



**SRC-PE Software**

## **CLI Command Reference, Volume 1**

*Release 3.1.x*

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# About This Guide

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## SRC Guides and Release Notes

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If the information in the latest *SRC Release Notes* differs from the information in the SRC guides, follow the *SRC Release Notes*.

## Audience

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This guide is intended for experienced system and network specialists working with JUNOS routers and JUNOS routing platforms in an Internet access environment. We assume that readers know how to use the routing platforms, directories, and RADIUS servers that they will deploy in their SRC networks.





If you are using the SRC software in a cable network environment, we assume that you are familiar with the PacketCable Multimedia Specification (PCMM) as defined by Cable Television Laboratories, Inc. (CableLabs) and with the Data-over-Cable Service Interface Specifications (DOCSIS) 1.1 protocol. We also assume that you are familiar with operating a multiple service operator (MSO) multimedia-managed IP network.

## Documentation Conventions

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Table 1 on page vi defines the notice icons used in this guide. Table 2 on page vi defines text conventions used throughout this documentation.

**Table 1: Notice Icons**

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

**Table 2: Text Conventions**

Convention	Description	Examples
<b>Bold text like this</b>	<ul style="list-style-type: none"> <li>■ Represents keywords, scripts, and tools in text.</li> <li>■ Represents a GUI element that the user selects, clicks, checks, or clears.</li> </ul>	<ul style="list-style-type: none"> <li>■ Specify the keyword <b>exp-msg</b>.</li> <li>■ Run the <b>install.sh</b> script.</li> <li>■ Use the <b>pkgadd</b> tool.</li> <li>■ To cancel the configuration, click <b>Cancel</b>.</li> </ul>
<b>Bold text like this</b>	Represents text that the user must type.	<code>user@host# set cache-entry-age cache-entry-age</code>
Fixed-width text like this	Represents information as displayed on your terminal's screen, such as CLI commands in output displays.	<pre>nic-locators {   login {     resolution {       resolver-name /realms/       login/A1;       key-type LoginName;       value-type SaeId;     }   } }</pre>
Regular sans serif typeface	<ul style="list-style-type: none"> <li>■ Represents configuration statements.</li> <li>■ Indicates SRC CLI commands and options in text.</li> <li>■ Represents examples in procedures.</li> <li>■ Represents URLs.</li> </ul>	<ul style="list-style-type: none"> <li>■ <code>system ldap server{ stand-alone;</code></li> <li>■ Use the <code>request sae modify device failover</code> command with the <code>force</code> option</li> <li>■ <code>user@host# . . .</code></li> <li>■ <code>http://www.juniper.net/techpubs/software/management/src/api-index.html</code></li> </ul>
<i>Italic sans serif typeface</i>	Represents variables in SRC CLI commands.	<code>user@host# set local-address local-address</code>
Angle brackets	In text descriptions, indicate optional keywords or variables.	Another runtime variable is <code>&lt; gfwif &gt;</code> .
Key name	Indicates the name of a key on the keyboard.	Press Enter.

**Table 2: Text Conventions** (*continued*)

Key names linked with a plus sign (+)	Indicates that you must press two or more keys simultaneously.	Press Ctrl + b.
<i>Italic typeface</i>	<ul style="list-style-type: none"> <li>■ Emphasizes words.</li> <li>■ Identifies book names.</li> <li>■ Identifies distinguished names.</li> <li>■ Identifies files, directories, and paths in text but not in command examples.</li> </ul>	<ul style="list-style-type: none"> <li>■ There are two levels of access: <i>user</i> and <i>privileged</i>.</li> <li>■ <i>SRC-PE Getting Started Guide</i></li> <li>■ <i>o = Users, o = UMC</i></li> <li>■ The <i>/etc/default.properties</i> file.</li> </ul>
Backslash	At the end of a line, indicates that the text wraps to the next line.	Plugin.radiusAcct-1.class = \net.juniper.srmt.sae.plugin\RadiusTrackingPluginEvent
Words separated by the   symbol	Represent a choice to select one keyword or variable to the left or right of this symbol. (The keyword or variable may be either optional or required.)	diagnostic   line

## Related Juniper Networks Documentation

The most current SRC documentation is available at:

<http://www.juniper.net/techpubs/software/management/src/>

This Web site contains the documentation described in Table 3 on page vii.

A complete list of abbreviations used in this document set, along with their spelled-out terms, is provided in the *SRC-PE Getting Started Guide*.

**Table 3: Juniper Networks C-series and SRC Technical Publications**

Document	Description
<b>Core Documentation Set</b>	
<i>C2000 and C4000 Hardware Guide</i>	Describes the hardware platforms and how to install, maintain, replace, and troubleshoot them. The guide also includes specifications.
<i>C2000 and C4000 Quick Start Guide</i>	Describes how to get the C-series Controller up and running quickly. Intended for experienced installers who want to expedite the installation process.
<i>SRC-PE Getting Started Guide</i>	Describes the SRC software, how to set up an initial software configuration, how to integrate RADIUS servers, and how to upgrade the SRC software. It also explains how to manage a C-series Controller. The guide describes how to set up and start the SRC CLI and the C-Web interface, as well as other SRC configuration tools. It includes reference material for the SRC documentation.
<i>SRC-PE CLI User Guide</i>	Describes how to use the SRC CLI, configure and monitor the platform with the CLI, and control the CLI environment. The guide also describes how to manage SRC components with the CLI.

**Table 3: Juniper Networks C-series and SRC Technical Publications** *(continued)*

Document	Description
<i>SRC-PE Network Guide</i>	Describes how to use and configure the SAE, the NIC, the SRC-ACP (Admission Control Plug-In) application, and the External Subscriber Monitor application. This guide also provides detailed information about using JUNOSe routers, JUNOS routing platforms, and other network devices in the SRC network.
<i>SRC-PE Services and Policies Guide</i>	Describes how to work with services and policies. The guide provides an overview, configuration procedures, and management information. The guide also provides information about the SRC tools for configuring policies.
<i>SRC-PE Subscribers and Subscriptions Guide</i>	Describes how to work with residential and enterprise subscribers and subscriptions. The guide provides an overview, configuration procedures, and management information. This guide also provides information about the enterprise service portals, including the Enterprise Manager Portal.
<i>SRC-PE Monitoring and Troubleshooting Guide</i>	Describes how to use logging, the SNMP agent, the SRC CLI, and the C-Web interface to monitor and troubleshoot SRC components. This guide also describes the SNMP traps.
<i>SRC-PE Solutions Guide</i>	Provides high-level instructions for SRC implementations. The guide documents the following scenarios: managing QoS services on JUNOSe routers; managing subscribers in a wireless roaming environment; providing voice over IP (VoIP) services; integrating the SRC software in a PCMM environment, including the use of the Juniper Policy Server (JPS); and mirroring subscriber traffic on JUNOSe routers.
<i>SRC-PE CLI Command Reference, Volume 1</i> <i>SRC-PE CLI Command Reference, Volume 2</i>	Together constitute information about command and statement syntax; descriptions of commands, configuration statements, and options; editing level of statement options; and a history of when a command was added to the documentation.
<i>SRC PE NETCONF API Guide</i>	Describes how to use the NETCONF application programming interface (API) to configure or request information from the NETCONF server on a C-series Controller that runs the SRC software.
<i>SRC-PE XML API Configuration Reference</i>	Describes the tag elements in the SRC Extensible Markup Language (XML) application programming interface (API) that are equivalent to configuration statements in the SRC command-line interface (SRC CLI).
<i>SRC-PE XML API Operational Reference</i>	Describes the tag elements in the SRC Extensible Markup Language (XML) application programming interface (API) that are equivalent to operational commands in the SRC command-line interface (SRC CLI).
<b>Application Library</b>	
<i>SRC Application Library Guide</i>	Describes how to install and work with applications that you can use to extend the capabilities of the SRC software. The guide documents the following applications: SRC SOAP Gateway (SRC-SG) Web applications, an application to provide threat mitigation, an application to provide tracking and QoS control at the application level by integrating the SRC software with the Ellacoya deep packet inspection (DPI) platform, and an application to control volume usage.
<b>Release Notes</b>	

**Table 3: Juniper Networks C-series and SRC Technical Publications** (continued)

Document	Description
<i>SRC-PE Release Notes</i>	In the <i>Release Notes</i> , you will find the latest information about features, changes, known problems, resolved problems, supported platforms and network devices (such as Juniper Networks routers and CMTS devices), and third-party software. If the information in the <i>Release Notes</i> differs from the information found in the documentation set, follow the <i>Release Notes</i> .
<i>SRC Application Library Release Notes</i>	
	Release notes are included in the corresponding software distribution and are available on the Web.

## Obtaining Documentation

To obtain the most current version of all Juniper Networks technical documents, see the products documentation page on the Juniper Networks Web site at <http://www.juniper.net/>.

To download complete sets of technical documentation to create your own documentation CD-ROMs or DVD-ROMs, see the CD-ROM and DVD-ROM Documentation page at

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- 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 post-sales technical support, you can access our tools and resources online or open a case with JTAC.

- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the JTAC User Guide located at <http://www.juniper.net/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

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- 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, see <http://www.juniper.net/support/requesting support.html>

# SRC CLI

This document summarizes the SRC command-line interface (SRC CLI).

Configuration statements and operational commands are listed in alphabetical order for the following components in the *SRC-PE CLI Command Reference, Volume 1*:

- CLI and System
- Juniper Networks Database
- SAE
- Network Information Collector (NIC)
- SNMP Agent
- Juniper Policy Server (JPS)
- IP Multimedia Subsystem (IMS)
- SRC License Management

Configuration statements and operational commands are listed in alphabetical order for the following components in the *SRC-PE CLI Command Reference, Volume 2*:

- Service CLI
- Policy CLI
- Subscriber CLI
- Redirect Server
- External Subscriber Monitor
- SRC Admission Control Plug-In (SRC-ACP)
- Dynamic Service Activator
- Diameter Application



# CLI and System

The following table summarizes the SRC command-line interface (SRC CLI) for controlling and using the SRC CLI environment and for managing the C-series platform. Configuration statements and operational commands are listed in alphabetical order.

- [Configuration commands and statements](#)
- [Filter commands](#)
- [Operational commands](#)

CLI and System
Configuration Commands and Statements
<a href="#">commit</a>
<a href="#">copy</a>
<a href="#">delete</a>
<a href="#">display set</a>
<a href="#">edit</a>
<a href="#">exit</a>
<a href="#">help</a>
<a href="#">help configuration</a>
<a href="#">history</a>
<a href="#">insert</a>
<a href="#">interfaces</a>
<a href="#">interfaces name group</a>
<a href="#">interfaces name tunnel</a>
<a href="#">interfaces name unit</a>
<a href="#">interfaces name unit unit-number family inet</a>
<a href="#">interfaces name unit unit-number family inet6 address</a>
<a href="#">load factory-default</a>
<a href="#">load merge</a>

<a href="#">load override</a>
<a href="#">load replace</a>
<a href="#">load set</a>
<a href="#">rename</a>
<a href="#">rollback</a>
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<a href="#">request security get-ca-certificate</a>
<a href="#">request security import-certificate</a>
<a href="#">request support information</a>
<a href="#">request system halt</a>
<a href="#">request system install</a>
<a href="#">request system reboot</a>
<a href="#">request system restore</a>
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<a href="#">request system uninstall</a>
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<a href="#">show system information</a>
<a href="#">show system snapshot</a>

[show system users](#)[ssh](#)[start shell](#)[telnet](#)[traceroute](#)

# **commit**

## **Syntax**

```
commit <check> <and-quit>
```

## **Release Information**

Command introduced in SRC Release 1.0.0

## **Description**

Commit the set of changes and cause the changes to take operational effect.

## **Options**

`check`—(Optional) Verify whether the syntax is correct, but do not apply changes.

`and-quit`—(Optional) Exit from configuration mode if the commit operation is successful.

## **Required Privilege Level**

config-control

# copy

## Syntax

```
copy parent1 identifier1 (to) parent2 identifier2
```

## Release Information

Command introduced in SRC Release 3.0.0

## Description

Copy an existing configuration statement or identifier.

## Options

*parent1*— Path to an existing configuration statement or identifier.

**Value**—Path of a collection object

*identifier1*— Existing identifier or statement.

**Value**— Identifier or statement

Configuration path.

**Value**

- to— Transition.

*parent2*— Path to a new configuration statement or identifier.

**Value**—Path of a collection object

*identifier2*— New identifier or statement.

**Value**— Identifier or statement

### **Required Privilege Level**

config-control

# delete

## Syntax

```
delete < force object value >
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Delete a configuration statement or identifier. All subordinate statements and identifiers contained within the specified statement path are deleted with it.

## Options

*force*— Flag indicating that no confirmation is requested before the software clears the configuration.

**Default**—false

*object*— Name of the statement or identifier to delete.

**Value**—Path of a configuration object

*value*— Value of the statement to delete.

**Value**—Valid value for selected object

## Required Privilege Level

config-control

# display set

## Syntax

```
display set <relative>
```

## Release Information

Command introduced in SRC Release 3.1.0

## Description

Display the configuration in the format of **set** commands.

## Options

**relative**—(Optional) Display the configuration for a hierarchy level in the format of **set** commands.

## Required Privilege Level

No specific privilege required.

# edit

## Syntax

`edit object`

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Specify edit level in the configuration hierarchy. This command lets you go directly to the specified edit level; for example, to [edit system login]. If you specify a path to a level that does not exist, the software creates the path for you. If you navigate to a different level without creating other statements (for example, by using a **top**, **up**, or **exit** command), the configuration statement may be deleted.

To edit the configuration statement to which you navigated by using the **edit** command, use the **set**, **delete**, **rename**, or **insert** commands.

## Options

*object*— Edit level; for example, **edit system login**.

## Required Privilege Level

No specific privilege required.

# exit

## Syntax

```
exit <configuration-mode>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Exit from this level in the CLI to the level above. At the top level in configuration mode, exit from configuration mode.

## Alias

quit

## Options

`configuration-mode`—(Optional) Exit from configuration mode.

## Required Privilege Level

No specific privilege required.

# help

## Syntax

help <command>

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display help about commands. Enter help followed a command name to view information.

## Options

*command*—(Optional) Name of command for which to display help help text.

**Value**—Operational command

## Required Privilege Level

No specific privilege required.

# help configuration

## Syntax

```
help configuration <object>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display help for a configuration statement. Enter help followed by the statement to view information.

## Options

*object*—(Optional) Configuration statement or object for which to provide help.

**Value**—Path of a configuration object

## Required Privilege Level

No specific privilege required.

# history

## Syntax

```
history <clear>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display the list of the commands executed—from least recent to most recent.

## Options

`clear`—(Optional) Clear command history.

## Required Privilege Level

No specific privilege required.

# insert

## Syntax

```
insert parent identifier1 (after | before) identifier2
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Insert an identifier into an existing configuration hierarchy. You must configure the identifiers before you reorder them. The **insert** command does not create new identifiers.

## Options

*parent*— Path in the configuration hierarchy to an existing configuration statement.

**Value**— Hierarchy path

*identifier1*— Existing identifier.

**Value**— Name of existing identifier

Ordering of identifiers.

**Value**

- *after*— Place *identifier1* after *identifier2*.
- *before*— Place *identifier1* before *identifier2*.

*identifier2*— New identifier to insert.

**Value**—Valid value for selected object

## Required Privilege Level

config-control

# interfaces

## Syntax

```
interfaces name {
    disable;
    trusted;
}
```

## Hierarchy Level

```
[edit interfaces]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure interfaces on the C-series Controller.

## Options

*name* *name*— Name of interface

**Value**— Interface name

*disable*—(Optional) Disable this interface

**Editing Level**—Basic

*trusted*—(Optional) Untrusted interfaces can be connected to untrusted networks. If not set, eth1 will be untrusted, any other interface will be trusted.

**Editing Level**—Basic

## Required Privilege Level

interface

## **Required Editing Level**

Basic

# interfaces *name* group

## Syntax

```
interfaces name group {
    mode (balance-rr | active-backup | balance-xor | broadcast | 802.3ad |
balance-tlb | balance-alb);
    downdelay downdelay;
    updelay updelay;
    lacp-rate (slow | fast);
    mii-monitoring-interval mii-monitoring-interval;
    interfaces [interfaces...];
    primary primary;
    transmit-hash-policy (layer2 | layer34);
}
```

## Hierarchy Level

```
[edit interfaces name group]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure Ethernet group interfaces. Group interfaces let you aggregate network interfaces into a single logical interface to support Ethernet redundancy.

When you configure group interfaces:

- The group interface name must not be one of the Ethernet interface names (that is, eth0, eth1, eth2, eth3).
- If an Ethernet interface is listed inside a group interface, it must not be configured as an interface by itself.
- Group interface and tunnel interface configurations are mutually exclusive. You cannot configure both types at the same time.

## Options

```
mode (balance-rr | active-backup | balance-xor | broadcast | 802.3ad
| balance-tlb | balance-alb)— Grouping mode.
```

## Value

- `balance-rr`— Round-robin policy: Transmit packets in

sequential order from the first available device through the last. This mode provides load balancing and fault tolerance.

- `active-backup`— Active-backup policy: Create only one device that is active. A different device becomes active if, and only if, the active device fails.

When a failover occurs in active-backup mode, bonding will issue one or more gratuitous ARPs on the newly active device. One gratuitous ARP is issued for the bonding master interface and each VLAN interface configured above it, provided that the interface has at least one IP address configured. Gratuitous ARPs issued for VLAN interfaces are tagged with the appropriate VLAN ID.

This mode provides fault tolerance. The primary option affects the behavior of this mode.

- `balance-xor`— XOR policy: Transmit based on the selected transmit hash policy. Alternate transmit policies can be selected with the transmit hash policy option. This mode provides load balancing and fault tolerance.
- `broadcast`— Broadcast policy: Transmit everything on all device interfaces. This mode provides fault tolerance.
- `802.3ad`— IEEE 802.3ad Dynamic link aggregation: Create aggregation groups that share the same speed and duplex settings. Utilizes all devices in the active aggregator according to the 802.3ad specification.

Device selection for outgoing traffic is done according to the transmit hash policy, which can be changed from the default simple XOR policy via the transmit hash policy option. Note that not all transmit policies may be 802.3ad compliant, particularly in regards to the packet mis-ordering requirements of section 43.2.4 of the 802.3ad standard. Differing peer implementations will have varying tolerances for noncompliance.

- `balance-tlb`— Adaptive transmit load balancing: Create channel bonding that does not require any special switch support. The outgoing traffic is distributed according to the current load (computed relative to the speed) on each device. Incoming traffic is received by the current device. If the receiving device fails, another device takes over the MAC address of the failed receiving device.
- `balance-alb`— Adaptive load balancing: Include adaptive transmit load balancing plus receive load balancing (rlb) for IPV4 traffic, and does not require any special switch support. The receive load balancing is achieved by ARP negotiation. The bonding driver intercepts the ARP replies sent by the local system on their way out and overwrites the source hardware address with the unique hardware address of one of the devices in the bond such that different peers use different hardware addresses for the server. Receive traffic from connections created by the server is also balanced. When the local system sends an ARP request the bonding driver copies and saves the peer's IP information from the ARP packet. When the ARP reply arrives from the peer, its hardware address is retrieved and the bonding driver initiates an ARP reply to this peer assigning it to one of the devices in the bond. A problematic outcome of using ARP negotiation for balancing is that each time that an ARP request is broadcast it uses the hardware address of the bond. Hence, peers learn the hardware address of the bond and the balancing of receive traffic collapses to the current device. This is handled by sending updates (ARP replies) to all the peers with their individually assigned hardware address

such that the traffic is redistributed. Receive traffic is also redistributed when a new device is added to the bond and when an inactive device is re-activated. The receive load is distributed sequentially (round robin) among the group of highest speed devices in the bond.

When a link is reconnected or a new device joins the bond the receive traffic is redistributed among all active devices in the bond by initiating ARP Replies with the selected MAC address to each of the clients. The updelay option must be set to a value equal or greater than the switch's forwarding delay so that the ARP replies sent to the peers will not be blocked by the switch.

### **Editing Level**—Basic

`downdelay` *downdelay*—(Optional) Time to wait before disabling a device after a link failure has been detected. This option is valid only for the MII monitor. The downdelay value should be a multiple of the MII monitoring interval; if not, it will be rounded down to the nearest multiple.

**Value**—Integer in the range 0–2147483647 ms

**Editing Level**—Basic

`updelay` *updelay*—(Optional) Time to wait before enabling a device after a link recovery has been detected. This option is valid only for the MII monitor. The updelay value should be a multiple of the MII monitoring interval; if not, it will be rounded down to the nearest multiple.

**Value**—Integer in the range 0–2147483647 ms

**Editing Level**—Basic

`lacp-rate (slow | fast)`—(Optional) Rate at which the link partner is requested to transmit LACPDU packets in 802.3ad mode. This option is valid only for the 802.3ad mode.

### **Value**

- `slow`— Request partner to transmit LACPDUs every 30 seconds.
- `fast`— Request partner to transmit LACPDUs every 1 second.

### **Editing Level**—Basic

`mii-monitoring-interval` *mii-monitoring-interval*—(Optional) MII link monitoring frequency. This option is valid only for the MII monitor.

You can monitor link integrity with the ARP monitor or the MII monitor. You cannot use both the ARP monitor and the MII monitor at the same time.

**Value**—Integer in the range -2147483648–2147483647 ms

**Editing Level**—Basic

`interfaces [ interfaces... ]`—Ethernet interfaces in this group.

**Value**—Text

**Editing Level**—Basic

`primary primary`—(Optional) Name of device that will always be the active device while it is available. Only when the primary is off-line will alternate devices be used. This is useful when one device is preferred over another, for example, when one device has higher throughput than another. This option is valid only for active-backup mode.

**Value**—Text

**Editing Level**—Basic

`transmit-hash-policy (layer2 | layer34)`—(Optional) Transmit hash policy to use for device selection in balance-xor and 802.3ad modes.

### Value

- `layer2`— Uses XOR of hardware MAC addresses to generate the hash. The formula is:  
(source MAC XOR destination MAC) modulo slave count  
This algorithm will place all traffic to a particular network peer on the same device. This algorithm is 802.3ad compliant.
- `layer34`— Uses upper layer protocol information, when available, to generate the hash. This allows for traffic to a particular network peer to span multiple devices, although a single connection will not span multiple devices.  
The formula for unfragmented TCP and UDP packets is  
((source port XOR dest port) XOR ((source IP XOR dest IP) AND 0xffff) modulo slave count  
For fragmented TCP or UDP packets and all other IP protocol traffic, the source and destination port information is omitted. For non-IP traffic, the formula is the same as for the layer2 transmit hash policy.  
This algorithm is not fully 802.3ad compliant. A single TCP or UDP conversation containing both fragmented and unfragmented packets will see packets striped across two interfaces. This may result in out of order delivery. Most traffic types will not meet this criteria, as TCP rarely fragments traffic, and most UDP traffic is not involved in extended conversations. Other implementations of 802.3ad may or may not tolerate this noncompliance.

**Editing Level**—Basic

**Required Privilege Level**

interface

**Required Editing Level**

Basic

## interfaces *name* tunnel

### Syntax

```
interfaces name tunnel {
    mode (ipip | gre | sit);
    destination destination;
    source source;
    key key;
    interface interface;
    ttl ttl;
}
```

### Hierarchy Level

```
[edit interfaces name tunnel]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a tunnel interface. A tunnel allows direct connection between a remote location and an application running on the C-series Controller; a tunnel lets you use the redirect server in deployments where the JUNOSe router does not have a direct connection to the C-series Controller.

### Options

`mode (ipip | gre | sit)`— Type of tunnel interface.

### Value

- `ipip`— IP-over-IP. Encapsulates IP packets within IP packets.
- `gre`— GRE. Encapsulates traffic that uses various routing protocols within IP.
- `sit`— IPv6 in IPv4 tunnel

**Default**— No value

**Editing Level**— Basic

`destination destination`— IP address of the remote end of the tunnel.

**Value**—IP address  
**Default**— No value  
**Editing Level**—Basic

`source source`—(Optional) Local IP address, that will not change, to receive tunneled packets. If you specify a source address, also specify a local interface.

**Value**—IP address  
**Default**— No value  
**Editing Level**—Basic

`key key`—(Optional) For a GRE tunnel, a GRE key.

**Value**—Integer in the range -2147483648–2147483647  
**Default**— No value  
**Editing Level**—Basic

`interface interface`—(Optional) Existing physical interface. If you configured a source address, specify an interface.

**Value**— Name of interface.

Example: eth0

**Default**— No value  
**Editing Level**—Basic

`ttl ttl`—(Optional) Lifetime of tunneled packets.

**Value**—Integer in the range 1–255  
**Editing Level**—Basic

## Required Privilege Level

interface

## Required Editing Level

Basic

## **interfaces *name* unit**

### **Syntax**

```
interfaces name unit unit-number ...
```

### **Hierarchy Level**

```
[edit interfaces name unit]
```

### **Release Information**

Statement introduced in SRC Release 1.0.0

### **Description**

Configure logical interfaces on a physical Ethernet interface on the C-series Controller. You can create different units to configure numerous IP addresses on an interface.

### **Options**

`unit-number unit-number`— Number of the unit (logical interface).

**Value**—Integer in the range 0–16385

### **Required Privilege Level**

interface

### **Required Editing Level**

Basic

## interfaces *name* unit *unit-number* family inet

### Syntax

```
interfaces name unit unit-number family inet {
    address address;
    broadcast broadcast;
}
```

### Hierarchy Level

```
[edit interfaces name unit unit-number family inet]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure properties for IPv4.

### Options

`address address`—(Optional) IP address with destination prefix for interface.

**Value**— IP address/destination prefix

**Default**— No value

**Editing Level**—Basic

`broadcast broadcast`—(Optional) Broadcast address.

**Value**—IP address

**Default**— No value

**Editing Level**—Basic

### Required Privilege Level

interface

### Required Editing Level

Basic

## **interfaces *name* unit *unit-number* family inet6 address**

### **Syntax**

```
interfaces name unit unit-number family inet6 address address ...
```

### **Hierarchy Level**

```
[edit interfaces name unit unit-number family inet6 address]
```

### **Release Information**

Statement introduced in SRC Release 1.1.0

### **Options**

`address address`—Interface address/destination prefix

**Value**— IP address/destination prefix

### **Required Privilege Level**

interface

### **Required Editing Level**

Basic

# load factory-default

## Syntax

```
load factory-default
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Load the default configuration supplied with the SRC software.

## Required Privilege Level

config-control

# load merge

## Syntax

```
load merge filename <relative> <format (text | xml) >
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Combine the configuration that is currently shown in the CLI and the configuration in the specified file.

## Options

*filename*— Path and filename of the file on the C-series Controller to load.

**Value**— Complete filename on the C-series Controller *path/filename*.

*relative*—(Optional) Hierarchy level relative to the current location.

*format (text | xml)* —(Optional) The configuration format.

### Value

- *text*— Text format
- *xml*— XML format

## Required Privilege Level

config-control

# load override

## Syntax

```
load override filename <format (text | xml) >
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Discard the entire configuration that is currently shown in the CLI, and load the entire configuration in the specified file. The statement also marks every object as changed.

## Options

*filename*— Path and filename of the file on the C-series Controller to load.

**Value**— Complete filename on the SRC Controller *path/filename*.

format (text | xml) —(Optional) The configuration format

### Value

- text— Text format
- xml— XML format

## Required Privilege Level

config-control

# load replace

## Syntax

```
load replace filename <relative> <format (text | xml) >
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Replace identifiers or values in a configuration.

## Options

*filename*— Path and filename of the file on the C-series Controller to load.

**Value**— Complete filename on the C-series Controller *path/filename*.

*relative*—(Optional) Hierarchy level relative to the current location.

*format (text | xml)* —(Optional) The configuration format

### Value

- *text*— Text format
- *xml*— XML format

## Required Privilege Level

config-control

# load set

## Syntax

```
load set filename <relative>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Execute the set of commands listed in the specified file.

## Options

*filename*— Path and filename of the file on the C-series Controller to load.

**Value**— Complete filename on the C-series Controller *path/filename*.

*relative*—(Optional) Hierarchy level relative to the current location.

## Required Privilege Level

config-control

# rename

## Syntax

```
rename parent identifier1 (to) identifier2
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Rename an existing configuration statement or identifier.

## Options

*parent*— Path to an existing configuration statement or identifier.

**Value**—Path of a collection object

*identifier1*— Existing identifier or statement.

**Value**— Identifier or statement

Configuration path.

**Value**

- to— Transition.

*identifier2*— New identifier or statement.

**Value**—Valid value for selected object

## Required Privilege Level

config-control

# rollback

## Syntax

rollback

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Return to a previously committed configuration.

**Note:** You can enter the **rollback** command only at the top level of the configuration hierarchy.

## Required Privilege Level

config-control

## routing-options static route

### Syntax

```
routing-options static route destination {
    next-hop [next-hop...];
    reject;
}
```

### Hierarchy Level

```
[edit routing-options static route]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure static routes to point to routers that connect to other networks to allow connectivity to devices on other networks.

### Options

*destination destination*— Destination network and mask. To configure the default route use destination 0.0.0.0/0

**Value**—Text

*next-hop [next-hop . . .]*—(Optional) Address of next hop from the C-series Controller to the destination.

**Value**—IP address

**Default**— No value

**Editing Level**—Basic

*reject*—(Optional) Drop packets to the specified destination, and send an ICMP unreachable message.

**Editing Level**—Basic

**Required Privilege Level**

routing

**Required Editing Level**

Basic

## **run**

### **Syntax**

`run command`

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Run an operational mode command without exiting from configuration mode.

### **Options**

*command*— Name of command to run.

**Value**—Operational command

### **Required Privilege Level**

No specific privilege required.

# save

## Syntax

```
save filename <format (text | xml) >
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Save the configuration to an ASCII file. The contents of the current level of the statement hierarchy and below are saved, along with the statement hierarchy containing it.

## Options

*filename*— Name of file to contain the saved configuration.

**Value**— One of the following:

- Local filename, including path— *path/file*.
- File URL.
- FTP format—*ftp://username@hostname/ filename* or *ftp://username:password @hostname/ filename*. (**Note:** Password appears at the CLI in clear text.)

*format (text | xml)* —(Optional) The configuration format

**Value**

- *text*— Text format
- *xml*— XML format

## Required Privilege Level

view

# set

## Syntax

*set object value*

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Create a statement hierarchy and set identifier values. When you enter a **set** command, the current level in the hierarchy does not change.

## Options

*object*— Configuration statement or identifier

**Value**—Path of a configuration object

*value*— Value configured for a configuration statement.

**Value**—Valid value for selected object

## Required Privilege Level

config-control

# show

## Syntax

```
show <object>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display information about a configuration object.

## Options

*object*—(Optional) Configuration object for which to display information. The object can be a configuration statement or an identifier for a statement.

**Value**—Path of a configuration object

## Required Privilege Level

config-view

# slot

## Syntax

`slot number ...`

## Hierarchy Level

`[edit slot]`

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure slot number for component.

## Options

`number number`— Number of the slot for which you want to configure values.

**Value**— Currently, the chassis has only one slot. The valid value is 0.

**Default**—0

## Required Privilege Level

system

## Required Editing Level

Basic

# system

## Syntax

```
system {
    host-name host-name;
    domain-name domain-name;
    domain-search [domain-search...];
    name-server [name-server...];
    authentication-order [(radius | tacplus | password)...];
    time-zone time-zone;
}
```

## Hierarchy Level

[edit system]

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure system properties.

## Options

`host-name host-name`—Hostname for the C-series Controller.

**Value**— hostname

**Default**— No value

**Editing Level**—Basic

`domain-name domain-name`—(Optional) Name of the domain in which the C-series Controller is located. This is the default domain name that is appended to hostnames that are not fully qualified.

**Value**— domain name

**Default**— No value

**Editing Level**—Basic

`domain-search [domain-search...]`—(Optional) List of domains to search.

**Value**— domain name

**Default**— No value  
**Editing Level**—Basic

`name-server [name-server . . . ]`—(Optional) Domain name server(s).

**Value**— name server  
**Default**— No value  
**Editing Level**—Basic

`authentication-order [(radius | tacplus | password) . . . ]`—(Optional) Order in which the software tries different user authentication methods when attempting to authenticate a user. For each login attempt, the software tries the authentication methods in order configured, until the password matches.

#### Value

- `radius`—RADIUS authentication
- `tacplus`—TACACS+ authentication services
- `password`—Traditional password authentication

**Editing Level**—Basic

`time-zone time-zone`—(Optional) Name of the local time zone.

**Value**— time-zone  
**Default**—UTC  
**Editing Level**—Basic

#### Required Privilege Level

system

#### Required Editing Level

Basic

# system ipmi

## Syntax

```
system ipmi {
    address address;
    gateway gateway;
    gateway-mac-address gateway-mac-address;
}
```

## Hierarchy Level

```
[edit system ipmi]
```

## Release Information

Statement introduced in SRC Release 2.0.0

## Description

Configure the IPMI interface.

## Options

*address address*—(Optional) IP address/destination prefix of IPMI interface. You must enter a value for the C2000 Controller. For the C4000 Controller, the address is automatically set to the IP address of the eth0 unit 0 interface.

**Value**—Text

**Editing Level**—Basic

*gateway gateway*— IP address of the gateway.

**Value**—IP address

**Editing Level**—Basic

*gateway-mac-address gateway-mac-address*—(Optional) MAC address of the gateway. If not specified, ARP will be used to get the gateway's MAC address.

**Value**—Text

**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Basic

# system ipmi user

## Syntax

```
system ipmi user name {
    plain-text-password;
    encrypted-password encrypted-password;
}
```

## Hierarchy Level

```
[edit system ipmi user]
```

## Release Information

Statement introduced in SRC Release 2.0.0

## Options

*name* *name*— Username that is used to login to the IPMI interface of a C-series Controller

**Value**— username

*plain-text-password*—(Optional) Prompt for a plain-text password.

