arrived is the interface to which the request is redirected.</p> <p>Using this feature allows for a richer user login experience. For example, instead of a popup prompt asking for username and password, users can get the login page in a browser. Enabling web-redirect has the same effect as users typing the Web authentication IP address in a client browser. Using web-redirect provides a more seamless authentication experience because users do not need to know the Web authentication IP address but only the IP address of the resource they are trying to access. After the user has been authenticated this way, traffic from user's IP address is authenticated to go through the web-redirect method.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

weight

Syntax	weight { equal; firewall; idp; }
Hierarchy Level	[edit security forwarding-process application-services maximize-idp-sessions]]
Release Information	Statement introduced in Release 9.6 of JUNOS Software.
Description	<p>If you are deploying IDP policies, you can tune the device to increase IDP session capacity. By using the provided commands to change the way the system allocates resources, you can achieve a higher IDP session capacity.</p> <p>This statement is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

wildcard

Syntax	wildcard <i>string</i> ;
Hierarchy Level	[edit security ike gateway <i>gateway-name</i> dynamic distinguished-name]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify that the values of a dynamic virtual private network (VPN) endpoint user's distinguished name's identity fields match the values in the group IKE user's distinguished name's fields. The order of the identity fields in the distinguished name strings does not matter during a match. (This statement is not supported on dynamic VPN implementations.)</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>string</i> —Distinguished name identity values to be matched.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

window-scale

Syntax	<pre>window-scale { match (equal greater-than less-than not-equal); value <i>window-scale-factor</i>; }</pre>
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol tcp]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Specify the scale factor that the session of the attack will use. The window scale extension expands the definition of the TCP window to 32 bits and then uses a scale factor to carry this 32-bit value in the 16-bit window field of the TCP header.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>match (equal greater-than less-than not-equal)—Match an operand.</p> <p>value <i>window-scale-factor</i>—Match the number of bytes. Range: 0 through 255</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

window-size

Syntax	<pre> window-size { match (equal greater-than less-than not-equal); value window-size; } </pre>
Hierarchy Level	[edit security idp custom-attack <i>attack-name</i> attack-type signature protocol tcp]
Release Information	Statement introduced in Release 9.3 of JUNOS Software.
Description	<p>Specify the number of bytes in the TCP window size.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>match (equal greater-than less-than not-equal)—Match an operand.</p> <p>value <i>window-size</i>—Match the number of bytes.</p> <p>Range: 0 through 65535</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

winnuke

Syntax	winnuke;
Hierarchy Level	[edit security screen ids-option <i>screen-name</i> tcp]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable detection of attacks on Windows NetBios communications. Packets are modified as necessary and passed on. Each WinNuke attack triggers an attack log entry in the event alarm log.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>security—To view this statement in the configuration.</p> <p>security-control—To add this statement to the configuration.</p>

xauth

Syntax	<pre>xauth { access-profile <i>profile-name</i> ; }</pre>
Hierarchy Level	[edit security ike gateway <i>gateway-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specifies that extended authentication (XAuth) is performed in addition to IKE authentication for remote users trying to access a VPN tunnel. Include a previously created access profile, created with the edit access profile statement, to specify the access profile to be used for authentication information.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	access-profile <i>profile-name</i> —Name of previously created access profile to reference for authentication information.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.
Related Topics	profile statement in the <i>JUNOS Systems Basics Configuration Guide</i> .

zones

```

Syntax zones {
    functional-zone {
        management {
            host-inbound-traffic {
                protocols {
                    protocol-name ;
                    protocol-name <except>;
                }
                system-services {
                    service-name ;
                    service-name <except>;
                }
            }
        }
        interfaces interface-name {
            host-inbound-traffic {
                protocols {
                    protocol-name ;
                    protocol-name <except>;
                }
                system-services {
                    service-name ;
                    service-name <except>;
                }
            }
        }
        screen screen-name ;
    }
}

security-zone zone-name {
    address-book {
        address address-name ( ip-prefix | dns-name dns-address-name );
        address-set address-set-name {
            address address-name ;
        }
    }
    host-inbound-traffic {
        protocols {
            protocol-name ;
            protocol-name <except>;
        }
        system-services {
            service-name ;
            service-name <except>;
        }
    }
    interfaces interface-name {
        host-inbound-traffic {
            protocols {
                protocol-name ;
                protocol-name <except>;
            }
        }
    }
}

```

```

        system-services {
            service-name ;
            service-name <except>;
        }
    }
}
screen screen-name ;
tcp-rst;
}
}

```

Hierarchy Level [edit security]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description A zone is a collection of interfaces for security purposes. All interfaces in a zone are equivalent from a security point of view. Configure the following zones:

- Functional zone—Special-purpose zone like management zone that can host dedicated management interfaces.
- Security zone—Most common type of zone that is used as a building block in policies.

This statement is supported on J Series and SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

Chapter 19

Services Hierarchy and Statements

This chapter presents the complete **services** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Where applicable, the chapter also provides a summary for each statement in the hierarchy that is exclusive to J Series and SRX Series devices. Statement summaries are organized alphabetically.

Use the statements in the **services** configuration hierarchy to configure real-time performance monitoring (RPM) on the J Series device. For configuration instructions, see the *JUNOS Software Administration Guide*. You can also use statements in this hierarchy to configure the Unified Access Control (UAC) application service on J Series and SRX Series devices. For configuration instructions, see the *JUNOS Software Security Configuration Guide*.

For information about these **services** statements that are shared across Juniper Networks devices, see the *JUNOS Services Interfaces Configuration Guide*.

This chapter contains the following sections:

- Services Configuration Statement Hierarchy on page 769

Services Configuration Statement Hierarchy

To configure RPM probes, use the following statements at the **[edit services]** hierarchy level. Statements exclusively for J Series and SRX Series devices running JUNOS Software are shown in bold font and are documented in this chapter.

Shared JUNOS Software statements in the **services** hierarchy are shown in normal font and are documented in the *JUNOS Services Interfaces Configuration Guide*.

```
services {
  rpm {
    bgp {
      data-fill;
      data-size;
      destination-port;
      history-size;
      logical-system logical-system-name [routing-instances routing-instance-name
    ];
      probe-count count ;
      probe-interval seconds ;
      probe-type type ;
      routing-instances instance-name ;
    }
  }
}
```

```

        test-interval interval ;
    }
    probe owner {
        test test-name {
            data-fill data ;
            data-size size ;
            destination-interface interface-name ;
            destination-port port ;
            dscp-code-point dscp-bits ;
            hardware-timestamp ;
            history-size size ;
            probe-count count ;
            probe-interval seconds ;
            probe-type type ;
            routing-instance instance-name ;
            source-address address ;
            target-url ( url | address ) ;
            test-interval interval ;
            thresholds thresholds ;
            traps traps ;
        }
    }
    probe-limit ;
    probe-server {
        icmp {
            destination-interface interface-name ;
        }
        tcp {
            destination-interface interface-name ;
            port port-number ;
        }
        udp {
            destination-interface interface-name ;
            port port-number ;
        }
    }
}

```

address

Syntax	address <i>ip-address</i> ;
Hierarchy Level	[edit services unified-access-control infranet-controller <i>hostname</i>]
Release Information	Statement introduced in Release 9.4 of JUNOS Software.
Description	<p>Specify the IP-address of the Infranet Controller with which the SRX Series devices should communicate.</p> <p>This statement is required when you are configuring the SRX Series device to act as a JUNOS Enforcer in a Unified Access Control (UAC) deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	services—To view this statement in the configuration. services-control—To add this statement to the configuration.
Related Topics	infranet-controller

ca-profile

Syntax	ca-profile <i>ca-profile</i> ;
Hierarchy Level	[edit services unified-access-control infranet-controller <i>hostname</i>]
Release Information	Statement introduced in Release 9.4 of JUNOS Software.
Description	<p>Specify the certificate authority (CA) of the certificate that the SRX Series device should use in communications with an Infranet Enforcer. The SRX Series device uses the CA to validate the Infranet Controller's server certificate.</p> <p>Use this statement if you have loaded certificates from multiple certificate authorities (CAs) onto your SRX Series device and you need to configure the device to act as a JUNOS Enforcer in a Unified Access Control (UAC) deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	services—To view this statement in the configuration. services-control—To add this statement to the configuration.
Related Topics	server-certificate-subject

infranet-controller

Syntax `infranet-controller hostname {
 address ip-address;
 port port-number;
 interface interface-name;
 password password;
 ca-profile ca-profile;
 server-certificate-subject subject;
 }`

Hierarchy Level `[edit services unified-access-control]`

Release Information Statement introduced in Release 9.4 of JUNOS Software.

Description Specify the hostname of the Infranet Controller with which the SRX Series devices should communicate. Possible values for this statement range from 1 to 31 characters.

This statement is required when you are configuring the SRX Series device to act as a JUNOS Enforcer in a Unified Access Control (UAC) deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.

This statement is supported on SRX Series devices.

Options The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level services—To view this statement in the configuration.
 services-control—To add this statement to the configuration.

Related Topics address

interface

Syntax	interface <i>interface-name</i> ;
Hierarchy Level	[edit services unified-access-control infranet-controller <i>hostname</i>]
Release Information	Statement introduced in Release 9.4 of JUNOS Software.
Description	<p>Specify the SRX Series interface through which the Infranet Controller should connect.</p> <p>This statement is required when you are configuring the SRX Series device to act as a JUNOS Enforcer in a Unified Access Control (UAC) deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	services—To view this statement in the configuration. services-control—To add this statement to the configuration.
Related Topics	port password

interval

Syntax	interval <i>seconds</i> ;
Hierarchy Level	[edit services unified-access-control]
Release Information	Statement introduced in Release 9.4 of JUNOS Software.
Description	<p>Specify the value in seconds that the SRX Series device should expect to receive a heartbeat signal from the Infranet Controller (default 30). This configuration statement is used in conjunction with the timeout statement to test active communications with the Infranet Controller. The value of the interval statement must be smaller than the value of timeout statement.</p> <p>Use this statement when you are configuring the SRX Series device to act as a JUNOS Enforcer in a Unified Access Control (UAC) deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	services—To view this statement in the configuration. services-control—To add this statement to the configuration.
Related Topics	timeout timeout-action

password

Syntax	password <i>password</i> ;
Hierarchy Level	[edit services unified-access-control infranet-controller <i>hostname</i>]
Release Information	Statement introduced in Release 9.4 of JUNOS Software.
Description	<p>Specify the password that the SRX Series device should send to the Infranet Controller in order to establish communications. The SRX Series device sends the password in its first message to the Infranet Controller.</p> <p>This statement is required when you are configuring the SRX Series device to act as a JUNOS Enforcer in a Unified Access Control (UAC) deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	services—To view this statement in the configuration. services-control—To add this statement to the configuration.
Related Topics	ca-profile server-certificate-subject

port

Syntax	<code>port <i>port-number</i>;</code>
Hierarchy Level	[edit services unified-access-control infranet-controller <i>hostname</i>]
Release Information	Statement introduced in Release 9.4 of JUNOS Software.
Description	<p>Specify the port on the Infranet Controller through which the SRX Series device should establish connections (default 11123). Possible values for this statement range from 1 to 65535.</p> <p>Use this statement when you are configuring the SRX Series device to act as a JUNOS Enforcer in a Unified Access Control (UAC) deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>services—To view this statement in the configuration.</p> <p>services-control—To add this statement to the configuration.</p>
Related Topics	<p>interface</p> <p>password</p>

server-certificate-subject

Syntax	server-certificate-subject <i>subject</i> ;
Hierarchy Level	[edit services unified-access-control infranet-controller <i>hostname</i>]
Release Information	Statement introduced in Release 9.4 of JUNOS Software.
Description	<p>Optionally specify the full subject name of the certificate that the SRX Series device should use to validate the Infranet Controller's server certificate.</p> <p>Use this statement when you are configuring the SRX Series device to act as a JUNOS Enforcer in a Unified Access Control (UAC) deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	services—To view this statement in the configuration. services-control—To add this statement to the configuration.
Related Topics	ca-profile password

test-only-mode

Syntax	test-only-mode (true false):
Hierarchy Level	[edit services unified-access-control]
Release Information	Statement introduced in Release 9.4 of JUNOS Software.
Description	<p>Configure the device in test-only mode to log access decisions from the Infranet Controller without actually enforcing the decisions. When configured in test-only mode, the SRX Series device enables all UAC traffic to go through so you can test the implementation without impeding traffic.</p> <p>Use this statement when you are configuring the SRX Series device to act as a JUNOS Enforcer in a Unified Access Control (UAC) deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.</p> <p>This statement is supported on SRX Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	services—To view this statement in the configuration. services-control—To add this statement to the configuration.

timeout

Syntax timeout *seconds*;

Hierarchy Level [edit services unified-access-control]

Release Information Statement introduced in Release 9.4 of JUNOS Software.

Description Specify the value in seconds that the SRX Series device should wait to get a heartbeat response from an Infranet Controller (default 60). If the SRX Series device does not receive a response in the specified time, it takes the action specified by the **timeout-action** configuration statement. It also tries again to make a connection to the Infranet Controller. After the second failed attempt, the SRX Series device fails over to the next Infranet Controller in the cluster. The SRX Series device continues trying to reach Infranet Controllers in the cluster until a connection is established.

Use this statement when you are configuring the SRX Series device to act as a JUNOS Enforcer in a Unified Access Control (UAC) deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller. When working with a cluster of Infranet Controllers, the JUNOS Enforcer connects to one at a time, failing over to other Infranet Controllers in the cluster as required.

This statement is supported on SRX Series devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level services—To view this statement in the configuration.
services-control—To add this statement to the configuration.

Related Topics interval

timeout-action

timeout-action

Syntax	timeout-action (close no-change open):
Hierarchy Level	[edit services unified-access-control]
Release Information	Statement introduced in Release 9.4 of JUNOS Software.
Description	<p>Specify what the SRX Series device should do when a timeout occurs and the device cannot connect to an Infranet Enforcer.</p> <p>Use this statement when you are configuring the SRX Series device to act as a JUNOS Enforcer in a Unified Access Control (UAC) deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>close—Close existing sessions and block any further traffic. This is the default option.</p> <p>no-change—Preserve existing sessions and require authentication for new sessions.</p> <p>open—Preserve existing sessions and allow new sessions access.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>services—To view this statement in the configuration.</p> <p>services-control—To add this statement to the configuration.</p>
Related Topics	<p>interval</p> <p>timeout</p>

traceoptions

Syntax	<pre>traceoptions { flag [(ipc config connect all)]; }</pre>
Hierarchy Level	[edit services unified-access-control]
Release Information	Statement introduced in Release 9.4 of JUNOS Software.
Description	<p>Define Unified Access Control (UAC) tracing options.</p> <p>Use this statement when you are configuring the SRX Series device to act as a JUNOS Enforcer in a Unified Access Control (UAC) deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.</p> <p>This statement is supported on SRX Series devices.</p>
Options	<p>flag—Trace operation to perform. To specify more than one trace option, include multiple flag statements.</p> <ul style="list-style-type: none"> ■ all—Trace with all flags enabled ■ config—Trace configuration information for all UAC-related configurations. This includes all configuration controlled through the unified-access-control statements at the edit services hierarchy level. It also includes other standard JUNOS configurations required for UAC enforcement such as zones, policies, and interfaces. ■ connect—Trace communications between the JUNOS Enforcer and the Infranet Controller, including SSL handshakes and timeouts. ■ ipc—Trace inter-process communications. Use this option to trace communications between the Routing Engine (RE) and the UACD enforcement plugin inside the Packet Forwarding Engine (PFE).
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>services—To view this statement in the configuration.</p> <p>services-control—To add this statement to the configuration.</p>

unified-access-control

Syntax

```
unified-access-control {
  infranet-controller hostname {
    address ip-address;
    port port-number;
    interface interface-name;
    password password;
    ca-profile ca-profile;
    server-certificate-subject subject;
  }
  timeout seconds;
  interval seconds;
  timeout-action (close | no-change | open):
test-only-mode (true | false):
  traceoptions {
    flag [ (ipc | config | connect | all) ];
  }
}
```

Hierarchy Level [edit services]

Release Information Statement introduced in Release 9.4 of JUNOS Software.

Description Use this statement to configure the SRX Series device to act as a JUNOS Enforcer in a Unified Access Control (UAC) deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.

This statement is supported on SRX Series devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level services—To view this statement in the configuration.
services-control—To add this statement to the configuration.

Chapter 20

SNMP Hierarchy and Statements

This chapter presents the complete **snmp** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Where applicable, the chapter also provides a summary for each statement in the hierarchy that is exclusive to J Series and SRX Series devices. Statement summaries are organized alphabetically.

Use the statements in the **snmp** configuration hierarchy to configure the Simple Network Management Protocol (SNMP) for monitoring device operation and performance. For configuration instructions, see the *JUNOS Software Administration Guide*.

For information about **snmp** statements that are not explained here—statements that are shared across Juniper Networks devices—see the *JUNOS Network Management Configuration Guide*.

This chapter contains the following sections:

- SNMP Configuration Statement Hierarchy on page 785

SNMP Configuration Statement Hierarchy

To configure SNMP, use the following statements at the **[edit snmp]** hierarchy level. Statements exclusively for J Series and SRX Series devices running JUNOS Software are shown in bold font and are documented in this chapter.

Shared JUNOS statements in the **snmp** hierarchy are shown in normal font and are documented in the *JUNOS Network Management Configuration Guide*.

```
snmp {
  client-list list-name;
  community community-name {
    authorization (read-only | read-write);
    client-list-name client-list-name;
    clients {
      address < restrict>;
    }
    routing-instances routing-instances {
      client-list-name client-list-name ;
      clients {
        address < restrict>;
      }
    }
  }
}
```

```

    view view-name ;
}
contact contact-information ;
description description ;
engine-id {
    (local engine-id | use-default-ip-address | use-mac-address);
}
filter-duplicates;
health-monitor {
    falling-threshold percentage ;
    interval seconds;
    rising-threshold percentage ;
}
interface [ interface-names ];
location location ;
logical-system-trap-filter;
name system-name ;
nonvolatile {
    commit-delay seconds ;
}
rmon {
    alarm index {
        description description ;
        falling-event-index index ;
        falling-threshold integer ;
        falling-threshold-interval seconds ;
        interval seconds ;
        request-type (get-next-request | get-request | walk-request);
        rising-event-index index ;
        rising-threshold integer ;
        sample-type (absolute-value | delta-value);
        startup-alarm (falling-alarm | rising-alarm | rising-or-falling-alarm);
        syslog-subtag text-string ;
        variable oid-variable ;
    }
    event index {
        community community-name ;
        description description ;
        type (log | log-and-trap | none | snmptrap);
    }
}
routing-instance access {
    access-list {
        routing-instance-name ;
    }
}
traceoptions {
    file filename <files number > <match regular-expression >
    <size maximum-file-size > <world-readable | no-world-readable>;
    flag flag ;
}
trap-group group-name {
    categories {
        authentication;
        chassis;
        configuration;
    }
}

```

```

    link;
    remote-operations;
    rmon-alarm;
    routing;
    services;
    sonet-alarms {
        alarm-name ;
    }
    startup;
    vrrp-events;
}
destination-port port-number ;
routing-instance instance-name ;
targets {
    address ;
}
version (all | v1 | v2);
}
trap-options {
    agent-address outgoing-interface;
    routing-instances instance-name {
        source-address address ;
    }
    source-address address ;
}
v3 {
    notify notify-name {
        tag tag-name ;
        type (inform | trap);
    }
    notify-filter notify-filter-name {
        oid oid-name <exclude | include>;
    }
    snmp-community community-index {
        community-name community-name ;
        context context ;
        security-name security-name ;
        tag tag-name ;
    }
    target-address target-address-name {
        address address ;
        address-mask address-mask ;
        port port-number ;
        retry-count number ;
        routing-instance instance-name ;
        tag-list tag-list ;
        target-parameters parameter-name ;
        timeout seconds ;
    }
    target-parameters target-parameters-name {
        notify-filter notify-filter-name ;{
            parameters {
                message-processing-model (v1 | v2c | v3);
                security-level (authentication | none | privacy);
                security-model (usm | v1 | v2c);
                security-name security-name ;
            }
        }
    }
}

```

```

    }
  }
  usm {
    local-engine {
      user user-name {
        authentication-md5 {
          authentication-password password ;
        }
        authentication-none;
        authentication-sha {
          authentication-password password ;
        }
        privacy-3des {
          privacy-password password ;
        }
        privacy-aes128 {
          privacy-password password ;
        }
        privacy-des {
          privacy-password password ;
        }
        privacy-none;
      }
    }
    remote-engine {
      user user-name {
        authentication-md5 {
          authentication-password password ;
        }
        authentication-none;
        authentication-sha {
          authentication-password password ;
        }
        privacy-3des {
          privacy-password password ;
        }
        privacy-aes128 {
          privacy-password password ;
        }
        privacy-des {
          privacy-password password ;
        }
        privacy-none;
      }
    }
  }
  vacm {
    access {
      group group-name {
        context-prefix prefix {
          security-model (any | usm | v1 | v2c) {
            security-level (authentication | none | privacy) {
              context-match (exact | prefix);
              notify-view notify-view-name ;
              read-view read-view-name ;
              write-view write-view-name ;
            }
          }
        }
      }
    }
  }
}

```

```

    }
  }
}
default-context-prefix {
  security-model (any | usm | v1 | v2c) {
    security-level (authentication | none | privacy) {
      context-match (exact | prefix);
      notify-view notify-view-name ;
      read-view read-view-name ;
      write-view write-view-name ;
    }
  }
}
}
}
}
security-to-group {
  security-model (usm | v1 | v2c) {
    security-name security-name {
      group group-name ;
    }
  }
}
}
}
}
view view-name {
  oid oid-name {
    <exclude | include>;
  }
}
}
}
}

```

authorization

Syntax	authorization (read-only read-write);
Hierarchy Level	[edit snmp community <i>community-name</i>]
Release Information	Statement modified in Release 8.5 of JUNOS Software.
Description	<p>Set the access authorization for SNMP Get, GetBulk, GetNext, and Set requests.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>read-write—Enable all requests, including Set requests. You must configure a view to enable Set requests.</p> <p>read-only—Enable Get, GetNext, and GetBulk requests. This is the default option.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Administration Guide</i> .
Required Privilege Level	<p>snmp—To view this statement in the configuration.</p> <p>snmp-control—To add this statement to the configuration.</p>

client-list-name

Syntax	client-list-name <i>client-list-name</i> ;
Hierarchy Level	[edit snmp community <i>community-name</i>]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Specify the name of the list of SNMP network management system (NSM) clients that are authorized to collect information about network operations. You cannot use an SNMP client list and individually configured SNMP clients in the same configuration.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>client-list-name</i> — Name of the client list. Client list is the list of IP address prefixes defined with the prefix-list statement in the policy-options hierarchy.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>snmp—To view this statement in the configuration.</p> <p>snmp-control—To add this statement to the configuration.</p>

Chapter 21

System Hierarchy and Statements

This chapter presents the complete **system** configuration hierarchy available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Where applicable, the chapter also provides a summary for each statement in the hierarchy that is exclusive to J Series and SRX Series devices. Statement summaries are organized alphabetically.

Use the statements in the **system** configuration hierarchy to configure system management functions, including the device's hostname, address, and domain name; the addresses of the Domain Name System (DNS) servers; user login accounts, including user authentication and the root-level user account; time zones and Network Time Protocol (NTP) properties; and properties of the device's auxiliary and console ports. For configuration instructions, see the *JUNOS Software Security Configuration Guide* and the *JUNOS Software Administration Guide*.

For information about **system** statements that are not explained here—statements that are shared across Juniper Networks devices—see the *JUNOS System Basics Configuration Guide* and the *JUNOS Network Interfaces Configuration Guide*.

This chapter includes the following sections:

- System Configuration Statement Hierarchy on page 791

System Configuration Statement Hierarchy

To configure system properties, use the following statements at the [edit **system**] hierarchy level. Statements exclusively for J Series and SRX Series devices running JUNOS Software are shown in bold font and are documented in this chapter.

Shared JUNOS statements in the **system** hierarchy are shown in normal font and are documented in the *JUNOS System Basics Configuration Guide* and the *JUNOS Network Interfaces Configuration Guide*.

```
system {
  accounting {
    destination {
      radius {
        server {
          server-address {
            accounting-port port-number ;
            retry number ;
            secret password ;
```

```

        source-address address ;
        timeout seconds ;
    }
}
}
tacplus {
    server server-address {
        port port-number ;
        secret password ;
        single-connection;
        timeout seconds ;
    }
}
}
events [login change-log interactive-commands];
traceoptions {
    file filename <files number > <size maximum-file-size >
    <world-readable | no-world-readable>;
    flag flag ;
}
}
archival {
    configuration {
        archive-sites {
            ftp://< username >:< password >@< host >:< port >/< url-path >;
            scp: // < username >:< password >@< host >:< port >/< url-path >;
        }
        transfer-interval interval ;
        transfer-on-commit;
    }
}
arp {
    aging-timer minutes;
    passive-learning;
}
authentication-order [ authentication-methods ];
autoinstallation {
    configuration-servers url {
        password password ;
    }
    interfaces interface-name {
        bootp;
        rarp;
        slarp;
    }
}
}
backup-router address <destination destination-address>;
building name;
commit synchronize;
(compress-configuration-files | no-compression-configuration-files);
default-address-selection;
diag-port-authentication (encrypted-password "password" | plain-text-password);
domain-name domain-name ;
domain-search [ domain-list ];
dump-device {
    boot-device;
}

```



```

compact-flash;
removable-compact-flash;
usb;
}
encrypt-configuration-files;
host-name hostname;
inet6-backup-router address <destination destination-address >;
internet-options address <destination destination-address >;
internet-options {
    (gre-path-mtu-discovery | no-gre-path-mtu-discovery);
    icmpv4-rate-limit {
        bucket-size seconds ;
        packet-rate packet-rate ;
    }
    icmpv6-rate-limit {
        bucket-size seconds ;
        packet-rate packet-rate ;
    }
    (ipip-path-mtu-discovery | no-ipip-path-mtu-discovery);
    no-tcp-rfc1323;
    no-tcp-rfc1323-paws;
    (path-mtu-discovery | no-path-mtu-discovery);
    source-quench;
    source-port upper-limit < upper-limit >;
    (source-quench | no-source-quench);
    tcp-drop-synfin-set;
}
location {
    altitude feet ;
    building name ;
    country-code code ;
    floor number ;
    hcoord horizontal-coordinate ;
    lata service-area ;
    latitude degrees ;
    longitude degrees ;
    npa-nxx number ;
    postal-code postal-code ;
    rack number ;
    vcoord vertical-coordinate ;
}
login {
    announcement text ;
    class class-name {
        allow-commands " regular-expression ";
        allow-configuration " regular-expression ";
        deny-commands " regular-expression ";
        deny-configuration " regular-expression ";
        idle-timeout minutes ;
        login-alarms;
        login-tip;
        permissions [ permissions ];
    }
    message text ;
    password {
        change-type (set-transitions | character-set);

```

```

        format (md5 | sha1 | des);
        maximum-length length;
        minimum-changes number;
        minimum-length length;
    }
    user username {
        authentication {
            (encrypted-password "password" | plain-text-password);
            ssh-dsa " public-key ";
            ssh-rsa " public-key ";
        }
        class class-name ;
        full-name complete-name ;
        uid uid-value ;
    }
    retry-options {
        backoff-threshold number ;
        backoff-factor seconds ;
        minimum-time seconds ;
        tries-before-disconnect number ;
    }
}
max-configurations-on-flash number ;
mirror-flash-on-disk;
name-server ip-address ;
no-compress-configuration-files;
no-multicast-echo;
no-redirects;
no-saved-core-context;
ntp {
    authentication-key key-number type type value password ;
    boot-server (NTP) address ;
    broadcast < address > <key key-number > <version value > <ttl value >;
    broadcast-client;
    multicast-client < address >;
    peer address <key key-number > <version value > <prefer>;
    server address <key key-number > <version value > <prefer>;
    source-address source-address ;
    trusted-key [ key-numbers ];
}
pic-console-authentication {
    encrypted-password encrypted-password ;
    plain-text-password;
}
ports {
    auxiliary {
        disable;
        insecure;
        type terminal-type ;
    }
    console {
        disable;
        insecure;
        log-out-on-disconnect;
        type terminal-type ;
    }
}

```

```

}
processes {
    audit-process;
    bootp;
    chassis-control (enable | disable) failover failover-option;
    class-of-service (enable | disable) failover failover-option;
    craft-control (enable | disable) failover failover-option;
    dfc-daemon;
    dhcp (enable | disable) failover failover-option;
    dialer-services;
    disk-monitoring (enable | disable) failover failover-option;
    ecc-error-logging (enable | disable) failover failover-option;
    event-processing (enable | disable) failover failover-option;
    firewall (enable | disable) failover failover-option;
    firewall-authentication-service (enable | disable);
    forwarding;
    general-authentication-service {
        (enable | disable);
        traceoptions {
            file filename {
                files number;
                match regular-expression;
                size maximum-file-size;
                <world-readable | no-world-readable>;
            }
            flag flag;
        }
    }
}
ilmi;
inet-process (enable | disable) failover failover-option;
init;
interface-control (enable | disable) failover failover-option;
isdn-signaling;
kernel-replication (enable | disable) failover failover-option;
l2ald-service;
l2tp-service (enable | disable) failover failover-option;
lACP;
link-management (enable | disable) failover failover-option;
logical-system-mux;
mib-process (enable | disable) failover failover-option;
named;
network-security (enable | disable);
ntp (enable | disable) failover failover-option;
periodic-packet-services;
pfe;
pgm (enable | disable) failover failover-option;
pic-services-logging (enable | disable) failover failover-option;
ppp;
pppoe (enable | disable) failover failover-option;
redundancy-device (enable | disable) failover failover-option;
remote-operations (enable | disable) failover failover-option;
routing (enable | disable) failover failover-option;
sampling (enable | disable) failover failover-option;
service-deployment (enable | disable) failover failover-option;
snmp (enable | disable) failover failover-option;
sonet-aps;

```

```

usb-control (enable | disable) failover failover-option;
vrrp;
watchdog (enable | disable) failover failover-option;
wan-acceleration {
  (enable | disable);
  traceoptions {
    file filename {
      files number;
      match regular-expression;
      size maximum-file-size;
      <world-readable | no-world-readable>;
    }
    flag flag;
  }
}
web-management (enable | disable) failover failover-option;
}
radius-options {
  attributes {
    nas-ip-address nas-ip-address ;
  }
}
radius-server server-address {
  accounting-port number ;
  port number ;
  retry number ;
  secret password ;
  source-address source-address ;
  timeout seconds ;
}
root-authentication {
  (encrypted-password " password " | plain-text-password);
  ssh-dsa " public-key ";
  ssh-rsa " public-key ";
}
(saved-core-context | no-saved-core-context);
saved-core-files number;
scripts {
  commit {
    allow-transients;
    file filename .xsl {
      optional;
      refresh;
      refresh-from url ;
      source url ;
    }
    refresh;
    refresh-from url ;
    traceoptions {
      file filename <files number > <size maximum-file-size >
      <world-readable | no-world-readable>;
      flag flag ;
    }
  }
}
load-scripts-from-flash;
op {

```

```

file filename .xsl {
    arguments name {
        description cli-help-text ;
    }
    command filename-alias ;
    description cli-help-text ;
    refresh;
    refresh-from url ;
    source url ;
}
refresh;
refresh-from url ;
traceoptions {
    file filename <files number > <size maximum-file-size >;
    flag flag ;
}
}
}
services {
    dhcp {
        boot-file filename ;
        boot-server ( address | hostname );
        domain-name domain-name ;
        domain-search [ domain-list ];
        default-lease-time seconds;
        maximum-lease-time seconds;
        name-server {
            address ;
        }
        option {
            [ ( id-number option-type option-value ) | ( id-number array option-type
              option-values ) ];
        }
        pool {
            subnet-address ( address/netmask ) {
                address-range {
                    high address;
                    low address;
                }
                exclude-address {
                    address ;
                }
            }
        }
        propagate-settings propagate-settings;
    }
    propagate-settings propagate-settings;
    router {
        address ;
    }
    static-binding MAC-address {
        fixed-address {
            address ;
        }
        host hostname ;
        client-identifier (ascii client-id | hexadecimal client-id);
    }
}

```

```

server-identifier address ;
wins-server {
    address;
}
}
finger {
    <connection-limit limit >;
    <rate-limit limit >;
}
ftp {
    <connection-limit limit >;
    <rate-limit limit >;
}
netconf {
    ssh {
        <connection-limit number > ;
        <rate-limit number >;
    }
}
outbound-ssh {
    application-id application-id {
        device-id device-id ;
        ip-address {
            port port-number ;
            retry number ;
            timeout value ;
        }
        keep-alive number ;
        reconnect-strategy (in-order | sticky);
        secret secret ;
        services {
            netconf;
        }
    }
}
traceoptions {
    file filename {
        <files number > ;
        <match regular-expression >;
        <size maximum-file-size >;
        <world-readable | no-world-readable>;
    }
    flag flag ;
}
}
service-deployment {
    local-certificate certificate-name ;
    servers server-address {
        port-number port-number ;
    }
    source-address source-address ;
    traceoptions {
        flag flag ;
    }
}
}
ssh {
    <connection-limit limit >;

```

```

    protocol-version [v1 v2];
    <rate-limit limit >;
    root-login (allow | deny | deny-password);
}
telnet {
    <connection-limit limit >;
    <rate-limit limit >;
}
web-management {
    http {
        interface [ interface-name s];
        port port ;
    }
    https {
        interface [ interface-names ];
        local-certificate name ;
        pki-local-certificate name;
        port port ;
        system-generated-certificate;
    }
    session {
        idle-timeout [ minutes ];
        session-limit [ session-limit ];
    }
}
xnm-clear-text {
    connection-limit limit ;
    rate-limit limit ;
}
xnm-ssl {
    connection-limit limit ;
    local-certificate name ;
    rate-limit limit ;
}
}
static-host-mapping hostname {
    alias [ alias ];
    inet [ address ];
    inet6 [address];
    sysid system-identifier ;
}
syslog {
    archive {
        archive-sites url;
        <files number >;
        <size maximum-file-size >;
        <world-readable | no-world-readable>;
    }
    console {
        facility severity ;
    }
}
file filename {
    facility severity ;
    explicit-priority;
    match " regular-expression ";
    archive {

```

```

        files number ;
        size maximum-file-size ;
        start-time;
        transfer-interval;
        <world-readable | no-world-readable>;
    }
}
host ( hostname | other-routing-engine | scc-master) {
    any;
    authorization;
    change-log;
    conflict-log;
    daemon;
    dfc;
    external;
    firewall;
    ftp;
    interactive-commands;
    kernel;
    pfe;
    user;
    explicit-priority;
    facility-override facility ;
    log-prefix string ;
    match " regular-expression ";
}
source-address source-address {
    archive;
    console;
    file;
    host;
    time-format;
    user;
}
time-format (year | millisecond | year millisecond);
user ( username | *) {
    match < regular-expression >;
}
}
tacplus-options service-name service-name ;
tacplus-server server-address {
    port port-number;
    secret password ;
    single-connection;
    source-address source-address ;
    timeout seconds ;
}
time-zone (GMT hour-offset | time-zone );
}

```


firewall-authentication-service

Syntax	firewall-authentication-service (enable disable);
Hierarchy Level	[edit system processes]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable or disable the firewall authentication service process.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>enable—Start the firewall authentication service process.</p> <p>disable—Stop the firewall authentication service process.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>system—To view this statement in the configuration.</p> <p>system-control—To add this statement to the configuration.</p>

general-authentication-service

Syntax general-authentication-service {
 (enable | disable);
 traceoptions {
 file *filename* {
 <files *number* >;
 <match *regular-expression*>;
 <size *maximum-file-size*>;
 <world-readable | no-world-readable>;
 }
 flag *flag* ;
 }
 }

Hierarchy Level [edit system processes]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Enable or disable the general authentication process.

This statement is supported on J Series and SRX Series devices.

Options enable—Start the general authentication service process.

disable—Stop the general authentication service process.

The remaining statements are explained separately.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Software Security Configuration Guide*.

Required Privilege Level system—To view this statement in the configuration.
 system-control—To add this statement to the configuration.

network-security

Syntax	network-security (enable disable);
Hierarchy Level	[edit system processes]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable or disable the network security process on the device.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>enable—Start the network security process.</p> <p>disable—Stop the network security process.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>system—To view this statement in the configuration.</p> <p>system-control—To add this statement to the configuration.</p>

pki-local-certificate

Syntax	pki-local-certificate <i>name</i> ;
Hierarchy Level	[edit system services web-management https]
Release Information	Statement introduced in Release 9.1 of JUNOS Software.
Description	<p>Specify the name of the certificate that is generated by public key infrastructure (PKI) and authenticated by certificate authority (CA).</p> <p>This statement is supported on J Series devices.</p>
Options	<i>name</i> —Name of certificate.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	<p>system—To view this statement in the configuration.</p> <p>system-control—To add this statement to the configuration.</p>

Port

See the following sections:

- port (reverse ssh)
- port (reverse telnet)

port (reverse ssh)

Syntax reverse ssh port 5000

Hierarchy Level [edit system services reverse ssh port 5000]

Release Information Statement introduced in Release 9.6 of JUNOS Software.

Description Reverse SSH allows you to configure a device to listen on a specific port for telnet and SSH (secure shell) services. When you connect to that port, the device provides an interface to the auxiliary port on the device. You can control the port that is used. By default, port 2901 is used.

This statement is supported on J Series devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Administration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

port (reverse telnet)

Syntax reverse telnet port 6000

Hierarchy Level [edit system services reverse telnet port 6000]

Release Information Statement introduced in Release 9.6 of JUNOS Software.

Description Reverse Telnet allows you to configure a device to listen on a specific port for telnet and SSH (secure shell) services. When you connect to that port, the device provides an interface to the auxiliary port on the device. You can control the port that is used. By default, port 2900 is used.

This statement is supported on J Series devices.

Usage Guidelines For configuration instructions and examples, see the *JUNOS Administration Guide*.

Required Privilege Level security—To view this statement in the configuration.
security-control—To add this statement to the configuration.

propagate-settings

Syntax	<code>propagate-settings <i>logical-interface-name</i> ;</code>
Hierarchy Level	[edit system services dhcp], [edit system services dhcp pool]
Release Information	Statement introduced in Release 8.5 of JUNOS Software.
Description	<p>Enable or disable the propagation of TCP/IP settings received on the device acting as Dynamic Host Configuration Protocol (DHCP) client. The settings can be propagated to the server pool running on the device. Use the system services dhcp statement to set this feature globally. Use the system services dhcp pool statement to set the feature for the address pool and override the global setting.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<i>logical-interface-name</i> —Name of the logical interface to receive TCP/IP settings from the external network for propagation to the DHCP pool running on the device.
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Administration Guide</i> .
Required Privilege Level	system—To view this statement in the configuration. system-control—To add this statement to the configuration.

reverse ssh

Syntax	<code>reverse ssh</code>
Hierarchy Level	[edit system services reverse ssh]
Release Information	Statement introduced in Release 9.6 of JUNOS Software.
Description	<p>Reverse Telnet allows you to configure a device to listen on a specific port for telnet and SSH (secure shell) services. When you connect to that port, the device provides an interface to the auxiliary port on the device. Use reverse SSH to encrypt the reverse Telnet communication between the device and the client.</p> <p>This statement is supported on J Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Administration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

reverse telnet

Syntax	reverse telnet
Hierarchy Level	[edit system services reverse telnet]
Release Information	Statement introduced in Release 9.6 of JUNOS Software.
Description	<p>Reverse Telnet allows you to configure a device to listen on a specific port for telnet and SSH (secure shell) services. When you connect to that port, the device provides an interface to the auxiliary port on the device.</p> <p>This statement is supported on J Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Administration Guide</i> .
Required Privilege Level	security—To view this statement in the configuration. security-control—To add this statement to the configuration.

system-generated-certificate

Syntax	system-generated-certificate;
Hierarchy Level	[edit system services web-management https]
Description	<p>Automatically generated self-signed certificate</p> <p>This statement is supported on J Series devices.</p>
Usage Guidelines	For configuration instructions and examples, see the <i>JUNOS Software Security Configuration Guide</i> .
Required Privilege Level	system—To view this statement in the configuration. system-control—To add this statement to the configuration.

traceoptions

See the following sections:

- `traceoptions` (General Authentication Service) on page 808
- `traceoptions` (WAN Acceleration) on page 810

traceoptions (General Authentication Service)

Syntax traceoptions {
 file *filename* {
 <files *number*>;
 <match *regular-expression*>;
 <size *maximum-file-size*>;
 <world-readable | no-world-readable>;
 }
 flag *flag* ;
 }

Hierarchy Level [edit system processes general-authentication-service]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure tracing operations for general-authentication-service processes.

This statement is supported on J Series and SRX Series devices.

Options file *filename* —By default, the name of the log file that records trace output is the name of the process being traced. Use this option to specify another name.

files *number* —(Optional) Specify the maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed to *trace-file .0*, then *trace-file.1*, and so on, until the maximum number of trace files is reached. The oldest archived file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the size option and a filename.

Range: 2 through 1000 files

Default: 10 files

match *regular-expression* —(Optional) Refine the output to include lines that contain the regular expression.

size *maximum-file-size* —(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file .0*. When the *trace-file* again reaches its maximum size, *trace-file .0* is renamed *trace-file .1* and *trace-file* is renamed *trace-file .0*. This renaming scheme continues until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the files option and filename.

Syntax: x k to specify KB, x m to specify MB, or x g to specify GB

Range: 10 KB through 1 GB

Default: 128 KB

world-readable | no-world-readable—(Optional) By default, log files can be accessed only by the user who configures the tracing operation. The **world-readable** option

enables any user to read the file. To explicitly set the default behavior, use the `no-world-readable` option.

flag *flag* —Tracing operation to perform. To specify more than one tracing operation, include multiple **flag** statements. You can include the following flags.

- **all** —Trace with all flags enabled
 - **configuration** —Trace configuration events
 - **framework**—Trace authentication framework events
 - **ldap** —Trace ldap authentication events
 - **local-authentication**—Trace local authentication events
 - **radius** —Trace radius authentication events

Required Privilege Level `trace`—To view this statement in the configuration.
`trace-control`—To add this statement to the configuration.

traceoptions (WAN Acceleration)

Syntax traceoptions {
 file *filename* {
 <files *number*> ;
 <match *regular-expression*>;
 <size *maximum-file-size*>;
 <world-readable | no-world-readable>;
 }
 flag *flag* ;
 }

Hierarchy Level [edit *system* processes wan-acceleration]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Configure tracing operations for WXC Integrated Services Module (ISM 200) processes.

This statement is supported on J Series and SRX Series devices.

Options file *filename* —By default, the name of the log file that records trace output is the name of the process being traced. Use this option to specify another name.

files *number* —(Optional) Specify the maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed to *trace-file .0*, then *trace-file.1* , and so on, until the maximum number of trace files is reached. The oldest archived file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the size option and a filename.

Range: 2 through 1000 files

Default: 10 files

match *regular-expression* —(Optional) Refine the output to include lines that contain the regular expression.

size *maximum-file-size* —(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file .0*. When the *trace-file* again reaches its maximum size, *trace-file .0* is renamed *trace-file .1* and *trace-file* is renamed *trace-file .0*. This renaming scheme continues until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the files option and filename.

Syntax: x k to specify KB, x m to specify MB, or x g to specify GB

Range: 10 KB through 1 GB

Default: 128 KB

world-readable | no-world-readable—(Optional) By default, log files can be accessed only by the user who configures the tracing operation. The **world-readable** option

enables any user to read the file. To explicitly set the default behavior, use the `no-world-readable` option.

flag *flag* —Tracing operation to perform. To specify more than one tracing operation, include multiple **flag** statements. You can include the following flags.

- **all**—Trace all options
 - **configuration** — Trace configuration events
 - **fpc-ipc**—Trace FPC interprocess communication messages
 - **fpc-ipc-heart-beat**—Trace FPC interprocess heart beat messages
 - **memory**—Trace memory allocation or deallocation messages
 - **ssam**—Trace state synchronization and management events
 - **wx-login**—Trace WXC ISM200 login events

Usage Guidelines For configuration instructions and examples, see the *WXC Integrated Services Module Installation and Configuration Guide*.

Required Privilege Level `trace`—To view this statement in the configuration.
`trace-control`—To add this statement to the configuration.

wan-acceleration

Syntax `wan-acceleration (enable | disable);`

Hierarchy Level [edit system processes]

Release Information Statement introduced in Release 8.5 of JUNOS Software.

Description Enable or disable the WXC Integrated Services Module (ISM 200) for WAN acceleration.

This statement is supported on J Series and SRX Series devices.

Options `enable`—Turn on the WXC ISM200.

`disable`—Turn off the WXC ISM200.

Usage Guidelines For configuration instructions and examples, see the *WXC Integrated Services Module Installation and Configuration Guide*.

Required Privilege Level `system`—To view this statement in the configuration.
`system-control`—To add this statement to the configuration.

Part 2

Operational Commands

- Clear Commands on page 815
- Request Commands on page 879
- Restart Commands on page 907
- Show Commands on page 909

Chapter 22

Clear Commands

This chapter presents the **clear** operational commands available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Use the **clear** operational commands to clear software processes on the device. Operational commands are organized alphabetically.

The commands shown in this chapter are exclusive to J Series and SRX Series devices. For information about **clear** commands that are not explained here—commands that are shared across Juniper Networks devices—see the *JUNOS System Basics and Services Command Reference*.

clear chassis cluster control-plane statistics

Syntax	clear chassis cluster control-plane statistics
Release Information	Command introduced in Release 9.3 of JUNOS Software.
Description	<p>Clear the control plane statistics of a chassis cluster.</p> <p>This command is supported on J Series and SRX Series devices.</p>
Required Privilege Level	clear
Related Topics	show chassis cluster control-plane statistics
List of Sample Output	clear chassis cluster control-plane statistics on page 816
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear chassis cluster control-plane statistics	<pre>user@host> clear chassis cluster control-plane statistics Cleared control-plane statistics</pre>

clear chassis cluster data-plane statistics

Syntax	clear chassis cluster data-plane statistics
Release Information	Command introduced in Release 9.3 of JUNOS Software.
Description	<p>Clear the data plane statistics of a chassis cluster.</p> <p>This command is supported on J Series and SRX Series devices.</p>
Required Privilege Level	clear
Related Topics	show chassis cluster data-plane statistics
List of Sample Output	clear chassis cluster data-plane statistics on page 817
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear chassis cluster data-plane statistics	<pre>user@host> clear chassis cluster data-plane statistics Cleared data-plane statistics</pre>

clear chassis cluster failover-count

Syntax	clear chassis cluster failover-count
Release Information	Command introduced in Release 9.3 of JUNOS Software.
Description	Clear the failover count of all redundancy-groups. This command is supported on J Series and SRX Series devices.
Required Privilege Level	clear
Related Topics	request chassis cluster failover node request chassis cluster failover reset show chassis cluster status
List of Sample Output	show chassis cluster status on page 818 clear chassis cluster failover-count on page 818 show chassis cluster status on page 818
Output Fields	When you enter this command, you are provided feedback on the status of your request.
Sample Output	The following example displays the redundancy groups before and after the failover-counts are cleared.

```

show chassis cluster status
user@host> show chassis cluster status

Cluster ID: 3
Node name      Priority    Status    Preempt  Manual failover

Redundancy group: 0 , Failover count: 1
node0          200        secondary no        no
node1          100        primary   no        no

Redundancy group: 1 , Failover count: 2
node0          100        primary   no        no
node1          10         secondary no        no

```

```

clear chassis cluster failover-count
user@host> clear chassis cluster failover-count
Cleared failover-count for all redundancy-groups

```

```

show chassis cluster status
user@host> show chassis cluster status

Cluster ID: 3
Node name      Priority    Status    Preempt  Manual failover

Redundancy group: 0 , Failover count: 0
node0          200        secondary no        no
node1          100        primary   no        no

Redundancy group: 1 , Failover count: 0
node0          100        primary   no        no

```

```
node1      10      secondary  no      no
```

clear chassis cluster statistics

Syntax	clear chassis cluster statistics
Release Information	Command introduced in Release 9.3 of JUNOS Software.
Description	<p>Clear the control plane and data plane statistics of a chassis cluster.</p> <p>This command is supported on J Series and SRX Series devices.</p>
Required Privilege Level	clear
Related Topics	show chassis cluster statistics
List of Sample Output	clear chassis cluster statistics on page 820
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear chassis cluster statistics	<pre>user@host> clear chassis cluster statistics Cleared control-plane statistics Cleared data-plane statistics</pre>

clear network-access requests pending

Syntax	clear network-access requests pending <index <i>index-number</i> >
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	Clear or cancel all pending authentication requests. This command is supported on J Series and SRX Series devices.
Options	none—Clear all network access requests pending. index <i>index-number</i> —Clear the specified authentication request. To display index numbers, use the show network-access requests pending command.
Required Privilege Level	clear
Related Topics	show network-access requests pending
List of Sample Output	clear network-access requests pending on page 821
Output Fields	This command produces no output.
Sample Output	The following example displays the network access requests that are pending, clears the requests, and displays the results of the clear operation:
clear network-access requests pending	<pre> user@host> show network-access requests pending Information about pending authentication entries Total pending authentication requests: 2 Index User Status 1 Sun Processing 2 Sam Processed user@host> clear network-access requests pending user@host> show network-access requests pending Information about pending authentication entries Total pending authentication requests: 2 Index User Status 1 Sun Cancelled by Admin 2 Sam Cancelled by Admin </pre>

clear network-access requests statistics

Syntax	clear network-access requests statistics
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	Clear general authentication statistics for the configured authentication type. This command is supported on J Series and SRX Series devices.
Required Privilege Level	clear
Related Topics	authentication-order show network-access requests statistics
List of Sample Output	clear network-access requests statistics on page 822
Output Fields	This command produces no output.
clear network-access requests statistics	user@host> clear network-access requests statistics

clear network-access securid-node-secret-file

Syntax	clear network-access securid-node-secret-file
Release Information	Command introduced in Release 9.1 of JUNOS Software.
Description	<p>Delete the node secret file for the SecurID authentication type.</p> <p>This command is supported on J Series and SRX Series devices.</p>
Required Privilege Level	clear
Related Topics	<p>configuration-file</p> <p>securid-server</p> <p>show network-access securid-node-secret-file</p>
List of Sample Output	clear network-access securid-node-secret-file on page 823
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear network-access securid-node-secret-file	user@host> clear network-access securid-node-secret-file

clear security alg h323 counters

Syntax	clear security alg h323 counters <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; <i>node</i> options added in Release 9.0 of JUNOS Software.
Description	Clear information about H.323 Application Layer Gateway (ALG) counters. This command is supported on J Series devices.
Options	<p>none—Clear H.323 ALG counters.</p> <p><i>node</i>—(Optional) For chassis cluster configurations, clear H.323 counters on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	<p>h323</p> <p>show security alg h323 counters</p>
List of Sample Output	clear security alg h323 counters on page 824
Output Fields	This command produces no output.
clear security alg h323 counters	user@host> clear security alg h323 counters

clear security alg mgcp calls

Syntax	clear security alg mgcp calls <node (<i>node-id</i> all local primary)>
Release Information	Command modified in Release 9.2 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	<p>Clear information about Media Gateway Control Protocol (MGCP) Application Layer Gateway (ALG) calls.</p> <p>This command is supported on J Series and SRX Series devices.</p>
Options	<p>none—Clear all MGCP ALG calls.</p> <p>node—(Optional) For chassis cluster configurations, clear MGCP calls on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	<p>mgcp</p> <p>show security alg mgcp calls</p>
List of Sample Output	clear security alg mgcp calls on page 825
Output Fields	This command produces no output.
clear security alg mgcp calls	user@host> clear security alg mgcp calls

clear security alg mgcp counters

Syntax	clear security alg mgcp counters <node (<i>node-id</i> all local primary)>
Release Information	Command modified in Release 9.2 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear Media Gateway Control Protocol (MGCP) Application Layer Gateway (ALG) counter information. This command is supported on J Series and SRX Series devices.
Options	<p>none—Clear all MGCP ALG counters.</p> <p>node—(Optional) For chassis cluster configurations, clear MGCP counters on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	<p>mgcp</p> <p>show security alg mgcp counters</p>
List of Sample Output	clear security alg mgcp counters on page 826
Output Fields	This command produces no output.
clear security alg mgcp counters	user@host> clear security alg mgcp counters

clear security alg msrpc portmap

Syntax	clear security alg msrpc portmap
Release Information	Command introduced in Release 9.0 of JUNOS Software.
Description	<p>Clear information about Microsoft's implementation of the remote procedure call (MSRPC) mapping table.</p> <p>This command is supported on J Series devices.</p>
Required Privilege Level	clear
Related Topics	<p>msrpc</p> <p>show security alg msrpc</p>
List of Sample Output	clear security alg msrpc portmap on page 827
Output Fields	This command produces no output.
clear security alg msrpc portmap	user@host> clear security alg msrpc portmap

clear security alg sccp calls

Syntax	clear security alg sccp calls <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear Skinny Client Protocol (SCCP) Application Layer Gateway (ALG) call information. This command is supported on J Series devices.
Options	<p>none—Clear all SCCP ALG calls.</p> <p>node—(Optional) For chassis cluster configurations, clear SCCP calls on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	<p>sccp</p> <p>show security alg sccp calls</p>
List of Sample Output	clear security alg sccp calls on page 828
Output Fields	This command produces no output.
clear security alg sccp calls	user@host> clear security alg sccp calls

clear security alg sccp counters

Syntax	clear security alg sccp counters <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear Skinny Client Control Protocol (SCCP) Application Layer Gateway (ALG) counters. This command is supported on J Series devices.
Options	<p>none—Clear all SCCP ALG counters.</p> <p>node—(Optional) For chassis cluster configurations, clear SCCP counters on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	<p>sccp</p> <p>show security alg sccp counters</p>
List of Sample Output	clear security alg sccp counters on page 829
Output Fields	This command produces no output.
clear security alg sccp counters	user@host> clear security alg sccp counters

clear security alg sip calls

Syntax	clear security alg sip calls <node (<i>node-id</i> all local primary)>
Release Information	Command modified in Release 9.2 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear Session Initiation Protocol (SIP) Application Layer Gateway (ALG) call information. This command is supported on J Series and SRX Series devices.
Options	<p>none—Clear all SIP ALG calls.</p> <p>node—(Optional) For chassis cluster configuration, clear SIP calls on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	<p>sip</p> <p>show security alg sip calls</p>
List of Sample Output	clear security alg sip calls on page 830
Output Fields	This command produces no output.
clear security alg sip calls	user@host> clear security alg sip calls

clear security alg sip counters

Syntax	clear security alg sip counters <node (<i>node-id</i> all local primary)>
Release Information	Command modified in Release 9.2 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear Session Initiation Protocol (SIP) Application Layer Gateway (ALG) counters. This command is supported on J Series and SRX Series devices.
Options	<p>none—Clear all SIP ALG counters.</p> <p>node—(Optional) For chassis cluster configurations, clear SIP counters on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	<p>sip</p> <p>show security alg sip counters</p>
List of Sample Output	clear security alg sip counters on page 831
Output Fields	This command produces no output.
clear security alg sip counters	user@host> clear security alg sip counters

clear security alg sunrpc portmap

Syntax	clear security alg sunrpc portmap
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	Clear Sun Microsystem remote procedure call (SUNRPC) mapping table information. This command is supported on J Series devices.
Required Privilege Level	clear
Related Topics	sunrpc show security alg sunrpc portmap
List of Sample Output	clear security alg sunrpc portmap on page 832
Output Fields	This command produces no output.
clear security alg sunrpc portmap	user@host> clear security alg sunrpc portmap

clear security firewall-authentication history

Syntax	clear security firewall-authentication history <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear all firewall authentication history information. This command is supported on J Series and SRX Series devices.
Options	node—(Optional) For chassis cluster configurations, clear all firewall authentication history on a specific node (device) in the cluster. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	firewall-authentication (Security) show security firewall-authentication history
List of Sample Output	clear security firewall-authentication history on page 833 clear security firewall-authentication history node 1 on page 833
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security firewall-authentication history	<pre> user@host> clear security firewall-authentication history node0: ----- node1: ----- </pre>
clear security firewall-authentication history node 1	<pre> user@host> clear security firewall-authentication history node 1 node1: ----- </pre>

clear security firewall-authentication history address

Syntax	clear security firewall-authentication history address <i>address</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear firewall authentication history for this source IP address. This command is supported on J Series and SRX Series devices.
Options	<p>address <i>address</i> —Source IP address for which to clear firewall authentication history.</p> <p>none—Clear all firewall authentication history for this address.</p> <p>node—(Optional) For chassis cluster configurations, clear firewall authentication history for this address on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	<p>firewall-authentication (Security)</p> <p>show security firewall-authentication history address</p>
List of Sample Output	<p>clear security firewall-authentication history address 100.0.0.1 on page 834</p> <p>clear security firewall-authentication history address 100.0.0.1 node 1 on page 834</p>
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security firewall-authentication history address 100.0.0.1	<pre>user@host> clear security firewall-authentication history address 100.0.0.1 node0: ----- node1: -----</pre>
clear security firewall-authentication history address 100.0.0.1 node 1	<pre>user@host> clear security firewall-authentication history address 100.0.0.1 node 1 node1: -----</pre>

clear security firewall-authentication history identifier

Syntax	clear security firewall-authentication history identifier <i>identifier</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	<p>Clear firewall authentication history information for the authentication with this identifier.</p> <p>This command is supported on J Series and SRX Series devices.</p>
Options	<p>identifier <i>identifier</i> —Identification number of the authentication for which to clear authentication history.</p> <p>none—Clear all firewall authentication history information for the authentication with this identifier.</p> <p>node—(Optional) For chassis cluster configurations, clear firewall authentication history on a specific node for the authentication with this identifier.</p> <ul style="list-style-type: none"> ■ node-id —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	<p>firewall-authentication (Security)</p> <p>show security firewall-authentication history identifier</p>
List of Sample Output	<p>clear security firewall-authentication history identifier 2 on page 835</p> <p>clear security firewall-authentication history identifier 2 node 1 on page 835</p>
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security firewall-authentication history identifier 2	<pre> user@host> clear security firewall-authentication history identifier 2 node0: ----- node1: ----- </pre>
clear security firewall-authentication history identifier 2 node 1	<pre> user@host> clear security firewall-authentication history identifier 2 node 1 node1: ----- </pre>

clear security firewall-authentication users

Syntax	clear security firewall-authentication users <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; <i>node</i> options added in Release 9.0 of JUNOS Software.
Description	Clear firewall authentication tables for all users. This command is supported on J Series and SRX Series devices.
Options	<p><i>node</i>—(Optional) For chassis cluster configurations, clear firewall authentication details for all users on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ <i>all</i> —Clear all nodes. ■ <i>local</i> —Clear the local node. ■ <i>primary</i>—Clear the primary node.
Required Privilege Level	clear
Related Topics	show security firewall-authentication users
List of Sample Output	clear security firewall-authentication users on page 836 clear security firewall-authentication users node 1 on page 836
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security firewall-authentication users	<pre> user@host> clear security firewall-authentication users node 1 node0: ----- node1: ----- </pre>
clear security firewall-authentication users node 1	<pre> user@host> clear security firewall-authentication users node 1 node1: ----- </pre>

clear security firewall-authentication users address

Syntax	clear security firewall-authentication users address <i>address</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; <i>node</i> options added in Release 9.0 of JUNOS Software.
Description	Clear information about the users at the specified IP address that are currently authenticated. This command is supported on J Series and SRX Series devices.
Options	<p><i>address address</i> —IP address for which to clear user firewall authentication information.</p> <p><i>none</i>—Clear all the firewall authentication information for users at this IP address.</p> <p><i>node</i>—(Optional) For chassis cluster configurations, clear user firewall authentication entries on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ <i>all</i> —Clear all nodes. ■ <i>local</i> —Clear the local node. ■ <i>primary</i>—Clear the primary node.
Required Privilege Level	clear
Related Topics	show security firewall-authentication users address
List of Sample Output	clear security firewall-authentication users address 100.0.0.1 on page 837 clear security firewall-authentication users address 100.0.0.1 node 1 on page 837
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security firewall-authentication users address 100.0.0.1	<pre> user@host> clear security firewall-authentication users address 100.0.0.1 node0: ----- node1: ----- </pre>
clear security firewall-authentication users address 100.0.0.1 node 1	<pre> user@host> clear security firewall-authentication users address 100.0.0.1 node 1 node1: ----- </pre>

clear security firewall-authentication users identifier

Syntax	clear security firewall-authentication users identifier <i>identifier</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear firewall authentication details about the user with this identification number. This command is supported on J Series and SRX Series devices.
Options	<p>none—Identification number of the user for which to clear authentication details.</p> <p>node—(Optional) For chassis cluster configurations, clear the firewall authentication details on a specific node (device) in the cluster for the user with this identification number.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	show security firewall-authentication users identifier
List of Sample Output	clear security firewall-authentication users identifier 2 on page 838 clear security firewall-authentication users identifier 2 node 1 on page 838
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security firewall-authentication users identifier 2	<pre> user@host> clear security firewall-authentication users identifier 2 node0: ----- node1: ----- </pre>
clear security firewall-authentication users identifier 2 node 1	<pre> user@host> clear security firewall-authentication users identifier 2 node 1 node1: ----- </pre>

clear security flow session all

Syntax	clear security flow session all <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear all currently active security sessions on the device. This command is supported on J Series and SRX Series devices.
Options	node —(Optional) For chassis cluster configurations, clear all security sessions on a specific node (device) in the cluster. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	show security flow session
List of Sample Output	clear security flow session all on page 839 clear security flow session all node 0 on page 839
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security flow session all	<pre> user@host> clear security flow session all node0: ----- 1 active sessions cleared node1: ----- 0 active sessions cleared </pre>
clear security flow session all node 0	<pre> user@host> clear security flow session all node 0 node0: ----- 0 active sessions cleared </pre>

clear security flow session application

Syntax clear security flow session application
application-name
 <node (*node-id* | all | local | primary)>

Release Information Command introduced in Release 8.5 of JUNOS Software; **node** options added in Release 9.0 of JUNOS Software.

Description Clear currently active sessions for application types or application sets.

This command is supported on J Series and SRX Series devices.

Options *application-name* —Name of the specified application type or application set.

- dns—Domain Name System
- ftp—File Transfer Protocol
- ignore—Ignore application type
- mgcp-ca—Media Gateway Control Protocol with Call Agent
- mgcp-ua—MGCP with User Agent
- ms-rpc—Microsoft RPC
- pptp—Point-to-Point Tunneling Protocol
- q931—ISDN connection control protocol
- ras—RAS
- realaudio—RealAudio
- rsh—UNIX remote shell services
- rtsp—Real-Time Streaming Protocol
- sccp—Skinny Client Control Protocol
- sip—Session Initiation Protocol
- sqlnet-v2—Oracle SQLNET
- sun-rpc—Sun Microsystems RPC
- talk—TALK program
- tftp—Trivial File Transfer Protocol

node—(Optional) For chassis cluster configurations, clear sessions for applications on a specific node (device) in the cluster.

- *node-id* —Identification number of the node. It can be 0 or 1.
- all —Clear all nodes.
- local —Clear the local node.
- primary—Clear the primary node.

Required Privilege Level	clear
Related Topics	show security flow session application
List of Sample Output	clear security flow session application dns on page 841 clear security flow session application dns node 0 on page 841
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security flow session application dns	<pre>user@host> clear security flow session application dns node0: ----- 0 active sessions cleared node1: ----- 0 active sessions cleared</pre>
clear security flow session application dns node 0	<pre>user@host> clear security flow session application dns node 0 node0: ----- 0 active sessions cleared</pre>

clear security flow session destination-port

Syntax	clear security flow session destination-port <i>destination-port-number</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear each session that uses the specified destination port This command is supported on J Series and SRX Series devices.
Options	<i>destination-port-number</i> —Number of the destination port. node —(Optional) For chassis cluster configurations, clear security sessions on the port on a specific node (device) in the cluster. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	show security flow session destination-port
List of Sample Output	clear security flow session destination-port 1 on page 842 clear security flow session destination-port 1 node 0 on page 842
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security flow session destination-port 1	<pre> user@host> clear security flow session destination-port 1 node0: ----- 0 active sessions cleared node1: ----- 0 active sessions cleared </pre>
clear security flow session destination-port 1 node 0	<pre> user@host> clear security flow session destination-port 1 node 0 node0: ----- 0 active sessions cleared </pre>

clear security flow session destination-prefix

Syntax	clear security flow session destination-prefix <i>destination-IP-prefix</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear sessions that match this destination IPv4 prefix or address. This command is supported on J Series and SRX Series devices.
Options	<i>destination-IP-prefix</i> —Destination IPv4 prefix or address. node —(Optional) For chassis cluster configurations, clear sessions that match the IPv4 prefix or address on a specific node (device) in the cluster. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	show security flow session destination-prefix
List of Sample Output	clear security flow session destination-prefix 100.0.0.1 on page 843 Clear security flow session destination-prefix 100.0.0.1 node 0 on page 843
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security flow session destination-prefix 100.0.0.1	<pre> user@host> clear security flow session destination-prefix 100.0.0.1 node0: ----- 0 active sessions cleared node1: ----- 0 active sessions cleared </pre>
Clear security flow session destination-prefix 100.0.0.1 node 0	<pre> user@host> clear security flow session destination-prefix 100.0.0.1 node 0 node0: ----- 0 active sessions cleared </pre>

clear security flow session interface

Syntax	clear security flow session interface <i>interface-name</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear sessions that use the specified interface. This command is supported on J Series and SRX Series devices.
Options	<i>interface-name</i> —Name of a specific incoming or outgoing interface. node —(Optional) For chassis cluster configurations, clear security sessions on the interface on a specific node (device) in the cluster. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	show security flow session interface
List of Sample Output	clear security flow session interface ge-0/0/0.0 on page 844 clear security flow session interface ge/0/0.0 node 0 on page 844
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security flow session interface ge-0/0/0.0	<pre> user@host> clear security flow session interface ge-0/0/0.0 node0: ----- 0 active sessions cleared node1: ----- 0 active sessions cleared </pre>
clear security flow session interface ge/0/0.0 node 0	<pre> user@host> clear security flow session interface ge-0/0/0.0 node 0 node0: ----- 0 active sessions cleared </pre>

clear security flow session protocol

Syntax clear security flow session protocol *protocol-name* | *protocol-number*
<node (*node-id* | all | local | primary)>

Release Information Command introduced in Release 8.5 of JUNOS Software; *node* options added in Release 9.0 of JUNOS Software.

Description Clear each session that uses the specified IP protocol.

This command is supported on J Series and SRX Series devices.

Options *protocol-name* — (Optional) Networking protocol name. The following text values are supported.

- ah—IP Security Authentication Header
- egp—Exterior gateway protocol
- esp—IPsec Encapsulating Security Payload
- gre—Generic routing encapsulation
- icmp—Internet Control Message Protocol
- 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

protocol-number —(Optional) Numeric protocol value. For a complete list of possible numeric values, see RFC 1700, *Assigned Numbers (for the Internet Protocol Suite)*.

Range: 0 through 255

node—(Optional) For chassis cluster configurations, clear security on a specific node (device) in the cluster for the user with this identification number.

- *node-id* —Identification number of the node. It can be 0 or 1.
- all —Clear all nodes.
- local —Clear the local node.
- primary—Clear the primary node.

Required Privilege Level clear

Related Topics	show security flow session protocol
List of Sample Output	clear security flow session protocol pim on page 846 clear security flow session protocol 0 on page 846
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security flow session protocol pim	<pre>user@host> clear security flow session protocol pim node0: ----- 0 active sessions cleared node1: ----- 0 active sessions cleared</pre>
clear security flow session protocol 0	<pre>user@host> clear security flow session protocol 0 node0: ----- 0 active sessions cleared node1: ----- 0 active sessions cleared</pre>

clear security flow session resource-manager

Syntax	clear security flow session resource-manager <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear resource-manager sessions. This command is supported on J Series and SRX Series devices.
Options	node—(Optional) For chassis cluster configurations, clear the resource manager sessions on a specific node (device) in the cluster. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	show security flow session resource-manager
List of Sample Output	clear security flow session resource-manager on page 847 clear security flow session resource-manager node 0 on page 847
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security flow session resource-manager	<pre> user@host> clear security flow session resource-manager node0: ----- 0 active sessions cleared node1: ----- 0 active sessions cleared </pre>
clear security flow session resource-manager node 0	<pre> user@host> clear security flow session resource-manager node 0 node0: ----- 0 active sessions cleared </pre>

clear security flow session session-identifier

Syntax	clear security flow session session-identifier session-identifier <node (node-id all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear the session with the specific identifier. This command is supported on J Series and SRX Series devices.
Options	<p>session-identifier —Number from 1 through 4294967295 that identifies the security session.</p> <p>node—(Optional) For chassis cluster configurations, clear the specified session on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ node-id—Identification number of the node. It can be 0 or 1. ■ all—Clear all nodes. ■ local—Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	show security flow session session-identifier
List of Sample Output	clear security flow session session-identifier 1 on page 848 clear security flow session session-identifier 1 node 0 on page 848
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security flow session session-identifier 1	<pre>user@host> clear security flow session session-identifier 1 0 active sessions cleared</pre>
clear security flow session session-identifier 1 node 0	<pre>user@host> clear security flow session session-identifier 1 node 0 node0: ----- 0 active sessions cleared</pre>

clear security flow session source-port

Syntax	clear security flow session source-port <i>source-port-number</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear each session that uses the specified source port. This command is supported on J Series and SRX Series devices.
Options	<i>source-port-number</i> —Number that identifies the source port. Range: 1 through 65535 node —(Optional) For chassis cluster configurations, clear sessions on the specified source port on a specific node (device) in the cluster. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	show security flow session source-port
List of Sample Output	clear security flow session source-port 1 on page 849 clear security flow session source-port 1 node 0 on page 849
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security flow session source-port 1	<pre> user@host> clear security flow session source-port 1 node0: ----- 0 active sessions cleared node1: ----- 0 active sessions cleared </pre>
clear security flow session source-port 1 node 0	<pre> user@host> clear security flow session source-port 1 node 0 node0: ----- 0 active sessions cleared </pre>

clear security flow session source-prefix

Syntax	clear security flow session source-prefix <i>source-prefix-number</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear sessions that match the source prefix. This command is supported on J Series and SRX Series devices.
Options	<i>source-prefix-number</i> —Source IPv4 prefix or address. <i>node</i> —(Optional) For chassis cluster configurations, clear security sessions matching the source prefix on a specific node (device) in the cluster. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ <i>all</i> —Clear all nodes. ■ <i>local</i> —Clear the local node. ■ <i>primary</i>—Clear the primary node.
Required Privilege Level	clear
Related Topics	show security flow session source-prefix
List of Sample Output	clear security flow session source-prefix 100.0.0.1 on page 850 clear security flow session source-prefix 100.0.0.1 node 0 on page 850
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security flow session source-prefix 100.0.0.1	<pre> user@host> clear security flow session source-prefix 100.0.0.1 node0: ----- 0 active sessions cleared node1: ----- 0 active sessions cleared </pre>
clear security flow session source-prefix 100.0.0.1 node 0	<pre> user@host> clear security flow session source-prefix 100.0.0.1 node 0 node0: ----- 0 active sessions cleared </pre>

clear security idp application-identification application-system-cache

Syntax	clear security idp application-identification application-system-cache
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Clear IDP application system cache. This command is supported on SRX Series devices.
Required Privilege Level	clear
Related Topics	application-system-cache show security idp application-identification application-system-cache
List of Sample Output	clear security idp application-identification application-system-cache on page 851
Output Fields	This command produces no output.
clear security idp application-identification application-system-cache	user@host> clear security idp application-identification application-system-cache

clear security idp attack table

Syntax	clear security idp attack table
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	<p>Clear details of the IDP attack table.</p> <p>This command is supported on SRX Series devices.</p>
Required Privilege Level	clear
Related Topics	<p>attacks</p> <p>show security idp attack table</p>
List of Sample Output	clear security idp attack table on page 852
Output Fields	This command produces no output.
clear security idp attack table	user@host> clear security idp attack table

clear security idp counters application-identification

Syntax	clear security idp counters application-identification
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Reset all the application identification counter values. This command is supported on SRX Series devices.
Required Privilege Level	clear
Related Topics	application-identification show security idp counters application-identification
List of Sample Output	clear security idp counters application-identification on page 853
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security idp counters application-identification	user@host> clear security idp counters application-identification clear_counter_class: counters cleared, status = 0

clear security idp counters dfa

Syntax	clear security idp counters dfa
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	<p>Reset all the DFA counter values.</p> <p>This command is supported on SRX Series devices.</p>
Required Privilege Level	clear
Related Topics	show security idp counters dfa
List of Sample Output	clear security idp counters dfa on page 854
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security idp counters dfa	<pre>user@host> clear security idp counters dfa clear_counter_class: counters cleared, status = 0</pre>

clear security idp counters flow

Syntax	clear security idp counters flow
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	<p>Reset all the IDP flow-related counter values.</p> <p>This command is supported on SRX Series devices.</p>
Required Privilege Level	clear
Related Topics	<p>flow (IDP)</p> <p>show security idp counters flow</p>
List of Sample Output	clear security idp counters flow on page 855
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security idp counters flow	<pre>user@host> clear security idp counters dfa clear_counter_class: counters cleared, status = 0</pre>

clear security idp counters ips

Syntax	clear security idp counters ips
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	<p>Reset all the ips counter values.</p> <p>This command is supported on SRX Series devices.</p>
Required Privilege Level	clear
Related Topics	<p>ips</p> <p>show security idp counters ips</p>
List of Sample Output	clear security idp counters ips on page 856
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security idp counters ips	<pre>user@host> clear security idp counters ips clear_counter_class: counters cleared, status = 0</pre>

clear security idp counters log

Syntax	clear security idp counters log
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	<p>Reset all the IDP log counter values.</p> <p>This command is supported on SRX Series devices.</p>
Required Privilege Level	clear
Related Topics	<p>log (IDP)</p> <p>show security idp counters log</p>
List of Sample Output	clear security idp counters log on page 857
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security idp counters log	<pre>user@host> clear security idp counters log clear_counter_class: counters cleared, status = 0</pre>

clear security idp counters packet

Syntax	clear security idp counters packet
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	<p>Reset all the IDP packet counter values.</p> <p>This command is supported on SRX Series devices.</p>
Required Privilege Level	clear
Related Topics	show security idp counters packet
List of Sample Output	clear security idp counters packet on page 858
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security idp counters packet	<pre>user@host> clear security idp counters packet clear_counter_class: counters cleared, status = 0</pre>

clear security idp counters policy-manager

Syntax	clear security idp counters policy-manager
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	<p>Reset all the IDP policies counter values.</p> <p>This command is supported on SRX Series devices.</p>
Required Privilege Level	clear
Related Topics	show security idp counters policy-manager
List of Sample Output	clear security idp counters policy-manager on page 859
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security idp counters policy-manager	<pre>user@host> clear security idp counters policy-manager clear_counter_class: counters cleared, status = 0</pre>

clear security idp counters tcp-reassembler

Syntax	clear security idp counters tcp-reassembler
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	<p>Reset all the TCP reassembler counter values.</p> <p>This command is supported on SRX Series devices.</p>
Required Privilege Level	clear
Related Topics	<p>re-assembler</p> <p>show security idp counters tcp-reassembler</p>
List of Sample Output	clear security idp counters tcp-reassembler on page 860
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security idp counters tcp-reassembler	<pre>user@host> clear security idp counters tcp-reassembler clear_counter_class: counters cleared, status = 0</pre>

clear security idp ssl-inspection session-id-cache

Syntax	clear security idp ssl-inspection session-id-cache
Release Information	Command introduced in Release 9.3 of JUNOS Software.
Description	<p>Clear all the entries stored in the SSL session ID cache.</p> <p>This command is supported on SRX Series devices.</p>
Required Privilege Level	clear
Related Topics	show security idp ssl-inspection session-id-cache
List of Sample Output	clear security idp ssl-inspection session-id-cache on page 861
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security idp ssl-inspection session-id-cache	<pre>user@host> clear security idp ssl-inspection session-id-cache Total SSL session cache entries cleared : 2</pre>

clear security ike respond-bad-spi-count

Syntax	clear security ike respond-bad-spi-count < <i>gateway-name</i> >
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	Clear information about invalid Internet Key Exchange (IKE) security parameter index (SPI) counters. This command is supported on J Series and SRX Series devices.
Options	none—Clear all invalid SPI counters. <i>gateway-name</i> —(Optional) Clear the invalid SPI counters for the given gateway.
Required Privilege Level	clear
Related Topics	respond-bad-spi
List of Sample Output	clear security ike respond-bad-spi-count on page 862 clear security ike respond-bad-spi-count gateway-name1 on page 862
Output Fields	This command produces no output.
clear security ike respond-bad-spi-count	user@host> clear security ike respond-bad-spi-count
clear security ike respond-bad-spi-count gateway-name1	user@host> clear security ike respond-bad-spi-count gateway-name1

clear security ike security-associations

Syntax	clear security ike security-associations < peer-address > <fpc slot-number> <indexSA-index-number> <kmd-instance (all kmd-instance-name)> <picslot-number>
Release Information	Command introduced in Release 8.5 of JUNOS Software; fpc, pic, and kmd-instance options added in Release 9.3 of JUNOS Software.
Description	Clear information about the current Internet Key Exchange (IKE) security associations. This command is supported on J Series and SRX Series devices.
Options	none—Clear all IKE security associations. peer-address —(Optional) Clear IKE security associations for the destination peer at this IP address. fpc slot-number —Specific to SRX Series devices. Clear information about existing IKE SAs in this particular Flexible PIC Concentrator (FPC) slot. index SA-index-number —(Optional) Clear the IKE security association with this index number. kmd-instance—Specific to SRX Series devices. Clear information about existing IKE SAs in the key management process (daemon) (KMD) identified by the FPC slot-number and PIC slot-number . ■ all—All KMD instances running on the Services Processing Unit (SPU). ■ kmd-instance-name—Name of the KMD instance running on the SPU. pic slot-number —Specific to SRX Series devices. Clear information about existing IKE SAs in this particular PIC slot.
Required Privilege Level	clear
Related Topics	show security ike security-associations
List of Sample Output	clear security ike security-associations on page 863 clear security ike security-associations 1.1.1.2 on page 864 clear security ike security-associations index 8 on page 864 clear security ike security-associations fpc 5 pic 0 kmd-instance all (SRX Series devices) on page 864
Output Fields	This command produces no output.
clear security ike security-associations	user@host> clear security ike security-associations

clear security ike security-associations 1.1.1.2
user@host> clear security ike security-associations 1.1.1.2

clear security ike security-associations index 8
user@host> clear security ike security-associations index 8

clear security ike security-associations fpc 5 pic 0 kmd-instance all (SRX Series devices)
user@host> clear security ike security-associations fpc 5 pic 0 kmd-instance all

clear security ipsec security-associations

Syntax	clear security ipsec security-associations fpc <i>slot-number</i> <index <i>SA-index-number</i> > kmd-instance (all <i>kmd-instance-name</i>) pic <i>slot-number</i>
Release Information	Command introduced in Release 8.5 of JUNOS Software; fpc, pic, and kmd-instance options added in Release 9.3 of JUNOS Software.
Description	Clear information about IPsec security associations. This command is supported on J Series and SRX Series devices.
Options	none—Clear all IPsec security associations. fpc <i>slot-number</i> —Specific to SRX Series devices. Clear information about existing IPsec SAs in this particular Flexible PIC Concentrator (FPC) slot. index <i>SA-index-number</i> —(Optional) Clear the IPsec security association with this index number. kmd-instance—Specific to SRX Series devices. Clear information about existing IPsec SAs in the key management process (daemon) (KMD) identified by the FPC <i>slot-number</i> and PIC <i>slot-number</i> . <ul style="list-style-type: none"> ■ all—All KMD instances running on the Services Processing Unit (SPU). ■ <i>kmd-instance-name</i>—Name of the KMD instance running on the SPU. pic <i>slot-number</i> —Specific to SRX Series devices. Clear information about existing IPsec SAs in this particular PIC slot.
Required Privilege Level	clear
Related Topics	show security ipsec security-associations
List of Sample Output	clear security ipsec security-associations on page 865 clear security ipsec security-associations index 8 on page 865
Output Fields	This command produces no output.
clear security ipsec security-associations	user@host> clear security ipsec security-associations
clear security ipsec security-associations index 8	user@host> clear security ipsec security-associations index 8

clear security ipsec statistics

Syntax	clear security ike statistics <fpc slot-number> <index SA-index-number> <pic slot-number>
Release Information	Command introduced in Release 8.5 of JUNOS Software; fpc and pic options added in Release 9.3 of JUNOS Software.
Description	Clear IPsec statistics on the device. This command is supported on J Series and SRX Series devices.
Options	none—Clear all IPsec statistics. fpc slot-number —Specific to SRX Series devices. Clear statistics about existing IPsec SAs in this particular Flexible PIC Concentrator (FPC) slot. index SA-index-number —(Optional) Clear the IPsec statistics for the security association with this index number. pic slot-number —Specific to SRX Series devices. Clear statistics about existing IPsec SAs in this particular PIC slot.
Required Privilege Level	clear
Related Topics	show security ipsec statistics
List of Sample Output	clear security ipsec statistics on page 866 clear security ipsec statistics index 1 on page 866 clear security ipsec statistics fpc 5 pic 0 (SRX Series devices) on page 866
Output Fields	This command produces no output.
clear security ipsec statistics	user@host> clear security ipsec statistics
clear security ipsec statistics index 1	user@host> clear security ipsec statistics index 1
clear security ipsec statistics fpc 5 pic 0 (SRX Series devices)	user@host> clear security ipsec statistics fpc 5 pic 0


clear security nat incoming-table

Syntax	clear security nat incoming-table <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; <i>node</i> options added in Release 9.0 of JUNOS Software.
Description	Clear Network Address Translation (NAT) incoming table information. This command is supported on J Series devices.
Options	<p>none—Clear all information NAT incoming table.</p> <p><i>node</i>—(Optional) For chassis cluster configurations, clear incoming table information on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	show security nat incoming-table
List of Sample Output	clear security nat incoming-table on page 867
Output Fields	This command produces no output.
clear security nat incoming-table	user@host> clear security nat incoming-table

clear security pki key-pair

Syntax	clear security pki key-pair (all certificate-id <i>certificate-id</i>)
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	<p>Clear public key infrastructure (PKI) key pair information for local digital certificates on the device.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>all—Clear key pair information for all local certificates.</p> <p>certificate-id <i>certificate-id</i> —Clear key pair information for the local certificate with this certificate ID.</p>
Required Privilege Level	clear and security
Related Topics	show security pki certificate-request
List of Sample Output	clear security pki key-pair all on page 868
Output Fields	This command produces no output.
clear security pki key-pair all	user@host> clear security pki key-pair all

clear security pki local-certificate

Syntax	clear security pki local-certificate (all certificate-id <i>certificate-id</i> system-generated)
Release Information	Command modified in Release 9.1 of JUNOS Software.
Description	Clear public key infrastructure (PKI) information for local digital certificates on the device. This statement is supported on J Series and SRX Series devices.
Options	all—Clear information for all the local digital certificates on the device.
	NOTE: You cannot clear the automatically generated self-signed certificate using clear security pki local-certificate all command. To clear the self-signed certificate you need to use system-generated as an option.
	certificate-id <i>certificate-id</i> —Clear the specified local digital certificate with this certificate ID.
	system-generated—Clear the existing automatically generated self-signed certificate and generate a new self-signed certificate.
Required Privilege Level	clear and security
Related Topics	show security pki local-certificate request security pki local-certificate generate-self-signed
List of Sample Output	clear security pki local-certificate all on page 869 clear security pki local-certificate system-generated on page 869
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security pki local-certificate all	user@host> clear security pki local-certificate all
clear security pki local-certificate system-generated	user@host> clear security pki local-certificate system-generated

clear security policies statistics

Syntax	clear security policies statistics
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	Clear statistics for security policies configured on the device. This command is supported on J Series and SRX Series devices.
Required Privilege Level	clear
Related Topics	show security policies
List of Sample Output	clear security policies statistics on page 870
Output Fields	This command produces no output.
clear security policies statistics	user@host> clear security policies statistics

clear security screen statistics

Syntax	clear security screen statistics <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 9.0 of JUNOS Software.
Description	Clear intrusion detection service (IDS) security screen statistics on the device. This command is supported on J Series and SRX Series devices.
Options	node—(Optional) For chassis cluster configurations, clear security screen statistics on a specific node. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	show security screen statistics
List of Sample Output	clear security screen statistics node 0 on page 871
Output Fields	This command produces no output.
clear security screen statistics node 0	user@host> clear security screen statistics node 0

clear security screen statistics interface

Syntax	clear security screen statistics interface <i>interface-name</i>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	<p>Clear intrusion detection service (IDS) security screen statistics for an interface.</p> <p>This command is supported on J Series and SRX Series devices.</p>
Options	<p>interface <i>interface-name</i> —Name of the interface on which to clear security screen statistics.</p> <p>node—(Optional) For chassis cluster configurations, clear security screen statistics on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	show security screen statistics
List of Sample Output	<p>clear security screen statistics interface fab0 on page 872</p> <p>clear security screen statistics interface fab0 node 0 on page 872</p>
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security screen statistics interface fab0	<pre> user@host> clear security screen statistics interface fab0 node0: ----- IDS statistics has been cleared. node1: ----- IDS statistics has been cleared.</pre>
clear security screen statistics interface fab0 node 0	<pre> user@host> clear security screen statistics interface fab0 node 0 node0: ----- IDS statistics has been cleared.</pre>

clear security screen statistics zone

Syntax	clear security screen statistics zone <i>zone-name</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Clear IDS security screen statistics for a security zone. This command is supported on J Series and SRX Series devices.
Options	<p>zone <i>zone-name</i> —Name of the security zone for which to clear security screen statistics.</p> <p>node—(Optional) For chassis cluster configurations, clear security screen statistics for a security zone on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all —Clear all nodes. ■ local —Clear the local node. ■ primary—Clear the primary node.
Required Privilege Level	clear
Related Topics	show security screen statistics
List of Sample Output	clear security screen statistics zone abc node all on page 873 clear security screen statistics node 0 zone my-zone on page 873
Output Fields	When you enter this command, you are provided feedback on the status of your request.
clear security screen statistics zone abc node all	<pre> user@host> clear security screen statistics zone abc node all node0: ----- IDS statistics has been cleared. node1: ----- IDS statistics has been cleared.</pre>
clear security screen statistics node 0 zone my-zone	<pre> user@host> clear security screen statistics node 0 zone my-zone node0: ----- IDS statistics has been cleared.</pre>

clear security utm anti-spam statistics

Syntax	clear security utm anti-spam statistics
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>Clear antispam statistics information.</p> <p>This command is supported on J Series devices and SRX210, SRX240, and SRX650 devices.</p>
Required Privilege Level	clear
Related Topics	<p>show security utm anti-spam statistics</p> <p>show security utm anti-spam status</p>
Output Fields	This command produces no output.
clear security utm anti-spam statistics	user@host> clear security utm anti-spam statistics

clear security utm antivirus statistics

Syntax	clear security utm anti-virus statistics
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>Clear antivirus statistics information.</p> <p>This command is supported on J Series devices and SRX210, SRX240, and SRX650 devices.</p>
Required Privilege Level	clear
Related Topics	<p>show security utm anti-virus statistics</p> <p>show security utm anti-virus status</p> <p>request security utm anti-virus juniper-express-engine</p> <p>request security utm anti-virus kaspersky-lab-engine</p>
Output Fields	This command produces no output.
clear security utm antivirus statistics	user@host> clear security utm anti-virus statistics

clear security utm content-filtering statistics

Syntax	clear security utm content-filtering statistics
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>Clear content-filtering statistics information.</p> <p>This command is supported on J Series devices and SRX210, SRX240, and SRX650 devices.</p>
Required Privilege Level	clear
Related Topics	show security utm content-filtering statistics
Output Fields	This command produces no output.
clear security utm content-filtering statistics	user@host> clear security utm content-filtering statistics

clear security utm session

Syntax	clear security utm session
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>Clear UTM session information.</p> <p>This command is supported on J Series devices and SRX210, SRX240, and SRX650 devices.</p>
Required Privilege Level	clear
Related Topics	<p>show security utm session</p> <p>show security utm status</p>
Output Fields	This command produces no output.
clear security utm session	user@host> clear security utm session

clear security utm web-filtering statistics

Syntax	clear security utm web-filtering statistics
Release Information	Command introduced in Release 9.5 of JUNOS Ssoftware.
Description	<p>Clear web filtering statistics information.</p> <p>This command is supported on J Series devices and SRX210, SRX240, and SRX650 devices.</p>
Required Privilege Level	clear
Related Topics	<p>show security utm web-filtering statistics</p> <p>show security utm web-filtering status</p>
Output Fields	This command produces no output.
clear security utm web-filtering statistics	user@host> clear security utm web-filtering statistics

Chapter 23

Request Commands

This chapter presents the **request** operational commands available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Use the **request** operational commands to stop or reboot device components, switch between primary and backup components, display messages, and display system information. Operational commands are organized alphabetically.

The commands shown in this chapter are exclusive to J Series and SRX Series devices. For information about **request** commands that are not explained here—commands that are shared across Juniper Networks device—see the *JUNOS System Basics and Services Command Reference*.

request chassis cluster failover node

Syntax	<code>request chassis cluster failover node <i>node-number</i> redundancy-group <i>group-number</i></code>
Release Information	Command introduced in Release 9.0 of JUNOS Software.
Description	<p>For chassis cluster configurations, initiate manual failover in a redundancy group from one node to the other, which becomes the primary node, and automatically reset the priority of the group to 255. The failover stays in effect until the new primary node becomes unavailable, the threshold of the redundancy group reaches 0, or you use the <code>request chassis cluster failover reset</code> command.</p> <p>After a manual failover, you must use the <code>request chassis cluster failover reset</code> command before initiating another failover.</p> <p>This command is supported on J Series and SRX Series devices.</p>
Options	<p><code>node <i>node-number</i></code>—Number of the chassis cluster node to which the redundancy group fails over.</p> <p>Range: 0 through 1</p> <p><code>redundancy-group <i>group-number</i></code>—Number of the redundancy group on which to initiate manual failover. Redundancy group 0 is a special group consisting of the two Routing Engines in the chassis cluster.</p> <p>Range: 0 through 255</p>
Required Privilege Level	maintenance
Related Topics	<p><code>clear chassis cluster failover-count</code></p> <p><code>request chassis cluster failover reset</code></p> <p><code>show chassis cluster status</code></p>
List of Sample Output	<code>request chassis cluster failover node 0 redundancy-group 1</code> on page 880
Output Fields	This command produces no output.
request chassis cluster failover node 0 redundancy-group 1	<code>user@host> request chassis cluster failover node 0 redundancy-group 1</code>

request chassis cluster failover reset

Syntax	request chassis cluster failover reset redundancy-group <i>group-number</i>
Release Information	Command introduced in Release 9.0 of JUNOS Software.
Description	In chassis cluster configurations, undo the previous manual failover and return the redundancy group to its original settings. This command is supported on J Series and SRX Series devices.
Options	redundancy-group <i>group-number</i> —Number of the redundancy group on which to reset manual failover. Redundancy group 0 is a special group consisting of the two Routing Engines in the chassis cluster. Range: 0 through 255
Required Privilege Level	maintenance
Related Topics	clear chassis cluster failover-count request chassis cluster failover node show chassis cluster status
List of Sample Output	request chassis cluster failover reset redundancy-group 0 on page 881
Output Fields	This command produces no output.
request chassis cluster failover reset redundancy-group 0	user@host> request chassis cluster failover reset redundancy-group 0

request modem wireless activate iota

Syntax	<code>request modem wireless activate iota <i>interface-name</i></code>
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>For CDMA EV-DO 3G wireless modem interfaces, enable modem card to connect to service provider's cellular network using Internet-based over the air (IOTA) provisioning.</p> <p>This command is supported on SRX210 devices.</p>
Options	<i>interface-name</i> —The 3G wireless modem interface on the SRX210 device is <code>cl-0/0/8</code> .
Required Privilege Level	maintenance
Output Fields	When you enter this command, you are provided feedback on the status of your request.
request modem wireless activate iota cl-0/0/8	<pre>user@host> request modem wireless activate iota cl-0/0/8 Beginning IOTA Activation. It can take up to 5 minutes Please check the trace logs for details.</pre>

request modem wireless activate manual

Syntax	<code>request modem wireless activate manual <i>interface-name</i> msl <i>msl-number</i> mdn <i>mdn-number</i> imsi <i>imsi-number</i> sid <i>sid-number</i> nid <i>nid-number</i> sip-user-id <i>sip-id</i> sip-password <i>sip-password</i></code>
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>For CDMA EV-DO 3G wireless modem interfaces, enable modem card to connect to service provider's cellular network.</p> <p>This command is supported on SRX210 devices.</p>
Options	<p><i>interface-name</i>—The 3G wireless modem interface on the SRX210 device is <code>cl-0/0/8</code>.</p> <p><i>msl msl-number</i>—Master subsidy lock (MSL) number required to unlock the modem card. Obtain the number from the service provider.</p> <p><i>mdn mdn-number</i>—Mobile directory number (MDN) 10-digit phone number. Obtain the number from the service provider.</p> <p><i>imsi imsi-number</i>—International mobile station identity (IMSI) subscriber identification number. Obtain the number from the service provider.</p> <p><i>sid sid-number</i>—System identification (SID) number. Use the <code>show modem wireless interface network</code> command to display the SID.</p> <p><i>nid nid-number</i>—Network identification (NID) number. Use the <code>show modem wireless interface network</code> command to display the NID.</p> <p><i>sip-user-id sip-id</i>—Simple IP user identification. Obtain the username from the service provider.</p> <p><i>sip-password sip-password</i>—Simple IP password. Obtain the password from the service provider.</p>
Required Privilege Level	maintenance
Related Topics	<code>show modem wireless interface network</code>
Output Fields	When you enter this command, you are provided feedback on the status of your request.
request modem wireless activate manual cl-0/0/8 msl 43210 mdn 0123456789 imsi 0123456789 sid 12345 nid 12345 sip-usr-id jnpr sip-password jn9r1	<pre> user@host> request modem wireless activate manual cl-0/0/8 msl 43210 mdn 0123456789 imsi 0123456789 sid 12345 nid 12345 sip-usr-id jnpr sip-password jn9r1 Checking status... Modem current activation status: Not Activated Starting activation... Performing account activation step 1/6 : [Unlock] Done Performing account activation step 2/6 : [Set MDN] Done Performing account activation step 3/6 : [Set SIP Info] Done Performing account activation step 4/6 : [Set IMSI] Done Performing account activation step 5/6 : [Set SID/NID] Done </pre>

```
Performing account activation step 6/6 : [Commit/Lock] Done
Configuration Commit Result: PASS
Resetting the modem ... Done
Account activation in progress. It can take up to 5 minutes
Please check the trace logs for details.
```

request modem wireless activate otasp

Syntax	<code>request modem wireless activate otasp <i>interface-name</i> dial-string <i>calling-number</i></code>
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>For CDMA EV-DO 3G wireless modem interfaces, enable the modem card to connect to service provider's cellular network using over-the-air service provisioning (OTASP).</p> <p>This command is supported on SRX210 devices.</p>
Options	<p><i>interface-name</i>—The 3G wireless modem interface on the SRX210 device is <code>cl-0/0/8</code>.</p> <p><i>dial-string</i> <i>calling-number</i>—Dial number that the modem uses to contact the network. Obtain the number from the service provider.</p>
Required Privilege Level	maintenance
Output Fields	When you enter this command, you are provided feedback on the status of your request.
request modem wireless activate otasp cl-0/0/8 dial-string *22864	<pre>user@host> request modem wireless activate otasp cl-0/0/8 dial-string *22864 OTASP number *22286*, Selecting NAM 0 Beginning OTASP Activation. It can take up to 5 minutes Please check the trace logs for details.</pre>

request modem wireless gsm sim-unblock

Syntax request modem wireless gsm sim-unblock *interface-name* puk *unlock-code*

Release Information Command introduced in Release 9.5 of JUNOS Software.

Description Unblock a blocked subscriber identity module (SIM) in the GSM 3G wireless modem card.

This command is supported on SRX210 devices.

Options *interface-name*—The 3G wireless modem interface on the SRX210 device is `cl-0/0/8`.

puk unlock-code—Eight-digit PIN unblocking key (PUK). Obtain the PUK from the service provider.



NOTE: If the PUK is entered incorrectly ten times, the SIM must be returned to the service provider for reactivation.

Required Privilege Level maintenance

Related Topics request modem wireless gsm sim-unlock

Output Fields When you enter this command, you are provided feedback on the status of your request.

request modem wireless gsm sim-unblock cl-0/0/8 puk 76543210	<pre>user@host> request modem wireless gsm sim-unblock cl-0/0/8 puk 76543210 Issued SIM unblock request successfully. Please verify SIM lock status under firmware stats</pre>
---	---

request modem wireless gsm sim-unlock

Syntax request modem wireless gsm sim-unlock *interface-name* pin *unlock-code*

Release Information Command introduced in Release 9.5 of JUNOS Software.

Description Unlock the subscriber identity module (SIM) in the GSM 3G wireless modem card.

This command is supported on SRX210 devices.

Options *interface-name*—The 3G wireless modem interface on the SRX210 device is `cl-0/0/8`.

pin unlock-code—Four-digit personal identification number (PIN). Obtain the PIN from the service provider.



NOTE: If the PIN is entered incorrectly three consecutive times, the SIM is blocked. Obtain a PIN unblocking key (PUK) from the service provider.

Required Privilege Level maintenance

Related Topics request modem wireless gsm sim-unblock

Output Fields When you enter this command, you are provided feedback on the status of your request.

request modem wireless user@host> request modem wireless gsm sim-unlock cl-0/0/8 pin 3210
gsm sim-unlock Issued SIM unlock request successfully.
cl-0/0/8 pin 3210 Please verify SIM lock status under firmware stats

request security idp security-package download

Syntax	request security idp security-package download <check-server> <full-update> <policy-templates> <status> <version <i>version-number</i> >
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Manually download the individual components of the security package from the Juniper Security Engineering portal. The components are downloaded into a staging folder inside the device. By default, this command tries to download the delta set attack signature table. This command is supported on SRX Series devices.
Options	<p>check-server—(Optional) Retrieve the version information of the latest security package from the security portal server.</p> <p>full-update—(Optional) Download the latest security package with the full set of attack signature tables from the portal.</p> <p>policy-templates—(Optional) Download the latest policy templates from the portal.</p> <p>version <i>version-number</i> —(Optional) Download the security package of a specific version from the portal.</p>
Required Privilege Level	maintenance
Related Topics	<p>show security idp active-policy</p> <p>show security idp security-package-version</p>
List of Sample Output	<p>request security idp security-package download on page 888</p> <p>request security idp security-package download policy-templates on page 888</p> <p>request security idp security-package download version 1151 full-update on page 889</p>
Output Fields	When you enter this command, you are provided feedback on the status of your request.
request security idp security-package download	<pre>user@host> request security idp security-package download Successfully downloaded from(https://services.netscreen.com/cgi-bin/index.cgi). Version info:1152(Thu Apr 24 14:37:44 2008, Detector=9.1.140080400)</pre>
request security idp security-package download policy-templates	<pre>user@host> request security idp security-package download policy-templates Successfully downloaded from(https://services.netscreen.com/cgi-bin/index.cgi). Version info:35</pre>


```
request security idp      user@host> request security idp security-package download version 1151 full-update  
security-package        Successfully downloaded from(https://services.netscreen.com/cgi-bin/index.cgi).  
download version 1151    Version info:1151(Wed Apr 23 14:39:15 2008, Detector=9.1.140080400)  
full-update
```

request security idp security-package install

Syntax	request security idp security-package install <policy-templates> <status> <update-attack-database-only>
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Update the attack database inside the device with the newly downloaded one from the staging folder, recompiles the existing running policy and pushes the re-compiled policy to the data plane. Also, if there is an existing running policy and the previously installed detector's version is different from the newly downloaded one, the downloaded components are pushed to the data plane. This command is supported on SRX Series devices.
Options	<p>policy-templates—(Optional) Install the policy template file into /var/db/scripts/commit/templates.</p> <p>status—(Optional) The command security-package install may take long time depending on the new Security DB size. Hence, security-package install command returns immediately and a background process performs the task. So, user can check the status using security-package install status command.</p> <p>update-attack-database-only—(Optional) Loads the security package into IDP database but do not compile/push the active policy or the new detector to the data plane.</p>
Required Privilege Level	maintenance
Related Topics	<p>show security idp active-policy</p> <p>show security idp security-package-version</p>
List of Sample Output	<p>request security idp security-package install on page 890</p> <p>request security idp security-package install status on page 890</p>
Output Fields	When you enter this command, you are provided feedback on the status of your request.
request security idp security-package install	<pre>user@host> request security idp security-package install</pre> <p>Will be processed in async mode. Check the status using the status checking CLI</p>
request security idp security-package install status	<pre>user@host> request security idp security-package install status</pre> <p>Done;Attack DB update : successful - [UpdateNumber=1152,ExportDate=Thu Apr 24 14:37:44 2008]</p> <p>Updating data-plane with new attack or detector : not performed due to no existing active policy found.</p>

request security idp ssl-inspection key add

Syntax	request security idp ssl-inspection key add <key-name> [file <file-name>] [password <password-string>] [server <server-ip>]
Release Information	Command introduced in Release 9.3 of JUNOS Software.
Description	<p>Install a Privacy-Enhanced Mail (PEM) key that is optionally password protection, and associate a server with an installed key. The length of each key name and password string should not exceed 32 alpha-numeric characters long.</p> <p>This command is supported on SRX Series devices.</p>
Options	<p><i>key-name</i>—Name of the SSL private key.</p> <p>file <file-name>—(Optional) Location of RSA private key (PEM format) file.</p> <p>password <password-string>—(Optional) Password used to encrypt specified key.</p> <p>server <server-ip> —(Optional) Server IP address to be added to the specified key.</p>
Required Privilege Level	maintenance
Related Topics	show security idp ssl-inspection key
List of Sample Output	<p>request security idp ssl-inspection key add key1 file /var/tmp/enc1.key password encrypted on page 891</p> <p>request security idp ssl-inspection key add key2 file /var/tmp/enc2.key password encrypted on page 891</p> <p>request security idp ssl-inspection key add key3 file /var/tmp/norm.key on page 893</p> <p>request security idp ssl-inspection key add key1 server 1.1.0.1 on page 893</p> <p>request security idp ssl-inspection key add key1 server 1.1.0.2 on page 893</p>
Output Fields	When you enter this command, you are provided feedback on the status of your request.
request security idp ssl-inspection key add key1 file /var/tmp/enc1.key password encrypted	<pre>user@host> request security idp ssl-inspection key add key1 file /var/tmp/enc1.key password encrypted Added key 'key1'</pre>
request security idp ssl-inspection key add key2 file /var/tmp/enc2.key password encrypted	<pre>user@host> request security idp ssl-inspection key add key2 file /var/tmp/enc2.key password encrypted Added key 'key2', server 2.2.0.1</pre>

```
request security idp
ssl-inspection key add
    key3 file
    /var/tmp/norm.key
```

```
request security idp user@host> request security idp ssl-inspection key add key3 file /var/tmp/norm.key  
ssl-inspection key add Added key 'key3'  
    key3 file  
    /var/tmp/norm.key
```

```
request security idp user@host> request security idp ssl-inspection key add key1 server 1.1.0.1  
ssl-inspection key add Added key 'key1', server 1.1.0.1  
    key1 server 1.1.0.1
```

```
request security idp user@host> request security idp ssl-inspection key add key1 server 1.1.0.2  
ssl-inspection key add Added key 'key1', server 1.1.0.2  
    key1 server 1.1.0.2
```

request security idp ssl-inspection key delete

Syntax request security idp ssl-inspection key delete [*<key-name>*] [server *<server-ip>*]

Release Information Command introduced in Release 9.3 of JUNOS Software.

Description Delete the specified server IP from the given key if the server is specified. If the server IP is not specified, the given key will be deleted along with all the server addresses associated with it.

This command is supported on SRX Series devices.



NOTE: You will get a delete confirmation question before deleting one or more keys or server.

Options *key-name*—(Optional) Name of the SSL private key.

server <server-ip> —(Optional) Server IP address associated with the specified key to be deleted.

Required Privilege Level maintenance

Related Topics show security idp ssl-inspection key

List of Sample Output request security idp ssl-inspection key delete on page 894
request security idp ssl-inspection key delete key1 on page 894
request security idp ssl-inspection key delete key2 server 2.2.0.1 on page 894

Output Fields When you enter this command, you are provided feedback on the status of your request.

**request security idp
ssl-inspection key delete** user@host> request security idp ssl-inspection key delete

This command will delete one or more ssl keys.
Continue? [yes,no] (no) yes

Number of keys 4, server 3 deleted

**request security idp
ssl-inspection key delete
key1** user@host> request security idp ssl-inspection key delete key1

This command will delete one or more ssl keys.
Continue? [yes,no] (no) yes

Number of keys 1, server 2 deleted

**request security idp
ssl-inspection key delete
key2 server 2.2.0.1** user@host> request security idp ssl-inspection key delete key2 server 2.2.0.1

This command will delete one or more ssl keys.
Continue? [yes,no] (no) yes

Number of keys 0, server 1 deleted

request security pki ca-certificate verify

Syntax	request security pki ca-certificate verify ca-profile <i>ca-profile-name</i>
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	Verify the digital certificate installed for the specified certificate authority (CA). This statement is supported on J Series and SRX Series devices.
Options	ca-profile <i>ca-profile-name</i> —Display the specified CA profile.
Required Privilege Level	maintenance and security
Related Topics	ca-profile show security pki ca-certificate
List of Sample Output	request security pki ca-certificate verify ca-profile ca1 (CRL downloaded) on page 895 request security pki ca-certificate verify ca-profile ca1 (CRL not downloaded) on page 895
Output Fields	When you enter this command, you are provided feedback on the status of your request.
Sample Output	This user has downloaded the certificate revocation list (CRL).
request security pki ca-certificate verify ca-profile ca1 (CRL downloaded)	user@host> request security pki ca-certificate verify ca-profile ca1 CA certificate ca1 verified successfully
Sample Output	This user has not downloaded the certificate revocation list (CRL).
request security pki ca-certificate verify ca-profile ca1 (CRL not downloaded)	user@host> request security pki ca-certificate verify ca-profile ca1 CA certificate ca1: CRL verification in progress.Please check the PKId debug logs for completion status

request security pki local-certificate generate-self-signed

Syntax	<pre>request security pki local-certificate generate-self-signed certificate-id <i>certificate-id-name</i> domain-name <i>domain-name</i> subject <i>subject-distinguished-name</i> <email <i>email-address</i>> <ip-address <i>ip-address</i> ></pre>
Release Information	Command introduced in Release 9.1 of JUNOS Software.
Description	<p>Manually generate a self-signed certificate for the given distinguished name.</p> <p>This statement is supported on J Series and SRX Series devices.</p>
Options	<p>certificate-id <i>certificate-id-name</i>—Name of the certificate and the public/private key pair.</p> <p>domain-name <i>domain-name</i>—Fully qualified domain name (FQDN). The FQDN provides the identity of the certificate owner for Internet Key Exchange (IKE) negotiations and provides an alternative to the subject name.</p> <p>subject <i>subject-distinguished-name</i>—Distinguished name format that contains the common name, department, company name, state, and country in the following format: CN, OU, O, ST, C</p> <ul style="list-style-type: none"> ■ CN—Common name ■ OU—Organizational unit name ■ O—Organization name ■ ST—State ■ C—Country <p>email <i>email-address</i>—E-mail address of the certificate holder.</p> <p>ip-address <i>ip-address</i>—IP address of the routing platform.</p>
Required Privilege Level	maintenance and security
Related Topics	<pre>clear security pki local-certificate show security pki local-certificate</pre>
List of Sample Output	request security pki local-certificate generate-self-signed certificate-id self-cert subject cn=abc domain-name juniper.net email mholmes@juniper.net on page 897
Output Fields	When you enter this command, you are provided feedback on the status of your request.


```
request security pki      user@host> request security pki local-certificate generate-self-signed  
local-certificate      certificate-id self-cert subject cn=abc domain-name juniper.net email  
generate-self-signed   mholmes@juniper.net  
certificate-id self-cert Self-signed certificate generated and loaded successfully  
subject cn=abc  
domain-name juniper.net  
email  
mholmes@juniper.net
```

request security pki local-certificate verify

Syntax	<code>request security pki local-certificate verify certificate-id <i>certificate-id-name</i></code>
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	Verify the validity of the local digital certificate identifier. This statement is supported on J Series and SRX Series devices.
Options	<code>certificate-id <i>certificate-id-name</i></code> — Name of the local digital certificate identifier.
Required Privilege Level	maintenance and security
List of Sample Output	<code>request security pki local-certificate verify certificate-id bme1</code> (not downloaded) on page 898 <code>request security pki local-certificate verify certificate bme1</code> (downloaded) on page 898
Output Fields	When you enter this command, you are provided feedback on the status of your request.
Sample Output	You receive the following response before the certificate revocation list (CRL) is downloaded:
request security pki local-certificate verify certificate-id bme1 (not downloaded)	<pre>user@host> request security pki local-certificate verify certificate-id bme1 Local certificate bme1: CRL verification in progress.Please check the PKId debug logs for completion status</pre>
Sample Output	You receive the following response after the certificate revocation list (CRL) is downloaded:
request security pki local-certificate verify certificate bme1 (downloaded)	<pre>user@host> request security pki local-certificate verify certificate-id bme1 Local certificate bme1 verification success</pre>

request security utm anti-virus juniper-express-engine

Syntax	request security utm anti-virus juniper-express-engine
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>Manually update the express antivirus pattern database using the command described. You can update the express antivirus pattern database automatically or manually.</p> <p>This command is supported on SRX210, SRX240, and SRX650 devices.</p>
Options	<p>pattern-delete — Delete the current express antivirus pattern database.</p> <p>pattern-reload — Reload the express antivirus pattern database.</p> <p>pattern-update — Update the express antivirus pattern database with the latest signatures.</p>
Required Privilege Level	maintenance
Related Topics	<p>request security utm anti-virus kaspersky-lab-engine</p> <p>clear security utm antivirus statistics</p> <p>show security utm anti-virus statistics</p> <p>show security utm anti-virus status</p>
Output Fields	<p>request security utm anti-virus juniper-express-engine pattern-update</p> <p>When you enter this command, you are provided feedback on the status of your request.</p>
request security utm anti-virus juniper-express-engine pattern-update	<pre>user@host> request security utm anti-virus juniper-express-engine pattern-update</pre>

request security utm anti-virus kaspersky-lab-engine

Syntax	request security utm anti-virus kaspersky-lab-engine
Description	<p>Manually update the full file-based antivirus pattern database using the commands described. You can update the full file-based antivirus pattern database automatically or manually.</p> <p>This command is supported on J Series devices and SRX210, SRX240, and SRX650 devices.</p>
Options	<p>pattern-delete — Delete the current full file-based antivirus pattern database.</p> <p>pattern-reload — Reload the full file-based antivirus pattern database.</p> <p>pattern-update — Update the full file-based antivirus pattern database with the latest signatures.</p>
Required Privilege Level	maintenance
Related Topics	<p>request security utm anti-virus juniper-express-engine</p> <p>clear security utm antivirus statistics</p> <p>show security utm anti-virus statistics</p> <p>show security utm anti-virus status</p>
Output Fields	<p>request security utm anti-virus kaspersky-lab-engine pattern-update</p> <p>When you enter this command, you are provided feedback on the status of your request.</p>
request security utm anti-virus kaspersky-lab-engine pattern-update	<pre>user@host> request security anti-virus kaspersky-lab-engine pattern-update</pre>

request system license update

Syntax	request system license update
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	Starts autoupdating license keys from the LMS server. This command is supported on J Series devices.
Options	trial—Starts autoupdating trial license keys from LMS server.
Required Privilege Level	maintenance
List of Sample Output	request system license update on page 901 request system license update trial on page 901
Output Fields	When you enter this command, you are provided feedback on the status of your request.
request system license update	<pre>user@host> request system license update</pre> <p>Request to automatically update license keys from https://ae1.juniper.net has been sent, use show system license to check status.</p>
request system license update trial	<pre>user@host> request system license update trial</pre> <p>Request to automatically update trial license keys from https://ae1.juniper.net has been sent, use show system license to check status.</p>

request system partition compact-flash

Syntax	request system partition compact-flash
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	<p>Reboots the device and repartitions the compact flash. The compact flash is repartitioned only if it is possible to restore all the data on the compact flash. Otherwise, the operation is aborted, and a message is displayed indicating that the current disk usage needs to be reduced.</p> <p>This command is supported on J Series devices.</p>
Required Privilege Level	maintenance
List of Sample Output	<p>request system partition compact-flash (If Yes) on page 902</p> <p>request system partition compact-flash (If No) on page 902</p>
Output Fields	When you enter this command, you are provided feedback on the status of your request.
request system partition compact-flash (If Yes)	<pre> user@host> request system partition compact-flash Are you sure you want to reboot and partition the compact-flash ? [yes,no] yes Initiating repartition operation. The operation may take several minutes to complete. System will reboot now... <System reboots> <Repartition operation is performed> <System reboots and starts up normally> </pre>
request system partition compact-flash (If No)	<pre> user@host> request system partition compact-flash Are you sure you want to reboot and partition the compact-flash ? [yes,no] no </pre>

request system services dhcp

Syntax	<code>request system services dhcp (release <i>interface-name</i> renew <i>interface-name</i>)</code>
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	<p>Release or renew the acquired IP address for a specific interface.</p> <p>To view the status of the Dynamic Host Configuration Protocol (DHCP) clients on the specified interfaces, enter the <code>show system services dhcp client <i>interface-name</i></code> command.</p> <p>This command is supported on J Series and SRX Series devices.</p>
Options	<p><code>release <i>interface-name</i></code> —Clears other resources received earlier from the server, and reinitializes the client state to INIT for the particular interface.</p> <p><code>renew <i>interface-name</i></code> —Reacquires an IP address from the server for the interface. When you use this option, the command sends a discover message if the client state is INIT and a renew request message if the client state is BOUND. For all other states it performs no action.</p>
Required Privilege Level	maintenance
Related Topics	<p>dhcp</p> <p><code>show system services dhcp client</code></p>
List of Sample Output	<p><code>request system services dhcp client release ge-1/0/1</code> on page 903</p> <p><code>request system services dhcp client renew ge-1/0/1</code> on page 903</p>
Output Fields	This command produces no output.
request system services dhcp client release ge-1/0/1	<code>user@host> request system services dhcp client release ge-1/0/1</code>
request system services dhcp client renew ge-1/0/1	<code>user@host> request system services dhcp client renew ge-1/0/1</code>

request system software in-service-upgrade

Syntax	<code>request system software in-service-upgrade <i>image_name</i> <<i>no-old-master-upgrade</i>></code>
Release Information	Command introduced in Release 9.6 of JUNOS Software.
Description	<p>The in-service software upgrade (ISSU) feature allows a chassis cluster pair to be upgraded or downgraded from supported JUNOS versions with a traffic impact similar to that of redundancy group failovers. Before upgrading, you should perform failovers so that all redundancy groups are active on only one device. We recommend that graceful Routing Engine switchover (GRES) be enabled prior to initiating an ISSU.</p> <p>This command is supported on SRX3400, SRX3600, SRX5600, and SRX5800 devices.</p>
Options	<p><i>image_name</i>—This is the location and name of the software upgrade package to be installed.</p> <p><i>no-old-master-upgrade</i>—(optional) This switch leaves the current master device in a nonupgraded state, which is a precaution against service failure. This option allows routing control to be quickly returned to the old master device if the newly upgraded device does not operate correctly.</p> <p>Use of the <i>no-old-master-upgrade</i> option will require you to run a standard upgrade on the old master device after the ISSU is completed on the backup device.</p>
Required Privilege Level	maintenance
List of Sample Output	request system software in-service-upgrade on page 904
Output Fields	When you enter this command, you are provided feedback on the status of your request.
request system software in-service-upgrade	<pre> user@host> request system software in-service-upgrade /var/tmp/junos-srx3000-9.6I20090206_2159_jnpr-domestic.tgz Chassis ISSU Started node0: ----- Chassis ISSU Started ISSU: Validating Image Inititating in-service-upgrade node0: ----- Inititating in-service-upgrade Checking compatibility with configuration Initializing... Using /var/tmp/junos-srx3000-9.6I20090206_2159_jnpr-domestic.tgz Checking junos requirements on / Available space: 229192 require: 4102 Verified SHA1 checksum of issu-indb.tgz Verified junos-boot-srx3000-9.6I20090206_2159_jnpr.tgz signed by PackageDevelopment_9_6_0 Verified junos-srx3000-9.6I20090206_2159_jnpr-domestic signed by PackageDevelopment_9_6_0 Hardware Database regeneration succeeded </pre>


```

Validating against /config/juniper.conf.gz
mgd: commit complete
Validation succeeded

Pushing bundle to node0
Installing package '/var/tmp/junos-srx3000-9.6I20090206_2159_jnpr-domestic.tgz'
...
Verified SHA1 checksum of issu-indb.tgz
Verified junos-boot-srx3000-9.6I20090206_2159_jnpr.tgz signed by
PackageDevelopment_9_6_0
Verified junos-srx3000-9.6I20090206_2159_jnpr-domestic signed by
PackageDevelopment_9_6_0
Available space: 391052 require: 175814
Verified SHA1 checksum of issu-indb.tgz
Verified junos-boot-srx3000-9.6I20090206_2159_jnpr.tgz signed by
PackageDevelopment_9_6_0
Verified junos-srx3000-9.6I20090206_2159_jnpr-domestic signed by
PackageDevelopment_9_6_0
JUNOS 9.6I20090206_2159_jnpr will become active at next reboot
WARNING: A reboot is required to load this software correctly
WARNING:      Use the 'request system reboot' command
WARNING:      when software installation is complete
Saving package file in /var/sw/pkg/junos-9.6I20090206_2159_jnpr.tgz ...
Saving state for rollback ...
Finished upgrading secondary node node0
Rebooting Secondary Node

node0:
-----
Shutdown NOW!
[pid 1365]
ISSU: Backup RE Prepare Done
Waiting for node0 to reboot.

node0 booted up.
Waiting for node0 to become secondary

node0 became secondary.