**Editing Level**—Basic

*encrypted-password* *encrypted-password*— Password in plaintext format

**Value**— plain-text-password

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Basic

# system ldap client

## Syntax

```
system ldap client {
    base-dn base-dn;
    url url;
    backup-urls [backup-urls...];
    principal principal;
    credentials credentials;
    timeout timeout;
    time-limit time-limit;
    eventing;
    polling-interval polling-interval;
    connection-manager-id connection-manager-id;
    dispatcher-pool-size dispatcher-pool-size;
    event-base-dn event-base-dn;
    signature-dn signature-dn;
    blacklist;
}
```

## Hierarchy Level

```
[edit system ldap client]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure directory properties used by the CLI to connect to the directory that contains SRC data.

On a C-series Controller, you use the Juniper Networks database and typically use the default configuration for the directory connection. You can add backup directories and change the password to the directory.

## Options

**base-dn** *base-dn*—(Optional) DN of the root directory for SRC components and applications.

**Value**— DN

**Default**—o = UMC

**Editing Level**—Expert

`url url`—(Optional) URL that identifies the location of the primary directory server.

**Value**— URL

**Default**—`ldap://127.0.0.1:389`

**Editing Level**—Expert

`backup-urls [backup-urls...]`—(Optional) URLs that identify the locations of backup directory servers. Backup servers are used if the primary directory server is not accessible.

**Value**— URL

**Default**— No value

**Editing Level**—Normal

`principal principal`—(Optional) DN that defines the username with which an SRC component accesses the directory.

**Value**— DN

**Default**—`cn = conf,o = Operators, < base >`

**Editing Level**—Expert

`credentials credentials`—(Optional) Password used for authentication with the directory server.

**Value**—Secret text

**Default**—`conf`

**Editing Level**—Expert

`timeout timeout`—(Optional) Maximum amount of time during which the directory must respond to a connection request.

**Value**—Integer in the range 0–600 s

**Default**— No value

**Editing Level**—Expert

`time-limit time-limit`—(Optional) The number of milliseconds to wait for directory results before returning. If set to 0, wait indefinitely.

**Value**—Integer in the range 0–2147483647 ms

**Default**— 5000

**Editing Level**—Expert

`eventing`—(Optional) Enable an SRC component to poll the directory for changes.

**Default**—TRUE

**Editing Level**—Expert

`polling-interval` *polling-interval*—(Optional) Interval at which an SRC component polls the directory to check for directory changes.

**Value**—Integer in the range 15–86400 s

**Default**— No value

**Editing Level**—Expert

`connection-manager-id` *connection-manager-id*—(Optional) CLI identifier of the connection manager for the directory eventing system (within the JNDI framework).

**Value**— Identifier for connection manager

Example—DIRAGENT\_POOL\_VR

**Editing Level**—Expert

`dispatcher-pool-size` *dispatcher-pool-size*—(Optional) Number of directory change notifications that can be sent simultaneously to the SRC component.

**Value**—Integer in the range 0–2147483647

**Editing Level**—Expert

`event-base-dn` *event-base-dn*—(Optional)

DN of an entry superior to the data associated with an SRC component in the directory.

If you are storing non-SRC data in the directory, and that data changes frequently whereas the SRC data does not, you may need to adjust the default value to improve performance. For optimal performance, set the value to the DN of an entry superior to both the SRC data and the changing non-SRC data.

**Value**— DN

**Default**— o = umc, < base >

**Editing Level**—Expert

`signature-dn` *signature-dn*—(Optional) DN of the directory entry that specifies the usedDirectory attribute for the SRC CLI. The usedDirectory attribute identifies the vendor of the directory server.

**Value**— DN

**Editing Level**—Expert

`blacklist`—(Optional) Specifies whether the directory monitoring system prevents connection to a directory if the directory fails to respond during 10 polling intervals.

**Editing Level**—Expert

**Required Privilege Level**

system

**Required Editing Level**

Basic

# system login

## Syntax

```
system login {
    announcement announcement;
}
```

## Hierarchy Level

```
[edit system login]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure system announcement to be displayed at user login.

## Options

`announcement announcement`—(Optional) Announcement displayed to every user after login.

**Value**— Announcement text

**Default**— No value

**Editing Level**—Basic

## Required Privilege Level

system admin

## Required Editing Level

Basic

# system login class

## Syntax

```
system login class name {
    allow-commands allow-commands;
    allow-configuration allow-configuration;
    deny-commands deny-commands;
    deny-configuration deny-configuration;
    idle-timeout idle-timeout;
    permissions [(admin | admin-control | all | clear | configure | control |
field | firewall | firewall-control | interface | interface-control | maintenance
| network | reset | routing | routing-control | secret | secret-control |
security | security-control | shell | snmp | snmp-control | system | system-
control | view | view-configuration | service | service-control | subscriber |
subscriber-control)...];
}
```

## Hierarchy Level

```
[edit system login class]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Define login classes. You can define any number of login classes.

## Options

*name* *name*— Name that you choose for a login class.

**Value**— Name

*allow-commands* *allow-commands*—(Optional) Operational mode commands that members of a login class can use.

If you omit this statement and the deny-commands statement, users can issue only those commands for which they have access privileges through the permissions statement.

You can use an extended (modern) regular expression as defined in POSIX 1003.2. If the regular expression contains any spaces, operators, or wildcard characters, enclose it in quotation marks.

**Value**— Operational-mode commands to allow

**Default**— No value

**Editing Level**—Basic

`allow-configuration` *allow-configuration*—(Optional) Configuration mode commands that members of a login class can use.

If you omit this statement and the `deny-configuration` statement, users can issue only those commands for which they have access privileges through the permissions statement

You can use an extended (modern) regular expression as defined in POSIX 1003.2. If the regular expression contains any spaces, operators, or wildcard characters, enclose it in quotation marks.

**Value**— Configuration-mode commands to allow

**Default**— No value

**Editing Level**—Basic

`deny-commands` *deny-commands*—(Optional) Operational mode commands that the user is denied permission to issue, even though the permissions set with the permissions statement would allow it.

If you omit this statement and the `allow-commands` statement, users can issue only those commands for which they have access privileges through the permissions statement.

You can use an extended (modern) regular expression as defined in POSIX 1003.2. If the regular expression contains any wildcard characters, enclose it in quotation marks.

**Value**— Operational mode commands to deny

**Default**— No value

**Editing Level**—Basic

`deny-configuration` *deny-configuration*—(Optional) Configuration mode commands that the user is denied permission to issue, even though the permissions set with the permissions statement would allow it.

If you omit this statement and the `allow-configuration` statement, users can issue only those commands for which they have access privileges through the permissions statement.

You can use extended (modern) regular expression as defined in POSIX 1003.2. If the regular expression contains any spaces, operators, or wildcard characters, enclose it in quotation marks.

**Value**— Configuration mode commands to deny

**Default**— No value

**Editing Level**—Basic

`idle-timeout` *idle-timeout*—(Optional) Maximum amount of time that a session can be idle before the user is logged off the C-series Controller. The session times out after remaining at the CLI operational mode prompt for the specified time.

If you omit this statement, a user is never forced off the system after extended idle times.

**Value**— Number of minutes

**Default**— No value

**Editing Level**—Basic

`permissions [(admin | admin-control | all | clear | configure | control | field | firewall | firewall-control | interface | interface-control | maintenance | network | reset | routing | routing-control | secret | secret-control | security | security-control | shell | snmp | snmp-control | system | system-control | view | view-configuration | service | service-control | subscriber | subscriber-control) ... ]`—(Optional) Access privileges for each login class.

## Value

- `admin`— Can view user account information in configuration mode and with the `show configuration` command.
- `admin-control`— Can view user accounts and configure them (at the [edit system login] hierarchy level).
- `all`— Has all permissions.
- `clear`— Can clear (delete) information learned from the network that is stored in various network databases (by using the `clear` commands).
- `configure`— Can enter configuration mode (by using the `configure` command).
- `control`— Can modify any configuration values.
- `field`— Reserved for field (debugging) support.
- `firewall`— Can view the firewall filter configuration in configuration mode.
- `firewall-control`— Can view and configure firewall filter information.
- `interface`— Can view the interface configuration in configuration mode and with the `show configuration operational mode` command.
- `interface-control`— Can modify interface configuration.
- `maintenance`— Can perform system maintenance, including starting a local shell on a C-series Controller, and can halt and reboot a C-series Controller (by using the `request system` commands).
- `network`— Can access the network by entering commands such as SSH or Telnet.
- `reset`— Can restart software processes by using the `restart` command and can configure whether software processes are enabled or disabled.

- `routing`— Can view routing information in configuration and operational modes.
- `routing-control`— Can view general routing information and modify routing configuration.
- `secret`— Can view passwords and other authentication keys in the configuration.
- `secret-control`— Can view passwords and other authentication keys in the configuration and can modify them in configuration mode.
- `security`— Can view security configuration in configuration mode and with the `show configuration operational mode` command.
- `security-control`— Can view security configuration in configuration mode and with the `show configuration operational mode` command.
- `shell`— Can start a local shell on the router by entering the `start shell` command.
- `snmp`— Can view SNMP configuration information in configuration and operational modes.
- `snmp-control`— Can view SNMP configuration information and configure SNMP (at the `[edit snmp]` hierarchy level).
- `system`— Can view system-level information in configuration and operational modes.
- `system-control`— Can view and configure system-level configuration information.
- `view`— Can use various commands to display current system-wide values and statistics.
- `view-configuration`— Can view all system configuration, excluding any secret configurations.
- `service`— Can view service and policy definitions.
- `service-control`— Can view and configure service definitions and policy definitions.
- `subscriber`— Can view information about subscriber definitions.
- `subscriber-control`— Can view and configure information about subscriber definitions.

### **Editing Level—Basic**

#### **Required Privilege Level**

system admin

#### **Required Editing Level**

Basic

# system login user

## Syntax

```
system login user user-name {
    class class;
    full-name full-name;
    uid uid;
    gid gid;
    prompt prompt;
    level (basic | normal | advanced | expert);
    complete-on-space (on | off);
}
```

## Hierarchy Level

```
[edit system login user]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure access permissions for individual users.

## Options

*user-name user-name*— Username that is used to log in to a C-series Controller.

**Value**— Username

*class class*— User's login class. Configure one class for each user. The class referenced must already be configured.

**Value**— Class-name

**Editing Level**—Basic

*full-name full-name*— Full name of the user. If the name contains spaces, enclose it in quotation marks.

**Value**— Name

**Editing Level**—Basic

`uid uid`— User identifier for the login account.

**Value**—Integer in the range 0–64000

**Editing Level**—Basic

`gid gid`— Group identifier for the login account.

**Value**—Integer in the range 0–64000

**Editing Level**—Basic

`prompt prompt`—(Optional) Default prompt that this user sees at the SRC CLI.

**Value**— Prompt-text

**Editing Level**—Basic

`level (basic | normal | advanced | expert)`—(Optional) Editing level available to the user. The setting for the editing level determines which configuration commands are visible to the user.

### Value

- `basic`— Minimal set of configuration statements and commands  
— only the statements that must be configured are visible.
- `normal`— Normal set of configuration statements and commands  
— the common and basic statements are visible.
- `advanced`— All configuration statements and commands,  
including the common and basic ones, are visible.
- `expert`— All configuration statements, including common, basic,  
and internal statements and commands used for debugging, are  
visible.

**Default**— Normal

**Editing Level**—Basic

`complete-on-space (on | off)`—(Optional) Set the CLI to complete a partial command entry when you type a space. This statement enables command completion for all user sessions for this user.

To enable command completion for an active user session, use the `set cli complete-on-space` operational mode command.

### Value

- `on`— Turn on command completion—allow either a space or a tab to be used for command completion.
- `off`— Turn off command completion—a space or a tab after a partial command name does not complete the command.

**Default**— On

**Editing Level**—Basic

### Required Privilege Level

system admin

### Required Editing Level

Basic

# system login user *user-name* authentication

## Syntax

```
system login user user-name authentication {
    plain-text-password;
    encrypted-password encrypted-password;
    ssh-authorized-keys [ssh-authorized-keys...];
}
```

## Hierarchy Level

```
[edit system login user user-name authentication]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Authentication methods that a user can use to log in to a C-series Controller. You can assign multiple authentication methods to a single user.

## Options

`plain-text-password`—(Optional) Prompt for a plain-text password.

**Editing Level**—Basic

`encrypted-password` *encrypted-password*—(Optional) Password in encrypted format.

**Value**— Encrypted-password

**Editing Level**—Basic

`ssh-authorized-keys` [*ssh-authorized-keys...*]—(Optional) Public key for SSH.

**Value**— Public-key

**Editing Level**—Basic

## Required Privilege Level

system admin

## **Required Editing Level**

Basic

# system ntp

## Syntax

```
system ntp {
    boot-server boot-server;
    broadcast-client;
    trusted-key [trusted-key...];
}
```

## Hierarchy Level

```
[edit system ntp]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure NTP.

We strongly recommend that you configure NTP on every server used for an SRC deployment. The system may not recognize subscriber sessions if the clocks are not synchronized.

## Options

`boot-server boot-server`—(Optional) Server that NTP queries when at boot time to determine the local date and time.

When you boot the system on which the SRC software runs, the system issues an `ntpdate` request, which polls a network server to determine the local date and time. You can configure a server that the system uses to determine the time at startup. If no boot server is configured, NTP uses one of the configured servers to set the initial time.

**Value**— IP address of an NTP server

**Default**— No value

**Editing Level**—Basic

`broadcast-client`—(Optional) Listen for NTP broadcast messages on the local network to discover other servers on the same subnet.

**Editing Level**—Basic

`trusted-key [ trusted-key . . . ]`—(Optional) List of keys you are allowed to use when you configure the local system to synchronize its time with other systems on the network.

**Value**— Positive signed 32-bit integer (1–2147483647)

**Default**— No value

**Editing Level**—Basic

#### Required Privilege Level

system

#### Required Editing Level

Basic

# system ntp authentication-key

## Syntax

```
system ntp authentication-key key-number {
    value value;
}
```

## Hierarchy Level

```
[edit system ntp authentication-key]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure NTP authentication keys so that the C-series Controller can send authenticated packets. If you configure the C-series Controller to operate in authenticated mode, you must configure a key.

NTP authentication uses the MD5 encryption algorithm.

## Options

*key-number key-number*— Positive integer that identifies the NTP authentication key.

**Value**—Integer in the range 1–2147483647

*value value*— The value of the NTP authentication, which can contain 1–8 ASCII characters.

**Value**—Secret text

**Default**— No value

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Basic  
68

# system ntp broadcast

## Syntax

```
system ntp broadcast address {
    key key;
    ttl ttl;
    version version;
}
```

## Hierarchy Level

```
[edit system ntp broadcast]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure the C-series Controller to operate in broadcast mode with the remote system at the specified address. In this mode, the local system sends periodic broadcast messages to a client population at the specified broadcast or multicast address. Typically, you include this statement only when the local system is operating as a transmitter.

## Options

`address address`— IP address to receive broadcast or multicast periodic broadcast messages.

**Value**— IP address

`key key`—(Optional) Value of the authentication key used to encrypt authentication fields in all packets sent to the broadcast or multicast address.

**Value**— Positive signed 32-bit integer (1–2147483647)

**Default**— No value

**Editing Level**—Basic

`ttl ttl`—(Optional) TTL value to transmit.

**Value**—Integer in the range 1–255

**Default**— No value

**Editing Level**—Basic

`version` *version*—(Optional) Version number of NTP to use in outgoing NTP packets.

- Value**—Integer in the range 1–4
- Default**— No value
- Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Basic

# system ntp multicast-client

## Syntax

```
system ntp multicast-client {
    address;
}
```

## Hierarchy Level

```
[edit system ntp multicast-client]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Listen for NTP multicast messages on the local network to discover other servers on the same subnet.

## Options

*address*—(Optional) IP address(s). If you specify more than one address, the system joins those multicast groups.

**Value**—IP address

**Default**— No value

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Basic

# system ntp peer

## Syntax

```
system ntp peer address {
    key key;
    version version;
    prefer;
}
```

## Hierarchy Level

```
[edit system ntp peer]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure the C-series Controller to operate in symmetric active mode with the remote system at the specified address. In this mode, the C-series Controller and the remote system can synchronize with each other. This configuration is useful in a network in which either the local router or the remote system might be a better source of time.

## Options

`address address`— IP address of an NTP peer. Do not specify a hostname.

**Value**—IP address

`key key`—(Optional) Key number used to encrypt all authentication fields in packets sent to the specified address.

**Value**— Positive signed 32-bit integer (1–2147483647)

**Default**— No value

**Editing Level**—Basic

`version version`—(Optional) Version number of NTP to be used in outgoing packets.

**Value**—Integer in the range 1–4

**Default**— No value

**Editing Level**—Basic

`prefer`—(Optional) Remote system is the preferred host. This remote system is then selected for synchronization among a set of systems that are operating correctly.

**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Basic

# system ntp server

## Syntax

```
system ntp server address {
    key key;
    version version;
    prefer;
}
```

## Hierarchy Level

```
[edit system ntp server]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure the C-series Controller to operate in client mode with the remote system at the specified address. In this mode, the C-series Controller can be synchronized with the remote system, but the remote system can never be synchronized with the C-series Controller.

## Options

`address address`— IP address of an NTP server. Do not specify a hostname.

**Value**—IP address

`key key`—(Optional) Key number used to encrypt all authentication fields in packets sent to the specified address.

**Value**— Positive signed 32-bit integer (1–2147483647)

**Default**— No value

**Editing Level**—Basic

`version version`—(Optional) Version number of NTP to be used in outgoing packets.

**Value**—Integer in the range 1–4

**Default**— No value

**Editing Level**—Basic

`prefer`—(Optional) Remote system is the preferred host. This remote system is then selected for synchronization among a set of systems that are operating correctly.

**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Basic

# system radius-server

## Syntax

```
system radius-server address {
    port port;
    secret secret;
    timeout timeout;
    retry retry;
}
```

## Hierarchy Level

```
[edit system radius-server]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure RADIUS authentication. To use more than one RADIUS server, include a `radius-server` statement for each server. The software contacts the servers in order in a round-robin fashion until it receives a valid response from one of the servers or until the retry limit is reached for all servers.

To configure RADIUS for authentication, also include `radius` in the `authentication-order` option for the `system` statement.

For a user authenticated through RADIUS to be able to log in to the C-series Controller, you must create either a local profile or a remote profile to define common access privileges for all users authenticated through RADIUS or TACACS+. For information about creating user profiles, see the `system login user` statement.

## Options

`address address`— IP address of RADIUS server.

**Value**— IP address

`port port`—(Optional) [Alias: authentication-port ] Port number on which to connect to a RADIUS server.

**Value**—Integer in the range 0–65535

**Default**—1812

**Editing Level**—Basic

`secret` *secret*— Password to use with the RADIUS server. This secret password is used by the C-series Controller and must match the password on the RADIUS server.

**Value**— password  
**Editing Level**—Basic

`timeout` *timeout*—(Optional) Amount of time that the C-series Controller waits to receive a response from the RADIUS server.

**Value**—Integer in the range 1–90 s  
**Default**—3  
**Editing Level**—Basic

`retry` *retry*—(Optional) Number of times the C-series Controller tries to contact a RADIUS server.

**Value**—Integer in the range 1–10  
**Default**—3  
**Editing Level**—Basic

#### Required Privilege Level

system

#### Required Editing Level

Basic

## system services

### Syntax

```
system services {  
    telnet;  
}
```

### Hierarchy Level

```
[edit system services]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure system services.

### Options

`telnet`—(Optional) Allow Telnet connections from remote systems to the C-series Controller.

**Note:** Telnet connections do not allow access through `root`.

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

# system services editor

## Syntax

```
system services editor {
    password-encryption (crypt | md5 | sha | plain);
}
```

## Hierarchy Level

```
[edit system services editor]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure access properties for external access to the Policies, Services, and Subscribers Editor.

## Options

`password-encryption (crypt | md5 | sha | plain)`—(Optional) Encrypt the passwords of users who remotely access the Policies, Services, and Subscribers Editor using the specified encryption algorithm.

### Value

- `crypt`— UNIX crypt, a one-way encryption.
- `md5`— Message Digest 5 (MD5), a 128-bit message digest.
- `sha`— SHA message digest, a 160-bit message digest.
- `plain`— No encryption.

### Editing Level—Basic

## Required Privilege Level

system

## Required Editing Level

Basic

## system services editor policy-editor

### Syntax

```
system services editor policy-editor {  
    directory-eventing;  
}
```

### Hierarchy Level

```
[edit system services editor policy-editor]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Options

`directory-eventing`—(Optional) Enable policy editor to poll the directory for changes.

**Default**—true

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

# system services netconf

## Syntax

```
system services netconf {  
    ssh;  
}
```

## Hierarchy Level

```
[edit system services netconf]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Allow connections through NETCONF to the C-series Controller.

## Options

ssh—(Optional) Use SSH for NETCONF connections.

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Basic

## system services ssh

### Syntax

```
system services ssh {
    root-login (allow | deny | deny-password);
    protocol-version (v1 | v2);
}
```

### Hierarchy Level

```
[edit system services ssh]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Allow SSH requests from remote systems to the C-series Controller.

### Options

`root-login (allow | deny | deny-password)`—(Optional) Control user access through SSH.

#### Value

- `allow`— Allow users to login in to the C-series Controller as `root` through SSH.(Default)
- `deny`— Disable users from logging in to the C-series Controller as `root` through SSH.
- `deny-password`— Allow users to log in to the C-series Controller as `root` through SSH when the authentication method (for example, RSA authentication) does not require a password.

#### Editing Level—Basic

`protocol-version (v1 | v2)`—(Optional) SSH protocol versions accepted.

#### Value

- `v1`—SSH version 1

- v2—SSH version 2 (Default)

**Editing Level**—Basic**Required Privilege Level**

system

**Required Editing Level**

Basic

# system services web-management http

## Syntax

```
system services web-management http {
    port port;
    interface [interface...];
}
```

## Hierarchy Level

```
[edit system services web-management http]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Use HTTP without encryption.

## Options

`port port`—(Optional) TCP port to be used for incoming connections to the C-Web interface.

**Value**—Integer in the range 1–65535

**Default**—80

**Editing Level**—Basic

`interface [interface...]`—(Optional) List of network interfaces to accept incoming connections. If you do not specify any interfaces, the software accepts connections from all interfaces.

**Value**— Name of external interface, such as eth0.

**Editing Level**—Basic

## Required Privilege Level

system system

## Required Editing Level

Basic

# system services web-management https

## Syntax

```
system services web-management https {
    port port;
    interface [interface...];
    local-certificate local-certificate;
}
```

## Hierarchy Level

```
[edit system services web-management https]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Use secure HTTP with encryption.

## Options

`port port`—(Optional) TCP port to be used for incoming connections to the C-Web interface.

**Value**—Integer in the range 1–65535

**Default**—443

**Editing Level**—Basic

`interface [interface...]`—(Optional) List of network interfaces to accept incoming connections. If you do not specify any interfaces, the software accepts connections from all interfaces.

**Value**— Name of external interface, such as eth0.

**Editing Level**—Basic

`local-certificate local-certificate`—(Optional) Name of the security certificate (in X.509 format) on the local system. This certificate is used to secure connections from external Web browsers to the C-Web interface.

**Value**— Name of digital security certificate.

**Editing Level**—Basic

**Required Privilege Level**

system system

**Required Editing Level**

Basic

# system services web-management logger

## Syntax

```
system services web-management logger name ...
```

## Hierarchy Level

```
[edit system services web-management logger]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a logging component for the C-Web interface. Logging can be to a file or to the system logging utility.

## Options

*name* *name*— Name of a logging component.

**Value**—Text

## Required Privilege Level

system system

## Required Editing Level

Basic

## system services web-management logger *name* file

### Syntax

```
system services web-management logger name file {
    filter filter;
    filename filename;
    rollover-filename rollover-filename;
    maximum-file-size maximum-file-size;
}
```

### Hierarchy Level

```
[edit system services web-management logger name file]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure logging of messages to a file.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**— The default value is different for each type of component.

**Editing Level**—Basic

*filename filename*— Absolute path of the filename that contains the current logs.

**Note:** Make sure that the user under which the J2EE application server or Web application server runs has write access to this folder. If this user does not have write access to the default folder, configure the component or application to write logs in folders to which the user has write access.

**Value**— Filename

**Default**— By default, SRC components and applications write log files in the folder in which the component or application is started.

**Editing Level**—Basic

`rollover-filename rollover-filename`—(Optional) Absolute path of the filename that contains the log history. When the log file reaches the maximum size, the software closes the log file and renames it with the name you specify for the rollover file. If a previous rollover file exists, the software overwrites it. The software then reopens the log file and continues to save event messages in it.

**Value**— Path of filename

Example—`/opt/UMC/sae/var/log/sae.alt`

**Default**— The default value is different for each type of component.

**Editing Level**—Normal

`maximum-file-size maximum-file-size`—(Optional) Maximum size of the log file and the rollover file.

Do not set the maximum file size to a value greater than the available disk space.

**Value**—Integer in the range 0–2147483647 kbytes

**Default**— 1000000

**Editing Level**—Normal

## Required Privilege Level

system system

## Required Editing Level

Basic

## system services web-management logger *name* syslog

### Syntax

```
system services web-management logger name syslog {
    filter filter;
    host host;
    facility facility;
    format format;
}
```

### Hierarchy Level

```
[edit system services web-management logger name syslog]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure logging of messages to system logging.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**— The default value is different for each type of component.

**Editing Level**—Basic

*host host*— IP address or name of a host that collects event messages by means of a standard system logging daemon.

**Value**— IP address or hostname

**Default**—loghost

**Editing Level**—Basic

*facility facility*—(Optional) Type of system log in accordance with the system logging protocol.

**Value**—Integer in the range 0–23

**Default**— 3

**Editing Level**—Advanced

`format` *format*—(Optional) MessageFormat string that specifies how the information in an event message is printed. (The strings `{#}` are replaced with the log information [...]).

**Value**— MessageFormat string as specified in <http://java.sun.com/j2se/1.4.2/docs/api/java/text/MessageFormat.html>.

The fields available for events are:

- 0—Time and date of the event
- 1—Name of the thread generating the event
- 2—Text message of the event
- 3—Category of the event
- 4—Priority of the event

**Editing Level**—Advanced**Required Privilege Level**

system system

**Required Editing Level**

Basic

# system static-host-mapping

## Syntax

```
system static-host-mapping host-name {
    inet [inet...];
    alias [alias...];
}
```

## Hierarchy Level

```
[edit system static-host-mapping]
```

## Release Information

Statement introduced in SRC Release 2.0.0

## Description

Configure static mapping to resolve hostnames.

## Options

*host-name* *host-name*— Fully-qualified name of the system.

**Value**—Text

*inet* [*inet...*]—(Optional) [Alias: inet4 inet6 ] IP addresses to which you want to map the hostname.

**Value**—IP address

**Editing Level**—Basic

*alias* [*alias...*]—(Optional) Aliases for the hostname.

**Value**—Text

**Editing Level**—Basic

## Required Privilege Level

system system

## **Required Editing Level**

Basic

# system syslog file

## Syntax

```
system syslog file file-name ...
```

## Hierarchy Level

```
[edit system syslog file]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Specify a file to store information that has been collected.

## Options

*file-name file-name*— Name of the file in which to log system messages.

**Value**— filename

## Required Privilege Level

system

## Required Editing Level

Basic

## system syslog file *file-name*

### Syntax

```
system syslog file file-name (any | authorization | daemon | ftp | kernel | user
| local7) {
    (any | emergency | alert | critical | error | warning | notice | info |
none);
}
```

### Hierarchy Level

```
[edit system syslog file file-name]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the message groups and severity level of messages to be forwarded to a specified file, host, or user.

### Options

Group of messages that are either generated by the same software process or concern a similar condition or activity (such as authentication attempts). A message group is referred to as a facility.

### Value

- *any*— Messages from all facilities.
- *authorization*— Authentication and authorization attempts.
- *daemon*— Actions performed or errors encountered by various system processes.
- *ftp*— Actions performed or errors encountered by an FTP process.
- *kernel*— Actions performed or errors encountered by the kernel.
- *user*— Actions performed or errors encountered by various user processes.
- *local7*— Actions performed or errors encountered by different SRC processes.

Severity level

### Value

- **any**— Messages for all severity levels.
- **emergency**— System panic or other condition that causes the system to stop functioning.
- **alert**— Conditions that require immediate correction.
- **critical**— Critical conditions, such as hard drive errors.
- **error**— Error conditions that generally have less serious consequences than errors in the emergency, alert, and critical levels.
- **warning**— Conditions that warrant monitoring.
- **notice**— Conditions that are not errors but might warrant special handling.
- **info**— Events or nonerror conditions of interest.
- **none**— Messages are not generated for any condition.

**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Basic

# system syslog host

## Syntax

```
system syslog host log-host-name ...
```

## Hierarchy Level

```
[edit system syslog host]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure the IP address or hostname of the remote host to receive system log messages. The remote machine must be running a standard syslogd utility.

## Options

*log-host-name log-host-name*— IP address or hostname of a remote system to receive system log messages. The remote machine must be running a standard syslogd utility.

**Value**— IP address or hostame

## Required Privilege Level

system

## Required Editing Level

Basic

## system syslog host *log-host-name*

### Syntax

```
system syslog host log-host-name (any | authorization | daemon | ftp | kernel |
user | local7) {
    (any | emergency | alert | critical | error | warning | notice | info |
none);
}
```

### Hierarchy Level

```
[edit system syslog host log-host-name]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the message groups and severity level of messages to be forwarded to a specified file, host, or user.

### Options

Group of messages that are either generated by the same software process or concern a similar condition or activity (such as authentication attempts). A message group is referred to as a facility.

#### Value

- *any*— Messages from all facilities.
- *authorization*— Authentication and authorization attempts.
- *daemon*— Actions performed or errors encountered by various system processes.
- *ftp*— Actions performed or errors encountered by an FTP process.
- *kernel*— Actions performed or errors encountered by the kernel.
- *user*— Actions performed or errors encountered by various user processes.
- *local7*— Actions performed or errors encountered by different SRC processes.

Severity level

#### Value

- any— Messages for all severity levels.
- emergency— System panic or other condition that causes the system to stop functioning.
- alert— Conditions that require immediate correction.
- critical— Critical conditions, such as hard drive errors.
- error— Error conditions that generally have less serious consequences than errors in the emergency, alert, and critical levels.
- warning— Conditions that warrant monitoring.
- notice— Conditions that are not errors but might warrant special handling.
- info— Events or nonerror conditions of interest.
- none— Messages are not generated for any condition.

**Editing Level**—Basic**Required Privilege Level**

system

**Required Editing Level**

Basic

# system syslog user

## Syntax

```
system syslog user user-name ...
```

## Hierarchy Level

```
[edit system syslog user]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Notify a specified user by means of a terminal session.

## Options

*user-name user-name*— Name of user to receive messages.

**Value**— Username

## Required Privilege Level

system

## Required Editing Level

Basic

## system syslog user *user-name*

### Syntax

```
system syslog user user-name (any | authorization | daemon | ftp | kernel | user
| local7) {
    (any | emergency | alert | critical | error | warning | notice | info |
none);
}
```

### Hierarchy Level

```
[edit system syslog user user-name]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the message groups and severity level of messages to be forwarded to a specified file, host, or user.

### Options

Group of messages that are either generated by the same software process or concern a similar condition or activity (such as authentication attempts). A message group is referred to as a facility.

### Value

- *any*— Messages from all facilities.
- *authorization*— Authentication and authorization attempts.
- *daemon*— Actions performed or errors encountered by various system processes.
- *ftp*— Actions performed or errors encountered by an FTP process.
- *kernel*— Actions performed or errors encountered by the kernel.
- *user*— Actions performed or errors encountered by various user processes.
- *local7*— Actions performed or errors encountered by different SRC processes.

Severity level

### Value

- **any**— Messages for all severity levels.
- **emergency**— System panic or other condition that causes the system to stop functioning.
- **alert**— Conditions that require immediate correction.
- **critical**— Critical conditions, such as hard drive errors.
- **error**— Error conditions that generally have less serious consequences than errors in the emergency, alert, and critical levels.
- **warning**— Conditions that warrant monitoring.
- **notice**— Conditions that are not errors but might warrant special handling.
- **info**— Events or nonerror conditions of interest.
- **none**— Messages are not generated for any condition.

**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Basic

# system tacplus-server

## Syntax

```
system tacplus-server {
    address [address...];
    secret secret;
}
```

## Hierarchy Level

```
[edit system tacplus-server]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure TACACS+ authentication.

To configure TACACS+ for authentication, also include `tacplus` in the `authentication-order` option for the `system` statement.

For a user authenticated through TACACS+ to be able to log into the C-series Controller, you must create either a local profile or a remote profile to define common access privileges for all users authenticated via RADIUS or TACACS+. For information about creating user profiles, see the `system login user` statement.

## Options

`address [address...]`— Address of TACACS+ authentication server.

**Value**— IP address

**Default**— No value

**Editing Level**—Basic

`secret secret`— Password to use with the RADIUS or TACACS+ server. The secret password used by the C-series Controller must match that used by the server.

**Value**—Secret text

**Default**— No value

**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Basic

# top

## Syntax

top <command>

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Return to the top level of the configuration hierarchy, which is indicated by the [edit] banner.

## Options

*command*—(Optional) Name of command to run from the top of configuration hierarchy.

**Note:** The following commands are not supported: **exit**, **rollback**, **run**, **top**

**Value**— Name of command to run

**Default**— No value

## Required Privilege Level

No specific privilege required.

# up

## Syntax

up <*number*>

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Move up in the hierarchy of configuration statements.

## Options

*number*—(Optional) Number of levels to move up in the hierarchy.

**Value**—Integer in the range 1–2147483647

**Default**—1

## Required Privilege Level

No specific privilege required.

# compare

## Syntax

```
compare <filename>
```

## Release Information

Command introduced in SRC Release 3.1.0

## Description

Display comparison of configuration changes to the active (running) configuration.

## Options

*filename*—(Optional) Name of file that contains the configuration changes. This file must be in plain-text format.

**Value**—Text

## Required Privilege Level

No specific privilege required.

# **count**

## **Syntax**

count

## **Release Information**

Command introduced in SRC Release 1.0.0

## **Description**

Indicate number of occurrences.

## **Required Privilege Level**

No specific privilege required.

# display

## Syntax

display (changed | running | hierarchy)

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display additional information.

## Options

Type of information to display.

### Value

- **changed**— Tag attributes with value changes.
- **running**— Display the most recently committed configuration.
- **hierarchy**— Display the configuration in a complete hierarchy from the top.

## Required Privilege Level

No specific privilege required.

# display

## Syntax

```
display level level
```

## Release Information

Command introduced in SRC Release 2.0.0

## Description

Display additional information.

## Options

*level level*— Display output for a hierarchy level, as indicated by the number of the hierarchy level. For example, NIC, SAE and ACP would be at hierarchy level 1.

**Value**—Integer in the range 0–2147483647

**Default**—1

## Required Privilege Level

No specific privilege required.

# display

## Syntax

```
display (xml)
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display additional information.