```

request wan-acceleration login

Syntax	<code>request wan-acceleration login fpc slot-number</code>
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	<p>Log in to the WXC Integrated Services Module (ISM 200) from J Series devices running JUNOS Software to access the WXOS CLI.</p> <p>To view the slot number, enter the <code>show chassis fpc pic-status</code> command. You require interface permission for read-only access, and interface-control and configure permission for read-write access.</p> <p>This command is supported on J Series devices.</p>
Options	<code>fpc slot-number</code> —Higher number of the two slots in the device chassis occupied by the WXC ISM 200.
Required Privilege Level	maintenance
Related Topics	<p><code>show chassis fpc</code></p> <p><code>restart wan-acceleration</code></p> <p><code>show wan-acceleration status</code></p>
List of Sample Output	<p><code>request wan-acceleration login fpc 3</code> (permissions set) on page 906</p> <p><code>request wan-acceleration login fpc 3</code> (permissions not set) on page 906</p>
Output Fields	When you enter this command, you are provided feedback on the status of your request.
Sample Output	This user has a user account with interface-control and configure permissions set for read-write access to WXOS or has interface permissions set for read-only access.
request wan-acceleration login fpc 3 (permissions set)	<pre>user@host> request wan-acceleration login fpc 3 Copyright 2001-2006 Juniper Networks, Inc. All Rights Reserved.</pre>
Sample Output	This user has a user account without the correct permissions set and does not gain access to WXOS.
request wan-acceleration login fpc 3 (permissions not set)	<pre>user@host> request wan-acceleration login fpc 3 FPCLOGIN_LOGIN_FAILURE: fpclogin failed: user permissions not set.</pre>

Chapter 24

Restart Commands

This chapter presents the **restart** operational commands available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Use the **restart** operational commands to restart software processes on the device. Operational commands are organized alphabetically.

The commands shown in this chapter are exclusive to J Series and SRX Series devices. For information about **restart** commands that are not explained here—commands that are shared across Juniper Networks devices—see the *JUNOS System Basics and Services Command Reference*.

restart wan-acceleration

Syntax	restart wan-acceleration
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	<p>Restart the WAN acceleration process.</p> <p>If the WXC Integrated Services Module (ISM 200) is not accessible, or is not responding, you can use this command to restart the WAN acceleration process on the device.</p> <p>This command is supported on J Series devices.</p>
Required Privilege Level	reset
Related Topics	<p>request wan-acceleration login</p> <p>show wan-acceleration status</p>
List of Sample Output	restart wan-acceleration on page 908
Output Fields	When you enter this command, you are provided feedback on the status of your request.
restart wan-acceleration	<pre>user@host> restart wan-acceleration WAN acceleration process started, pid 5497</pre>

Chapter 25

Show Commands

This chapter presents the **show** operational commands available on J Series Services Routers and SRX Series Services Gateways running JUNOS Software. Use the **show** operational commands to review and verify the validity of your configurations and monitor device operation. Operational commands are organized alphabetically.

The commands shown in this chapter are exclusive to J Series and SRX Series devices. For information about **show** commands that are not explained here—commands that are shared across Juniper Networks devices—see the *JUNOS Interfaces Command Reference*, the *JUNOS Routing Protocols and Policies Command Reference*, and the *JUNOS System Basics and Services Command Reference*.

show bgp neighbor

Syntax show bgp neighbor
 < neighbor-address >
 <instance instance >

Release Information Command modified in Release 8.5 of JUNOS Software.

Description Display the state of the specified Border Gateway Protocol (BGP) neighbor. If a peer is forced to Idle state because of license check failure, the output displays the state and the reason—LicenseCheckFailed.

This command is supported on J Series and SRX Series devices.

Options instance *instance*—(Optional) Display peer information for a particular routing instance.

neighbor-address—(Optional) Display information for only the BGP peer at the specified IP address.

Required Privilege Level view

Related Topics *JUNOS Routing Protocols and Policies Command Reference*

List of Sample Output show bgp neighbor 5.5.5.2 on page 912
 show bgp neighbor instance master on page 913

Output Fields Table 5 on page 910 lists the output fields for the show bgp neighbor command. Output fields are listed in the approximate order in which they appear.

Table 5: show bgp neighbor Output Fields

Field Name	Field Description
Peer	Address of the BGP neighbor. The address is followed by the neighbor's port number.
AS	AS number of the peer.
Local	Address of the local device. The address is followed by the peer's port number.
Type	Type of peer: Internal or External.

Table 5: show bgp neighbor Output Fields (continued)

Field Name	Field Description
State	<p>Current state of the BGP session:</p> <ul style="list-style-type: none"> ■ Active—BGP is initiating a transport protocol connection in an attempt to connect to a peer. If the connection is successful, BGP sends an open message. ■ Connect—BGP is waiting for the transport protocol connection to complete. ■ Established—The BGP session has been established, and the peers are exchanging update messages. ■ Idle—Either the BGP license check failed, or this is the first stage of a connection and BGP is waiting for a Start event. ■ OpenConfirm—BGP has acknowledged receipt of an open message from the peer and is waiting to receive a keepalive or notification message. ■ OpenSent—BGP has sent an open message and is waiting to receive an open message from the peer.
Flags	<p>Internal BGP flags:</p> <ul style="list-style-type: none"> ■ Aggregate Label—BGP has aggregated a set of incoming labels (labels received from the peer) into a single forwarding label. ■ CleanUp—The peer session is being shut down. ■ Delete—This peer has been deleted. ■ Idled—This peer has been permanently idled. ■ Initializing—The peer session is initializing. ■ SendRtn—Messages are being sent to the peer. ■ Sync—This peer is synchronized with the rest of the peer group. ■ TryConnect—Another attempt is being made to connect to the peer. ■ Unconfigured—This peer is not configured. ■ WriteFailed—An attempt to write to this peer failed. ■ Last State—Previous state of the BGP session.
Last State	Previous state of the BGP session.
Last Event	<p>Last activity that occurred in the BGP session:</p> <ul style="list-style-type: none"> ■ Closed—The BGP session closed. ■ ConnectRetry—The transport protocol connection failed, and BGP is trying again to connect. ■ HoldTime—The session ended because the hold timer expired. ■ KeepAlive—The local device sent a BGP keepalive message to the peer. ■ Open—The local device sent a BGP open message to the peer. ■ OpenFail—The local device did not receive an acknowledgment of a BGP open message from the peer. ■ RecvKeepAlive—The local device received a BGP keepalive message from the peer. ■ RecvNotify—The local device received a BGP notification message from the peer. ■ RecvOpen—The local device received a BGP open message from the peer. ■ RecvUpdate—The local device received a BGP update message from the peer. ■ Start—The peering session started. ■ Stop—The peering session stopped. ■ TransportError—A TCP error occurred.

Table 5: show bgp neighbor Output Fields *(continued)*

Field Name	Field Description
Last Error	<p>Last error that occurred in the BGP session:</p> <ul style="list-style-type: none"> ■ Cease—An error occurred, such as a version mismatch, that caused the session to close. ■ Finite State Machine Error—In setting up the session, BGP received a message that it did not understand. ■ Hold Time Expired—The session's hold time expired. ■ Message Header Error—The header of a BGP message was malformed. ■ Open Message Error—A BGP open message contained an error. ■ None—No errors occurred in the BGP session. ■ Update Message Error—A BGP update message contained an error.
Export	Name of the export policy that is configured on the peer.
Import	Name of the import policy that is configured on the peer.
Options	<p>Configured BGP options:</p> <ul style="list-style-type: none"> ■ AddressFamily—Configured address family: inet or inet-vpn. ■ GracefulRestart—Graceful restart is configured. ■ HoldTime—Hold time configured with the hold-time statement. The hold time is three times the interval at which keepalive messages are sent. ■ Local Address—Address configured with the local-address statement. ■ NLRI—Configured multicast BGP state for the BGP group: multicast, unicast, or both if you have configured nlri any. ■ Peer AS—Configured peer autonomous system (AS). ■ Preference—Preference value configured with the preference statement. ■ Refresh—Configured to refresh automatically when the policy changes. ■ Rib-group—Configured routing table group.
Address families configured	Names of configured address families for the VPN.
Local Address	Address of the local device.
Holdtime	Hold time configured with the hold-time statement. The hold time is three times the interval at which keepalive messages are sent.
Preference	Preference value configured with the preference statement.
Number of flaps	Number of times the BGP session has gone down and then come back up.
Trace file	Name of the file to receive the output of the tracing operation.

```

show bgp neighbor user@host> show bgp neighbor 5.5.5.2
5.5.5.2      Type: Internal  State: Idle (LicenseCheckFailed)  Flags: <ImportEval Sync>
Peer: 5.5.5.2 AS 200      Local: unspecified AS 200
                Type: Internal  State: Idle (LicenseCheckFailed)      (route reflector
client)Flags: <ImportEval>
                Last State: Idle      Last Event: Start

```



```

Last Error: None
Options: <Preference LogUpDown Cluster AddressFamily PeerAS Rib-group Refresh>

Address families configured: inet-unicast inet-vpn-unicast l2vpn-signaling
Holdtime: 90 Preference: 170
Number of flaps: 0
Trace options: all
Trace file: /var/log/bgp size 131072 files 10

```

```

show bgp neighbor      user@host> show bgp neighbor instance master
instance master      Peer: 5.5.5.1 AS 200           Local: 5.5.5.2 AS 200
                        Type: Internal   State: Idle (LicenseCheckFailed)      Flags: <>
                        Last State: Idle   Last Event: Start
                        Last Error: Cease
                        Export: [ static ]
                        Options: <Preference LocalAddress LogUpDown AddressFamily PeerAS Rib-group
Refresh>
                        Address families configured: inet-unicast inet-vpn-unicast
                        Local Address: 5.5.5.2 Holdtime: 90 Preference: 170
                        Number of flaps: 4
                        Last flap event: RecvUpdate
                        Error: 'Update Message Error' Sent: 3 Recv: 0
                        Error: 'Cease' Sent: 2 Recv: 0
                        Trace file: /var/log/bgp size 131072 files 10

```

show chassis cluster control-plane statistics

Syntax	show chassis cluster control-plane statistics
Release Information	Command introduced in Release 9.3 of JUNOS Software.
Description	Display information about chassis cluster control plane statistics. This command is supported on J Series and SRX Series devices.
Required Privilege Level	view
Related Topics	clear chassis cluster control-plane statistics
List of Sample Output	show chassis cluster control-plane statistics on page 914
Output Fields	Table 6 on page 914 lists the output fields for the show chassis cluster control-plane statistics command. Output fields are listed in the approximate order in which they appear.

Table 6: show chassis cluster control-plane statistics Output Fields

Field Name	Field Description
Control link statistics	Statistics of the control link used by chassis cluster traffic. <ul style="list-style-type: none"> ■ Heartbeat packets sent—Number of heartbeat messages sent on the control link. ■ Heartbeat packets received—Number of heartbeat messages received on the control link.
Fabric link statistics	Statistics of the fabric link used by chassis cluster traffic. <ul style="list-style-type: none"> ■ Probes sent—Number of probes sent. ■ Probes received—Number of probes received.

```

show chassis cluster control-plane statistics  user@host> show chassis cluster control-plane statistics
Control link statistics:
  Heartbeat packets sent: 124
  Heartbeat packets received: 125
Fabric link statistics:
  Probes sent: 124
  Probes received: 125

```

show chassis cluster data-plane statistics

Syntax	show chassis cluster data-plane statistics
Release Information	Command introduced in Release 9.3 of JUNOS Software.
Description	<p>Display information about chassis cluster data plane statistics.</p> <p>This command is supported on J Series and SRX Series devices.</p>
Required Privilege Level	view
Related Topics	clear chassis cluster data-plane statistics
List of Sample Output	show chassis cluster data-plane statistics on page 916
Output Fields	Table 7 on page 916 lists the output fields for the show chassis cluster data-plane statistics command. Output fields are listed in the approximate order in which they appear.

Table 7: show chassis cluster data-plane statistics Output Fields

Field Name	Field Description
Services Synchronized	<ul style="list-style-type: none"> ■ Service name—Name of the service. ■ Rtos sent—Number of runtime objects (RTOs) sent. ■ Rtos received—Number of RTOs received. ■ Translation context—Messages synchronizing Network Address Translation (NAT) translation context. ■ Incoming NAT—Messages synchronizing incoming Network Address Translation (NAT) service. ■ Resource manager—Messages synchronizing resource manager groups and resources. ■ Session create—Messages synchronizing session creation. ■ Session close—Messages synchronizing session close. ■ Session change—Messages synchronizing session change. ■ Gate create—Messages synchronizing creation of pinholes (temporary openings in the firewall). ■ Session ageout refresh request—Messages synchronizing request session after ageout. ■ Session ageout refresh reply—Messages synchronizing reply session after ageout. ■ IPsec VPN—Messages synchronizing VPN session. ■ Firewall user authentication—Messages synchronizing firewall user authentication session. ■ MGCP ALG—Messages synchronizing MGCP ALG sessions. ■ H323 ALG—Messages synchronizing H.323 ALG sessions. ■ SIP ALG—Messages synchronizing SIP ALG sessions. ■ SCCP ALG—Messages synchronizing SCCP ALG sessions. ■ PPTP ALG—Messages synchronizing PPTP ALG sessions. ■ RTSP ALG—Messages synchronizing RTSP ALG sessions.

```

show chassis cluster user@host> show chassis cluster data-plane statistics
data-plane statistics Services Synchronized:
    Service name                RTOs sent  RTOs received
    Translation context         0           0
    Incoming NAT                0           0
    Resource manager            0           0
    Session create              0           0
    Session close               0           0
    Session change              0           0
    Gate create                 0           0
    Session ageout refresh requests 0           0
    Session ageout refresh replies 0           0
    IPsec VPN                   0           0
    Firewall user authentication 0           0
    MGCP ALG                    0           0
    H323 ALG                    0           0
    SIP ALG                     0           0
    SCCP ALG                    0           0
    PPTP ALG                    0           0
    RTSP ALG                    0           0

```

show chassis cluster interfaces

Syntax	show chassis cluster interfaces
Release Information	Command modified in Release 9.0 of JUNOS Software.
Description	Display the status of the control interface in a chassis cluster configuration. This command is supported on J Series and SRX Series devices.
Required Privilege Level	view
List of Sample Output	show chassis cluster interfaces on page 917
Output Fields	Table 8 on page 917 lists the output fields for the show chassis cluster interfaces command. Output fields are listed in the approximate order in which they appear.

Table 8: show chassis cluster interfaces Output Fields

Field Name	Field Description
Control link namea	Name and status of the chassis cluster control interface.
Redundant-ethernet Information	<ul style="list-style-type: none"> ■ Name—Name of the redundant Ethernet interface. ■ Status—State of the interface: up or down. ■ Redundancy-group—ID number (1-255) of the redundancy group associated with the redundant Ethernet interface.
Interface Monitoring	<ul style="list-style-type: none"> ■ Interface—Name of the interface to be monitored. ■ Weight—Relative importance of the interface to redundancy group operation. ■ Status—State of the interface: up or down. ■ Redundancy-group—Identification number of the redundancy group associated with the interface.

```

show chassis cluster user@host> show chassis cluster interfaces
interfaces          Control link name: em0.0
                      Redundant-ethernet Information:
                        Name      Status      Redundancy-group
                        reth0     Up          1
                      Interface Monitoring:
                        Interface  Weight    Status    Redundancy-group
                        ge-6/0/0  200      Up        1

```

show chassis cluster ip-monitoring status redundancy-group

Syntax	show chassis cluster ip-monitoring status <redundancy-group <i>group-number</i> >
Release Information	Command added in Release 9.6 of JUNOS Software.
Description	Display the status of all monitored IP addresses under a redundancy group. This command is supported on SRX Series devices.
Options	<p>none— Display the status of monitored IP addresses under all redundancy groups on the node.</p> <p><i>redundancy-group group-number</i> — Display the status of monitored IP addresses under the specified redundancy group.</p>
Required Privilege Level	view
Related Topics	<p>redundancy-group</p> <p>clear chassis cluster failover-count</p> <p>request chassis cluster failover node</p> <p>request chassis cluster failover reset</p>
List of Sample Output	<p>show chassis cluster ip-monitoring status on page 918</p> <p>show chassis cluster ip-monitoring status redundancy-group on page 919</p>
Output Fields	Table 9 on page 918 lists the output fields for the show chassis cluster ip-monitoring status command. Output fields are listed in the approximate order in which they appear.

Table 9: show chassis cluster ip-monitoring status Output Fields

Field Name	Field Description
Redundancy-group	ID number (0 - 255) of a redundancy group in the cluster.
IP Address	Monitored IP address in the redundancy group.
Weight	Relative assigned value of the reachability of the monitored IP address.
Status	Current reachability state (Reachable or Unreachable) of the monitored IP address.

```

show chassis cluster ip-monitoring status
user@host> show chassis cluster ip-monitoring status
Redundancy-group  IP Address  Weight  Status
1                 1.2.3.4    20      Unreachable
2                 56.0.0.10  100     Reachable

```

```
show chassis cluster user@host> show chassis cluster ip-monitoring status redundancy-group 2  
ip-monitoring status Redundancy-group IP Address Weight Status  
redundancy-group 2 56.0.0.10 100 Reachable
```

show chassis cluster statistics

Syntax	show chassis cluster statistics
Release Information	Command modified in Release 9.6 of JUNOS Software.
Description	Display information about chassis cluster services and interfaces. This command is supported on J Series and SRX Series devices.
Required Privilege Level	view
Related Topics	clear chassis cluster statistics
List of Sample Output	show chassis cluster statistics on page 921
Output Fields	Table 10 on page 920 lists the output fields for the <code>show chassis cluster statistics</code> command. Output fields are listed in the approximate order in which they appear.

Table 10: show chassis cluster statistics Output Fields

Field Name	Field Description
Control link statistics	Statistics of the control link used by chassis cluster traffic. <ul style="list-style-type: none">■ Heartbeat packets sent—Number of heartbeat messages sent on the control link.■ Heartbeat packets received—Number of heartbeat messages received on the control link.
Fabric link statistics	Statistics of the fabric link used by chassis cluster traffic. <ul style="list-style-type: none">■ Probes sent—Number of probes sent.■ Probes received—Number of probes received.

Table 10: show chassis cluster statistics Output Fields (continued)

Field Name	Field Description
Services Synchronized	<ul style="list-style-type: none"> ■ Service name—Name of the service. ■ Rtos sent—Number of runtime objects (RTOs) sent. ■ Rtos received—Number of RTOs received. ■ Translation context—Messages synchronizing Network Address Translation (NAT) translation context. ■ Incoming NAT—Messages synchronizing incoming Network Address Translation (NAT) service. ■ Resource manager—Messages synchronizing resource manager groups and resources. ■ Session create—Messages synchronizing session creation. ■ Session close—Messages synchronizing session close. ■ Session change—Messages synchronizing session change. ■ Gate create—Messages synchronizing creation of pinholes (temporary openings in the firewall). ■ Session ageout refresh request—Messages synchronizing request session after ageout. ■ Session ageout refresh reply—Messages synchronizing reply session after ageout. ■ IPsec VPN—Messages synchronizing VPN session. ■ Firewall user authentication—Messages synchronizing firewall user authentication session. ■ MGCP ALG—Messages synchronizing MGCP ALG sessions. ■ H323 ALG—Messages synchronizing H.323 ALG sessions. ■ SIP ALG—Messages synchronizing SIP ALG sessions. ■ SCCP ALG—Messages synchronizing SCCP ALG sessions. ■ PPTP ALG—Messages synchronizing PPTP ALG sessions. ■ RTSP ALG—Messages synchronizing RTSP ALG sessions. ■ MAC address learning—Messages synchronizing MAC address learning.

```

show chassis cluster user@host> show chassis cluster statistics
statistics Control link statistics:
    Heartbeat packets sent: 798
    Heartbeat packets received: 784
  Fabric link statistics:
    Probes sent: 793
    Probes received: 0
  Services Synchronized:
    Service name           RTOs sent  RTOs received
    Translation context    0           0
    Incoming NAT           0           0
    Resource manager       0           0
    Session create         0           0
    Session close          0           0
    Session change         0           0
    Gate create            0           0
    Session ageout refresh requests 0           0
    Session ageout refresh replies  0           0
    IPsec VPN              0           0
    Firewall user authentication 0           0

```

MGCP ALG	0	0
H323 ALG	0	0
SIP ALG	0	0
SCCP ALG	0	0
PPTP ALG	0	0
RTSP ALG	0	0
MAC address learning	0	0

show chassis cluster status

Syntax	show chassis cluster status <redundancy-group <i>group-number</i> >
Release Information	Command modified in Release 9.2 of JUNOS Software.
Description	Display the failover status of a chassis cluster. This command is supported on J Series and SRX Series devices.
Options	none—Display the status of all redundancy groups in the chassis cluster. <i>redundancy-group group-number</i> —(Optional) Display the status of the specified redundancy group.
Required Privilege Level	view
Related Topics	redundancy-group clear chassis cluster failover-count request chassis cluster failover node request chassis cluster failover reset
List of Sample Output	show chassis cluster status on page 924 show chassis cluster status redundancy-group 0 on page 924
Output Fields	Table 11 on page 923 lists the output fields for the show chassis cluster status command. Output fields are listed in the approximate order in which they appear.

Table 11: show chassis cluster status Output Fields

Field Name	Field Description
Cluster ID	ID number (1-15) of a cluster.
Redundancy-Group	ID number (1-255) of a redundancy group in the chassis cluster.
Node name	Node (device) in the chassis cluster (<i>node0</i> or <i>node1</i>).
Priority	Assigned priority for the redundancy group on that node.
Status	State of the redundancy group (Primary or Secondary). <ul style="list-style-type: none"> ■ Primary—Redundancy group is active and passing traffic. ■ Secondary—Redundancy group is passive and not passing traffic.
Preempt	<ul style="list-style-type: none"> ■ Yes: Mastership can be preempted based on priority. ■ No: Change in priority will not preempt the mastership.

Table 11: show chassis cluster status Output Fields *(continued)*

Field Name	Field Description
Manual failover	<ul style="list-style-type: none"> ■ Yes: If the Mastership is set manually through the CLI with the <code>request chassis cluster failover node</code> or <code>request chassis cluster failover redundancy-group</code> command. This overrides Priority and Preempt. ■ No: Mastership is not set manually through the CLI.

```

show chassis cluster user@host> show chassis cluster status
status Cluster ID: 3, Redundancy-group: 0
          Node name      Priority    Status    Preempt    Manual failover
          node0           254      Primary   No          No
          node1           2       Secondary No          No
          Cluster ID: 3, Redundancy-group: 1
          Node name      Priority    Status    Preempt    Manual failover
          node0           254      Primary   No          No
          node1           1       Secondary No          No

show chassis cluster user@host> show chassis cluster status redundancy-group 0
status redundancy-group Cluster: 1, Redundancy-Group: 0
0          Node name      Priority    Status    Preempt    Manual failover
          node0           254      Primary   No          No
          node1           1       Secondary No          No

```

show chassis fpc

Syntax	<pre>show chassis fpc <detail < pim-slot > <node (node-id local primary)>> <node (node-id local primary)> <pic-status < pim-slot > <node (node-id local primary)>></pre>
Release Information	Command modified in Release 9.2 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	<p>Display status information about the installed Physical Interface Modules (PIMs) and PIM slots in a single device chassis or in a chassis cluster configuration.</p> <p>This command is supported on J Series and SRX Series devices.</p>
Options	<p>none—Display brief information about the state of the installed PIMs and PIM slots.</p> <p>detail—(Optional) Display detailed PIM status information.</p> <p>pim-slot —(Optional) Display information about the PIM in this slot.</p> <p>node—(Optional) For chassis cluster configurations, display status information for all PIMs or for the specified PIM on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ node-id —Identification number of the node. It can be 0 or 1. ■ local—Display information about the local node. ■ primary—Display information about the primary node. <p>pic-status—(Optional) Display status information for all PIMs or for the PIM in the specified slot (see pim-slot). The PIM slot number is reported as an FPC number, and the PIM number (always 0) is reported as a PIC number.</p>
Required Privilege Level	view
Related Topics	<i>JUNOS System Basics and Services Command Reference</i>
List of Sample Output	<p>show chassis fpc on page 926</p> <p>show chassis fpc (SRX5600 and SRX5800 devices) on page 926</p> <p>show chassis fpc detail on page 927</p> <p>show chassis fpc pic-status on page 927</p> <p>show chassis fpc pic-status (SRX5600 and SRX5800 devices) on page 927</p>
Output Fields	Table 12 on page 926 lists the output fields for the show chassis fpc command. Output fields are listed in the approximate order in which they appear.

Table 12: show chassis fpc Output Fields

Field Name	Field Description
Slot or Slot State	Slot number and state. The state can be one of the following conditions: <ul style="list-style-type: none"> ■ Dead—Held in reset because of errors. ■ Diag—Slot is being ignored while the device is running diagnostics. ■ Dormant—Held in reset. ■ Empty—No PIM is present. ■ Online—PIM is online and running. ■ Present—PIM is detected by the device, but is either not supported by the current version of JUNOS or inserted in the wrong slot. The output also states either Hardware Not Supported or Hardware Not In Right Slot. PIM is coming up but not yet online. ■ Probed—Probe is complete; awaiting restart of the Packet Forwarding Engine (PFE). ■ Probe-wait—Waiting to be probed.
Temp (C) or Temperature	Temperature of the air passing by the PIM, in degrees Celsius or in both Celsius and Fahrenheit.
Total CPU Utilization (%)	Total percentage of CPU being used by the PIM's processor.
Interrupt CPU Utilization (%)	Of the total CPU being used by the PIM's processor, the percentage being used for interrupts.
Memory DRAM (MB)	Total DRAM, in megabytes, available to the PIM's processor.
Heap Utilization (%)	Percentage of heap space (dynamic memory) being used by the PIM's processor. If this number exceeds 80 percent, there may be a software problem (memory leak).
Buffer Utilization (%)	Percentage of buffer space being used by the PIM's processor for buffering internal messages.
Start Time	Time when the Routing Engine detected that the PIM was running.
Uptime	How long the Routing Engine has been connected to the PIM and, therefore, how long the PIM has been up and running.
PIC type	(pic-status output only) Type of PIM.

```

show chassis fpc      user@host> show chassis fpc
Temp CPU Utilization (%) Memory      Utilization (%)
Slot State              (C) Total  Interrupt  CPU less FPC
0 Online                ----- CPU less FPC -----
1 Online                ----- Not Usable -----
2 Online                ----- CPU less FPC -----

```

```

show chassis fpc      user@host> show chassis fpc
(SRX5600 and           Temp CPU Utilization (%) Memory      Utilization (%)
SRX5800 devices) Slot State (C) Total  Interrupt  DRAM (MB) Heap      Buffer
0 Empty
1 Empty
2 Empty
3 Online                37      3          0        1024      7          42

```

```

4 Empty
5 Empty
6 Online          30      8      0      1024      23      30
7 Empty
8 Empty
9 Empty
10 Empty
11 Empty

```

```

show chassis fpc detail user@host> show chassis fpc detail
Slot 2 information:
  State                               Online
  Total CPU DRAM                      ---- CPU less FPC ----
  Start time                          2002-01-07 17:11:28 PST
  Uptime                              2 days, 8 hours, 38 minutes, 5 seconds

```

```

show chassis fpc user@host> show chassis fpc pic-status
pic-status node0:

```

```

-----
Slot 0  Online      FPC
  PIC 0  Online      4x GE Base PIC
Slot 3  Online      FPC
  PIC 0  Online      4x FE
Slot 6  Online      FPC
  PIC 0  Online      8x GE uPIM
node1:

```

```

-----
Slot 0  Offline     FPC
Slot 3  Offline     FPC
Slot 6  Offline     FPC

```

```

show chassis fpc user@host> show chassis fpc pic-status
pic-status (SRX5600 Slot 3  Online      SRX5k SPC
and SRX5800 devices)  PIC 0  Online      SPU Cp
                        PIC 1  Online      SPU Flow

```

```

Slot 6  Online      SRX5k DPC 4x 10GE
  PIC 0  Online      1x 10GE(LAN/WAN) RichQ
  PIC 1  Online      1x 10GE(LAN/WAN) RichQ
  PIC 2  Online      1x 10GE(LAN/WAN) RichQ
  PIC 3  Online      1x 10GE(LAN/WAN) RichQ

```

show chassis hardware

Syntax	show chassis hardware <clei-models detail extensive models node (<i>node-id</i> all local primary)>
Release Information	Command modified in Release 9.2 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display chassis hardware information. This command is supported on J Series and SRX Series devices.
Options	<p>clei-models—(Optional) Display Common Language Equipment Identifier Code (CLEI) barcode and model number for orderable field-replaceable units (FRUs).</p> <p>detail extensive—(Optional) Display the specified level of output.</p> <p>models—(Optional) Display model numbers and part numbers for orderable FRUs.</p> <p>node—(Optional) For chassis cluster configurations, display chassis hardware information on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ node-id —Identification number of the node. It can be 0 or 1. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	<i>JUNOS System Basics and Services Command Reference</i>
List of Sample Output	<p>show chassis hardware on page 930</p> <p>show chassis hardware (SRX5600 and SRX5800 devices) on page 930</p> <p>show chassis hardware detail on page 930</p> <p>show chassis hardware detail node 1 on page 930</p> <p>show chassis hardware extensive on page 931</p> <p>show chassis hardware models (SRX5600 and SRX5800 devices) on page 932</p> <p>show chassis hardware clei-models (SRX5600 and SRX5800 devices) on page 932</p>
Output Fields	Table 13 on page 928 lists the output fields for the show chassis hardware command. Output fields are listed in the approximate order in which they appear.

Table 13: show chassis hardware Output Fields

Field Name	Field Description
Item	Chassis component—Information about the backplane; power supplies; fan trays; Routing Engine; each Physical Interface Module (PIM)—reported as FPC and PIC—and each fan, blower, and impeller.
Version	Revision level of the chassis component.

Table 13: show chassis hardware Output Fields (continued)

Field Name	Field Description
Part Number	Part number for the chassis component.
Serial Number	Serial number of the chassis component. The serial number of the backplane is also the serial number of the device chassis. Use this serial number when you need to contact Juniper Networks Customer Support about the device chassis.
Assb ID or Assembly ID	Identification number that describes the FRU hardware.
FRU model number	Model number of FRU hardware component.
CLEI code	Common Language Equipment Identifier code. This value is displayed only for hardware components that use ID EEPROM format v2. This value is not displayed for components that use ID EEPROM format v1.
EEPROM Version	ID EEPROM version used by hardware component: 0x01 (version 1) or 0x02 (version 2).
Description	<p>Brief description of the hardware item:</p> <ul style="list-style-type: none"> ■ Type of power supply. ■ Type of PIM. If the PIM type is not supported on the current software release, the output states Hardware Not Supported. ■ Type of FPC: The FPC type corresponds to the PIM. The following shows the PIM abbreviation in the output and the corresponding PIM name: <ul style="list-style-type: none"> ■ 2x FE—Dual-Port Fast Ethernet PIM ■ 4x FE—4-Port Fast Ethernet ePIM ■ 1x GE Copper—Copper Gigabit Ethernet ePIM (one 10-Mbps, 100-Mbps, or 1000-Mbps port) ■ 1x GE SFP—SFP Gigabit Ethernet ePIM (one fiber port) ■ 1x SFP uPIM—1-Port Gigabit Ethernet uPIM ■ 6x GE SFP uPIM—6-Port Gigabit Ethernet uPIM ■ 8x GE SFP uPIM—8-Port Gigabit Ethernet uPIM ■ 16x GE SFP uPIM—16-Port Gigabit Ethernet uPIM ■ 4x GE Base PIC—Four built-in Gigabit Ethernet ports on a chassis (fixed PIM) ■ 2x Serial—Dual-Port Serial PIM ■ 2x T1—Dual-Port T1 PIM ■ 2x E1—Dual-Port E1 PIM ■ 2x CT1E1/PRI—Dual-Port Channelized T1/E1/ISDN PRI PIM ■ 1x T3—T3 PIM (one port) ■ 1x E3—E3 PIM (one port) ■ 4x BRI S/T—4-Port ISDN BRI S/T PIM ■ 4x BRI U—4-Port ISDN BRI U PIM ■ 1x ADSL Annex A—ADSL 2/2 + Annex A PIM (one port, for POTS) ■ 1x ADSL Annex B—ADSL 2/2 + Annex B PIM (one port, for ISDN) ■ 2x SHDSL (ATM)—G.SHDSL PIM (2-port two-wire mode or 1-port four-wire mode) ■ Integrated Services Module—WXC Integrated Services Module (ISM 200) ■ For hosts, the Routing Engine type.

```

show chassis hardware user@host> show chassis hardware
Hardware inventory:
Item                Version  Part number  Serial number  Description
Chassis              REV 07   750-009992   AA04350184    RE-J.1
Routing Engine      REV 04   750-010738   AB04330259    FPC
PIC 0
Power Supply 0      2x FE, 2x T1

show chassis hardware user@host> show chassis hardware
(SRX5600 and
SRX5800 devices)
Hardware inventory:
Item                Version  Part number  Serial number  Description
Chassis              REV 03   710-013698   TR0779        SRX 5800
Midplane             REV 03   710-014974   KC3406        SRX 5800 Backplane
FPM Board            Rev 03   740-013110   QCS1122504F   Front Panel Display
PDM                  Rev 03   740-013683   QCS1134703V   Power Distribution Module
PEM 1                Rev 03   740-013683   QCS1134700E   DC Power Entry Module
PEM 2                Rev 06   740-015113   1000696955    DC Power Entry Module
Routing Engine 0     REV 07   710-013385   JZ3257        RE-S-1300
CB 0                 REV 07   710-013385   JZ3257        SRX5k SCB
FPC 3                BB-P2-39 710-020305   JS4847        SRX5k SPC
CPU                  REV 06   710-013713   KC1180        DPC PMB
PIC 0                BUILTIN  BUILTIN       SPU Cp
PIC 1                BUILTIN  BUILTIN       SPU Flow
FPC 6                REV 03   750-020751   JT0109        SRX5k DPC 4x 10GE
CPU                  REV 06   710-013713   KC3543        DPC PMB
PIC 0                BUILTIN  BUILTIN       1x 10GE(LAN/WAN) RichQ
Xcvr 0               NON-JNPR A7C00SY      XFP-10G-SR
PIC 1                BUILTIN  BUILTIN       1x 10GE(LAN/WAN) RichQ
Xcvr 0               REV 01   740-011571   C728XJ01W    XFP-10G-SR
PIC 2                BUILTIN  BUILTIN       1x 10GE(LAN/WAN) RichQ
PIC 3                BUILTIN  BUILTIN       1x 10GE(LAN/WAN) RichQ
Fan Tray 0          REV 04   740-014971   TP1432        Fan Tray
Fan Tray 1          REV 04   740-014971   TP1829        Fan Tray

show chassis hardware user@host> show chassis hardware detail
detail
Hardware inventory:
Item                Version  Part number  Serial number  Description
Chassis              REV 05   710-010001   ad04420077    J4300
Midplane             REV 07   710-010003   AE04420393    System IO board
Routing Engine      REV 08   750-010005   btrd43500196  RE-J.2
ad0                  488 MB  512MB CHH     504754C53A711400 Compact Flash
ad2                  488 MB  512MB CHH     504754C43A711400 Removable Compact
Flash
FPC 2                REV 08   750-013493   NB9161        FPC
PIC 0                REV 08   750-013493   NB9161        Integrated Services
Module
ANNEX                REV 08   750-013493   NB9161        Integrated Services

show chassis hardware user@host> show chassis hardware detail node 1
detail node 1
node1:
-----
Hardware inventory:
Item                Version  Part number  Serial number  Description
Chassis              REV 03   710-014593   JN108C688ADB  J6350
Midplane             REV 01   710-016210   NN9781        JX350 System IO
System IO            REV 01   710-016210   NN9781        Crypto Acceleration
Crypto Module

```

```

Routing Engine  REV 08  710-015273  NM6569          RE-J6350-3400
  ad0      991 MB  1GB CKS          20060000000000000800 Compact Flash
FPC 0
FPC 3          REV 06  750-013492  NM1294          FPC
FPC 6          REV 11  750-015153  NP8750          FPC

```

show chassis hardware extensive

```

user@host> show chassis hardware extensive
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Jedec Code:   0x0000          EEPROM Version: 0x00
P/N:          .....          S/N:          JN107a494ADA
Assembly ID:  0x0513          Assembly Version: 00.00
Date:         00-00-0000      Assembly Flags:  0x00
Version:      .....
ID: j4350
...
FPC 5          REV 08  750-013493  NB9161          FPC
Jedec Code:   0x7fb0          EEPROM Version: 0x01
P/N:          750-013493      S/N:          S/N NB9161
Assembly ID:  0x073c          Assembly Version: 01.08
Date:         03-03-2006      Assembly Flags:  0x00
Version:      REV 08
ID: FPC
FRU Model Number: SSG-EPIM-1TX
Board Information Record:
Address 0x00: 34 01 05 05 02 ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 07 3c 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 31 33 34 39 33 00 00
Address 0x20: 53 2f 4e 20 4e 42 39 31 36 31 00 00 00 03 03 07
Address 0x30: d6 ff ff ff 34 01 05 05 02 ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 53
Address 0x50: 53 47 2d 45 50 49 4d 2d 31 54 58 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PIC 0
Integrated Services
Module
Jedec Code:   0x7fb0          EEPROM Version: 0x01
Assembly ID:  0x063c          Assembly Version: 01.08
Date:         03-03-2006      Assembly Flags:  0x00
ID: Integrated Services Module
Board Information Record:
Address 0x00: 34 01 05 05 02 ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 06 3c 01 08 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x20: 00 00 00 00 00 00 00 00 00 00 00 00 00 03 03 07
Address 0x30: d6 ff ff ff 34 01 05 05 02 ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 53
Address 0x50: 53 47 2d 45 50 49 4d 2d 31 54 58 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ed c0 0e 0b 00 00 00 00 00 00 00
ANNEX          REV 08  750-013493  NB9161          Integrated Services
Jedec Code:   0x7fb0          EEPROM Version: 0x01
P/N:          750-013493      S/N:          S/N NB9161
Assembly ID:  0x0808          Assembly Version: 01.08
Date:         03-03-2006      Assembly Flags:  0x00
Version:      REV 08
ID: Integrated Services
FRU Model Number: SSG-EPIM-1TX
Board Information Record:
Address 0x00: 34 01 05 05 02 ff ff ff ff ff ff ff ff ff ff

```

I2C Hex Data:

```

Address 0x00: 7f b0 01 ff 08 08 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 31 33 34 39 33 00 00
Address 0x20: 53 2f 4e 20 4e 42 39 31 36 31 00 00 00 03 03 07
Address 0x30: d6 ff ff ff 34 01 05 05 02 ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 53
Address 0x50: 53 47 2d 45 50 49 4d 2d 31 54 58 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

```

**show chassis hardware
models (SRX5600 and
SRX5800 devices)**

```
user@host> show chassis hardware models
```

```
Hardware inventory:
```

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 03	710-013698	TR0779	CHAS-BP-MX960-S
FPM Board	REV 03	710-014974	KC3406	CRAFT-MX960-S
Routing Engine 0	REV 06	740-015113	1000696955	RE-S-1300-2048-S
CB 0	REV 07	710-013385	JZ3257	SCB-MX960-S

**show chassis hardware
clei-models (SRX5600
and SRX5800 devices)**

```
user@host> show chassis hardware clei-models
```

```
Hardware inventory:
```

Item	Version	Part number	CLEI code	FRU model number
FPM Board	REV 02	710-017254		CRAFT-MX480-S
Routing Engine 0	REV 06	740-015113		RE-S-1300-2048-S
CB 0	REV 07	710-013385		SCB-MX960-S
Fan Tray				SRX5600-FAN

show ethernet-switching mac-learning-log

Syntax	show ethernet-switching mac-learning-log
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>Display the event log of learned MAC addresses.</p> <p>This command is supported on J Series devices and SRX100, SRX210, and SRX240 devices.</p>
Required Privilege Level	view
Related Topics	show ethernet-switching table
List of Sample Output	show ethernet-switching mac-learning-log on page 933
Output Fields	Table 14 on page 933 lists the output fields for the show ethernet-switching mac-learning-log command. Output fields are listed in the approximate order in which they appear.

Table 14: show interfaces Output Fields

Field Name	Field Description
Date and Time	Timestamp when the MAC address was added or deleted from the log.
VLAN-IDX	VLAN index. An internal value assigned by the JUNOS Software for each VLAN.
MAC	Learned MAC address.
Deleted Added	MAC address deleted or added to the MAC learning log.
Blocking	<p>The forwarding state of the interface:</p> <ul style="list-style-type: none"> ■ blocked—Traffic is not being forwarded on the interface. ■ unblocked—Traffic is forwarded on the interface.

```

show ethernet-switching user@host> show ethernet-switching mac-learning-log
mac-learning-log Wed Mar 18 08:07:05 2009
vlan_idx 7 mac 00:00:00:00:00:00 was deleted
Wed Mar 18 08:07:05 2009
vlan_idx 9 mac 00:00:00:00:00:00 was deleted
Wed Mar 18 08:07:05 2009
vlan_idx 10 mac 00:00:00:00:00:00 was deleted
Wed Mar 18 08:07:05 2009
vlan_idx 11 mac 00:00:00:00:00:00 was deleted
Wed Mar 18 08:07:05 2009
vlan_idx 12 mac 00:00:00:00:00:00 was deleted
Wed Mar 18 08:07:05 2009
vlan_idx 13 mac 00:00:00:00:00:00 was deleted
Wed Mar 18 08:07:05 2009
vlan_idx 14 mac 00:00:00:00:00:00 was deleted

```

```
Wed Mar 18 08:07:05 2009
vlan_idx 15 mac 00:00:00:00:00:00 was deleted
Wed Mar 18 08:07:05 2009
vlan_idx 16 mac 00:00:00:00:00:00 was deleted
Wed Mar 18 08:07:05 2009
vlan_idx 4 mac 00:00:00:00:00:00 was added
Wed Mar 18 08:07:05 2009
vlan_idx 6 mac 00:00:00:00:00:00 was added
Wed Mar 18 08:07:05 2009
vlan_idx 7 mac 00:00:00:00:00:00 was added
Wed Mar 18 08:07:05 2009
vlan_idx 9 mac 00:00:00:00:00:00 was added
Wed Mar 18 08:07:05 2009
vlan_idx 10 mac 00:00:00:00:00:00 was added
Wed Mar 18 08:07:05 2009
vlan_idx 11 mac 00:00:00:00:00:00 was added
Wed Mar 18 08:07:05 2009
vlan_idx 12 mac 00:00:00:00:00:00 was added
Wed Mar 18 08:07:05 2009
vlan_idx 13 mac 00:00:00:00:00:00 was added
Wed Mar 18 08:07:05 2009
vlan_idx 14 mac 00:00:00:00:00:00 was added
Wed Mar 18 08:07:05 2009
vlan_idx 15 mac 00:00:00:00:00:00 was added
Wed Mar 18 08:07:05 2009
vlan_idx 16 mac 00:00:00:00:00:00 was added
Wed Mar 18 08:07:05 2009
vlan_idx 5 mac 00:00:00:00:00:00 was added
Wed Mar 18 08:07:05 2009
vlan_idx 18 mac 00:00:05:00:00:05 was learned
Wed Mar 18 08:07:05 2009
vlan_idx 5 mac 00:30:48:90:54:89 was learned
Wed Mar 18 08:07:05 2009
vlan_idx 6 mac 00:00:5e:00:01:00 was learned
Wed Mar 18 08:07:05 2009
vlan_idx 16 mac 00:00:5e:00:01:08 was learned
Wed Mar 18 08:07:05 2009
vlan_idx 7 mac 00:00:5e:00:01:09 was learned
Wed Mar 18 08:07:05 2009
vlan_idx 8 mac 00:19:e2:50:ac:00 was learned
Wed Mar 18 08:07:05 2009
vlan_idx 12 mac 00:00:5e:00:01:04 was learned
[output truncated]
```

show ethernet-switching table

Syntax	show ethernet-switching table <brief detail extensive > <interface <i>interface-name</i> >
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	Display the Ethernet switching table. This command is supported on J Series devices and SRX100, SRX210, and SRX240 devices.
Options	none—(Optional) Display brief information about the Ethernet switching table. brief detail extensive—(Optional) Display the specified level of output. interface-name—(Optional) Display the Ethernet switching table for a specific interface.
Required Privilege Level	view
Related Topics	show ethernet-switching mac-learning-log
List of Sample Output	show ethernet-switching table on page 936 show ethernet-switching table brief on page 936 show ethernet-switching table detail on page 937 show ethernet-switching table extensive on page 938 show ethernet-switching table interface ge-0/0/1 on page 938
Output Fields	Table 15 on page 935 lists the output fields for the show ethernet-switching table command. Output fields are listed in the approximate order in which they appear.

Table 15: show ethernet-switching table Output Fields

Field Name	Field Description
VLAN	The name of a VLAN.
MAC address	The MAC address associated with the VLAN.
Type	The type of MAC address. Values are: <ul style="list-style-type: none"> ■ static—The MAC address is manually created. ■ learn—The MAC address is learned dynamically from a packet's source MAC address. ■ flood—The MAC address is unknown and flooded to all members.
Age	The time remaining before the entry ages out and is removed from the Ethernet switching table.
Interfaces	Interface associated with learned MAC addresses or All-members (flood entry).
Learned	For learned entries, the time which the entry was added to the Ethernet switching table.

```

show ethernet-switching table      user@host> show ethernet-switching table
Ethernet-switching table: 57 entries, 17 learned
VLAN MAC address Type Age Interfaces
F2 * Flood - All-members
F2 00:00:05:00:00:03 Learn 0 ge-0/0/44.0
F2 00:19:e2:50:7d:e0 Static - Router
Linux * Flood - All-members
Linux 00:19:e2:50:7d:e0 Static - Router
Linux 00:30:48:90:54:89 Learn 0 ge-0/0/47.0
T1 * Flood - All-members
T1 00:00:05:00:00:01 Learn 0 ge-0/0/46.0
T1 00:00:5e:00:01:00 Static - Router
T1 00:19:e2:50:63:e0 Learn 0 ge-0/0/46.0
T1 00:19:e2:50:7d:e0 Static - Router
T10 * Flood - All-members
T10 00:00:5e:00:01:09 Static - Router
T10 00:19:e2:50:63:e0 Learn 0 ge-0/0/46.0
T10 00:19:e2:50:7d:e0 Static - Router
T111 * Flood - All-members
T111 00:19:e2:50:63:e0 Learn 0 ge-0/0/15.0
T111 00:19:e2:50:7d:e0 Static - Router
T111 00:19:e2:50:ac:00 Learn 0 ge-0/0/15.0
T2 * Flood - All-members
T2 00:00:5e:00:01:01 Static - Router
T2 00:19:e2:50:63:e0 Learn 0 ge-0/0/46.0
T2 00:19:e2:50:7d:e0 Static - Router
T3 * Flood - All-members
T3 00:00:5e:00:01:02 Static - Router
T3 00:19:e2:50:63:e0 Learn 0 ge-0/0/46.0
T3 00:19:e2:50:7d:e0 Static - Router
T4 * Flood - All-members
T4 00:00:5e:00:01:03 Static - Router
T4 00:19:e2:50:63:e0 Learn 0 ge-0/0/46.0
[output truncated]

```

```

show ethernet-switching table brief user@host> show ethernet-switching table brief
Ethernet-switching table: 57 entries, 17 learned
VLAN MAC address Type Age Interfaces
F2 * Flood - All-members
F2 00:00:05:00:00:03 Learn 0 ge-0/0/44.0
F2 00:19:e2:50:7d:e0 Static - Router
Linux * Flood - All-members
Linux 00:19:e2:50:7d:e0 Static - Router
Linux 00:30:48:90:54:89 Learn 0 ge-0/0/47.0
T1 * Flood - All-members
T1 00:00:05:00:00:01 Learn 0 ge-0/0/46.0
T1 00:00:5e:00:01:00 Static - Router
T1 00:19:e2:50:63:e0 Learn 0 ge-0/0/46.0
T1 00:19:e2:50:7d:e0 Static - Router
T10 * Flood - All-members
T10 00:00:5e:00:01:09 Static - Router
T10 00:19:e2:50:63:e0 Learn 0 ge-0/0/46.0
T10 00:19:e2:50:7d:e0 Static - Router
T111 * Flood - All-members
T111 00:19:e2:50:63:e0 Learn 0 ge-0/0/15.0
T111 00:19:e2:50:7d:e0 Static - Router
T111 00:19:e2:50:ac:00 Learn 0 ge-0/0/15.0
T2 * Flood - All-members
T2 00:00:5e:00:01:01 Static - Router
T2 00:19:e2:50:63:e0 Learn 0 ge-0/0/46.0
T2 00:19:e2:50:7d:e0 Static - Router

```



```

T3 * Flood - All-members
T3 00:00:5e:00:01:02 Static - Router
T3 00:19:e2:50:63:e0 Learn 0 ge-0/0/46.0
T3 00:19:e2:50:7d:e0 Static - Router
T4 * Flood - All-members
T4 00:00:5e:00:01:03 Static - Router
T4 00:19:e2:50:63:e0 Learn 0 ge-0/0/46.0
[output truncated]

```

**show ethernet-switching
table detail**

```

user@host> show ethernet-switching table detail
Ethernet-switching table: 57 entries, 17 learned
F2, *
Interface(s): ge-0/0/44.0
Type: Flood
F2, 00:00:05:00:00:03
Interface(s): ge-0/0/44.0
Type: Learn, Age: 0, Learned: 2:03:09
F2, 00:19:e2:50:7d:e0
Interface(s): Router
Type: Static
Linux, *
Interface(s): ge-0/0/47.0
Type: Flood
Linux, 00:19:e2:50:7d:e0
Interface(s): Router
Type: Static
Linux, 00:30:48:90:54:89
Interface(s): ge-0/0/47.0
Type: Learn, Age: 0, Learned: 2:03:08
T1, *
Interface(s): ge-0/0/46.0
Type: Flood
T1, 00:00:05:00:00:01
Interface(s): ge-0/0/46.0
Type: Learn, Age: 0, Learned: 2:03:07
T1, 00:00:5e:00:01:00
Interface(s): Router
Type: Static
T1, 00:19:e2:50:63:e0
Interface(s): ge-0/0/46.0
Type: Learn, Age: 0, Learned: 2:03:07
T1, 00:19:e2:50:7d:e0
Interface(s): Router
Type: Static
T10, *
Interface(s): ge-0/0/46.0
Type: Flood
T10, 00:00:5e:00:01:09
Interface(s): Router
Type: Static
T10, 00:19:e2:50:63:e0
Interface(s): ge-0/0/46.0
Type: Learn, Age: 0, Learned: 2:03:08
T10, 00:19:e2:50:7d:e0
Interface(s): Router
Type: Static
T111, *
Interface(s): ge-0/0/15.0
Type: Flood
[output truncated]

```

```

show ethernet-switching table extensive
user@host> show ethernet-switching table extensive
Ethernet-switching table: 57 entries, 17 learned
F2, *
Interface(s): ge-0/0/44.0
Type: Flood
F2, 00:00:05:00:00:03
Interface(s): ge-0/0/44.0
Type: Learn, Age: 0, Learned: 2:03:09
F2, 00:19:e2:50:7d:e0
Interface(s): Router
Type: Static
Linux, *
Interface(s): ge-0/0/47.0
Type: Flood
Linux, 00:19:e2:50:7d:e0
Interface(s): Router
Type: Static
Linux, 00:30:48:90:54:89
Interface(s): ge-0/0/47.0
Type: Learn, Age: 0, Learned: 2:03:08
T1, *
Interface(s): ge-0/0/46.0
Type: Flood
T1, 00:00:05:00:00:01
Interface(s): ge-0/0/46.0
Type: Learn, Age: 0, Learned: 2:03:07
T1, 00:00:5e:00:01:00
Interface(s): Router
Type: Static
T1, 00:19:e2:50:63:e0
Interface(s): ge-0/0/46.0
Type: Learn, Age: 0, Learned: 2:03:07
T1, 00:19:e2:50:7d:e0
Interface(s): Router
Type: Static
T10, *
Interface(s): ge-0/0/46.0
Type: Flood
T10, 00:00:5e:00:01:09
Interface(s): Router
Type: Static
T10, 00:19:e2:50:63:e0
Interface(s): ge-0/0/46.0
Type: Learn, Age: 0, Learned: 2:03:08
T10, 00:19:e2:50:7d:e0
Interface(s): Router
Type: Static
T111, *
Interface(s): ge-0/0/15.0
Type: Flood
[output truncated]

show ethernet-switching table interface ge-0/0/1
user@host> show ethernet-switching table interface ge-0/0/1
Ethernet-switching table: 1 unicast entries
VLAN      MAC address      Type      Age Interfaces
V1        *                Flood     - All-members
V1        00:00:05:00:00:05 Learn     0 ge-0/0/1.0

```

show igmp-snooping route

Syntax	<pre><brief detail> <ethernet switching <brief detail vlan (vlan-id vlan-name) >> <inet <brief detail vlan (vlan-id vlan-name) >> <vlan (vlan-id vlan-name) ></pre>
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>Display IGMP snooping route information.</p> <p>This command is supported on J Series devices and SRX100, SRX210, and SRX240 devices.</p>
Options	<p>none—Display general parameters.</p> <p>brief detail—(Optional) Display the specified level of output.</p> <p>ethernet-switching—(Optional) Display Ethernet switching information.</p> <p>inet—(Optional) Display inet information.</p> <p>vlan <i>vlan-id</i> <i>vlan-name</i>—(Optional) Display route information for the specified VLAN.</p>
Required Privilege Level	view
Related Topics	show igmp-snooping vlans
List of Sample Output	<p>show igmp-snooping route on page 939</p> <p>show igmp-snooping route vlan v1 on page 940</p>
Output Fields	Table 16 on page 939 lists the output fields for the show igmp-snooping route command. Output fields are listed in the approximate order in which they appear.

Table 16: show igmp-snooping route Output Fields

Field Name	Field Description
VLAN	Name of the VLAN.
Group	Multicast group address.
Next-hop	ID associated with the next-hop device.

```

show igmp-snooping user@host> show igmp-snooping route
route
VLAN      Group      Next-hop
v11       224.1.1.1, *  533
Interfaces: ge-0/0/13.0, ge-0/0/1.0
v12       224.1.1.3, *  534
Interfaces: ge-0/0/13.0, ge-0/0/0.0

```

```
show igmp-snooping route vlan v1
user@host> show igmp-snooping route vlan v1
Table: 0
VLAN      Group                Next-hop
v1        224.1.1.1, *        1266
Interfaces: ge-0/0/0.0
v1        224.1.1.3, *        1266
Interfaces: ge-0/0/0.0
v1        224.1.1.5, *        1266
Interfaces: ge-0/0/0.0
v1        224.1.1.7, *        1266
Interfaces: ge-0/0/0.0
v1        224.1.1.9, *        1266
Interfaces: ge-0/0/0.0
v1        224.1.1.11, *       1266
Interfaces: ge-0/0/0.0
```

show igmp-snooping vlans

Syntax	show igmp-snooping vlans <brief detail > <vlan <i>vlan-id</i> <i>vlan-name</i> >
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	Display IGMP snooping VLAN information. This command is supported on J Series devices and SRX100, SRX210, and SRX240 devices.
Options	none—Display general parameters. brief detail—(Optional) Display the specified level of output. vlan <i>vlan-id</i> <i>vlan-name</i> —(Optional) Display VLAN information for the specified VLAN.
Required Privilege Level	view
Related Topics	show igmp-snooping route
List of Sample Output	show igmp-snooping vlans on page 942 show igmp-snooping vlans vlan v10 on page 942 show igmp-snooping vlans vlan v10 detail on page 942
Output Fields	Table 17 on page 941 lists the output fields for the show igmp-snooping vlans command. Output fields are listed in the approximate order in which they appear.

Table 17: show igmp-snooping vlans

Field Name	Field Description
VLAN	Name of the VLAN.
Interfaces	Number of interfaces in the VLAN.
Groups	Number of groups in the VLAN.
MRouters	Number of multicast routers associated with the VLAN.
Receivers	Number of host receivers in the VLAN.
Tag	Numerical identifier of the VLAN.
vlan-interface	Internal VLAN interface identifier.
Membership timeout	Membership timeout value.
Querier timeout	Timeout value for interfaces dynamically marked as router interfaces (interfaces that receive queries). When the querier timeout is reached, the switch marks the interface as a host interface.

Table 17: show igmp-snooping vlans (continued)

Field Name	Field Description
Interface	Name of the interface.
Reporters	Number of dynamic groups on an interface.

```

show igmp-snooping user@host> show igmp-snooping vlans
vlans
VLAN Interfaces Groups MRouters Receivers
default 0 0 0 0
v1 11 50 0 0
v10 1 0 0 0
v11 1 0 0 0
v180 3 0 1 0
v181 3 0 0 0
v182 3 0 0 0

show igmp-snooping user@host> show igmp-snooping vlans vlan v10
vlans vlan v10
VLAN Interfaces Groups MRouters Receivers
v10 1 0 0 0

show igmp-snooping user@host> sshow igmp-snooping vlans vlan v10 detail
vlans vlan v10 detail
VLAN: v10, Tag: 10, vlan-interface: vlan.10
Membership timeout: 260, Querier timeout: 255
Interface: ge-0/0/10.0, tagged, Groups: 0, Reporters: 0

```

show interfaces

Syntax show interfaces
 < interface-name >
 <extensive | terse>

Release Information Command modified in Release 9.5 of JUNOS Software.

Description Display status information and statistics about interfaces on J Series and SRX Series devices running JUNOS Software.

This command is supported on J Series and SRX Series devices.

Options *interface-name* —(Optional) Display standard information about the specified interface. Following is a list of typical interface names. Replace *pim* with the PIM slot and *port* with the port number. For a complete list, see the *JUNOS Software Interfaces and Routing Configuration Guide*.

- *at-pim/0/port*—ATM-over-ADSL or ATM-over-SHDSL interface.
- *br-pim/0/port*—Basic Rate Interface for establishing ISDN connections.
- *ce1-pim/0/ port*—Channelized E1 interface.
- *cl-0/0/8*—3G wireless modem interface for SRX210 devices.
- *ct1-pim/0/port*—Channelized T1 interface.
- *dl0*—Dialer Interface for initiating ISDN and USB modem connections.
- *e1-pim/0/port*—E1 interface.
- *e3-pim/0/port*—E3 interface.
- *fe-pim/0/port*—Fast Ethernet interface.
- *ge-pim/0/port*—Gigabit Ethernet interface.
- *se-pim/0/port*—Serial interface.
- *t1-pim/0/port*—T1 (also called DS1) interface.
- *t3-pim/0/port*—T3 (also called DS3) interface.
- *wx-slot/0/0*—WAN acceleration interface, for the WXC Integrated Services Module (ISM 200).

extensive | terse—(Optional) Display the specified level of output.

Required Privilege Level view

Related Topics *JUNOS Interfaces Command Reference*

List of Sample Output show interfaces Gigabit Ethernet on page 944
 show interfaces extensive (Gigabit Ethernet) on page 944
 show interfaces terse on page 945
 show interfaces extensive (WAN Acceleration) on page 946

show interfaces extensive (3G Wireless Modem) on page 947

Output Fields Table 18 on page 944 lists the output fields for the `show interfaces` command. Output fields are listed in the approximate order in which they appear.

Table 18: show interfaces Output Fields

Field Name	Field Description
Allowed host inbound traffic	The allowed traffic through the interface.
Traffic statistics	Number of packets and bytes transmitted and received on the physical interface.
Local statistics	Number of packets and bytes transmitted and received on the physical interface.
Transit statistics	Number of packets and bytes transiting the physical interface.
Flow input statistics	Statistics on packets received by flow module.
Flow output statistics	Statistics on packets sent by flow module.
Flow error statistics	Statistics on errors in the flow module.
Admin	The interface is enabled (up) or disabled (down).

```

show interfaces Gigabit Ethernet user@host> show interfaces ge-0/0/1.0
Logical interface ge-0/0/1.0 (Index 67) (SNMP ifIndex 36)
  Flags: Device-Down SNMP-Traps Encapsulation: ENET2
  Protocol inet, MTU: 1500
  Flags: None
  Addresses, Flags: Dest-route-down Is-Preferred Is-Primary
    Destination: 4.4.4/24, Local: 4.4.4.254, Broadcast: 4.4.4.255
  Security: Zone: Untrust, ident-reset: on
  Allowed host-inbound traffic: bfd bgp bootp dhcp dlsn dvmrp finger ftp
                                http https ike ident-reset igmp ldp mld
                                msdp netconf ospf ospf3 pgm pim ping rip
                                ripng rlogin router-discovery rpm rsh
                                rsvp sap snmp snmp-trap ssh telnet
                                traceroute vrrp xnm-clear xnm-sslshow
  interfaces <interface-name> extensive

show interfaces extensive (Gigabit Ethernet) user@host> show interfaces ge-0/0/1.0 extensive
Logical interface ge-0/0/1.0 (Index 67) (SNMP ifIndex 37) (Generation 134)
  Flags: SNMP-Traps VLAN-Tag [ 0x8100.100 ] Encapsulation: ENET2
  Traffic statistics:
    Input bytes : 0
    Output bytes : 0
    Input packets: 0
    Output packets: 0
    Input bytes : IPv6 0
    Output bytes : IPv6 0
    Input packets: IPv6 0
    Output packets: IPv6 0
  Local statistics:
    Input bytes : 0

```



```

Output bytes : 0
Input packets: 0
Output packets: 0
Input bytes : IPv6 0
Output bytes : IPv6 0
Input packets: IPv6 0
Output packets: IPv6 0
Transit statistics:
Input bytes : 0 0 bps
Output bytes : 0 0 bps
Input packets: 0 0 pps
Output packets: 0 0 pps
Input bytes : IPv6 0
Output bytes : IPv6 0
Input packets: IPv6 0
Output packets: IPv6 0
Flow statistics:
Flow input statistics:
Self packets : 0
ICMP packets : 113
VPN packets : 0
Bytes permitted by policy: 0
Connections established: 11
Flow output statistics:
Multicast packets : 0
Bytes permitted by policy: 0
Flow error statistics (Packets dropped due to):
Policy denied: 0
No parent for a gate: 0
Syn-attack protection: 0
Incoming NAT errors: 0
No session found: 0
No more sessions: 0
Invalid zone received packet: 0
User authentication errors: 0
Multiple user authentications: 0
Multiple Incoming NAT: 0
Address spoofing: 0
No zone or NULL zone binding: 0
No NAT gate: 0
No minor session: 0
No session for a gate: 0
TCP sequence number out of window: 0
No Route present: 0
Authentication failed: 0
Security association not active: 0
No SA for incoming SPI: 0
No one interested in self packets: 0
Protocol inet, MTU: 1500, Generation: 139, Route table: 0
Flags: None
Addresses, Flags: None
Destination: Unspecified, Local: 2.2.2.2, Broadcast: Unspecified,
Generation: 137
Addresses, Flags: Primary Is-Primary
Destination: Unspecified, Local: 3.3.3.3, Broadcast: Unspecified,
Generation: 139

```

show interfaces terse user@host> **show interfaces terse**

Interface	Admin	Link	Proto	Local	Remote
ge-0/0/0	up	up			
ge-0/0/0.0	up	up	inet	10.209.4.61/18	

```

gr-0/0/0          up    up
ip-0/0/0          up    up
st0               up    up
st0.1             up    ready inet
ls-0/0/0          up    up
lt-0/0/0          up    up
mt-0/0/0          up    up
pd-0/0/0          up    up
pe-0/0/0          up    up
e3-1/0/0          up    up
t3-2/0/0          up    up
e1-3/0/0          up    up
se-4/0/0          up    down
t1-5/0/0          up    up
br-6/0/0          up    up
dc-6/0/0          up    up
dc-6/0/0.32767    up    up
bc-6/0/0:1        down  up
bc-6/0/0:1.0      up    down
dl0               up    up
dl0.0             up    up    inet
dsc               up    up
gre               up    up
ipip              up    up
lo0               up    up
lo0.16385         up    up    inet    10.0.0.1        --> 0/0
                                           10.0.0.16       --> 0/0

lsi               up    up
mtun              up    up
pimd              up    up
pime              up    up
pp0               up    up

```

**show interfaces
extensive (WAN
Acceleration)**

```

user@host> show interfaces wx-6/0/0 extensive
Physical interface: wx-6/0/0, Enabled, Physical link is Up
Interface index: 142, SNMP ifIndex: 41, Generation: 143
Type: PIC-Peer, Link-level type: PIC-Peer, MTU: 1522, Clocking: Unspecified,
Speed: 1000mbps
Device flags   : Present Running
Interface flags: Point-To-Point Promiscuous SNMP-Traps Internal: 0x4000
Link type      : Full-Duplex
Link flags     : None
Physical info  : Unspecified
Hold-times    : Up 0 ms, Down 0 ms
Current address: Unspecified, Hardware address: Unspecified
Alternate link address: Unspecified
Last flapped   : 2007-08-01 05:19:35 UTC (02:12:04 ago)
Statistics last cleared: Never
Traffic statistics:
  Input bytes   :           58427           0 bps
  Output bytes  :          115078           0 bps
  Input packets:             847           0 pps
  Output packets:           972           0 pps
Input errors:
  Errors: 0, Drops: 0, Framing errors: 0, Runts: 0, Giants: 0,
  Policed discards: 0, Resource errors: 0
Output errors:
  Carrier transitions: 0, Errors: 0, Drops: 0, MTU errors: 0,
  Resource errors: 0
Logical interface wx-6/0/0.0 (Index 68) (SNMP ifIndex 43) (Generation 135)
Flags: Point-To-Point SNMP-Traps Encapsulation: PIC-Peering

```

```

Security: Zone: wx-zone
Allowed host-inbound traffic : any-service bootp bfd bgp dlsu dns dvmrp
igmp ldp msdp nhrp ospf pgm pim rip router-discovery rsvp sap vrrp dhcp
finger ftp tftp ident-reset http https ike netconf ping rlogin rpm rsh snmp
snmp-trap ssh telnet traceroute xnm-clear-text xnm-ssl
Flow Statistics :
Flow Input statistics :
  Self packets : 0
  ICMP packets : 0
  VPN packets : 0
  Bytes permitted by policy : 70137
  Connections established : 4
Flow Output statistics:
  Multicast packets : 0
  Bytes permitted by policy : 2866
Flow error statistics (Packets dropped due to):
  Address spoofing: 0
  Authentication failed: 0
  Incoming NAT errors: 0
  Invalid zone received packet: 0
  Multiple user authentications: 0
  Multiple incoming NAT: 0
  No parent for a gate: 0
  No one interested in self packets: 0
  No minor session: 0
  No more sessions: 0
  No NAT gate: 0
  No route present: 0
  No SA for incoming SPI: 0
  No tunnel found: 0
  No session for a gate: 0
  No zone or NULL zone binding 0
  Policy denied: 0
  Security association not active: 0
  TCP sequence number out of window: 0
  Syn-attack protection: 0
  User authentication errors: 0
Protocol inet, MTU: 1500, Generation: 141, Route table: 0
Flags: None
Addresses, Flags: Is-Preferred Is-Primary
  Destination: 10.87.13.2, Local: 3.3.3.3, Broadcast: Unspecified,
  Generation: 142

```

**show interfaces
extensive (3G Wireless
Modem)**

```

user@host> show interfaces cl-0/0/8 extensive
Physical interface: cl-0/0/8, Enabled, Physical link is Up
Interface index: 67, SNMP ifIndex: 25, Generation: 4
Type: Async-Serial, Link-level type: PPP-Subordinate, MTU: 1504,
Clocking: Unspecified, Speed: MODEM
Device flags : Present Running
Interface flags: Point-To-Point SNMP-Traps Internal: 0x4000
Link flags : None
Hold-times : Up 0 ms, Down 0 ms
CoS queues : 8 supported, 8 maximum usable queues
Last flapped : Never
Statistics last cleared: Never
Traffic statistics:
  Input bytes : 0 0 bps
  Output bytes : 868 0 bps
  Input packets: 0 0 pps
  Output packets: 16 0 pps
Input errors:

```

```
Errors: 0, Drops: 0, Framing errors: 0, Runts: 0, Giants: 0,
Policed discards: 0, Resource errors: 0
Output errors:
Carrier transitions: 0, Errors: 0, Drops: 0, MTU errors: 0,
Resource errors: 0
Egress queues: 8 supported, 4 in use
Queue counters:      Queued packets  Transmitted packets      Dropped packets

0 best-effort        6                6                0
1 expedited-fo       0                0                0
2 assured-forw       0                0                0
3 network-cont      10               10               0

MODEM status:
Modem type           : Sierra-USB-3G Data/Fax Modem Version 2.27m
Initialization command string : ATSO=2
Initialization status : Ok
Call status          : Connected to 14591
Call duration         : 134316 seconds
Call direction        : Dialout
Baud rate             : <x> bps
```

show interfaces flow-statistics

Syntax	show interfaces flow-statistics <interface-name>
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	<p>Display interfaces flow statistics.</p> <p>This command is supported on J Series and SRX Series devices.</p>
Options	<p><i>Interface-name</i> —(Optional) Display flow statistics about the specified interface. Following is a list of typical interface names. Replace pim with the PIM slot and port with the port number. For a complete list, see the <i>JUNOS Software Interfaces and Routing Configuration Guide</i>.</p> <ul style="list-style-type: none"> ■ <i>at-pim/0/port</i>—ATM-over-ADSL or ATM-over-SHDSL interface. ■ <i>br-pim/0/port</i>—Basic Rate Interface for establishing ISDN connections. ■ <i>ce1-pim/0/port</i>—Channelized E1 interface. ■ <i>ct1-pim/0/port</i>—Channelized T1 interface. ■ <i>dl0</i>—Dialer Interface for initiating ISDN and USB modem connections. ■ <i>e1-pim/0/port</i>—E1 interface. ■ <i>e3-pim/0/port</i>—E3 interface. ■ <i>fe-pim/0/ port</i>—Fast Ethernet interface. ■ <i>ge-pim/0/port</i>—Gigabit Ethernet interface. ■ <i>se-pim/0/port</i>—Serial interface. ■ <i>t1-pim/0/port</i>—T1 (also called DS1) interface. ■ <i>t3-pim/0/ port</i>—T3 (also called DS3) interface. ■ <i>wx-slot/0/0</i>—WAN acceleration interface, for the WXC Integrated Services Module (ISM 200).
Required Privilege Level	view
List of Sample Output	show interfaces flow-statistics (Gigabit Ethernet) on page 950
Output Fields	Table 19 on page 949 lists the output fields for the show interfaces flow-statistics command. Output fields are listed in the approximate order in which they appear.

Table 19: show interfaces flow-statistics Output Fields

Field Name	Field Description
Traffic statistics	Number of packets and bytes transmitted and received on the physical interface.
Local statistics	Number of packets and bytes transmitted and received on the physical interface.
Transit statistics	Number of packets and bytes transiting the physical interface.

Table 19: show interfaces flow-statistics Output Fields (continued)

Field Name	Field Description
Flow input statistics	Statistics on packets received by flow module.
Flow output statistics	Statistics on packets sent by flow module.
Flow error statistics	Statistics on errors in the flow module.

```

show interfaces
flow-statistics (Gigabit Ethernet)

user@host> show interfaces flow-statistics ge-0/0/1.0
Logical interface ge-0/0/1.0 (Index 70) (SNMP ifIndex 49)
Flags: SNMP-Traps Encapsulation: ENET2
Input packets : 5161
Output packets: 83
Security: Zone: zone2
Allowed host-inbound traffic : bootp bfd bgp dls w dns dvmrp igmp ldp msdp
nhrp ospf pgm
pim rip router-discovery rsvp sap vrrp dhcp finger ftp tftp ident-reset http
https ike
netconf ping rlogin rpm rsh snmp snmp-trap ssh telnet traceroute xnm-clear-text
xnm-ssl
lsping
Flow Statistics :
Flow Input statistics :
  Self packets : 0
  ICMP packets : 0
  VPN packets : 2564
  Bytes permitted by policy : 3478
  Connections established : 1
Flow Output statistics:
  Multicast packets : 0
  Bytes permitted by policy : 16994
Flow error statistics (Packets dropped due to):
  Address spoofing: 0
  Authentication failed: 0
  Incoming NAT errors: 0
  Invalid zone received packet: 0
  Multiple user authentications: 0
  Multiple incoming NAT: 0
  No parent for a gate: 0
  No one interested in self packets: 0
  No minor session: 0
  No more sessions: 0
  No NAT gate: 0
  No route present: 0
  No SA for incoming SPI: 0
  No tunnel found: 0
  No session for a gate: 0
  No zone or NULL zone binding: 0
  Policy denied: 0
  Security association not active: 0
  TCP sequence number out of window: 0
  Syn-attack protection: 0
  User authentication errors: 0
Protocol inet, MTU: 1500
Flags: None

```

Addresses, Flags: Is-Preferred Is-Primary
Destination: 2.2.2/24, Local: 2.2.2.2, Broadcast: 2.2.2.255

show modem wireless interface

Syntax	show modem wireless interface <i>interface-name</i>
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	Display information about 3G wireless modem interface. This command is supported on SRX210 devices.
Options	interface <i>interface-name</i> —The 3G wireless modem interface on the SRX210 device is cl-0/0/8.
Required Privilege Level	view
List of Sample Output	show modem wireless interface cl-0/0/8 on page 952
Output Fields	Table 20 on page 952 lists the output fields for the show modem wireless interface command.

Table 20: show modem wireless interface Output Fields

Field Name	Field Description
Wireless modem firmware details	Display firmware information about the 3G wireless modem. See show modem wireless interface firmware .
Wireless Modem Network Info	Display network statistics for the 3G wireless modem interface. See show modem wireless interface network .
Radio statistics	Display received signal strength indication (RSSI) for the 3G wireless modem. See show modem wireless interface rssi .

```

show modem wireless interface cl-0/0/8
user@host> show modem wireless interface cl-0/0/8
Wireless modem firmware details
  Modem firmware version: F1_2_3_15AP C:/WS/FW/F1_2_3_15AP/MSM7200R3/SRC/AMSS
2008/07/09 12:22:16
  Modem Firmware build date: 07/09/08
  Card type: Aircard 880E
  Modem manufacturer: Sierra Wireless, Inc
  Hardware version: 1.0
  Factory serial number (FSN): D46031822831022W
  Modem PIN security status: Disabled.
  SIM Status: SIM Okay
  SIM lock: Unlocked
  SIM user operation needed: No Op
  Retries remaining: 3
  Current modem temperature: 25 deg C
Wireless Modem Network Info
  Current Modem Status: Online
  Current Service Status: Offline
  Current Service Type: Combo(CS,PS)
  Current Service Mode: HSPA

```



```
Current Band: 257.  
Roaming Status: No  
Network Selection Mode: Automatic  
Network:  
Mobile Country Code (MCC): 1  
Mobile Network Code (MNC): 1  
Location Area Code (LAC): 128  
Routing Area Code (RAC): 0  
Cell Identification: 0  
Scrambling Code: 9  
Radio statistics  
Current radio signal strength: -95 dB
```

show modem wireless interface firmware

Syntax	show modem wireless interface <i>interface-name</i> firmware
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	Display firmware details for 3G wireless modem interface. This command is supported on SRX210 devices.
Options	interface <i>interface-name</i> —The 3G wireless modem interface on the SRX210 device is cl-0/0/8.
Required Privilege Level	view
List of Sample Output	show modem wireless interface firmware (CDMA EV-DO modem) on page 955 show modem wireless interface firmware (GSM modem) on page 955
Output Fields	Table 21 on page 954 lists some of the output fields for the show modem wireless interface firmware command. Output fields are listed in the approximate order in which they appear.

Table 21: show modem wireless interface firmware Output Fields

Field Name	Field Description
SIM Status	Status of the subscriber identity module (SIM) in the GSM 3G wireless modem card. The status can be one of the following states: <ul style="list-style-type: none"> ■ SIM Okay ■ SIM not inserted ■ SIM removed ■ SIM init failure—There is a problem with the SIM; the SIM may need to be replaced. ■ SIM locked ■ PIN1 blocked—Obtain a PIN unblocking key (PUK) to unblock the SIM. ■ PIN1 rejected—The wrong PIN was entered. ■ PIN2 rejected—The wrong PIN was entered. ■ Network rejected
SIM lock	Whether the SIM is locked or unlocked. See SIM user operation needed to determine if any action is required.
SIM user operation needed	Action required by the user. This can be one of the following: <ul style="list-style-type: none"> ■ No op—No user operation required. ■ Enter PIN—Enter the personal identification number (PIN) to unlock the SIM. See request modem wireless gsm sim-unlock. ■ Enter PUK—Enter the PIN unblocking key (PUK) to unblock the SIM. See request modem wireless gsm sim-unblock.

Table 21: show modem wireless interface firmware Output Fields *(continued)*

Field Name	Field Description
Retries remaining	<p>If the value of SIM user operation needed is Enter PIN, the number of PIN unlock attempts remaining before the modem is blocked. If the PIN is entered incorrectly three consecutive times, the SIM is blocked.</p> <p>If the value of SIM user operation needed is Enter PUK, the number of unblock attempts remaining before the modem is unusable. If the PUK is entered incorrectly ten times, the SIM must be returned to the service provider for reactivation.</p>

**show modem wireless
interface firmware
(CDMA EV-DO modem)**

```
user@host> show modem wireless interface cl-0/0/8 firmware
Modem Firmware Version : p2005600
Modem Firmware built date : 12-09-07
Card type : Aircard 597E - CDMA EV-DO revA
Manufacturer : Sierra Wireless, Inc.
Hardware Version : 1.0
Electronic Serial Number (ESN) : 0x6032688F
Preferred Roaming List (PRL) Version : 20224
Supported Mode : 1xeV-do rev-a, 1x
Current Modem Temperature : 32 C
Modem Activated : YES
Activation Date: 2-06-08
Modem PIN Security : Unlocked
Power-up lock : Disabled
```

**show modem wireless
interface firmware (GSM
modem)**

```
user@host> show modem wireless interface cl-0/0/8 firmware
Wireless modem firmware details
Modem firmware version: F1_2_3_15AP C:/WS/FW/F1_2_3_15AP/MSM7200R3/SRC/AMSS
2008/07/09 12:22:16
Modem Firmware build date: 07/09/08
Card type: Aircard 881E
Modem manufacturer: Sierra Wireless, Inc
Hardware version: 1.0
Factory serial number (FSN): D46031813941022W
Modem PIN security status: Disabled
SIM status: Low Power
SIM lock: Unlocked
SIM user operation needed: No Op
Retries remaining: 3
Current modem temperature: 25 degrees Celsius
```

show modem wireless interface network

Syntax	show modem wireless interface <i>interface-name</i> network
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	Display wireless network statistics for 3G wireless modem interface. This command is supported on SRX210 devices.
Options	interface <i>interface-name</i> —The 3G wireless modem interface on the SRX210 device is cl-0/0/8.
Required Privilege Level	view
List of Sample Output	show modem wireless interface network (CDMA EV-DO modem) on page 957 show modem wireless interface network (GSM modem) on page 957
Output Fields	Table 22 on page 956 lists some of the output fields for the show modem wireless interface network command.

Table 22: show modem wireless interface network Output Fields

Field Name	Field Description
System Identifier (SID)	Current SID of the network providing service.
Network Identifier (SID)	Current NID of the station providing service.
Roaming Status	Roaming state.
Current Modem Status	Status of the 3G wireless modem card. The status can be one of the following states: <ul style="list-style-type: none"> ■ Offline—Modem is not usable ■ Online—Modem booted properly ■ Low Power—Modem booted and in low power mode
Current Service Status	Status of the 3G wireless modem connection. The status can be one of the following states: <ul style="list-style-type: none"> ■ Offline—Modem is not connected ■ Online—Modem is connected
Current Service Type	One of the following: <ul style="list-style-type: none"> ■ Circuit switched (CS) ■ Packet switched (PS) ■ Combo (CS,PS)

Table 22: show modem wireless interface network Output Fields *(continued)*

Field Name	Field Description
Current Service Mode	One of the following: <ul style="list-style-type: none"> ■ High-Speed Packet Access (HSPA) ■ High-Speed Downlink Packet Access (HSDPA) ■ High-Speed Uplink Packet Access (HSUPA)
Current Band	Current radio band in use.
Mobile country Code (MCC)	Number that uniquely identifies the country.
Mobile Network Code	Number that uniquely identifies a network within a country.
System Identifier (SID)	Current SID of the network providing service.

**show modem wireless
interface network
(CDMA EV-DO modem)**

```
user@host> show modem wireless interface cl-0/0/8 network
Running Operating mode : 1xEV-DO (Rev A) and 1xRTT
Call Setup Mode : Mobile IP only
System Identifier (SID) : 3421
Network Identifier (NID) : 91
Roaming Status(1xRTT) : Home
Idle Digital Mode : HDR
System Time : Wed Jun6 15:16:9 2008
```

**show modem wireless
interface network (GSM
modem)**

```
user@host> show modem wireless interface cl-0/0/8 network
Wireless Modem Network Info
Current Modem Status: Online
Current Service Status: Offline
Current Service Type: Combo(CS,PS)
Current Service Mode: HSPA
Current Band: 257
Roaming Status: No
Network Selection Mode: Automatic
Network:
Mobile Country Code (MCC): 1
Mobile Network Code (MNC): 1
Location Area Code (LAC): 128
Routing Area Code (RAC): 0
Cell Identification: 0
Scrambling Code: 9
```

show modem wireless interface rssi

Syntax	show modem wireless interface <i>interface-name</i> rssi
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	Display received signal strength indication (RSSI) for 3G wireless modem interface. This command is supported on SRX210 devices.
Options	interface <i>interface-name</i> —The 3G wireless modem interface on the SRX210 device is cl-0/0/8.
Required Privilege Level	view
List of Sample Output	show modem wireless interface cl-0/0/8 rssi on page 958
Output Fields	Table 23 on page 958 lists the output fields for the show modem wireless interface rssi command.

Table 23: show modem wireless interface rssi Output Fields

Field Name	Field Description
rssi	Current RSSI, in decibels (dB).

show modem wireless interface cl-0/0/8 rssi	user@host> show modem wireless interface cl-0/0/8 rssi Radio statistics Current radio signal strength: -95 dB
--	---

show network-access requests pending

Syntax	show network-access requests pending <detail> <index <i>number</i> >
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	Display the status of pending authentication requests. This command is supported on J Series and SRX Series devices.
Options	none—Show pending authentication requests. detail—Display detailed information about all pending requests. index <i>number</i> —(Optional) Display detailed information about the request specified by this index number. Use the command without options to obtain a list of requests and index numbers.
Required Privilege Level	view
Related Topics	clear network-access requests pending
List of Sample Output	show network-access requests pending on page 960 show network-access requests pending detail on page 960 show network-access requests pending index 1 on page 960
Output Fields	Table 24 on page 959 lists the output fields for the show network-access requests pending command. Output fields are listed in the approximate order in which they appear.

Table 24: show network-access requests pending Output Fields

Field Name	Field Description
Index	Internal number identifying the pending request. Use this number to obtain more information on the record.
User	Originator of authentication request.
Status	<p>The pending requests are requests and responses that are not yet sent back to the respective clients. The pending requests can be in one of the following states:</p> <ul style="list-style-type: none"> ■ Processing: This request is being processed by the device. The authentication process has started but is not complete. ■ Waiting on Auth Server: The request is sent to an external authentication server, and the device is waiting for the response. ■ Processed: This request has completed authentication (success or failure). The results are not yet forwarded back to the client. ■ Request cancelled by Admin: This request was cancelled by the Admin. The reply with cancel code is not yet sent back to the client.

Table 24: show network-access requests pending Output Fields (continued)

Field Name	Field Description
Profile	The profile determines how the user is authenticated. Local clients defined with the statement <code>access profile client</code> are authenticated with the password authentication. Clients configured external to the device, on a RADIUS or LDAP server are authenticated with RADIUS or LDAP authentication.

```

show network-access requests pending
user@host> show network-access requests pending
Information about pending authentication entries
Total pending authentication requests: 2
Index User          Status
1      Sun           Processing
2      Sam           Processed

```

```

show network-access requests pending detail
user@host> show network-access requests pending detail
Information about pending authentication entries
Total pending authentication requests: 2
Index: 1 User: Sun
Status: Processing
Profile: Sunnyvale-firewall-users
Index: 2 User: Sam
Status: Processed
Profile: Westford-profile

```

```

show network-access requests pending index 1
user@host> show network-access requests pending index 1
Index: 1 User: Sun
Status: Processing
Profile: Sunnyvale-firewall-users

```


show network-access requests statistics

Syntax	show network-access requests statistics
Release Information	Command modified in Release 9.1 of JUNOS Software.
Description	Display authentication statistics for the configured authentication type. This command is supported on J Series and SRX Series devices.
Required Privilege Level	view
Related Topics	authentication-order clear network-access requests statistics
Output Fields	Table 25 on page 961 lists the output fields for the network-access requests statistics command. Output fields are listed in the approximate order in which they appear.

Table 25: show network-access requests statistics Output Fields

Field Name	Field Description
Total requests received	Total number of authentication requests that the device received from clients.
Total responses sent	Total number of authentication responses that the device sent to the clients.
Success responses	Total number of clients that authenticated successfully.
Failure responses	Total number of clients that failed to authenticate.

```

show network-access requests statistics  user@host> show network-access requests statistics
General authentication statistics
  Total requests received: 100
  Total responses sent: 70
Radius authentication statistics
  Total requests received: 40
  Success responses: 20
  Failure responses: 20
LDAP authentication statistics
  Total requests received: 30
  Success responses: 15
  Failure responses: 15
Local authentication statistics
  Total requests received: 5
  Success responses: 2
  Failure responses: 3
Securid authentication statistics
  Total requests received: 15
  Success responses: 3
  Failure responses: 12

```

show network-access securid-node-secret-file

Syntax	show network-access securid-node-secret-file
Release Information	Command introduced in Release 9.1 of JUNOS Software.
Description	Display the path to the node secret file for the SecurID authentication type. This command is supported on J Series and SRX Series devices.
Required Privilege Level	view
Related Topics	configuration-file securid-server clear network-access securid-node-secret-file
List of Sample Output	show network-access securid-node-secret-file on page 962
Output Fields	Table 26 on page 962 lists the output fields for the network-access securid-node-secret-file command. Output fields are listed in the approximate order in which they appear.

Table 26: show network-access securid-node-secret-file Output Fields

Field Name	Field Description
SecurID Server	Name of the SecurID authentication server.
Node Secret File	Path to the node secret file.

```

show network-access user@host> show network-access securid-node-secret-file
securid-node-secret-file SecurID server node secret file:
                          SecurID Server      Node Secret File
                          ace-server1         /var/db/securid/ace-server1/node-secret

```

show poe controller

Syntax	show poe controller
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	Displays the status of the Power over Ethernet (PoE) controller. This command is supported on SRX240 devices.
Options	none—Displays general parameters of the PoE software module controller.
Required Privilege Level	View
Output Fields	Table 27 on page 963 lists the output fields for the <code>show poe controller</code> command. Output fields are listed in the approximate order in which they appear.

Table 27: show poe controller Output Fields

Field name	Field Description
Controller-index	Identifies the controller.
Maximum-power	Specifies the maximum power that can be provided by the SRX Series device to PoE ports.
Power-consumption	Specifies the total amount of power allocated to the PoE ports.
Guard-band	Shows the guard band configured on the controller.
Management	Shows the power management mode.

show poe controller user@host>show poe controller

Controller index	Maximum power	Power consumption	Guard band	Management
0	150.0 W	0.0 W	0 W	Static

show poe interface

Syntax	show poe interface <ge-fpc/pic/port>
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	Displays the status of Power over Ethernet (PoE) ports. This command is supported on SRX240 devices.
Options	none—Displays the status of all PoE ports on the SRX Series device. ge-fpc/pic/port— (Optional) Displays the status of a specific PoE port on the SRX Series device.
Required Privilege Level	View
Output Fields	Table 28 on page 964 lists the output fields for the show poe interface command. Output fields are listed in the approximate order in which they appear.

Table 28: show poe interface Output Fields

Field name	Field Description
PoE Interface	Specifies the interface name.
Admin Status	Specifies whether PoE capabilities are enabled or disabled.
Oper status	Specifies the operational status of the port.
Max-power	Specifies the maximum power configured on the port.
Priority	Specifies whether the port is high priority or low priority.
Power-consumption	Specifies how much power is being used by the port.
Class	Indicates the class of the powered device as defined by the IEEE 802 AF standard.

show poe interface user@host>show poe interface

```

Interface Admin status Oper status Max power Priority Power consumption Class
ge-0/0/0 Enabled Searching 15.4W Low 0.0W 0
ge-0/0/1 Enabled Powered-up 15.4W High 6.6W 0
ge-0/0/2 Disabled Disabled 15.4W Low 0.0W 0
ge-0/0/3 Disabled Disabled 15.4W Low 0.0W 0

```

user@host>show poe interface ge-0/0/1

```

PoE interface status :
PoE interface          : ge-0/0/1
Administrative status   : Enabled
Operational status     : Powered-up

```

```
Power limit on the interface : 15.4 W
Priority                      : High
Power consumed               : 6.6 W
Class of power device        : 0
```

show poe telemetries interface

Syntax	show poe telemetries interface ge-fpc/pic/port all x
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	Displays a history of power consumption on the specified interface. This command is supported on SRX240 devices.
Options	ge-fpc/pic/port—Displays telemetries for the specified PoE interface. all—Displays all telemetries records for the specified PoE interface. x—Displays the specified number of telemetries records for the specified PoE interface.
Required Privilege Level	View
Output Fields	Table 29 on page 966 lists the output fields for the <code>show poe telemetries interface</code> command. Output fields are listed in the approximate order in which they appear.

Table 29: show poe telemetries interface Output Fields

Field name	Field Description
S1 No	Number of the record for the specified port. The last record is the most recent.
Timestamp	Time that the power-consumption data was gathered.
Power	Amount of power provided by the specified port at the time the data was gathered.
Voltage	Voltage on the specified port at the time the data was gathered.

show poe telemetries interface user@host>show poe telemetries interface ge-0/0/1 all

S1 No	Timestamp	Power	Voltage
1	Fri Jan 04 11:41:15 2009	6.6 W	47.2 V
2	Fri Jan 04 11:40:15 2009	6.6 W	47.2 V
3	Fri Jan 04 11:39:15 2009	6.6 W	47.2 V
4	Fri Jan 04 11:38:15 2009	6.6 W	47.2 V
5	Fri Jan 04 11:37:15 2009	6.6 W	47.2 V
6	Fri Jan 04 11:36:15 2009	6.6 W	47.2 V
7	Fri Jan 04 11:35:15 2009	6.6 W	47.2 V
8	Fri Jan 04 11:34:15 2009	6.6 W	47.2 V

user@host>show poe telemetries interface ge-0/0/1 5

S1 No	Timestamp	Power	Voltage
1	Fri Jan 04 11:47:15 2009	6.6 W	47.2 V
2	Fri Jan 04 11:38:15 2009	6.6 W	47.2 V
3	Fri Jan 04 11:29:15 2009	6.6 W	47.2 V

```
4    Fri Jan 04 11:11:15 2009 6.6 W    47.2 V
5    Fri Jan 04 11:10:15 2009 6.6 W    47.2 V
```

show schedulers

Syntax	show schedulers < scheduler-name <i>scheduler-name</i> >
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	Display information about security policy schedulers configured on the system. If a specific scheduler is identified, detailed information is displayed for that scheduler only. This command is supported on J Series and SRX Series devices.
Options	none—Display information on all configured schedulers. scheduler-name <i>scheduler-name</i> —(Optional) Display information on a particular scheduler.
Required Privilege Level	view
Related Topics	schedulers
List of Sample Output	show schedulers on page 968 show schedulers scheduler-name sch20 on page 969
Output Fields	Table 30 on page 968 lists the output fields for the show schedulers command. Output fields are listed in the approximate order in which they appear.

Table 30: show schedulers Output Fields

Field Name	Field Description
Scheduler name	Name of the scheduler.
State	Status of the scheduler: <ul style="list-style-type: none"> ■ active—The scheduler is associated with one or more policies. If active: <ul style="list-style-type: none"> ■ Next deactivation—Date and time when the policies with which the scheduler is associated are to be deactivated. ■ inactive—The scheduler is associated with one or more policies. If inactive: <ul style="list-style-type: none"> ■ Next activation—Date and time when the associated policies are to be activated. ■ unused—The scheduler is not associated with any policy, or it is past the stop date and no future activity is required.

```

show schedulers  user@host> show schedulers
Scheduler name: s1, State: unused
Scheduler name: sch1, State: inactive
Next activation: Thu Feb 15 00:00:00 2007
Scheduler name: sch10, State: unused
Scheduler name: sch20, State: active
Next deactivation: Thu Feb 15 00:00:00 2007

```



```
show schedulers      user@host> show schedulers scheduler-name sch20  
scheduler-name sch20 Scheduler name: sch20, State: active  
                        Next deactivation: Thu Feb 15 00:00:00 2007
```

show security alg h323 counters

Syntax	show security alg h323 counters <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; <i>node</i> options added in Release 9.0 of JUNOS Software.
Description	Display H.323 Application Layer Gateway (ALG) counters information. This command is supported on J Series devices.
Options	<p>none—Display H.323 ALG counters. information.</p> <p><i>node</i>—(Optional) For chassis cluster configurations, display H.323 counters on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	<p>h323</p> <p>clear security alg h323 counters</p>
List of Sample Output	show security alg h323 counters on page 971
Output Fields	Table 31 on page 970 lists the output fields for the show security alg h323 counters command. Output fields are listed in the approximate order in which they appear.

Table 31: show security alg h323 counters Output Fields

Field Name	Field Description
Packets received	Number of H.323 ALG packets received.
Packets dropped	Number of H.323 ALG packets dropped.
RAS message received	Number of incoming RAS (Endpoint Registration, Admission, and Status) messages per second per gatekeeper received and processed.
Q.931 message received	Counter for Q.931 message received.
H.245 message received	Counter for H.245 message received.

Table 31: show security alg h323 counters Output Fields (continued)

Field Name	Field Description
Number of calls	Total number of H.323 ALG calls.
NOTE: This counter displays the number of call legs and may not display the exact number of voice calls that are active. For instance, for a single active voice call between two endpoints, this counter might display a value of 2.	
Number of active calls	Number of active H.323 ALG calls.
Decoding errors	Number of decoding errors.
Message flood dropped	Error counter for message flood dropped.
NAT errors	H.323 ALG Network Address Translation (NAT) errors.
Resource manager errors	H.323 ALG resource manager errors.

```

show security alg h323 counters
user@host> show security alg h323 counters
H.323 counters summary:
Packets received      :4060
Packets dropped       :24
RAS message received  :3690
Q.931 message received :202
H.245 message received :145
Number of calls       :25
Number of active calls :0
H.323 Error Counters:
Decoding errors       :24
Message flood dropped  :0
NAT errors             :0
Resource manager errors :0
H.323 Message Counters:
RRQ   : 431   RCF   : 49 ARQ : 60 ACF   : 33
URQ   : 34   UCF   : 25 DRQ : 55 DCF   : 44
oth RAS : 2942 Setup : 28 Alert : 9 Connect : 25
CallPrd : 18 Info  : 0 RelCmpl : 39 Facility : 14
Progress : 0 Empty : 65 OLC   : 20 OLC-ACK : 20
oth H245 : 16

```

show security alg mgcp calls

Syntax	show security alg mgcp calls <endpoint <i>endpoint-name</i> node (<i>node-id</i> all local primary)>
Release Information	Command modified in Release 9.2 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about Media Gateway Control Protocol (MGCP) Application Layer Gateway (ALG) calls. This command is supported on J Series and SRX Series devices.
Options	<p>none—Display all MGCP ALG calls.</p> <p>endpoint <i>endpoint-name</i> —(Optional) Display information about the endpoints of each MGCP ALG call.</p> <p>node—(Optional) For chassis cluster configurations, display MGCP calls on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	<p>mgcp</p> <p>clear security alg mgcp calls</p>
List of Sample Output	<p>show security alg mgcp calls on page 973</p> <p>show security alg mgcp calls endpoint on page 973</p>
Output Fields	Table 32 on page 972 lists the output fields for the show security alg mgcp calls command. Output fields are listed in the approximate order in which they appear.

Table 32: show security alg mgcp calls Output Fields

Field Name	Field Description
Connection ID	Connection identifier for MGCP ALG calls.
Local SDP	MGCP ALG call local owner IP address as per the Session Description Protocol (SDP).
Remote SDP	MGCP ALG call remote owner IP address as per the Session Description Protocol (SDP).
RM Group	Resource manager group ID.
Notified entity	The certificate authority (CA) currently controlling the gateway.

```

show security alg mgcp calls
user@host> show security alg mgcp calls
Endpoint@GW      Zone      Call ID      RM Group
d001@101.50.10.1  Trust     10d55b81140e0f76  512
Connection Id> 0
Local SDP>  o: 101.50.10.1      x_o: 101.50.10.1
c: 101.50.10.1/32206      x_c: 101.50.10.1/32206
Remote SDP>  c: 3.3.3.5/16928      x_c: 3.3.3.5/16928
Endpoint@GW      Zone      Call ID      RM Group
d001@3.3.3.5      Untrust   3a104e9b41a7c4c9  511
Connection Id> 0
Local SDP>  o: 3.3.3.5      x_o: 3.3.3.5
c: 3.3.3.5/16928      x_c: 3.3.3.5/16928
Remote SDP>  c: 101.50.10.1/32206      x_c: 101.50.10.1/32206

show security alg mgcp calls endpoint
user@host> show security alg mgcp calls endpoint
Gateway: 101.50.10.1      Zone: Trust      IP: 101.50.10.1 -> 101.50.10.1
Endpoint      Trans #  Call #  Notified Entity
d001          1        1      0.0.0.0/0->0.0.0.0/0
Gateway: 3.3.3.5      Zone: Untrust    IP: 3.3.3.5 -> 3.3.3.5
Endpoint      Trans #  Call #  Notified Entity
d001          1        1      0.0.0.0/0->0.0.0.0/0

```

show security alg mgcp counters

Syntax	show security alg mgcp counters <node (<i>node-id</i> all local primary)>
Release Information	Command modified in Release 9.2 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display Media Gateway Control Protocol (MGCP) Application Layer Gateway (ALG) counters information. This command is supported on J Series and SRX Series devices.
Options	<p>none—Display MGCP ALG counters information.</p> <p>node—(Optional) For chassis cluster configurations, display MGCP counters on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	<p>mgcp</p> <p>clear security alg mgcp counters</p>
List of Sample Output	show security alg mgcp counters on page 975
Output Fields	Table 33 on page 974 lists the output fields for the show security alg mgcp counters command. Output fields are listed in the approximate order in which they appear.

Table 33: show security alg mgcp counters Output Fields

Field Name	Field Description
Packets received	Number of MGCP ALG packets received.
Packets dropped	Number of MGCP ALG packets dropped.
Message received	Number of MGCP ALG messages received.
Number of connections	Number of MGCP ALG connections.
Number of active connections	Number of active MGCP ALG connections.
Number of calls	Number of MGCP ALG calls.
Number of active calls	Number of MGCP ALG active calls.

Table 33: show security alg mgcp counters Output Fields (continued)

Field Name	Field Description
Number of active transactions	Number of active transactions.
Number of re-transmission	Number of MGCP ALG retransmissions.
Unknown-method	MGCP ALG unknown method errors.
Decoding error	MGCP ALG decoding errors.
Transaction error	MGCP ALG transaction errors.
Call error	MGCP ALG counter errors.
Connection error	MGCP ALG connection errors.
Connection flood drop	MGCP ALG connection flood drop errors.
Message flood drop	MGCP ALG message flood drop error.
IP resolve error	MGCP ALG IP address resolution errors.
NAT error	MGCP ALG Network Address Translation (NAT) errors.
Resource manager error	MGCP ALG resource manager errors.

```

show security alg mgcp counters user@host> show security alg mgcp counters
counters MGCP counters summary:
Packets received :284
Packets dropped :0
Message received :284
Number of connections :4
Number of active connections :3
Number of calls :4
Number of active calls :3
Number of transactions :121
Number of active transactions:52
Number of re-transmission :68
MGCP Error Counters:
Unknown-method :0
Decoding error :0
Transaction error :0
Call error :0
Connection error :0
Connection flood drop :0
Message flood drop :0
IP resolve error :0
NAT error :0
Resource manager error :0
MGCP Packet Counters:
CRCX :4 MDCX :9 DLCX :2
AUPE :1 AUCX :0 NTFY :43
RSIP :79 EPCF :0 RQNT :51
000-199 :0 200-299 :95 300-999 :0

```

show security alg mgcp endpoints

Syntax	show security alg mgcp endpoints < endpoint name > <node (node-id all local primary)>
Release Information	Command modified in Release 9.2 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about Media Gateway Control Protocol (MGCP) Application Layer Gateway (ALG) endpoints. This command is supported on J Series and SRX Series devices.
Options	none—Display MGCP ALG endpoints information. <i>endpoint-name</i> —(Optional) Display information about the specified MGCP ALG endpoint. <i>node</i> —(Optional) For chassis cluster configurations, display MGCP endpoints on a specific node (device) in the cluster. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ <i>all</i>—Display information about all nodes. ■ <i>local</i>—Display information about the local node. ■ <i>primary</i>—Display information about the primary node.
Required Privilege Level	view
Related Topics	mgcp
List of Sample Output	show security alg mgcp endpoints on page 977 show security alg mgcp endpoints d001@100.100.100.152 on page 977
Output Fields	Table 34 on page 976 lists the output fields for the show security alg mgcp endpoints command. Output fields are listed in the approximate order in which they appear.

Table 34: show security alg mgcp endpoints Output Fields

Field Name	Field Description
Gateway	IP address of the gateway.
Zone	Gateway zone ID.
Endpoint	Endpoint name.
Trans #	Transaction ID.
Call #	Call ID.

Table 34: show security alg mgcp endpoints Output Fields (continued)

Field Name	Field Description
Notified entity	The certificate authority (CA) currently controlling the gateway.

```

show security alg mgcp endpoints user@host> show security alg mgcp endpoints
Gateway: 100.100.100.152 Zone: z0 IP: 100.100.100.152 ->
100.100.100.152
Endpoint      Trans #  Call #  Notified entity
d001          3        1      0.0.0.0:0 -> 0.0.0.0:0

show security alg mgcp endpoints d001@100.100.100.152
d001@100.100.100.152 user@host> show security alg mgcp endpoints d001@100.100.100.152
Gateway: 100.100.100.152 Zone: z0 IP: 100.100.100.152 ->
100.100.100.152
Endpoint      Trans #  Call #  Notified entity
d001          12       2      0.0.0.0:0 -> 0.0.0.0:0

```

show security alg msrpc

Syntax	show security alg msrpc <object-id-map> <portmap>
Release Information	Command introduced in Release 9.0 of JUNOS Software.
Description	Display Microsoft (MS) remote procedure call (RPC) Application Layer Gateway (ALG) information. This command is supported on J Series devices.
Options	object-id-map—(Optional) Display information about MSRPC ID (UUID) to object ID (OID) table. portmap—(Optional) Display information about Microsoft's implementation of the remote procedure call (MSRPC) mapping table.
Required Privilege Level	view
Related Topics	msrpc “Sample Output” on page 979
List of Sample Output	show security alg msrpc object-id-map on page 978 show security alg msrpc portmap on page 979
Output Fields	Table 35 on page 978 lists the output fields for the <code>show security alg msrpc</code> command. Output fields are listed in the approximate order in which they appear.

Table 35: show security alg msrpc Output Fields

Field Name	Field Description
UUID	MS RPC ID.
OID	MS RPC object ID.
IP	IP address of the server that maps to the MS RPC ID.
Port	Port number of the server that maps to the MS RPC ID.
Protocol	Protocol used to support the process.

```

show security alg msrpc object-id-map  user@host> show security alg msrpc object-id-map
                                         UUID                                OID
1be617c0-31a5-11cf-a7d8-00805f48a135    0x80000020
e3514235-4b06-11d1-ab04-00c04fc2dcd2    0x80000002
67df7c70-0f04-11ce-b13f-00aa003bac6c    0x80000014

```

```
show security alg msrpc portmap user@host> show security alg msrpc portmap
```

IP	Port	Protocol	UUID
172.27.81.162	36100	TCP	1544f5e0-613c-11d1-93df-00c04fd7bd09
172.27.81.162	516	TCP	f5cc5a18-4264-101a-8c59-08002b2f8426

show security alg sccp calls

Syntax	show security alg sccp calls < brief detail node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about Skinny Client Control Protocol (SCCP) Application Layer Gateway (ALG) calls. This command is supported on J Series devices.
Options	none brief—Display brief call information. detail—(Optional) Display detailed call information. node—(Optional) For chassis cluster configurations, display SCCP calls on a specific node (device) in the cluster. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	sccp clear security alg sccp calls
List of Sample Output	show security alg sccp calls on page 981 show security alg sccp calls detail on page 981
Output Fields	Table 36 on page 980 lists the output fields for the show security alg sccp calls command. Output fields are listed in the approximate order in which they appear.

Table 36: show security alg sccp calls Output Fields

Field Name	Field Description
Client IP address	IP address of the client.
Client zone	Client zone ID.
Call manager	IP address of the call manager.
Resource manager group	Resource manager group ID.

```

show security alg sccp calls      user@host> show security alg sccp calls
Client IP      Zone      CallManager    Conference ID  RM group
11.0.102.91    7        13.0.99.226    16789504       2047
12.0.102.96    8        13.0.99.226    16789505       2048

show security alg sccp calls detail user@host> show security alg sccp calls detail
Client IP address: 11.0.102.91
Client zone: 7
CallManager IP: 13.0.99.226
Conference ID: 16789504
Resource manager group: 2048
SCCP channel information:
  Media transmit channel address (IP address/Port): 0.0.0.0:0
  Media transmit channel translated address (IP address/Port): 0.0.0.0:0
  Media transmit channel pass-through party ID (PPID): 0
  Media transmit channel resource ID: 0
  Media receive channel address (IP address/Port): 11.0.102.91:20060
  Media receive channel translated address (IP address/Port): 25.0.0.1:1032
  Media receive channel pass-through party ID (PPID): 16934451
  Media receive channel resource ID: 8185
  Multimedia transmit channel address (IP address/Port): 0.0.0.0:0
  Multimedia transmit channel translated address (IP address/Port): 0.0.0.0:0
  Multimedia transmit channel pass-through party ID (PPID): 0
  Multimedia transmit channel resource ID: 0
  Multimedia receive channel address (IP address/Port): 0.0.0.0:0
  Multimedia receive channel translated address (IP address/Port): 0.0.0.0:0
  Multimedia receive channel pass-through party ID (PPID): 0
  Multimedia receive channel resource ID: 0
Total number of calls = 1

```

show security alg sccp counters

Syntax	show security alg sccp counters <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about Skinny Client Control Protocol (SCCP) Application Layer Gateway (ALG) counters. This command is supported on J Series devices.
Options	<p>none—Display all SCCP ALG counters.</p> <p>node—(Optional) For chassis cluster configurations, display SCCP counters on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	<p>sccp</p> <p>clear security alg sccp counters</p>
List of Sample Output	show security alg sccp counters on page 983
Output Fields	Table 37 on page 982 lists the output fields for the show security alg sccp counters command. Output fields are listed in the approximate order in which they appear.

Table 37: show security alg sccp counters Output Fields

Field Name	Field Description
Active client sessions	Number of active SCCP ALG client sessions.
Active calls	Number of active SCCP ALG calls.
Total calls	Total number of SCCP ALG calls.
Packets received	Number of SCCP ALG packets received.
PDU's processed	Number of SCCP ALG protocol data units (PDU) processed.
Current call rate	Number of calls per second.
Packets dropped	Number of packets dropped by the SCCP ALG.