## Options

Type of information to display.

### Value

- `xml` — Display information as XML tags.

## Required Privilege Level

No specific privilege required.

# except

## Syntax

`except pattern`

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display text that does not match the specified pattern.

## Options

*pattern*— Pattern to hide.

**Value**— Text that forms the pattern.

## Required Privilege Level

No specific privilege required.

# find

## Syntax

```
find pattern
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Search for first occurrence of a specified pattern.

## Options

*pattern*— Pattern to locate.

**Value**— Text that forms the pattern.

## Required Privilege Level

No specific privilege required.

# last

## Syntax

```
last <lines>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display the last part of the output.

## Options

*lines*—(Optional) Number of lines from the last line backward.

**Value**—Integer in the range 0–2147483647

**Default**—10

## Required Privilege Level

No specific privilege required.

# match

## Syntax

```
match pattern
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display text that matches the specified pattern.

## Options

*pattern*— Pattern to match.

**Value**— Pattern to locate.

## Required Privilege Level

No specific privilege required.

## **no-more**

### **Syntax**

no-more

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Do not paginate output.

### **Required Privilege Level**

No specific privilege required.

# save

## Syntax

`save filename`

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Save output text to file.

## Options

*filename*— Name or URL of file to which to save output.

**Value**— Filename or URL

## Required Privilege Level

No specific privilege required.

# clear security certificate

## Syntax

```
clear security certificate <identifier identifier>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Delete a digital certificate from the system.

## Options

*identifier identifier*—(Optional) Name of a local digital certificate.

**Value**—*Certificate name*

## Required Privilege Level

security

# clear security certificate-request

## Syntax

```
clear security certificate-request <file-name file-name>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Delete a certificate request on the system.

## Options

*file-name file-name*—(Optional) Name of certificate signing request file. This file is stored in the /tmp directory and has the file-extension .csr.

**Value**—*filename*

**Default**—certreq

## Required Privilege Level

security

# clear security ssh

## Syntax

```
clear security ssh known-host known-host
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Clear (delete) cached SSH data.

## Options

`known-host known-host`— Name of known host to remove

**Value**— Hostname

## Required Privilege Level

security

# configure

## Syntax

```
configure <exclusive>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Enter configuration mode. In configuration mode, you enter hierarchical statements to define properties for the SRC software.

## Alias

edit

## Options

**exclusive**—(Optional) If you enter configuration mode with the exclusive lock on, you lock the candidate global configuration for as long as you remain in configuration mode.

## Required Privilege Level

configure

# disable

## Syntax

```
disable component component
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Stop an SRC component that is running on the system.

## Options

*component component*— Name of SRC component to stop.

To see a list of installed components, use the `show component` command.

**Value**— Component name

## Required Privilege Level

reset

# enable

## Syntax

```
enable component component
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Start a specified SRC component that is installed on the system.

## Options

*component component*— Name of SRC component to start.

**Value**— Component name

## Required Privilege Level

reset

# **exit**

## **Syntax**

exit

## **Release Information**

Command introduced in SRC Release 1.0.0

## **Description**

Exit from the CLI session. If a session was established through SSH, you return to the local environment; if the session was established through Telnet or from a console, you return to the login prompt.

## **Alias**

quit

## **Required Privilege Level**

No specific privilege required.

# file archive

## Syntax

```
file archive <compress> source source destination destination
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Create an archive file on a C-series Controller.

## Options

**compress**—(Optional) Compress an archive file by using the GNU `gzip` utility to create a TGZ file.

**source** *source*— Directory path to archive.

**Value**— Directory path

**destination** *destination*— Name of archive file to be created.

**Value**— Filename

## Required Privilege Level

maintenance

## file checksum md5

### Syntax

```
file checksum md5 path
```

### Release Information

Command introduced in SRC Release 1.0.0

### Description

Calculate an MD5 checksum of a file on a C-series Controller.

### Options

*path*— Directory path of the file.

**Value**— Directory path

### Required Privilege Level

maintenance

# file compare

## Syntax

```
file compare < (context | unified) > <ignore-white-space> files from-file to-file
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Compare files on a C-series Controller.

## Options

(Optional)

### Value

- **context**— Output shows the context for differences between the files. It shows which line was changed in one line listing, then the change for the line in a second line listing.
- **unified**— Output shows the differences between files in a unified format. A single listing of line numbers shows the line on which a change occurred, then the changed text.

**ignore-white-space**—(Optional) Differences in amount of white space ignored.

***from-file***—File to compare

**Value**— Filename

***to-file***—File to compare

**Value**— Filename

## Required Privilege Level

maintenance

# file copy

## Syntax

`file copy source destination`

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Copy files.

## Options

*source*— Source URL of file to copy.

**Value**— FTP or file URL

*destination*— Destination URL of file to copy.

**Value**— FTP or file URL

## Required Privilege Level

maintenance

# file create

## Syntax

```
file create filename <encoding (base64) > content content
```

## Release Information

Command introduced in SRC Release 3.1.0

## Description

Create a file with the provided content

## Options

*filename*— The filename must be created in an existing directory that is writable by the logged in user. If the name of an existing file is selected, the existing file will be overwritten.

**Value**—Text

encoding (base64) —(Optional) Type of content encoding.

**Value**

- base64— Content is base64 encoded and will be decoded before content is written to file.

content *content*— When using the CLI, the content can be provided in a "here-document" using "< < EOF". The here-document ends when *EOF* is entered on a line by itself. *EOF* is an arbitrary string.

**Value**—Text

## Required Privilege Level

maintenance

# file delete

## Syntax

```
file delete file
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Delete a file on a C-series Controller.

## Options

*file*— File to delete.

**Value**— Filename

## Required Privilege Level

maintenance

# file list

## Syntax

```
file list <recursive> <detail> <path>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

List files in a directory on a C-series Controller.

## Options

*recursive*—(Optional) Create recursive listing of files.

*detail*—(Optional) Provide information about the files in a listing of files, such as modification date and file size.

*path*—(Optional) Path to the directory in which you list files.

**Value**— Pathname

## Required Privilege Level

maintenance

# file monitor

## Syntax

```
file monitor filename
```

## Release Information

Command introduced in SRC Release 2.0.0

## Description

Show online updates of a file

## Options

*filename*—Filename to monitor

**Value**—Text

## Required Privilege Level

maintenance

# file rename

## Syntax

```
file rename source destination
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Rename a file on a C-series Controller.

## Options

*source*— File to rename.

**Value**— Filename

*destination*— New name for file to be renamed.

**Value**— Filename

## Required Privilege Level

maintenance

# file show

## Syntax

```
file show <encoding (base64) > filename
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display content of a file.

## Options

`encoding (base64)` —(Optional) Type of file encoding.

### Value

- `base64` — File has base64 encoding.

*filename* — Name of file for which to display content.

**Value** — Filename

## Required Privilege Level

maintenance

# ipmisol close local-session

## Syntax

```
ipmisol close local-session
```

## Release Information

Command introduced in SRC Release 2.0.0

## Description

Close the active IPMI connection to the local host. At any time, only one IPMI Serial-Over-LAN connection to an IPMI interface is allowed.

## Required Privilege Level

network

# ipmisol close remote-session

## Syntax

```
ipmisol close remote-session host host user user
```

## Release Information

Command introduced in SRC Release 2.0.0

## Description

Close the active IPMI connection to a specific remote host. At any time, only one IPMI Serial-Over-LAN connection to an IPMI interface is allowed.

## Options

`host host`— IP address of IPMI interface on the remote host.

**Value**— IP address

`user user`— IPMI username configured on the remote host.

**Value**— Username

## Required Privilege Level

network

# ipmisol open

## Syntax

```
ipmisol open host host user user
```

## Release Information

Command introduced in SRC Release 2.0.0

## Description

Open a remote serial console using IPMI Serial-Over-LAN. The remote system must have IPMI configured.

## Options

`host host`— IP address of IPMI interface on the remote host.

**Value**— IP address

`user user`— IPMI username configured on the remote host.

**Value**— Username

## Required Privilege Level

network

# ping

## Syntax

```
ping <count count> <interval interval> <interface interface> <no-resolve> <tos
tos> <ttl ttn> <size size> <pattern pattern> host
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Determine whether a remote host is reachable by sending ping requests to the remote host.

## Options

`count count`—(Optional) Number of ping requests to send.

**Value**—Integer in the range 1–2000000000 packets

`interval interval`—(Optional) Interval between ping requests.

**Value**—Integer in the range 1–2147483647 s

`interface interface`—(Optional) Interface from which to send a ping request.

**Value**— Interface name; for example, eth0.

`no-resolve`—(Optional) Do not display symbolic addresses in command output.

`tos tos`—(Optional) Value of IP type-of-service byte.

**Value**—Integer in the range 0–255

`ttn ttn`—(Optional) Maximum number of hops between the source and the destination.

**Value**— Number of hops

*size size*—(Optional) Number of bytes of data to be sent.

**Value**—Integer in the range 0–65468

**Default**— 56. This value translates to 64 ICMP bytes that includes the 8 bytes for ICMP header data.

*pattern pattern*—(Optional) Number of bytes to fill, or pad, the packet to send. You can use this option to diagnose data-dependent problems in a network. For example, pattern ff causes all ones to fill the sent packet.

**Value**— Hexadecimal fill pattern. Up to 16 bytes to fill the packet to send.

*host*— IP address or hostname of remote host.

**Value**— IP address or hostname

### Required Privilege Level

network

# request disk disable

## Syntax

```
request disk disable <device device>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Disable a specified disk in the disk mount.

## Options

`device device`—(Optional) Number assigned to the disk to be disabled, 0 or 1.

**Value**—Integer in the range 0–1

**Default**—0

## Required Privilege Level

maintenance

# request disk enable

## Syntax

```
request disk enable <device device>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Enable a a specified disk in the disk mount.

## Options

`device device`—(Optional) Number assigned to the disk to be enabled, 0 or 1.

**Value**—Integer in the range 0–1

**Default**—0

## Required Privilege Level

maintenance

# request disk identify

## Syntax

```
request disk identify <device device>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Turn on LED blinking for a specified disk on a C-series Controller to identify which disk is disk 0 and which is disk 1.

## Options

`device device`—(Optional) Number assigned to a disk, 0 or 1.

**Value**—Integer in the range 0–1

**Default**—0

## Required Privilege Level

maintenance

# request disk initialize

## Syntax

```
request disk initialize <device device> <force>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Initialize a specified disk in the disk mount.

## Options

`device device`—(Optional) Number assigned to the disk to be initialized, 0 or 1.

**Value**—Integer in the range 0–1

**Default**—0

`force`—(Optional) Initialize a specified disk.

**Note:**When you run this command and specify a disk that contains data, the command initializes the disk and the data on the disk is lost.

## Required Privilege Level

maintenance

# request ipmi power

## Syntax

```
request ipmi power (on | off | soft-off | reset | cycle)
```

## Release Information

Command introduced in SRC Release 3.0.0

## Description

Execute an IPMI power command.

## Options

### Value

- `on`— Power up a C-series Controller.
- `off`— Power down a C-series Controller. This command does not initiate a clean shutdown of the operating system prior to powering down the system.
- `soft-off`— Power down a C-series Controller softly. This command initiates a soft shutdown of the operating system prior to powering down the system.
- `reset`— Perform a hard reset on a C-series Controller.
- `cycle`— Power off and then power on a C-series Controller.

## Required Privilege Level

maintenance

# request network discovery

## Syntax

```
request network discovery network network <community community>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Discover all manageable network elements in an IP subnet. The devices must be online and respond to SNMP queries.

## Options

`network network`— Address of the network to discover

**Value**— Address in dotted decimal notation

- Individual host—`###.###`
- Complete network—`###.###/###`

`community community`—(Optional) Name of SNMP community

**Value**— SNMP community name

**Default**—public

## Required Privilege Level

network

# request security enroll

## Syntax

```
request security enroll <subject subject> <password password> url url ca-  
identifier ca-identifier identifier identifier
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Request that the certificate authority (CA) automatically sign the certificate request for the specified subject and challenge password and enroll the certificate through the Simple Certificate Enrollment Protocol (SCEP). Use the `request security get-ca-certificate` command to generate the certificate request.

## Options

`subject subject`—(Optional) Name (as defined in the X.509 standard for public key infrastructure) used in the certificate name field. If you do not specify a value for `subject`, the SRC software uses the unqualified hostname of the system in the format `cn = hostname`. You can specify one subject for a certificate.

**Value**— Distinguished name in the format: `cn = name`.

### Example

```
cn=sdx1,ou=pop,o=Juniper,l=kanata, st=ontario,c=Canada
```

`password password`—(Optional) Password on the CA for the specified subject. If you do not enter a password, the system prompts you for one.

**Value**— `password`

`url url`— URL of certificate authority (which is the SCEP server).

**Value**— `URL`

`ca-identifier ca-identifier`— Identifier that designates the certificate authority. Use the value provided by the CA.

**Value**— *CA identifier*

*identifier identifier*— Local name of a digital certificate.

**Value**— *Certificate name*

### Required Privilege Level

security

# request security generate-certificate-request

## Syntax

```
request security generate-certificate-request <subject subject> <password
password> <file-name file-name> <encoding (binary | pem) >
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Create a self-signed certificate and a certificate signing request. You send the the certificate signing request file to a certificate authority (CA) for signing. Use the `request security import-certificate` command to import the issued certificate.

## Options

**subject** *subject*—(Optional) Name (as defined in the X.509 standard for public key infrastructure) used in the certificate name field. If you do not specify a value for **subject**, the SRC software uses the unqualified hostname of the system in the format `cn = hostname`. You can specify one subject for a certificate.

**Value**— Distinguished name in the format: `cn = name`.

### Example

```
cn=sdx1,ou=pop,o=Juniper,l=kanata, st=ontario,c=Canada
```

**password** *password*—(Optional) Password on the CA for the specified subject. If you do not enter a password, the system prompts you for one.

**Value**— *password*

**file-name** *file-name*—(Optional) Name of certificate signing request file. This file is stored in the `/tmp` directory with the file-extension `.csr`.

**Value**— *filename*

**Default**—`certreq`

encoding (binary | pem) —(Optional) Type of encoding used by the certificate signing request.

**Value**

- binary— Binary encoding
- pem— Privacy enhanced mail encoding

**Default**—pem

**Required Privilege Level**

security

# request security get-ca-certificate

## Syntax

```
request security get-ca-certificate url url ca-identifier ca-identifier
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Request a certificate authority (CA) certificate through the Simple Certificate Enrollment Protocol (SCEP). After you request the certificate, use the `request security enroll` command to request digital certificates from this CA.

## Options

`url url`— URL of certificate authority (which is the SCEP server).

**Value**— *URL*

`ca-identifier ca-identifier`— Identifier that designates the certificate authority. The identifier is not the name of the certificate authority.

**Value**— *Identifier*

## Required Privilege Level

security

# request security import-certificate

## Syntax

```
request security import-certificate file-name file-name identifier identifier
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Import a digital certificate from a file. Run the `request security generate-certificate-request` command first to create a certificate signing request that you manually submit to the CA for signing.

## Options

`file-name file-name`— Name of the certificate file.

**Value**— *filename*

`identifier identifier`— Name of a local digital certificate.

**Value**— *Certificate name*

## Required Privilege Level

security

# request support information

## Syntax

```
request support information <days> < (acp | activity | agent | cli | appsvr |
diameter | dsa | extsubmon | ims | jdb | jps | licSvr | nic | redir | sae |
webadm) >
```

## Release Information

Command introduced in SRC Release 3.1.0

## Description

Collects information about components.

## Options

*days*—(Optional) Range of days for which information is collected. Files modified before this range are ignored.

**Value**—Integer in the range 1–36500

**Default**—7

(Optional) Components from which diagnostic information will be collected.

## Value

- *acp*— Collects information from SRC ACP
- *activity*— Collects information from Activity Monitor
- *agent*— Collects information from the SNMP agent
- *cli*— Collects information from the CLI
- *appsvr*— Collects information from the application server
- *diameter*— Collects information from Diameter application
- *dsa*— Collects information from Dynamic Service Activator
- *extsubmon*— Collects information from External Subscriber Monitor
- *ims*— Collects information from IP multimedia subsystem (IMS)
- *jdb*— Collects information from Juniper Networks database
- *jps*— Collects information from Juniper Policy Server (JPS)
- *licSvr*— Collects information from the license server
- *nic*— Collects information from the network information collector (NIC)
- *redir*— Collects information from the Redirect Server
- *sae*— Collects information from the SAE

- `webadm`— Collects information from the C-Web interface

**Required Privilege Level**

view

# request system halt

## Syntax

```
request system halt <force>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Stop system processes and halt the operating system.

## Alias

poweroff

## Options

`force`—(Optional) Stop the system without first performing a shutdown.

## Required Privilege Level

maintenance

# request system install

## Syntax

```
request system install url url package package
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Install a specified SRC component.

## Options

`url url`— URL of an SRC installable image. The URL can be one of the following:

- `usb:`—Local USB disk
- `ftp://host/path`—Path on an FTP site or on the local system

**Value**— URL

`package package`— Name of the SRC package to install.

**Value**— Package name

## Required Privilege Level

maintenance

# request system reboot

## Syntax

```
request system reboot <force>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Shut down then restart the C-series Controller.

## Options

`force`—(Optional) Restart the C-series Controller without first performing a system shutdown.

## Required Privilege Level

maintenance

# request system restore

## Syntax

```
request system restore
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Restore the root file system from a previously taken snapshot.

**Note:** The system will reboot twice while the snapshot is being restored.

## Required Privilege Level

maintenance

# request system snapshot

## Syntax

```
request system snapshot <verbose>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Create a backup copy of the root file system.

After you issue the command, you cannot return to the previous version of the software because the running and backup copies of the software are identical.

## Options

`verbose`—(Optional) Display detailed messages during the backup process.

## Required Privilege Level

maintenance

# request system uninstall

## Syntax

```
request system uninstall package package
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Remove an SRC package that is installed on the system.

## Options

`package package`— Name of the SRC package to remove.

**Value**— Package name

## Required Privilege Level

maintenance

# request system upgrade

## Syntax

```
request system upgrade url url <package package> <no-reboot>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Upgrade the SRC software.

## Options

`url url`—URL of an SRC installable image. The URL can be one of the following:

- `usb:`—Local USB disk
- `ftp://host/path`—Path on an FTP site or on the local system

**Value**— URL

`package package`—(Optional) Name of an SRC package to upgrade.

**Value**— Package name

`no-reboot`—(Optional) Do not reboot after upgrade

## Required Privilege Level

maintenance

# restart

## Syntax

```
restart component component < (gracefully | immediately | soft) >
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Restart an SRC component that is running on the system.

## Options

*component* *component*— Name of SRC component to restart.

**Value**— Name of component

(Optional) Method to use to restart component.

### Value

- *gracefully*— Shutdown the component, then start it again.
- *immediately*— Send a signal kill (SIGKILL) signal to immediately stop the component, then start it again.
- *soft*— Send a signal hangup (SIGHUP) signal to the process for the component to restart the component.

**Default**—*gracefully*

## Required Privilege Level

reset

# set cli complete-on-space

## Syntax

```
set cli complete-on-space (on | off)
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Set the CLI to complete a partial command entry when you type a space. This command enables command completion for the current user session.

To enable command completion for all user sessions for a specified user, use the **system login user** statement.

## Options

Command completion

### Value

- **on**— Turn on command completion to allow a space to be used for command completion.
- **off**— Turn off command completion; a space after a partial command name does not complete the command.

## Required Privilege Level

No specific privilege required.

# set cli directory

## Syntax

```
set cli directory directory
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Set the path of the working directory.

## Options

*directory*— Pathname of working directory.

**Value**— Directory path

## Required Privilege Level

No specific privilege required.

# set cli language

## Syntax

```
set cli language <language>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Set the language and encoding appropriate to your terminal environment.

## Options

*language*—(Optional) Language and encoding.

**Value**— Language and encoding in the format 2-character language code (lower case)\_2-character country code (upper case). encoding. For example, en\_US.UTF8.

**Default**—en\_US.UTF8

## Required Privilege Level

No specific privilege required.

# set cli level

## Syntax

```
set cli level (basic | normal | advanced | expert)
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Set the access level for the CLI commands. The access level controls the number of commands and configuration statements accessible to the user.

## Options

Editing level

### Value

- **basic**— Minimal set of configuration statements and commands. Only the statements that must be configured are visible.
- **normal**— Normal set of configuration statements and commands. The common and basic statements are visible.
- **advanced**— All configuration statements and commands, including the common and basic ones, are visible.
- **expert**— All configuration statements, including common, basic, and internal statements and commands used for debugging are visible.

## Required Privilege Level

No specific privilege required.

## **set cli password**

### **Syntax**

```
set cli password
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Change the current password that is used to access the CLI.

### **Required Privilege Level**

No specific privilege required.

# set cli prompt

## Syntax

```
set cli prompt cli-prompt
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Set the prompt that is displayed within the CLI.

## Options

*cli-prompt*— Characters that appear at the CLI prompt.

Specify the characters \> to have > appear at the end of the prompt in operational mode and # at the end of the prompt in configuration mode.

**Value**— Text to appear at prompt

## Required Privilege Level

No specific privilege required.

## set cli screen-length

### Syntax

```
set cli screen-length length
```

### Release Information

Command introduced in SRC Release 1.0.0

### Description

Set the number of lines to appear on the screen.

### Options

*length*— Number of lines to appear on a CLI screen. If the terminal supports reporting the screen size the screen size reported by the terminal takes precedence.

**Value**—Integer in the range 5–100000

### Required Privilege Level

No specific privilege required.

# set cli screen-width

## Syntax

```
set cli screen-width width
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Set the screen width in number of columns to appear on the screen.

## Options

*width*— Number of columns to appear on a CLI screen. If the terminal supports reporting the screen size the screen size reported by the terminal takes precedence.

**Value**—Integer in the range 0–100000

## Required Privilege Level

No specific privilege required.

# set cli terminal

## Syntax

```
set cli terminal (ansi | vt100 | xterm | dumb)
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Set the terminal type.

## Options

Terminal type

### Value

- `ansi`—ANSI-compatible terminal
- `vt100`—VT100-compatible terminal
- `xterm`—Xterm window
- `dumb`—Dumb terminal

## Required Privilege Level

No specific privilege required.

# set date

## Syntax

```
set date time
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Set the system date and time.

## Options

*time*— System date and time.

**Value**— System date and time in the format YYYYMMDDhhmm.ss in which:

- YYYY—Year. Contains 4 digits.
- mm—Month. A number 1–12.
- DD—Day. A number 1–31
- mm—Minute. A number 0–59.
- ss—Second. A number 0–59.

For example, to enter the time 12:15 and 30 seconds on October 30, 2006  
enter 200610301215.30.

## Required Privilege Level

maintenance

# set date ntp

## Syntax

```
set date ntp servers
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Use NTP to set the date and time for the C-series Controller.

> **Note:** For normal operation, we strongly recommended that you configure NTP to maintain local time. For additional information, see the **system ntp** configuration statement.

If NTP is enabled it is not possible to set the time manually.

## Options

*servers*— List of the IP addresses of NTP servers to use.

**Value**— IP address(es)

## Required Privilege Level

maintenance

# show cli

## Syntax

```
show cli
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display properties that have been set to control the CLI environment.

## Required Privilege Level

No specific privilege required.

## **show cli authorization**

### **Syntax**

```
show cli authorization
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Identify the user logged in to the CLI session, and display the user's privilege level, the user's permissions to run specified operational and configuration commands, and the user's authorization to run commands.

### **Required Privilege Level**

No specific privilege required.

# show cli directory

## Syntax

```
show cli directory
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display the current working directory.

## Required Privilege Level

No specific privilege required.

## **show cli level**

### **Syntax**

```
show cli level
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Display the current access level.

### **Required Privilege Level**

No specific privilege required.

# show component

## Syntax

```
show component
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display information and status for SRC components installed.

## Required Privilege Level

maintenance

# show configuration

## Syntax

```
show configuration <object>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display information about the SRC configuration.

## Options

*object*—(Optional) Object for which to display information.

**Value**—Path of a configuration object

## Required Privilege Level

config-view

# show date

## Syntax

```
show date
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display the time and date set on the system.

## Alias

```
time
```

## Required Privilege Level

No specific privilege required.

# **show disk status**

## **Syntax**

```
show disk status <brief>
```

## **Release Information**

Command introduced in SRC Release 1.0.0

## **Description**

Display status information.

## **Options**

`brief`—(Optional) Display summary information.

## **Required Privilege Level**

view

# show interfaces

## Syntax

```
show interfaces <interface-name>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display information about interfaces configured on a C-series Controller, including but not limited to interface address, information about packets sent, and information about packets received.

## Options

*interface-name*—(Optional) Name of an interface

**Value**— Interface name; for example eth0. If you do not specify an interface name, the command displays information for all interfaces.

**Default**— No value

## Required Privilege Level

network

## **show ipmi chassis**

### **Syntax**

```
show ipmi chassis
```

### **Release Information**

Command introduced in SRC Release 3.0.0

### **Description**

Display IPMI chassis information.

### **Required Privilege Level**

view

# show ipmi power

## Syntax

```
show ipmi power
```

## Release Information

Command introduced in SRC Release 3.0.0

## Description

Display the power status (on/off) of a specified C-series Controller through IPMI.

## Required Privilege Level

view

# show iptables

## Syntax

```
show iptables < (nat | filter | mangle) > <reset-counters>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display information about the iptables Linux tool.

## Options

(Optional) Type of information to display.

### Value

- `nat`— Display information for the nat table for the iptables tool. The nat table provides rules for rewriting packet addresses.
- `filter`— Display information for the filter table for the iptables tool. The filter table provides rules for defining packet filters.
- `mangle`— Display information for the mangle table for the iptables tool. The mangle table provides rules for adjusting packet options, such as quality of service.

`reset-counters`—(Optional) Reset counters of the items in output.

## Required Privilege Level

view

# show ntp associations

## Syntax

```
show ntp associations <no-resolve>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display NTP peers and their state.

## Options

`no-resolve`—(Optional) Suppress symbolic addressing.

## Required Privilege Level

view

## **show ntp statistics**

### **Syntax**

```
show ntp statistics <no-resolve>
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Display information about NTP.

### **Options**

`no-resolve`—(Optional) Suppress symbolic addressing.

### **Required Privilege Level**

view

# show ntp status

## Syntax

```
show ntp status <no-resolve>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display the values of internal variables returned by NTP peers.

## Options

`no-resolve`—(Optional) Suppress symbolic addressing.

## Required Privilege Level

view

# show route

## Syntax

```
show route <no-resolve> <detail>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display information from the routing table.

## Options

`no-resolve`—(Optional) Do not display symbolic addresses in command output.

`detail`—(Optional) Display detailed output.

## Required Privilege Level

network

# show security certificate

## Syntax

```
show security certificate <trusted>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display information about the certificates stored on the local system.

## Options

`trusted`—(Optional) Display information about certificate authority (CA) certificates.

## Required Privilege Level

security

## **show system boot-messages**

### **Syntax**

```
show system boot-messages
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Display system messages generated during system startup.

### **Required Privilege Level**

view

# show system information

## Syntax

```
show system information
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display information about the system. The command output includes the system hostname, information about the system hardware, the version of the SRC software installed on the system.

## Required Privilege Level

No specific privilege required.

## **show system snapshot**

### **Syntax**

```
show system snapshot
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Show information of existing system snapshot

### **Required Privilege Level**

view

# show system users

## Syntax

```
show system users <brief> <no-from>
```

## Release Information

Command introduced in SRC Release 1.1.0

## Description

Show users who are currently logged in

## Options

`brief`—(Optional) Use the short format

`no-from`—(Optional) Do not show the FROM field

## Required Privilege Level

view

# ssh

## Syntax

```
ssh host host < (v1 | v2) >
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Open an SSH session to another host.

## Options

*host host*— Hostname or IP address of the remote host. You can specify a username by using the format *user@host* for *host*. If you do not specify a username, the command uses the username of the current user.

**Value**— Hostname, IP address, *user@hostname*, or *user@IP address*

(Optional) SSH version

### Value

- v1— Use SSH version 1.
- v2— Use SSH version 2.

### Default—

## Required Privilege Level

network

# start shell

## Syntax

```
start shell (csh | sh | bash)
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Set type of shell to start.

## Options

Type of shell to start.

### Value

- `csh`— C shell
- `sh`— Bourne-style shell
- `bash`— GNU Bourne shell

**Default**—`csh`

## Required Privilege Level

shell maintenance

# telnet

## Syntax

```
telnet host [<port port>]
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Open a Telnet session to another host.

## Options

*host*— Hostname or address of the remote host.

**Value**— Hostname or IP address

*port port*—(Optional) Port number or service name on the remote host.

**Value**— Port number

## Required Privilege Level

network

# traceroute

## Syntax

```
traceroute <gateway gateway> <interface interface> <tos tos> <ttl ttl> <wait  
wait> <no-resolve> <bypass-routing> <source source> host
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display the route from the local host, interface on the local host, or IP address on the local host to a remote host.

## Options

*gateway gateway*—(Optional) Address of gateway through which route passes.

**Value**— IP address

*interface interface*—(Optional) Interface from which to send packets to trace a route. The IP address of this interface is the source IP address in packets sent to trace the route. Typically, you specify either the *interface* or *source* option to obtain the IP address for packets sent on a multi-homed host (a host that has more than one IP address).

**Note:** Only users with root permissions can execute this command with this option.

**Value**— Interface name; for example, eth0.

*tos tos*—(Optional) Value of IP type-of-service byte

**Value**—Integer in the range 0–255

*ttl ttl*—(Optional) Maximum number of hops between the source and the destination

**Value**— Number of hops

*wait wait*—(Optional) Number of seconds to wait for a response.

**Value**—Integer in the range 0–600 s

`no-resolve`—(Optional) Do not display symbolic addresses in command output.

`bypass-routing`—(Optional) Do not use the entries in the routing table when traceroute request is sent; use the interface specified by the `interface` option.

`source source`—(Optional) IP address from which to send packets to trace a route. The IP address is included in packets sent to trace the route. Typically, you specify either the `interface` or `source` option to obtain the IP address for packets sent on a multi-homed host (a host that has more than one IP address).

**Value**— IP address (not a hostname). If you specify an IP address that is not assigned to a system, you receive an error message to the effect that a traceroute request was not sent.

`host`— IP address or hostname of remote host.

**Value**— IP address or hostname

### Required Privilege Level

network

# Juniper Networks Database

The following table summarizes the SRC command-line interface (SRC CLI) for the Juniper Networks Database. Configuration statements and operational commands are listed in alphabetical order.

Juniper Networks Database
Configuration Statements
<a href="#">system ldap server</a>
<a href="#">system ldap server community</a>
<a href="#">system ldap server security</a>
Operational Commands
<a href="#">request system ldap change-admin-password</a>
<a href="#">request system ldap change-component-password</a>
<a href="#">request system ldap community force-update</a>
<a href="#">request system ldap community initialize</a>
<a href="#">request system ldap load</a>
<a href="#">request system ldap security export-certificate</a>
<a href="#">show system ldap community</a>
<a href="#">show system ldap statistics</a>

# system ldap server

## Syntax

```
system ldap server {  
    (stand-alone);  
}
```

## Hierarchy Level

```
[edit system ldap server]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Enable the Juniper Networks database to run in standalone mode. This database contains the SRC configuration information.

Typically, you run the database in standalone mode only in testing environments. If you want to run the Juniper Networks database in a community (or group) of databases, use the `system ldap server community` statement.

Enable the Juniper Networks database in either standalone or community mode; a Juniper Networks database can run either standalone or in a community, but not both. If you do not enable the database, it will not run.

## Options

### Value

- `stand-alone`— Standalone mode for the Juniper Networks database.

### Editing Level—Basic

## Required Privilege Level

system

**Required Editing Level**

Basic

# system ldap server community

## Syntax

```
system ldap server community {
    role (primary | secondary);
    primary-neighbors [primary-neighbors...];
    secondary-neighbors [secondary-neighbors...];
}
```

## Hierarchy Level

```
[edit system ldap server community]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Enable the Juniper Networks database to operate as part of a community (group) of other Juniper Networks databases. The Juniper Networks database contains the SRC configuration information.

If you want to run the Juniper Networks database standalone, use the `stand-alone` option at the `system ldap server` hierarchy level.

Enable the Juniper Networks database in either standalone or community mode; a Juniper Networks database can run either standalone or in a community, but not both. If you do not enable the database, it will not run.

## Options

`role (primary | secondary)`— Role of the database. The role determines the read and write access to the database.

### Value

- `primary`— A database that provides read and write access to client applications. It replicates its data and distributes changes to any Juniper Networks databases configured as neighbors.
- `secondary`— A database that provides read access to client applications. If client applications try to write data to this database, the database refers the client to a primary database.

**Default**— No value

**Editing Level**— Basic

`primary-neighbors [primary-neighbors...]`—(Optional) A database that propagates changes that it receives to other Juniper Networks databases configured as neighbors. A primary neighbor must be assigned a primary role.

**Value**— Primary neighbor identified by one of the following:

- IP address; for example, 192.2.4.0
- Hostname that the C-series Controller can resolve through the domain name system; for example, myhostname1
- Fully qualified hostname; for example, myhostname1.mycompany.com

**Default**— No value

**Editing Level**—Basic

`secondary-neighbors [secondary-neighbors...]`—(Optional) A database that only receives database changes. A secondary neighbor must be assigned a secondary role.