Table 37: show security alg sccp counters Output Fields *(continued)*

Field Name	Field Description
Decode errors	Number of decoding errors.
Protocol errors	Number of protocol errors.
Address translation errors	Number of NAT errors.
Policy lookup errors	Number of errors occurring during policy lookups.
Unknown PDUs	Number of unknown protocol data units (PDUs).
Maximum calls exceed	Number of times the maximum number of calls was exceeded.
Maximum call rate exceed	Number of times the maximum call rate was exceeded.
Initialization errors	Number of call initialization errors.
Internal errors	Number of internal errors.
Nonspecific error	Number of nonspecific errors.

```

show security alg sccp counters  user@host> show security alg sccp counters
                                SCCP call statistics:
                                Active client sessions      : 4
                                Active calls                 : 2
                                Total calls                  : 3
                                Packets received             : 232
                                PDUs processed               : 232
                                Current call rate            : 0
                                Error counters:
                                Packets dropped              : 0
                                Decode errors                : 0
                                Protocol errors               : 0
                                Address translation errors    : 0
                                Policy lookup errors         : 0
                                Unknown PDUs                 : 0
                                Maximum calls exceeded       : 0
                                Maximum call rate exceeded   : 0
                                Initialization errors        : 0
                                Internal errors               : 0
                                Nonspecific error             : 0

```

show security alg sip calls

Syntax	show security alg sip calls <brief detail node (<i>node-id</i> all local primary) >
Release Information	Command modified in Release 9.2 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about Session Initiation Protocols (SIP) Application Layer Gateway (ALG) calls. This command is supported on J Series and SRX Series devices.
Options	none brief—Display brief call information. detail—(Optional) Display detailed information about SIP ALG calls. node—(Optional) For chassis cluster configurations, display SIP calls on a specific node (device) in the cluster. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	sip clear security alg sip calls
List of Sample Output	show security alg sip calls on page 985 show security alg sip calls detail on page 985 show security alg sip calls node all on page 985
Output Fields	Table 38 on page 984 lists the output fields for the show security alg sip calls command. Output fields are listed in the approximate order in which they appear.

Table 38: show security alg sip calls Output Fields

Field Name	Field Description
UAS callid	Call Identifier for the SIP ALG user agent server.
Local Tag	Local tag for the SIP ALG user agent server.
Remote Tag	Remote tag for the SIP ALG user agent server.
State	State of the SIP ALG user agent server.


```

show security alg sip calls      user@host> show security alg sip calls
Total number of calls: 2 (# of call legs 4)
  Call leg1: zone 3
    UAS callid:000ed748-55330007-04c3379d-0aab7e18@2.2.3.2 (pending tsx 1)
    Local tag
    Remote tag: 000ed748553300e264b0a951-5caa0a95
    State: STATE_DISCONNECTED
  Call leg2: zone 2
    UAC callid:000ed748-55330007-04c3379d-0aab7e18@2.2.3.2 (pending tsx 1)
    Local tag: 000ed748553300e264b0a951-5caa0a95
    Remote tag
    State: STATE_DISCONNECTED
  Call leg1: zone 3
    UAS callid:000ed748-55330007-04c3379d-0aab7e18@2.2.3.2 (pending tsx 1)
    Local tag: 000f90542e7e64cd724880f5-65db2f99
    Remote tag: 000ed748553300e264b0a951-5caa0a95
    State: STATE_ESTABLISHED
  Call leg2: zone 2
    UAC callid:000ed748-55330007-04c3379d-0aab7e18@2.2.3.2 (pending tsx 1)
    Local tag: 000ed748553300e264b0a951-5caa0a95
    Remote tag: 000f90542e7e64cd724880f5-65db2f99
    State: STATE_ESTABLISHED

```

```

show security alg sip calls detail user@host> show security alg sip calls detail
Total number of calls: 1
  Call ID      : 000ed748-5533005e-11d97de9-77759865@10.10.10.254
  Local tag    : 000f90542e7e005c7807c3a0-0647d41e
  Remote tag    : 000ed748553300724648b313-2ccd0d9a
  State        : STATE_ESTABLISHED
  RM Group:2048
  Local Info
  -----
  Call leg 1:  IP          Port      IP          Port      RSC id
                -----
  Host         10.10.10.10  5060      10.10.10.10  5060
  Contact      10.10.10.100  5060      10.10.10.254 1025      8191
  Contact maddr-
  SDP:c        10.10.10.100
  SDP:m        10.10.10.100  18902     10.10.10.254 64518 8192 ,8185
  Call leg 2:
  Host         10.10.10.10  5060      10.10.10.10  5060
  Contact      10.10.10.254 1025     10.10.10.100 5060      8188
  Contact maddr-
  SDP:c        10.10.10.254
  SDP:m        10.10.10.254 64518     10.10.10.100 18902 8186 ,8187

```

```

show security alg sip calls node all user@host> show security alg sip calls node all
node0:
-----
Total number of calls: 1
Call leg 1 Zone : 6
  UAS call ID: 00078513-12490005-2ca7b914-2b5ea3b3@26.0.29.236 (pending
transactions 0)
  Local tag : 00036bb9112700267368b9d7-423830f3
  Remote tag : 000785131249002902c91c61-0a9627ad
  State      : STATE_ESTABLISHED
Call leg 2 Zone : 8
  UAC call ID: 00078513-12490005-2ca7b914-2b5ea3b3@11.0.100.196:1050 (pending
transactions 0)
  Local tag : 000785131249002902c91c61-0a9627ad
  Remote tag : 00036bb9112700267368b9d7-423830f3

```

```
State      : STATE_ESTABLISHED

node1:
-----
Total number of calls: 1
Call leg 1 Zone : 6
  UAS call ID: 00078513-12490005-2ca7b914-2b5ea3b3@26.0.29.236 (pending
transactions 0)
  Local tag  : 00036bb9112700267368b9d7-423830f3
  Remote tag : 000785131249002902c91c61-0a9627ad
  State      : STATE_ESTABLISHED
Call leg 2 Zone : 8
  UAC call ID: 00078513-12490005-2ca7b914-2b5ea3b3@11.0.100.196:1050 (pending
transactions 0)
  Local tag  : 000785131249002902c91c61-0a9627ad
  Remote tag : 00036bb9112700267368b9d7-423830f3
  State      : STATE_ESTABLISHED
```

show security alg sip counters

Syntax	show security alg sip counters <node (<i>node-id</i> all local primary)>
Release Information	Command modified in Release 9.2 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about Session Initiation Protocol (SIP) Application Layer Gateway (ALG) counters. This command is supported on J Series and SRX Series devices.
Options	<p>none—Display all SIP ALG counters.</p> <p>node—(Optional) For chassis cluster configurations, display SIP counters on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	<p>sip</p> <p>clear security alg sip counters</p>
List of Sample Output	show security alg sip counters on page 989
Output Fields	Table 39 on page 987 lists the output fields for the show security alg sip counters command. Output fields are listed in the approximate order in which they appear.

Table 39: show security alg sip counters Output Fields

Field Name	Field Description
INVITE	Number of INVITE requests sent. An INVITE request is sent to invite another user to participate in a session.
CANCEL	Number of CANCEL requests sent. A user can send a CANCEL request to cancel a pending INVITE request. A CANCEL request has no effect if the SIP server processing the INVITE had sent a final response for the INVITE before it received the CANCEL
ACK	Number of ACK requests sent. The user from whom the INVITE originated sends an ACK request to confirm reception of the final response to the INVITE request.
BYE	Number of BYE requests sent. A user sends a BYE request to abandon a session. A BYE request from either user automatically terminates the session.
RR header exceeded max	Number of times the SIP ALG RR (Record-Route) headers exceeded the maximum limit.

Table 39: show security alg sip counters Output Fields (continued)

Field Name	Field Description
REGISTER	Number of REGISTER requests sent. A user sends a REGISTER request to a SIP registrar server to inform it of the current location of the user. A SIP registrar server records all the information it receives in REGISTER requests and makes this information available to any SIP server attempting to locate a user.
OPTIONS	Number of OPTIONS requests sent. An OPTION request is used by the User Agent (UA) to obtain information about the capabilities of the SIP proxy. A server responds with information about what methods, session description protocols, and message encoding it supports.
INFO	Number of INFO requests sent. AN INFO message is used to communicate mid-session signaling information along the signaling path for the call.
MESSAGE	Number of MESSAGE requests sent. SIP messages consist of requests from a client to a server and responses to the requests from a server to a client with the purpose of establishing a session (or a call).
NOTIFY	Number of NOTIFY requests sent. NOTIFY requests are sent to inform subscribers of changes in state to which the subscriber has a subscription.
PRACK	Number of PRACK requests sent. The PRACK request plays the same role as ACK, but for provisional responses.
PUBLISH	Number of PUBLISH requests sent. The PUBLISH request used for publishing event state. PUBLISH is similar to REGISTER in that it allows a user to create, modify, and remove state in another entity which manages this state on behalf of the user.
REFER	Number of REFER requests sent. A REFER request is used to refer the recipient (identified by the Request-URI) to a third party by the contact information provided in the request.
SUBSCRIBE	Number of SUBSCRIBE requests sent. A SUBSCRIBE request is used to request current state and state updates from a remote node.
UPDATE	Number of UPDATE requests sent. AN UPDATE request is used to create a temporary opening in the firewall (pinhole) for new or updates Session Description Protocol (SDP) information. The following fields are modified: Via, From, To, Call-ID, Contact, Route, and Record-Route.
BENOTIFY	Number of BENOTIFY requests sent. A BENOTIFY request is used to reduce the unnecessary SIP signaling traffic on application servers. Applications that do not need a response for a NOTIFY request can enhance performance by enabling BENOTIFY.
SERVICE	Number of SERVICE requests sent. The SERVICE method used by a SIP client to request a service of a SIP server. It is a standard SIP message and will be forwarded until it reaches the server or end user which is performing the service.
OTHER	Number of OTHER requests sent.
Total Pkt-in	Number of SIP ALG total packets received.
Total Pkt dropped on error	Number of SIP ALG total packets dropped while transmission and retransmission of messages.
Transaction error	Number of SIP ALG transaction errors.

Table 39: show security alg sip counters Output Fields (continued)

Field Name	Field Description
Call error	Number of SIP ALG call errors.
IP resolve error	Number of SIP ALG IP address resolution errors.
NAT error	Number of SIP ALG NAT errors.
Resource manager error	Number of SIP ALG resource manager errors.
Contact header exceeded max	Number of times the SIP ALG contact headers exceeded the maximum limit.
Invite Dropped due to call limit	Number of SIP ALG invite dropped due to call limits.
SIP msg not processed by stack	Number of SIP ALG stack errors.
SIP msg not processed by alg	Number of SIP ALG messages not processed by ALGs.
SIP unknown method dropped	Number of SIP ALG unknown method errors.
Decoding error	Number of SIP ALG decoding errors.
Request for disconnected call	Number of SIP ALG calls disconnected.
Request out of state	Number of SIP ALG messages out of state errors.

```

show security alg sip counters user@host> show security alg sip counters
SIP message counters(T:Transmit, RT:Retransmit):
  Method      T    1xx  2xx  3xx  4xx  5xx  6xx
              RT   RT   RT   RT   RT   RT   RT
    INVITE     0    0    0    0    0    0    0
              0    0    0    0    0    0    0
    CANCEL     0    0    0    0    0    0    0
              0    0    0    0    0    0    0
    ACK        0    0    0    0    0    0    0
              0    0    0    0    0    0    0
    BYE        0    0    0    0    0    0    0
              0    0    0    0    0    0    0
    REGISTER   0    0    0    0    0    0    0
              0    0    0    0    0    0    0
    OPTIONS    0    0    0    0    0    0    0
              0    0    0    0    0    0    0
    INFO       0    0    0    0    0    0    0
              0    0    0    0    0    0    0
    MESSAGE    0    0    0    0    0    0    0
              0    0    0    0    0    0    0
    NOTIFY     0    0    0    0    0    0    0
              0    0    0    0    0    0    0
    PRACK      0    0    0    0    0    0    0
              0    0    0    0    0    0    0
    PUBLISH    0    0    0    0    0    0    0
              0    0    0    0    0    0    0
    REFER      0    0    0    0    0    0    0
              0    0    0    0    0    0    0
    SUBSCRIBE  0    0    0    0    0    0    0

```

	0	0	0	0	0	0	0
UPDATE	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
BENOTIFY	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
SERVICE	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
	0	0	0	0	0	0	0

SIP Error Counters:

Total Pkt-in	:15
Total Pkt dropped on error	:0
Transaction error	:0
Call error	:0
IP resolve error	:0
NAT error	:0
Resource manager error	:0
RR header exceeded max	:0
Contact header exceeded max	:0
Invite Dropped due to call limit	:0
SIP msg not processed by stack	:0
SIP msg not processed by alg	:0
SIP unknown method dropped	:0
Decoding error	:0
Request for disconnected call	:0
Request out of state	:0

show security alg sip rate

Syntax	show security alg sip rate <node (<i>node-id</i> all local primary)>
Release Information	Command modified in Release 9.2 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display rate information for Session Initiation Protocol (SIP) Application Layer Protocol (ALG) messages. This command is supported on J Series and SRX Series devices.
Options	<p>none—Display all SIP ALG rate information.</p> <p>node—(Optional) For chassis cluster configurations, display SIP rate on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	sip
List of Sample Output	show security alg sip rate on page 991
Output Fields	Table 40 on page 991 lists the output fields for the show security alg sip rate command. Output fields are listed in the approximate order in which they appear.

Table 40: show security alg sip rate Output Fields

Field Name	Field Description
CPU ticks	SIP ALG CPU ticks per microsecond.
Time taken	Time, in microseconds, that the last SIP ALG message needed to transit the network.
Total time	Total time, in microseconds, during an interval of less than 10 minutes for the specified number of SIP ALG messages to transit the network.
Rate	Number of SIP ALG messages per second transiting the network.

```

show security alg sip user@host> show security alg sip rate
rate CPU ticks per us is 166
Time taken for the last message is 1103 us
Total time taken for 3124 messages is 6221482 us (in less than 10 minutes)
Rate: 502 messages/second

```

show security alg sip transactions

Syntax	show security alg sip transactions <node (<i>node-id</i> all local primary)>
Release Information	Command modified in Release 9.2 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about Session Initiation Protocol (SIP) Application Layer Gateway (ALG) transactions. This command is supported on J Series and SRX Series devices.
Options	<p>none—Display all SIP ALG transactions.</p> <p>node—(Optional) For chassis cluster configurations, display SIP transactions on a specific node (device) in the cluster.</p> <p><i>node-id</i>—Identification number of the node. It can be 0 or 1.</p> <p>all—Display information about all nodes.</p> <p>local—Display information about the local node.</p> <p>primary—Display information about the primary node.</p>
Required Privilege Level	view
Related Topics	sip
List of Sample Output	show security alg sip transactions on page 992
Output Fields	Table 41 on page 992 lists the output fields for the show security alg sip transaction command. Output fields are listed in the approximate order in which they appear.

Table 41: show security alg sip transactions Output Fields

Field Name	Field Description
UAS	SIP ALG User Agent Server transaction name.
UAC	ALG SIP User Agent Client transaction name.

```

show security alg sip transactions
user@host> show security alg sip transactions
Total number of transactions: 1
Transaction Name      Method  CSeq    State      Timeout  VIA RSC ID
UAS:tsx0x4b06ddf4    BYE     101     Proceeding -1        -
UAC:tsx0x4b06f610    BYE     101     Calling    27       8185

```


show security alg status

Syntax	show security alg status
Release Information	Command modified in Release 9.5 of JUNOS Software
Description	<p>Display the status (enabled/disabled) of the supported Application Layer Gateway (ALG) transactions.</p> <p>This command is supported on SRX Series and J Series devices. The following list describes the default status on each of these devices:</p> <ul style="list-style-type: none"> ■ SRX3000 and SRX5000 line devices—FTP ALGs and TFTP ALGs are enabled by default. All other ALGs are disabled. ■ SRX100, SRX210, SRX240, and SRX650 devices—All supported ALGs are enabled by default. ■ J Series devices—All supported ALGs are enabled by default. <p>For complete information about which ALGs are supported on which devices, see the <i>JUNOS Software Security Configuration Guide</i>.</p>
Options	none—Display status of all supported ALGs.
Required Privilege Level	view
Output Fields	<p>The following list describes the output fields for the show security alg status command. Output fields are listed in the approximate order in which they appear.</p> <ul style="list-style-type: none"> ■ DNS—Domain Name Server ■ FTP—File Transfer Protocol ■ H323—H.323 protocol ■ MGCP—Media Gateway Control Protocol ■ MSRPC—Microsoft remote procedure call ■ PPTP—Point-to-Point Tunneling Protocol ■ RSH—UNIX remote shell services ■ RTSP—Real-Time Streaming Protocol ■ SCCP—Skinny Client Control Protocol ■ SIP—Session Initiation Protocol ■ SQL—Oracle SQL ■ SUNRPC—Sun Microsystems remote procedure call ■ TALK—TALK program ■ TFTP—Trivial File Transfer Protocol

```
show security alg status  user@host> show security alg status  
ALG Status :  
  
DNS      : Enabled  
FTP      : Enabled  
H323     : Disabled  
MGCP     : Disabled  
MSRPC    : Enabled  
PPTP     : Enabled  
RSH      : Enabled  
RTSP     : Enabled  
SCCP     : Disabled  
SIP      : Disabled  
SQL      : Enabled  
SUNRPC   : Enabled  
TALK     : Enabled  
TFTP     : Enabled
```

show security alg sunrpc portmap

Syntax	show security alg sunrpc portmap
Release Information	Command introduced in Release 9.0 of JUNOS Software.
Description	Display Sun Microsystems remote procedure call (RPC) ALG information. This command is supported on J Series devices.
Options	portmap—Display Sun Microsystem remote procedure call (SUNRPC) mapping table information.
Required Privilege Level	view
Related Topics	sunrpc clear security alg sunrpc portmap
List of Sample Output	show security alg sunrpc portmap on page 995
Output Fields	Table 42 on page 995 lists the output fields for the show security alg sunrpc portmap command. Output fields are listed in the approximate order in which they appear.

Table 42: show security alg sunrpc portmap Output Fields

Field Name	Field Description
IP	IP address of the server that maps to the program.
Port	Port number of the server that maps to the program.
Protocol	Protocol used to support the process.
Program	Program ID number.

```

show security alg sunrpc portmap
user@host> show security alg sunrpc portmap
IP          Port    Protocol Program
10.209.17.127 32835   TCP      100005
10.209.17.127 2049    UDP      100003
10.209.17.127 111     UDP      100000
10.209.17.127 111     TCP      100000

```

show security firewall-authentication history

Syntax	show security firewall-authentication history <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display security firewall authentication history information. This command is supported on J Series and SRX Series devices.
Options	<p>none—Display history of firewall authentication information.</p> <p>node—(Optional) For chassis cluster configurations, display all firewall authentication history on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	<p>firewall-authentication (Security)</p> <p>clear security firewall-authentication history</p>
List of Sample Output	<p>show security firewall-authentication history on page 997</p> <p>show security firewall-authentication history node all on page 997</p>
Output Fields	Table 43 on page 996 lists the output fields for the show security firewall-authentication history command. Output fields are listed in the approximate order in which they appear.

Table 43: show security firewall-authentication history Output Fields

Field Name	Field Description
Authentications	Number of authentications.
Id	Identification number.
Source IP	IP address of the authentication source.
Date	Authentication date.
Time	Authentication time.
Duration	Authentication duration.

Table 43: show security firewall-authentication history Output Fields (continued)

Field Name	Field Description
Status	Authentication status success or failure.
User	Name of the user.

```

show security      user@host> show security firewall-authentication history
firewall-authentication
history           History of firewall authentication data:
                   Authentications: 1
                   Id Source Ip      Date      Time      Duration  Status  User
                   1 211.0.0.6      2007-04-03 11:43:06 00:00:45  Success hello

show security      user@host> show security firewall-authentication history node all
firewall-authentication
history node all  node0:
                   -----
                   History of firewall authentication data:
                   Authentications: 2
                   Id Source Ip      Date      Time      Duration  Status  User
                   1 100.0.0.1      2008-01-04 12:00:10 0:05:49  Success  local1
                   2 100.0.0.1      2008-01-04 14:36:52 0:01:03  Success  local1
                   node1:
                   -----
                   History of firewall authentication data:
                   Authentications: 1
                   Id Source Ip      Date      Time      Duration  Status  User
                   1 100.0.0.1      2008-01-04 14:59:43 1193046:06: Success local1

```

show security firewall-authentication history address

Syntax	show security firewall-authentication history address <i>ip-address</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; <i>node</i> options added in Release 9.0 of JUNOS Software.
Description	Display security firewall authentication history for this source IP address. This command is supported on J Series and SRX Series devices.
Options	address <i>ip-address</i> —IP address of the authentication source. none—Display all firewall authentication history for this address. node—(Optional) For chassis cluster configurations, display firewall authentication history for this address on a specific node. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	firewall-authentication (Security) clear security firewall-authentication history address
List of Sample Output	show security firewall-authentication history address 4.4.4.2 on page 999 show security firewall-authentication history address 100.0.0.1 node local on page 999
Output Fields	Table 44 on page 998 lists the output fields for the show security firewall-authentication history address command. Output fields are listed in the approximate order in which they appear.

Table 44: show security firewall-authentication history address Output Fields

Field Name	Field Description
Username	User ID.
Source IP	IP address of the authentication source.
Authentication state	Status of authentication (success or failure).
Authentication method	Path chosen for authentication.
Access start date	Date when user authenticated.

Table 44: show security firewall-authentication history address Output Fields (continued)

Field Name	Field Description
Access start time	Time when user authenticated.
Duration of user access	Time duration of the accessing firewall.
Policy name	Name of the policy.
Source zone	User traffic received from the zone.
Destination zone	User traffic destined to the zone.
Access profile	Name of profile used for authentication.
Bytes sent by this user	Number of bytes sent by the user.
Bytes received by this user	Number of bytes received by the user.

**show security
firewall-authentication
history address 4.4.4.2**

```
user@host> show security firewall-authentication history address 4.4.4.2
Username: u1
Source IP: 4.4.4.2
Authentication state: Success
Authentication method: Pass-through using HTTP
Access start date: 2007-09-12
Access start time: 15:33:29
Duration of user access: 0:00:48
Policy name: Z1-Z2
Source zone: Z1
Destination zone: Z2
Access profile: profile-local
Bytes sent by this user: 0
Bytes received by this user: 449
```

**show security
firewall-authentication
history address
100.0.0.1 node local**

```
user@host> show security firewall-authentication history address 100.0.0.1 node
local
node0:
-----
Username: local1
Source IP: 100.0.0.1
Authentication state: Success
Authentication method: Pass-through using Telnet
Access start date: 2008-01-04
Access start time: 12:00:10
Duration of user access: 0:05:49
Policy name: POL1
Source zone: z1
Destination zone: z2
Access profile: p1
Bytes sent by this user: 0
Bytes received by this user: 0
Username: local1
Source IP: 100.0.0.1
Authentication state: Success
Authentication method: Pass-through using Telnet
Access start date: 2008-01-04
```

```
Access start time: 14:36:52
Duration of user access: 0:01:03
Policy name: POL1
Source zone: z1
Destination zone: z2
Access profile: p1
Bytes sent by this user: 2178
Bytes received by this user: 4172
```


show security firewall-authentication history identifier

Syntax	show security firewall-authentication history identifier <i>identifier</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; <i>node</i> options added in Release 9.0 of JUNOS Software.
Description	Display security firewall authentication history information for the authentication with this identifier. This command is supported on J Series and SRX Series devices.
Options	<p>identifier <i>identifier</i>—Identifying number of the authentication process.</p> <p>none—Display all firewall authentication history information for the authentication with this identifier.</p> <p>node—(Optional) For chassis cluster configurations, display firewall authentication history on a specific node for the authentication with this identifier.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	<p>firewall-authentication (Security)</p> <p>clear security firewall-authentication history identifier</p>
List of Sample Output	<p>show security firewall-authentication history identifier 1 on page 1002</p> <p>show security firewall-authentication identifier 1 node primary on page 1002</p>
Output Fields	Table 45 on page 1001 lists the output fields for the <code>show security firewall-authentication history identifier</code> command. Output fields are listed in the approximate order in which they appear.

Table 45: show security firewall-authentication history identifier Output Fields

Field Name	Field Description
Username	User ID.
Source IP	IP address of the authentication source.
Authentication state	Status of authentication (success or failure).
Authentication method	Path chosen for authentication.

Table 45: show security firewall-authentication history identifier Output Fields (continued)

Field Name	Field Description
Access start date	Date when user authenticated.
Access start time	Time when user authenticated.
Duration of user access	Time duration of the accessing firewall.
Policy index	Identification number of the policy.
Policy name	Name of the policy.
Source zone	User traffic received from the zone.
Destination zone	User traffic destined to the zone.
Access profile	Name of profile used for authentication.
Bytes sent by this user	Number of bytes sent by the user.
Bytes received by this user	Number of bytes received by the user.
Client-groups	Name of the client group.

**show security
firewall-authentication
history identifier 1**

```
user@host> show security firewall-authentication history identifier 1
Username: hello
Source IP: 211.0.0.6
Authentication state: Success
Authentication method: Pass-through using Telnet
Access start date: 2007-04-03
Access start time: 11:43:06
Duration of user access: 00:00:45
Policy index: 4
Source zone: z2
Destination zone: z1
Access profile: profile1
Bytes sent by this user: 0
Bytes received by this user: 1050
Client-groups: Sunnyvale Bangalore
```

**show security
firewall-authentication
identifier 1 node primary**

```
user@host> show security firewall-authentication history identifier 1 node primary
node0:
-----
Username: local1
Source IP: 100.0.0.1
Authentication state: Success
Authentication method: Pass-through using Telnet
Access start date: 2008-01-04
Access start time: 12:00:10
Duration of user access: 0:05:49
Policy name: POL1
Source zone: z1
Destination zone: z2
Access profile: p1
```

```
Bytes sent by this user: 0  
Bytes received by this user: 0
```

show security firewall-authentication users

Syntax	show security firewall-authentication users <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; <i>node</i> options added in Release 9.0 of JUNOS Software.
Description	Display firewall authentication details about all users. This command is supported on J Series and SRX Series devices.
Options	<p>none—Display details about all firewall authentication users.</p> <p><i>node</i>—(Optional) For chassis cluster configurations, display firewall authentication details for all users on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	<p>firewall-authentication (Security)</p> <p>clear security firewall-authentication users</p>
List of Sample Output	<p>show security firewall-authentication users on page 1005</p> <p>show security firewall-authentication users node 0 on page 1005</p> <p>show security firewall-authentication users node all on page 1005</p>
Output Fields	Table 46 on page 1004 lists the output fields for the show security firewall-authentication users command. Output fields are listed in the approximate order in which they appear.

Table 46: show security firewall-authentication users Output Fields

Field Name	Field Description
Total users in table	Gives count of how many entries/users the command will display.
Id	Identification number.
Source IP	IP address of the authentication source.
Src zone	User traffic received from the zone.
Dst zone	User traffic destined to the zone.
Profile	Name of profile used for authentication.

Table 46: show security firewall-authentication users Output Fields (continued)

Field Name	Field Description
Age	Idle timeout for the user.
Status	Authentication status success or failure.
User	Name of the user.

**show security
firewall-authentication
users**

```
user@host> show security firewall-authentication users
Firewall authentication data:
Total users in table: 1
  Id Source Ip      Src zone Dst zone Profile   Age Status  User
  1 10.0.0.1        z1      z2      p1          0 Success local1
```

**show security
firewall-authentication
users node 0**

```
user@host> show security firewall-authentication users node 0
node0:
-----
Firewall authentication data:
Total users in table: 1
  Id Source Ip      Src zone Dst zone Profile   Age Status  User
  3 100.0.0.1        z1      z2      p1          1 Success local1
```

**show security
firewall-authentication
users node all**

```
user@host> show security firewall-authentication users node all
node0:
-----
Firewall authentication data:
Total users in table: 1
  Id Source Ip      Src zone Dst zone Profile   Age Status  User
  3 100.0.0.1        z1      z2      p1          1 Success local1

node1:
-----
Firewall authentication data:
Total users in table: 1
  Id Source Ip      Src zone Dst zone Profile   Age Status  User
  2 100.0.0.1        z1      z2      p1          1 Success local1
```

show security firewall-authentication users address

Syntax	show security firewall-authentication users address <i>ip-address</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about the users at the specified IP address that are currently authenticated. This command is supported on J Series and SRX Series devices.
Options	address <i>ip-address</i> —IP address of the authentication source. none—Display all the firewall authentication information for users at this IP address. node—(Optional) For chassis cluster configurations, display user firewall authentication entries on a specific node. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	firewall-authentication (Security) clear security firewall-authentication users address
List of Sample Output	show security firewall-authentication users address 211.0.0.6 on page 1007 show security firewall-authentication users address 100.0.0.1 node local on page 1007
Output Fields	Table 47 on page 1006 lists the output fields for the show security firewall-authentication users address command. Output fields are listed in the approximate order in which they appear.

Table 47: show security firewall-authentication users address Output Fields

Field Name	Field Description
Username	User ID.
Source IP	IP address of the authentication source.
Authentication state	Status of authentication (success or failure).
Authentication method	Path chosen for authentication.
Access time remaining	Duration for which the connection exists.

Table 47: show security firewall-authentication users address Output Fields *(continued)*

Field Name	Field Description
Source zone	User traffic received from the zone.
Destination zone	User traffic destined to the zone.
Policy index	Identification number of the policy.
Policy name	Name of the policy.
Access profile	Name of profile used for authentication.
Interface Name	Name of the interface.
Bytes sent by this user	Number of bytes sent by the user.
Bytes received by this user	Number of bytes received by the user.
Client-groups	Name of the client group.

```

show security      user@host>show security firewall-authentication users address 211.0.0.6
firewall-authentication Username: hello
users address 211.0.0.6 Source IP: 211.0.0.6
                          Authentication state: Success
                          Authentication method: Pass-through using Telnet
                          Access time remaining: 0
                          Source zone: z2
                          Destination zone: z1
                          Policy index: 5
                          Access profile: profile1
                          Interface Name: ge-0/0/2.0
                          Bytes sent by this user: 0
                          Bytes received by this user: 0
                          Client-groups: Sunnyvale Bangalore

```

```

show security      user@host> show security firewall-authentication users address 100.0.0.1 node
firewall-authentication local
users address 100.0.0.1 node0:
node local          -----
                          Username: local1
                          Source IP: 100.0.0.1
                          Authentication state: Success
                          Authentication method: Pass-through using Telnet
                          Age: 2
                          Access time remaining: 4
                          Source zone: z1
                          Destination zone: z2
                          Policy name: POL1
                          Access profile: p1
                          Interface Name: reth1.0
                          Bytes sent by this user: 614
                          Bytes received by this user: 1880

```

show security firewall-authentication users identifier

Syntax	show security firewall-authentication users identifier <i>identifier</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display firewall authentication details about the user with this identification number. This command is supported on J Series and SRX Series devices.
Options	<p><i>identifier</i><i>identifier</i>—Identification number of the user for which to display authentication details.</p> <p><i>node</i>—(Optional) For chassis cluster configurations, display the firewall authentication details security firewall authentication entry on a specific node (device) in the cluster for the user with this identification number.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	firewall-authentication (Security) clear security firewall-authentication users identifier
List of Sample Output	show security firewall-authentication users identifier 3 on page 1009 show security firewall-authentication users identifier 3 node primary on page 1009
Output Fields	Table 48 on page 1008 lists the output fields for the show security firewall-authentication users identifier command. Output fields are listed in the approximate order in which they appear.

Table 48: show security firewall-authentication users identifier Output Fields

Field Name	Field Description
Username	User ID.
Source IP	IP address of the authentication source.
Authentication state	Status of authentication (success or failure).
Authentication method	Path chosen for authentication.
Age	Idle timeout for the user.

Table 48: show security firewall-authentication users identifier Output Fields (continued)

Field Name	Field Description
Access time remaining	Duration for which the connection exists.
Source zone	User traffic received from the zone.
Destination Zone	User traffic destined to the zone.
Policy Name	Name of the policy.
Access profile	Name of profile used for authentication.
Interface Name	Name of the interface
Bytes sent by this user	Number of bytes sent by the user.
Bytes received by this user	Number of bytes received by the user.

**show security
firewall-authentication
users identifier 3**

```
user@host> show security firewall-authentication users identifier 3
Username: u1
Source IP: 4.4.4.2
Authentication state: Success
Authentication method: Pass-through using HTTP
Age: 1
Access time remaining: 254
Source zone: Z1
Destination zone: Z2
Policy name: Z1-Z2
Access profile: profile-local
Interface Name: ge-0/0/1.0
Bytes sent by this user: 0
Bytes received by this user: 449
```

**show security
firewall-authentication
users identifier 3 node
primary**

```
user@host> show security firewall-authentication users identifier 3 node primary
node0:
-----
Username: local1
Source IP: 100.0.0.1
Authentication state: Success
Authentication method: Pass-through using Telnet
Age: 1
Access time remaining: 5
Source zone: z1
Destination zone: z2
Policy name: POL1
Access profile: p1
Interface Name: reth1.0
Bytes sent by this user: 614
Bytes received by this user: 1880
```

show security flow gate

Syntax	show security flow gate <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	<p>Display information about temporary openings known as pinholes or gates in the security firewall.</p> <p>Pinholes are used by applications that commonly have both control and data sessions and must create openings in the firewall for the data sessions based on information from the parent sessions.</p> <p>This command is supported on J Series and SRX Series devices.</p>
Options	<p>node—(Optional) For chassis cluster configurations, display gate information on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	flow
List of Sample Output	<p>show security flow gate on page 1011</p> <p>show security flow gate node 0 on page 1012</p>
Output Fields	Table 49 on page 1010 lists the output fields for the show security flow gate command. Output fields are listed in the approximate order in which they appear.

Table 49: show security flow gate Output Fields

Field Name	Field Description
Hole	Range of flows permitted by the pinhole.
Translated	<p>Tuples used to create the session if it matches the pinhole.</p> <ul style="list-style-type: none"> ■ Source address and port ■ Destination address and port
Protocol	Application protocol, such as UDP or TCP.
Application	Name of the application.
Age	Idle timeout for the pinhole.

Table 49: show security flow gate Output Fields (continued)

Field Name	Field Description
Flags	Internal debug flags for the pinhole.
Zone	Incoming zone.
Reference count	Number of resource-manager references to the pinhole.
Resource	Resource manager information about the pinhole.

```

show security flow gate user@host> show security flow gate
Hole: 0.0.0.0-0.0.0.0/0-0->40.1.1.252-40.1.1.252/64515-64515
Translated: 0.0.0.0/0->11.0.31.161/25415
Protocol: udp
Application: none/0
Age: 101 seconds
Flags: 0xe001
Zone: untrust
Reference count: 1
Resource: 5-1024-8185
Hole: 0.0.0.0-0.0.0.0/0-0->40.1.1.252-40.1.1.252/1046-1046
Translated: 40.1.1.250/36039->11.0.31.161/5060
Protocol: udp
Application: junos-sip/63
Age: 65535 seconds
Flags: 0xe200
Zone: untrust
Reference count: 1
Resource: 5-1024-8189
Hole: 0.0.0.0-0.0.0.0/0-0->40.1.1.5-40.1.1.5/24101-24101
Translated: 0.0.0.0/0->40.1.1.5/24101
Protocol: udp
Application: none/0
Age: 93 seconds
Flags: 0xe001
Zone: trust
Reference count: 1
Resource: 5-1024-8188
Hole: 0.0.0.0-0.0.0.0/0-0->40.1.1.5-40.1.1.5/24100-24100
Translated: 0.0.0.0/0->40.1.1.5/24100
Protocol: udp
Application: none/0
Age: 93 seconds
Flags: 0xe001
Zone: trust
Reference count: 1
Resource: 5-1024-8191
Hole: 0.0.0.0-0.0.0.0/0-0->40.1.1.250-40.1.1.250/5060-5060
Translated: 0.0.0.0/0->40.1.1.250/5060
Protocol: udp
Application: junos-sip/63
Age: 65535 seconds
Flags: 0xe200
Zone: trust
Reference count: 1
Resource: 5-1024-8190

```

```

show security flow gate  user@host> show security flow gate node 0
node 0                  node0:

```

```

-----
Hole: 0.0.0.0-0.0.0.0/0-0->11.0.30.21-11.0.30.21/24923-24923
Translated: 0.0.0.0/0->11.0.30.21/24923
Protocol: udp
Application: none/0
Age: 89 seconds
Flags: 0xe001
Zone: trust
Reference count: 1
Resource: 5-1024-8192
Hole: 0.0.0.0-0.0.0.0/0-0->11.0.54.20-11.0.54.20/5060-5060
Translated: 0.0.0.0/0->11.0.54.20/5060
Protocol: udp
Application: junos-sip/63
Age: 65535 seconds
Flags: 0xe200
Zone: trust
Reference count: 1
Resource: 5-1024-8188

Hole: 0.0.0.0-0.0.0.0/0-0->11.0.100.196-11.0.100.196/64511-64511
Translated: 0.0.0.0/0->26.0.29.236/25897
Protocol: udp
Application: none/0
Age: 88 seconds
Flags: 0xe001
Zone: dmz
Reference count: 1
Resource: 5-1024-8187

Hole: 0.0.0.0-0.0.0.0/0-0->11.0.100.196-11.0.100.196/64510-64510
Translated: 0.0.0.0/0->26.0.29.236/25896
Protocol: udp
Application: none/0
Age: 88 seconds
Flags: 0xe001
Zone: dmz
Reference count: 1
Resource: 5-1024-8190

Hole: 0.0.0.0-0.0.0.0/0-0->11.0.100.196-11.0.100.196/1024-1024
Translated: 11.0.54.20/41968->26.0.29.236/5060
Protocol: udp
Application: junos-sip/63
Age: 65535 seconds
Flags: 0xe200
Zone: dmz
Reference count: 1
Resource: 5-1024-8186

```

show security flow session

Syntax	show security flow session node (<i>node-id</i> all local primary)
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about all currently active security sessions on the device. This command is supported on J Series and SRX Series devices.
Options	<p>none—Display information about all active sessions.</p> <p>node—(Optional) For chassis cluster configurations, display all active sessions on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	<p>flow</p> <p>clear security flow session all</p>
List of Sample Output	<p>show security flow session on page 1014</p> <p>show security flow session node all on page 1014</p>
Output Fields	Table 50 on page 1013 lists the output fields for the show security flow session command. Output fields are listed in the approximate order in which they appear.

Table 50: show security flow session Output Fields

Field Name	Field Description
Session ID	Number that identifies the session. Use this ID to get more information about the session.
Policy name	Policy that permitted the traffic.
Timeout	Idle timeout after which the session expires.
In	Incoming flow (source and destination IP addresses, application protocol, and interface).
Out	Reverse flow (source and destination IP addresses, application protocol, and interface).

```

show security flow session
user@host> show security flow session
Session ID: 2102, Policy name: self-traffic-policy/1, Timeout: 272
  In: 172.24.68.74/3428 --> 10.157.84.52/23;tcp, If: ge-0/0/0.0
  Out: 10.157.84.52/23 --> 172.24.68.74/3428;tcp, If: .local..0
Session ID: 2111, Policy name: self-traffic-policy/1, Timeout: 1800
  In: 172.24.68.97/3175 --> 10.157.84.52/23;tcp, If: ge-0/0/0.0
  Out: 10.157.84.52/23 --> 172.24.68.97/3175;tcp, If: .local..0
Session ID: 2112, Policy name: self-traffic-policy/1, Timeout: 1781
  In: 172.24.68.97/3176 --> 10.157.84.52/23;tcp, If: ge-0/0/0.0
  Out: 10.157.84.52/23 --> 172.24.68.97/3176;tcp, If: .local..0
3 sessions displayed

```

```

show security flow session node all
user@host> show security flow session node all
node0:
-----
Session ID: 1, Policy name: sfw1/4, State: Active, Timeout: 60
  In: 1.1.1.2/2000 --> 11.11.1.2/40000;udp, If: reth0.1
  Out: 11.11.1.2/40000 --> 1.1.1.2/2000;udp, If: reth1.1
Session ID: 2, Policy name: sfw2/5, State: Active, Timeout: 60
  In: 1.1.2.2/2000 --> 11.11.2.2/40000;udp, If: reth0.2
  Out: 11.11.2.2/40000 --> 1.1.2.2/2000;udp, If: reth1.2
Session ID: 3, Policy name: sfw3/6, State: Active, Timeout: 60
  In: 1.1.3.2/2000 --> 11.11.3.2/40000;udp, If: reth0.3
  Out: 11.11.3.2/40000 --> 1.1.3.2/2000;udp, If: reth1.3
Session ID: 4, Policy name: sfw4/7, State: Active, Timeout: 60
  In: 1.1.4.2/2000 --> 11.11.4.2/40000;udp, If: reth0.4
  Out: 11.11.4.2/40000 --> 1.1.4.2/2000;udp, If: reth1.4
4 sessions displayed
node1:
-----
Session ID: 1, Policy name: sfw1/4, State: Backup, Timeout: 482
  In: 1.1.1.2/2000 --> 11.11.1.2/40000;udp, If: reth0.1
  Out: 11.11.1.2/40000 --> 1.1.1.2/2000;udp, If: reth1.1
Session ID: 2, Policy name: sfw2/5, State: Backup, Timeout: 476
  In: 1.1.2.2/2000 --> 11.11.2.2/40000;udp, If: reth0.2
  Out: 11.11.2.2/40000 --> 1.1.2.2/2000;udp, If: reth1.2
Session ID: 3, Policy name: sfw3/6, State: Backup, Timeout: 480
  In: 1.1.3.2/2000 --> 11.11.3.2/40000;udp, If: reth0.3
  Out: 11.11.3.2/40000 --> 1.1.3.2/2000;udp, If: reth1.3
Session ID: 4, Policy name: sfw4/7, State: Backup, Timeout: 482
  In: 1.1.4.2/2000 --> 11.11.4.2/40000;udp, If: reth0.4
  Out: 11.11.4.2/40000 --> 1.1.4.2/2000;udp, If: reth1.4
4 sessions displayed

```

show security flow session application

Syntax	show security flow session application <i>application-name</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about each session of the specified application type. This command is supported on J Series and SRX Series devices.
Options	<p><i>application-name</i> —Type of application about which to display sessions information. Possible values are</p> <ul style="list-style-type: none"> ■ dnsDomain Name System ■ ftpFile Transfer Protocol ■ ignoreIgnore application type ■ mgcp-caMedia Gateway Control Protocol with Call Agent ■ mgcp-uaMGCP with User Agent ■ pptpPoint-to-Point Tunneling Protocol ■ q931ISDN connection control protocol ■ rasRAS ■ realaudioRealAudio ■ rshUNIX remote shell services ■ rtspReal-Time Streaming Protocol ■ sccpSkinny Client Control Protocol ■ sipSession Initiation Protocol ■ sqlnet-v2Oracle SQLNET ■ talkTALK program ■ tftpTrivial File Transfer Protocol <p>node—(Optional) For chassis cluster configurations, display sessions for the specified application type or application set on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.

Required Privilege Level	view
Related Topics	clear security flow session application
List of Sample Output	show security flow session application ftp on page 1016 show security flow session application sip node primary on page 1016
Output Fields	Table 51 on page 1016 lists the output fields for the show security flow session application command. Output fields are listed in the approximate order in which they appear.

Table 51: show security flow session application Output Fields

Field Name	Field Description
Session ID	Number that identifies the session. You can use this ID to get additional information about the session.
Policy name	Policy that permitted the traffic.
Timeout	Idle timeout after which the session expires.
In	Incoming flow (source and destination IP addresses, application protocol, and interface).
Out	Reverse flow (source and destination IP addresses, application protocol, and interface).

show security flow session application ftp

```
user@host> show security flow session application ftp
Session ID: 33, Policy name: default-policy/2, Timeout: 1492
In: 10.10.10.1/2851 --> 192.168.0.2/21;tcp, If: t1-1/0/0.0
Out: 192.168.0.2/21 --> 10.10.10.1/2851;tcp, If: ge-0/0/1.0
```

show security flow session application sip node primary

```
user@host> show security flow session application sip node primary
node0:
-----
Session ID: 246, Policy name: trust_to_dmz/4, State: Active, Timeout: 6
In: 26.0.29.236/50039 --> 11.0.54.20/5060;udp, If: reth0.0
Out: 11.0.54.20/5060 --> 11.0.100.196/1047;udp, If: reth2.0

Session ID: 253, Policy name: trust_to_dmz/4, State: Active, Timeout: 4
In: 26.0.29.236/50055 --> 11.0.54.20/5060;udp, If: reth0.0
Out: 11.0.54.20/5060 --> 11.0.100.196/1048;udp, If: reth2.0
Session ID: 254, Policy name: trust_to_dmz/4, State: Active, Timeout: 64
Resource information : SIP ALG, 1024, 8186
In: 11.0.54.20/41968 --> 11.0.100.196/1024;udp, If: reth2.0
Out: 26.0.29.236/5060 --> 11.0.54.20/41968;udp, If: reth0.0

3 sessions displayed
```


show security flow session destination-port

Syntax	show security flow session destination-port <i>destination-port-number</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about each session that uses the specified destination port. This command is supported on J Series and SRX Series devices.
Options	<i>destination-port-number</i> —Number of the destination port about which to display sessions information. Range: 1 through 65535 node —(Optional) For chassis cluster configurations, display sessions for the specified destination port on a specific node. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	clear security flow session destination-port
List of Sample Output	show security flow session destination-port 21 on page 1018 show security flow session destination-port 40000 node local on page 1018
Output Fields	Table 52 on page 1017 lists the output fields for the show security flow session destination-port command. Output fields are listed in the approximate order in which they appear.

Table 52: show security flow session destination-port Output Fields

Field Name	Field Description
Session ID	Number that identifies the session. You can use this ID to get additional information about the session.
Policy name	Policy that permitted the traffic.
Timeout	Idle timeout after which the session expires.
In	Incoming flow (source and destination IP addresses, application protocol, and interface).
Out	Reverse flow (source and destination IP addresses, application protocol, and interface).

```

show security flow      user@host> show security flow session destination-port 21
session destination-port Session ID: 33, Policy name: default-policy/2, Timeout: 1492
21                      In: 10.10.10.1/2851 --> 192.168.0.2/21;tcp, If: t1-1/0/0.0
                               Out: 192.168.0.2/21 --> 10.10.10.1/2851;tcp, If: ge-0/0/1.0

show security flow      user@host> show security flow session destination-port 40000 node local
session destination-port node0:
40000 node local -----
Session ID: 1, Policy name: sfw1/4, State: Active, Timeout: 60
  In: 1.1.1.2/2000 --> 11.11.1.2/40000;udp, If: reth0.1
  Out: 11.11.1.2/40000 --> 1.1.1.2/2000;udp, If: reth1.1
Session ID: 2, Policy name: sfw2/5, State: Active, Timeout: 60
  In: 1.1.2.2/2000 --> 11.11.2.2/40000;udp, If: reth0.2
  Out: 11.11.2.2/40000 --> 1.1.2.2/2000;udp, If: reth1.2
Session ID: 3, Policy name: sfw3/6, State: Active, Timeout: 60
  In: 1.1.3.2/2000 --> 11.11.3.2/40000;udp, If: reth0.3
  Out: 11.11.3.2/40000 --> 1.1.3.2/2000;udp, If: reth1.3
Session ID: 4, Policy name: sfw4/7, State: Active, Timeout: 60
  In: 1.1.4.2/2000 --> 11.11.4.2/40000;udp, If: reth0.4
  Out: 11.11.4.2/40000 --> 1.1.4.2/2000;udp, If: reth1.4
4 sessions displayed

```

show security flow session destination-prefix

Syntax	show security flow session destination-prefix <i>destination-IP-prefix</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about each session that matches the specified IPv4 destination prefix. This command is supported on J Series and SRX Series devices.
Options	<i>destination-IP-prefix</i> —Destination IPv4 prefix or address about which to display session information. <i>node</i> —(Optional) For chassis cluster configurations, display sessions that match the specified destination prefix on a specific node. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	clear security flow session destination-prefix
List of Sample Output	show security flow session destination-prefix 192.168/16 on page 1020 show security flow session destination-prefix 11.11.1.2 node primary on page 1020
Output Fields	Table 53 on page 1019 lists the output fields for the show security flow session destination-prefix command. Output fields are listed in the approximate order in which they appear.

Table 53: show security flow session destination-prefix Output Fields

Field Name	Field Description
Session ID	Number that identifies the session. You can use this ID to get additional information about the session.
Policy name	Policy that permitted the traffic.
Timeout	Idle timeout after which the session expires.
In	Incoming flow (source and destination IP addresses, application protocol, and interface).
Out	Reverse flow (source and destination IP addresses, application protocol, and interface).

```

show security flow session destination-prefix 192.168/16
user@host> show security flow session destination-prefix 192.168/16
Session ID: 33, Policy name: default-policy/2, Timeout: 1492
  In: 10.10.10.1/2851 --> 192.168.0.2/21;tcp, If: t1-1/0/0.0
  Out: 192.168.0.2/21 --> 10.10.10.1/2851;tcp, If: ge-0/0/1.0

show security flow session destination-prefix 11.11.1.2 node primary
user@host> show security flow session destination-prefix 11.11.1.2 node primary
node0:
-----
Session ID: 1, Policy name: sfw1/4, State: Active, Timeout: 60
  In: 1.1.1.2/2000 --> 11.11.1.2/40000;udp, If: reth0.1
  Out: 11.11.1.2/40000 --> 1.1.1.2/2000;udp, If: reth1.1
1 sessions displayed

```

show security flow session interface

Syntax	show security flow session interface <i>interface-name</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about each session that uses the specified interface. The interface name can be a session's incoming or outgoing interface. This command is supported on J Series and SRX Series devices.
Options	<i>interface-name</i> —Name of the interface on the router for which to display sessions information. <i>node</i> —(Optional) For chassis cluster configurations, display sessions that use the specified interface on a specific node. <ul style="list-style-type: none"> ■ <i>node-id</i>—Identification number of the node. It can be 0 or 1. ■ <i>all</i>—Display information about all nodes. ■ <i>local</i>—Display information about the local node. ■ <i>primary</i>—Display information about the primary node.
Required Privilege Level	view
Related Topics	clear security flow session interface
List of Sample Output	show security flow session interface Gigabit Ethernet on page 1022 show security flow session interface reth0.1 node local on page 1022
Output Fields	Table 54 on page 1021 lists the output fields for the show security flow session interface command. Output fields are listed in the approximate order in which they appear.

Table 54: show security flow session interface Output Fields

Field Name	Field Description
Session ID	Number that identifies the session. You can use this ID to get additional information about the session.
Policy name	Policy that permitted the traffic.
Timeout	Idle timeout after which the session expires.
In	Incoming flow (source and destination IP address, application protocol, and interface).
Out	Reverse flow (source and destination IP address, application protocol, and interface).

```
show security flow      user@host> show security flow session interface ge-0/0/0.0
session interface GigabitEthernet
                               Session ID: 1658, Policy name: self-traffic-policy/1, Timeout: 1800
                               In: 172.23.9.135/3998 --> 10.157.84.52/23;tcp, If: ge-0/0/0.0
                               Out: 10.157.84.52/23 --> 172.23.9.135/3998;tcp, If: .local..0
                               1 sessions displayed

show security flow      user@host> show security flow session interface reth0.1 node local
session interface      node0:
reth0.1 node local
                               -----
                               Session ID: 1, Policy name: sfw1/4, State: Active, Timeout: 60
                               In: 1.1.1.2/2000 --> 11.11.1.2/40000;udp, If: reth0.1
                               Out: 11.11.1.2/40000 --> 1.1.1.2/2000;udp, If: reth1.1
                               1 sessions displayed
```

show security flow session protocol

Syntax show security flow session protocol (*protocol-name* | *protocol-number*)
<node (*node-id* | all | local | primary)>

Release Information Command introduced in Release 8.5 of JUNOS Software; *node* options added in Release 9.0 of JUNOS Software.

Description Display information about each session that uses the specified protocol.

This command is supported on J Series and SRX Series devices.

Options *protocol-name* —(Optional) Protocol to use as a sessions filter. Information about sessions that use this protocol is displayed. Possible protocols are

- ah—IP Security Authentication Header
- egp—Exterior gateway protocol
- esp—IPsec Encapsulating Security Payload
- gre—Generic routing encapsulation
- icmp—Internet Control Message Protocol
- 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

protocol-number —(Optional) Numeric protocol value. For a complete list of possible numeric values, see RFC 1700, *Assigned Numbers (for the Internet Protocol Suite)*.

Range: 0 through 255

node—(Optional) For chassis cluster configurations, display sessions that use the specified protocol on a specific node.

- *node-id* —Identification number of the node. It can be 0 or 1.
- all—Display information about all nodes.
- local—Display information about the local node.
- primary—Display information about the primary node.

Required Privilege Level view

Related Topics clear security flow session protocol

List of Sample Output show security flow session protocol udp on page 1024
 show security flow session protocol tcp on page 1024
 show security flow session protocol udp node primary on page 1024

Output Fields Table 55 on page 1024 lists the output fields for the show security flow session protocol command. Output fields are listed in the approximate order in which they appear.

Table 55: show security flow session protocol Output Fields

Field Name	Field Description
Session ID	Number that identifies the session. You can use this ID to get additional information about the session.
Policy name	Policy that permitted the traffic.
Timeout	Idle timeout after which the session expires.
In	Incoming flow (Source and destination IP addresses, application protocol, and interface).
Out	Reverse flow (Source and destination IP addresses, application protocol, and interface).

show security flow session protocol udp user@host> **show security flow session protocol udp**
 Session ID: 1, Policy name: self-traffic-policy/1, Timeout: 57
 In: 0.0.0.0/68 --> 255.255.255.255/67;udp, If: ge-0/0/0.0
 Out: 255.255.255.255/67 --> 0.0.0.0/68;udp, If: .local..0

show security flow session protocol tcp user@host> **show security flow session protocol tcp**
 Session ID: 4135, Policy name: N/A, Timeout: 1799
 In: 10.0.0.96/1026 --> 10.0.0.1/5000;tcp, If: pc-5/0/0.16383
 Out: 10.0.0.1/5000 --> 10.0.0.96/1026;tcp, If: .local..0
 Session ID: 6301, Policy name: wx2ut, Timeout: 1726
 In: 2.2.2.1/1865 --> 90.0.0.5/3578;tcp, If: wx-5/0/0.0
 Out: 90.0.0.5/3578 --> 2.2.2.1/1865;tcp, If: e1-2/0/0.0
 Session ID: 6307, Policy name: ut2wx, Timeout: 1726
 In: 90.0.0.5/3331 --> 2.2.2.1/3578;tcp, If: e1-2/0/0.0
 Out: 2.2.2.1/3578 --> 90.0.0.5/3331;tcp, If: wx-5/0/0.0
 Session ID: 6329, Policy name: ut2wx, Timeout: 494
 In: 90.0.0.6/3336 --> 2.2.2.3/3578;tcp, If: e1-2/0/1.0
 Out: 2.2.2.3/3578 --> 90.0.0.6/3336;tcp, If: wx-5/0/0.0
 Session ID: 6348, Policy name: ut2t_red, Timeout: 1605
 In: 90.0.0.1/3972 --> 20.0.0.1/21;tcp, If: e1-2/0/0.0
 Out: 20.0.0.1/21 --> 90.0.0.1/3972;tcp, If: ge-0/0/1.0
 Session ID: 6355, Policy name: t2ut_red, Timeout: 1726
 In: 20.0.0.1/1104 --> 90.0.0.1/21;tcp, If: ge-0/0/1.0
 Out: 90.0.0.1/21 --> 20.0.0.1/1104;tcp, If: e1-2/0/0.0
 6 sessions displayed

show security flow session protocol udp node primary user@host> **show security flow session protocol udp node primary**
 node0:

 Session ID: 1, Policy name: sfw1/4, State: Active, Timeout: 60
 In: 1.1.1.2/2000 --> 11.11.1.2/40000;udp, If: reth0.1


```
Out: 11.11.1.2/40000 --> 1.1.1.2/2000;udp, If: reth1.1
Session ID: 2, Policy name: sfw2/5, State: Active, Timeout: 60
In: 1.1.2.2/2000 --> 11.11.2.2/40000;udp, If: reth0.2
Out: 11.11.2.2/40000 --> 1.1.2.2/2000;udp, If: reth1.2
Session ID: 3, Policy name: sfw3/6, State: Active, Timeout: 60
In: 1.1.3.2/2000 --> 11.11.3.2/40000;udp, If: reth0.3
Out: 11.11.3.2/40000 --> 1.1.3.2/2000;udp, If: reth1.3
Session ID: 4, Policy name: sfw4/7, State: Active, Timeout: 60
In: 1.1.4.2/2000 --> 11.11.4.2/40000;udp, If: reth0.4
Out: 11.11.4.2/40000 --> 1.1.4.2/2000;udp, If: reth1.4
4 sessions displayed
```

show security flow session resource-manager

Syntax	show security flow session resource-manager <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; <i>node</i> options added in Release 9.0 of JUNOS Software.
Description	Display information about sessions created by the resource manager. This command is supported on J Series and SRX Series devices.
Options	<p>none—Display all resource manager sessions.</p> <p><i>node</i>—(Optional) For chassis cluster configurations, display resource manager sessions on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	clear security flow session resource-manager
List of Sample Output	<p>show security flow session resource-manager on page 1027</p> <p>show security flow session resource-manager node 0 on page 1027</p> <p>show security flow session resource-manager node 1 on page 1027</p>
Output Fields	Table 56 on page 1026 lists the output fields for the <code>show security flow session resource-manager</code> command. Output fields are listed in the approximate order in which they appear.