**Value**— Secondary neighbor identified by one of the following:

- IP address; for example, 192.2.4.0
- Hostname that the C-series Controller can resolve through the domain name system; for example, myhostname1
- Fully qualified hostname; for example, myhostname1.mycompany.com

**Default**— No value

**Editing Level**—Basic

#### Required Privilege Level

system

#### Required Editing Level

Basic

# system ldap server security

## Syntax

```
system ldap server security {
    (enable | strict);
}
```

## Hierarchy Level

```
[edit system ldap server security]
```

## Release Information

Statement introduced in SRC Release 2.0.0

## Description

You can secure connections to a Juniper Networks database by:

- Allowing only Secure Lightweight Directory Access Protocol (LDAPS) connections from remote systems. In this case, both database replication and remote SRC components connect through LDAPS. Restricting all remote connections through LDAPS is supported only on C-Series Controllers.
- Allowing only LDAPS connections for database replication, but LDAP or LDAPS connections for other applications. In this case, remote SRC components can connect through LDAP or LDAPS.

To allow access to the Juniper Networks database only through LDAP, use the `delete security` command at the `system ldap server` hierarchy level.

## Options

Secure connections to the Juniper Networks database.

### Value

- `enable`— Use LDAPS to secure connections to other Juniper Networks databases for data replication.
- `strict`— Use LDAPS to secure remote connections to the Juniper Networks database. Local SRC components have LDAP access to the database.

### Editing Level—Basic

**Required Privilege Level**

system

**Required Editing Level**

Basic

# request system ldap change-admin-password

## Syntax

```
request system ldap change-admin-password new-password new-password
```

## Release Information

Command introduced in SRC Release 1.0.1

## Description

Change the administrative password for the Juniper Networks database.

## Options

*new-password new-password*— New administrative password for the Juniper Networks database.

**Value**— *password*

## Required Privilege Level

maintenance

# request system ldap change-component-password

## Syntax

```
request system ldap change-component-password (cli | licenseReader |
licenseWriter | nic | sae | conf) new-password new-password
```

## Release Information

Command introduced in SRC Release 2.0.0

## Description

Change the password that a specified SRC component uses to communicate with the Juniper Networks database.

## Options

Name of an SRC component.

### Value

- **cli**— Password that the SRC CLI uses to communicate with the Juniper Networks database.
- **licenseReader**— Password that the SRC license server uses to obtain licensing information from the Juniper Networks database.
- **licenseWriter**— Password that the SRC license server uses to provide licensing information to the Juniper Networks database.
- **nic**— Password that the Network Information Collector (NIC) uses to communicate with the Juniper Networks database.
- **sae**— Password that the SAE uses to communicate with the Juniper Networks database for changes to the following repositories in the database: Users, Services, Policies, and Networks.
- **conf**— Password used to communicate configuration information with the Juniper Networks database.

*new-password new-password*— New password SRC component

**Value**— *password*

## Required Privilege Level

maintenance

## request system ldap community force-update

### Syntax

```
request system ldap community force-update neighbor neighbor
```

### Release Information

Command introduced in SRC Release 2.0.0

### Description

For a specified neighbor, update data that has changed since the neighbor database was last active.

### Options

`neighbor neighbor`— Name of neighbor to be updated.

**Value**— Neighbor name

### Required Privilege Level

maintenance

# request system ldap community initialize

## Syntax

```
request system ldap community initialize neighbor neighbor
```

## Release Information

Command introduced in SRC Release 2.0.0

## Description

Initialize data for a specified neighbor in a community of Juniper Networks databases.

## Options

`neighbor neighbor`— Name of the neighbor to initialize.

**Value**— Neighbor name

## Required Privilege Level

maintenance

# request system ldap load

## Syntax

```
request system ldap load (equipment-registration | isp-service-portal |
enterprise-portal | snmp-agent | dsa-configuration | hostchecker-configuration |
idp-configuration | tm-configuration) < (replace | merge) >
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Load sample data supplied with the SRC software.

## Options

Type of data to be loaded.

### Value

- `equipment-registration`— Sample data for the sample residential portal to demonstrate an application that provides an association between a subscriber and the equipment being used to make the DHCP connection.
- `isp-service-portal`— Sample data for the sample residential portal to demonstrate an application that provides a means for subscribers to directly log in to a subscriber session for their ISP.
- `enterprise-portal`— Sample data for the Enterprise Manager Portal and the sample enterprise service portal.
- `snmp-agent`— Sample data for SNMP traps for SNMP agent.
- `dsa-configuration`— Sample data for the Dynamic Service Activator.
- `hostchecker-configuration`— Sample data Instant Virtual Extremity (IVE) Host Checker integration application.
- `idp-configuration`— Sample data for the Intrusion Detection and Prevention (IDP) integration application.
- `tm-configuration`— Sample data for the traffic mirroring application.

(Optional) Replace all existing entries or only new entries. If it is first time to load one specific ldap sample data, the choice of replace or merge would make no difference.

### Value

- `replace`— Replace all existing entries or adding new entries from a given ldif file
- `merge`— Replace only deleted entries or adding new entries from a given ldif file

**Default**— `merge`

### Required Privilege Level

`maintenance`

# request system ldap security export-certificate

## Syntax

```
request system ldap security export-certificate file-name file-name
```

## Release Information

Command introduced in SRC Release 3.0.0

## Description

Export LDAP server CA certificate.

## Options

*file-name file-name*— Name of the certificate file

**Value**—Text

## Required Privilege Level

maintenance

# **show system ldap community**

## **Syntax**

```
show system ldap community
```

## **Release Information**

Command introduced in SRC Release 2.0.0

## **Description**

Display statistics for a community of Juniper Networks databases.

## **Required Privilege Level**

view

## **show system ldap statistics**

### **Syntax**

```
show system ldap statistics
```

### **Release Information**

Command introduced in SRC Release 2.0.0

### **Description**

Display local operation statistics for the Juniper Networks database.

### **Required Privilege Level**

view

# SAE

The following table summarizes the SRC command-line interface (SRC CLI) for the SAE. Configuration statements and operational commands are listed in alphabetical order.

SAE
Configuration Statements
<a href="#">shared_auth-cache_cached-dhcp-profile</a>
<a href="#">shared_classification-script_dhcp_classifier</a>
<a href="#">shared_classification-script_dhcp_classifier_name_dhcp-classifier_rule</a>
<a href="#">shared_classification-script_dhcp_classifier_name_dhcp-classifier_rule_name_condition</a>
<a href="#">shared_classification-script_dhcp_classifier_name_dhcp-classifier_rule_name_script</a>
<a href="#">shared_classification-script_interface_classifier</a>
<a href="#">shared_classification-script_interface_classifier_name_interface-classifier_rule</a>
<a href="#">shared_classification-script_interface_classifier_name_interface-classifier_rule_name_condition</a>
<a href="#">shared_classification-script_interface_classifier_name_interface-classifier_rule_name_script</a>
<a href="#">shared_classification-script_subscriber_classifier</a>
<a href="#">shared_classification-script_subscriber_classifier_name_subscriber-classifier_rule</a>
<a href="#">shared_classification-script_subscriber_classifier_name_subscriber-classifier_rule_name_condition</a>
<a href="#">shared_classification-script_subscriber_classifier_name_subscriber-classifier_rule_name_script</a>
<a href="#">shared_network_application-manager-group</a>
<a href="#">shared_network_device</a>
<a href="#">shared_network_device_name_interface-classifier_rule</a>
<a href="#">shared_network_device_name_interface-classifier_rule_name_condition</a>
<a href="#">shared_network_device_name_interface-classifier_rule_name_script</a>
<a href="#">shared_network_device_name_virtual-router</a>
<a href="#">shared_network_policy-decision-point</a>
<a href="#">shared_sae_configuration</a>

<a href="#"><u>shared_sae_configuration_aggregate-services</u></a>
<a href="#"><u>shared_sae_configuration_driver</u></a>
<a href="#"><u>shared_sae_configuration_driver_aaa</u></a>
<a href="#"><u>shared_sae_configuration_driver_aaa_session-store</u></a>
<a href="#"><u>shared_sae_configuration_driver_junos</u></a>
<a href="#"><u>shared_sae_configuration_driver_junos_configuration-checking</u></a>
<a href="#"><u>shared_sae_configuration_driver_junos_lsp-tracking</u></a>
<a href="#"><u>shared_sae_configuration_driver_junos_security</u></a>
<a href="#"><u>shared_sae_configuration_driver_junos_session-store</u></a>
<a href="#"><u>shared_sae_configuration_driver_junose</u></a>
<a href="#"><u>shared_sae_configuration_driver_junose_session-store</u></a>
<a href="#"><u>shared_sae_configuration_driver_pcmmm</u></a>
<a href="#"><u>shared_sae_configuration_driver_pcmmm_cmts-specific-rks-plug-ins</u></a>
<a href="#"><u>shared_sae_configuration_driver_pcmmm_session-store</u></a>
<a href="#"><u>shared_sae_configuration_driver_scripts</u></a>
<a href="#"><u>shared_sae_configuration_driver_session-store</u></a>
<a href="#"><u>shared_sae_configuration_driver_simulated</u></a>
<a href="#"><u>shared_sae_configuration_driver_simulated_name_session-store</u></a>
<a href="#"><u>shared_sae_configuration_driver_snmp</u></a>
<a href="#"><u>shared_sae_configuration_driver_third-party</u></a>
<a href="#"><u>shared_sae_configuration_driver_third-party_session-store</u></a>
<a href="#"><u>shared_sae_configuration_dynamic-radius-server</u></a>
<a href="#"><u>shared_sae_configuration_external-interface-features</u></a>
<a href="#"><u>shared_sae_configuration_external-interface-features_name_CommunityManager</u></a>
<a href="#"><u>shared_sae_configuration_external-interface-features_name_EventAPI</u></a>
<a href="#"><u>shared_sae_configuration_external-interface-features_name_JavaScriptProcessor</u></a>
<a href="#"><u>shared_sae_configuration_external-interface-features_name_PythonScriptProcessor</u></a>

<a href="#"><u>shared_sae_configuration_external-interface-features_name_SAEAccess</u></a>
<a href="#"><u>shared_sae_configuration_external-interface-features_name_SAEFeature</u></a>
<a href="#"><u>shared_sae_configuration_external-interface-features_name_SAEFeature_properties</u></a>
<a href="#"><u>shared_sae_configuration_file-accounting-template</u></a>
<a href="#"><u>shared_sae_configuration_file-accounting-template_name_attributes</u></a>
<a href="#"><u>shared_sae_configuration_global-radius-udp-port</u></a>
<a href="#"><u>shared_sae_configuration_idle-timeout</u></a>
<a href="#"><u>shared_sae_configuration_interim-accounting</u></a>
<a href="#"><u>shared_sae_configuration_ldap</u></a>
<a href="#"><u>shared_sae_configuration_ldap_directory-eventing</u></a>
<a href="#"><u>shared_sae_configuration_ldap_persistent-login-cache</u></a>
<a href="#"><u>shared_sae_configuration_ldap_policy-data</u></a>
<a href="#"><u>shared_sae_configuration_ldap_service-data</u></a>
<a href="#"><u>shared_sae_configuration_ldap_subscriber-data</u></a>
<a href="#"><u>shared_sae_configuration_license-manager_client</u></a>
<a href="#"><u>shared_sae_configuration_license-manager_directory-access</u></a>
<a href="#"><u>shared_sae_configuration_logger</u></a>
<a href="#"><u>shared_sae_configuration_logger_name_file</u></a>
<a href="#"><u>shared_sae_configuration_logger_name_syslog</u></a>
<a href="#"><u>shared_sae_configuration_login-registration</u></a>
<a href="#"><u>shared_sae_configuration_nic-proxy-configuration</u></a>
<a href="#"><u>shared_sae_configuration_nic-proxy-configuration_name_cache</u></a>
<a href="#"><u>shared_sae_configuration_nic-proxy-configuration_name_nic-host-selection</u></a>
<a href="#"><u>shared_sae_configuration_nic-proxy-configuration_name_nic-host-selection_blacklisting</u></a>
<a href="#"><u>shared_sae_configuration_nic-proxy-configuration_name_resolution</u></a>
<a href="#"><u>shared_sae_configuration_nic-proxy-configuration_name_test-nic-bindings</u></a>
<a href="#"><u>shared_sae_configuration_nic-proxy-configuration_name_test-nic-bindings_key-values</u></a>

<a href="#"><u>shared_sae_configuration_plug-ins</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_event-publishers</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_manager</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_acp-interface-listener</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_custom-radius-accounting</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_custom-radius-accounting_peer-group</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_custom-radius-authentication</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_custom-radius-authentication_peer-group</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_ejb-adaptor</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_external</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_file-accounting</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-accounting</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-accounting_peer-group</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-accounting_radius-packet-definition</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-accounting_radius-packet-definition_name_attributes</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-accounting_radius-packet-definition_name_vendor-specific</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-accounting_radius-packet-definition_name_vendor-specific_name_attributes</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-accounting_radius-packet-definition_name_vendor-specific_name_type</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-accounting_radius-packet-definition_name_vendor-specific_name_type_name_attributes</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-accounting_radius-packet-definition_name_vendor-specific-26</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-accounting_radius-packet-definition_name_vendor-specific-26_name_attributes</u></a>

<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-accounting_radius-packet-definition_name_vendor-specific-26_name_type</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-accounting_radius-packet-definition_name_vendor-specific-26_name_type_name_attributes</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-authentication</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-authentication_peer-group</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-authentication_radius-packet-definition</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-authentication_radius-packet-definition_name_attributes</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-authentication_radius-packet-definition_name_vendor-specific</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-authentication_radius-packet-definition_name_vendor-specific_name_attributes</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-authentication_radius-packet-definition_name_vendor-specific_name_type</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-authentication_radius-packet-definition_name_vendor-specific_name_type_name_attributes</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-authentication_radius-packet-definition_name_vendor-specific-26</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-authentication_radius-packet-definition_name_vendor-specific-26_name_attributes</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-authentication_radius-packet-definition_name_vendor-specific-26_name_type</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_flex-radius-authentication_radius-packet-definition_name_vendor-specific-26_name_type_name_attributes</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_interface-subscriber-limit</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_internal</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_internal_properties</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_ldap-authentication</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_pcmmm-rks</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_pcmmm-rks_peer-group</u></a>
<a href="#"><u>shared_sae_configuration_plug-ins_name_name_qos-profile-tracking</u></a>

<a href="#"><u>shared_sae_configuration Plug-ins_name_name_radius-accounting</u></a>
<a href="#"><u>shared_sae_configuration Plug-ins_name_name_radius-accounting_peer-group</u></a>
<a href="#"><u>shared_sae_configuration Plug-ins_name_name_radius-authentication</u></a>
<a href="#"><u>shared_sae_configuration Plug-ins_name_name_radius-authentication_peer-group</u></a>
<a href="#"><u>shared_sae_configuration Plug-ins_name_name_schedule-authorization</u></a>
<a href="#"><u>shared_sae_configuration Plug-ins_state-synchronization</u></a>
<a href="#"><u>shared_sae_configuration_policy-management-configuration</u></a>
<a href="#"><u>shared_sae_configuration_radius-packet-template</u></a>
<a href="#"><u>shared_sae_configuration_radius-packet-template_name_radius-attributes</u></a>
<a href="#"><u>shared_sae_configuration_radius-packet-template_name_radius-attributes_name_attributes</u></a>
<a href="#"><u>shared_sae_configuration_radius-packet-template_name_radius-attributes_name_vendor-specific</u></a>
<a href="#"><u>shared_sae_configuration_radius-packet-template_name_radius-attributes_name_vendor-specific_name_attributes</u></a>
<a href="#"><u>shared_sae_configuration_radius-packet-template_name_radius-attributes_name_vendor-specific_name_type</u></a>
<a href="#"><u>shared_sae_configuration_radius-packet-template_name_radius-attributes_name_vendor-specific_name_type_name_attributes</u></a>
<a href="#"><u>shared_sae_configuration_radius-packet-template_name_radius-attributes_name_vendor-specific-26</u></a>
<a href="#"><u>shared_sae_configuration_radius-packet-template_name_radius-attributes_name_vendor-specific-26_name_attributes</u></a>
<a href="#"><u>shared_sae_configuration_radius-packet-template_name_radius-attributes_name_vendor-specific-26_name_type</u></a>
<a href="#"><u>shared_sae_configuration_radius-packet-template_name_radius-attributes_name_vendor-specific-26_name_type_name_attributes</u></a>
<a href="#"><u>shared_sae_configuration_script-extension</u></a>
<a href="#"><u>shared_sae_configuration_service-activation</u></a>
<a href="#"><u>shared_sae_configuration_service-schedule</u></a>
<a href="#"><u>shared_sae_configuration_session-job-manager</u></a>
<a href="#"><u>shared_sae_configuration_subscriber-sessions</u></a>

<a href="#"><u>shared_sae_configuration_time-based-policies</u></a>
<a href="#"><u>shared_sae_dhcp-classifier_rule</u></a>
<a href="#"><u>shared_sae_dhcp-classifier_rule_name_condition</u></a>
<a href="#"><u>shared_sae_dhcp-classifier_rule_name_script</u></a>
<a href="#"><u>shared_sae_group</u></a>
<a href="#"><u>shared_sae_subscriber-classifier_rule</u></a>
<a href="#"><u>shared_sae_subscriber-classifier_rule_name_condition</u></a>
<a href="#"><u>shared_sae_subscriber-classifier_rule_name_script</u></a>
<a href="#"><u>slot_number_sae</u></a>
<a href="#"><u>slot_number_sae_initial</u></a>
<a href="#"><u>slot_number_sae_initial_directory-connection</u></a>
<a href="#"><u>slot_number_sae_initial_directory-eventing</u></a>
<a href="#"><u>slot_number_sae_radius</u></a>
Operational Commands
<a href="#"><u>clear sae directory-blacklist</u></a>
<a href="#"><u>clear sae registered equipment</u></a>
<a href="#"><u>clear sae registered login</u></a>
<a href="#"><u>monitor sae statistics sessions</u></a>
<a href="#"><u>request sae import-pilot-license</u></a>
<a href="#"><u>request sae load configuration</u></a>
<a href="#"><u>request sae load domain-map</u></a>
<a href="#"><u>request sae load interface-classification</u></a>
<a href="#"><u>request sae load services</u></a>
<a href="#"><u>request sae load subscriptions</u></a>
<a href="#"><u>request sae login ip authenticated-dhcp</u></a>
<a href="#"><u>request sae login ip authenticated-interface</u></a>

[request sae login ip unauthenticated-dhcp](#)[request sae login ip unauthenticated-interface](#)[request sae logout dn](#)[request sae logout ip](#)[request sae logout login-name](#)[request sae logout session-id](#)[request sae modify device failover](#)[request sae remove-pilot-license](#)[request sae shutdown device](#)[show sae directory-blacklist](#)[show sae drivers](#)[show sae interfaces](#)[show sae licenses](#)[show sae policies](#)[show sae registered equipment](#)[show sae registered login](#)[show sae services](#)[show sae statistics device](#)[show sae statistics device common](#)[show sae statistics directory](#)[show sae statistics directory connections](#)[show sae statistics license client](#)[show sae statistics license device](#)[show sae statistics license local](#)[show sae statistics policy-management](#)[show sae statistics process](#)

<a href="#"><u>show sae statistics radius</u></a>
<a href="#"><u>show sae statistics radius client</u></a>
<a href="#"><u>show sae statistics sessions</u></a>
<a href="#"><u>show sae subscribers</u></a>
<a href="#"><u>show sae subscribers dn</u></a>
<a href="#"><u>show sae subscribers ip</u></a>
<a href="#"><u>show sae subscribers login-name</u></a>
<a href="#"><u>show sae subscribers service-name</u></a>
<a href="#"><u>show sae subscribers session-id</u></a>
<a href="#"><u>show sae threads</u></a>

## shared auth-cache cached-dhcp-profile

### Syntax

```
shared auth-cache cached-dhcp-profile name {
    description description;
    pool-name pool-name;
    ip-address ip-address;
    dhcp-options dhcp-options;
    boot-server-name boot-server-name;
    boot-file-name boot-file-name;
    virtual-router virtual-router;
    local-interface local-interface;
    lease-time lease-time;
    user-name user-name;
    service-bundle service-bundle;
    radius-class radius-class;
}
```

### Hierarchy Level

```
[edit shared auth-cache cached-dhcp-profile]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a cached DHCP profile.

### Options

*name name*— Name of a cached DHCP profile.

**Value**— String

*description description*—(Optional) Description of the DHCP client device.

**Value**— String

**Default**— No value

**Editing Level**—Basic

`pool-name` *pool-name*—(Optional) Name of the IP address pool on the JUNOS router from which a DHCP address is selected.

**Value**— String

**Default**— No value

**Editing Level**—Basic

`ip-address` *ip-address*—(Optional) Fixed IP address that is offered to the DHCP client if the client is part of a network in the configured DHCP pool.

**Value**— IP address

**Default**— No value

**Editing Level**—Basic

`dhcp-options` *dhcp-options*—(Optional) Defines DHCP options that are used to configure DHCP clients.

**Value**— Define DHCP options in the format: option = value [,value...].

where option is the DHCP option name or number (see the customer documentation for a list of supported DHCP options) and values are entered based on the type of option:

- int32, int16, int8—Decimal or hex prefixed by 0x
- string—Optionally surrounded by double quotes
- ip-address—Dotted decimal
- data-string—Sequence of hex-encoded bytes separated by a : (colon) or a string surrounded by double quotes

Separate multiple options by line breaks.

Value is a string containing one or more options defined as 'name = value'. Multiple options are separated by line breaks.

To include nonstandard options in a DHCP profile, use the name `option-nnn`, where *nnn* is the option number, and the value is of type data-string; that is, either a string surrounded in double quotes, or a sequence of hex-encoded bytes, separated by a colon (:).

**Default**— No value

**Editing Level**—Basic

`boot-server-name` *boot-server-name*—(Optional) Name of the server used to boot the DHCP client.

**Value**— String, length < 64

**Default**— No value  
**Editing Level**—Basic

`boot-file-name` *boot-file-name*—(Optional) Name of a boot file used to boot the DHCP client.

**Value**— String, length < 128  
**Default**— No value  
**Editing Level**—Basic

`virtual-router` *virtual-router*—(Optional) Name of the virtual router that holds the IP address pool.

**Value**— Name of the virtual router in the format *vrname@hostname*. An \* (asterisk) means that the values for the virtual router are ignored when the cached profile is used. Use an \* if you do not know the virtual router to which the subscriber will connect.  
**Default**— No value  
**Editing Level**—Basic

`local-interface` *local-interface*—(Optional) Name of the JUNOSe router interface that will receive the DHCP client device's request for an IP address.

**Value**— Name of the virtual router in the format *vrname@hostname*. An \* (asterisk) means that the values for local interface are ignored when the cached profile is used. Use an \* if you do not know the interface to which the subscriber will connect or if you want to allow the subscriber to connect through multiple interfaces.  
**Default**— No value  
**Editing Level**—Basic

`lease-time` *lease-time*—(Optional) Length of time the supplied IP address is valid. This parameter is not currently implemented on the JUNOSe router. The DHCP lease time that the SAE sends to the JUNOSe router is ignored.

**Value**— Number of seconds  
**Default**— No value  
**Editing Level**—Basic

`user-name` *user-name*—(Optional) Username of the DHCP subscriber without the domain name.

**Value**— String that specifies the information to the left of the @ character in *userName@domainName*.  
**Default**— No value  
**Editing Level**—Basic

`service-bundle` *service-bundle*—(Optional) Vendor-specific RADIUS attribute that specifies the SRC service bundle to use.

**Value**— String

**Default**— No value

**Editing Level**—Basic

`radius-class` *radius-class*—(Optional) RADIUS attribute class.

**Value**— String

**Default**— No value

**Editing Level**—Basic

#### **Required Privilege Level**

system

#### **Required Editing Level**

Basic

## shared classification-script dhcp classifier

### Syntax

```
shared classification-script dhcp classifier name {
    description description;
}
```

### Hierarchy Level

```
[edit shared classification-script dhcp classifier]
```

### Release Information

Statement introduced in SRC Release 3.1.0

### Options

*name name*—

**Value**—Text

*description description*—(Optional) Description of the classification script.

**Value**— String

**Default**— No value

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

# shared classification-script dhcp classifier *name* dhcp-classifier rule

## Syntax

```
shared classification-script dhcp classifier name dhcp-classifier rule name {
    target target;
}
```

## Hierarchy Level

```
[edit shared classification-script dhcp classifier name dhcp-classifier rule]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a rule in a classifier script.

## Options

*name name*— Name of a classification script.

**Value**—Text

*target target*—(Optional) Result of the classification script that is returned to the SAE.

**Value**— The result depends on the type of classification script:

- Subscriber classification script—An LDAP query that uniquely identifies a subscriber entry in the directory.
- DHCP classification script—DHCP profile.

**Default**— Not applicable

**Editing Level**—Basic

## Required Privilege Level

system

## **Required Editing Level**

Basic

# shared classification-script dhcp classifier *name* dhcp-classifier rule *name* condition

## Syntax

```
shared classification-script dhcp classifier name dhcp-
classifier rule name condition name ...
```

## Hierarchy Level

```
[edit shared classification-script dhcp classifier name dhcp-
classifier rule name condition]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure match conditions used to find a target. You can configure multiple conditions for each classifier rule.

## Options

*name name*— Match conditions used to find a target. For information about configuring match conditions, see *Classifying Interfaces and Subscribers with the SRC CLI* in *SRC-PE Subscribers and Subscriptions Guide*.

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

## shared classification-script dhcp classifier *name* dhcp-classifier rule *name* script

### Syntax

```
shared classification-script dhcp classifier name dhcp-
classifier rule name script {
    script-value;
}
```

### Hierarchy Level

```
[edit shared classification-script dhcp classifier name dhcp-
classifier rule name script]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Options

*script-value*—(Optional) Script target. A script that can contain definitions of custom functions that can be called during the matching process. The complete content of the script is interpreted when the classifier is initially loaded. Because you can insert code into a script target, you can use the classification script to perform various tasks.

**Value**— Script enclosed in quotation marks.

**Default**— No value

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

# shared classification-script interface classifier

## Syntax

```
shared classification-script interface classifier name {  
    description description;  
}
```

## Hierarchy Level

```
[edit shared classification-script interface classifier]
```

## Release Information

Statement introduced in SRC Release 3.1.0

## Options

name *name*—

**Value**—Text

description *description*—(Optional) Description of the classification script.

**Value**— String

**Default**— No value

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Basic

# shared classification-script interface classifier *name* interface-classifier rule

## Syntax

```
shared classification-script interface classifier name interface-
classifier rule name {
    target target;
}
```

## Hierarchy Level

```
[edit shared classification-script interface classifier name interface-
classifier rule]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure an interface classification rule.

## Options

*name name*— Name of the rule in the interface classification script.

**Value**— Text

*target target*—(Optional) Result of the classification script that gets returned to the SAE.

**Value**— Path to a policy group. For example, /sample/junose/DHCP.

**Default**— No value

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Basic

# shared classification-script interface classifier *name* interface-classifier rule *name* condition

## Syntax

```
shared classification-script interface classifier name interface-
classifier rule name condition name ...
```

## Hierarchy Level

```
[edit shared classification-script interface classifier name interface-
classifier rule name condition]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure match conditions used to find a target. You can configure multiple conditions for each classifier rule.

## Options

*name name*— Match conditions used to find a target. For more information about configuring match conditions, see *Classifying Interfaces and Subscribers with the SRC CLI* in *SRC-PE Subscribers and Subscriptions Guide*.

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

## shared classification-script interface classifier *name* interface-classifier rule *name* script

### Syntax

```
shared classification-script interface classifier name interface-
classifier rule name script {
    script-value;
}
```

### Hierarchy Level

```
[edit shared classification-script interface classifier name interface-
classifier rule name script]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Options

*script-value*—(Optional) Script target. A script that can contain definitions of custom functions that can be called during the matching process. The complete content of the script is interpreted when the classifier is initially loaded. Because you can insert code into a script target, you can use the classification script to perform various tasks.

**Value**— Script enclosed in quotation marks.

**Default**— No value

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

# shared classification-script subscriber classifier

## Syntax

```
shared classification-script subscriber classifier name {  
    description description;  
}
```

## Hierarchy Level

```
[edit shared classification-script subscriber classifier]
```

## Release Information

Statement introduced in SRC Release 3.1.0

## Options

name *name*—

**Value**—Text

description *description*—(Optional) Description of the classification script.

**Value**— String

**Default**— No value

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Basic

# shared classification-script subscriber classifier *name* subscriber-classifier rule

## Syntax

```
shared classification-script subscriber classifier name subscriber-
classifier rule name {
    target target;
}
```

## Hierarchy Level

```
[edit shared classification-script subscriber classifier name subscriber-
classifier rule]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a rule in a classifier script.

## Options

*name name*— Name of a classification script.

**Value**—Text

*target target*—(Optional) Result of the classification script that is returned to the SAE.

**Value**— The result depends on the type of classification script:

- Subscriber classification script—An LDAP query that uniquely identifies a subscriber entry in the directory.
- DHCP classification script—DHCP profile.

**Default**— Not applicable

**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Basic

# shared classification-script subscriber classifier *name* subscriber-classifier rule *name* condition

## Syntax

```
shared classification-script subscriber classifier name subscriber-
classifier rule name condition name ...
```

## Hierarchy Level

```
[edit shared classification-script subscriber classifier name subscriber-
classifier rule name condition]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure match conditions used to find a target. You can configure multiple conditions for each classifier rule.

## Options

*name name*— Match conditions used to find a target. For information about configuring match conditions, see *Classifying Interfaces and Subscribers with the SRC CLI* in *SRC-PE Subscribers and Subscriptions Guide*.

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

# shared classification-script subscriber classifier *name* subscriber-classifier rule *name* script

## Syntax

```
shared classification-script subscriber classifier name subscriber-
classifier rule name script {
    script-value;
}
```

## Hierarchy Level

```
[edit shared classification-script subscriber classifier name subscriber-
classifier rule name script]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Options

*script-value*—(Optional) Script target. A script that can contain definitions of custom functions that can be called during the matching process. The complete content of the script is interpreted when the classifier is initially loaded. Because you can insert code into a script target, you can use the classification script to perform various tasks.

**Value**— Script enclosed in quotation marks.

**Default**— No value

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Basic

# shared network application-manager-group

## Syntax

```
shared network application-manager-group name {
    description description;
    application-manager-id application-manager-id;
    connected-sae [connected-sae...];
    pdp-group pdp-group;
    local-address-pools [local-address-pools...];
    managing-sae-ior managing-sae-ior;
}
```

## Hierarchy Level

```
[edit shared network application-manager-group]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure application managers for the Juniper policy server (JPS).

## Options

*name name*— Name of application manager group.

**Value**— Text string

*description description*—(Optional) Information about the SAE community.

**Value**— Text string

**Default**— No value

**Editing Level**—Basic

*application-manager-id application-manager-id*— Unique identifier within the domain of the service provider for the application manager that handles the service session; used to specify the application manager identifier (AMID) that is included in all messages sent to and from the policy server.

This option is required. The SAE constructs the AMID value by concatenating two fields:

Application Manager Tag (this option) and Application Type (this value is obtained from a service during activation).

**Value**— 2-byte unsigned integer

**Default**— No value

**Editing Level**—Basic

`connected-sae` [*connected-sae . . .*]— SAEs that are connected to the specified policy server group (PDP Group). This list becomes the community of SAEs.

This option is required. When you modify a community, wait for passive session stores of the new community members to be updated before you shut down the current active SAE. Otherwise, a failover from the current active SAE to the new member is triggered immediately, and the new member's session store may not have received all data from the active SAE's session store.

**Value**— IP address or hostname

**Default**— No value

**Editing Level**—Basic

`pdp-group` *pdp-group*— Name of the policy server group associated with this SAE community.

**Value**— Text string

**Default**— No value

**Editing Level**—Basic

`local-address-pools` [*local-address-pools . . .*]—(Optional) List of IP address pools that this PDP group currently manages and stores. You must configure a local address pool if you are using the NIC so that the NIC can resolve the IP-to-SAE mapping.

**Value**— An address pool is specified by a sequence of zero or more address sets enclosed in parentheses (). An address set can be either a range of addresses or a subnetwork with or without address exclusions.

- Specify a range by entering a start and end address separated by a space and enclosed in square brackets. For example, [10.10.10.5 10.10.10.250] denotes the address set 10.10.10.5 to 10.10.10.250 inclusive.
- Specify a subnet with optional address exclusions in curly brackets. You must include a base address and a mask or prefix length separated by a forward slash. To exclude addresses, follow the forward slash with a comma and a comma-separated list of excluded addresses. For example:
  - {10.20.20.0/24} denotes all addresses that start with 10.20.20
  - {10.21.0.0/255.255.0.0} denotes all addresses that start with 10.21
  - {10.20.30.0/24,10.20.30.0,10.20.30.255} denotes all

addresses that start with 10.20.30 except 10.20.30.0 and 10.20.30.255

**Default**— No value

**Editing Level**—Basic

`managing-sae-ior` *managing-sae-ior*—(Optional) Common Object Request Broker Architecture (CORBA) reference for the SAE managing this policy server group. The `amIorPublisher` script provides this information when the SAE connects to the policy server. If you do not select this script when configuring initialization scripts, enter a value.

**Value**— One of the following items:

- The actual CORBA reference for the SAE
- The absolute path to the interoperable object reference (IOR) file
- A corbaloc URL in the form `corbaloc:: < host > :8801/SAE`
  - `< host >` —Name or IP address of the SAE host

The following examples show different CORBA references.

- Absolute path—`/opt/UMC/sae/var/run/sae.ior`
- corbaloc URL—`boston:8801/sae`
- Actual IOR—  
`IOR:0000000000000002438444C3A736D67742E6A756E697...`

**Default**— No value

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

# shared network device

## Syntax

```
shared network device name {
    description description;
    management-address management-address;
    device-type (junose | junos | pcmm | third-party);
    qos-profile [qos-profile...];
}
```

## Hierarchy Level

```
[edit shared network device]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a device that the SAE manages.

## Options

`name` *name*— Name of the router or other device that the SAE manages.

**Value**— Text; must use lowercase characters

`description` *description*—(Optional) Description of the device that the SAE manages.

**Value**— Text

**Default**— No value

**Editing Level**—Basic

`management-address` *management-address*—(Optional) IP address of the device. For networks with JUNOSE routers, the redirect component in redundant mode uses this address to send SNMP set messages to set a static route to the new redirect server after a failover.

**Value**— IP address

**Default**— No value

**Editing Level**—Basic

`device-type (junose | junos | pcmm | third-party)`—(Optional) Type of device that you are configuring.

**Value**

- `junose`— JUNOSe router
- `junos`— JUNOS routing platform
- `pcmm`— CMTS device
- `third-party`— Third-party device

**Default**— No value

**Editing Level**—Basic

`qos-profile [qos-profile...]`—(Optional) For JUNOSe routers, specifies quality of service (QoS) profiles that are configured on the router.

**Value**— Single QoS profile or a list of QoS profiles

**Default**— No value

**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Basic

## shared network device *name* interface-classifier rule

### Syntax

```
shared network device name interface-classifier rule name {
    target target;
}
```

### Hierarchy Level

```
[edit shared network device name interface-classifier rule]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure an interface classification rule.