Table 56: show security flow session resource-manager Output Fields

Field Name	Field Description
Session ID	Number that identifies the session. You can use this ID to get additional information about the session.
Policy name	Policy that permitted the traffic.
Timeout	Idle timeout after which the session expires.
Resource information	Information about the session particular to the resource manager, including the name of the ALG, the group ID, and the resource ID.
In	Incoming flow (source and destination IP addresses, application protocol, and interface).
Out	Reverse flow (source and destination IP addresses, application protocol, and interface).

```

show security flow session resource-manager
user@host> show security flow session resource-manager
Session ID: 2218, Policy name: foo/4, Timeout: 60
Resource information : MGCP ALG, 2047, 8188
  In: 12.0.102.26/28072 --> 11.0.101.236/23252;udp, If: ge-0/0/2.0
  Out: 11.0.101.236/23252 --> 12.0.102.26/28072;udp, If: ge-0/0/1.0

show security flow session resource-manager node 0
user@host> show security flow session resource-manager node 0
node0:
-----
Session ID: 254, Policy name: trust_to_dmz/4, State: Active, Timeout: 36
Resource information : SIP ALG, 1024, 8186
  In: 11.0.54.20/41968 --> 11.0.100.196/1024;udp, If: reth2.0
  Out: 26.0.29.236/5060 --> 11.0.54.20/41968;udp, If: reth0.0

Session ID: 255, Policy name: trust_to_dmz/4, State: Active, Timeout: 120
Resource information : SIP ALG, 1024, 8191
  In: 26.0.29.236/25896 --> 11.0.30.21/24922;udp, If: reth0.0
  Out: 11.0.30.21/24922 --> 11.0.100.196/64510;udp, If: reth2.0

2 sessions displayed

show security flow session resource-manager node 1
user@host> show security flow session resource-manager node 1
node1:
-----
Session ID: 250, Policy name: trust_to_dmz/4, State: Backup, Timeout: 880
Resource information : SIP ALG, 1022, 8192
  In: 11.0.54.20/41968 --> 11.0.100.196/1024;udp, If: reth2.0
  Out: 26.0.29.236/5060 --> 11.0.54.20/41968;udp, If: reth0.0

Session ID: 251, Policy name: trust_to_dmz/4, State: Backup, Timeout: 894
Resource information : SIP ALG, 1022, 8180
  In: 26.0.29.236/25896 --> 11.0.30.21/24922;udp, If: reth0.0
  Out: 11.0.30.21/24922 --> 11.0.100.196/64510;udp, If: reth2.0

2 sessions displayed

```

show security flow session session-identifier

Syntax	show security flow session session-identifier session-identifier <node (node-id all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display detailed information about the session with this identifier. This command is supported on J Series and SRX Series devices.
Options	<p>session-identifier —Identifier of the session about which to display information.</p> <p>node—(Optional) For chassis cluster configurations, display session information about the sessions with this identifier on a specific node.</p> <ul style="list-style-type: none"> ■ node-id —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	clear security flow session session-identifier
List of Sample Output	<p>show security flow session session-identifier 36 on page 1029</p> <p>show security flow session session-identifier 2218 on page 1030</p> <p>show security flow session session-identifier 33 on page 1030</p> <p>show security flow session session-identifier 1 node primary on page 1030</p>
Output Fields	Table 57 on page 1028 lists the output fields for the show security flow session session-identifier command. Output fields are listed in the approximate order in which they appear.

Table 57: show security flow session session-identifier Output Fields

Field Name	Field Description
Session ID	Number that identifies the session. You can use this ID to get additional information about the session.
Status	Session status.
Flag	Internal flag depicting the state of the session, used for debugging purposes.
Virtual system	Virtual system to which the session belongs.
Policy name	Name and ID of the policy that the first packet of the session matched.

Table 57: show security flow session session-identifier Output Fields (continued)

Field Name	Field Description
Maximum timeout	Maximum session timeout.
Current timeout	Remaining time for the session unless traffic exists in the session.
Start time	Time when the session was created, offset from the system start time.
Duration	Length of time for which the session is active.
In	<p>For the input flow:</p> <ul style="list-style-type: none"> ■ Source and destination addresses and protocol tuple for the input flow. ■ Interface: Input flow interface. ■ Session token: Internal token derived from the virtual routing instance. ■ Flag: Internal debugging flags. ■ Route: Internal next hop of the route to be used by the flow. ■ Gateway: Next-hop gateway of the flow. ■ Tunnel: If the flow is going into a tunnel, the tunnel ID. Otherwise, 0 (zero). ■ Port Sequence, FIN sequence, FIN state, Cookie: Internal TCP state tracking information.
Out	<p>For the reverse flow:</p> <ul style="list-style-type: none"> ■ Source and destination addresses, and protocol tuple for the reverse flow. ■ Interface: Reverse flow interface. ■ Session token: Internal token derived from the virtual routing instance. ■ Flag: Internal debugging flags. ■ Route: Internal next hop of the route to be used by the flow. ■ Gateway: Next-hop gateway of the flow. ■ Tunnel: If the flow is going into a tunnel, the tunnel ID. Otherwise, 0 (zero). ■ Port Sequence, FIN sequence, FIN state, Cookie: Internal TCP state tracking information.

```

show security flow      user@host> show security flow session session-identifier 36
session                Session ID: 36, Status: Normal, Flag: 0x8094540
session-identifier 36 Virtual system: Root VSYS(I), Policy name: foo/4
                          Maximum timeout: 1800, Current timeout: 1646
                          Start time: 61995, Duration: 158
                          In: 10.10.10.1/4923 --> 3.3.3.2/23;tcp,
                             Interface: t1-1/0/0.0,
                             Session token: 0x12, Flag: 0x8094530
                             Route: 0x70010, Gateway: 10.10.10.0, Tunnel: 0
                             Port sequence: 0, FIN sequence: 0,
                             FIN state: 0, Cookie: 0,
                          Out: 3.3.3.2/23 --> 10.10.10.1/4923;tcp,
                             Interface: .local..0,
                             Session token: 0x4, Flag: 0x8094530
                             Route: 0xffffb0006, Gateway: 3.3.3.2, Tunnel: 0
                             Port sequence: 0, FIN sequence: 0,
                             FIN state: 0, Cookie: 0,
                          1 sessions displayed

```

```

show security flow      user@host> show security flow session session-identifier 2218
session                Session ID: 2218, Status: Normal, Flag: 0x8094660
session-identifier 2218 Virtual system: Root VSYS(I), Policy name: foo/4
                          Maximum timeout: 60, Current timeout: 60
                          Start time: 0, Duration: 0
                          Client: MGCP ALG, Group: 2047, Resource: 8188
                          In: 12.0.102.26/28072 --> 11.0.101.236/23252;udp,
                             Interface: ge-0/0/2.0,
                             Session token: 0xa, Flag: 0x8094740
                             Route: 0xb0010, Gateway: 12.0.102.26, Tunnel: 0
                             Port sequence: 0, FIN sequence: 0,
                             FIN state: 0, Cookie: 0,
                          Out: 11.0.101.236/23252 --> 12.0.102.26/28072;udp,
                             Interface: ge-0/0/1.0,
                             Session token: 0x8, Flag: 0x8094740
                             Route: 0xa0010, Gateway: 11.0.101.236, Tunnel: 0
                             Port sequence: 0, FIN sequence: 0,
                             FIN state: 0, Cookie: 0,
                          1 sessions displayed

```

```

show security flow      user@host> show security flow session session-identifier 33
session                Session ID: 33, Status: Normal, Flag: 0x80a15f0
session-identifier 33 Virtual system: Root VSYS(I), Policy name: default-policy/2
                          Application: junos-ftp/1
                          Maximum timeout: 1800, Current timeout: 1492
                          Start time: 31128, Duration: 121
                          In: 10.10.10.1/2851 --> 192.168.0.2/21;tcp,
                             Interface: tl-1/0/0.0,
                          Session token: 0x6, Flag: 0x80a15e0
                          Route: 0x60010, Gateway: 10.10.10.0, Tunnel: 0
                          Port sequence: 0, FIN sequence: 0,
                          FIN state: 0, Cookie: 0,
                          Out: 192.168.0.2/21 --> 10.10.10.1/2851;tcp,
                             Interface: ge-0/0/1.0,
                             Session token: 0x6, Flag: 0x80a15e0
                             Route: 0x90010, Gateway: 192.168.0.2, Tunnel: 0
                             Port sequence: 0, FIN sequence: 0,
                             FIN state: 0, Cookie: 0,
                          1 sessions displayed

```

```

show security flow      user@host> show security flow session session-identifier 1 node primary
session                node0:
session-identifier 1 node
primary                -----
                          Session ID: 1, Status: Normal, State: Active
                          Flag: 0x40
                          Virtual system: root, Policy name: sfw1/4
                          Maximum timeout: 60, Current timeout: 60
                          Start time: 472, Duration: 142
                          In: 1.1.1.2/2000 --> 11.11.1.2/40000;udp,
                             Interface: reth0.1,
                             Session token: 0xa, Flag: 0x1
                             Route: 0x1bfb01, Gateway: 1.1.1.2, Tunnel: 0
                             Port sequence: 0, FIN sequence: 0,
                             FIN state: 0,
                          Out: 11.11.1.2/40000 --> 1.1.1.2/2000;udp,
                             Interface: reth1.1,
                             Session token: 0x12, Flag: 0x0
                             Route: 0x1b9b01, Gateway: 11.11.1.2, Tunnel: 0
                             Port sequence: 0, FIN sequence: 0,

```

```
FIN state: 0,  
1 sessions displayed
```

show security flow session source-port

Syntax	show security flow session source-port source-port-number <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about each session that uses the specified source port. This command is supported on J Series and SRX Series devices.
Options	<p><i>source-port-number</i> —Number of the source port about which to display sessions information.</p> <p><i>node</i>—(Optional) For chassis cluster configurations, display sessions for the specified source port on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ <i>all</i>—Display information about all nodes. ■ <i>local</i>—Display information about the local node. ■ <i>primary</i>—Display information about the primary node.
Required Privilege Level	view
Related Topics	clear security flow session source-port
List of Sample Output	show security flow session source-port 2851 on page 1033 show security flow session source-port 2000 node 1 on page 1033
Output Fields	Table 58 on page 1032 lists the output fields for the show security flow session source-port command. Output fields are listed in the approximate order in which they appear.

Table 58: show security flow session source-port Output Fields

Field Name	Field Description
Session ID	Number that identifies the session. You can use this ID to get additional information about the session.
Policy name	Policy that permitted the traffic.
Timeout	Idle timeout after which the session expires.
Resource information	Information about the session particular to the resource manager, including the name of the ALG, the group ID, and the resource ID.
In	Incoming flow (source and destination IP addresses, application protocol, and interface).
Out	Reverse flow (source and destination IP addresses, application protocol, and interface).


```

show security flow      user@host> show security flow session source-port 2851
session source-port    Session ID: 33, Policy name: default-policy/2, Timeout: 1492
2851                   In: 10.10.10.1/2851 --> 192.168.0.2/21;tcp, If: t1-1/0/0.0
                           Out: 192.168.0.2/21 --> 10.10.10.1/2851;tcp, If: ge-0/0/1.0

```

```

show security flow      user@host> show security flow session source-port 2000 node 1
session source-port    node1:
2000 node 1            -----
                           Session ID: 1, Policy name: sfw1/4, State: Backup, Timeout: 322
                           In: 1.1.1.2/2000 --> 11.11.1.2/40000;udp, If: reth0.1
                           Out: 11.11.1.2/40000 --> 1.1.1.2/2000;udp, If: reth1.1
                           Session ID: 2, Policy name: sfw2/5, State: Backup, Timeout: 316
                           In: 1.1.2.2/2000 --> 11.11.2.2/40000;udp, If: reth0.2
                           Out: 11.11.2.2/40000 --> 1.1.2.2/2000;udp, If: reth1.2
                           Session ID: 3, Policy name: sfw3/6, State: Backup, Timeout: 320
                           In: 1.1.3.2/2000 --> 11.11.3.2/40000;udp, If: reth0.3
                           Out: 11.11.3.2/40000 --> 1.1.3.2/2000;udp, If: reth1.3
                           Session ID: 4, Policy name: sfw4/7, State: Backup, Timeout: 322
                           In: 1.1.4.2/2000 --> 11.11.4.2/40000;udp, If: reth0.4
                           Out: 11.11.4.2/40000 --> 1.1.4.2/2000;udp, If: reth1.4
                           4 sessions displayed

```

show security flow session source-prefix

Syntax	show security flow session source-prefix <i>source-prefix-number</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about each session that uses the specified source prefix. This command is supported on J Series and SRX Series devices.
Options	<i>source-prefix-number</i> —Source IPv4 prefix or address about which to display sessions information. <i>node</i> —(Optional) For chassis cluster configurations, display sessions for the specified source prefix on a specific node. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ <i>all</i>—Display information about all nodes. ■ <i>local</i>—Display information about the local node. ■ <i>primary</i>—Display information about the primary node.
Required Privilege Level	view
Related Topics	clear security flow session source-prefix
List of Sample Output	show security flow session source-prefix 10/8 on page 1035
Output Fields	Table 59 on page 1034 lists the output fields for the show security flow session source-prefix command. Output fields are listed in the approximate order in which they appear.

Table 59: show security flow session source-prefix Output Fields

Field Name	Field Description
Session ID	Number that identifies the session. You can use this ID to get additional information about the session.
Policy name	Policy that permitted the traffic.
Timeout	Idle timeout after which the session expires.
In	Incoming flow (source and destination IP addresses, application protocol, and interface).
Out	Reverse flow (source and destination IP addresses, application protocol, and interface).

```
show security flow      user@host> show security flow session source-prefix 10/8  
session source-prefix  Session ID: 36, Policy name: foo/4, Timeout: 1547  
10/8                  In: 10.10.10.1/4923 --> 3.3.3.2/23;tcp, If: t1-1/0/0.0  
                        Out: 3.3.3.2/23 --> 10.10.10.1/4923;tcp, If: .local..0  
                        1 sessions displayed
```

show security flow session summary

Syntax	show security flow session summary <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; <i>node</i> options added in Release 9.0 of JUNOS Software.
Description	Display summary information about existing sessions, including types of sessions, active and failed sessions, and the maximum allowed number of sessions. This command is supported on J Series and SRX Series devices.
Options	<p>none—Display details summary of all sessions.</p> <p><i>node</i>—(Optional) For chassis cluster configurations, display a summary of sessions on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	clear security flow session all
List of Sample Output	<p>show security flow session summary on page 1037</p> <p>show security flow session summary (SRX Series devices) on page 1037</p> <p>show security flow session summary node all on page 1037</p> <p>show security flow session summary member primary on page 1037</p>
Output Fields	Table 60 on page 1036 lists the output fields for the show security flow session summary command. Output fields are listed in the approximate order in which they appear.

Table 60: show security flow session summary Output Fields

Field Name	Field Description
Unicast-sessions	Total number of active unicast sessions.
Multicast-sessions	Total number of active multicast sessions.
Failed-sessions	Total number of failed sessions.
Active-sessions	Total number of active sessions.
Maximum-sessions	Maximum number of supported sessions.

```

show security flow session summary      user@host> show security flow session summary
Session summary:
  Unicast-sessions: 1
  Multicast-sessions: 0
  Failed-sessions: 0
  Active-sessions: 1
  Maximum-sessions: 256000

show security flow session summary (SRX Series devices) user@host> show security flow session summary
Session summary:
  Unicast-sessions: 0
  Multicast-sessions: 0
  Failed-sessions: 0
  Sessions-in-use: 0
  Maximum-sessions: 131072
  Unicast-sessions: 0
  Multicast-sessions: 0
  Failed-sessions: 0
  Sessions-in-use: 0
  Maximum-sessions: 524288

show security flow session summary node all user@host> show security flow session summary node all
node0:
-----
Session summary:
  Unicast-sessions: 4
  Multicast-sessions: 0
  Failed-sessions: 0
  Sessions-in-use: 4
  Maximum-sessions: 262144
node1:
-----
Session summary:
  Unicast-sessions: 4
  Multicast-sessions: 0
  Failed-sessions: 0
  Sessions-in-use: 4
  Maximum-sessions: 262144

show security flow session summary member primary user@host> show security flow session summary member primary
Session summary:
  Unicast-sessions: 1
  Multicast-sessions: 0
  Failed-sessions: 0
  Active-sessions: 1
  Maximum-sessions: 10000

```

show security flow session tunnel

Syntax	show security flow session tunnel <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display information about all tunnel sessions. This command is supported on J Series and SRX Series devices.
Options	<p>none—Display all tunnel sessions.</p> <p>node—(Optional) For chassis cluster configurations, display tunnel sessions on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	<p>no-syn-check-in-tunnel</p> <p>clear security flow session all</p>
List of Sample Output	show security flow session tunnel on page 1038
Output Fields	Table 61 on page 1038 lists the output fields for the show security flow session tunnel command. Output fields are listed in the approximate order in which they appear.

Table 61: show security flow session tunnel Output Fields

Field Name	Field Description
Session ID	Number that identifies the session. You can use this ID to get additional information about the session.
Policy name	Policy that permitted the traffic. NA (Not Applicable) for a tunnel session.
Timeout	Idle timeout after which the session expires. NA (Not Applicable) for a tunnel session.
In	Incoming flow (source and destination IP addresses, application protocol, and interface).

```

show security flow session tunnel  user@host> show security flow session tunnel
                                     Session ID: 9003, Policy name: N/A, Timeout: N/A
                                     In: 2.2.2.2/0 --> 2.2.2.1/0;esp, If: fe-4/0/0.0

```

```
Session ID: 9004, Policy name: N/A, Timeout: N/A  
In: 2.2.2.2/48468 --> 2.2.2.1/48442;esp, If: fe-4/0/0.0  
Session ID: 9005, Policy name: N/A, Timeout: N/A  
In: 10.157.89.106/2048 --> 10.157.89.210/2048;gre, If: ge-0/0/1.0
```

show security idp active-policy

Syntax	show security idp active-policy
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	<p>Display information about the policy name and running detector version with which the policy is compiled from IDP data plane module.</p> <p>This command is supported on SRX Series devices.</p>
Required Privilege Level	view
Related Topics	<p>request security idp security-package download</p> <p>request security idp security-package install</p>
List of Sample Output	show security idp active-policy on page 1040
Output Fields	Table 62 on page 1040 lists the output fields for the show security idp active-policy command. Output fields are listed in the approximate order in which they appear.

Table 62: show security idp active-policy Output Fields

Field Name	Field Description
Policy Name	Name of the running policy.
Running Detector Version	Current version of the running detector.

```
show security idp active-policy user@host> show security idp active-policy
Policy Name : viking-policy
Running Detector Version : 9.1.140080300
```


show security idp application-identification application-system-cache

Syntax	show security idp application-identification application-system-cache
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	<p>Display application ID from default port/protocol binding or from the application system cache.</p> <p>This command is supported on SRX Series devices.</p>
Required Privilege Level	view
Related Topics	<p>application-system-cache</p> <p>clear security idp application-identification application-system-cache</p>
List of Sample Output	show security idp application-identification application-system-cache on page 1041
Output Fields	Table 63 on page 1041 lists the output fields for the show security idp application-identification application-system-cache command. Output fields are listed in the approximate order in which they appear.

Table 63: show security idp application-identification application-system-cache Output Fields

Field Name	Field Description
Vsys-ID	Application identification number.
IP address	IPv4 address.
Port	Port number that are is use with the current session.
Protocol	Name of the protocol session.
Expired	Session expired status Yes or No
Service	Name of the service.

```

show security idp      user@host> show security idp application-identification application-system-cache
application-identification IDP Application System Cache statistics:
application-system-cache Vsys-ID      IP address      Port      Protocol  Expired  Service
                           0              5.0.0.1       80       tcp       No       HTTP

```

show security idp attack table

Syntax	show security idp attack table
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display detailed information of IDP attack table. This command is supported on SRX Series devices.
Required Privilege Level	view
Related Topics	attacks clear security idp attack table
List of Sample Output	show security idp attack table on page 1042
Output Fields	Table 64 on page 1042 lists the output fields for the show security idp attack table command. Output fields are listed in the approximate order in which they appear.

Table 64: show security idp attack table Output Fields

Field Name	Field Description
Attack name	Name of the attack that you want to match in the monitored network traffic.
Hits	Total number of attack matches.

show security idp attack table	user@host> show security idp attack table
	IDP attack statistics:
	Attack name#Hits
	HTTP:OVERFLOW:PI3WEB-SLASH-OF1

show security idp counters application-identification

Syntax	show security idp counters application-identification
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display the status of all IDP application identification (AI) counter values. This command is supported on SRX Series devices.
Required Privilege Level	view
Related Topics	application-identification clear security idp counters application-identification
List of Sample Output	show security idp counters application-identification on page 1044
Output Fields	Table 65 on page 1043 lists the output fields for the show security idp counters application-identification command. Output fields are listed in the approximate order in which they appear.

Table 65: show security idp counters application-identification Output Fields

Field Name	Field Description
AI cache hits	Number of sessions found application in AI cache.
AI cache misses	Number of sessions those did not find application from AI cache.
AI matches	Number of sessions matched AI signatures.
AI no-matches	Number of sessions that did not match AI signatures.
AI-enabled sessions	Number of sessions that are AI enabled.
AI-disabled sessions	Number of sessions that are AI disabled.
AI-disabled sessions due to gate match	Number of sessions disabled AI match due to gate match.
AI-disabled sessions due to ssl encapsulated flows	Number of sessions disabled AI match due to ssl encapsulated flows.
AI-disabled sessions due to cache hit	Number of sessions disabled AI match due to AI cache match.
AI-disabled sessions due to configuration	Number of sessions disabled AI match due to AI session limit in the configuration.
AI-disabled sessions due to protocol remapping	Number of sessions disabled AI match due to protocol remapping.
AI-disabled sessions due to RPC match	Number of sessions disabled AI match due to RPC match.

Table 65: show security idp counters application-identification Output Fields *(continued)*

Field Name	Field Description
AI-disabled sessions due to Aux/Dynamic/Encap/Mgmt flows	Number of sessions disabled AI match due to auxiliary, dynamic, encapsulated, or management flows.
(Unsupported)	
AI-disabled sessions due to non-TCP/UDP flows	Number of sessions disabled AI match due to non-TCP or non-UDP flows.
AI-disabled sessions due to no AI signatures	Number of sessions disabled AI match due to absence of AI signature.
(Unsupported)	
AI-disabled sessions due to session limit	Number of sessions disabled AI match after reaching AI max session limit.
AI-disabled sessions due to session packet memory limit	Number of sessions disabled AI match after reaching AI memory usage limit per session.
AI-disabled sessions due to global packet memory limit	Number of sessions disabled AI match after reaching AI global memory usage limit.

```

show security idp      user@host> show security idp counters application-identification
counters              IDP counters:
application-identification IDP counter type                                Value
AI cache hits                                2682
AI cache misses                              3804
AI matches                                   74
AI no-matches                                27
AI-enabled sessions                          3804
AI-disabled sessions                        2834
AI-disabled sessions due to gate match        0
AI-disabled sessions due to ssl encapsulated flows 0
AI-disabled sessions due to cache hit         2682
AI-disabled sessions due to configuration      0
AI-disabled sessions due to protocol remapping 0
AI-disabled sessions due to RPC match          0
AI-disabled sessions due to Aux/Dynamic/Encap/Mgmt flows 0
AI-disabled sessions due to non-TCP/UDP flows 118
AI-disabled sessions due to no AI signatures  0
AI-disabled sessions due to session limit      0
AI-disabled sessions due to session packet memory limit 34
AI-disabled sessions due to global packet memory limit 0

```

show security idp counters dfa

Syntax	show security idp counters dfa
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display the status of all DFA counter values. This command is supported on SRX Series devices.
Required Privilege Level	view
Related Topics	clear security idp counters dfa
List of Sample Output	show security idp counters dfa on page 1045
Output Fields	Table 66 on page 1045 lists the output fields for the show security idp counters dfa command. Output fields are listed in the approximate order in which they appear.

Table 66: show security idp counters dfa Output Fields

Field Name	Field Description
DFA Group Merged Usage	Number of DFA groups merged.
DFA Matches	Number of DFA matches found.

```

show security idp user@host> show security idp counters dfa
counters dfa      IDP counters:
                    IDP counter type
                    DFA Group Merged Usage      Value
                    DFA Matches                  0
                                                    1

```

show security idp counters flow

Syntax	show security idp counters flow
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display the status of all IDP flow counter values. This command is supported on SRX Series devices.
Required Privilege Level	view
Related Topics	flow (IDP) clear security idp counters flow
List of Sample Output	show security idp counters flow on page 1047
Output Fields	Table 67 on page 1046 lists the output fields for the show security idp counters flow command. Output fields are listed in the approximate order in which they appear.

Table 67: show security idp counters flow Output Fields

Field Name	Field Description
Fast-path packets	Number of packets that are set through fast path after completing idp policy lookup.
Slow-path packets	Number of packet that are sent through slow path during idp policy lookup.
ICMP-error packets	Number of ICMP error packets.
(Unsupported)	
Session construction failed	Number of times the packet failed to establish the session.
(Unsupported)	
Session limit reached	Number of sessions that reached idp sessions limit.
Not a new session	Number of session that extended from its time limit.
(Unsupported)	
Invalid index at ageout	Invalid session index in session ageout message.
(Unsupported)	
Packet logging	Number of packets saved for packet logging.
Busy packets	Number of packets saved as the one or more packets of this session are handed off for async processing.
(Unsupported)	
Policy cache hits	Number of sessions that matched policy cache.

Table 67: show security idp counters flow Output Fields (continued)

Field Name	Field Description
Policy cache misses	Number of sessions that did not match policy cache.
Maximum flow hash collisions	Maximum number of packets of one flow that share the same hash value.
Bad-UDP-checksumpackets	Number of packets that received with bad UDP checksum error.
(Unsupported)	
Gates added	Number of gate entries added for dynamic port identification.
Gate matches	Number of times a gate is matched.
(Unsupported)	
Sessions deleted	Number of sessions deleted.
Sessions aged-out	Number of sessions are aged out if no traffic is received within session timeout value.
(Unsupported)	
Sessions in-use while aged-out	Number of sessions in use during session ageout.
(Unsupported)	
TCP flows marked dead on RST/FIN	Number of session marked dead on TCP RST/FIN.
Sessions constructed	Number of sessions established.
Sessions destructed	Number of sessions destructed.
SM Session Create	Number of SM sessions created.
SM Packet Process	Number of packets processed from SM.
SM Session close	Number of SM sessions closed.

```

show security idp user@host> show security idp counters flow
counters flow IDP counters:
                  IDP counter type                               Value
                  Fast-path packets                             0
                  Slow-path packets                             1
                  ICMP-error packets                             0
                  Session construction failed                     0
                  Session limit reached                           0
                  Not a new session                               0
                  Invalide index at ageout                       0
                  Packet logging                                  0
                  Busy packets                                    0
                  Policy cache hits                               0
                  Policy cache misses                             1
                  Maximum flow hash collisions                   0
                  Flow hash collisions                           0

```

Bad-UDP-checksum packets	0
Gates added	0
Gate matches	0
Sessions deleted	1
Sessions aged-out	0
Sessions in-use while aged-out	0
TCP flows marked dead on RST/FIN	1
Sessions constructed	1
Sessions destructed	1
SM Session Create	1
SM Packet Process	28
SM Session close	1

show security idp counters ips

Syntax	show security idp counters ips
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display the status of all IPS counter values. This command is supported on SRX Series devices.
Required Privilege Level	view
Related Topics	ips clear security idp counters ips
List of Sample Output	show security idp counters ips on page 1050
Output Fields	Table 68 on page 1049 lists the output fields for the show security idp counters ips command. Output fields are listed in the approximate order in which they appear.

Table 68: show security idp counters ips Output Fields

Field Name	Field Description
TCP fast path	Number of TCP packets skipped for IDS processing.
Layer-4 anomalies	Number of Layer-4 protocol error or anomaly.
Anomaly hash misses	Number of times look failed on anomaly hash.
Line context matches	Number of attempts to match line based attacks in traffic stream.
Stream256 context matches	Number of attempts to match stream based attacks in first 256 bytes of traffic stream.
Stream context matches	Number of attempts to match stream based attacks in traffic stream.
Packet context matches	Number of attempts to match packet based attacks in traffic packet.
Packet header matches	Number of attempts to match packet header based attacks in traffic packet.
Context matches	Number of attempts to match protocol context based attacks in traffic stream.
Regular expression matches	Number of attempts to match PCRE expressions in traffic stream.
Tail DFAs	Number of attempts to match an attack on tail DFA group matches.
Exempted attacks	Number of attacks exempted from match as per-exempt rulebase.
Out of order chains	Number of times attack is excluded from match due to member attacks in an attack group did not complete chain.
Partial chain matches	Number of attacks in partial chain match with attack scope as transaction.

Table 68: show security idp counters ips Output Fields *(continued)*

Field Name	Field Description
IDS device FIFO size	Number of IDS contexts in virtual IDS device.
IDS device FIFO overflows	Number of times an IDS context can not be written as the IDS device is full.
Brute force queue size	Number of entries in the brute force queue.
IDS cache hits	Number of sessions those found attack instance in IDS cache.
(Unsupported)	
IDS cache misses	Number of sessions those did not find attack instance in IDS cache.
(Unsupported)	
Shellcode detection invocations	Number of times shell code match is attempted.
Wrong offsets	Number of times attack's offset is not within the service offset range.
No peer MAC	Number of times flow peer MAC address is not available.
(Unsupported)	

```

show security idp counters ips user@host> show security idp counters ips
IDP counters:
IDP counter type                                Value
TCP fast path                                  15
Layer-4 anomalies                              0
Anomaly hash misses                            3
Line context matches                            5
Stream256 context matches                      5
Stream context matches                        5
Packet context matches                        0
Packet header matches                        0
Context matches                               12
Regular expression matches                    0
Tail DFAs                                    0
Exempted attacks                              0
Out of order chains                          0
Partial chain matches                        0
IDS device FIFO size                          0
IDS device FIFO overflows                    0
Brute force queue size                        0
IDS cache hits                                0
IDS cache misses                              0
Shellcode detection invocations                0
Wrong offsets                                0
No peer MAC                                    0

```

show security idp counters log

Syntax	show security idp counters log
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display the status of all IDP log counter values. This command is supported on SRX Series devices.
Required Privilege Level	view
Related Topics	log (IDP) clear security idp counters log
List of Sample Output	show security idp counters log on page 1052
Output Fields	Table 69 on page 1051 lists the output fields for the show security idp counters log command. Output fields are listed in the approximate order in which they appear.

Table 69: show security idp counters log Output Fields

Field Name	Field Description
Logs dropped	Number of logs that are dropped.
Suppressed log count	Number of logs that are suppressed.
Logs waiting for post-window packets (Unsupported)	Number of logs waiting for post-window packets.
Logs ready to be sent (Unsupported)	Number of logs ready to be sent.
Logs in suppression list (Unsupported)	Number of logs considered for suppression list.
Log timers created	Number of times the log timer is created.
Logs timers expired	Number of times the log timer is expired.
Log timers cancelled	Number of times the log timer is canceled.
Logs ready to be sent high watermark (Unsupported)	Number of packets that are ready to be sent with high degree watermark.
Log receive buffer full (Unsupported)	Number of times the buffer is full.

Table 69: show security idp counters log Output Fields (continued)

Field Name	Field Description
Packet log too big (Unsupported)	Number of packet logs that exceeded allowed packet log size.
Reads per second (Unsupported)	Number of packets that are read per second.
Logs in read buffer high watermark (Unsupported)	Number of high watermark packets that are in read buffer.
Packets logged	Number of packets that are logged,
Packets lost (Unsupported)	Number of packets that are failed to log.
Packets copied (Unsupported)	Number of packets copied during packet log.
Packets held (Unsupported)	Number of packets held for packet log.
Packets released	Number of packets that are released from hold.
IP Action Messages (Unsupported)	Number of IP action messages.
IP Action Drops (Unsupported)	Number of IP action messages dropped.
IP Action Exists (Unsupported)	Number of exits during IP action creation.
NWaits (Unsupported)	Number of logs waiting for post window packets.
Match vectors	Number of attacks in IDS match vector.
Supercedes	Number of attacks in supercede vector.

show security idp counters log

user@host> show security idp counters log

IDP counters:

IDP counter type

Logs dropped

Value

0

Suppressed log count	0
Logs waiting for post-window packets	0
Logs ready to be sent	0
Logs in suppression list	0
Log timers created	0
Logs timers expired	0
Log timers cancelled	0
Logs ready to be sent high watermark	0
Log receive buffer full	0
Packet log too big	0
Reads per second	1
Logs in read buffer high watermark	0
Log Bytes in read buffer high watermark	0
Packets logged	0
Packets lost	0
Packets copied	0
Packets held	0
Packets released	0
IP Action Messages	0
IP Action Drops	0
IP Action Exists	0
NWaits	0
Match vectors	0
Supercedes	0
Kpacket too big	0

show security idp counters packet

Syntax	show security idp counters packet
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display the status of all IDP packet counter values. This command is supported on SRX Series devices.
Required Privilege Level	view
Related Topics	clear security idp counters packet
List of Sample Output	show security idp counters packet on page 1055
Output Fields	Table 70 on page 1054 lists the output fields for the show security idp counters packet command. Output fields are listed in the approximate order in which they appear.

Table 70: show security idp counters packet Output Fields

Field Name	Field Description
Processed packets	Number of packets processed by IDP service.
Dropped packets	Number of packets dropped by IDP service.
Dropped sessions	Number of sessions dropped.
(Unsupported)	
Bad IP headers	Number of packets that fail IP header length validity check.
Packets with IP options	Number of packets that contain the optional header fields.
Decapsulated packets	Number of packets that are decapsulated.
GRE decapsulations	Number of packets that are generic routing encapsulation (GRE) decapsulated.
(Unsupported)	
PPP decapsulations	Number of packets that are Point-to-Point Protocol (PPP) decapsulated.
(Unsupported)	
GTP decapsulations	Number of packets that are GPRS tunneling protocol (GTP) decapsulated.
(Unsupported)	
GTP flows	Number of GTP flows.
(Unsupported)	

Table 70: show security idp counters packet Output Fields *(continued)*

Field Name	Field Description
TCP decompression uncompressed IP (Unsupported)	Number of uncompressed IP headers that are to be TCP decompressed.
TCP decompression compressed IP (Unsupported)	Number of compressed IP headers that are to be TCP decompressed.
Deferred-send packets (Unsupported)	Number of deferred IP packets that are sent out.
IP-in-IP packets (Unsupported)	Number of packets that are IP-in-IP encapsulated.
TTL errors (Unsupported)	Number of packets with TTL error in the header.
Routing loops (Unsupported)	Number of packets that continue to be routed in an endless circle due to inconsistent routing state.
No-route packets (Unsupported)	Number of packets that could not be routed further.
Flood IP (Unsupported)	Number of packets that are identified as IP flood packets.
Invalid ethernet headers (Unsupported)	Number of packets that are identified with invalid Ethernet header.
Packets attached	Number of packets attached.
Packets cloned	Number of packets that are cloned.
Packets allocated	Number of packets allocated.
Packets destructed	Number of packets destructed.

```

show security idp counters packet  user@host> show security idp counters packet
IDP counters:
IDP counter type                      Value
Processed packets                     27
Dropped packets                       0
Dropped sessions                      0
Bad IP headers                        0
Packets with IP options               0

```

Decapsulated packets	0
GRE decapsulations	0
PPP decapsulations	0
GTP decapsulations	0
GTP flows	0
TCP decompression uncompressed IP	0
TCP decompression compressed IP	0
Deferred-send packets	0
IP-in-IP packets	0
TTL errors	0
Routing loops	0
STP drops	0
No-route packets	0
Flood IP	0
Invalid ethernet headers	0
Packets attached	28
Packets cloned	28
Packets allocated	0
Packets destructed	55

show security idp counters policy-manager

Syntax	show security idp counters policy-manager
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display the status of all IDP policies counter values. This command is supported on SRX Series devices.
Required Privilege Level	view
Related Topics	clear security idp counters policy-manager
List of Sample Output	show security idp counters policy-manager on page 1057
Output Fields	Table 71 on page 1057 lists the output fields for the show security idp counters policy-manager command. Output fields are listed in the approximate order in which they appear.

Table 71: show security idp counters policy-manager Output Fields

Field Name	Field Description
Number of policies	Number of policies installed.
Number of aged out policies	Number of IDP policies that are expired.

show security idp counters policy-manager	<pre> user@host> show security idp counters policy-manager IDP counters: IDP counter type Number of policies Number of aged out policies </pre>	<pre> Value 0 0 </pre>
--	--	------------------------

show security idp counters tcp-reassembler

Syntax	show security idp counters tcp-reassembler
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display the status of all TCP reassembler counter values. This command is supported on SRX Series devices.
Required Privilege Level	view
Related Topics	re-assembler clear security idp counters tcp-reassembler
List of Sample Output	show security idp counters tcp-reassembler on page 1059
Output Fields	Table 72 on page 1058 lists the output fields for the show security idp counters tcp-reassembler command. Output fields are listed in the approximate order in which they appear.

Table 72: show security idp counters tcp-reassembler Output Fields

Field Name	Field Description
Bad TCP checksums (Unsupported)	Number of packets that have incorrect TCP checksums.
Bad TCP headers	Number of bad TCP headers detected.
Slow path segments	Number of segments that are sent through the slow path if the TCP segment does not pass fast-path segment validation.
Fast path segments	Number of segments that are sent through the fast path after passing a predefined TCP validation sequence.
Sequence number wrap around errors	Number of packets that wrap around of the sequence number.
Session reuses	Number of sessions that reused an already established TCP session.
SYN retransmissions	Number of SYN packets that are retransmitted.
Bad three way handshake acknowledgements	Number of packets that have incorrect three-way handshake acknowledgements (ACK packet).
Sequence number out of sync flows	Number of packets that have out-of-sync sequence numbers.
Fast path pattern matches in queued up streams	Number of queued packets that have fast path pattern match.
New segments with no overlaps with old segment	Number of new segments that do not overlap with old segment.

Table 72: show security idp counters tcp-reassembler Output Fields (continued)

Field Name	Field Description
New segment overlaps with beginning of old segment	Number of new segments that overlap with beginning of old segment.
New segment overlaps completely with old segment	Number of new segments that overlap completely with old segment.
New segment is contained in old segment	Number of new segments contained in old segment.
New segment overlaps with end of old segment	Number of new segments that overlap with the end of old segment.
New segment begins after end of old segment	Number of new segments that overlap after the end of old segment.
Memory consumed by new segment	Memory that is consumed by the new segment.
Segments in memory	Number of segments that are stored in memory for processing.
Per-flow memory overflows	Number of segments dropped after reaching per flow memory limit.
Global memory overflows	Number of segments dropped after reaching reassembler global memory limit.
Overflow drops	Number of packets that are dropped due to memory overflow.
Copied packets	Number of packets copied in reassembler.
(Unsupported)	
Closed Acks	Number of Ack packets seen without having seen SYN on the same session.

```

show security idp user@host> show security idp counters tcp-reassembler
counters IDP counters:
tcp-reassembler IDP counter type Value
Bad TCP checksums 0
Bad TCP headers 0
Slow path segments 4
Fast path segments 23
Sequence number wrap around errors 0
Session reuses 0
SYN retransmissions 0
Bad three way handshake acknowledgements 0
Sequence number out of sync flows 0
Fast path pattern matches in queued up streams 0
New segments with no overlaps with old segment 0
New segment overlaps with beginning of old segment 0
New segment overlaps completely with old segment 0
New segment is contained in old segment 0
New segment overlaps with end of old segment 0
New segment begins after end of old segment 0
Memory consumed by new segment 0
Segments in memory 0
Per-flow memory overflows 0

```

Global memory overflows	0
Overflow drops	0
Copied packets	0
Closed Acks	0

show security idp memory

Syntax	show security idp memory
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display the status of all IDP data plane memory. This command is supported on SRX Series devices.
Required Privilege Level	view
List of Sample Output	show security idp memory on page 1061
Output Fields	Table 73 on page 1061 lists the output fields for the show security idp memory command. Output fields are listed in the approximate order in which they appear.

Table 73: show security idp memory Output Fields

Field Name	Field Description
PIC	Name of the PIC.
Total IDP data plane memory	Total memory space which is allocated for the IDP data plane.
Used	Used memory space in the data plane.
Available	Available memory space in the data plane.

```

show security idp user@host> show security idp memory
memory          IDP data plane memory statistics:
                   PIC : spu-13
                   Total IDP data plane memory : 307 MB
                   Used : 42 MB ( 43008 KB )
                   Available : 265 MB ( 271360 KB )
                   PIC : spu-12
                   Total IDP data plane memory : 307 MB
                   Used : 42 MB ( 43008 KB )
                   Available : 265 MB ( 271360 KB )

```

show security idp security-package-version

Syntax	show security idp security-package-version
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	<p>Display information of the currently installed security package version and detector version.</p> <p>This command is supported on SRX Series devices.</p>
Required Privilege Level	view
Related Topics	<p>security-package</p> <p>request security idp security-package download</p> <p>request security idp security-package install</p>
List of Sample Output	show security idp security-package-version on page 1062
Output Fields	Table 74 on page 1062 lists the output fields for the show security idp security-package-version command. Output fields are listed in the approximate order in which they appear.

Table 74: show security idp security-package-version Output Fields

Field Name	Field Description
Attack database version	Attack database version number that are currently installed on the system.
Detector version	Detector version number that are currently installed on the system.
Policy template version	Policy template version that are currently installed on the system.

```

show security idp security-package-version  user@host> show security idp security-package-version
Attack database version:1154(Mon Apr 28 15:08:42 2008)
Detector version :9.1.140080400
Policy template version :7

```

show security idp ssl-inspection key

Syntax	show security idp ssl-inspection key [<i><key-name></i>] [server <i><server-ip></i>]
Release Information	Command introduced in Release 9.3 of JUNOS Software.
Description	Display SSL keys added to the system along with their associated server IP addresses. This command is supported on SRX Series devices.
Options	<i>key-name</i> —(Optional) Name of SSL private key. server <i>server-ip</i> —(Optional) Server IP address associated for specified key.
Required Privilege Level	view
List of Sample Output	show security idp ssl-inspection key on page 1063 show security idp ssl-inspection key key2 on page 1063
Output Fields	Table 75 on page 1063 lists the output fields for the show security idp ssl-inspection key command. Output fields are listed in the approximate order in which they appear.

Table 75: show security idp ssl-inspection key Output Fields

Field Name	Field Description
Total SSL keys	Total number of SSL keys.
key	Name of the SSL private key.
server	Server IP address associated with the SSL keys.

show security idp ssl-inspection key	<pre> user@host> show security idp ssl-inspection key Total SSL keys : 4 SSL Server key and ip address: Key : key1, server : 1.1.0.1 Key : key1, server : 1.1.0.2 Key : key2, server : 2.2.0.1 key : key3 </pre>
show security idp ssl-inspection key key2	<pre> user@host> show security idp ssl-inspection key key2 SSL Server key and ip address: Key : key2, server : 2.2.0.1 </pre>

show security idp ssl-inspection session-id-cache

Syntax	show security idp ssl-inspection session-id-cache
Release Information	Command introduced in Release 9.3 of JUNOS Software.
Description	<p>Display all the SSL session IDs in the session ID cache. Each cache entry is 32 bytes long.</p> <p>This command is supported on SRX Series devices.</p>
Required Privilege Level	view
Related Topics	clear security idp ssl-inspection session-id-cache
List of Sample Output	show security idp ssl-inspection session-id-cache on page 1064
Output Fields	Table 76 on page 1064 lists the output fields for the show security idp ssl-inspection session-id-cache command. Output fields are listed in the approximate order in which they appear.

Table 76: show security idp ssl-inspection session-id-cache Output Fields

Field Name	Field Description
Total SSL session identifiers	Total number of SSL session identifiers stored in the session ID cache.

```

show security idp      user@host> show security idp ssl-inspection session-id-cache
ssl-inspection      SSL session identifiers :
session-id-cache
c98396c768f983b515d93bb7c421fb6b8ce5c2c5c230b8739b7fcf8ce9c0de4e
a211321a3242233243c3dc0d421fb6b8ce5e4e983b515d932c5c230b87392c

Total SSL session identifiers : 2

```


show security idp status

Syntax	show security idp status
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display the status of the current IDP policy. This command is supported on SRX Series devices.
Required Privilege Level	view
List of Sample Output	show security idp status on page 1065
Output Fields	Table 77 on page 1065 lists the output fields for the <code>show security idp status</code> command. Output fields are listed in the approximate order in which they appear.

Table 77: show security idp status Output Fields

Field Name	Field Description
Status of IDP	Status of current IDP policy.
Packets/second	The aggregated throughput (packets per second) for the system.
KBits/second	The aggregated throughput (kbits per second) for the system.
Latency	<ul style="list-style-type: none"> ■ min—Minimum delay for a packet to receive and return by a node in microseconds. ■ max—Maximum delay for a packet to receive and return by a node in microseconds. ■ ave—Average delay for a packet to receive and return by a node in microseconds.
Current policy	Name of the current installed policy.

```

show security idp status  user@host> show security idp status
                           Status of IDP: s0,      Up since: 2008-03-31 16:33:22 PDT (12:47:45 ago)
                           Packets/second: 0          Peak: 12 @ 2008-03-31 18:45:39 PDT
                           KBits/second : 0           Peak: 6 @ 2008-03-31 18:45:39 PDT
                           Latency (microseconds): [min: 0] [max: 0] [ave: 0]
                           Current policy: viking-policy v0

```

show security ike pre-shared-key

Syntax	show security ike pre-shared key <master-key <i>master-key</i> > <user-id <i>user-id</i> >
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	Display the Internet Key Exchange (IKE) preshared key used by the Virtual Private network (VPN) gateway to authenticate the remote access user. This command is supported on J Series and SRX Series devices.
Options	master-key <i>master-key</i> —(Optional) Master preshared key. user-id <i>user-id</i> —(Optional) IKE user ID value.
Required Privilege Level	view
Related Topics	pre-shared-key
List of Sample Output	show security ike pre-shared-key on page 1066
show security ike pre-shared-key	user@host> show security ike pre-shared-key user-id a@juniper.net master-key juniper Preshared Key:3b33ec3631a561ec5a710f5d02f208033b108bb4

show security ike security-associations

Syntax show security ike security-associations
 <peer-address>
 <brief | detail>
 <fpc slot-number>
 <index SA-index-number>
 <kmd-instance (all | kmd-instance-name)>
 <pic slot-number>

Release Information Command introduced in Release 8.5 of JUNOS Software; fpc, pic, and kmd-instance options added in Release 9.3 of JUNOS Software.

Description Display information about Internet Key Exchange (IKE) security associations (SAs).

This command is supported on J Series and SRX Series devices.

Options none—Display standard information about existing IKE SAs, including index numbers.

peer-address—(Optional) Display details about a particular SA, based on the IP address of the destination peer. This option and *index* provide the same level of output.

brief—(Optional) Display standard information about all existing IKE SAs. (Default)

detail—(Optional) Display detailed information about all existing IKE SAs.

fpc slot-number—Specific to SRX Series devices. Display information about existing IKE SAs in this particular Flexible PIC Concentrator (FPC) slot. This option is used to filter the output.

index SA-index-number—(Optional) Display information for a particular SA based on the index number of the SA. To obtain the index number for a particular SA, display the list of existing SAs by using the command with no options. This option and *peer-address* provide the same level of output.

kmd-instance —Specific to SRX Series devices. Display information about existing IKE SAs in the key management process (daemon) (KMD) identified by the FPC slot-number and PIC slot-number. This option is used to filter the output.

■ *all*—All KMD instances running on the Services Processing Unit (SPU).

■ *kmd-instance-name*—Name of the KMD instance running on the SPU.

pic slot-number —Specific to SRX Series devices. Display information about existing IKE SAs in this particular PIC slot. This option is used to filter the output.

Required Privilege Level view

Related Topics clear security ike security-associations

List of Sample Output show security ike security-associations on page 1070
 show security ike security-associations detail on page 1070

show security ike security-associations detail (SRX Series devices) on page 1071
 show security ike security-associations index 8 detail on page 1071
 show security ike security-associations 1.1.1.2 on page 1071
 show security ike security-associations fpc 6 pic 1 kmd-instance all (SRX Series devices) on page 1071

Output Fields Table 78 on page 1068 lists the output fields for the `show security ike security-associations` command. Output fields are listed in the approximate order in which they appear.

Table 78: show security ike security-associations Output Fields

Field Name	Field Description
IKE Peer or Remote Address	IP address of the destination peer with which the local peer communicates.
Index	Index number of an SA. This number is an internally generated number you can use to display information about a single SA.
Location	<ul style="list-style-type: none"> ■ FPC—Flexible PIC Concentrator (FPC) slot number. ■ PIC—PIC slot number. ■ KMD-Instance—The name of the kmd-instance running on the SPU, identified by the FPC slot-number and PIC slot-number. Currently, 4 kmd-instances running on each SPU and any particular IKE negotiation is carried out by a single kmd-instance.
Role	Part played in the IKE session. The device triggering the IKE negotiation is the initiator, and the device accepting the first IKE exchange packets is the responder.
State	State of the IKE security associations: <ul style="list-style-type: none"> ■ DOWN—SA has not been negotiated with the peer. ■ UP—SA has been negotiated with the peer.
Initiator cookie	Random number, called a cookie, which is sent to the remote node when the IKE negotiation is triggered.
Responder cookie	Random number generated by the remote node and sent back to the initiator as a verification that the packets were received. A cookie is aimed at protecting the computing resources from attack without spending excessive CPU resources to determine the cookie's authenticity.
Mode or Exchange type	Negotiation method agreed on by the two IPsec endpoints, or peers, used to exchange information between themselves. Each exchange type determines the number of messages and the payload types that are contained in each message. The modes, or exchange types, are <ul style="list-style-type: none"> ■ main—The exchange is done with six messages. This mode or exchange type encrypts the payload, protecting the identity of the neighbor. The authentication method used is displayed: preshared keys or certificate. ■ aggressive—The exchange is done with three messages. This mode or exchange type does not encrypt the payload, leaving the identity of the neighbor unprotected.
Local	Address of the local peer.
Remote	Address of the remote peer.
Lifetime	Number of seconds remaining until the IKE SA expires.

Table 78: show security ike security-associations Output Fields (continued)

Field Name	Field Description
Algorithms	<p>Internet Key Exchange (IKE) algorithms used to encrypt and secure exchanges between the peers during the IPsec Phase 2 process:</p> <ul style="list-style-type: none"> ■ Authentication—Type of authentication algorithm used. <ul style="list-style-type: none"> ■ sha1—Secure Hash Algorithm 1 (sha1) authentication. ■ md5—MD5 authentication ■ Encryption—Type of encryption algorithm used.. <ul style="list-style-type: none"> ■ aes-256-cbc—Advanced Encryption Standard (AES) 256-bit encryption. ■ aes-192-cbc— AES 192-bit encryption ■ aes-128-cbc—AES 128-bit encryption. ■ 3des-cbc—3 Data Encryption Standard (DES) encryption. ■ des-cbc—DES encryption.
Traffic statistics	<ul style="list-style-type: none"> ■ Input bytes—Number of bytes received. ■ Output bytes—Number of bytes transmitted. ■ Input packets—Number of packets received. ■ Output packets—Number of packets transmitted.
Flags	<p>Notification to the key management process of the status of the IKE negotiation:</p> <ul style="list-style-type: none"> ■ caller notification sent—Caller program notified about the completion of the IKE negotiation. ■ waiting for done—Negotiation is done. The library is waiting for the remote end retransmission timers to expire. ■ waiting for remove—Negotiation has failed. The library is waiting for the remote end retransmission timers to expire before removing this negotiation. ■ waiting for policy manager—Negotiation is waiting for a response from the policy manager.
IPSec security associations	<ul style="list-style-type: none"> ■ <i>number created</i>: The number of SAs created. ■ <i>number deleted</i>: The number of SAs deleted.

Table 78: show security ike security-associations Output Fields (continued)

Field Name	Field Description
Phase 2 negotiations in progress	<p>Number of phase 2 IKE negotiations in progress and status information:</p> <ul style="list-style-type: none"> ■ Negotiation type—Type of phase 2 negotiation. JUNOS Software currently supports quick mode. ■ Message ID—Unique identifier for a phase 2 negotiation. ■ Local identity—Identity of the local phase 2 negotiation. The format is id-type-name (proto-name:port-number,[0..id-data-len] = iddata-presentation) ■ Remote identity—Identity of the remote phase 2 negotiation. The format is id-type-name (proto-name:port-number,[0..id-data-len] = iddata-presentation) ■ Flags—Notification to the key management process of the status of the IKE negotiation: <ul style="list-style-type: none"> ■ caller notification sent—Caller program notified about the completion of the IKE negotiation. ■ waiting for done—Negotiation is done. The library is waiting for the remote end retransmission timers to expire. ■ waiting for remove—Negotiation has failed. The library is waiting for the remote end retransmission timers to expire before removing this negotiation. ■ waiting for policy manager—Negotiation is waiting for a response from the policy manager.

**show security ike
security-associations**

```
user@host> show security ike security-associations
Index Remote Address State Initiator cookie Responder cookie Mode
8 1.1.1.2 UP 3a895f8a9f620198 9040753e66d700bb Main
Index Remote Address State Initiator cookie Responder cookie Mode
9 1.2.1.3 UP 5ba96hfa9f65067 1 70890755b65b80b d Main
```

**show security ike
security-associations
detail**

```
user@host> show security ike security-associations detail
IKE peer 1.1.1.2, Index 8,
Role: Responder, State: UP
Initiator cookie: 3a895f8a9f620198, Responder cookie: 9040753e66d700bb
Exchange type: Main, Authentication method: Pre-shared keys
Local: 1.1.1.1: 500, Remote: 1.1.1.2:500
Lifetime: Expired in 381 seconds
Algorithms:
Authentication : md5
Encryption: 3des-cbc
Pseudo random function hmac-md5
Traffic statistics:
Input bytes: 11268
Output bytes: 6940
Input packets: 57
Output packets 57
Flags: Caller notification sent
IPsec security associations: 0 created, 0 deleted
Phase 2 negotiations in progress: 1

Negotiation type: Quick mode, Role: Responder, Message ID: 1765792815
Local: 1.1.1.1:500, Remote: 1.1.1.2:500
Local identity: No Id
Remote identity: No Id
Flags: Caller notification sent, Waiting for remove
```

**show security ike
security-associations
detail (SRX Series
devices)**

```
user@host> show security ike security-associations detail1
IKE peer 30.0.0.2, Index 1,
  Location: FPC 1, PIC 2, KMD-Instance 3
  Role: Initiator, State: UP
  Initiator cookie: 58196469ec2df068, Responder cookie: e4de44f4ef333df9
  Exchange type: Main, Authentication method: Pre-shared-keys
  Local: 20.0.0.4:500, Remote: 30.0.0.2:500
  Lifetime: Expires in 1171 seconds
  Algorithms:
    Authentication      : sha1
    Encryption          : 3des-cbc
    Pseudo random function: hmac-sha1
  Traffic statistics:
    Input bytes  :          604
    Output bytes :         1472
    Input packets:           4
    Output packets:          8
  Flags: Caller notification sent
  IPsec security associations: 1 created, 0 deleted
  Phase 2 negotiations in progress: 0
```

**show security ike
security-associations
index 8 detail**

```
user@host> show security ike security-associations index 8 detail
IKE peer 1.1.1.2, Index 8
  Role: Responder, State:UP
  Initiator cookie: 3a895f8a9f620198, Responder cookie: 9040753e66d700bb
  Exchange type; main, Authentication method: Pre-shared-keys
  Local: 1.1.1.1:500, Remote: 1.1.1.2:500
  Lifetime: Expired in 381 seconds
  Algorithms:
    Authentication:      md5
    Encryption:          3des-cbc
    Pseudo random function  hmac-md5
  Traffic statistics:
    Input bytes:         11268
    Output bytes:        6940
    Input packets:       57
    Output packets:      57
  Flags: Caller notification sent
  IPsec security associations: 0 created, 0 deleted
  Phase 2 negotiations in progress: 1

  Negotiation type: Quick mode, Role: Responder, Message ID: 1765792815
  Local: 1.1.1.1:500, Remote: 1.1.1.2:500
  Local identity: No Id
  Remote identity: No Id
  Flags: Caller notification sent, Waiting for remove
```

**show security ike
security-associations
1.1.1.2**

```
user@host> show security ike security-associations 1.1.1.2
Index  Remote Address  State  Initiator cookie  Responder cookie  Mode
8       1.1.1.2             UP     3a895f8a9f620198  9040753e66d700bb  Main
```

**show security ike
security-associations fpc
6 pic 1 kmd-instance all
(SRX Series devices)**

```
user@host> show security ike security-associations fpc 6 pic 1 kmd-instance all
Index  Remote Address  State  Initiator cookie  Responder cookie  Mode
1728053250 1.1.1.2       UP     fc959afd1070d10b  bdeb7e8c1ea99483  Main
```

show security ipsec next-hop-tunnels

Syntax	show security ipsec next-hop-tunnels < interface-name <i>interface-name</i> >
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	Display security information about the secure tunnel interface. This command is supported on J Series and SRX Series devices.
Options	none—Display information about all secure tunnel interface. interface-name <i>interface-name</i> —(Optional) Name of the secure tunnel logical interface.
Required Privilege Level	view
List of Sample Output	show security ipsec next-hop-tunnels on page 1072
Output Fields	Table 79 on page 1072 lists the output fields for the show security ipsec next-hop-tunnels command. Output fields are listed in the approximate order in which they appear.

Table 79: show security ipsec next-hop-tunnels Output Fields

Field Name	Field Description
Next-hop gateway	IP address of the next gateway.
Interface	Name of the secure tunnel logical interface.
IPsec VPN name	Name of the IPsec VPN tunnel.
Flag	<ul style="list-style-type: none"> ■ Static—IP address manually configured. ■ Auto—IP address obtained from the remote peer automatically.

```

show security ipsec user@host> show security ipsec next-hop-tunnels
next-hop-tunnels
Next-hop gateway  interface  IPsec VPN name  Flag
11.1.1.2          st0.0         autokey         Static
11.1.1.3          st0.0         pbd-4-6         Auto

```


show security ipsec security-associations

Syntax	<pre>show security ipsec security-associations <brief detail> <fpc slot-number> <index SA-index-number> <kmd-instance (all kmd-instance-name)> <pic slot-number></pre>
Release Information	Command introduced in Release 8.5 of JUNOS Software; fpc , pic , and kmd-instance options added in Release 9.3 of JUNOS Software.
Description	<p>Display information about the IPsec security associations (SAs).</p> <p>This command is supported on J Series and SRX Series devices.</p>
Options	<p>none—Display information about all SAs.</p> <p>brief detail—(Optional) Display the specified level of output.</p> <p>fpc slot-number—Specific to SRX Series devices. Display information about existing IPsec SAs in this particular Flexible PIC Concentrator (FPC) slot. This option is used to filter the output.</p> <p>index SA-index-number—(Optional) Display detailed information about the specified security association identified by index number. To obtain a list of all SAs that includes their index numbers, use the command with no options.</p> <p>kmd-instance—Specific to SRX Series devices. Display information about existing IPsec SAs in the key management process (daemon) (KMD) identified by the FPC slot-number and PIC slot-number. This option is used to filter the output.</p> <ul style="list-style-type: none"> ■ all—All KMD instances running on the Services Processing Unit (SPU) ■ kmd-instance-name—Name of the KMD instance running on the SPU. <p>pic slot-number—Specific to SRX Series devices. Display information about existing IPsec SAs in this particular PIC slot. This option is used to filter the output.</p>
Required Privilege Level	view
Related Topics	clear security ipsec security-associations
List of Sample Output	<p>show security ipsec security-associations on page 1076</p> <p>show security ipsec security-associations index on page 1076</p> <p>show security ipsec security-associations brief on page 1077</p> <p>show security ipsec security-associations detail on page 1077</p> <p>show security ipsec security-associations detail (SRX Series devices) on page 1077</p> <p>show security ipsec security-associations fpc 6 pic 1 kmd-instance all (SRX Series devices) on page 1078</p>

Output Fields Table 80 on page 1074 lists the output fields for the **show security ipsec security-associations** command. Output fields are listed in the approximate order in which they appear.

Table 80: show security ipsec security-associations

Field Name	Field Description
Total active tunnels	Total number of active IPsec tunnels.
ID	Index number of the SA. You can use this number to get additional information about the SA.
Gateway	IP address of the remote gateway.
Port	If Network Address Translation (NAT-T) is used, this value is 4500. Otherwise it is the standard IKE port, 500.
Algorithm	<p>Cryptography used to secure exchanges between peers during the IKE Phase 2 negotiations includes</p> <ul style="list-style-type: none"> ■ An authentication algorithm used to authenticate exchanges between the peers. Options are hmac-md5-95, hmac-sha1-96, or ESP. ■ An encryption algorithm used to encrypt data traffic. Options are 3des-cbc, aes-128-cbc, aes-192-cbc, aes-256-cbc, or des-cbc.
SPI	Security parameter index (SPI) identifier. An SA is uniquely identified by an SPI. Each entry includes the name of the VPN, the remote gateway address, the SPIs for each direction, the encryption and authentication algorithms, and keys. The peer gateways each have two SAs, one resulting from each of the two phases of negotiation: Phase 1 and Phase 2.
Life: sec/kb	The lifetime of the SA, after which it expires, expressed either in seconds or kilobytes.
Sta	<p>State has two options, Installed and Not Installed.</p> <ul style="list-style-type: none"> ■ Installed—The security association is installed in the security association database. ■ Not Installed—The security association is not installed in the security association database. <p>For transport mode, the value of State is always Installed.</p>
Mon	The Mon refers to VPN monitoring status. If VPN monitoring is enabled, then this will show U (up) or D (down). A hyphen (-) means VPN monitoring is not enabled for this SA.
vsys or Virtual-system	The root system.
Tunnel index	Numeric identifier of the specific IPsec tunnel for the SA.
Local gateway	Gateway address of the local system.
Remote gateway	Gateway address of the remote system.
Local identity	Identity of the local peer so that its partner destination gateway can communicate with it. The value is specified as an IPv4 address, fully qualified domain name, e-mail address, or distinguished name.

Table 80: show security ipsec security-associations (continued)

Field Name	Field Description
Remote identity	IPv4 address of the destination peer gateway.
DF-bit	State of the don't fragment bit: set or cleared.
Policy-name	Name of the applicable policy.
Location	<p>FPC—Flexible PIC Concentrator (FPC) slot number.</p> <p>PIC—PIC slot number.</p> <p>KMD-Instance—The name of the kmd-instance running on the SPU, identified by the FPC slot-number and PIC slot-number. Currently, 4 kmd-instances running on each SPU and any particular IPsec negotiation is carried out by a single kmd-instance.</p>
Direction	Direction of the security association; it can be inbound or outbound.
AUX-SPI	<p>Value of the auxiliary security parameter index.</p> <ul style="list-style-type: none"> ■ When the value is AH or ESP, AUX-SPI is always 0. ■ When the value is AH+ESP, AUX-SPI is always a positive integer.
Mode	<p>Mode of the security association:</p> <ul style="list-style-type: none"> ■ transport—Protects host-to-host connections. ■ tunnel—Protects connections between security gateways.
Type	<p>Type of the security association:</p> <ul style="list-style-type: none"> ■ manual—Security parameters require no negotiation. They are static and are configured by the user. ■ dynamic—Security parameters are negotiated by the IKE protocol. Dynamic security associations are not supported in transport mode.
State	<p>State of the security association:</p> <ul style="list-style-type: none"> ■ Installed—The security association is installed in the security association database. ■ Not Installed—The security association is not installed in the security association database. <p>For transport mode, the value of State is always Installed.</p>
Protocol	<p>Protocol supported.</p> <ul style="list-style-type: none"> ■ Transport mode supports Encapsulation Security Protocol (ESP) and Authentication Header (AH). ■ Tunnel mode supports ESP and AH <ul style="list-style-type: none"> ■ Authentication—Type of authentication used. ■ Encryption—Type of encryption used.

Table 80: show security ipsec security-associations (continued)

Field Name	Field Description
Soft lifetime	<p>The soft lifetime informs the IPsec key management system that the SA is about to expire.</p> <p>Each lifetime of a security association has two display options, hard and soft, one of which must be present for a dynamic security association. This allows the key management system to negotiate a new SA before the hard lifetime expires.</p> <ul style="list-style-type: none"> ■ Expires in seconds—Number of seconds left until the SA expires.
Hard lifetime	<p>The hard lifetime specifies the lifetime of the SA.</p> <ul style="list-style-type: none"> ■ Expires in seconds—Number of seconds left until the SA expires.
Lifesize Remaining	<p>The lifesize remaining specifies the usage limits in kilobytes. If there is no lifesize specified, it shows unlimited.</p> <ul style="list-style-type: none"> ■ Expires in kilobytes—Number of kilobytes left until the SA expires.
Anti-replay service	State of the service that prevents packets from being replayed. It can be Enabled or Disabled .
Replay window size	<p>Configured size of the antireplay service window. It can be 32 or 64 packets. If the replay window size is 0, the antireplay service is disabled.</p> <p>The antireplay window size protects the receiver against replay attacks by rejecting old or duplicate packets.</p>

**show security ipsec
security-associations**

```

user@host> show security ipsec security-associations
Total active tunnels: 1
ID Gateway  Port  Algorithm  SPI  Life:sec/kb Sta vsys
5 5.5.5.4    500  esp:3des/sha1  ed0cec21  expir unlim I/I      0
5 5.5.5.4    500  esp:3des/sha1

```

**show security ipsec
security-associations
index**

```

user@host> show security ipsec security-associations index 5
Virtual-system: Root
Local gateway: 1.1.1.1, Remote gateway: 1.1.1.2
Local identity: ipv4_subnet(any:0,[0..7]=0.0.0.0/0)
Remote identity: ipv4_subnet(any:0,[0...7]=0.0.0.0/0)
DF-bit: clear
Policy-name: my-policy

Direction: inbound, SPI: 494001027, AUX-SPI: 0
Mode: tunnel, Type: dynamic, State: Installed
Protocol: ESP, Authentication: hmac-sha1-96, Encryption: 3des-cbc
Soft lifetime: Expired
Hard lifetime: Expired in 130 seconds
Lifesize Remaining: Unlimited
Anti-replay service: Enabled, Replay window size: 64

Direction: inbound, SPI: 1498711950, AUX-SPI: 0
Mode: tunnel, Type: dynamic, State: Installed
Protocol: ESP, Authentication: hmac-sha1-96, Encryption: 3des-cbc
Soft lifetime: Expires in 40 seconds
Hard lifetime: Expires in 175 seconds

```

```

Lifesize Remaining: Unlimited
Anti-replay service: Enabled, Replay window size: 64

Direction: outbound, SPI: 4038397695, AUX-SPI: 0
Mode: tunnel, Type: dynamic, State: Installed
Protocol: ESP, Authentication: hmac-sha1-96, Encryption: 3des-cbc
Soft lifetime: Expires in 40 seconds
Hard lifetime: Expires in 175 seconds
Lifesize Remaining: Unlimited
Anti-replay service: Enabled, Replay window size: 64

```

**show security ipsec
security-associations
brief**

```

user@host> show security ipsec security-associations brief
Total active tunnels: 2
ID Gateway Port Algorithm SPI Life:sec/kb Mon vsys
<16384 1.1.1.1 500 ESP:3des/sha1 af88baa 28795/unlim D 0
>16384 1.1.1.1 500 ESP:3des/sha1 f4e3e5f4 28795/unlim D 0

```

**show security ipsec
security-associations
detail**

```

user@host> show security ipsec security-associations detail
Virtual-system: Root
Local Gateway: 1.1.1.2, Remote Gateway: 1.1.1.1
Local Identity: ipv4_subnet(any:0,[0..7]=0.0.0.0/0)
Remote Identity: ipv4_subnet(any:0,[0..7]=0.0.0.0/0)
DF-bit: clear

Direction: inbound, SPI: 184060842, AUX-SPI: 0
Hard lifetime: Expires in 28785 seconds
Lifesize Remaining: Unlimited
Soft lifetime: Expired
Mode: tunnel, Type: dynamic, State: installed, VPN Monitoring: DOWN
Protocol: ESP, Authentication: hmac-sha1-96, Encryption: 3des-cbc
Anti-replay service: enabled, Replay window size: 32

Direction: outbound, SPI: 4108576244, AUX-SPI: 0
Hard lifetime: Expires in 28785 seconds
Lifesize Remaining: Unlimited
Soft lifetime: Expired
Mode: tunnel, Type: dynamic, State: installed, VPN Monitoring: DOWN
Protocol: ESP, Authentication: hmac-sha1-96, Encryption: 3des-cbc
Anti-replay service: enabled, Replay window size: 32

```

**show security ipsec
security-associations
detail (SRX Series
devices)**

```

user@host> show security ipsec security-associations detail
Virtual-system: Root
Local Gateway: 20.0.0.4, Remote Gateway: 30.0.0.2
Local Identity: ipv4_subnet(any:0,[0..7]=0.0.0.0/0)
Remote Identity: ipv4(any:0,[0..3]=20.0.0.4)
DF-bit: clear
Policy-name: p1

Location: FPC 1, PIC 2, KMD-Instance 3
Direction: inbound, SPI: 3727011331, AUX-SPI: 0
Hard lifetime: Expires in 3570 seconds
Lifesize Remaining: Unlimited
Soft lifetime: Expires in 3525 seconds
Mode: tunnel, Type: dynamic, State: installed, VPN Monitoring: -
Protocol: ESP, Authentication: hmac-sha1-96, Encryption: aes-cbc (128 bits)
Anti-replay service: enabled, Replay window size: 32

Location: FPC 1, PIC 2, KMD-Instance 3
Direction: outbound, SPI: 4212479378, AUX-SPI: 0

```

Hard lifetime: Expires in 3570 seconds
Lifesize Remaining: Unlimited
Soft lifetime: Expires in 3525 seconds
Mode: tunnel, Type: dynamic, State: installed, VPN Monitoring: -
Protocol: ESP, Authentication: hmac-sha1-96, Encryption: aes-cbc (128 bits)
Anti-replay service: enabled, Replay window size: 32

show security ipsec security-associations fpc 6 pic 1 kmd-instance all (SRX Series devices)

user@host> **show security ipsec security-associations fpc 6 pic 1 kmd-instance all**
Total active tunnels: 1

ID	Gateway	Port	Algorithm	SPI	Life:sec/kb	Mon	vsys
<2	1.1.1.2	500	ESP:3des/sha1	67a7d25d	28280/unlim	-	0
>2	1.1.1.2	500	ESP:3des/sha1	a23cbcdc	28280/unlim	-	0

show security ipsec statistics

Syntax	show security ipsec statistics fpc <i>slot-number</i> <index <i>SA-index-number</i> > pic <i>slot-number</i>
Release Information	Command introduced in Release 8.5 of JUNOS Software; fpc and pic options added in Release 9.3 of JUNOS Software.
Description	Display standard IPsec statistics. This command is supported on J Series and SRX Series devices.
Options	none—Display statistics about all IPsec security associations (SAs). fpc <i>slot-number</i> —Specific to SRX Series devices. Display statistics about existing IPsec SAs in this particular Flexible PIC Concentrator (FPC) slot. This option is used to filter the output. index <i>SA-index-number</i> —(Optional) Display statistics for the SA with this index number. pic <i>slot-number</i> —Specific to SRX Series devices. Display statistics about existing IPsec SAs in this particular PIC slot. This option is used to filter the output.
Required Privilege Level	view
Related Topics	clear security ipsec statistics
List of Sample Output	show security ipsec statistics on page 1080 show security ipsec statistics index 5 on page 1080 show security ipsec statistics fpc 6 pic 1 (SRX Series devices) on page 1081
Output Fields	Table 81 on page 1079 lists the output fields for the show security ipsec statistics command. Output fields are listed in the approximate order in which they appear.

Table 81: show security ipsec statistics Output Fields

Field Name	Field Description
Virtual-system	The root system.
ESP Statistics:	<ul style="list-style-type: none"> ■ Encrypted bytes—Total number of bytes encrypted by the local system across the IPsec tunnel. ■ Decrypted bytes—Total number of bytes decrypted by the local system across the IPsec tunnel. ■ Encrypted packets—Total number of packets encrypted by the local system across the IPsec tunnel. ■ Decrypted packets—Total number of packets decrypted by the local system across the IPsec tunnel.

Table 81: show security ipsec statistics Output Fields (*continued*)

Field Name	Field Description
AH Statistics:	<ul style="list-style-type: none"> ■ Input bytes—Total number of bytes received by the local system across the IPsec tunnel. ■ Output bytes—Total number of bytes transmitted by the local system across the IPsec tunnel. ■ Input packets—Total number of packets received by the local system across the IPsec tunnel. ■ Output packets—Total number of packets transmitted by the local system across the IPsec tunnel.
Errors	<ul style="list-style-type: none"> ■ AH authentication failures—Total number of authentication header (AH) failures. An AH failure occurs when there is a mismatch of the authentication header in a packet transmitted across an IPsec tunnel. ■ Replay errors—Total number of replay errors. A replay error is generated when a duplicate packet is received within the replay window. ■ ESP authentication failures—Total number of Encapsulation Security Payload (ESP) failures. An ESP failure occurs when there is an authentication mismatch in ESP packets. ■ ESP decryption failures—total number of ESP decryption errors. ■ Bad headers—Total number of invalid headers detected. ■ Bad trailers—Total number of invalid trailers detected.

```

show security ipsec statistics  user@host> show security ipsec statistics
Virtual-system: Root
ESP Statistics:
  Encrypted bytes:          0
  Decrypted bytes:         0
  Encrypted packets:       0
  Decrypted packets:       0
AH Statistics:
  Input bytes:             0
  Output bytes:            0
  Input packets:           0
  Output packets:          0
Errors:
  AH authentication failures: 0, Replay errors: 0
  ESP authentication failures: 0, ESP decryption failures: 0
  Bad headers: 0, Bad trailers: 0

```

```

show security ipsec statistics index 5  user@host> show security ipsec statistics index 5
Virtual-system: Root
SA index: 5
ESP Statistics:
  Encrypted bytes:          0
  Decrypted bytes:         0
  Encrypted packets:       0
  Decrypted packets:       0
AH Statistics:
  Input bytes:             0
  Output bytes:            0
  Input packets:           0
  Output packets:          0

```


Errors:

AH authentication failures: 0, Replay errors: 0

ESP authentication failures: 0, ESP decryption failures: 0

Bad headers: 0, Bad trailers: 0

**show security ipsec
statistics fpc 6 pic 1
(SRX Series devices)**

user@host> show security ipsec statistics fpc 6 pic 1

ESP Statistics:

Encrypted bytes: 536408

Decrypted bytes: 696696

Encrypted packets: 1246

Decrypted packets: 888

AH Statistics:

Input bytes: 0

Output bytes: 0

Input packets: 0

Output packets: 0

Errors:

AH authentication failures: 0, Replay errors: 0

ESP authentication failures: 0, ESP decryption failures: 0

Bad headers: 0, Bad trailers: 0

show security monitoring fpc fpc-number

Syntax	show security monitoring fpc <i>fpc-number</i> <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display security monitoring information about the FPC slot. This command is supported on SRX Series devices.
Options	<p><i>fpc-number</i> —Display security monitoring information for the specified FPC slot. It can be in the range from 0 to 11.</p> <p><i>node</i>—(Optional) For chassis cluster configurations, display security monitoring information for the specified FPC on a specific node (device) in the cluster.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
List of Sample Output	show security monitoring fpc 1 on page 1082 show security monitoring fpc 8 on page 1083
Output Fields	Table 82 on page 1082 lists the output fields for the show security monitoring fpc fpc-number command. Output fields are listed in the approximate order in which they appear.

Table 82: show security monitoring fpc fpc-number Output Fields

Field Name	Field Description
FPC	Slot number in which the FPC is installed. It can be between 0 to 11.
PIC	Slot number in which the PIC is installed.
CPU Utilization (%)	Total percentage of CPU being used by the PIC's processors.
Memory Utilization (%)	Percentage of heap space (dynamic memory) being used by the PIC's processor. If this number exceeds 80 percent, there may be a software problem (memory leak).

```

show security monitoring fpc 1
user@host> show security monitoring fpc 1
FPC 1
  PIC 0
    CPU utilization      :    0 %
    Memory Utilization:   67 %
  PIC 1

```

```

CPU utilization   :    0 %
Memory Utilization:   67 %

```

**show security
monitoring fpc 8**

```
user@host> show security monitoring fpc 8
```

```
node0:
```

```
-----
FPC 8
```

```
PIC 0
```

```

CPU utilization   :    0 %
Memory Utilization:   74 %

```

```
node1:
```

```
-----
FPC 8
```

```
PIC 0
```

```

CPU utilization   :    0 %
Memory Utilization:   74 %

```

```
PIC 1
```

```

CPU utilization   :    0 %
Memory Utilization:   43 %

```

show security nat destination pool

Syntax	show security nat destination pool < pool-name > all
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display information about the specified Network Address Translation (NAT) destination address pool. This command is supported on SRX Series devices.
Options	<i>pool-name</i> —Name of the destination address pool. all—Display information about all the destination NAT address pool.
Required Privilege Level	view
Related Topics	pool (Destination NAT)
List of Sample Output	show security nat destination pool dst-nat-pool1 on page 1084 show security nat destination pool all on page 1085
Output Fields	Table 83 on page 1084 lists the output fields for the show security nat destination pool command. Output fields are listed in the approximate order in which they appear.

Table 83: show security nat destination pool Output Fields

Field Name	Field Description
Pool Name	Name of the destination pool.
Pool id	Pool identification number.
Routing Instance	Name of the routing instance.
Total address	Number of IP addresses that are in use.
Address available	Number of IP addresses that are free for use.
Address range	IP address or IP address range for the pool.
Port	Port number.
Total destination nat pool number	Number of destination NAT pools.

```

show security nat      user@host> show security nat destination pool dst-nat-pool1
destination pool      Pool name:      dst-nat-pool1
dst-nat-pool1         Pool id:      1
                        Routing instance: ri-green
                        Total address:    1

```

```

Address available: 1
Address range      Port
10.1.1.150-10.1.1.150

```

show security nat destination pool all user@host> **show security nat destination pool all**

```

Total destination nat pool number: 3

Pool name:      dst-nat-pool1
Pool id:        1
Routing instance: ri-green
Total address:  1
Address available: 1
Address range      Port
10.1.1.150-10.1.1.150
Pool name:      dst-nat-pool2
Pool id:        2
Routing instance: ri-green
Total address:  21
Address available: 10
Address range      Port
10.1.1.160-10.1.1.180
Pool name:      dst-nat-pool3
Pool id:        3
Routing instance: ri-green
Total address:  1
Address available: 1
Address range      Port
10.1.1.190-10.1.1.190      8080

```

show security nat destination rule

Syntax	show security nat destination rule <rule-name> all
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display information about the specified destination Network Address Translation (NAT) rule. This command is supported on SRX Series devices.
Options	<i>rule-name</i> —Name of the rule. all—Display information about all the destination NAT rule.
Required Privilege Level	view
Related Topics	rule (Destination NAT)
List of Sample Output	show security nat destination rule r4 on page 1087 show security nat destination rule all on page 1087
Output Fields	Table 84 on page 1086 lists the output fields for the show security nat destination rule command. Output fields are listed in the approximate order in which they appear. Table 71 lists the output fields for the show security nat destination rule command. Output fields are listed in the approximate order in which they appear.

Table 84: show security nat destination rule Output Fields

Field Name	Field Description
Destination nat rule	Name of the destination NAT rule.
State	Status of the IP address: <ul style="list-style-type: none"> ■ Active—Denotes that the IP address is in use. ■ Free—IP address is available for allocation.
Index	Rule index number.
From routing instance	Name of the routing instance from which the packet comes.
Source address	Name of the source addresses which match the rule. The default value is any.
Destination address	Name of the destination addresses which match the rule. The default value is any.
Destination ports	Destination ports number which match the rule. The default value is any.

Table 84: show security nat destination rule Output Fields *(continued)*

Field Name	Field Description
Action	The action taken in regard to a packet that matches the rule's tuples. Actions include the following: <ul style="list-style-type: none"> ■ destination-nat—Use user-defined destination NAT pool to perform destination NAT. ■ ui—Do not perform destination NAT.
Hit times	Number of times a translation in the translation table is used for a destination NAT rule.
Fail times	Number of times a translation in the translation table failed to translate for a destination NAT rule.
Total destination nat rule number	Number of destination NAT rules.
Total hit times	Number of times a translation in the translation table is used for all the destination NAT rules.
Total fail times	Number of times a translation in the translation table failed to translate for all the destination NAT rules.

```

show security nat      user@host>show security nat destination rule r4
destination rule r4  Destination nat rule: r4, State: enabled, Index: 7
                        From routing instance: ri-1
                        Source addresses:
                        any: 0.0.0.0/0
                        Destination addresses:
                        1.1.1.1/32 1.1.1.3/32
                        Destination ports:
                        any: 0
                        Action: destination-nat pool d1

                        Hit times: 30
                        Fail times: 0

```

```

show security nat      user@host> show security nat destination rule all
destination rule all  Total destination nat rule number: 2
                        Total hit times: 45
                        Total fail times: 3

                        Destination nat rule: r4, State: enabled, Index: 7
                        From routing instance: ri-1
                        Source addresses:
                        any: 0.0.0.0/0
                        Destination addresses:
                        1.1.1.1/32 1.1.1.3/32
                        Destination ports:
                        any: 0
                        Action: destination-nat pool d1

                        Hit times: 30
                        Fail times: 0

                        Destination nat rule: r5, State: enabled, Index: 8

```

```
From routing instance: ri-1, interface: fe-0/0/0.0
Source addresses:
  any: 0.0.0.0/0
Destination addresses:
  1.1.1.1/32
Destination ports:
  any: 0
Action: destination-nat pool d3

Hit times: 15
Fail times: 3
```


show security nat destination summary

Syntax	show security nat destination summary
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	<p>Display a summary of Network Address Translation (NAT) destination pool information.</p> <p>This command is supported on SRX Series devices.</p>
Required Privilege Level	view
Related Topics	<p>pool (Destination NAT)</p> <p>rule (Destination NAT)</p>
List of Sample Output	show security nat destination summary on page 1089
Output Fields	Table 85 on page 1089 lists the output fields for the show security nat destination summary command. Output fields are listed in the approximate order in which they appear.

Table 85: show security nat destination summary Output Fields

Field Name	Field Description
Total destination nat pool number	Number of destination NAT pools.
Pool name	Name of the destination address pool.
Address range	IP address or IP address range for the pool.
Routing Instance	Name of the routing instance.
Port	Port number.
Total	Number of IP addresses that are in use.
Available	Number of IP addresses that are free for use.
Total destination nat rule number	Number of destination NAT rules.
Total hit times	Number of times a translation in the translation table is used for all the destination NAT rules.
Total fail times	Number of times a translation in the translation table failed to translate for all the destination NAT rules.

```

show security nat destination summary  user@host> show security nat destination summary
                                         Total destination nat pool number: 3
                                         Pool name           Address range   Routing instance  Port Total Available

```

dst-nat-pool1	10.1.1.150-10.1.1.150	ri-green		1	1
dst-nat-pool2	10.1.1.160-10.1.1.180	ri-green		21	10
dst-nat-pool3	10.1.1.190-10.1.1.190	ri-green	8080	1	1

Total destination nat rule number: 2

Total hit times: 45

Total fail times: 3

show security nat incoming-table

Syntax	show security nat incoming-table <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display Network Address Translation (NAT) table information. This command is supported on J Series devices.
Options	<p>none—Display all information NAT incoming table.</p> <p>node—(Optional) For chassis cluster configurations, display incoming table information on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	clear security nat incoming-table
List of Sample Output	show security nat incoming-table on page 1092
Output Fields	Table 86 on page 1091 lists the output fields for the show security nat incoming-table command. Output fields are listed in the approximate order in which they appear.

Table 86: show security nat incoming-table Output Fields

Field Name	Field Description
In use	Number of entries in the NAT table.
Maximum	Maximum number of entries possible in the NAT table.
Entry allocation failed	Number of entries failed for allocation.
Destination	Destination IP address and port number.
Host	Host IP address and port number that the destination IP address is mapped.
References	Number of sessions referencing the entry.
Timeout	Timeout, in seconds, of the entry in the NAT table.
Source-pool	Name of source pool where translation is allocated.

```
show security nat incoming-table
user@host> show security nat incoming-table
In use: 1, Maximum: 1024, Entry allocation failed: 0
Destination      Host              References Timeout Source-pool
10.1.1.26:1028    1.1.1.10:5060    1          3600 p1
```

show security nat interface-nat-ports

Syntax	show security nat interface-nat-ports <node (<i>node-id</i> all local primary)>
Release Information	Command modified in Release 9.2 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display port usage for an interface source pool for Network Address Translation (NAT). This command is supported on J Series and SRX Series devices.
Options	<p>none—Display all port usage information for an interface source pool.</p> <p>node—(Optional) For chassis cluster configurations, display interface NAT ports information on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
List of Sample Output	show security nat interface-nat-ports on page 1093
Output Fields	Table 87 on page 1093 lists the output fields for the show security nat interface-nat-ports command. Output fields are listed in the approximate order in which they appear.

Table 87: show security nat interface-nat-ports Output Fields

Field Name	Field Description
Pool Index	Port pool index.
Total Ports	Total number of ports in a port pool. In SRX Series devices, 10 interface NAT ports are supported.
Single Ports Allocated	Number of ports allocated one at a time that are in use.
Single Ports Available	Number of ports allocated one at a time that are free for use.
Twin Ports Allocated	Number of ports allocated two at a time that are in use.
Twin Ports Available	Number of ports allocated two at a time that are free for use.

```

show security nat      user@host> show security nat interface-nat-ports
interface-nat-ports  Pool  Total  Single ports  Single ports  Twin ports  Twin ports
                        index  ports   allocated    available    allocated   available

```

0	64510	0	63486	0	1024
1	64510	0	63486	0	1024
2	64510	0	63486	0	1024
3	64510	0	63486	0	1024
4	64510	0	63486	0	1024
5	64510	0	63486	0	1024
6	64510	0	63486	0	1024
7	64510	0	63486	0	1024
8	64510	0	63486	0	1024
9	64510	0	63486	0	1024

show security nat source pool

Syntax	show security nat source pool < <i>pool-name</i> > all
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display information about the specified Network Address Translation (NAT) source address pool. This command is supported on SRX Series devices.
Options	<i>pool-name</i> —Name of the source pool. all—Display information about all the source NAT address pool.
Required Privilege Level	view
Related Topics	pool (Source NAT)
List of Sample Output	show security nat source pool src-nat-pool1 on page 1096 show security nat source pool all on page 1096
Output Fields	Table 88 on page 1095 lists the output fields for the show security nat source pool command. Output fields are listed in the approximate order in which they appear.

Table 88: show security nat source pool Output Fields

Field Name	Field Description
Pool name	Name of the source pool.
Pool id	Pool identification number.
Routing Instance	Name of the routing instance.
Port range	Port number range for the pool.
Total address	Number of IP addresses that are in use.
Address available	Number of IP addresses that are free for use.
Address range	IP address or IP address range for the pool.
Single ports	Number of allocated single ports.
Twin ports	Number of allocated twin ports.

```

show security nat user@host> show security nat source pool src-nat-pool1
source pool      Pool name:      src-nat-pool1
src-nat-pool1    Pool id:       1
                   Routing instance: ri-1
                   Port range:      [2000,63000]
                   Total address:   1
                   Address available: 1
                   Address range      Single ports Twin ports
                   30.30.30.6-30.30.30.6      0          0

```

```

show security nat user@host> show security nat source pool all
source pool all  Total source nat pool number: 2
                   Pool name:      src-nat-pool1
                   Pool id:       1
                   Routing instance: ri-1
                   Port range:      [2000,63000]
                   Total address:   1
                   Address available: 1
                   Address range      Single ports Twin ports
                   30.30.30.6-30.30.30.6      0          0
                   Pool name:      src-nat-pool2
                   Pool id:       2
                   Routing instance: ri-1
                   Port translation: no
                   Total address:   81
                   Address available: 50
                   Address range      Single ports Twin ports
                   10.0.0.20-10.0.0.100      0          0

```


show security nat source rule

Syntax	show security nat source rule <rule-name> all
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display information about the specified source Network Address Translation (NAT) rule. This command is supported on SRX Series devices.
Options	<i>rule-name</i> —Name of the rule. all—Display information about all the source NAT rule.
Required Privilege Level	view
Related Topics	rule (Source NAT)
List of Sample Output	show security nat source rule r1 on page 1098 show security nat source rule all on page 1098
Output Fields	Table 89 on page 1097 lists the output fields for the show security nat source rule command. Output fields are listed in the approximate order in which they appear

Table 89: show security nat source rule Output Fields

Field Name	Field Description
Source nat rule	Name of the source NAT rule.
State	Status of the IP address: <ul style="list-style-type: none"> ■ Active—Denotes that the IP address is in use. ■ Free—IP address is available for allocation.
Index	Rule index number.
From routing instance	Name of the routing instance from which the packet comes.
To routing instance	Name of the routing instance in which packet should reach.
Source address	Name of the source addresses which match the rule. The default value is any.
Destination address	Name of the destination addresses which match the rule. The default value is any.
Destination ports	Destination ports number which match the rule. The default value is any.

Table 89: show security nat source rule Output Fields *(continued)*

Field Name	Field Description
Action	The action taken in regard to a packet that matches the rule's tuples. Actions include the following: <ul style="list-style-type: none"> ■ off—Do not perform source NAT. ■ source-nat—Use user-defined source NAT pool to perform source NAT ■ interface—Use egress interface's IP address to perform source NAT.
Hit times	Number of times a translation in the translation table is used for a source NAT rule.
Fail times	Number of times a translation in the translation table failed to translate for a source NAT rule.
Total destination nat rule number	Number of destination NAT rules.
Total hit times	Number of times a translation in the translation table is used for all the source NAT rules.
Total fail times	Number of times a translation in the translation table failed to translate for all the source NAT rules.

```

show security nat user@host> show security nat source rule r1
source rule r1      Source nat rule: r1, State: enabled, Index: 4
                      From routing instance: ri-2
                      To routing instance: ri-1
                      Source addresses:
                        any: 0.0.0.0/0
                      Destination addresses:
                        any: 0.0.0.0/0
                      Action: source-nat pool s1

                      Hit times: 22
                      Fail times: 2

```

```

show security nat user@host> show security nat source rule all
source rule all      Total source nat rule number: 2
                      Total hit times: 32
                      Total fail times: 2

                      Source nat rule: r1, State: enabled, Index: 4
                      From routing instance: ri-2
                      To routing instance: ri-1
                      Source addresses:
                        any: 0.0.0.0/0
                      Destination addresses:
                        any: 0.0.0.0/0
                      Action: source-nat pool s1

                      Hit times: 22
                      Fail times: 2

                      Source nat rule: r2, State: enabled, Index: 5
                      From routing instance: ri-2, zone: z3 z4
                      To routing instance: ri-1

```

```
Source addresses:  
  any: 0.0.0.0/0  
Destination addresses:  
  any: 0.0.0.0/0  
Action: source-nat pool s2  
  
Hit times: 10  
Fail times: 0
```

show security nat source summary

Syntax	show security nat source summary
Release Information	Command introduced in Release 9.2 of JUNOS Software.
Description	Display a summary of Network Address Translation (NAT) source pool information. This command is supported on SRX Series devices.
Required Privilege Level	view
Related Topics	pool (Source NAT) rule (Source NAT)
List of Sample Output	show security nat source summary on page 1100
Output Fields	Table 90 on page 1100 lists the output fields for the show security nat source summary command. Output fields are listed in the approximate order in which they appear.

Table 90: show security nat source summary Output Fields

Field Name	Field Description
Total source nat pool number	Number of source NAT pools.
Pool name	Name of the source address pool.
Address range	IP address or IP address range for the pool.
Routing Instance	Name of the routing instance.
PAT IP	Whether Port Address Translation (PAT) is enabled (yes or no).
total IP	Number of IP addresses that are in use.
available	Number of IP addresses that are free for use.
Total source nat rule number	Number of source NAT rules.
Total hit times	Number of times a translation in the translation table is used for all the source NAT rules.
Total fail times	Number of times a translation in the translation table failed to translate for all the source NAT rules.

```

show security nat      user@host> show security nat source summary
source summary      Total source nat pool number: 2
                       Pool name      Address range  Routing instance PAT IP total IP available
                       src-nat-pool1  30.30.30.6-30.30.30.6  ri-1      yes    1      1
                       src-nat-pool2  10.0.0.20-10.0.0.100  ri-1      no     81     50

```

```
Total source nat rule number: 1
Total hit times: 22
Total fail times: 2
```

show security nat static rule

Syntax	show security nat static rule <rule-name> all
Release Information	Command introduced in Release 9.3 of JUNOS Software.
Description	Display information about the specified static Network Address Translation (NAT) rule. This command is supported on SRX Series devices.
Options	<i>rule-name</i> —Name of the rule. all—Display information about all the static NAT rules.
Required Privilege Level	view
Related Topics	rule (Static NAT)
List of Sample Output	show security nat static rule rsr11 on page 1103 show security nat static rule all on page 1103
Output Fields	Table 91 on page 1102 lists the output fields for the show security nat static rule command. Output fields are listed in the approximate order in which they appear.

Table 91: show security nat static rule Output Fields

Field Name	Field Description
Static nat rule	Name of the static NAT rule.
Rule-set	Name of the rule-set. Currently, you can configure 8 rules within the same rule-set.
Rule-Id	Rule ID number.
Rule-position	Position of the rules indicates the order that they apply to traffic.
From interface	Name of the interface from which the packet comes.
From routing instance	Name of the routing instance from which the packet comes.
Destination address	Name of the destination addresses that match the rule.
Host addresses	Name of the host addresses that match the rule.
Netmask	Subnet IP address.
Translation hits	Number of times a translation in the translation table is used for a static NAT rule.

```

show security nat static user@host> show security nat static rule rsr11
rule rsr11 Static NAT rule: rsr11 Rule-set: rsr1
    Rule-Id           : 1
    Rule position      : 4
    From routing instance : default
    Destination addresses : 40.0.0.0
    Host addresses      : 31.0.0.0
    Netmask             : 255.255.255.0
    Translation hits    : 0

```

```

show security nat static user@host> show security nat static rule all
rule all Static NAT rule: rsr3 Rule-set: rsr2
    Rule-Id           : 3
    Rule position      : 6
    From interface     : ge-0/0/1.0
    Destination addresses : 60.0.0.0
    Host addresses      : 100.0.0.0
    Netmask             : 255.255.255.0
    Translation hits    : 0
Static NAT rule: rsr11 Rule-set: rsr1
    Rule-Id           : 1
    Rule position      : 4
    From routing instance : default
    Destination addresses : 40.0.0.0
    Host addresses      : 31.0.0.0
    Netmask             : 255.255.255.0
    Translation hits    : 0

```

show security nat static-nat summary

Syntax	show security nat static-nat summary <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; <i>node</i> options added in Release 9.0 of JUNOS Software.
Description	Display static Network Address Translation (NAT) summary information. This command is supported on J Series devices.
Options	<p>none—Display static NAT summary information.</p> <p><i>node</i>—(Optional) For chassis cluster configurations, display static NAT summary information on specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
List of Sample Output	show security nat static-nat summary on page 1104
Output Fields	Table 92 on page 1104 lists the output fields for the <code>show security nat static-nat summary</code> command. Output fields are listed in the approximate order in which they appear.

Table 92: show security nat static-nat summary Output Fields

Field Name	Field Description
Total static NAT mappings	Number of static NAT entries in the table.
Maximum	Maximum number of static NAT entries possible.
Ingress Interface	Name of the interface on which static NAT is defined.
Destination	Destination IP address and subnet mask.
Host	Host IP address and subnet mask mapped to the destination IP address and subnet mask.
Virtual Router	Name of the virtual device that performs route lookup for the host IP address and subnet mask.

```

show security nat static-nat summary  user@host> show security nat static-nat summary
                                         Total static NAT mappings: 3, Maximum: 300
                                         Ingress Interface   Destination   Host           Virtual Router

```


ge-0/0/0.0	1.1.1.1/32	10.1.1.1/32	trust-vr
ge-0/0/0.0	1.1.3.0/24	10.1.3.0/24	trust-vr
ge-0/0/0.1	2.2.2.1/32	20.1.1.1/32	trust-vr

show security pki ca-certificate

Syntax	show security pki ca-certificate <brief detail> <ca-profile <i>ca-profile-name</i> >
Release Information	Command modified in Release 8.5 of JUNOS Software.
Description	Display information about the certificate authority (CA) public key infrastructure (PKI) digital certificates configured on the device. This statement is supported on J Series and SRX Series devices.
Options	none—Display basic information about all configured CA certificates. brief detail—(Optional) Display the specified level of output. ca-profile <i>ca-profile-name</i> —(Optional) Display information about only the specified CA certificate.
Required Privilege Level	view
Related Topics	ca-profile request security pki ca-certificate verify <i>JUNOS System Basics and Services Command Reference</i>
List of Sample Output	show security pki ca-certificate ca-profile juniper brief on page 1107 show security pki ca-certificate ca-profile juniper detail on page 1108
Output Fields	Table 93 on page 1106 lists the output fields for the show security pki ca-certificate command. Output fields are listed in the approximate order in which they appear.

Table 93: show security pki ca-certificate Output Fields

Field Name	Field Description
Certificate identifier	Name of the digital certificate.
Certificate version	Revision number of the digital certificate.
Serial number	Unique serial number of the digital certificate.
Issued to	Device that was issued the digital certificate.
Issued by	Authority that issued the digital certificate.

Table 93: show security pki ca-certificate Output Fields (continued)

Field Name	Field Description
Issuer	Authority that issued the digital certificate, including details of the authority organized using the distinguished name format. Possible subfields are: <ul style="list-style-type: none"> ■ Organization—Organization of origin. ■ Organizational unit—Department within an organization. ■ Country—Country of origin. ■ Locality—Locality of origin. ■ Common name—Name of the authority.
Subject	Details of the digital certificate holder organized using the distinguished name format. Possible subfields are: <ul style="list-style-type: none"> ■ Organization—Organization of origin. ■ Organizational unit—Department within an organization. ■ Country—Country of origin. ■ Locality—Locality of origin. ■ Common name—Name of the authority.
Validity	Time period when the digital certificate is valid. Values are: <ul style="list-style-type: none"> ■ Not before—Start time when the digital certificate becomes valid. ■ Not after—End time when the digital certificate becomes invalid.
Public key algorithm	Encryption algorithm used with the private key, such as rsaEncryption(1024 bits).
Signature algorithm	Encryption algorithm that the CA used to sign the digital certificate, such as sha1WithRSAEncryption.
Fingerprint	Secure Hash Algorithm (SHA1) and Message Digest 5 (MD5) hashes used to identify the digital certificate.
Distribution CRL	Distinguished name information and the URL for the certificate revocation list (CRL) server.
Use for key	Use of the public key, such as Certificate signing, CRL signing, Digital signature, or Data encipherment.

**show security pki
ca-certificate ca-profile
juniper brief**

```
user@host> show security pki ca-certificate ca-profile juniper brief
Certificate identifier: kpradeep.juniper.net
Issued to: kpradeep.juniper.net, Issued by: kpradeep.juniper.net
Validity:
  Not before: 2005 Jul 8th, 12:44:54 GMT
  Not after: 2010 Jul 8th, 12:46:07 GMT
Public key algorithm: rsaEncryption(1024 bits)
Certificate identifier: kpradeep.juniper.net
Issued to: kpradeep.newra.juniper.net, Issued by: kpradeep.juniper.net
Validity:
  Not before: 2005 Jul 12th, 12:48:32 GMT
  Not after: 2006 Jul 12th, 12:58:32 GMT
Public key algorithm: rsaEncryption(1024 bits)
Certificate identifier: kpradeep.juniper.net
```

```

Issued to: kpradeep.newra.juniper.net, Issued by: kpradeep.juniper.net
Validity:
  Not before: 2005 Jul 12th, 12:48:32 GMT
  Not after: 2006 Jul 12th, 12:58:32 GMT
Public key algorithm: rsaEncryption(1024 bits)

```

**show security pki
ca-certificate ca-profile
juniper detail**

```

user@host> show security pki ca-certificate ca-profile juniper detail
Certificate identifier: kpradeep.juniper.net
Certificate version: 3
Serial number: 1442 8439 1974 7864 6894 2623 4704 6564 1574
Issuer:
  Common name: kpradeep.juniper.net
Subject:
  Common name: kpradeep.juniper.net
Validity:
  Not before: 2005 Jul 8th, 12:44:54 GMT
  Not after: 2010 Jul 8th, 12:46:07 GMT
Public key algorithm: rsaEncryption(1024 bits)
e8:ba:49:61:42:c4:3e:81:07:19:8d:cd:38:cc:85:9b:ff:d2:c6:90:04:fa
18:58:8a:03:59:57:3d:b2:f0:06:62:a7:93:db:4e:8c:5d:6d:14:80:4e:38
03:69:64:ac:56:cf:72:d7:49:d1:00:45:c8:02:68:fd:e0:af:98:78:b1:b9
ee:9c:ad:21:f2:9d:7b:06:c4:71:b2:be:f4:e3:58:af:22:3b:ae:dc:1a:5e
f2:35:2c:0b:49:23:ee:2e:ba:e4:9a:24:f3:ff:01:5c:20:92:1d:76:51:fb
6b:bb:45:65:2f:db:2b:d7:e5:7d:03:9b:3e:21:88:75:46:5f
Signature algorithm: sha1WithRSAEncryption
Fingerprint:
  00:8e:6f:58:dd:68:bf:25:0a:e3:f9:17:70:d6:61:f3:53:a7:79:10 (sha1)
  71:6f:6a:76:17:9b:d6:2a:e7:5a:72:97:82:6d:26:86 (md5)
Distribution CRL:
  file://\multiplex\CertEnroll\kpradeep.juniper.net.crl
  http://multiplex/CertEnroll/kpradeep.juniper.net.crl
Use for key: CRL signing, Certificate signing, Digital signature
Certificate identifier: kpradeep.juniper.net
Certificate version: 3
Serial number: 9998 7697 0440 0585 1234
Issuer:
  Common name: kpradeep.juniper.net
Subject:
  Organization: Juniper Networks, Organizational unit: Pepsi, Country: IN,
  Locality: Bangalore, Common name: kpradeep.newra.juniper.net
Validity:
  Not before: 2005 Jul 12th, 12:48:32 GMT
  Not after: 2006 Jul 12th, 12:58:32 GMT
Public key algorithm: rsaEncryption(1024 bits)
bd:26:77:95:16:23:b4:82:fc:cd:ea:fe:28:41:d4:d3:fd:df:f7:76:03:a6
23:3a:8a:6e:9e:25:41:e3:96:57:4a:bf:dc:5e:f2:09:a6:07:79:02:f7:40
1b:b9:79:70:79:65:c8:70:d9:6a:bd:a9:9c:cd:b3:39:80:e5:5a:c7:74:66
4a:05:b7:3b:ed:7a:99:e9:4b:58:e6:e7:69:9a:79:d4:c1:a5:26:12:5e:8d
3b:d1:b0:22:df:a9:ba:a2:23:73:21:1b:62:44:72:ad:c0:c3:7c:56:e8:ea
fe:ae:81:2b:44:8b:fe:da:ea:e3:18:85:bf:05:ea:28:8d:4b
Signature algorithm: sha1WithRSAEncryption
Fingerprint:
  46:71:15:34:f0:a6:41:76:65:81:33:4f:68:47:c4:df:78:b8:e3:3f (sha1)
  ee:cc:c7:f4:5d:ac:65:33:0a:55:db:59:72:2c:dd:16 (md5)
Distribution CRL:
  file://\multiplex\CertEnroll\kpradeep.juniper.net.crl
  http://multiplex/CertEnroll/kpradeep.juniper.net.crl
Use for key: Data encipherment, Key encipherment
Certificate identifier: kpradeep.juniper.net
Certificate version: 3
Serial number: 9998 7666 0817 5841 3062

```

```

Issuer:
  Common name: kpradeep.juniper.net
Subject:
  Organization: Juniper Netowrks, Organizational unit: Pepsi,
  Country: IN,
  Locality: Bangalore, Common name: kpradeep.newra.juniper.net
Validity:
  Not before: 2005 Jul 12th, 12:48:32 GMT
  Not after: 2006 Jul 12th, 12:58:32 GMT
Public key algorithm: rsaEncryption(1024 bits)
  b6:b8:70:5f:c5:c5:c4:6d:be:a5:1e:19:12:b2:d4:8f:44:01:89:aa:66:98
  2d:21:0c:a2:45:04:ac:09:f6:8f:c7:ae:c3:40:d7:f4:b7:d8:8f:f1:21:d0
  c5:f0:b4:ea:05:c6:92:3a:e6:2e:33:0f:7b:a0:e1:de:16:52:13:09:16:91
  01:4a:bb:1e:f5:8d:98:e1:e4:2a:03:81:46:4f:1a:a3:20:4e:4d:5c:6e:f5
  ab:7e:08:81:b3:c0:78:2d:7b:ae:be:db:56:1e:6d:34:1f:a3:20:6e:7f:59
  a0:f1:d6:52:d9:35:5d:0a:f6:b4:ef:97:47:5b:0e:d3:11:2b
Signature algorithm: sha1WithRSAEncryption
Fingerprint:
  bc:78:87:9b:a7:91:13:20:71:db:ac:b5:56:71:42:ad:1a:b6:46:17 (sha1)
  23:79:40:c9:6d:a6:f0:ca:e0:13:30:d4:29:6f:86:79 (md5)
Distribution CRL:
  file://\multiplex\CertEnroll\kpradeep.juniper.net.crl
  http://multiplex/CertEnroll/kpradeep.juniper.net.crl
Use for key: Non repudiation, Digital signature

```

show security pki certificate-request

Syntax	show security pki certificate-request <brief detail> <certificate-id <i>certificate-id-name</i> >
Release Information	Command modified in Release 8.5 of JUNOS Software.
Description	Display information about manually generated local digital certificate requests that are stored on the device. This statement is supported on J Series and SRX Series devices.
Options	none—Display basic information about all local digital certificate requests. brief detail—(Optional) Display the specified level of output. certificate-id <i>certificate-id-name</i> —(Optional) Display information about only the specified local digital certificate requests.
Required Privilege Level	view
Related Topics	clear security pki key-pair <i>JUNOS System Basics and Services Command Reference</i>
List of Sample Output	show security pki certificate-request certificate-id hassan brief on page 1111 show security pki certificate-request certificate-id hassan detail on page 1111
Output Fields	Table 94 on page 1110 lists the output fields for the show security pki certificate-request command. Output fields are listed in the approximate order in which they appear.

Table 94: show security pki certificate-request Output Fields

Field Name	Field Description
Certificate identifier	Name of the digital certificate.
Certificate version	Revision number of the digital certificate.
Issued to	Device that was issued the digital certificate.
Subject	Details of the digital certificate holder organized using the distinguished name format. Possible subfields are: <ul style="list-style-type: none"> ■ Organization—Organization of origin. ■ Organizational unit—Department within an organization. ■ Country—Country of origin. ■ Locality—Locality of origin. ■ Common name—Name of the authority.
Alternate subject	Domain name or IP address of the device related to the digital certificate.

Table 94: show security pki certificate-request Output Fields (continued)

Field Name	Field Description
Public key algorithm	Encryption algorithm used with the private key, such as rsaEncryption(1024 bits).
Public key verification status	Public key verification status: Failed or Passed. The detail output also provides the verification hash.
Fingerprint	Secure Hash Algorithm (SHA1) and Message Digest 5 (MD5) hashes used to identify the digital certificate.
Use for key	Use of the public key, such as Certificate signing, CRL signing, Digital signature, or Data encipherment.

**show security pki
certificate-request
certificate-id hassan
brief**

```
user@host> show security pki certificate-request certificate-id hassan brief
Certificate identifier: hassan
Issued to: hassan@juniper.net
Public key algorithm: rsaEncryption(1024 bits)
```

**show security pki
certificate-request
certificate-id hassan
detail**

```
user@host> show security pki certificate-request certificate-id hassan detail
Certificate identifier: hassan
Certificate version: 3
Subject:
  Organization: juniper, Organizational unit: pepsi, Country: IN,
  Common name: hassan
Alternate subject: 102.168.72.124
Public key algorithm: rsaEncryption(1024 bits)
Public key verification status: Passed
c7:a4:fb:e7:8c:4f:31:e7:eb:01:d8:32:65:21:f2:eb:6f:7d:49:1a:c3:9b
63:47:e2:4f:f6:db:f6:c8:75:dd:e6:ec:0b:35:0a:62:32:45:6b:35:1f:65
c9:66:b7:40:b2:f9:2a:ab:5b:60:f7:c7:73:36:da:68:25:fc:40:4b:12:3c
d5:c8:c6:66:f6:10:1e:86:67:a8:95:9b:7f:1c:ae:a7:55:b0:28:95:a7:9a
a2:24:28:e4:5a:b2:a9:06:7a:69:37:20:15:e1:b6:66:eb:22:b5:b6:77:f6
65:88:b0:94:2b:91:4b:99:78:4a:e3:56:cc:14:45:d7:97:fd
Fingerprint:
  8f:22:1a:f2:9f:27:b0:21:6c:da:46:64:31:34:1f:68:42:5a:39:e0 (sha1)
  09:15:11:aa:ea:f9:5a:b5:70:d7:0b:8e:be:a6:d3:cb (md5)
Use for key: Digital signature
```

show security pki crl

Syntax	show security pki crl < brief detail> <ca-profile <i>ca-profile-name</i> >
Release Information	Command modified in Release 8.5 of JUNOS Software.
Description	Display information about the certificate revocation lists (CRLs) configured on the device. This statement is supported on J Series and SRX Series devices.
Options	none—Display basic information about all CRLs. brief detail—(Optional) Display the specified level of output. ca-profile <i>ca-profile-name</i> —(Optional) Display information about only the specified CA profile.
Required Privilege Level	view
Related Topics	crl <i>JUNOS System Basics and Services Command Reference</i>
List of Sample Output	show security pki crl ca-profile ca2 on page 1113 show security pki crl ca-profile ca2 brief on page 1113 show security pki crl ca-profile ca2 detail on page 1113
Output Fields	Table 95 on page 1112 lists the output fields for the show security pki crl command. Output fields are listed in the approximate order in which they appear.

Table 95: show security pki crl Output Fields

Field Name	Field Description
CA profile	Name of the configured CA profile.
CRL version	Revision number of the certificate revocation list.
CRL issuer	Authority that issued the digital certificate, including details of the authority organized using the distinguished name format. Possible subfields are: <ul style="list-style-type: none"> ■ emailAddress—Mail address of the issuing authority. ■ C—Country of origin. ■ ST—State of origin. ■ L—Locality of origin. ■ O—Organization of origin. ■ OU—Department within an organization. ■ CN—Name of the authority.