### Options

*name name*— Name of the rule in the interface classification script.

**Value**— Text

*target target*—(Optional) Result of the classification script that gets returned to the SAE.

**Value**— Path to a policy group. For example, /sample/junose/DHCP.

**Default**— No value

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

## shared network device *name* interface-classifier rule *name* condition

### Syntax

```
shared network device name interface-classifier rule name condition name ...
```

### Hierarchy Level

```
[edit shared network device name interface-classifier rule name condition]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure match conditions used to find a target. You can configure multiple conditions for each classifier rule.

### Options

*name name*— Match conditions used to find a target. For more information about configuring match conditions, see *Classifying Interfaces and Subscribers with the SRC CLI* in *SRC-PE Subscribers and Subscriptions Guide*.

**Value**—Text

### Required Privilege Level

system

### Required Editing Level

Basic

# shared network device *name* interface-classifier rule *name* script

## Syntax

```
shared network device name interface-classifier rule name script {
    script-value;
    include include;
}
```

## Hierarchy Level

```
[edit shared network device name interface-classifier rule name script]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Options

*script-value*—(Optional) Script target. A script that can contain definitions of custom functions that can be called during the matching process. The complete content of the script is interpreted when the classifier is initially loaded. Because you can insert code into a script target, you can use the classification script to perform various tasks.

**Value**— Script enclosed in quotation marks.

**Default**— No value

**Editing Level**—Basic

*include include*—(Optional) Reference to existing script to be included into the script you are configuring.

**Value**— Name of script

**Default**— No value

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Basic

## shared network device *name* virtual-router

### Syntax

```
shared network device name virtual-router name {
    sae-connection [sae-connection...];
    snmp-read-community snmp-read-community;
    snmp-write-community snmp-write-community;
    scope [scope...];
    local-address-pools local-address-pools;
    static-address-pools static-address-pools;
    tracking-plug-in [tracking-plug-in...];
}
```

### Hierarchy Level

```
[edit shared network device name virtual-router]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a virtual router object.

### Options

*name name*— Name of the virtual router.

**Value**— One of the following:

- For JUNOSe routers, the name of the VR, which is case sensitive, must exactly match the name of the VR configured on the router.
- For JUNOS routing platforms, CMTS devices, and other third-party devices, use the name default

*sae-connection [sae-connection...]*—(Optional) IP addresses of the SAEs that can manage this device. This option is required for the SAE to work with the router.

To specify the active SAE and the standby SAE, enter an exclamation point (!) after the hostname or IP address of the SAEs.

**Value**— IP address or a list of IP addresses

Specify the active SAE and the redundant SAE by entering an exclamation point (!) after the hostname or IP address of the connected SAEs. For example: 10.3.219.10! 10.3.219.20!

**Default**— No value

**Editing Level**—Basic

`snmp-read-community snmp-read-community`—(Optional) SNMP community name associated with SNMP read-only operations for this virtual router. Read operations are typically used by router initialization scripts to read information, such as IP address pools, from the router.

**Value**— Text

**Default**— No value

**Editing Level**—Basic

`snmp-write-community snmp-write-community`—(Optional) SNMP community name associated with SNMP write operations for this virtual router. The write community is used only by the redirect server to set a static route.

**Value**— Text

**Default**— No value

**Editing Level**—Basic

`scope [ scope . . . ]`—(Optional) The virtual router can be associated with a number of service scopes. The scopes are available for subscribers connected to this virtual router for selecting customized versions of services.

**Value**— Text

**Default**— No value

**Editing Level**—Basic

`local-address-pools local-address-pools`—(Optional) For JUNOS virtual routers, address of local address pools on the JUNOS virtual router.

- If you do not configure the PoolPublisher router initialization script for a JUNOS virtual router, configure this option for a JUNOS virtual router.
- If you do configure the PoolPublisher router initialization script for a JUNOS virtual router, configure this option if pool data needs to be updated. This data needs to be updated if you change the address pools on a virtual router that is actively being managed by SAE. The reason is that the initialization script is triggered only when the COPS connection is started.

For CMTS devices, you must configure either a local address pool or a static address pool so

that the NIC can resolve the IP-to-SAE mapping.

**Value**— An address pool is specified by a sequence of zero or more address sets enclosed in parentheses (). An address set can be either a range of addresses or a subnetwork with or without address exclusions.

- Specify a range by entering a start and end address separated by a space and enclosed in square brackets. For example, [10.10.10.5 10.10.10.250] denotes the address set 10.10.10.5 to 10.10.10.250 inclusive.
- Specify a subnet with optional address exclusions in curly brackets. You must include a base address and a mask or prefix length separated by a forward slash. To exclude addresses, follow the forward slash with a comma and a comma-separated list of excluded addresses. For example:
  - {10.20.20.0/24} denotes all addresses that start with 10.20.20
  - {10.21.0.0/255.255.0.0} denotes all addresses that start with 10.21
  - {10.20.30.0/24,10.20.30.0,10.20.30.255} denotes all addresses that start with 10.20.30 except 10.20.30.0 and 10.20.30.255

**Default**— No value

**Editing Level**—Basic

`static-address-pools static-address-pools`—(Optional) IP address pools that a JUNOS virtual router manages but does not store on the router because the router is not managing the allocation of these addresses. For CMTS devices, you must configure either a local address pool or a static address pool so that the NIC can resolve the IP-to-SAE mapping.

**Value**—

**Default**— No value

**Editing Level**—Basic

`tracking-plugin [tracking-plugin...]`—(Optional) List of plug-ins that are notified of interface events for this virtual router.

**Value**— Single tracking plug-in or a list of tracking plug-ins

**Default**— No value

**Editing Level**—Basic

## Required Privilege Level

system

**Required Editing Level**

Basic

# shared network policy-decision-point

## Syntax

```
shared network policy-decision-point name {
    description description;
    pdp-address pdp-address;
    pdp-group pdp-group;
}
```

## Hierarchy Level

```
[edit shared network policy-decision-point]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configures the policy server as a policy decision point.

## Options

*name* *name*— Name of policy decision point.

**Value**— Text string

*description* *description*—(Optional) Information about this policy server.

**Value**— Text string

**Default**— No value

**Editing Level**—Basic

*pdp-address* *pdp-address*— IP address of the policy server. The SAE uses this address to establish a COPS connection with the policy server.

**Value**— IP address

**Default**— No value

**Editing Level**—Basic

*pdp-group* *pdp-group*— Name of the policy server group.

**Value**— Text string  
**Default**— No value  
**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Basic

## shared sae configuration

### Syntax

```
shared sae configuration {
    substitution-num-engines substitution-num-engines;
    substitution-cache-size substitution-cache-size;
    compress-session-data;
}
```

### Hierarchy Level

```
[edit shared sae configuration]
```

### Options

`substitution-num-engines substitution-num-engines`—(Optional) Number of Substitution Engines

**Value**—Integer in the range -2147483648–2147483647

**Default**—5

**Editing Level**—Expert

`substitution-cache-size substitution-cache-size`—(Optional) Substitution Engine Cache Size

**Value**—Integer in the range -2147483648–2147483647

**Default**—5000

**Editing Level**—Expert

`compress-session-data`—(Optional) Enable or disable compression of the serialized data when saving the state of the SAE. You can use serialized data compression to reduce the size of sessions objects that the SAE sends across the network for the session store feature.

Enabling this option reduces the size of objects, but increases the CPU load on the SAE. We recommend that you do not enable this option because of the increase to the CPU load.

**Default**— Disabled

**Editing Level**—Basic

### Required Privilege Level

system

**Required Editing Level**

Basic

## shared sae configuration aggregate-services

### Syntax

```
shared sae configuration aggregate-services {
    keepalive-time keepalive-time;
    keepalive-retry-time keepalive-retry-time;
    activation-deactivation-time activation-deactivation-time;
    failed-notification-retry-time failed-notification-retry-time;
    reactivation-verification-time reactivation-verification-time;
}
```

### Hierarchy Level

```
[edit shared sae configuration aggregate-services]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure timers and intervals associated with monitoring and activating aggregate sessions.

### Options

*keepalive-time keepalive-time*— Interval at which keepalive messages are sent from an aggregate service session and an associated fragment service session.

**Value**— Number of seconds in the range 1–2147483647

**Default**— 86400

**Editing Level**—Basic

*keepalive-retry-time keepalive-retry-time*— Time to wait before resending unacknowledged keepalive messages.

**Value**— Number of seconds in the range 1–2147483647

**Default**— 900

**Editing Level**—Basic

*activation-deactivation-time activation-deactivation-time*— Time to wait before retrying failed activation or deactivation of the fragment service session.

**Value**— Number of seconds in the range 1–2147483647

**Default**— 900  
**Editing Level**—Basic

`failed-notification-retry-time` *failed-notification-retry-time*— Length of time to continue sending failure notifications if an aggregate service cannot reach a fragment service, or a fragment service cannot reach an aggregate service during shutdown of the aggregate service.

**Value**— Number of seconds in the range 1-2147483647  
**Default**— 86400  
**Editing Level**—Basic

`reactivation-verification-time` *reactivation-verification-time*— Maximum time (in seconds) to verify fragment reactivation

**Value**—Integer in the range -2147483648-2147483647  
**Default**—30  
**Editing Level**—Basic

#### Required Privilege Level

system

#### Required Editing Level

Normal

## shared sae configuration driver

### Syntax

```
shared sae configuration driver {
    unauthenticated-subscriber-dn unauthenticated-subscriber-dn;
    virtual-portal-address virtual-portal-address;
    mac-cache-expiration mac-cache-expiration;
}
```

### Hierarchy Level

```
[edit shared sae configuration driver]
```

### Options

*unauthenticated-subscriber-dn unauthenticated-subscriber-dn*— Transitional profile for subscribers who are not logged in to the SAE. For example, if a subscriber logs out of the SAE using the API method `Subscriber.logout()`, an unauthenticated subscriber session is created. The unauthenticated subscriber profile must exist and can be subscribed to services available for unauthenticated subscribers. The portal implementation determines whether unauthenticated (anonymous) subscribers can access the portal.

**Value**— `<DN>`. You can use the special value `<base>` to refer to the globally configured base DN. The string `<base>` is replaced with the directory base DN.

**Default**— *uniqueID= unauthenticated,ou= local,retailerName= default,o= Users,< base>*

**Editing Level**—Normal

*virtual-portal-address virtual-portal-address*—(Optional) IP address that policies use as a substitution to send traffic to a captive portal.

**Value**— IP address

**Default**— No value

**Editing Level**—Normal

*mac-cache-expiration mac-cache-expiration*— Amount of time that a subscriber profile remains in the SAE's in-memory cache. Configure this parameter to be greater than the time required for a DHCP subscriber to transition from an unauthenticated IP address to an authenticated IP address or vice versa. The time required for a DHCP subscriber to transition from one IP address to another depends on the lease times configured on the JUNOS router and the instructions given to the subscriber on the Web portal, such as `reboot your PC now`.

**Value**— Number of seconds in the range 0–2147483647

**Default**— 1800

**Editing Level**—Normal

**Required Privilege Level**

system

**Required Editing Level**

Normal

## shared sae configuration driver aaa

### Syntax

```
shared sae configuration driver aaa {
    sae-community-manager sae-community-manager;
    keep-alive-timeout keep-alive-timeout;
    registry-retry-interval registry-retry-interval;
    reply-timeout reply-timeout;
    sequential-message-timeout sequential-message-timeout;
    transient-session-timeout transient-session-timeout;
    max-update-interval max-update-interval;
    update-grace-period update-grace-period;
    resume-unrecovered;
    thread-pool-size thread-pool-size;
    thread-idle-timeout thread-idle-timeout;
}
```

### Hierarchy Level

```
[edit shared sae configuration driver aaa]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Configure the SAE to manage AAA NAS groups.

*sae-community-manager sae-community-manager*— Name of the community manager that manages AAA NAS group communities. Active SAEs are selected from this community.

**Value**— Community name

**Default**— AAACommunityManager

**Editing Level**—Expert

*keep-alive-timeout keep-alive-timeout*—(Optional) Time to wait before expiring the registry to a Diameter server.

**Value**— Number of seconds

**Default**— 60

**Editing Level**—Basic

`registry-retry-interval` *registry-retry-interval*—(Optional) Time to wait before retrying a failed registry to a Diameter server.

**Value**— Number of seconds

**Default**— 30

**Editing Level**—Basic

`reply-timeout` *reply-timeout*—(Optional) Time to wait before expiring a request sent to a Diameter server.

**Value**— Number of seconds

**Default**— 20

**Editing Level**—Basic

`sequential-message-timeout` *sequential-message-timeout*—(Optional) Time to wait before expiring an expected message.

**Value**— Number of seconds

**Default**— 20

**Editing Level**—Basic

`transient-session-timeout` *transient-session-timeout*—(Optional) Time to wait before expiring a temporary session.

**Value**— Number of seconds

**Default**— 90

**Editing Level**—Basic

`max-update-interval` *max-update-interval*—(Optional) Maximum interval of interim updates for user sessions.

**Value**— Number of seconds

**Default**— 3600

**Editing Level**—Basic

`update-grace-period` *update-grace-period*—(Optional) Grace period to expect an interim update for a user session.

**Value**— Number of seconds

**Default**— 900

**Editing Level**—Basic

`resume-unrecovered`—(Optional) Specifies whether a user session that has failed to recover

from a failover should be resumed.

**Value**— true or false  
**Default**— true  
**Editing Level**—Basic

`thread-pool-size` *thread-pool-size*—(Optional) Number of working threads that process requests.

**Value**— Thread pool size  
**Default**— 50  
**Editing Level**—Basic

`thread-idle-timeout` *thread-idle-timeout*—(Optional) Time to wait before stopping working threads after they become idle.

**Value**— Number of seconds  
**Default**— 60  
**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Normal

## shared sae configuration driver aaa session-store

### Syntax

```
shared sae configuration driver aaa session-store {
    maximum-queue-age maximum-queue-age;
    maximum-queued-operations maximum-queued-operations;
    maximum-queue-size maximum-queue-size;
    maximum-file-size maximum-file-size;
    minimum-disk-space-usage minimum-disk-space-usage;
    rotation-batch-size rotation-batch-size;
    maximum-session-size maximum-session-size;
    disk-load-buffer-size disk-load-buffer-size;
    network-buffer-size network-buffer-size;
    retry-interval retry-interval;
    communications-timeout communications-timeout;
    load-timeout load-timeout;
    idle-timeout idle-timeout;
    maximum-backlog-ratio maximum-backlog-ratio;
    minimum-backlog minimum-backlog;
}
```

### Hierarchy Level

```
[edit shared sae configuration driver aaa session-store]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Configure the session store for the AAA NAS groups.

*maximum-queue-age* *maximum-queue-age*—(Optional) Maximum age that a queue of buffered store operations (such as adding a session to the store or removing a session from the store) can reach before the queue is written to a session store file.

**Value**— Number of milliseconds in the range 0–2147483647. A value of -1 indicates that there is no limit. A value of zero causes the session store to write each store operation to a session store file immediately.

**Default**— 5000

**Editing Level**—Advanced

*maximum-queued-operations* *maximum-queued-operations*—(Optional) Number of buffered store operations that are queued before the queue is written to a session store file.

**Value**— Integer in the range 0–2147483647. A value of -1 indicates that there is no limit. A value of zero causes the session store to write each store operation to a session store file immediately.

**Default**— 50

**Editing Level**—Advanced

`maximum-queue-size` *maximum-queue-size*—(Optional) Maximum size that a queue of buffered store operations can reach before the queue is written to a session store file.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 51050

**Editing Level**—Advanced

`maximum-file-size` *maximum-file-size*—(Optional) Maximum size of session store files. When a file reaches this size, a new file is created.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 25000000

**Editing Level**—Advanced

`minimum-disk-space-usage` *minimum-disk-space-usage*—(Optional) Percentage of space in all session store files that is used by live sessions. When the percentage of space in the session store files that is used by live sessions decreases to this percentage, the oldest session store file is compacted and appended to the newest session store file, and then the oldest session store file is deleted.

**Value**— Percentage of disk space in the range 1–100. We recommend a range of 30-50

**Default**— 25

**Editing Level**—Advanced

`rotation-batch-size` *rotation-batch-size*—(Optional) When the oldest session store file is rotated, specifies the number of sessions that are rotated from the oldest file to the newest file at the same time. While a set of sessions is rotated, no other session store activity can take place.

**Value**— Integer in the range 0–2147483647

**Default**— 50

**Editing Level**—Advanced

`maximum-session-size` *maximum-session-size*—(Optional) Maximum size of a single subscriber or service session. Use this parameter to reserve memory for an internal buffer.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 10000

**Editing Level**—Advanced

`disk-load-buffer-size` *disk-load-buffer-size*—(Optional) Size of the buffer that is used to load all of a session store's files from disk at startup.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 1000000

**Editing Level**—Advanced

`network-buffer-size` *network-buffer-size*—(Optional) Size of the buffer that holds messages or message segments that are waiting to be sent to passive session stores

**Value**— Number of bytes in the range 21 + < size of maximum session size field> –2147483647

**Default**— 51050

**Editing Level**—Advanced

`retry-interval` *retry-interval*—(Optional) Time interval between attempts by the active session store to connect to missing passive session stores.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 5000

**Editing Level**—Advanced

`communications-timeout` *communications-timeout*—(Optional) Amount of time that a session store waits before closing when it is blocked from reading or writing a message. This timeout does not apply when a session store is waiting for a remote session store to load its state from disk.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 60000

**Editing Level**—Advanced

`load-timeout` *load-timeout*—(Optional) Amount of time that an active session store waits for a passive session store or a passive session store waits for an active session store to load its data from disk before it closes the connection to the session store.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 420000

**Editing Level**—Advanced

`idle-timeout` *idle-timeout*—(Optional) Amount of time that a passive session store waits for activity from the active session store before it closes the connection to the active session store. This timeout applies after the session store startup and initial update processes are complete.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 3600000

**Editing Level**—Advanced

`maximum-backlog-ratio` *maximum-backlog-ratio*—(Optional) Along with the minimum backlog size, specifies when the active session store closes the connection to a passive session store because of a backlog of messages waiting to be sent. After the startup and initial update processes are complete, if the backlog becomes too large, the connection to the passive session store is closed. After the retry interval ends, a new connection is opened.

If the backlog of unsent operations (in bytes) divided by the total size (in bytes) of all live store operations is greater than this number, the connection is closed.

**Value**— Floating point number

**Default**— 1.5

**Editing Level**—Advanced

`minimum-backlog` *minimum-backlog*—(Optional) Along with the maximum backlog ratio, specifies when the active session store closes the connection to a passive session store because of a backlog of messages waiting to be sent to the passive session store. After the startup and initial update processes are complete, if the backlog becomes too large, the connection to the passive session store is closed. After the retry interval ends, a new connection is opened.

If the maximum backlog ratio is met, the active session store does not close the connection unless the backlog of messages (in bytes) is greater than this number.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 5000000

**Editing Level**—Advanced

### Required Privilege Level

system

### Required Editing Level

Advanced

## shared sae configuration driver junos

### Syntax

```
shared sae configuration driver junos {
    beep-server-port beep-server-port;
    tls-beep-server-port tls-beep-server-port;
    connection-attempts connection-attempts;
    keepalive-interval keepalive-interval;
    message-timeout message-timeout;
    batch-size batch-size;
    transaction-batch-time transaction-batch-time;
    sdx-group-name sdx-group-name;
    sdx-session-group-name sdx-session-group-name;
    send-commit-check send-commit-check;
}
```

### Hierarchy Level

```
[edit shared sae configuration driver junos]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the SAE to manage JUNOS routing platforms. A JUNOS routing platform interacts with the SAE by using a JUNOS software process called `sdx`. When the `sdx` process establishes a TCP/IP connection to the SAE, the SAE begins to manage the router. The JUNOS router driver configuration defines parameters related to the interactions between the SAE and the `sdx` process.

`beep-server-port` *beep-server-port*— TCP port number that is used to communicate with the `sdx` process on JUNOS routing platforms. This port number must match the port number configured in the `sdx` process on the router.

**Value**— TCP port number; if this value is set to zero and the TLS BEEP server port is set, the SAE accepts only TLS connections.

If you change this port number, you need to restart the SAE before the change takes effect.

**Default**— 3333

**Editing Level**—Advanced

`tls-beep-server-port` *tls-beep-server-port*— TCP port number used to communicate with the `sdx` process on JUNOS routing platforms using a secure TLS connection.

**Value**— TLS port number; if this value is set to zero, the SAE does not accept TLS connections.

If you change this port number, you need to restart the SAE before the change takes effect.

**Default**— 3434

**Editing Level**—Advanced

`connection-attempts` *connection-attempts*— Number of outstanding connection attempts before the SAE starts dropping new connection attempts.

**Value**— Positive value greater than 0; if the value is equal to or less than 0, the default value is used.

**Default**— 50

**Editing Level**—Advanced

`keepalive-interval` *keepalive-interval*— Interval between keepalive messages sent from the router. The `sdx` process on the router monitors the connection to the SAE by sending keepalive messages at one-third the specified interval. If the `sdx` process does not receive the expected keepalive answer within the specified timeout, it closes the connection.

A short interval results in a high load on the BEEP interface.

A long interval results in a long time before a connection failure is detected.

**Value**— Number of seconds in the range 0-2147483647. A value of 0 means that timeout is disabled.

**Default**— 45

**Editing Level**—Advanced

`message-timeout` *message-timeout*— Amount of time that the router driver waits for a response from the `sdx` process. Under a high load the router may not be able to respond fast enough to requests.

Change this value only if a high number of timeout events appear in the error log.

**Value**— Number of milliseconds in the range 0-2147483647

**Default**— 30000

**Editing Level**—Advanced

`batch-size` *batch-size*— Minimum number of service configuration transactions that are committed at the same time. If any of the transactions in a batch fails, all transactions are aborted, and the associated service activations or deactivations fail.

To control maximum latency for a job when services are activated in parallel, specify 120 % of the number of CORBA threads as the batch size.

**Value**— Integer in the range 0–2147483647

**Default**— 10

**Editing Level**—Advanced

`transaction-batch-time` *transaction-batch-time*— Maximum time to collect configuration transactions in a batch. The batch is completed if either the batch size or the batch time is reached.

The completion time is calculated from the creation of a batch. Note that the batch time is a function of the total configuration size and not of the number of commands in the configuration transactions.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 2000

**Editing Level**—Advanced

`sdx-group-name` *sdx-group-name*— Name of group on the JUNOS routing platform in which provisioning objects are stored.

**Value**— Name configured on the JUNOS routing platform

**Default**— sdx

**Editing Level**—Advanced

`sdx-session-group-name` *sdx-session-group-name*— Name of group on the JUNOS routing platform in which session objects are stored.

**Value**— Name configured on the JUNOS routing platform

**Default**— sdx-sessions

**Editing Level**—Advanced

`send-commit-check` *send-commit-check*— Enables or disables commit check. If enabled, a more detailed error message is logged if a batch fails, which lets you verify individual transactions in a batch.

To maximize service activation performance, commit check should be disabled.

**Value**— true or false

**Default**— true

**Editing Level**—Advanced

**Required Privilege Level**

system

**Required Editing Level**

Advanced

# shared sae configuration driver junos configuration-checking

## Syntax

```
shared sae configuration driver junos configuration-checking {
    configuration-checking-schedule configuration-checking-schedule;
    configuration-checking-action (enforce | synchronize | detect);
}
```

## Hierarchy Level

```
[edit shared sae configuration driver junos configuration-checking]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure the SAE to periodically check the configuration of the JUNOS routing platform.

## Options

`configuration-checking-schedule configuration-checking-schedule`—  
(Optional) Specifies when the SAE checks the router configuration.

**Value**— The schedule format is modeled on the UNIX crontab Entry Format (see UNIX crontab man pages). It consists of seven fields separated by space or tabs and enclosed in double quotation marks. The fields specify:

- Minute (0-59)
- Hour (0-23)
- Day of month (1-31, or the first three letters of the day of month)
- Month of the year (1-12)
- Day of the week (0-6 with 0 = Sunday, or the first three letters of the name of the day)
- Year (4 digits indicating the year)
- Time Zone ID: An \* indicates the SAE local time zone.

For custom time zones, specify the format:

- zone = "GMT" (" + " | "-") (hour : minute | hour minute | hour)
- hour = digit digit
- minute = digit digit
- digit = 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9

Use the following guidelines when configuring the schedule:

- An asterisk (\*) is interpreted as 0 for minutes and hours and as the SAE local time zone for time zone. For all other fields, it stands for "first-last."
- Ranges of numbers and names are allowed. Ranges are two values separated with a hyphen. The specified range is inclusive. For example, 1–5 for the hour field specifies checking at hours 1, 2, 3, 4, and 5.
- Lists are allowed. A list is a set of numbers (or ranges) separated by commas. For example: "1,2,5,9", "0-4,8-12".
- Step values can be used with ranges. Following a range with "/ < number >" specifies skips in the number's value through the range. For example, "0-23/2" in the hours field specifies event execution every other hour. Steps are also permitted after an asterisk, so "\* /2" specifies every 2 hours.
- When determining the next event time based on a specific time pattern, the following rules apply: Seconds and milliseconds are ignored (that is, rounded up to the closest minute). If you set both a day of the month and a day of the week, only the day of month is used.

**Default**— No value

**Editing Level**—Advanced

`configuration-checking-action (enforce | synchronize | detect)`—  
(Optional) Action that the SAE takes when it detects disparities between the configuration of the SAE and the configuration on the router.

**Value**— One of the following:

- **detect**—Reports disparities through the SAE router driver event trap called `routerConfOutOfSynch` and through the info log. The SAE does not make any changes on the router.
- **enforce**—Enforces the state of the session layer on the router. The SAE removes all sessions that have disparities and creates new sessions with the same activation parameters as the original ones
- **synchronize**—Synchronizes the state of the session layer on the router. The SAE removes all sessions that have disparities.

**Editing Level**—Advanced

## Required Privilege Level

system

**Required Editing Level**

Advanced

# shared sae configuration driver junos lsp-tracking

## Syntax

```
shared sae configuration driver junos lsp-tracking {
    match match;
    file file;
}
```

## Hierarchy Level

```
[edit shared sae configuration driver junos lsp-tracking]
```

## Release Information

Statement introduced in SRC Release 3.0.0

## Description

Configure event tracking for JUNOS LSPs to provide information to an application, such as the sample IPTV application, that needs information about LSP status.

LSP tracking can configure the system log on managed JUNOS routing platforms to send notification messages to the managing SAE when LSPs are created and removed, and when bandwidth allocation for an LSP changes.

## Options

`match match`—(Optional) A regular expression to identify a set of LSP names. If you do not define an expression, the SAE tracks all LSPs.

**Value**— Regular expression

**Default**— No value

**Editing Level**—Basic

`file file`—(Optional) Name of the file to store syslog event messages (that provide information about LSP state changes in a JUNOS routing platform).

**Value**— Filename

**Default**— mpls4sae

**Editing Level**—Expert

## Required Privilege Level

system system  
276

**Required Editing Level**

Basic

## shared sae configuration driver junos security

### Syntax

```
shared sae configuration driver junos security {
    need-client-authentication;
    local-certificate local-certificate;
}
```

### Hierarchy Level

```
[edit shared sae configuration driver junos security]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure Transport Layer Security (TLS) on the SAE.

`need-client-authentication`—(Optional) Enables or disables whether or not the SAE requests a client certificate from the router

If enabled, the SAE asks the router for a client certificate when a connection to the router is established.

If disabled, the SAE does not ask the router for a client certificate when a connection to the router is established.

**Default**— Enabled

**Editing Level**—Normal

`local-certificate local-certificate`—(Optional) Name of certificate to be used for TLS communications

**Value**— Name of certificate

**Default**— No value

**Editing Level**—Normal

### Required Privilege Level

system

**Required Editing Level**

Advanced

## shared sae configuration driver junos session-store

### Syntax

```
shared sae configuration driver junos session-store {
    maximum-queue-age maximum-queue-age;
    maximum-queued-operations maximum-queued-operations;
    maximum-queue-size maximum-queue-size;
    maximum-file-size maximum-file-size;
    minimum-disk-space-usage minimum-disk-space-usage;
    rotation-batch-size rotation-batch-size;
    maximum-session-size maximum-session-size;
    disk-load-buffer-size disk-load-buffer-size;
    network-buffer-size network-buffer-size;
    retry-interval retry-interval;
    communications-timeout communications-timeout;
    load-timeout load-timeout;
    idle-timeout idle-timeout;
    maximum-backlog-ratio maximum-backlog-ratio;
    minimum-backlog minimum-backlog;
}
```

### Hierarchy Level

```
[edit shared sae configuration driver junos session-store]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the session store for the JUNOS driver.

*maximum-queue-age maximum-queue-age*—(Optional) Maximum age that a queue of buffered store operations (such as adding a session to the store or removing a session from the store) can reach before the queue is written to a session store file.

**Value**— Number of milliseconds in the range 0–2147483647. A value of -1 indicates that there is no limit. A value of zero causes the session store to write each store operation to a session store file immediately.

**Default**— 5000

**Editing Level**—Advanced

*maximum-queued-operations maximum-queued-operations*—(Optional) Number of buffered store operations that are queued before the queue is written to a session store file.

**Value**— Integer in the range 0–2147483647. A value of -1 indicates that there is no limit. A value of zero causes the session store to write each store operation to a session store file immediately.

**Default**— 50

**Editing Level**—Advanced

`maximum-queue-size` *maximum-queue-size*—(Optional) Maximum size that a queue of buffered store operations can reach before the queue is written to a session store file.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 51050

**Editing Level**—Advanced

`maximum-file-size` *maximum-file-size*—(Optional) Maximum size of session store files. When a file reaches this size, a new file is created.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 25000000

**Editing Level**—Advanced

`minimum-disk-space-usage` *minimum-disk-space-usage*—(Optional) Percentage of space in all session store files that is used by live sessions. When the percentage of space in the session store files that is used by live sessions decreases to this percentage, the oldest session store file is compacted and appended to the newest session store file, and then the oldest session store file is deleted.

**Value**— Percentage of disk space in the range 1–100. We recommend a range of 30-50

**Default**— 25

**Editing Level**—Advanced

`rotation-batch-size` *rotation-batch-size*—(Optional) When the oldest session store file is rotated, specifies the number of sessions that are rotated from the oldest file to the newest file at the same time. While a set of sessions is rotated, no other session store activity can take place.

**Value**— Integer in the range 0–2147483647

**Default**— 50

**Editing Level**—Advanced

`maximum-session-size` *maximum-session-size*—(Optional) Maximum size of a single subscriber or service session. Use this parameter to reserve memory for an internal buffer.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 10000

**Editing Level**—Advanced

`disk-load-buffer-size` *disk-load-buffer-size*—(Optional) Size of the buffer that is used to load all of a session store's files from disk at startup.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 1000000

**Editing Level**—Advanced

`network-buffer-size` *network-buffer-size*—(Optional) Size of the buffer that holds messages or message segments that are waiting to be sent to passive session stores

**Value**— Number of bytes in the range 21 + < size of maximum session size field> –2147483647

**Default**— 51050

**Editing Level**—Advanced

`retry-interval` *retry-interval*—(Optional) Time interval between attempts by the active session store to connect to missing passive session stores.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 5000

**Editing Level**—Advanced

`communications-timeout` *communications-timeout*—(Optional) Amount of time that a session store waits before closing when it is blocked from reading or writing a message. This timeout does not apply when a session store is waiting for a remote session store to load its state from disk.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 60000

**Editing Level**—Advanced

`load-timeout` *load-timeout*—(Optional) Amount of time that an active session store waits for a passive session store or a passive session store waits for an active session store to load its data from disk before it closes the connection to the session store.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 420000

**Editing Level**—Advanced

`idle-timeout` *idle-timeout*—(Optional) Amount of time that a passive session store waits for activity from the active session store before it closes the connection to the active session store. This timeout applies after the session store startup and initial update processes are complete.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 3600000

**Editing Level**—Advanced

`maximum-backlog-ratio` *maximum-backlog-ratio*—(Optional) Along with the minimum backlog size, specifies when the active session store closes the connection to a passive session store because of a backlog of messages waiting to be sent. After the startup and initial update processes are complete, if the backlog becomes too large, the connection to the passive session store is closed. After the retry interval ends, a new connection is opened.

If the backlog of unsent operations (in bytes) divided by the total size (in bytes) of all live store operations is greater than this number, the connection is closed.

**Value**— Floating point number

**Default**— 1.5

**Editing Level**—Advanced

`minimum-backlog` *minimum-backlog*—(Optional) Along with the maximum backlog ratio, specifies when the active session store closes the connection to a passive session store because of a backlog of messages waiting to be sent to the passive session store. After the startup and initial update processes are complete, if the backlog becomes too large, the connection to the passive session store is closed. After the retry interval ends, a new connection is opened.

If the maximum backlog ratio is met, the active session store does not close the connection unless the backlog of messages (in bytes) is greater than this number.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 5000000

**Editing Level**—Advanced

#### Required Privilege Level

system

#### Required Editing Level

Advanced

# shared sae configuration driver junose

## Syntax

```
shared sae configuration driver junose {
    cops-server-port cops-server-port;
    backlog backlog;
    keepalive-interval keepalive-interval;
    message-timeout message-timeout;
    cops-message-maximum-length cops-message-maximum-length;
    cops-message-read-buffer-size cops-message-read-buffer-size;
    cops-message-write-buffer-size cops-message-write-buffer-size;
    pending-address-timeout pending-address-timeout;
    cops-handler-threads cops-handler-threads;
    cached-driver-expiration cached-driver-expiration;
    drop-unmanaged-interfaces-xdr-driver;
    track-unmanaged-interfaces-xdr-driver;
}
```

## Hierarchy Level

```
[edit shared sae configuration driver junose]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure the SAE to manage JUNOSe routers. The router driver specifies the COPS connection between the SAE COPS server and the COPS client in the JUNOSe router.