Table 95: show security pki crl Output Fields (continued)

Field Name	Field Description
Effective date	Date and time the certificate revocation list becomes valid.
Next update	Date and time the routing platform will download the latest version of the certificate revocation list.
Revocation List	<p>List of digital certificates that have been revoked before their expiration date. Values are:</p> <ul style="list-style-type: none"> ■ Serial number—Unique serial number of the digital certificate. ■ Revocation date—Date and time that the digital certificate was revoked.

```

show security pki crl      user@host> show security pki crl ca-profile ca2
ca-profile ca2           CA profile: ca2
                           CRL version: V00000001
                           CRL issuer: emailAddress = asaini@juniper.net, C = US, ST = ca, L = sunnyvale,
                           O = Juniper networks, OU = SPG QA, CN = 2000-spg-juniper-net
                           Effective date: 04-26-2007 18:47
                           Next update: 05- 4-2007 07:07

```

```

show security pki crl      user@host> show security pki crl ca-profile ca2 brief
ca-profile ca2 brief     CA profile: ca2
                           CRL version: V00000001
                           CRL issuer: emailAddress = asaini@juniper.net, C = US, ST = ca, L = sunnyvale,
                           O = Juniper networks, OU = SPG QA, CN = 2000-spg-juniper-net
                           Effective date: 04-26-2007 18:47
                           Next update: 05- 4-2007 07:07

```

```

show security pki crl      user@host> show security pki crl ca-profile ca2 detail
ca-profile ca2 detail    CA profile: ca2
                           CRL version: V00000001
                           CRL issuer: emailAddress = asaini@juniper.net, C = US, ST = ca, L = sunnyvale,
                           O = Juniper networks, OU = SPG QA, CN = 2000-spg-juniper-net
                           Effective date: 04-26-2007 18:47
                           Next update: 05- 4-2007 07:07
                           Revocation List:
                           Serial number      Revocation date
                           174e639900000000506 03-16-2007 23:09
                           174ef3f3000000000507 03-16-2007 23:09
                           17529cd6000000000508 03-16-2007 23:09
                           1763ac26000000000509 03-16-2007 23:09
                           21904e5700000000050a 03-16-2007 23:09
                           2191cf7900000000050b 03-16-2007 23:09
                           21f10eb600000000050c 03-16-2007 23:09
                           2253ca2a00000000050f 03-16-2007 23:09
                           2478939b000000000515 03-16-2007 23:09
                           24f35004000000000516 03-16-2007 23:09
                           277ddfa8000000000517 03-16-2007 23:09
                           277e97bd000000000518 03-16-2007 23:09
                           27846a76000000000519 03-16-2007 23:09
                           2785176f00000000051a 03-16-2007 23:09

```

show security pki local-certificate

Syntax	show security pki local-certificate < brief detail > < certificate-id <i>certificate-id-name</i> > <system-generated>
Release Information	Command modified in Release 9.1 of JUNOS Software.
Description	Display information about the local digital certificates, corresponding public keys, and the automatically generated self-signed certificate configured on the device. This statement is supported on J Series and SRX Series devices.
Options	none—Display basic information about all configured local digital certificates, corresponding public keys, and the automatically generated self-signed certificate. brief detail—(Optional) Display the specified level of output. certificate-id <i>certificate-id-name</i> —(Optional) Display information about only the specified local digital certificates and corresponding public keys. system-generated—Display information about the automatically generated self-signed certificate.
Required Privilege Level	view
Related Topics	clear security pki local-certificate request security pki local-certificate generate-self-signed <i>JUNOS System Basics and Services Command Reference</i>
List of Sample Output	show security pki local-certificate certificate-id on page 1115 show security pki local-certificate certificate-id detail on page 1116 show security pki local-certificate system-generated on page 1116 show security pki local-certificate system-generated detail on page 1116
Output Fields	Table 96 on page 1114 lists the output fields for the show security pki local-certificate command. Output fields are listed in the approximate order in which they appear.

Table 96: show security pki local-certificate Output Fields

Field Name	Field Description
Certificate identifier	Name of the digital certificate.
Certificate version	Revision number of the digital certificate.
Serial number	Unique serial number of the digital certificate.
Issued to	Device that was issued the digital certificate.

Table 96: show security pki local-certificate Output Fields (continued)

Field Name	Field Description
Issued by	Authority that issued the digital certificate.
Issuer	Authority that issued the digital certificate, including details of the authority organized using the distinguished name format. Possible subfields are: <ul style="list-style-type: none"> ■ Organization—Organization of origin. ■ Organizational unit—Department within an organization. ■ Country—Country of origin. ■ Locality—Locality of origin. ■ Common name—Name of the authority.
Subject	Details of the digital certificate holder organized using the distinguished name format. Possible subfields are: <ul style="list-style-type: none"> ■ Organization—Organization of origin. ■ Organizational unit—Department within an organization. ■ Country—Country of origin. ■ Locality—Locality of origin. ■ Common name—Name of the authority.
Alternate subject	Domain name or IP address of the device related to the digital certificate.
Validity	Time period when the digital certificate is valid. Values are: <ul style="list-style-type: none"> ■ Not before—Start time when the digital certificate becomes valid. ■ Not after—End time when the digital certificate becomes invalid.
Public key algorithm	Encryption algorithm used with the private key, such as rsaEncryption(1024 bits).
Public key verification status	Public key verification status: Failed or Passed. The detail output also provides the verification hash.
Signature algorithm	Encryption algorithm that the CA used to sign the digital certificate, such as sha1WithRSAEncryption.
Fingerprint	Secure Hash Algorithm (SHA1) and Message Digest 5 (MD5) hashes used to identify the digital certificate.
Distribution CRL	Distinguished name information and URL for the certificate revocation list (CRL) server.
Use for key	Use of the public key, such as Certificate signing, CRL signing, Digital signature, or Data encipherment.

**show security pki
local-certificate
certificate-id**

```
user@host> show security pki local-certificate certificate-id hassan
Certificate identifier: hassan
Issued to: hassan, Issued by: kpradeep.juniper.net
Validity:
  Not before: 2005 Aug  2nd, 05:23:42 GMT
  Not after:  2006 Aug  2nd, 05:33:42 GMT
Public key algorithm: rsaEncryption(1024 bits)
Public key verification status: Passed
```

**show security pki
local-certificate
certificate-id detail**

```
user@host> show security pki local-certificate certificate-id hassan detail
Certificate identifier: hassan
Certificate version: 3
Serial number: 3115 8938 6334 6035 7529
Issuer:
  Common name: kpradeep.juniper.net
Subject:
  Organization: juniper, Organizational unit: pepsi, Country: IN,
  Common name: hassan
Alternate subject: hassan.com
Validity:
  Not before: 2005 Aug 2nd, 05:23:42 GMT
  Not after: 2006 Aug 2nd, 05:33:42 GMT
Public key algorithm: rsaEncryption(1024 bits)
Public key verification status: Passed
c7:a4:fb:e7:8c:4f:31:e7:eb:01:d8:32:65:21:f2:eb:6f:7d:49:1a:c3:9b
63:47:e2:4f:f6:db:f6:c8:75:dd:e6:ec:0b:35:0a:62:32:45:6b:35:1f:65
c9:66:b7:40:b2:f9:2a:ab:5b:60:f7:c7:73:36:da:68:25:fc:40:4b:12:3c
d5:c8:c6:66:f6:10:1e:86:67:a8:95:9b:7f:1c:ae:a7:55:b0:28:95:a7:9a
a2:24:28:e4:5a:b2:a9:06:7a:69:37:20:15:e1:b6:66:eb:22:b5:b6:77:f6
65:88:b0:94:2b:91:4b:99:78:4a:e3:56:cc:14:45:d7:97:fd
Signature algorithm: sha1WithRSAEncryption
Fingerprint:
  36:ec:35:5a:9a:6d:1c:77:a8:bb:f6:b9:94:57:36:11:c8:88:93:cc (sha1)
  1f:ab:f2:a0:84:5a:9c:e6:0e:92:79:70:cf:2c:1a:73 (md5)
Distribution CRL:
  file://\multiplex\CertEnroll\kpradeep.juniper.net.crl
  http://multiplex/CertEnroll/kpradeep.juniper.net.crl
Use for key: Digital signature
```

**show security pki
local-certificate
system-generated**

```
user@host> show security pki local-certificate system-generated
Certificate identifier: system-generated
Issued to: JN10D3DFCADA, Issued by: CN = JN10D3DFCADA, CN = system generated,
CN = self-signed
Validity:
  Not before: 02-21-2008 10:27
  Not after: 02-19-2013 10:27
Public key algorithm: rsaEncryption(1024 bits)
```

**show security pki
local-certificate
system-generated detail**

```
user@host> show security pki local-certificate system-generated detail
Certificate identifier: system-generated
Certificate version: 3
Serial number: a3f42347afe6953f8f3fe4aae70f310f
Issuer:
  Common name: JN10D3DFCADA
Subject:
  Common name: JN10D3DFCADA
Alternate subject: email empty, fqdn empty, ip empty
Validity:
  Not before: 02-21-2008 10:27
  Not after: 02-19-2013 10:27
Public key algorithm: rsaEncryption(1024 bits)
30:81:89:02:81:81:00:c1:50:fa:46:eb:57:6b:7d:11:05:a0:7d:17
0c:2b:0e:d1:26:4c:ae:4d:75:b2:c9:73:2d:bb:d0:ef:07:f0:24:9e
23:42:29:79:30:c3:3b:f4:b7:5a:74:3a:9c:d1:66:45:af:e8:41:5d
52:bf:81:c3:c9:d9:d5:ba:0f:5e:d3:28:d4:44:d2:60:0c:42:76:c5
ed:93:89:20:13:ee:e6:23:ab:d6:e5:fe:5e:13:a2:94:c0:ae:f9:1e
cd:fa:ca:9f:59:92:b4:b3:84:e9:61:76:7b:81:f4:5a:48:a6:91:ae
39:99:b9:3a:06:ac:d7:b2:15:85:bd:8f:b7:90:e1:02:03:01:00:01
Signature algorithm: sha1WithRSAEncryption
```

```
Fingerprint:  
42:79:b0:f0:fa:fc:03:33:bd:0d:d4:56:21:f1:d9:28:51:00:3f:b0 (sha1)  
f0:77:8e:3e:1d:41:12:a1:bf:3d:cd:19:e5:66:3e:15 (md5)
```

show security policies

Syntax	show security policies <detail> <policy-name <i>policy-name</i> >
Release Information	Command modified in Release 9.2 of JUNOS Software.
Description	Display a summary of all security policies configured on the device. If a particular policy is specified, display information particular to that policy. This command is supported on J Series and SRX Series devices.
Options	none—Display basic information about all configured policies. detail—(Optional) Display a detailed view of all of the policies configured on the device. policy-name <i>policy-name</i> —(Optional) Display information about the specified policy.
Required Privilege Level	view
Related Topics	clear security policies statistics
List of Sample Output	show security policies on page 1120 ssh security policies policy-name p1 detail on page 1120
Output Fields	Table 97 on page 1118 lists the output fields for the show security policies command. Output fields are listed in the approximate order in which they appear.

Table 97: show security policies Output Fields

Field Name	Field Description
From zone	Name of the source zone.
To zone	Name of the destination zone.
Policy	Name of the applicable Policy.
Sequence number	Number of the policy within a given context. For example, three policies that are applicable in a from-zoneA to-zoneB context might be ordered with sequence numbers 1, 2, and 3. Also, in a from-zoneC to-zoneD context, four policies might have sequence numbers 1, 2, 3, and 4.
State	Status of the policy: <ul style="list-style-type: none"> ■ enabled: The policy can be used in the policy lookup process which determines access rights for a packet and the action taken in regard to it. ■ disabled: The policy cannot be used in the policy lookup process, and therefore it is not available for access control.

Table 97: show security policies Output Fields (continued)

Field Name	Field Description
Source addresses	<p>For standard display mode, the names of the source addresses for a policy. Address sets are resolved to their individual names. (In this case, only the names are given, not their IP addresses.)</p> <p>For detail display mode, the names and corresponding IP addresses of the source addresses for a policy. Address sets are resolved to their individual address name-IP address pairs.</p>
Destination addresses	Name of the destination address (or address set) as it was entered in the destination zone's address book. A packet's destination address must match this value for the policy to apply to it.
Applications	<p>Name of a preconfigured or custom application whose type the packet matches, as specified at configuration time.</p> <ul style="list-style-type: none"> ■ IP protocol: The IP protocol used by the application—for example, TCP, UDP, ICMP. ■ ALG: If an ALG is associated with the session, the name of the ALG. Otherwise, 0. ■ Inactivity timeout: Elapse time without activity after which the application is terminated. ■ Source port range: The low-high source port range for the session application.
Destination Address Translation	<p>Status of the destination address translation traffic:</p> <ul style="list-style-type: none"> ■ drop translated— Drop the packets with translated destination address. ■ drop untranslated—Drop the packets without translated destination address.
Action or Action-type	<ul style="list-style-type: none"> ■ The action taken in regard to a packet that matches the policy's tuples. Actions include the following: <ul style="list-style-type: none"> ■ permit ■ firewall-authentication ■ tunnel ipsec-vpn <i>vpn-name</i> ■ pair-policy <i>pair-policy-name</i> ■ source-nat pool <i>pool-name</i> ■ pool-set <i>pool-set-name</i> ■ interface ■ destination-nat <i>name</i> ■ deny ■ reject
Index	An internal number associated with the policy.
Session log	Session log entry that indicates whether the at-create and at-close flags were set at configuration time to log session information.
Scheduler name	Name of a preconfigured scheduler whose schedule determines when the policy is active (or inactive) to check an incoming packet to determine how to treat the packet.

Table 97: show security policies Output Fields *(continued)*

Field Name	Field Description
Policy statistics	<p>Policy statistics include the following:</p> <ul style="list-style-type: none"> ■ Input bytes—The number of bytes presented for processing by the device. ■ Output bytes—The number of bytes actually processed by the device. ■ Input packets—The number of packets presented for processing by the device. ■ Active sessions—The number of sessions currently present because of access control lookups that used this policy. ■ Session deletions—The number of sessions deleted since system startup. ■ Policy lookups—Number of times the policy was accessed to check for a match.

show security policies

```

user@host> show security policies
From zone: trust, To zone: untrust
Policy: p1, State: enabled, Index: 4, Sequence number: 1
Source addresses: v-2-2-2-0
Destination addresses: v-1-1-1-0
Applications: any
Action: permit, log, scheduled
Policy: p2, State: enabled, Index: 5, Sequence number: 2
Source addresses: v-2-2-2-0
Destination addresses: v-1-1-1-0
Applications: any
Action: deny, scheduled

```

**show security policies
policy-name p1 detail**

```

user@host> show security policies policy-name p1 detail
Policy: p1, action-type: permit, State: enabled, Index: 4
Sequence number: 1
From zone: trust, To zone: untrust
Source addresses:
v-2-2-2-0: 2.2.2.0/24
Destination addresses:
v-1-1-1-0: 1.1.1.0/24
Application: any
IP protocol: 0, ALG: 0, Inactivity timeout: 0
Source port range: [0-0]
Destination port range: [0-0]
Destination Address Translation: drop translated
Session log: at-create, at-close
Scheduler name: sch20
Policy statistics:
Input bytes      :          50000      100 bps
Output bytes     :          40000      100 bps
Input packets    :           200      200 pps
Output packets   :           100      100 pps
Session rate     :              2       1 sps
Active sessions  :             11
Session deletions:             20
Policy lookups   :             12

```


show security resource-manager group active

Syntax	show security resource-manager group active <group-number > <node (node-id all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display security information about active groups created through the resource manager. This command is supported on J Series and SRX Series devices.
Options	<p>none—Display resource manager group service information for all active groups.</p> <p><i>group-number</i> —(Optional) Display resource manager group service information for a specific group identification number.</p> <p><i>node</i>—(Optional) For chassis cluster configurations, display active resource manager group service information on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
List of Sample Output	<p>show security resource-manager group active on page 1122</p> <p>show security resource-manager group active 2048 on page 1122</p> <p>show security resource-manager group active node primary on page 1122</p> <p>show security resource-manager group active node all on page 1122</p> <p>show security resource-manager group active 1024 node all on page 1122</p>
Output Fields	Table 98 on page 1121 lists the output fields for the show security resource-manager group command. Output fields are listed in the approximate order in which they appear.

Table 98: show security resource-manager group Output Fields

Field Name	Field Description
Total groups	Total number of groups in the system.
active groups	Number of active groups.
Group ID	Identification number whose group information is displayed.

**show security
resource-manager group
active**

```
user@host> show security resource-manager group active
Total groups 32, active groups 0
```

**show security
resource-manager group
active 2048**

```
user@host> show security resource-manager group active 2048
Total groups 2048, active groups 1
Group ID 2048: state - Active
    : Virtual System      - root
    : Application         - SIP ALG
    : Group Timeout       - 65535
    : Number of resources - 3
      Resource ID - 8190
      Resource ID - 8188
      Resource ID - 8187
```

**show security
resource-manager group
active node primary**

```
user@host> show security resource-manager group active node primary
node0:
-----
Group ID 1024: Application - SIP ALG
Total groups 1024, active groups 1
```

**show security
resource-manager group
active node all**

```
user@host> show security resource-manager group active node all
node0:
-----
Group ID 1024: Application - SIP ALG
Total groups 1024, active groups 1
node1:
-----
Group ID 1024: Application - SIP ALG
Total groups 1024, active groups 1
```

**show security
resource-manager group
active 1024 node all**

```
user@host> show security resource-manager group active 1024 node all
node0:
-----
Group ID 1024: state - Active
    : Application         - SIP ALG
    : Group Timeout       - 65535
    : Number of resources - 3
      Resource ID - 8192
      Resource ID - 8188
      Resource ID - 8187
node1:
-----
Group ID 1024: state - Active
    : Application         - SIP ALG
    : Group Timeout       - 65535
    : Number of resources - 3
      Resource ID - 8187
      Resource ID - 8186
      Resource ID - 8190
```

show security resource-manager resource active

Syntax	show security resource-manager resource active <resource-id > <node (node-id all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display security information about active resources created through the resource manager. This command is supported on J Series and SRX Series devices.
Options	none—Display information for all active resources. <i>resource-id</i> —(Optional) Display information for a resource with a specific identification number. <i>node</i> —(Optional) For chassis cluster configurations, display active resource manager information on a specific node. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ <i>all</i>—Display information about all nodes. ■ <i>local</i>—Display information about the local node. ■ <i>primary</i>—Display information about the primary node.
Required Privilege Level	view
List of Sample Output	show security resource-manager resource active on page 1124 show security resource-manager resource active 8190 on page 1124 show security resource-manager resource active node local on page 1124 show security resource-manager resource active node primary on page 1124
Output Fields	Table 99 on page 1123 lists the output fields for the show security resource-manager resource command. Output fields are listed in the approximate order in which they appear.

Table 99: show security resource-manager resource Output Fields

Field Name	Field Description
Total resources	Total number of resources in the system.
active resources	Number of active resources.
Resource ID	Identification number whose resource information is displayed.

**show security
resource-manager
resource active**

```
user@host> show security resource-manager resource active
Total resources 128, active resources 0
```

**show security
resource-manager
resource active 8190**

```
user@host> show security resource-manager resource active 8190
Total resource 8192, active resource 3
Resource ID 8190: state - Active
    : Start time           - 0
    : Resource timeout     - 120
    : Parent group         - 2048
    : Number of sessions   - 1
      Session ID - 8
    : Number of Holes      - 1
      1) Source IP Range   - {0.0.0.0, 0.0.0.0}
        Source Port Range - {0, 0}
        Destination IP Range - {20.20.20.31, 20.20.20.31}
        Destination Port Range - {50195, 50195}
        Protocol          - 17
        Reference count    - 1
```

**show security
resource-manager
resource active node
local**

```
user@host> show security resource-manager resource active node local
node0:
-----
Resource ID 8192: Group ID - 1024, Application - SIP ALG
Resource ID 8188: Group ID - 1024, Application - SIP ALG
Resource ID 8187: Group ID - 1024, Application - SIP ALG
Total Resources 8192, active resources 3
```

**show security
resource-manager
resource active node
primary**

```
user@host> show security resource-manager resource active node primary
node0:
-----
Resource ID 8192: Group ID - 1024, Application - SIP ALG
Resource ID 8188: Group ID - 1024, Application - SIP ALG
Resource ID 8187: Group ID - 1024, Application - SIP ALG
Total Resources 8192, active resources 3
```

show security resource-manager settings

Syntax	show security resource-manager settings <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display resource manager settings. This command is supported on J Series and SRX Series devices.
Options	node—(Optional) For chassis cluster configurations, display resource manager settings on a specific node. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
List of Sample Output	show security resource-manager settings on page 1125 show security resource-manager settings node primary on page 1126 show security resource-manager settings node all on page 1126
Output Fields	Table 100 on page 1125 lists the output fields for the show security resource-manager settings command. Output fields are listed in the approximate order in which they appear.

Table 100: show security resource-manager settings Output Fields

Field Name	Field Description
Client Heartbeat	Time after which idle an resource manager client is timed out.
Count	Number of active clients.
Pinhole age	Duration for which the temporary opening in the security firewall (pinhole) is open for specified traffic. If the specified traffic does not exist during this time period, the pinhole is timed out.

```

show security      user@host> show security resource-manager settings
resource-manager Client Heartbeat: timeout 600 seconds, count 5
settings          Pinhole age: 32 seconds

```

**show security
resource-manager
settings node primary**

```
user@host> show security resource-manager settings node primary
node0:
-----
Client heartbeat: timeout 600 seconds, count 5
Pinhole age: 120 seconds
```

**show security
resource-manager
settings node all**

```
user@host> show security resource-manager settings node all
node0:
-----
Client heartbeat: timeout 600 seconds, count 5
Pinhole age: 120 seconds
node1:
-----
Client heartbeat: timeout 600 seconds, count 5
Pinhole age: 120 seconds
```

show security screen ids-option

Syntax	show security screen ids-option screen-name <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display configuration information about the specified security screen. This command is supported on J Series and SRX Series devices.
Options	<i>screen-name</i> —Name of the screen. <i>node</i> —(Optional) For chassis cluster configurations, display the configuration status of the security screen on a specific node. <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ <i>all</i>—Display information about all nodes. ■ <i>local</i>—Display information about the local node. ■ <i>primary</i>—Display information about the primary node.
Required Privilege Level	view
Related Topics	ids-option
List of Sample Output	show security screen ids-option jscreen on page 1128 show security screen ids-option jscreen1 node all on page 1128
Output Fields	Table 101 on page 1127 lists the output fields for the show security screen ids-option command. Output fields are listed in the approximate order in which they appear.

Table 101: show security screen ids-option Output Fields

Field Name	Field Description
TCP port scan threshold	Number of microseconds during which the device accepts packets from the same remote source with up to 10 different port numbers.
ICMP address sweep threshold	Maximum number of microseconds during which up to 10 ICMP echo requests from the same host are allowed into the device.
UDP flood threshold	Number of UDP packets per second allowed to ping the same destination address before the device rejects further UDP packets.
TCP winnuke	Enable or disable the detection of Transport Control Protocol (TCP) WinNuke attacks.
TCP SYN flood attack threshold	Number of SYN packets per second required to trigger the SYN proxy response.
TCP SYN flood alarm threshold	Number of half-complete proxy connections per second at which the device makes entries in the event alarm log.

Table 101: show security screen ids-option Output Fields *(continued)*

Field Name	Field Description
TCP SYN flood source threshold	Number of SYN segments to be received per second before the device starts dropping connection requests.
TCP SYN flood destination threshold	Number of SYN segments received per second before the device begins dropping connection requests.
TCP SYN flood timeout	Maximum length of time before a half-completed connection is dropped from the queue.
TCP SYN flood queue size	Number of proxy connection requests that can be held in the proxy connection queue before the device starts rejecting new connection requests.
ICMP large packet	Enable or disable the detection of any ICMP frame with an IP length greater than 1024 bytes.

```

show security screen      user@host> show security screen ids-option jscreen
ids-option jscreen      Screen object status:
                           Name                               Value
                           TCP port scan threshold           5000
                           ICMP address sweep threshold       5000

show security screen      user@host> show security screen ids-option jscreen1 node all
ids-option jscreen1 node node0:
all                      -----
                           Screen object status:
                           Name                               Value
                           UDP flood threshold                1000
                           TCP winnuke                        enabled
                           TCP SYN flood attack threshold      200
                           TCP SYN flood alarm threshold       512
                           TCP SYN flood source threshold      4000
                           TCP SYN flood destination threshold 4000
                           TCP SYN flood timeout              20
                           TCP SYN flood queue size            1024
                           ICMP large packet                  enabled
                           node1:
                           -----
                           Screen object status:
                           Name                               Value
                           UDP flood threshold                1000
                           TCP winnuke                        enabled
                           TCP SYN flood attack threshold      200
                           TCP SYN flood alarm threshold       512
                           TCP SYN flood source threshold      4000
                           TCP SYN flood destination threshold 4000
                           TCP SYN flood timeout              20
                           TCP SYN flood queue size            1024
                           ICMP large packet                  enabled

```


show security screen statistics

Syntax	show security screen statistics (zone <i>zone-name</i> interface <i>interface-name</i>) <node (<i>node-id</i> all local primary)>
Release Information	Command introduced in Release 8.5 of JUNOS Software; node options added in Release 9.0 of JUNOS Software.
Description	Display intrusion detection system (IDS) security screen statistics. This command is supported on J Series and SRX Series devices.
Options	<p>none—Display IDS security for all zones and interface.</p> <p>zone <i>zone-name</i> —(Optional) Display screen statistics for this security zone.</p> <p>interface <i>interface-name</i>—(Optional) Display screen statistics for this interface.</p> <p>node—(Optional) For chassis cluster configurations, display security screen statistics on a specific node.</p> <ul style="list-style-type: none"> ■ <i>node-id</i> —Identification number of the node. It can be 0 or 1. ■ all—Display information about all nodes. ■ local—Display information about the local node. ■ primary—Display information about the primary node.
Required Privilege Level	view
Related Topics	<p>clear security screen statistics</p> <p>clear security screen statistics interface</p> <p>clear security screen statistics zone</p>
List of Sample Output	<p>show security screen statistics zone scrzone on page 1131</p> <p>show security screen statistics interface ge-0/0/3 on page 1132</p> <p>show security screen statistics interface ge-0/0/1 node primary on page 1132</p>
Output Fields	Table 102 on page 1129 lists the output fields for the show security screen statistics command. Output fields are listed in the approximate order in which they appear.

Table 102: show security screen statistics Output Fields

Field Name	Field Description
ICMP flood	Internet Control Message Protocol (ICMP) flood counter. An ICMP flood typically occurs when ICMP echo requests use all resources in responding, such that valid network traffic can no longer be processed.

Table 102: show security screen statistics Output Fields *(continued)*

Field Name	Field Description
UDP flood	User Datagram Protocol (UDP) flood counter. 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.
TCP winnuke	Number of Transport Control Protocol (TCP) WinNuke attacks. WinNuke is a denial-of-service (DoS) attack targeting any computer on the Internet running Windows.
TCP port scan	Number of TCP port scans. The purpose of this attack is to scan the available services in the hopes that at least one port will respond, thus identifying a service to target.
ICMP address sweep	Number of ICMP address sweeps. An IP address sweep can occur with the intent of triggering responses from active hosts
IP tear drop	Number of teardrop attacks. teardrop attacks exploit the reassembly of fragmented IP packets.
TCP SYN flood	Number of TCP SYN attacks.
IP spoofing	Number of IP spoofs. IP spoofing occurs when an invalid source address is inserted in the packet header to make the packet appear to come from a trusted source.
ICMP ping of death	ICMP ping of death counter. Ping of death occurs when IP packets are sent that exceed the maximum legal length (65,535 bytes).
IP source route option	Number of IP source route attacks.
TCP land attack	Number of land attacks. 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.
TCP SYN fragment	Number of TCP SYN fragments.
TCP no flag	Number of TCP headers without flags set. A normal TCP segment header has at least one control flag set.
IP unknown protocol	Number of Internet protocols (IP).
IP bad options	Number of invalid options.
IP record route option	Number of packets with the IP record route option enabled. This option records the IP addresses of the network devices along the path that the IP packet travels.
IP timestamp option	Number of IP timestamp option attacks. This option records the time (in Universal Time) when each network device receives the packet during its trip from the point of origin to its destination.
IP security option	Number of IP security option attacks.
IP loose source route option	Number of IP loose source route option attacks. This option specifies a partial route list for a packet to take on its journey from source to destination.
IP strict source route option	Number of IP strict source route option attacks. This option specifies the complete route list for a packet to take on its journey from source to destination.
IP stream option	Number of stream option attacks. This option provides a way for the 16-bit SATNET stream identifier to be carried through networks that do not support streams.

Table 102: show security screen statistics Output Fields (continued)

Field Name	Field Description
ICMP fragment	Number of ICMP fragments. 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.
ICMP large packet	Number of large ICMP packets.
TCP SYN FIN	Number of TCP SYN FIN packets.
TCP FIN no ACK	Number of TCP FIN flags without the acknowledge (ACK) flag.
Source session limit	Number of concurrent sessions that can be initiated from a source IP address.
TCP SYN-ACK-ACK Proxy	Number of TCP flags enabled with SYN-ACK-ACK. To prevent flooding with SYN-ACK-ACK sessions, you can enable the SYN-ACK-ACK proxy protection screen option. After the number of connections from the same IP address reaches the SYN-ACK-ACK proxy threshold, J Series and SRX Series devices running JUNOS Software rejects further connection requests from that IP address.
IP Block Fragment	Number of IP block fragments.
Destination session limit	Number of concurrent sessions that can be directed to a single destination IP address.

```

show security screen user@host> show security screen statistics zone scrzone
statistics zone scrzone Screen statistics:
IDS attack type           Statistics
  ICMP flood              0
  UDP flood               0
  TCP winnuke             0
  TCP port scan           91
  ICMP address sweep      0
  IP tear drop            0
  TCP SYN flood           0
  IP spoofing             0
  ICMP ping of death      0
  IP source route option  0
  TCP land attack         0
  TCP SYN fragment        0
  TCP no flag             0
  IP unknown protocol     0
  IP bad options          0
  IP record route option  0
  IP timestamp option     0
  IP security option      0
  IP loose source route option 0
  IP strict source route option 0
  IP stream option        0
  ICMP fragment           0
  ICMP large packet       0
  TCP SYN FIN             0
  TCP FIN no ACK          0
  Source session limit    0
  TCP SYN-ACK-ACK proxy   0
  IP block fragment       0
  Destination session limit 0

```

```

show security screen user@host> show security screen statistics interface ge-0/0/3
statistics interface Screen statistics:
ge-0/0/3
IDS attack type      Statistics
ICMP flood           0
UDP flood            0
TCP winnuke          0
TCP port scan        91
ICMP address sweep   0
IP tear drop         0
TCP SYN flood        0
IP spoofing          0
ICMP ping of death   0
IP source route option 0
TCP land attack      0
TCP SYN fragment     0
TCP no flag          0
IP unknown protocol  0
IP bad options        0
IP record route option 0
IP timestamp option  0
IP security option    0
IP loose source route option 0
IP strict source route option 0
IP stream option      0
ICMP fragment        0
ICMP large packet    0
TCP SYN FIN          0
TCP FIN no ACK       0
Source session limit 0
TCP SYN-ACK-ACK proxy 0
IP block fragment    0
Destination session limit 0

show security screen user@host> show security screen statistics interface ge-0/0/1 node primary
statistics interface node0:
ge-0/0/1 node primary -----
Screen statistics:
IDS attack type      Statistics
ICMP flood           1
UDP flood            1
TCP winnuke          1
TCP port scan        1
ICMP address sweep   1
IP tear drop         1
TCP SYN flood        1
IP spoofing          1
ICMP ping of death   1
IP source route option 1
TCP land attack      1
TCP SYN fragment     1
TCP no flag          1
IP unknown protocol  1
IP bad options        1
IP record route option 1
IP timestamp option  1
IP security option    1
IP loose source route option 1
IP strict source route option 1
IP stream option      1
ICMP fragment        1
ICMP large packet    1

```

TCP SYN FIN	1
TCP FIN no ACK	1
Source session limit	1
TCP SYN-ACK-ACK proxy	1
IP block fragment	1
Destination session limit	1

show security utm anti-spam statistics

Syntax	show security utm anti-spam statistics
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>Display antispam statistics for connections including total e-mail scanned, tagged and dropped connections.</p> <p>Command is supported on J Series devices and SRX210, SRX240, and SRX650 devices.</p>
Required Privilege Level	view
Related Topics	<p>clear security utm anti-spam statistics</p> <p>show security utm anti-spam status</p>
Output Fields	<p>show security utm anti-spam statistics</p> <p>Output fields are listed in the approximate order in which they appear.</p>
show security utm anti-spam statistics	<pre> user@host> show security utm anti-spam statistics Total connections: 0 Denied connections: 0 Total greetings: 0 Denied greetings: 0 Total e-mail scanned: 0 Spam total: 0 Spam tagged: 0 Spam dropped: 0 DNS errors: 0 Timeout errors: 0 Return errors: 0 Invalid parameter errors: 0 </pre>

show security utm anti-spam status

Syntax	show security utm anti-spam status
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>Display antispam status for connections including whitelist and blacklist server information.</p> <p>This command is supported on J Series devices and SRX210, SRX240, and SRX650 devices.</p>
Required Privilege Level	view
Related Topics	<p>clear security utm anti-spam statistics</p> <p>show security utm anti-spam statistics</p>
Output Fields	<p>show security utm anti-spam status</p> <p>Output fields are listed in the approximate order in which they appear.</p>
show security utm anti-spam status	<pre> user@host> show security utm anti-spam status SBL Whitelist Server: SBL Blacklist Server: msgsecurity.juniper.net DNS Server: Primary : 1.2.3.4, Src Interface: ge-0/0/0 Secondary: 0.0.0.0, Src Interface: ge-0/0/1 Ternary : 0.0.0.0, Src Interface: fe-0/0/2 </pre>

show security utm anti-virus statistics

Syntax	show security utm anti-virus statistics		
Release Information	Command introduced in Release 9.5 of JUNOS Software.		
Description	Display antivirus statistics for connections including clean and infected files and scan engine status.		
	This command is supported on J Series devices and SRX210, SRX240, and SRX650 devices.		
Required Privilege Level	view		
Related Topics	clear security utm antivirus statistics show security utm anti-virus status request security utm anti-virus juniper-express-engine request security utm anti-virus kaspersky-lab-engine		
Output Fields	show security utm anti-virus statistics Output fields are listed in the approximate order in which they appear.		
show security utm anti-virus statistics	<pre> user@host>show security utm anti-virus statistics Intelligent-prescreening passed: 0 MIME-whitelist passed: 0 URL-whitelist passed: 0 Forwarded to scan engine: 0 Scan Mode: scan-all: 0 Scan-extension: 0 Scan Code: clear: 0 Infected: 0 Password files 0 Decompress layers: 0 Corrupt files: 0 Out of resources: 0 Internal errors: 0 Fall back: log-and-permit block Engine not ready: 0 0 Password file: 0 0 Decompress layer: 0 0 Corrupt files: 0 0 Out of resources: 0 0 Timeout: 0 0 Maximum content size: 0 0 Too many requests: 0 0 Others: 0 0 </pre>		

show security utm anti-virus status

Syntax	show security utm anti-virus status
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>Display antivirus status for connections including clean and infected files and scan engine status.</p> <p>This command is supported on J Series devices and SRX210, SRX240, and SRX650 devices.</p>
Required Privilege Level	view
Related Topics	<p>clear security utm antivirus statistics</p> <p>show security utm anti-virus statistics</p> <p>request security utm anti-virus juniper-express-engine</p> <p>request security utm anti-virus kaspersky-lab-engine</p>
Output Fields	<p>show security utm anti-virus status</p> <p>Output fields are listed in the approximate order in which they appear.</p>
show security utm anti-virus status	<pre> user@host> show security utm anti-virus status Anti-virus key expire date: 2010-07-30 Update server: http://update.juniper-updates.net/EAV/SRX210/ Interval: 1440 minutes Pattern update status: next update in 922 minutes Last result: download catalog file failed Anti-virus signature version: 000000_00 Anti-virus signature compiler version: N/A Scan engine type: juniper-express-engine Scan engine information: Engine not ready Pattern type: N/A Total number of signatures: 11020 New signatures (13): ----- 00021301 Backdoor.Win32.Frauder.ky 00021296 Rootkit.Win32.Pakes.e 00021323 Trojan-Downloader.Win32.Exchanger.agf 00021303 Trojan-Downloader.Win32.Injecter.arc 00021325 Trojan-PSW.Win32.LdPinch.abgp 00021299 Trojan-Ransom.Win32.Hexzone.pr 00021298 Trojan-Spy.Win32.Zbot.fgt 00021300 Trojan-Spy.Win32.Zbot.fgv 00021324 Trojan-Spy.Win32.Zbot.fgw 00021322 Trojan-Spy.Win32.Zbot.fhc 00021321 Trojan-Spy.Win32.Zbot.fhd 00021297 Trojan.Win32.FraudPack.aju 00021302 Trojan.Win32.Inject.isz Modified signatures (0): ----- Removed signatures (1): </pre>

```
-----  
00020871 Trojan-GameThief.Win32.OnLineGames.bjpk
```

show security utm content-filtering statistics

Syntax	show security utm content-filtering statistics
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>Display content-filtering statistics for connections including lists of blocked files and the reasons for blocking.</p> <p>This command is supported on J Series devices and SRX210, SRX240, and SRX650 devices.</p>
Required Privilege Level	view
Related Topics	clear security utm content-filtering statistics
Output Fields	<p>show security utm content-filtering statistics</p> <p>Output fields are listed in the approximate order in which they appear.</p>
show security utm content-filtering statistics	<pre> user@host> show security utm content-filtering statistics Content-filtering-statistic: Blocked Base on command list: 0 Base on mime list: 0 Base on extension list: 0 ActiveX plugin: 0 Java applet: 0 EXE files: 0 ZIP files: 0 HTTP cookie: 0 </pre>

show security utm session

Syntax	show security utm session
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	Display general UTM session information including all allocated sessions and active sessions. Command introduced in Release 9.4 of JUNOS Software.
Required Privilege Level	view
Related Topics	clear security utm session show security utm status
Output Fields	show security utm session Output fields are listed in the approximate order in which they appear.
show security utm session	<pre>user@host> show security utm session Maximum sessions: 4000 Total allocated sessions: 0 Total freed sessions: 0 Active sessions: 0</pre>

show security utm status

Syntax	show security utm status
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>Display whether the UTM service is running or not.</p> <p>This command is supported on J Series devices and SRX210, SRX240, and SRX650 devices.</p>
Required Privilege Level	view
Related Topics	<p>clear security utm session</p> <p>show security utm session</p>
Output Fields	<p>show security utm status</p> <p>Output fields are listed in the approximate order in which they appear.</p>
show security utm status	<pre>user@host> show security utm status UTM service status: Running</pre>

show security utm web-filtering statistics

Syntax show security utm web-filtering statistics

Release Information Command introduced in Release 9.5 of JUNOS Software.

Description Display web-filtering statistics for connections including whitelist and blacklist hits and custom category hits.

This command is supported on J Series devices and SRX210, SRX240, and SRX650 devices.

Required Privilege Level view

Related Topics clear security utm web-filtering statistics

show security utm web-filtering status

Output Fields show security utm web-filtering statistics

Output fields are listed in the approximate order in which they appear.

```

show security utm      user@host> show security utm web-filtering statistics
web-filtering statistics
Total requests:          0
  white list hit:         0
  Black list hit:         0
  Queries to server:      0
  Server reply permit:    0
  Server reply block:     0
  Custom category permit: 0
  Custom category block:  0
  Cache hit permit:       0
  Cache hit block:        0
  Web-filtering sessions in total: 16000
  Web-filtering sessions in use:  0
Fall back:               log-and-permit      block
      Default              0                  0
      Timeout              0                  0
Connectivity              0                  0
Too-many-requests         0                  0

```

show security utm web-filtering status

Syntax	show security utm web-filtering status
Release Information	Command introduced in Release 9.5 of JUNOS Software.
Description	<p>Display whether the SurfControl CPA server is running or not.</p> <p>This command is supported on J Series devices and SRX210, SRX240, and SRX650 devices.</p>
Required Privilege Level	view
Related Topics	<p>clear security utm web-filtering statistics</p> <p>show security utm web-filtering statistics</p>
Output Fields	<p>show security utm web-filtering status</p> <p>Output fields are listed in the approximate order in which they appear.</p>
show security utm web-filtering status	<pre>user@host> show security utm web-filtering status UTM web-filtering status: Server status: SC-CPA server down</pre>

show security zones

Syntax	show security zones <detail terse> < zone-name >
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	Display information about security zones. This command is supported on J Series and SRX Series devices.
Options	none—Display information about all zones. detail terse—(Optional) Display the specified level of output. zone-name —(Optional) Display information about the specified zone.
Required Privilege Level	view
Related Topics	security-zone
List of Sample Output	show security zones on page 1144 show security zones abc on page 1145 show security zones abc detail on page 1145 show security zones terse on page 1145 show security zones my-shared-external on page 1145
Output Fields	Table 103 on page 1144 lists the output fields for the show security zones command. Output fields are listed in the approximate order in which they appear.

Table 103: show security zones Output Fields

Field Name	Field Description
Security zone	Name of the security zone.
Policy configurable	Whether the policy can be configured or not.
Interfaces bound	Number of interfaces in the zone.
Interfaces	List of the interfaces in the zone.
Zone	Name of the zone.
Type	Type of the zone.

```

show security zones  user@host> show security zones
                        Functional zone: management
                        Policy configurable: No
                        Interfaces bound: 1

```



```

    Interfaces:
      ge-0/0/0.0
Security zone: Host
  Send reset for non-SYN session TCP packets: Off
  Policy configurable: Yes
  Interfaces bound: 1
  Interfaces:
    fxp0.0
Security zone: abc
  Send reset for non-SYN session TCP packets: Off
  Policy configurable: Yes
  Interfaces bound: 1
  Interfaces:
    ge-0/0/1.0
Security zone: def
  Send reset for non-SYN session TCP packets: Off
  Policy configurable: Yes
  Interfaces bound: 1
  Interfaces:
    ge-0/0/2.0
Security zone: junos-global
  Send reset for non-SYN session TCP packets: Off
  Policy configurable: Yes
  Interfaces bound: 0
  Interfaces:

```

```

show security zones abc user@host> show security zones abc
Security zone: abc
  Send reset for non-SYN session TCP packets: Off
  Policy configurable: Yes
  Interfaces bound: 1
  Interfaces:
    ge-0/0/1.0

```

```

show security zones abc user@host> show security zones abc detail
detail Security zone: abc
  Send reset for non-SYN session TCP packets: Off
  Policy configurable: Yes
  Interfaces bound: 1
  Interfaces:
    ge-0/0/1.0

```

```

show security zones user@host> show security zones terse
terse
Zone                Type
my-internal          Security
my-external          Security
dmz                  Security
my-shared-external   Security

```

```

show security zones user@host> show security zones my-shared-external
my-shared-external Security zone: my-shared-external, Shared
  send reset for non SYN non session TCP packets : On
  IP/TCP reassembly for ALG on traffic from/to this zone: Yes
  Policy Configurable: Yes
  Interfaces bound:1.
    ge-0/1/1.0
  IP classification: Disabled.

```

show security zones type

Syntax	show security zones type (functional security) <detail terse>
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	Display information about security zones of the specified type. This command is supported on J Series and SRX Series devices.
Options	functional—Display functional zones. security—Display security zones. detail terse—(Optional) Display the specified level of output.
Required Privilege Level	view
Related Topics	security-zone
List of Sample Output	show security zones type functional on page 1146 show security zones type security on page 1147 show security zones type security terse on page 1147 show security zones type security detail on page 1147
Output Fields	Table 104 on page 1146 lists the output fields for the <code>show security zones type</code> command. Output fields are listed in the approximate order in which they appear.

Table 104: show security zones type Output Fields

Field Name	Field Description
Security zone	Zone name.
Policy configurable	Whether the policy can be configured or not.
Interfaces	List of the interfaces in the zone.
Interfaces bound	Number of interfaces in the zone.
Zone	Name of the zone.
Type	Type of the zone.

```

show security zones    user@host> show security zones type functional
type functional      Security zone: Host
                        Send reset for non-SYN session TCP packets: Off
                        Policy configurable: Yes
                        Interfaces bound: 1

```

```

Interfaces:
fxp0.0
Security zone: fz
Send reset for non-SYN session TCP packets: Off
Policy configurable: Yes
Interfaces bound: 1
Interfaces:
ge-0/0/1.0

```

```

show security zones   user@host> show security zones type security
type security       Security zone: Host
                        Send reset for non-SYN session TCP packets: Off
                        Policy configurable: Yes
                        Interfaces bound: 1
                        Interfaces:
                        fxp0.0
                        Security zone: fz
                        Send reset for non-SYN session TCP packets: Off
                        Policy configurable: Yes
                        Interfaces bound: 1
                        Interfaces:
                        ge-0/0/1.0

```

```

show security zones   user@host> show security zones type security terse
type security terse
Zone                Type
my-internal         Security
my-external         Security
dmz                 Security
my-shared-external Security

```

```

show security zones   user@host> show security zones type security detail
type security detail Security zone: HOST
                        Send reset for non-SYN session TCP packets: Off
                        Policy configurable: Yes
                        Interfaces bound: all
                        Interfaces:
Security zone: junos-global
                        Send reset for non-SYN session TCP packets: Off
                        Policy configurable: Yes
                        Interfaces bound: 0
                        Interfaces:

```

show services unified-access-control authentication-table

Syntax	show services unified-access-control authentication-table
Release Information	Command introduced in Release 9.4 of JUNOS Software.
Description	<p>Display a summary of the authentication table entries configured from the Infranet Controller. Authentication tables store mappings between JUNOS traffic flows and Unified Access Control (UAC) roles. The Infranet Controller uses the roles specified in the mappings to help determine the UAC policies to apply to the JUNOS flows.</p> <p>Use this command when you have configured the SRX Series device to act as a JUNOS Enforcer in a UAC deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.</p> <p>This command is supported on SRX Series devices.</p>
Options	<p>detail—Displays a detailed view of all authentication table entries.</p> <p>identifier <i>id</i>—Displays information about a specific authentication table entry by identification number.</p>
Required Privilege Level	view
List of Sample Output	<p>show services unified-access-control authentication-table on page 1148</p> <p>show services unified-access-control authentication-table detail on page 1148</p> <p>show services unified-access-control authentication-table identifier 1 on page 1148</p>
show services unified-access-control authentication-table	<pre>user@host> show services unified-access-control authentication-table Id Source IP Username Age Role identifier 1 172.24.72.79 atsang 0 0000000001.000005.0</pre>
show services unified-access-control authentication-table detail	<pre>user@host> show services unified-access-control authentication-table detail Identifier: 1 Source IP: 172.24.72.79 Username: atsang Age: 0 Role identifier Role name 0000000001.000005.0 Users 1113249951.100616.0 Personal Firewall 1183670148.427197.0 UAC</pre>
show services unified-access-control authentication-table identifier 1	<pre>user@host> show services unified-access-control authentication-table identifier 1 Identifier: 1 Source IP: 172.24.72.79 Username: atsang Age: 0 Role identifier Role name 0000000001.000005.0 Users 1113249951.100616.0 Personal Firewall 1183670148.427197.0 UAC</pre>

show services unified-access-control policies

Syntax	show services unified-access-control policies
Release Information	Command introduced in Release 9.4 of JUNOS Software.
Description	<p>Display a summary of resource access policies configured from the Infranet Controller.</p> <p>Use this command when you have configured the SRX Series device to act as a JUNOS Enforcer in a Unified Access Control (UAC) deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.</p> <p>This command is supported on SRX Series devices.</p>
Options	<p>detail—Displays a detailed view of all policies.</p> <p>identifier <i>id</i>—Displays information about a specific policy by identification number.</p>
Required Privilege Level	view
List of Sample Output	<p>show services unified-access-control policies on page 1149</p> <p>show services unified-access-control policies detail on page 1149</p> <p>show services unified-access-control policies identifier 1 on page 1149</p>
show services unified-access-control policies	<pre> user@host> services unified-access-control policies Id Resource Action Apply Role identifier 1 10.100.15.0/24:* allow selected 1113249951.100616.0 2 10.100.17.0/24:* deny all </pre>
show services unified-access-control policies detail	<pre> user@host> services unified-access-control policies detail Identifier: 1 Resource: 10.100.15.0/24:* Resource: 10.100.16.23-10.100.16.60:* Action: allow Apply: selected Role identifier Role name 1113249951.100616.0 Personal Firewall 1112927873.881659.0 Antivirus 1183670148.427197.0 UAC Identifier: 2 Resource: 10.100.17.0/24:* Resource: 10.100.16.23-10.100.16.60:* Resource: 10.100.18.0/24:* Action: deny Apply: all </pre>
show services unified-access-control policies identifier 1	<pre> user@host> show services unified-access-control policies identifier 1 Identifier: 1 Resource: 10.100.15.0/24:* Resource: 10.100.16.23-10.100.16.60:* Action: allow Apply: selected Role identifier Role name 1113249951.100616.0 Personal Firewall </pre>

```
1112927873.881659.0 Antivirus
1183670148.427197.0 UAC
```

show services unified-access-control status

Syntax show services unified-access-control status

Release Information Command introduced in Release 9.4 of JUNOS Software.

Description Display the status of the connection between the SRX Series device and the Infranet Controller as well as statistics to help debug connections to the Infranet Controller.

Use this command when you have configured the SRX Series device to act as a JUNOS Enforcer in a Unified Access Control (UAC) deployment. When deployed as a JUNOS Enforcer, the SRX Series device enforces the policies that are defined on the UAC's Infranet Controller.

This command is supported on SRX Series devices.

Required Privilege Level view

List of Sample Output show services unified-access-control status on page 1151

```

show services      user@host> show services unified-access-control status
unified-access-control
status             Host      Address      Port  Interface  State
dev106vm26           10.64.11.106 11123 ge-0/0/0.0  connected
dev107vm26           10.64.11.106 11123 ge-0/0/0.0  closed

```

show system services dhcp client

Syntax	show system services dhcp client < <i>interface-name</i> > <statistics>
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	Display information about DHCP clients. This command is supported on J Series and SRX Series devices.
Options	none—Display DHCP information for all interfaces. <i>interface-name</i> —(Optional) Display DHCP information for the specified interface. statistics—(Optional) Display DHCP client statistics.
Required Privilege Level	view and system
Related Topics	dhcp request system services dhcp
List of Sample Output	show system services dhcp client on page 1153 show system services dhcp client ge-0/0/1.0 on page 1153 show system services dhcp client statistics on page 1154
Output Fields	Table 105 on page 1152 lists the output fields for the show system services dhcp client command. Output fields are listed in the approximate order in which they appear.

Table 105: show system services dhcp client Output Fields

Field Name	Field Description
Logical Interface Name	Name of the logical interface.
Client Status	State of the client binding.
Vendor Identifier	Vendor ID.
Server Address	IP address of the DHCP server.
Address obtained	IP address obtained from the DHCP server.
Lease Obtained at	Date and time the lease was obtained.
Lease Expires at	Date and time the lease expires.
DHCP Options	<ul style="list-style-type: none"> ■ Name: server-identifier, Value: IP address of the name server. ■ Name: device, Value: IP address of the name device. ■ Name: domain-name, Value: Name of the domain.

Table 105: show system services dhcp client Output Fields (continued)

Field Name	Field Description
Packets dropped	Total packets dropped.
Messages received	<p>Number of the following DHCP messages received:</p> <ul style="list-style-type: none"> ■ DHCPPOFFER—First packet received on a logical interface when DHCP is enabled. ■ DHCPACK—When received from the server, the client sends an ARP request for that address and adds a (ARP response) timer for 4 seconds and stop the earlier timer added for DHCPACK. ■ DHCPNAK—When a DHCPNAK is received instead of DHCPACK, the logical interface sends a DHCPDISCOVER packet.
Messages sent	<p>Number of the following DHCP messages sent:</p> <ul style="list-style-type: none"> ■ DHCPDECLINE—Packet sent when ARP response is received and there is a conflict. The logical interface sends a new DHCPDISCOVER packet. ■ DHCPDISCOVER—Packet sent on the interface for which the DHCP client is enabled. ■ DHCPREQUEST—Packet sent to the DHCP server after accepting the DHCPPOFFER. After sending the DHCPREQUEST, the device adds a retransmission-interval timer. ■ DHCPINFORM—Packet sent to the DHCP server for local configuration parameters. ■ DHCPRELEASE—Packet sent to the DHCP server to relinquish network address and cancel remaining lease. ■ DHCPRENEW—Packet sent to the DHCP server to renew the address. The next message to be sent will be a DHCPREQUEST message, which will be unicast directly to the server. ■ DHCPREBIND—Packet sent to any server to renew the address. The next message to be sent will be a DHCPREQUEST message, which will be broadcast.

**show system services
dhcp client**

```
user@host> show system services dhcp client
Logical Interface Name    ge-0/0/1.0
Hardware address         00:0a:12:00:12:12
Client Status            bound
Vendor Identifier        ether
Server Address           10.1.1.1
Address obtained          10.1.1.89
update server            enabled
Lease Obtained at        2006-08-24 18:13:04 PST
Lease Expires at         2006-08-25 18:13:04 PST
DHCP Options :
  Name: name-server, Value: [ 10.209.194.131, 2.2.2.2, 3.3.3.3 ]
  Name: server-identifier, Value: 10.1.1.1
  Name: router, Value: [ 10.1.1.80 ]
  Name: domain-name, Value: netscreen-50
```

**show system services
dhcp client ge-0/0/1.0**

```
user@host> show system services dhcp client ge-0/0/1.0
Logical Interface name    ge-0/0/1.0
Hardware address         00:12:1e:a9:7b:81
Client status            bound
Address obtained          30.1.1.20
Update server            disabled
Lease obtained at        2007-05-10 18:16:18 UTC
Lease expires at         2007-05-11 18:16:18 UTC
```

```
DHCP options:
  Name: server-identifier, Value: 30.1.1.2
  Code: 1, Type: ip-address, Value: 255.255.255.0
  Name: name-server, Value: [ 77.77.77.77, 55.55.55.55 ]
  Name: domain-name, Value: englab.juniper.net
```

```
show system services user@host> show system services dhcp client statistics
dhcp client statistics Packets dropped:
```

```
  Total 0
```

```
Messages received:
```

```
  DHCP OFFER 0
```

```
  DHCPACK 8
```

```
  DHCPNAK 0
```

```
Messages sent:
```

```
  DHCPDECLINE 0
```

```
  DHCPDISCOVER 0
```

```
  DHCPREQUEST 1
```

```
  DHCPINFORM 0
```

```
  DHCPRELEASE 0
```

```
  DHCPRENEW 7
```

```
  DHCPREBIND 0
```

show system services dhcp relay-statistics

Syntax	show system services dhcp relay-statistics
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	<p>Display information about the DHCP relay.</p> <p>This command is supported on J Series and SRX Series devices.</p>
Required Privilege Level	view and system
Related Topics	dhcp
List of Sample Output	show system services dhcp relay-statistics on page 1155
Output Fields	Table 106 on page 1155 lists the output fields for the <code>show system services dhcp relay-statistics</code> command. Output fields are listed in the approximate order in which they appear.

Table 106: show system services dhcp relay-statistics Output Fields

Field Name	Field Description
Received packets	Total DHCP packets received.
Forwarded packets	Total DHCP packet forwarded.
Dropped packets	<p>Total DHCP packets dropped for the following reasons:</p> <ul style="list-style-type: none"> ■ Due to a missing interface in the relay database—Number of packets discarded because they did not belong to a configured interface. ■ Due to a missing matching routing instance—Number of packets discarded because they did not belong to a configured routing instance. ■ Due to an error during packet read—Number of packets discarded because of a system read error. ■ Due to an error during packet send—Number of packets that the DHCP relay application could not send. ■ Due to an invalid server address—Number of packets discarded because an invalid server address was specified. ■ Due to a missing valid local address—Number of packets discarded because there was no valid local address. ■ Due to a missing route to the server or client—Number of packets discarded because there were no addresses available for assignment.

```

show system services dhcp relay-statistics
user@host> show system services dhcp relay-statistics
Received packets: 4
Forwarded packets: 4
Dropped packets: 4
  Due to missing interface in relay database: 4
  Due to missing matching routing instance: 0
  Due to an error during packet read: 0

```

```
Due to an error during packet send: 0  
Due to invalid server address: 0  
Due to missing valid local address: 0  
Due to missing route to server/client: 0
```

show wan-acceleration status

Syntax	show wan-acceleration status
Release Information	Command introduced in Release 8.5 of JUNOS Software.
Description	<p>Display the redirection status and related information about the WXC Integrated Services Module (ISM 200) for WAN acceleration.</p> <p>This command is supported on J Series devices.</p>
Required Privilege Level	view
Related Topics	<p>request wan-acceleration login</p> <p>restart wan-acceleration</p>
List of Sample Output	show wan-acceleration status on page 1157
Output Fields	Table 107 on page 1157 lists the output fields for the show wan-acceleration status command. Output fields are listed in the approximate order in which they appear.

Table 107: show wan-acceleration status Output Fields

Field Name	Field Description
Redirection status	Indicates whether traffic redirection to the WXC ISM 200 is active.
Interface	Name of the WXC ISM 200 interface.
Primary address	Address used to manage the WXC ISM 200, and as the source address of traffic sent across the WAN.
Secondary address	Source address of traffic destined for an alternate WAN path when the Multi-Path feature is configured (optional).
JUNOS version	Installed version of JUNOS Software.
WXOS version	Installed version of WXOS.
JUNOS/WXOS protocol	Indicates whether the JUNOS Software and WXOS versions are compatible.

```

show wan-acceleration user@host> show wan-acceleration status
status      Redirection status: active, Interface: wx-2/0/0
              Primary address: 10.87.5.2, Secondary address: 0.0.0.0
              JUNOS version: 9.0R1 Enhanced Services
              WXOS version: 5.4.6.0j
              JUNOS/WXOS protocol: Version compatible

```


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