*cops-server-port* *cops-server-port*— TCP port number of the COPS server used to communicate with the JUNOSe routers.

**Value**— Port number that matches the configuration of the SRC client in the JUNOSe router.

**Default**— 3288

**Editing Level**—Advanced

*backlog* *backlog*— Maximum number of outstanding connection attempts before connections are dropped.

**Value**— Integer

**Default**— 50

**Editing Level**—Advanced

`keepalive-interval` *keepalive-interval*— Interval between keepalive messages sent from the COPS client (the JUNOS router). The COPS client monitors the COPS connection by sending keepalive messages at random intervals between one-fourth and three-fourths of the specified interval. If the client does not receive the expected keepalive answer within the specified timeout, the client terminates the connection.

A short interval results in a high load on the COPS interface.

A long interval results in a long time before a COPS failure is detected.

**Value**— Number of seconds in the range 0-32768. A value of 0 means that timeout is disabled.

**Default**— 45

**Editing Level**—Advanced

`message-timeout` *message-timeout*— Timeout interval in which the COPS server waits for a response to COPS requests. Under a high load the router may not be able to respond fast enough to COPS requests. Change this value only if a high number of COPS timeout events appear in the error log.

**Value**— Number of milliseconds

**Default**— 120000

**Editing Level**—Advanced

`cops-message-maximum-length` *cops-message-maximum-length*— Maximum length of a COPS message. We recommend that you use the default setting.

**Value**— Number of bytes in the range 4 bytes to 2 GB

**Default**— 200000

**Editing Level**—Advanced

`cops-message-read-buffer-size` *cops-message-read-buffer-size*— Buffer size for receiving COPS messages from the JUNOS client. We recommend that you use the default setting unless you are instructed to change it by Juniper Networks engineers.

**Value**— Number of bytes in the range 4 bytes to 2 GB

**Default**— 30000

**Editing Level**—Advanced

`cops-message-write-buffer-size` *cops-message-write-buffer-size*— Buffer size for sending COPS messages to the JUNOS client. We recommend that you use the default setting unless you are instructed to change it by Juniper Networks engineers.

**Value**— Number of bytes in the range 4 bytes to 2 GB

**Default**— 30000**Editing Level**—Advanced

`pending-address-timeout` *pending-address-timeout*— Maximum time that a DHCP address request remains pending.

**Value**— Number of milliseconds. Typical values are in the range 1000-15000 (1 second to 15 seconds).

**Default**— 5000**Editing Level**—Advanced

`cops-handler-threads` *cops-handler-threads*—(Optional) Size of the thread pool for handling unsolicited messages. These threads are shared among all JUNOS router drivers. You may want to set this value higher than the default if you wish to create greater throughput on platforms with multiple processing cores, and you are not achieving full processor resource utilization. Increasing the number of threads increases the ability to use multiple processing cores in parallel.

**Value**— Number of threads**Default**— No value**Editing Level**—Advanced

`cached-driver-expiration` *cached-driver-expiration*— Minimum amount of time to keep the state of a router driver after its COPS connection is closed. You might want to change this value because the SAE can resynchronize more quickly if most of the state is still in memory and it does not need to be reread from the disk.

**Value**— Number of seconds in the range 0-2147483647**Default**— 600**Editing Level**—Advanced

`drop-unmanaged-interfaces-xdr-driver`—(Optional) For JUNOS COPS-XDR drivers, enables or disables the driver to keep a record of unmanaged interfaces. You must enable this option if you have unmanaged dynamic interfaces in a virtual router that is managed by COPS-XDR. If the driver does not keep a record of unmanaged interfaces, next-interface actions in policies may not work properly in certain cases. To use RAM more efficiently, enable this option if you have a large number of unmanaged interfaces that are not the target of next-hop policies.

**Default**— Disabled**Editing Level**—Expert

`track-unmanaged-interfaces-xdr-driver`—(Optional) Enables sending of interface tracking events for unmanaged interfaces of the XDR router driver. Because the COPS-XDR protocol does not include notifications (DRQs) when unmanaged interfaces are disabled, plugins will not receive an unmanaged interface's stop events.

**Default**— Disabled  
**Editing Level**—Expert

**Required Privilege Level**

system

**Required Editing Level**

Advanced

## shared sae configuration driver junose session-store

### Syntax

```
shared sae configuration driver junose session-store {
    maximum-queue-age maximum-queue-age;
    maximum-queued-operations maximum-queued-operations;
    maximum-queue-size maximum-queue-size;
    maximum-file-size maximum-file-size;
    minimum-disk-space-usage minimum-disk-space-usage;
    rotation-batch-size rotation-batch-size;
    maximum-session-size maximum-session-size;
    disk-load-buffer-size disk-load-buffer-size;
    network-buffer-size network-buffer-size;
    retry-interval retry-interval;
    communications-timeout communications-timeout;
    load-timeout load-timeout;
    idle-timeout idle-timeout;
    maximum-backlog-ratio maximum-backlog-ratio;
    minimum-backlog minimum-backlog;
}
```

### Hierarchy Level

```
[edit shared sae configuration driver junose session-store]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the session store for the JUNOS driver.

*maximum-queue-age* *maximum-queue-age*—(Optional) Maximum age that a queue of buffered store operations (such as adding a session to the store or removing a session from the store) can reach before the queue is written to a session store file.

**Value**— Number of milliseconds in the range 0–2147483647. A value of -1 indicates that there is no limit. A value of zero causes the session store to write each store operation to a session store file immediately.

**Default**— 5000

**Editing Level**—Advanced

*maximum-queued-operations* *maximum-queued-operations*—(Optional) Number of buffered store operations that are queued before the queue is written to a session store file.

**Value**— Integer in the range 0–2147483647. A value of -1 indicates that there is no limit. A value of zero causes the session store to write each store operation to a session store file immediately.

**Default**— 50

**Editing Level**—Advanced

`maximum-queue-size` *maximum-queue-size*—(Optional) Maximum size that a queue of buffered store operations can reach before the queue is written to a session store file.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 51050

**Editing Level**—Advanced

`maximum-file-size` *maximum-file-size*—(Optional) Maximum size of session store files. When a file reaches this size, a new file is created.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 25000000

**Editing Level**—Advanced

`minimum-disk-space-usage` *minimum-disk-space-usage*—(Optional) Percentage of space in all session store files that is used by live sessions. When the percentage of space in the session store files that is used by live sessions decreases to this percentage, the oldest session store file is compacted and appended to the newest session store file, and then the oldest session store file is deleted.

**Value**— Percentage of disk space in the range 1–100. We recommend a range of 30-50

**Default**— 25

**Editing Level**—Advanced

`rotation-batch-size` *rotation-batch-size*—(Optional) When the oldest session store file is rotated, specifies the number of sessions that are rotated from the oldest file to the newest file at the same time. While a set of sessions is rotated, no other session store activity can take place.

**Value**— Integer in the range 0–2147483647

**Default**— 50

**Editing Level**—Advanced

`maximum-session-size` *maximum-session-size*—(Optional) Maximum size of a single subscriber or service session. Use this parameter to reserve memory for an internal buffer.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 10000

**Editing Level**—Advanced

`disk-load-buffer-size` *disk-load-buffer-size*—(Optional) Size of the buffer that is used to load all of a session store's files from disk at startup.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 1000000

**Editing Level**—Advanced

`network-buffer-size` *network-buffer-size*—(Optional) Size of the buffer that holds messages or message segments that are waiting to be sent to passive session stores

**Value**— Number of bytes in the range 21 + < size of maximum session size field> –2147483647

**Default**— 51050

**Editing Level**—Advanced

`retry-interval` *retry-interval*—(Optional) Time interval between attempts by the active session store to connect to missing passive session stores.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 5000

**Editing Level**—Advanced

`communications-timeout` *communications-timeout*—(Optional) Amount of time that a session store waits before closing when it is blocked from reading or writing a message. This timeout does not apply when a session store is waiting for a remote session store to load its state from disk.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 60000

**Editing Level**—Advanced

`load-timeout` *load-timeout*—(Optional) Amount of time that an active session store waits for a passive session store or a passive session store waits for an active session store to load its data from disk before it closes the connection to the session store.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 420000

**Editing Level**—Advanced

`idle-timeout` *idle-timeout*—(Optional) Amount of time that a passive session store waits for activity from the active session store before it closes the connection to the active session store. This timeout applies after the session store startup and initial update processes are complete.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 3600000

**Editing Level**—Advanced

`maximum-backlog-ratio` *maximum-backlog-ratio*—(Optional) Along with the minimum backlog size, specifies when the active session store closes the connection to a passive session store because of a backlog of messages waiting to be sent. After the startup and initial update processes are complete, if the backlog becomes too large, the connection to the passive session store is closed. After the retry interval ends, a new connection is opened.

If the backlog of unsent operations (in bytes) divided by the total size (in bytes) of all live store operations is greater than this number, the connection is closed.

**Value**— Floating point number

**Default**— 1.5

**Editing Level**—Advanced

`minimum-backlog` *minimum-backlog*—(Optional) Along with the maximum backlog ratio, specifies when the active session store closes the connection to a passive session store because of a backlog of messages waiting to be sent to the passive session store. After the startup and initial update processes are complete, if the backlog becomes too large, the connection to the passive session store is closed. After the retry interval ends, a new connection is opened.

If the maximum backlog ratio is met, the active session store does not close the connection unless the backlog of messages (in bytes) is greater than this number.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 5000000

**Editing Level**—Advanced

#### Required Privilege Level

system

#### Required Editing Level

Advanced

## shared sae configuration driver pcmm

### Syntax

```
shared sae configuration driver pcmm {
    keepalive-interval keepalive-interval;
    tcp-connection-timeout tcp-connection-timeout;
    application-manager-id application-manager-id;
    message-timeout message-timeout;
    cops-message-maximum-length cops-message-maximum-length;
    cops-message-read-buffer-size cops-message-read-buffer-size;
    cops-message-write-buffer-size cops-message-write-buffer-size;
    sae-community-manager sae-community-manager;
    disable-full-sync;
    disable-pcmm-i03-policy;
    session-recovery-retry-interval session-recovery-retry-interval;
    element-id element-id;
    default-rks-plugin-in default-rks-plugin-in;
}
```

### Hierarchy Level

```
[edit shared sae configuration driver pcmm]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the SAE to manage PCMM devices. The SAE connects to the PCMM device by using a COPS-over-TCP connection. The PCMM device driver controls this connection.

*keepalive-interval* *keepalive-interval*— Interval between keepalive messages sent from the COPS client (the PCMM device) to the COPS server (the SAE). The COPS client monitors the COPS connection by sending keepalive messages at random intervals between one-fourth and three-fourths of the specified interval. If the client or the server does not receive the expected keepalive answer within the specified timeout, the client closes the connection.

**Value**— Number of seconds in the range 0-2147483647. A value of 0 means that the timeout is disabled.

**Default**— 45

**Editing Level**—Advanced

*tcp-connection-timeout* *tcp-connection-timeout*— Timeout for opening a TCP

connection to the PCMM device.

**Value**— Number of seconds in the range 0–2147483647.

**Default**— 5

**Editing Level**—Advanced

`application-manager-id application-manager-id`— Identifier of the application manager when this SAE is configured as the application manager. The application manager includes this identifier in all messages that it sends to the policy server. The policy server passes this ID to the CMTS device in Gate Control messages. The CMTS device returns the ID associated with the gate to the policy server. The policy server uses this information to associate gate messages with a particular application manager.

**Value**— 4-byte unsigned integer that is unique in a service provider network.

**Default**— 1

**Editing Level**—Normal

`message-timeout message-timeout`— Amount of time that the COPS server (the SAE) waits for a response to COPS requests from the COPS client (the PCMM device). Under a high load the PCMM device may not be able to respond fast enough to COPS requests. Change this value only if a high number of COPS timeout events appear in the error log.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 120000

**Editing Level**—Advanced

`cops-message-maximum-length cops-message-maximum-length`— Maximum length of a COPS message. We recommend that you use the default setting.

**Value**— Number of bytes in the range 4 bytes to 2 GB

**Default**— 204800

**Editing Level**—Advanced

`cops-message-read-buffer-size cops-message-read-buffer-size`— Buffer size for receiving COPS messages from the PCMM client. We recommend that you use the default setting unless you are instructed to change it by Juniper Networks engineers.

**Value**— Number of bytes in the range 4 bytes to 2 GB

**Default**— 30000

**Editing Level**—Advanced

`cops-message-write-buffer-size cops-message-write-buffer-size`— Buffer size for sending COPS messages to the PCMM client. We recommend that you use the default setting unless you are instructed to change it by Juniper Networks engineers.

**Value**— Number of bytes in the range 4 bytes to 2 GB

**Default**— 30000

**Editing Level**—Advanced

`sae-community-manager sae-community-manager`— Name of the community manager that manages PCMM driver communities. Active SAEs are selected from this community.

**Value**— Community name

**Default**— PCMMCommunityManager

**Editing Level**—Expert

`disable-full-sync`—(Optional) Disables state synchronization with PCMM policy servers. State synchronization is achieved when the SAE is required to communicate with the policy server over the COPS connection.

**Default**—false

**Editing Level**—Expert

`disable-pcmm-i03-policy`—(Optional) Disables the SAE to send classifiers to the router that comply with PCMM I03. Use this option if your network deployment has CMTS devices that do not support PCMM I03.

**Default**—true

**Editing Level**—Expert

`session-recovery-retry-interval session-recovery-retry-interval`— Time interval between attempts by the SAE to restore service sessions that are still being recovered in the background when state synchronization is completed with a state-data-incomplete error. The SAE attempts to restore a service session if it receives a service modification or deactivation request for an unrecovered service session before the next interval.

We recommend setting this value to 3600000 (1 hour) or longer.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 3600000

**Editing Level**—Expert

`element-id element-id`—(Optional) Unique identifier that the SAE uses to identify itself when it originates RKS events.

**Value**— 8-byte unsigned integer in the range 0–99999; must be unique within a PCMM network

**Default**— 1

**Editing Level**—Advanced

`default-rks-plug-in` *default-rks-plug-in*—(Optional) RKS plug-in to which the SAE sends event messages if you do not configure a CMTS-specific plug-in.

**Value**— Name of an RKS plug-in  
**Default**— No value  
**Editing Level**—Advanced

**Required Privilege Level**

system

**Required Editing Level**

Normal

# shared sae configuration driver pcmm cmts-specific-rks-plug-ins

## Syntax

```
shared sae configuration driver pcmm cmts-specific-rks-plug-ins name {
    rks-plug-in rks-plug-in;
}
```

## Hierarchy Level

```
[edit shared sae configuration driver pcmm cmts-specific-rks-plug-ins]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a CMTS-specific RKS plug-in.

## Options

*name name*— Name of the RKS plug-in.

**Value**—Text

*rks-plug-in rks-plug-in*—(Optional) Name of the plug-in to which the SAE sends events for this CMTS device.

**Value**— Name of an RKS plug-in

**Default**— No value

**Editing Level**—Advanced

## Required Privilege Level

system

## Required Editing Level

Advanced

## shared sae configuration driver pcmm session-store

### Syntax

```
shared sae configuration driver pcmm session-store {
    maximum-queue-age maximum-queue-age;
    maximum-queued-operations maximum-queued-operations;
    maximum-queue-size maximum-queue-size;
    maximum-file-size maximum-file-size;
    minimum-disk-space-usage minimum-disk-space-usage;
    rotation-batch-size rotation-batch-size;
    maximum-session-size maximum-session-size;
    disk-load-buffer-size disk-load-buffer-size;
    network-buffer-size network-buffer-size;
    retry-interval retry-interval;
    communications-timeout communications-timeout;
    load-timeout load-timeout;
    idle-timeout idle-timeout;
    maximum-backlog-ratio maximum-backlog-ratio;
    minimum-backlog minimum-backlog;
}
```

### Hierarchy Level

```
[edit shared sae configuration driver pcmm session-store]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the session store for the PCMM driver.

*maximum-queue-age* *maximum-queue-age*—(Optional) Maximum age that a queue of buffered store operations (such as adding a session to the store or removing a session from the store) can reach before the queue is written to a session store file.

**Value**— Number of milliseconds in the range 0–2147483647. A value of -1 indicates that there is no limit. A value of zero causes the session store to write each store operation to a session store file immediately.

**Default**— 5000

**Editing Level**—Advanced

*maximum-queued-operations* *maximum-queued-operations*—(Optional) Number of buffered store operations that are queued before the queue is written to a session store file.

**Value**— Integer in the range 0–2147483647. A value of -1 indicates that there is no limit. A value of zero causes the session store to write each store operation to a session store file immediately.

**Default**— 50

**Editing Level**—Advanced

`maximum-queue-size` *maximum-queue-size*—(Optional) Maximum size that a queue of buffered store operations can reach before the queue is written to a session store file.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 51050

**Editing Level**—Advanced

`maximum-file-size` *maximum-file-size*—(Optional) Maximum size of session store files. When a file reaches this size, a new file is created.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 25000000

**Editing Level**—Advanced

`minimum-disk-space-usage` *minimum-disk-space-usage*—(Optional) Percentage of space in all session store files that is used by live sessions. When the percentage of space in the session store files that is used by live sessions decreases to this percentage, the oldest session store file is compacted and appended to the newest session store file, and then the oldest session store file is deleted.

**Value**— Percentage of disk space in the range 1–100. We recommend a range of 30-50

**Default**— 25

**Editing Level**—Advanced

`rotation-batch-size` *rotation-batch-size*—(Optional) When the oldest session store file is rotated, specifies the number of sessions that are rotated from the oldest file to the newest file at the same time. While a set of sessions is rotated, no other session store activity can take place.

**Value**— Integer in the range 0–2147483647

**Default**— 50

**Editing Level**—Advanced

`maximum-session-size` *maximum-session-size*—(Optional) Maximum size of a single subscriber or service session. Use this parameter to reserve memory for an internal buffer.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 10000

**Editing Level**—Advanced

`disk-load-buffer-size` *disk-load-buffer-size*—(Optional) Size of the buffer that is used to load all of a session store's files from disk at startup.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 1000000

**Editing Level**—Advanced

`network-buffer-size` *network-buffer-size*—(Optional) Size of the buffer that holds messages or message segments that are waiting to be sent to passive session stores

**Value**— Number of bytes in the range 21 + < size of maximum session size field> –2147483647

**Default**— 51050

**Editing Level**—Advanced

`retry-interval` *retry-interval*—(Optional) Time interval between attempts by the active session store to connect to missing passive session stores.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 5000

**Editing Level**—Advanced

`communications-timeout` *communications-timeout*—(Optional) Amount of time that a session store waits before closing when it is blocked from reading or writing a message. This timeout does not apply when a session store is waiting for a remote session store to load its state from disk.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 60000

**Editing Level**—Advanced

`load-timeout` *load-timeout*—(Optional) Amount of time that an active session store waits for a passive session store or a passive session store waits for an active session store to load its data from disk before it closes the connection to the session store.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 420000

**Editing Level**—Advanced

`idle-timeout` *idle-timeout*—(Optional) Amount of time that a passive session store waits for activity from the active session store before it closes the connection to the active session store. This timeout applies after the session store startup and initial update processes are complete.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 3600000

**Editing Level**—Advanced

`maximum-backlog-ratio` *maximum-backlog-ratio*—(Optional) Along with the minimum backlog size, specifies when the active session store closes the connection to a passive session store because of a backlog of messages waiting to be sent. After the startup and initial update processes are complete, if the backlog becomes too large, the connection to the passive session store is closed. After the retry interval ends, a new connection is opened.

If the backlog of unsent operations (in bytes) divided by the total size (in bytes) of all live store operations is greater than this number, the connection is closed.

**Value**— Floating point number

**Default**— 1.5

**Editing Level**—Advanced

`minimum-backlog` *minimum-backlog*—(Optional) Along with the maximum backlog ratio, specifies when the active session store closes the connection to a passive session store because of a backlog of messages waiting to be sent to the passive session store. After the startup and initial update processes are complete, if the backlog becomes too large, the connection to the passive session store is closed. After the retry interval ends, a new connection is opened.

If the maximum backlog ratio is met, the active session store does not close the connection unless the backlog of messages (in bytes) is greater than this number.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 5000000

**Editing Level**—Advanced

### Required Privilege Level

system

### Required Editing Level

Advanced

# shared sae configuration driver scripts

## Syntax

```
shared sae configuration driver scripts {
    extension-path extension-path;
    general general;
    junos junos;
    junose-pr junose-pr;
    junose-xdr junose-xdr;
    pcmm pcmm;
    third-party third-party;
}
```

## Hierarchy Level

```
[edit shared sae configuration driver scripts]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure device scripts. When the SAE establishes a connection with a router, PCMM device, or other network device, it can run a script to customize the setup of the connection. These scripts are run when the connection is established and again when the connection is dropped.

## Options

*extension-path extension-path*—(Optional) Path to scripts that are not in the default location, */opt/UMC/sae/lib*.

**Value**— List of paths separated by semicolons (;)

**Default**— No value

**Editing Level**—Normal

*general general*—(Optional) Script that can be used for all types of routers, PCMM devices, and other network devices that the SRC software supports. The script is run when the connection between a router or other network device and the SAE is established and again when the connection is dropped.

**Value**— Name of a script

**Default**— No value

**Editing Level**—Basic

`junos junos`—(Optional) Initialization script for JUNOS routing platforms. The script is run when the connection between a router and the SAE is established and again when the connection is dropped.

**Value**— Name of a script

**Default**— No value

**Editing Level**—Basic

`junose-pr junose-pr`—(Optional) Initialization script for JUNOSe routers when the JUNOSe driver uses COPS-PR mode when connecting to the SAE. The script is run when the connection between a router and the SAE is established and again when the connection is dropped.

**Value**— Name of the file that contains the script without including the .py extension.

**Default**— No value

**Editing Level**—Basic

`junose-xdr junose-xdr`—(Optional) Initialization script for JUNOSe routers when the JUNOSe driver uses XDR mode when connecting to the SAE. The script is run when the connection between a router and the SAE is established and again when the connection is dropped.

In COPS XDR mode, the router does not send the network access server (NAS) IP address to the SAE. If your configuration requires this value, add the following line to a JUNOSe script:

```
import ERXnasip
```

When you add the `import ERXnasip` entry, the script obtains the NAS-IP address from the router through SNMP. This mechanism can affect performance, especially when the SAE manages a large number of virtual routers.

**Value**— Name of a script. For example, `iorPublisher`, `poolPublisher`.

**Default**— No value

**Editing Level**—Basic

`pcmm pcmm`—(Optional) Initialization script for the Juniper Policy Server in a PCMM environment. The script is run when the connection between a policy server and the SAE is established and again when the connection is dropped.

**Value**— Name of a script

**Default**— No value

**Editing Level**—Basic

`third-party third-party`—(Optional) Initialization script for third-party device drivers.

The script is run when the third-party device driver is activated or deactivated.

**Value**— Name of a script. For example, iorPublisher.

**Default**— No value

**Editing Level**—Basic

#### **Required Privilege Level**

system

#### **Required Editing Level**

Basic

## shared sae configuration driver session-store

### Syntax

```
shared sae configuration driver session-store {
    ip-address ip-address;
    port port;
    root-directory root-directory;
}
```

### Hierarchy Level

```
[edit shared sae configuration driver session-store]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure global session store parameters that are shared by all session store instances (active or passive) on the SAE. You can also configure session store parameters within a router or other device driver configuration.

### Options

*ip-address ip-address*—(Optional) IP address that the session store infrastructure on this SAE uses to listen for incoming TCP connections from active session stores.

**Value**— IP address. The address must be an IP address configured for the SAE host. If you do not enter an address or if you disable this field, active session stores cannot create passive session stores on this SAE. We recommend that you enter an address that is configured in a list of connected SAEs.

**Default**— No value

**Editing Level**—Advanced

*port port*—(Optional) TCP port number on which the session store infrastructure on this SAE listens for incoming connections from active session stores. This option has no effect if you have not configured a session store IP address.

**Value**— Port number in the range 1027–65535

**Default**— No value

**Editing Level**—Advanced

`root-directory` *root-directory*—(Optional) Root directory in which the session store creates files. This option has no effect if you have not configured a session store IP address.

- Value**— Directory name
- Default**— *No value*
- Editing Level**—Advanced

**Required Privilege Level**

system

**Required Editing Level**

Advanced

# shared sae configuration driver simulated

## Syntax

```
shared sae configuration driver simulated name {
    driver-type (junos | junose | pcmm);
    router-version router-version;
    router-address router-address;
    transport-router transport-router;
}
```

## Hierarchy Level

```
[edit shared sae configuration driver simulated]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure simulated router drivers. Simulated router drivers allow you to create subscriber sessions without connecting to a router. You can then use the simulated subscriber sessions to test SAE applications.

## Options

*name name*— Name of the simulated router driver.

**Value**—Text

*driver-type* (junos | junose | pcmm)— Type of device that the simulated driver simulates

**Value**— One of the following:

- junos
- junose
- pcmm

**Default**— JUNOS

**Editing Level**—Basic

*router-version router-version*—(Optional) Version of the device software to

simulate.

**Value**— Valid software version for the device that is being simulated.

**Default**— No value

**Editing Level**—Basic

`router-address router-address`— Address of the router that is available for router initialization scripts.

**Value**— IP address

**Default**— 10.0.0.1

**Editing Level**—Basic

`transport-router transport-router`—(Optional) Name of a virtual router that is used to connect to the SAE. This value is passed to the router initialization script. It is not supported on JUNOS routing platforms.

**Value**— Name of a virtual router

**Default**— No value

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Normal

## shared sae configuration driver simulated *name* session-store

### Syntax

```
shared sae configuration driver simulated name session-store {
    maximum-queue-age maximum-queue-age;
    maximum-queued-operations maximum-queued-operations;
    maximum-queue-size maximum-queue-size;
    maximum-file-size maximum-file-size;
    minimum-disk-space-usage minimum-disk-space-usage;
    rotation-batch-size rotation-batch-size;
    maximum-session-size maximum-session-size;
    disk-load-buffer-size disk-load-buffer-size;
    network-buffer-size network-buffer-size;
    retry-interval retry-interval;
    communications-timeout communications-timeout;
    load-timeout load-timeout;
    idle-timeout idle-timeout;
    maximum-backlog-ratio maximum-backlog-ratio;
    minimum-backlog minimum-backlog;
}
```

### Hierarchy Level

```
[edit shared sae configuration driver simulated name session-store]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the session store for the simulated driver.

*maximum-queue-age* *maximum-queue-age*—(Optional) Maximum age that a queue of buffered store operations (such as adding a session to the store or removing a session from the store) can reach before the queue is written to a session store file.

**Value**— Number of milliseconds in the range 0–2147483647. A value of -1 indicates that there is no limit. A value of zero causes the session store to write each store operation to a session store file immediately.

**Default**— 5000

**Editing Level**—Advanced

*maximum-queued-operations* *maximum-queued-operations*—(Optional) Number of

buffered store operations that are queued before the queue is written to a session store file.

**Value**— Integer in the range 0–2147483647. A value of -1 indicates that there is no limit. A value of zero causes the session store to write each store operation to a session store file immediately.

**Default**— 50

**Editing Level**—Advanced

`maximum-queue-size` *maximum-queue-size*—(Optional) Maximum size that a queue of buffered store operations can reach before the queue is written to a session store file.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 51050

**Editing Level**—Advanced

`maximum-file-size` *maximum-file-size*—(Optional) Maximum size of session store files. When a file reaches this size, a new file is created.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 25000000

**Editing Level**—Advanced

`minimum-disk-space-usage` *minimum-disk-space-usage*—(Optional) Percentage of space in all session store files that is used by live sessions. When the percentage of space in the session store files that is used by live sessions decreases to this percentage, the oldest session store file is compacted and appended to the newest session store file, and then the oldest session store file is deleted.

**Value**— Percentage of disk space in the range 1–100. We recommend a range of 30–50

**Default**— 25

**Editing Level**—Advanced

`rotation-batch-size` *rotation-batch-size*—(Optional) When the oldest session store file is rotated, specifies the number of sessions that are rotated from the oldest file to the newest file at the same time. While a set of sessions is rotated, no other session store activity can take place.

**Value**— Integer in the range 0–2147483647

**Default**— 50

**Editing Level**—Advanced

`maximum-session-size` *maximum-session-size*—(Optional) Maximum size of a single subscriber or service session. Use this parameter to reserve memory for an internal buffer.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 10000

**Editing Level**—Advanced

`disk-load-buffer-size` *disk-load-buffer-size*—(Optional) Size of the buffer that is used to load all of a session store's files from disk at startup.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 1000000

**Editing Level**—Advanced

`network-buffer-size` *network-buffer-size*—(Optional) Size of the buffer that holds messages or message segments that are waiting to be sent to passive session stores

**Value**— Number of bytes in the range 21 + < size of maximum session size field> –2147483647

**Default**— 51050

**Editing Level**—Advanced

`retry-interval` *retry-interval*—(Optional) Time interval between attempts by the active session store to connect to missing passive session stores.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 5000

**Editing Level**—Advanced

`communications-timeout` *communications-timeout*—(Optional) Amount of time that a session store waits before closing when it is blocked from reading or writing a message. This timeout does not apply when a session store is waiting for a remote session store to load its state from disk.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 60000

**Editing Level**—Advanced

`load-timeout` *load-timeout*—(Optional) Amount of time that an active session store waits for a passive session store or a passive session store waits for an active session store to load its data from disk before it closes the connection to the session store.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 420000

**Editing Level**—Advanced

`idle-timeout` *idle-timeout*—(Optional) Amount of time that a passive session store waits for activity from the active session store before it closes the connection to the active session store. This timeout applies after the session store startup and initial update processes

are complete.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 3600000

**Editing Level**—Advanced

`maximum-backlog-ratio` *maximum-backlog-ratio*—(Optional) Along with the minimum backlog size, specifies when the active session store closes the connection to a passive session store because of a backlog of messages waiting to be sent. After the startup and initial update processes are complete, if the backlog becomes too large, the connection to the passive session store is closed. After the retry interval ends, a new connection is opened.

If the backlog of unsent operations (in bytes) divided by the total size (in bytes) of all live store operations is greater than this number, the connection is closed.

**Value**— Floating point number

**Default**— 1.5

**Editing Level**—Advanced

`minimum-backlog` *minimum-backlog*—(Optional) Along with the maximum backlog ratio, specifies when the active session store closes the connection to a passive session store because of a backlog of messages waiting to be sent to the passive session store. After the startup and initial update processes are complete, if the backlog becomes too large, the connection to the passive session store is closed. After the retry interval ends, a new connection is opened.

If the maximum backlog ratio is met, the active session store does not close the connection unless the backlog of messages (in bytes) is greater than this number.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 5000000

**Editing Level**—Advanced

#### Required Privilege Level

system

#### Required Editing Level

Advanced

# shared sae configuration driver snmp

## Syntax

```
shared sae configuration driver snmp {
    read-only-community-string read-only-community-string;
    read-write-community-string read-write-community-string;
}
```

## Hierarchy Level

```
[edit shared sae configuration driver snmp]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure global default SNMP communities for use with JUNOS routers and JUNOS routing platforms. Global default SNMP communities are used if a virtual router does not exist on the router or the community strings have not been configured for the VR.

## Options

`read-only-community-string read-only-community-string`— Default SNMP community string used for read access to the router.

**Value**— SNMP community string that matches a read-only community string configured on the router.

**Default**— public

**Editing Level**—Normal

`read-write-community-string read-write-community-string`— Default SNMP community string used for write access to the router.

**Value**— SNMP community string that matches a read-write community string configured on the router.

**Default**— private

**Editing Level**—Normal

## Required Privilege Level

system

**Required Editing Level**

Basic

## shared sae configuration driver third-party

### Syntax

```
shared sae configuration driver third-party {
    sae-community-manager sae-community-manager;
}
```

### Hierarchy Level

```
[edit shared sae configuration driver third-party]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the community manager for third-party devices that the SAE manages.

*sae-community-manager sae-community-manager*— Name of the community manager that manages network device communities. Active SAEs are selected from this community.

**Value**— Community name

**Default**— PROXYCommunityManager

**Editing Level**—Expert

### Required Privilege Level

system

### Required Editing Level

Advanced

## shared sae configuration driver third-party session-store

### Syntax

```
shared sae configuration driver third-party session-store {
    maximum-queue-age maximum-queue-age;
    maximum-queued-operations maximum-queued-operations;
    maximum-queue-size maximum-queue-size;
    maximum-file-size maximum-file-size;
    minimum-disk-space-usage minimum-disk-space-usage;
    rotation-batch-size rotation-batch-size;
    maximum-session-size maximum-session-size;
    disk-load-buffer-size disk-load-buffer-size;
    network-buffer-size network-buffer-size;
    retry-interval retry-interval;
    communications-timeout communications-timeout;
    load-timeout load-timeout;
    idle-timeout idle-timeout;
    maximum-backlog-ratio maximum-backlog-ratio;
    minimum-backlog minimum-backlog;
}
```

### Hierarchy Level

```
[edit shared sae configuration driver third-party session-store]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the session store for the third-party device driver.

*maximum-queue-age maximum-queue-age*—(Optional) Maximum age that a queue of buffered store operations (such as adding a session to the store or removing a session from the store) can reach before the queue is written to a session store file.

**Value**— Number of milliseconds in the range 0–2147483647. A value of -1 indicates that there is no limit. A value of zero causes the session store to write each store operation to a session store file immediately.

**Default**— 5000

**Editing Level**—Advanced

*maximum-queued-operations maximum-queued-operations*—(Optional) Number of buffered store operations that are queued before the queue is written to a session store file.

**Value**— Integer in the range 0–2147483647. A value of -1 indicates that there is no limit. A value of zero causes the session store to write each store operation to a session store file immediately.

**Default**— 50

**Editing Level**—Advanced

`maximum-queue-size` *maximum-queue-size*—(Optional) Maximum size that a queue of buffered store operations can reach before the queue is written to a session store file.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 51050

**Editing Level**—Advanced

`maximum-file-size` *maximum-file-size*—(Optional) Maximum size of session store files. When a file reaches this size, a new file is created.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 25000000

**Editing Level**—Advanced

`minimum-disk-space-usage` *minimum-disk-space-usage*—(Optional) Percentage of space in all session store files that is used by live sessions. When the percentage of space in the session store files that is used by live sessions decreases to this percentage, the oldest session store file is compacted and appended to the newest session store file, and then the oldest session store file is deleted.

**Value**— Percentage of disk space in the range 1–100. We recommend a range of 30-50

**Default**— 25

**Editing Level**—Advanced

`rotation-batch-size` *rotation-batch-size*—(Optional) When the oldest session store file is rotated, specifies the number of sessions that are rotated from the oldest file to the newest file at the same time. While a set of sessions is rotated, no other session store activity can take place.

**Value**— Integer in the range 0–2147483647

**Default**— 50

**Editing Level**—Advanced

`maximum-session-size` *maximum-session-size*—(Optional) Maximum size of a single subscriber or service session. Use this parameter to reserve memory for an internal buffer.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 10000

**Editing Level**—Advanced

`disk-load-buffer-size` *disk-load-buffer-size*—(Optional) Size of the buffer that is used to load all of a session store's files from disk at startup.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 1000000

**Editing Level**—Advanced

`network-buffer-size` *network-buffer-size*—(Optional) Size of the buffer that holds messages or message segments that are waiting to be sent to passive session stores

**Value**— Number of bytes in the range 21 + < size of maximum session size field> –2147483647

**Default**— 51050

**Editing Level**—Advanced

`retry-interval` *retry-interval*—(Optional) Time interval between attempts by the active session store to connect to missing passive session stores.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 5000

**Editing Level**—Advanced

`communications-timeout` *communications-timeout*—(Optional) Amount of time that a session store waits before closing when it is blocked from reading or writing a message. This timeout does not apply when a session store is waiting for a remote session store to load its state from disk.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 60000

**Editing Level**—Advanced

`load-timeout` *load-timeout*—(Optional) Amount of time that an active session store waits for a passive session store or a passive session store waits for an active session store to load its data from disk before it closes the connection to the session store.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 420000

**Editing Level**—Advanced

`idle-timeout` *idle-timeout*—(Optional) Amount of time that a passive session store waits for activity from the active session store before it closes the connection to the active session store. This timeout applies after the session store startup and initial update processes are complete.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 3600000

**Editing Level**—Advanced

`maximum-backlog-ratio` *maximum-backlog-ratio*—(Optional) Along with the minimum backlog size, specifies when the active session store closes the connection to a passive session store because of a backlog of messages waiting to be sent. After the startup and initial update processes are complete, if the backlog becomes too large, the connection to the passive session store is closed. After the retry interval ends, a new connection is opened.

If the backlog of unsent operations (in bytes) divided by the total size (in bytes) of all live store operations is greater than this number, the connection is closed.

**Value**— Floating point number

**Default**— 1.5

**Editing Level**—Advanced

`minimum-backlog` *minimum-backlog*—(Optional) Along with the maximum backlog ratio, specifies when the active session store closes the connection to a passive session store because of a backlog of messages waiting to be sent to the passive session store. After the startup and initial update processes are complete, if the backlog becomes too large, the connection to the passive session store is closed. After the retry interval ends, a new connection is opened.

If the maximum backlog ratio is met, the active session store does not close the connection unless the backlog of messages (in bytes) is greater than this number.

**Value**— Number of bytes in the range 0–2147483647

**Default**— 5000000

**Editing Level**—Advanced

### Required Privilege Level

system

### Required Editing Level

Advanced

# shared sae configuration dynamic-radius-server

## Syntax

```
shared sae configuration dynamic-radius-server {
    maximum-cached-peer maximum-cached-peer;
}
```

## Hierarchy Level

```
[edit shared sae configuration dynamic-radius-server]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure the number of peers that the dynamic RADIUS server can maintain.

## Options

*maximum-cached-peer maximum-cached-peer*— Maximum number of peers maintained by the dynamic RADIUS server.

**Value**— Integer

**Default**— 100

**Editing Level**— Basic

## Required Privilege Level

system

## Required Editing Level

Basic

## shared sae configuration external-interface-features

### Syntax

```
shared sae configuration external-interface-features name ...
```

### Hierarchy Level

```
[edit shared sae configuration external-interface-features]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Create an external interface configuration.

### Options

*name* *name*— Name of the external interface configuration.

**Value**—Text

### Required Privilege Level

system

### Required Editing Level

Advanced

# shared sae configuration external-interface-features *name* CommunityManager

## Syntax

```
shared sae configuration external-interface-features name CommunityManager {
    keepalive-interval keepalive-interval;
    threads threads;
    acquire-timeout acquire-timeout;
    blackout-time blackout-time;
}
```

## Hierarchy Level

```
[edit shared sae configuration external-interface-features name CommunityManager]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure the SAE community manager that manages PCMM and third-party device communities.

*keepalive-interval keepalive-interval*— Interval between keepalive messages sent from the active SAE to the passive members of the community.

**Value**— Number of seconds in the range 0–2147483647

**Default**— 30

**Editing Level**—Basic

*threads threads*— Number of threads that are allocated to manage the community. You generally do not need to change this property.

**Value**— Integer in the range 1–50

**Default**— 5

**Editing Level**—Basic

*acquire-timeout acquire-timeout*— Amount of time an SAE waits for a remote member of the community when it is acquiring a distributed lock. To avoid race conditions when the SAE community is determining which SAE is the active SAE, the community manager has a distributed lock. When an SAE attempts to become the active SAE, it needs to acquire the distributed lock. You generally do not need to change this property.

**Value**— Number of seconds in the range 0–2147483647

**Default**— 15

**Editing Level**—Advanced

`blackout-time` *blackout-time*— Amount of time that an active SAE must wait after it shuts down before it can try to become the active SAE of the community again.

**Value**— Number of seconds in the range 0–2147483647

**Default**— 30

**Editing Level**—Advanced

### Required Privilege Level

system

### Required Editing Level

Basic

# shared sae configuration external-interface-features *name* EventAPI

## Syntax

```
shared sae configuration external-interface-features name EventAPI {
    retry-time retry-time;
    retry-limit retry-limit;
    threads threads;
}
```

## Hierarchy Level

```
[edit shared sae configuration external-interface-features name EventAPI]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure properties for the Event Notification API.

`retry-time retry-time`— Amount of time between attempts to send router events that could not be delivered.

**Value**— Number of seconds in the range 0–2147483647

**Default**— 300

**Editing Level**—Basic

`retry-limit retry-limit`— Maximum number of times an event fails to be delivered before it is discarded.

**Value**— Integer in the range 0–2147483647

**Default**— 5

**Editing Level**—Basic

`threads threads`— Number of threads allocated to process events.

**Value**— Integer in the range 0–2147483647

**Default**— 5

**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Basic

## shared sae configuration external-interface-features *name* JavaScriptProcessor

### Syntax

```
shared sae configuration external-interface-features name JavaScriptProcessor {
    script-directory script-directory;
    scan-interval scan-interval;
    compiler-classpath compiler-classpath;
    character-encoding character-encoding;
    compiler-debug;
    java-compiler java-compiler;
}
```

### Hierarchy Level

```
[edit shared sae configuration external-interface-features name JavaScriptProcessor]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the SAE properties that activate and configure the Java script interface module.

*script-directory script-directory*—(Optional) Storage location for Java scripts; defined relative to the SAE installation directory. If you store the scripts in the /opt/UMC/sae/var/javaScripts directory on the SRC system, you do not need to specify this property.

Do not specify a directory that is part of the class path of the JVM running the SAE. If you do so, unloading of Java scripts will fail.

**Value**— Path that can be read by a URL class loader, in one of the following formats:

- file: // < path > < filename >
- http: // < hostName > . < portNumber > < path > < filename >
- path—List of directories separated by forward slashes
- filename—Name of the JAR file
- hostName—Name of the host on which the script is stored
- portNumber—Number of the TCP/IP port

**Default**— *var/javaScripts*

**Editing Level**—Advanced

`scan-interval` *scan-interval*— Time interval between scans in the script directory for new or modified .java source files. At each scan, the interface module compiles new and modified files. If the scripts conform to Java script requirements, the interface module installs them on the SAE as Java scripts. It also removes deleted scripts from the SAE.

**Value**— Number of seconds in the range 0–2147483647; 0 (zero) means that the interface module does not scan the directories.

**Default**— 0

**Editing Level**—Advanced

`compiler-classpath` *compiler-classpath*— Class path that the compiler uses to load source files.

**Value**— Path that can be read by a URL class loader, in one of the following formats:

- file: // < path > < filename >
- http:// < hostName > . < portNumber > < path > < filename >
- path—List of directories separated by forward slashes
- filename—Name of the JAR file
- hostName—Name of the host on which the script is stored
- portNumber—Number of the TCP/IP port

If you clear this value, the value defaults to the Java script directory specified by the `script-directory` option.

**Default**— *var/javaScripts/lib/sae.jar*

**Editing Level**—Advanced

`character-encoding` *character-encoding*—(Optional) Character encoding that the compiler uses when it loads Java source files.

**Value**— See <http://java.sun.com/j2se/1.4/docs/guide/intl/encoding.doc.html>

**Default**— Default encoding for the platform on which you are working

**Editing Level**—Advanced

`compiler-debug`—(Optional) Enables or disables whether the compiler places debug information into .class files

**Default**— Disabled

**Editing Level**—Advanced

`java-compiler` *java-compiler*—(Optional)

If you do not specify an external compiler, the interface module compiles the scripts-in-process with the `com.sun.tools.javac.Main` compiler from Sun Microsystems's `tools.jar`. The information specified in the Character Encoding, Compiler Classpath, and Compiler Debug fields is passed to the compiler.

If you specify an external compiler, an external process is created to perform the compilation using the specified command, and the information specified in the Character Encoding, Compiler Classpath, and Compiler Debug fields is ignored. Assumptions:

- The specified shell command will invoke an appropriate Java compiler without error.
- The specified shell command uses a class path that includes both the Java script directory specified in the Script Directory field and the SAE's public APIs.
- The compiler outputs its `.class` files to the directory specified in the Script Directory field.

**Value**— Command string with the class path that identifies both the Java script directory and the public APIs for the SAE.

**Default**— `javac -classpath var/javaScripts:lib/sae.jar -d var/javaScripts`

**Editing Level**—Advanced

#### Required Privilege Level

system

#### Required Editing Level

Basic

## **shared sae configuration external-interface-features *name* PythonScriptProcessor**

### **Syntax**

```
shared sae configuration external-interface-features name PythonScriptProcessor {  
}
```

### **Hierarchy Level**

```
[edit shared sae configuration external-interface-features name PythonScriptProcessor]
```

### **Release Information**

Statement introduced in SRC Release 1.0.0

### **Description**

Create an instance of the Python script processor.

### **Required Privilege Level**

system

### **Required Editing Level**

Basic

## shared sae configuration external-interface-features *name* SAEAccess

### Syntax

```
shared sae configuration external-interface-features name SAEAccess {
    cache-size cache-size;
    cache-timeout cache-timeout;
    cache-clean cache-clean;
}
```

### Hierarchy Level

```
[edit shared sae configuration external-interface-features name SAEAccess]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure properties for the SAE access interface module.

`cache-size cache-size`— Maximum number of subscriber objects kept in the cache.

**Value**— Integer in the range 0–2147483647

**Default**— 1024

**Editing Level**—Normal

`cache-timeout cache-timeout`— Maximum time that idle subscriber objects are kept in the cache.

**Value**— Number of seconds in the range 0–2147483647

**Default**— 30

**Editing Level**—Normal

`cache-clean cache-clean`— Number of subscriber objects removed from the cache when the maximum number is reached.

**Value**— Integer in the range 1 - < cache size >

**Default**— 1

**Editing Level**—Normal

**Required Privilege Level**

system

**Required Editing Level**

Basic

## shared sae configuration external-interface-features *name* SAEFeature

### Syntax

```
shared sae configuration external-interface-features name SAEFeature {
    java-class java-class;
    additional-classpath additional-classpath;
}
```

### Hierarchy Level

```
[edit shared sae configuration external-interface-features name SAEFeature]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure SAE properties for customized interface modules.

`java-class java-class`— Name of the Java class that implements the interface module.

**Value**— Fully qualified Java class name. For example, `net.juniper.smgmt.sae.saeimpl.SAEAccessImpl`.

**Default**— No value

**Editing Level**— Normal

`additional-classpath additional-classpath`—(Optional) Path to the location where libraries are stored. If you store the libraries in the `/opt/UMC/sae/lib` directory on the host where you installed the SAE software, you do not need to specify a class path.

**Value**— Comma-separated list of URLs that can be read by a URL class loader in one of the following formats:

- `file:// <path> <filename>`
- `http:// <hostName> <portNumber> <path> <filename>`

where

- `path` is a list of directories separated by backslashes
- `filename` is the name of the JAR file
- `hostName` is the name of the host on which the script is stored

- portNumber is the number of the TCP/IP port

**Default**— No value

**Editing Level**—Normal

#### **Required Privilege Level**

system

#### **Required Editing Level**

Basic

## shared sae configuration external-interface-features *name* SAEFeature properties

### Syntax

```
shared sae configuration external-interface-
features name SAEFeature properties name {
    value;
}
```

### Hierarchy Level

```
[edit shared sae configuration external-interface-
features name SAEFeature properties]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Define properties for an SAE customized interface module.

### Options

*name name*— Name of the property for which you want to define a value.

**Value**—Text

*value*— Value for the property.

**Value**— Value for the property.

**Default**— No value

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Normal

# shared sae configuration file-accounting-template

## Syntax

```
shared sae configuration file-accounting-template name ...
```

## Hierarchy Level

```
[edit shared sae configuration file-accounting-template]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a template that defines header names for attributes listed in accounting files. When the SAE writes data to a flat file, it writes into the first line the headers that identify the attributes in the file. For example, in the following accounting file, the first line lists headers for all attribute fields in the file, and the following lines list the actual data in each field:

Accounting Status,NAS ID,SAE Host,Router Name,Interface Name,Interface Alias

start,SSP.uelmo,uelmo,default@erx7\_ssp57,FastEthernet1/1.1.

You can assign your own names to the headers that appear in the file. To do so, you define the header names in a template and then set up file accounting plug-ins to use the template. The default template, FileAccounting.std, defines header names for all possible attributes. You can use the default template or create your own templates.

## Options

*name name*— Name of the file-accounting template.

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

## shared sae configuration file-accounting-template *name* attributes

### Syntax

```
shared sae configuration file-accounting-template name attributes (status | nas-
id | host | router-name | interface-name | interface-alias | interface-descr |
port-id | user-ip-address | login-name | accounting-id | auth-user-id | if-radius-
class | if-session-id | service-name | radius-class | event-time | session-id |
terminate-cause | session-time | in-octets | out-octets | in-packets | out-
packets | nas-ip | user-mac-address | service-session-name | service-session-tag
| user-type | user-radius-class | user-session-id | primary-user-name |
subscription-name | login-id | if-index | event-time-millisecond | nas-port |
operational | user-inet-address | nas-inet-address | router-type | interface-
speed | service-bundle | user-dn | uid | domain | retailer-dn | password |
service-scope | session-timeout | downstream-bandwidth | upstream-bandwidth |
dhcp-packet | aggr-session-id | aggr-login-name | aggr-user-dn | aggr-user-inet-
address | aggr-accounting-id | aggr-auth-user-id) {
    value;
}
```

### Hierarchy Level

```
[edit shared sae configuration file-accounting-template name attributes]
```

### Description

Configure the values for the attribute headers that will appear in accounting files.

### Options

Name of the accounting attribute for which you want to define a header.

#### Value

- status
- nas-id
- host
- router-name
- interface-name
- interface-alias
- interface-descr
- port-id
- user-ip-address
- login-name
- accounting-id
- auth-user-id

- if-radius-class
- if-session-id
- service-name
- radius-class
- event-time
- session-id
- terminate-cause
- session-time
- in-octets
- out-octets
- in-packets
- out-packets
- nas-ip
- user-mac-address
- service-session-name
- service-session-tag
- user-type
- user-radius-class
- user-session-id
- primary-user-name
- subscription-name
- login-id
- if-index
- event-time-millisecond
- nas-port
- operational
- user-inet-address
- nas-inet-address
- router-type
- interface-speed
- service-bundle
- user-dn
- uid
- domain
- retailer-dn
- password
- service-scope
- session-timeout
- downstream-bandwidth
- upstream-bandwidth
- dhcp-packet
- aggr-session-id
- aggr-login-name
- aggr-user-dn
- aggr-user-inet-address
- aggr-accounting-id
- aggr-auth-user-id

*value*— Header text that appears in the accounting file.

**Value**— Text that you want to appear as the header in the property file. If the header contains spaces, enclose the header in quotation marks.

**Default**— No value

**Editing Level**—Basic

### **Required Privilege Level**

system

### **Required Editing Level**

Basic

# shared sae configuration global-radius-udp-port

## Syntax

```
shared sae configuration global-radius-udp-port {
    udp-port;
}
```

## Hierarchy Level

```
[edit shared sae configuration global-radius-udp-port]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a global source UDP port or a pool of ports that RADIUS plug-ins use to communicate with RADIUS servers.

In RADIUS packets that RADIUS plug-ins send to a RADIUS server, the plug-in uses an identifier field to match requests to replies. This field provides for a maximum of 256 identifiers. Once all identifiers are used, the plug-in cannot send any more requests until it receives replies that match the requests already sent. In high-load systems, this limit can slow performance.

To overcome this limitation, you can configure a pool of UDP ports for RADIUS plug-ins. Having a pool of ports allows RADIUS plug-ins to create one queue per port to wait for RADIUS replies. Each queue can wait for 256 RADIUS packets. The RADIUS plug-ins send RADIUS packets through the pool of ports in a round-robin mode.

## Options

*udp-port*— Global source UDP port or a pool of ports that RADIUS plug-ins use to communicate with RADIUS servers. You can also configure UDP ports for each plug-in instance. If you do not configure a UDP port for a plug-in instance, the plug-in uses the global UDP port.

**Value**— You can enter a single port number, a pool of port numbers, or a list of port numbers and port ranges:

- Port number in the range 1–65535
- A range of ports in the format port-port; for example, 7000-7003

**Default**— 18130

**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Advanced

## shared sae configuration idle-timeout

### Syntax

```
shared sae configuration idle-timeout {  
    adjust-session-time;  
}
```

### Hierarchy Level

```
[edit shared sae configuration idle-timeout]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Specify whether or not the SAE reduces the session time reported in the accounting stop message by the idle time. This way the session time is accurately reported to avoid overcharges for the session.

### Options

`adjust-session-time`—(Optional) If enabled, when an idle timeout terminates a session, the session time reported in the accounting stop message is reduced by the idle time.

**Default**— No value

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Advanced

# shared sae configuration interim-accounting

## Syntax

```
shared sae configuration interim-accounting {
    service-interim-accounting;
    service-interim-interval service-interim-interval;
    subscriber-interim-accounting;
    subscriber-interim-interval subscriber-interim-interval;
}
```

## Hierarchy Level

```
[edit shared sae configuration interim-accounting]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Enable interim accounting and set intervals between interim accounting messages for services and subscribers. These settings apply to all subscriber sessions and service sessions. You can override these settings for specific services by configuring an accounting interim interval in the service configuration.

## Options

*service-interim-accounting*—(Optional) Enable interim accounting for services. You can override this setting for specific services by configuring an accounting interim interval in the service configuration.

**Default**— Enabled

**Editing Level**—Basic

*service-interim-interval* *service-interim-interval*— Interval between service interim accounting messages. A short interval causes the SAE to send many messages to the router and to the RADIUS servers. A long interval can result in a large loss of accounting information in the event of a system failure.

**Value**— Number of seconds in the range 900–86400

**Default**— 900

**Editing Level**—Basic

*subscriber-interim-accounting*—(Optional) Enable interim accounting for subscribers. If enabled, the SAE continually generates Interim-Update accounting requests for

all active subscribers at the interval specified with the **subscriber-interim-interval** option.

**Default**— Enabled

**Editing Level**—Basic

`subscriber-interim-interval` *subscriber-interim-interval*— Interval between subscriber interim accounting messages. A short interval causes the SAE to send many messages to any configured accounting servers. A long interval can result in a large loss of accounting information in the event of a system failure.

**Value**— Number of seconds in the range 900–86400

**Default**— 900

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Normal

# shared sae configuration ldap

## Syntax

```
shared sae configuration ldap {
    network-dn network-dn;
    enable-directory-eventing;
}
```

## Hierarchy Level

```
[edit shared sae configuration ldap]
```

## Description

Configure the LDAP connection from the SAE to the directory in which network device data is stored.

## Options

`network-dn network-dn`— Subtree in the directory in which network device data is stored.

**Value**— `<DN>`. You can use the special value `<base>` to refer to the globally configured base DN. The string `<base>` is replaced with the directory base DN.

**Default**— `o=Network,<base>`

**Editing Level**—Expert

`enable-directory-eventing`—(Optional) Enables or disables automatic discovery of changes in the SAE configuration data.

**Default**— Enabled

**Editing Level**—Normal

## Required Privilege Level

system

## Required Editing Level

Normal

# shared sae configuration ldap directory-eventing

## Syntax

```
shared sae configuration ldap directory-eventing {
    timeout timeout;
    dispatcher-pool-size dispatcher-pool-size;
}
```

## Hierarchy Level

```
[edit shared sae configuration ldap directory-eventing]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a timeout for SAE directory eventing, and specify the number of events that the SAE can receive from the directory simultaneously.

## Options

`timeout timeout`— Maximum time that the directory eventing system waits for the directory to respond.

**Value**— Number of seconds in the range 1–2147483647

**Default**— No value

**Editing Level**—Basic

`dispatcher-pool-size dispatcher-pool-size`— Number of events that the SAE can receive from the directory simultaneously.

**Value**— Integer in the range 1–2147483647

**Default**— No value

**Editing Level**—Expert

## Required Privilege Level

system

**Required Editing Level**

Expert

## shared sae configuration ldap persistent-login-cache

### Syntax

```
shared sae configuration ldap persistent-login-cache {
    dn dn;
    server-address server-address;
    port-number port-number;
    authentication-dn authentication-dn;
    password password;
    directory-eventing;
    polling-interval polling-interval;
    blacklist;
    (ldaps);
}
```

### Hierarchy Level

```
[edit shared sae configuration ldap persistent-login-cache]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the LDAP connection from the SAE to the directory in which persistent login cache data is stored.

### Options

*dn dn*— Subtree in the directory in which persistent login cache data is stored.

**Value**— < DN > . You can use the special value < base > to refer to the globally configured base DN. The string < base > is replaced with the directory base DN.

**Default**— o = authCache, < base >

**Editing Level**—Normal

*server-address server-address*—(Optional) Directory server that stores information.

**Value**— IP address or hostname. For multiple directory servers, enclose the addresses or hostnames in quotes and separate addresses or names with a space. For example: "127.153.27.1 192.168.0.1".

**Default**— No value

**Editing Level**—Normal

`port-number` *port-number*—(Optional) Directory port number

**Value**—Integer in the range -2147483648–2147483647

**Default**— 389

**Editing Level**—Normal

`authentication-dn` *authentication-dn*—(Optional) DN that the SAE uses to authenticate access to the directory server. The specified directory entry must exist and have read access to all attributes.

For subscriber data, the entry must have write access if subscribers are allowed to customize their subscription profiles.

**Value**— `<DN>`. You can use the special value `<base>` to refer to the globally configured base DN. The string `<base>` is replaced with the directory base DN.

**Default**— No value

**Editing Level**—Normal

`password` *password*—(Optional) Password used to authenticate access to the directory server. You must configure the password in the directory to authenticate read access to the directory.

**Value**— Text string or base64 string.

For authentication to access subscriber data, the password must match the value of the `userPassword` attribute of the authentication DN.

**Default**— No value

**Editing Level**—Normal

`directory-eventing`—(Optional) Enables or disables automatic discovery of changes to directory data.

For subscriber data:

- If enabled, changes in the subscriber profile or subscriptions take effect automatically while the subscriber is logged in.
- If disabled, changes in the subscriber profile or subscriptions do not take effect until the next time the subscriber logs in.

For service data:

- If enabled, changes in service definitions take effect automatically. If a changed

service is in use, all service instances are deactivated and then reactivated with the modified settings. Consequently, service may be affected for subscribers who are logged in at the time of the modification.

- If disabled, changes in service definitions do not take effect until you restart the SAE.

**Default**— Disabled  
**Editing Level**—Advanced

`polling-interval` *polling-interval*— Frequency for checking the directory for changes.

**Value**— Number of seconds in the range 15–86400  
**Default**— 30  
**Editing Level**—Advanced

`blacklist`—(Optional) Specifies whether the directory monitoring system prevents connection to a directory if the directory fails to respond during 10 polling intervals.

**Value**— true or false  
**Default**— true  
**Editing Level**—Advanced

`ldaps`—Enables LDAPS as the secure protocol for connections to the directory server.

**Value**— `ldaps`—Enable LDAPS  
**Default**— Disabled  
**Editing Level**—Advanced

**Required Privilege Level**

system

**Required Editing Level**

Normal

## shared sae configuration ldap policy-data

### Syntax

```
shared sae configuration ldap policy-data {
    policy-dn policy-dn;
    parameter-dn parameter-dn;
    directory-eventing;
    polling-interval polling-interval;
}
```

### Hierarchy Level

```
[edit shared sae configuration ldap policy-data]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the LDAP connection from the SAE to the directory in which service data is stored.

### Options

`policy-dn policy-dn`— Subtree in the directory in which policy data is stored.

**Value**— `<DN>`. You can use the special value `<base>` to refer to the globally configured base DN. The string `<base>` is replaced with the directory base DN.

**Default**— `o= Policies,< base>`

**Editing Level**—Normal

`parameter-dn parameter-dn`— Subtree in the directory in which policy parameter data is stored.

**Value**— `<DN>`. You can use the special value `<base>` to refer to the globally configured base DN. The string `<base>` is replaced with the directory base DN.

**Default**— `o= Parameters,< base>`

**Editing Level**—Normal

`directory-eventing`—(Optional) Enables or disables automatic discovery of changes to directory data.

- If enabled, changes in policy definitions take effect automatically. If a changed policy is in use, all policy instances are deactivated and then reactivated with the modified settings. Consequently, service may be affected for subscribers who are logged in when the change is made.
- If disabled, changes in policy definitions do not take effect until you restart the SAE.

**Default**— Disabled  
**Editing Level**—Advanced

`polling-interval` *polling-interval*— Frequency for checking the directory for changes.

**Value**— Number of seconds in the range 15–86400  
**Default**— 30  
**Editing Level**—Advanced

**Required Privilege Level**

system

**Required Editing Level**

Normal

# shared sae configuration ldap service-data

## Syntax

```
shared sae configuration ldap service-data {
    dn dn;
    server-address server-address;
    port-number port-number;
    authentication-dn authentication-dn;
    password password;
    directory-eventing;
    polling-interval polling-interval;
    blacklist;
    (ldaps);
}
```

## Hierarchy Level

```
[edit shared sae configuration ldap service-data]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure the LDAP connection from the SAE to the directory in which service data is stored.

## Options

*dn dn*— Subtree in the directory in which service data is stored.

The SAE loads service definitions on startup and when service reloading is requested.

**Value**— *< DN >*. You can use the special value *< base >* to refer to the globally configured base DN. The string *< base >* is replaced with the directory base DN.

**Default**— *< base >*

**Editing Level**—Normal

*server-address server-address*—(Optional) Directory server that stores information.

**Value**— IP address or hostname. For multiple directory servers, enclose the addresses or hostnames in quotes and separate addresses or names with a space. For example: "127.153.27.1 192.168.0.1".

**Default**— No value**Editing Level**—Normal`port-number` *port-number*—(Optional) Directory port number**Value**—Integer in the range -2147483648–2147483647**Default**— 389**Editing Level**—Normal

`authentication-dn` *authentication-dn*—(Optional) DN that the SAE uses to authenticate access to the directory server. The specified directory entry must exist and have read access to all attributes.

For subscriber data, the entry must have write access if subscribers are allowed to customize their subscription profiles.

**Value**— `<DN>`. You can use the special value `<base>` to refer to the globally configured base DN. The string `<base>` is replaced with the directory base DN.

**Default**— No value**Editing Level**—Normal

`password` *password*—(Optional) Password used to authenticate access to the directory server. You must configure the password in the directory to authenticate read access to the directory.

**Value**— Text string or base64 string.

For authentication to access subscriber data, the password must match the value of the `userPassword` attribute of the authentication DN.

**Default**— No value**Editing Level**—Normal

`directory-eventing`—(Optional) Enables or disables automatic discovery of changes to directory data.

For subscriber data:

- If enabled, changes in the subscriber profile or subscriptions take effect automatically while the subscriber is logged in.
- If disabled, changes in the subscriber profile or subscriptions do not take effect until the next time the subscriber logs in.

For service data:

- If enabled, changes in service definitions take effect automatically. If a changed service is in use, all service instances are deactivated and then reactivated with the modified settings. Consequently, service may be affected for subscribers who are logged in at the time of the modification.
- If disabled, changes in service definitions do not take effect until you restart the SAE.

**Default**— Disabled

**Editing Level**—Advanced

`polling-interval` *polling-interval*— Frequency for checking the directory for changes.

**Value**— Number of seconds in the range 15–86400

**Default**— 30

**Editing Level**—Advanced

`blacklist`—(Optional) Specifies whether the directory monitoring system prevents connection to a directory if the directory fails to respond during 10 polling intervals.

**Value**— true or false

**Default**— true

**Editing Level**—Advanced

`ldaps`—Enables LDAPS as the secure protocol for connections to the directory server.

**Value**— `ldaps`—Enable LDAPS

**Default**— Disabled

**Editing Level**—Advanced

## Required Privilege Level

system

## Required Editing Level

Normal

## shared sae configuration ldap subscriber-data

### Syntax

```
shared sae configuration ldap subscriber-data {
    subscription-loading-filter (subscriberRefFilter | objectClassFilter);
    load-subscriber-schedules;
    persistent-sessions;
    login-cache-dn login-cache-dn;
    session-cache-dn session-cache-dn;
    dn dn;
    server-address server-address;
    port-number port-number;
    authentication-dn authentication-dn;
    password password;
    directory-eventing;
    polling-interval polling-interval;
    blacklist;
    (ldaps);
}
```

### Hierarchy Level

```
[edit shared sae configuration ldap subscriber-data]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the LDAP connection from the SAE to the directory in which subscriber data is stored.

### Options

`subscription-loading-filter (subscriberRefFilter | objectClassFilter)`  
 — Filter that the SAE uses to search for subscriptions in the directory when the SAE loads a subscription.

**Value**— One of the following:

- `subscriberRefFilter`—Subscriber reference filter. The SAE runs a search based on the `subscriberRef` attribute in the `umcServiceProfile` object, which is the base object class of the service profile hierarchy. The `subscriberRef` attribute contains a DN that points to the parent of the subscriber object.
- `objectClassFilter`—Subscription Objectclass filter. The SAE

performs a one-level search with the directory entry, which represents the subscriber folder as the base DN. The search filter is (objectClass = sspServiceProfile). This method can be slow if you have a large number of subscription entries within the subscriber folder subtree.

**Default**— objectClassFilter

**Editing Level**—Normal

`load-subscriber-schedules`—(Optional) Enable or disable loading of subscriber schedules.

**Default**— Enabled

**Editing Level**—Normal

`persistent-sessions`—(Optional) Load existing persistent sessions and schedules when starting or recovering a user session.

**Default**—false

**Editing Level**—Normal

`login-cache-dn` *login-cache-dn*— Subtree in the directory where subscriber login information is cached. When a subscriber logs in to a residential portal, the SAE searches subscriber profiles by mapping the realm of the login name to a retailer object found below the search base.

**Value**— <DN> . You can use the special value <base> to refer to the globally configured base DN. The string <base> is replaced with the directory base DN.

**Default**— *o= userProfileCache,< base>*

**Editing Level**—Normal

`session-cache-dn` *session-cache-dn*— Subtree in the directory where persistent session data is cached.

**Value**— <DN> . You can use the special value <base> to refer to the globally configured base DN. The string <base> is replaced with the directory base DN.

**Default**— *o= PersistentSessions,< base>*

**Editing Level**—Normal

`dn` *dn*— Subtree in the directory in which subscriber data is stored.

When a subscriber logs in to a residential portal, the SAE searches subscriber profiles by mapping the realm of the login name to a retailer object found below the DN.

**Value**— <DN> . You can use the special value < base > to refer to the globally configured base DN. The string < base > is replaced with the directory base DN.

**Default**— o = Users, < base >

**Editing Level**—Normal

`server-address` *server-address*—(Optional) Directory server that stores information.

**Value**— IP address or hostname. For multiple directory servers, enclose the addresses or hostnames in quotes and separate addresses or names with a space. For example: "127.153.27.1 192.168.0.1".

**Default**— No value

**Editing Level**—Normal

`port-number` *port-number*—(Optional) Directory port number

**Value**—Integer in the range -2147483648–2147483647

**Default**— 389

**Editing Level**—Normal

`authentication-dn` *authentication-dn*—(Optional) DN that the SAE uses to authenticate access to the directory server. The specified directory entry must exist and have read access to all attributes.

For subscriber data, the entry must have write access if subscribers are allowed to customize their subscription profiles.

**Value**— <DN> . You can use the special value < base > to refer to the globally configured base DN. The string < base > is replaced with the directory base DN.

**Default**— No value

**Editing Level**—Normal

`password` *password*—(Optional) Password used to authenticate access to the directory server. You must configure the password in the directory to authenticate read access to the directory.

**Value**— Text string or base64 string.

For authentication to access subscriber data, the password must match the value of the userPassword attribute of the authentication DN.

**Default**— No value

**Editing Level**—Normal

`directory-eventing`—(Optional) Enables or disables automatic discovery of changes to directory data.

For subscriber data:

- If enabled, changes in the subscriber profile or subscriptions take effect automatically while the subscriber is logged in.
- If disabled, changes in the subscriber profile or subscriptions do not take effect until the next time the subscriber logs in.

For service data:

- If enabled, changes in service definitions take effect automatically. If a changed service is in use, all service instances are deactivated and then reactivated with the modified settings. Consequently, service may be affected for subscribers who are logged in at the time of the modification.
- If disabled, changes in service definitions do not take effect until you restart the SAE.

**Default**— Disabled

**Editing Level**—Advanced

`polling-interval` *polling-interval*— Frequency for checking the directory for changes.

**Value**— Number of seconds in the range 15–86400

**Default**— 30

**Editing Level**—Advanced

`blacklist`—(Optional) Specifies whether the directory monitoring system prevents connection to a directory if the directory fails to respond during 10 polling intervals.

**Value**— true or false

**Default**— true

**Editing Level**—Advanced

`ldaps`—Enables LDAPS as the secure protocol for connections to the directory server.

**Value**— ldaps—Enable LDAPS

**Default**— Disabled

**Editing Level**—Advanced

## Required Privilege Level

system

## **Required Editing Level**

Normal

# shared sae configuration license-manager client

## Syntax

```
shared sae configuration license-manager client {
    type type;
    cache cache;
}
```

## Hierarchy Level

```
[edit shared sae configuration license-manager client]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure the license manager client.

## Options

`type type`— Type of the license client.

**Value**— SDX is currently the only valid value

**Default**— SDX

**Editing Level**—Expert

`cache cache`— Path to a cache file.

**Value**— Valid path

**Default**— `var/run/lic_cache`

**Editing Level**—Expert

## Required Privilege Level

system

## Required Editing Level

Expert

## shared sae configuration license-manager directory-access

### Syntax

```
shared sae configuration license-manager directory-access {
    server-address server-address;
    server-port server-port;
    license-dn license-dn;
    authentication-dn authentication-dn;
    password password;
    (ldaps);
    connection-manager-id connection-manager-id;
    event-base-dn event-base-dn;
    signature-dn signature-dn;
    snmp-agent;
}
```

### Hierarchy Level

```
[edit shared sae configuration license-manager directory-access]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure directory access to the license manager.

### Options

*server-address server-address*—(Optional) IP addresses or hostnames of the directory server that stores licensing data.

**Value**— IP address or hostname. For multiple directory servers, enclose the addresses or hostnames in quotes and separate addresses or names with a space.

**Default**— No value

**Editing Level**—Normal

*server-port server-port*—(Optional) Port number of the LDAP connection to the directory server that stores licensing data.

**Value**— Port number in the range 0–65535

**Default**— 389

**Editing Level**—Normal

`license-dn` *license-dn*—(Optional) Subtree in the directory where licensing information is stored. The SAE searches for the license key below this path.

**Value**— `<DN>`. The string `<base>` is replaced with the directory base DN

**Default**— `ou = Licenses, o = Management, <base>`

**Editing Level**—Normal

`authentication-dn` *authentication-dn*—(Optional) DN the SAE uses to authenticate access to the directory server.

**Value**— `<DN>`. The string `<base>` is replaced with the directory base DN

**Default**— No value

**Editing Level**—Normal

`password` *password*—(Optional) Password used to authenticate access to the directory.

**Value**— Text string or Base64 string

**Default**— No value

**Editing Level**—Normal

Enables or disables LDAPS as the secure protocol for connections to the directory server that stores license data.

**Value**

- `ldaps`—

**Default**— Disabled

**Editing Level**—Normal

`connection-manager-id` *connection-manager-id*— DES connection manager within the Java Naming and Directory Interface (JNDI) framework.

**Value**— Text

**Default**— `LICENSE_MANAGER`

**Editing Level**—Expert

`event-base-dn` *event-base-dn*—(Optional) Directory eventing base DN for the license manager data.

**Value**— < DN > . The string < base > is replaced with the directory base DN

**Default**— No value

**Editing Level**—Expert

`signature-dn` *signature-dn*—(Optional) DN of the entry that specifies the LDAP schema attribute usedDirectory. This attribute identifies the type of directory, such as openLDAP or DirX, on which the license data is stored.

**Value**— < DN > . The string < base > is replaced with the directory base DN

**Default**— No value

**Editing Level**—Expert

`snmp-agent`—(Optional) Specifies whether the SRC SNMP agent exports MIBs for this directory connection.

**Default**— Disabled

**Editing Level**—Normal

## Required Privilege Level

system

## Required Editing Level

Basic

# shared sae configuration logger

## Syntax

```
shared sae configuration logger name ...
```

## Hierarchy Level

```
[edit shared sae configuration logger]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Create a logging configuration for the SAE.

## Options

`name name`— Name of the logging configuration.

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

## shared sae configuration logger *name* file

### Syntax

```
shared sae configuration logger name file {
    filter filter;
    filename filename;
    rollover-filename rollover-filename;
    maximum-file-size maximum-file-size;
}
```

### Hierarchy Level

```
[edit shared sae configuration logger name file]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure logging of messages to a file.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**— The default value is different for each type of component.

**Editing Level**—Basic

*filename filename*— Absolute path of the filename that contains the current logs.

**Note:** Make sure that the user under which the J2EE application server or Web application server runs has write access to this folder. If this user does not have write access to the default folder, configure the component or application to write logs in folders to which the user has write access.

**Value**— Filename

**Default**— No value

**Editing Level**—Basic

*rollover-filename rollover-filename*—(Optional) Absolute path of the filename that

contains the log history. When the log file reaches the maximum size, the software closes the log file and renames it with the name you specify for the rollover file. If a previous rollover file exists, the software overwrites it. The software then reopens the log file and continues to save event messages in it.

**Value**— Path of filename

Example—`/opt/UMC/sae/var/log/sae.alt`

**Default**— The default value is different for each type of component.

**Editing Level**—Normal

`maximum-file-size` *maximum-file-size*—(Optional) Maximum size of the log file and the rollover file.

Do not set the maximum file size to a value greater than the available disk space.

**Value**—Integer in the range 0–2147483647 kbytes

**Default**— 1000000

**Editing Level**—Normal

#### Required Privilege Level

system

#### Required Editing Level

Basic

## shared sae configuration logger *name* syslog

### Syntax

```
shared sae configuration logger name syslog {
    filter filter;
    host host;
    facility facility;
    format format;
}
```

### Hierarchy Level

```
[edit shared sae configuration logger name syslog]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure logging of messages to system logging.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**—/error-

**Editing Level**—Basic

*host host*— IP address or name of a host that collects event messages by means of a standard system logging daemon.

**Value**— IP address or hostname

**Default**—loghost

**Editing Level**—Basic

*facility facility*—(Optional) Type of system log in accordance with the system logging protocol.

**Value**—Integer in the range 0–23

**Default**— 3

**Editing Level**—Advanced

*format format*—(Optional) MessageFormat string that specifies how the information in an event message is printed. (The strings {#} are replaced with the log information [...]).

**Value**— MessageFormat string as specified in <http://java.sun.com/j2se/1.4.2/docs/api/java/text/MessageFormat.html>.

The fields available for events are:

- 0—Time and date of the event
- 1—Name of the thread generating the event
- 2—Text message of the event
- 3—Category of the event
- 4—Priority of the event

**Default**— None

**Editing Level**—Advanced

**Required Privilege Level**

system

**Required Editing Level**

Basic

## shared sae configuration login-registration

### Syntax

```
shared sae configuration login-registration {  
    registration-authentication;  
}
```

### Hierarchy Level

```
[edit shared sae configuration login-registration]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Enable the authentication of registered username/password pairs.

### Options

`registration-authentication`—(Optional) Enables the authentication of registered username/password pairs. Enable this option if your authentication server does not allow authentication while a session for the authenticated username is active.

**Default**—  
**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Normal

# shared sae configuration nic-proxy-configuration

## Syntax

```
shared sae configuration nic-proxy-configuration name {  
}
```

## Hierarchy Level

```
[edit shared sae configuration nic-proxy-configuration]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a NIC proxy.

## Options

*name name*— Name of the NIC proxy configuration.

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Normal

## shared sae configuration nic-proxy-configuration *name* cache

### Syntax

```
shared sae configuration nic-proxy-configuration name cache {
    cache-size cache-size;
    cache-cleanup-interval cache-cleanup-interval;
    cache-entry-age cache-entry-age;
}
```

### Hierarchy Level

```
[edit shared sae configuration nic-proxy-configuration name cache]
```

### Description

Configure the NIC proxy cache properties. You can modify cache properties for the NIC proxy to optimize the resolution performance for your network configuration and system resources. Typically, you can use the default settings for the cache properties.

*cache-size cache-size*—(Optional) Maximum size of the cache in which the NIC proxy retains data. If you decrease the cache size or disable the cache while the NIC proxy is running, the NIC proxy removes entries in order of descending age until the cache size meets the new limit.

**Value**— Integer in the range 0–2147483647

**Default**—10000

**Editing Level**—Advanced

*cache-cleanup-interval cache-cleanup-interval*— Time interval at which the NIC proxy removes expired entries from its cache.

**Value**— Number of seconds in the range 5–2147483

**Default**—15

**Editing Level**—Advanced

*cache-entry-age cache-entry-age*—(Optional) Maximum time that the NIC proxy can cache an entry. The NIC proxy compares this property with the life expectancy of each entry and uses the lower value to determine when to remove the entry.

**Value**— Number of seconds in the range 0–4294967295

- 0 or unspecified—Life expectancy of the data, which determines expiration of data
- Other values—Actual time that the NIC proxy caches entries

**Editing Level**—Advanced**Required Privilege Level**

system

**Required Editing Level**

Advanced

## shared sae configuration nic-proxy-configuration *name* nic-host-selection

### Syntax

```
shared sae configuration nic-proxy-configuration name nic-host-selection {
    groups [groups...];
    selection-criteria (roundRobin | randomPick | priorityList);
}
```

### Hierarchy Level

```
[edit shared sae configuration nic-proxy-configuration name nic-host-selection]
```

### Description

Configure the mechanism that a NIC proxy uses to select NIC system if multiple systems are available. You use NIC host selection when you use NIC replication.

*groups* [*groups...*]—(Optional) List of groups of NIC hosts that the NIC proxy can contact for resolution requests.

**Value**— Names of groups.

**Default**— No value

**Editing Level**—Advanced

*selection-criteria* (roundRobin | randomPick | priorityList)— Selection criteria that the NIC proxy uses to determine which NIC host to contact. Configure selection criteria if you configure more than one group.

**Value**— One of the following criteria:

- roundRobin—NIC proxy selects NIC hosts in a fixed, cyclic order. The NIC proxy always selects the next host in the list.
- randomPick—NIC proxy selects NIC hosts randomly from the list.
- priorityList—NIC proxy selects NIC hosts according to their assigned priorities in the list. If the host with the highest priority in the list is not available, the NIC proxy tries the host with the next-highest priority, and so on.

Use round-robin or random pick to distribute resolution requests among NIC hosts. Use priority list if you prefer to use a particular NIC host; for example, you may reduce operating cost by using a local NIC host.

**Default**— roundRobin

**Editing Level**—Advanced

**Required Privilege Level**

system

**Required Editing Level**

Advanced

## shared sae configuration nic-proxy-configuration *name* nic-host-selection blacklisting

### Syntax

```
shared sae configuration nic-proxy-configuration name nic-host-
selection blacklisting {
    try-next-system-on-error;
    number-of-retries-before-blacklisting number-of-retries-before-blacklisting;
    blacklist-retry-interval blacklist-retry-interval;
}
```

### Hierarchy Level

```
[edit shared sae configuration nic-proxy-configuration name nic-host-
selection blacklisting]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure how to handle nonresponsive NIC hosts. When a NIC host does not respond, it is blacklisted which means that other NIC hosts are contacted until the blacklisted host becomes available again.

### Options

**try-next-system-on-error**—(Optional) Specifies whether or not the NIC proxy should contact the next specified NIC host if a NIC host is determined to be unavailable. Configure this property only if you configure more than one group.

**Default**—true

**Editing Level**—Advanced

**number-of-retries-before-blacklisting** *number-of-retries-before-blacklisting*— Number of times the NIC proxy tries to communicate with a NIC host before the NIC proxy stops communicating with the NIC host for a period of time.

**Value**—Integer in the range 0–2147483647

**Default**—3

**Editing Level**—Advanced

**blacklist-retry-interval** *blacklist-retry-interval*— Interval at which the NIC

proxy attempts to connect to an unavailable NIC host.

**Value**—Integer in the range 15–2147483647 s

**Default**—15

**Editing Level**—Advanced

#### **Required Privilege Level**

system

#### **Required Editing Level**

Basic

## shared sae configuration nic-proxy-configuration *name* resolution

### Syntax

```
shared sae configuration nic-proxy-configuration name resolution {
    resolver-name resolver-name;
    key-type key-type;
    value-type value-type;
    expect-multiple-values;
    constraints constraints;
}
```

### Hierarchy Level

```
[edit shared sae configuration nic-proxy-configuration name resolution]
```

### Description

Configure properties for a NIC proxy (NIC locator), the NIC component that requests information on behalf of an application.

**resolver-name** *resolver-name*— NIC resolver that the NIC proxy uses. This resolver must be the same as one that is configured on the NIC host.

**Value**— Path to the NIC resolver.

Example—/realms/ip/A1,/realms/dn/A1.

**Default**— No value

**Editing Level**—Basic

**key-type** *key-type*— Type of data used that the key provides for the NIC resolution. You can provide a qualifier to a data type to distinguish between different instances of a data type in a resolution scenario, or to provide information about a data type to clarify the use of that data type in a resolution.

**Value**— One of the following types:

- Ip —Subscriber's IP address
- Vr—Virtual router
- Interface—Name of router's interface
- InterfaceId—Identifier of an interface on the router
- Dn—LDAP distinguished name for subscriber
- LoginName—Subscriber login ID
- AnyString—Other information

To qualify data types, enter a qualifier within parentheses.

Example—LoginName(username).

**Default**— No value

**Editing Level**—Basic

`value-type` *value-type*— Type of value to be returned in the resolution. The value type varies according to the application that uses the NIC proxy.

**Value**— One of the following types:

- SaeId—SAE server ID
- LoginName—Subscriber login ID
- AnyString—Other information

To qualify data types, enter a qualifier within parentheses.

Example—LoginName(username).

**Default**— No value

**Editing Level**—Basic

`expect-multiple-values`—(Optional) Specifies whether or not the key can have multiple corresponding values.

**Editing Level**—Basic

`constraints` *constraints*—(Optional) Data type that a resolver uses during the resolution process. A constraint represents a condition that must or may be satisfied before the next stage of the resolution process can proceed.

Configure a constraint only if the constraint will be provided by the application in the resolution request. Typically, you do not need to configure constraints.

**Value**— Data types of constraints specified for the NIC resolution. Separate data types with commas.

**Default**— No value

**Editing Level**—Advanced

**Required Privilege Level**

system

**Required Editing Level**

Normal

## shared sae configuration nic-proxy-configuration *name* test-nic-bindings

### Syntax

```
shared sae configuration nic-proxy-configuration name test-nic-bindings {
    use-test-bindings;
}
```

### Hierarchy Level

```
[edit shared sae configuration nic-proxy-configuration name test-nic-bindings]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure key-value mappings to be used to test a NIC resolution.

### Options

`use-test-bindings`—(Optional) Test the NIC resolutions without having to configure or run a NIC host. The values returned are those configured in the key-values property.

**Default**—false

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

# shared sae configuration nic-proxy-configuration *name* test-nic-bindings key-values

## Syntax

```
shared sae configuration nic-proxy-configuration name test-nic-bindings key-
values name {
    value;
}
```

## Hierarchy Level

```
[edit shared sae configuration nic-proxy-configuration name test-nic-bindings key-
values]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure keys and associated values to use for testing. Define all of values to be returned for specified keys.

## Options

*name* *name*—

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Advanced

## shared sae configuration plug-ins

### Syntax

```
shared sae configuration plug-ins {
    plugin-publisher-auth-queue plugin-publisher-auth-queue;
    plugin-publisher-tracking-queue plugin-publisher-tracking-queue;
}
```

### Hierarchy Level

[edit shared sae configuration plug-ins]

### Options

*plugin-publisher-auth-queue plugin-publisher-auth-queue—*

**Value**—Integer in the range -2147483648–2147483647

**Default**—20

**Editing Level**—Advanced

*plugin-publisher-tracking-queue plugin-publisher-tracking-queue—*

**Value**—Integer in the range -2147483648–2147483647

**Default**—20

**Editing Level**—Advanced

### Required Privilege Level

system

### Required Editing Level

Normal

## shared sae configuration plug-ins event-publishers

### Syntax

```
shared sae configuration plug-ins event-publishers {
    subscriber-authorization [subscriber-authorization...];
    default-retailer-authentication [default-retailer-authentication...];
    default-retailer-dhcp-authentication [default-retailer-dhcp-
authentication...];
    dhcp-authorization [dhcp-authorization...];
    service-authorization [service-authorization...];
    subscription-authorization [subscription-authorization...];
    subscriber-tracking [subscriber-tracking...];
    service-tracking [service-tracking...];
    interface-tracking [interface-tracking...];
    embedded-admin-server-authorization [embedded-admin-server-
authorization...];
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins event-publishers]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure event publishers. Event publishers tell the SAE which events to send to which plug-in.

### Options

**subscriber-authorization** [*subscriber-authorization...*]—(Optional)  
 Authorize all subscriber sessions. These plug-in instances are called after a subscriber profile is loaded but before a subscriber session is started. The SAE calls these plug-ins for each subscriber who logs in to a portal.

These plug-in instances cannot perform authentication because passwords are not available at this point in the login process. Therefore if you specify plug-ins that perform authentication, the login process will fail.

**Value**— List of plug-ins

**Default**— No value

**Introduced in**—1.0.0

**Editing Level**—Normal

`default-retailer-authentication` [*default-retailer-authentication...*]  
 —(Optional) Authenticate subscribers who are assigned to retailer objects that do not specify a authentication plug-in. These plug-ins are called when the subscriber logs in to a domain. The authentication process for portal logins maps the supplied domain name to a retailer object.

If you do not specify default retailer authentication plug-ins or retailer-specific plug-ins, subscribers are admitted without authentication.

**Value**— List of plug-ins

**Default**— No value

**Editing Level**—Normal

`default-retailer-dhcp-authentication` [*default-retailer-dhcp-authentication...*]  
 —(Optional) Authenticate DHCP address requests for subscribers who are assigned to retailer objects that do not specify a DHCP authentication plug-in. These plug-ins are called when the SAE receives a DHCP discover request from a client that has its username and password cached in the SAE. The username and password can either be cached persistently in the directory or temporarily in memory during a switch from an unauthenticated to an authenticated address.

**Value**— List of plug-ins

**Default**— No value

**Editing Level**—Normal

`dhcp-authorization` [*dhcp-authorization...*]  
 —(Optional) Authorize all DHCP address requests for all DHCP subscribers who log in to a portal. These plug-ins are called for both authenticated and unauthenticated address requests.

**Value**— List of plug-ins

**Default**— No value

**Editing Level**—Normal

`service-authorization` [*service-authorization...*]  
 —(Optional) Authorize all service sessions. These plug-ins are called before a service session is started, and are called for every service session started by any subscriber.

**Value**— List of plug-ins

**Default**— No value

**Editing Level**—Normal

`subscription-authorization` [*subscription-authorization...*]  
 —(Optional) Authorize subscribers to change their subscriptions. These plug-ins are called when a subscriber tries to modify, subscribe to, or unsubscribe from a subscription.

**Value**— List of plug-ins**Default**— No value**Editing Level**—Normal

`subscriber-tracking [subscriber-tracking...]`—(Optional) Collect accounting data for all subscriber sessions. These plug-ins are called for every subscriber session that is started and stopped. They are called after a subscriber session has started and when the session is stopped.

**Value**— List of plug-ins**Default**— No value**Editing Level**—Normal

`service-tracking [service-tracking...]`—(Optional) Collect accounting data for all service sessions. These plug-ins are called for every service session that is started and stopped. They are called after a service session starts, when the service session stops, and during interim updates.

**Value**— List of plug-ins**Default**— No value**Editing Level**—Normal

`interface-tracking [interface-tracking...]`—(Optional) Collect accounting data for all interfaces that the SAE manages. These plug-ins are called for every managed interface that is started and stopped. They are called after an interface comes up, when new policies are installed on the interface, and when the interface goes down. You can include NIC SAE plug-ins, which cause the SAE to send interface tracking events to the NIC SAE plug-in agent.

**Value**— List of plug-ins**Default**— No value**Editing Level**—Normal

`embedded-admin-server-authorization [embedded-admin-server-authorization...]`—(Optional) Authorize administrators to connect to the embedded Web server, which is used to access SAE Web Admin.

**Value**— List of plug-ins**Default**— No value**Editing Level**—Normal**Required Privilege Level**

system

**Required Editing Level**

Normal

# shared sae configuration plug-ins manager

## Syntax

```
shared sae configuration plug-ins manager {
    threads threads;
}
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins manager]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure the number of threads used for plug-in synchronization.

## Options

`threads threads`— Number of threads that the SAE maintains for plug-in synchronization.

**Value**— Integer in the range 0–100

**Default**— 5

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Expert

# shared sae configuration plug-ins name

## Syntax

```
shared sae configuration plug-ins name name ...
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a plug-in. A plug-in configuration describes a particular plug-in that can handle events that it receives from the SAE.

- An authorization plug-in configuration might perform RADIUS authentication when it receives a subscriber login event.
- A tracking plug-in might write accounting information to a file when it receives service session events.

For each type of plug-in you can create multiple instances that contain different configurations of the plug-in.

## Alias

pool

## Options

name *name*— Name of the plug-in configuration.

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Normal

## shared sae configuration plug-ins name *name* acp-interface-listener

### Syntax

```
shared sae configuration plug-ins name name acp-interface-listener {
    ldap-server ldap-server;
    bind-dn bind-dn;
    bind-password bind-password;
    (ldaps);
    congestion-points-base-dn congestion-points-base-dn;
    admission-control-base-dn admission-control-base-dn;
    timeout timeout;
    acp-remote-corba-ior acp-remote-corba-ior;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name acp-interface-listener]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a hosted internal plug-in for SRC-ACP that the SAE uses to monitor the state of interfaces on a VR for backbone congestion points.

*ldap-server ldap-server*— IP address or name of the host that supports the directory that contains backbone service definitions and network interfaces.

**Value**— IP address or name of the host optionally followed by a port number. Use the format *< host > : < port number >* . For example, 10.227.0.0:389

**Default**— No value

**Editing Level**—Normal

*bind-dn bind-dn*— DN of the directory entry that defines the username with which the plug-in accesses the directory.

**Value**— *< DN >* . You can use the special value *< base >* to refer to the globally configured base DN. The string *< base >* is replaced with the directory base DN.

**Default**— No value

**Editing Level**—Normal

`bind-password` *bind-password*— Password with which the plug-in accesses the directory.

**Value**— Text string

**Default**— No value

**Editing Level**—Normal

`ldaps`—Enables LDAPS as the secure protocol for connections to the directory server.

**Value**— `ldaps`—Enable LDAPS

**Default**— Disabled

**Editing Level**—Advanced

`congestion-points-base-dn` *congestion-points-base-dn*— DN at which SRC-ACP stores backbone congestion points.

**Value**— `<DN>`. You can use the special value `<base>` to refer to the globally configured base DN. The string `<base>` is replaced with the directory base DN.

**Default**— No value

**Editing Level**—Normal

`admission-control-base-dn` *admission-control-base-dn*— DN at which SRC-ACP stores edge congestion points.

**Value**— `<DN>`. You can use the special value `<base>` to refer to the globally configured base DN. The string `<base>` is replaced with the directory base DN.

**Default**— No value

**Editing Level**—Normal

`timeout` *timeout*—(Optional) Maximum time that the plug-in waits for the router to respond.

**Value**— Number of milliseconds in the range 0–2147483647. A zero means there is no timeout.

**Default**— 5000

**Editing Level**—Advanced

`acp-remote-corba-ior` *acp-remote-corba-ior*— Object reference for the ACP plug-in.

**Value**— ACP CORBA reference that is defined with the **edit shared acp configuration corba acp-ior** statement.

**Default**— No value

**Editing Level**—Advanced

### Required Privilege Level

system

### Required Editing Level

Basic

## shared sae configuration plug-ins name *name* custom-radius-accounting

### Syntax

```
shared sae configuration plug-ins name name custom-radius-accounting {
    java-class-radius-packet-handler java-class-radius-packet-handler;
    class-path-radius-packet-handler class-path-radius-packet-handler;
    append-acct-status-type-attribute;
    require-mandatory-attributes;
    load-balancing-mode (failover | roundRobin);
    fallback-timer fallback-timer;
    timeout timeout;
    retry-interval retry-interval;
    maximum-queue-length maximum-queue-length;
    bind-address bind-address;
    udp-port udp-port;
    default-peer default-peer;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name custom-radius-accounting]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a custom RADIUS accounting plug-in.

*java-class-radius-packet-handler java-class-radius-packet-handler*—  
Name of the Java class that implements the RadiusPacketHandler interface in the RADIUS client library.

**Value**— Java class name. For example, net.juniper.smgmt.radius.  
RadiusPacketHandlerImpl

**Default**— No value

**Editing Level**— Basic

*class-path-radius-packet-handler class-path-radius-packet-handler*—  
(Optional) List of URLs that identify a location from which Java classes are loaded when the plug-in is initialized.

**Value**— Comma-separated list of URLs

**Default**— No value

**Editing Level**—Basic

`append-acct-status-type-attribute`—(Optional) Enable or disable whether or not the plug-in includes the Acct-Status-Type attribute in a RADIUS accounting request packet.

**Default**— Enabled

**Editing Level**—Normal

`require-mandatory-attributes`—(Optional) Enable or disable whether or not a RADIUS authentication or accounting request must contain all mandatory RADIUS attributes before sending the request packet.

**Default**— Enabled

**Editing Level**—Normal

`load-balancing-mode (failover | roundRobin)`— Mode for load-balancing RADIUS servers. You can set up the plug-in to switch between RADIUS servers in case of failure or to load-balance every request.

**Value**— One of the following:

- Failover—The SAE sends requests to the RADIUS server that is configured as the default peer. If the default peer fails, the SAE uses the next server configured in the peer group. The SAE cycles through the configured RADIUS servers as needed.
- Round-robin—The SAE alternates requests between all RADIUS servers configured in the peer group.

**Default**— Failover

**Editing Level**—Normal

`failback-timer failback-timer`— Controls if and when the SAE attempts to fail back to the default peer.

**Value**— One of the following:

- Number of seconds after a failover that the SAE attempts to fail back; range is -1-2147483647
- 0—SAE always attempts to fail back
- -1—SAE never attempts to fail back

**Default**— -1

**Editing Level**—Normal

`timeout` *timeout*— Maximum time the SAE waits for a response from a RADIUS server. If the RADIUS server does not respond to the request, the request fails and the SAE logs an error message. Note: configure this attribute to be five times (or more) greater than the `retry-interval` attribute to make sure the fail-over mechanism works without losing any packet.

**Value**— Number of milliseconds in the range -1-9223372036854775807. -1 means that there is no timeout.

**Default**— 15000

**Editing Level**—Normal

`retry-interval` *retry-interval*— Time the SAE waits for a response from a RADIUS server before it resends the RADIUS packet. The SAE keeps sending RADIUS packets until either the server acknowledges the packet or the maximum timeout is reached. Note: configure the `timeout` attribute to be five times (or more) greater than this attribute to make sure the fail-over mechanism works without losing any packet.

**Value**— Number of milliseconds in the range 0-9223372036854775807.

**Default**— 3000

**Editing Level**—Normal

`maximum-queue-length` *maximum-queue-length*— Maximum number of unacknowledged RADIUS messages that the plug-in receives from the RADIUS server before it discards new messages.

**Value**— Integer in the range 0-2147483647

**Default**— 10000

**Editing Level**—Normal

`bind-address` *bind-address*—(Optional) Source IP address that the plug-in uses to communicate with the RADIUS server. If you do not specify an address, the global default address is used. You configure the global default address with the **slot number sae radius local-address** command.

**Value**— IP address

**Default**— No value

**Editing Level**—Advanced

`udp-port` *udp-port*—(Optional) Source UDP port used for communication with the RADIUS server. If not specified, the global default is used.

**Value**— One of the following:

- Port number in the range 1-65535
- A range of ports in the format `port-port`; for example, 7000-7003

- A comma-separated list of port numbers and port ranges enclosed in double quotation marks. For example, "7000-7003, 7006, 7007-7009".

**Default**— No value  
**Editing Level**—Advanced

`default-peer` *default-peer*— Name of the RADIUS server to which the SAE sends packets for this plug-in.

**Value**— Name of the server as defined with the **shared sae configuration plug-ins pool *name* custom-radius-accounting peer-group** command.  
**Default**— No value  
**Editing Level**—Normal

**Required Privilege Level**

system

**Required Editing Level**

Basic

## shared sae configuration plug-ins name *name* custom-radius-accounting peer-group

### Syntax

```
shared sae configuration plug-ins name name custom-radius-accounting peer-
group name {
    server-address server-address;
    server-port server-port;
    secret secret;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name custom-radius-accounting peer-
group]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a RADIUS peer, which is an instance of a RADIUS server. If you define multiple servers, the SAE uses them in cases of failover or as alternate servers for load-balancing purposes.

Note that if you configure more than one RADIUS peer in a plug-in instance that has the same properties, the SNMP counters for the plug-in will not update correctly. The reason is that the software does not know which RADIUS peer to send updates to.

### Options

*name* *name*— Name of the RADIUS peer.

**Value**—Text

*server-address* *server-address*— IP address of the RADIUS server to which the SAE sends accounting data or that the SAE uses for authentication and authorization.

**Value**— IP address

**Default**— No value

**Editing Level**—Normal

`server-port` *server-port*— Port used for RADIUS packets.

**Value**— Port number in the range 0–65535.

- RADIUS accounting servers typically use ports 1813 or 1646.
- RADIUS authentication servers typically use ports 1812 or 1645.

**Default**—1812

**Editing Level**—Normal

`secret` *secret*— Password that is shared with the RADIUS server. You must configure the same secret on the RADIUS server.

**Value**— Shared secret; the software encodes the secret using BASE-64.

**Default**— No value

**Editing Level**—Normal

#### Required Privilege Level

system

#### Required Editing Level

Basic

## shared sae configuration plug-ins name *name* custom-radius-authentication

### Syntax

```
shared sae configuration plug-ins name name custom-radius-authentication {
    java-class-radius-packet-handler java-class-radius-packet-handler;
    class-path-radius-packet-handler class-path-radius-packet-handler;
    require-mandatory-attributes;
    load-balancing-mode (failover | roundRobin);
    fallback-timer fallback-timer;
    timeout timeout;
    retry-interval retry-interval;
    maximum-queue-length maximum-queue-length;
    bind-address bind-address;
    udp-port udp-port;
    default-peer default-peer;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name custom-radius-authentication]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a custom RADIUS authentication plug-in.

*java-class-radius-packet-handler java-class-radius-packet-handler*—  
Name of the Java class that implements the RadiusPacketHandler interface in the RADIUS client library.

**Value**— Java class name. For example, net.juniper.smgmt.radius.  
RadiusPacketHandlerImpl

**Default**— No value

**Editing Level**—Basic

*class-path-radius-packet-handler class-path-radius-packet-handler*—  
(Optional) List of URLs that identify a location from which Java classes are loaded when the plug-in is initialized.

**Value**— Comma-separated list of URLs

**Default**— No value  
**Editing Level**—Basic

`require-mandatory-attributes`—(Optional) Specifies whether or not a RADIUS authentication or accounting request must contain all mandatory RADIUS attributes before sending the request packet.

**Value**— true or false  
**Default**— true  
**Editing Level**—Normal

`load-balancing-mode (failover | roundRobin)`— Mode for load-balancing RADIUS servers. You can set up the plug-in to switch between RADIUS servers in case of failure or to load-balance every request.

**Value**— One of the following:

- Failover—The SAE sends requests to the RADIUS server that is configured as the default peer. If the default peer fails, the SAE uses the next server configured in the peer group. The SAE cycles through the configured RADIUS servers as needed.
- Round-robin—The SAE alternates requests between all RADIUS servers configured in the peer group.

**Default**— Failover  
**Editing Level**—Normal

`failback-timer failback-timer`— Controls if and when the SAE attempts to fail back to the default peer.

**Value**— One of the following:

- Number of seconds after a failover that the SAE attempts to fail back; range is -1-2147483647
- 0—SAE always attempts to fail back
- -1—SAE never attempts to fail back

**Default**— -1  
**Editing Level**—Normal

`timeout timeout`— Maximum time the SAE waits for a response from a RADIUS server. If the RADIUS server does not respond to the request, the request fails and the SAE logs an error message. Note: configure this attribute to be five times (or more) greater than the retry-interval attribute to make sure the fail-over mechanism works without losing any packet.

**Value**— Number of milliseconds in the range -1-9223372036854775807. -1 means that there is no timeout.  
**Default**— 15000  
**Editing Level**—Normal

`retry-interval` *retry-interval*— Time the SAE waits for a response from a RADIUS server before it resends the RADIUS packet. The SAE keeps sending RADIUS packets until either the server acknowledges the packet or the maximum timeout is reached. Note: configure the timeout attribute to be five times (or more) greater than this attribute to make sure the fail-over mechanism works without losing any packet.

**Value**— Number of milliseconds in the range 0-9223372036854775807  
**Default**— 3000  
**Editing Level**—Normal

`maximum-queue-length` *maximum-queue-length*— Maximum number of unacknowledged RADIUS messages that the plug-in receives from the RADIUS server before it discards new messages.

**Value**— Integer in the range 0-2147483647  
**Default**— 10000  
**Editing Level**—Normal

`bind-address` *bind-address*—(Optional) Source IP address that the plug-in uses to communicate with the RADIUS server. If you do not specify an address, the global default address is used. You configure the global default address with the **slot number sae radius local-address** command.

**Value**— IP address  
**Default**— No value  
**Editing Level**—Advanced

`udp-port` *udp-port*—(Optional) Source UDP port or a range of source UDP ports used for communication with the RADIUS server. If you do not specify a UDP port, the global UDP port is used. You configure the global UDP port with the **shared sae configuration global-radius-udp-port** command.

**Value**— One of the following:

- Port number in the range 1-65535
- A range of ports in the format port-port; for example, 7000-7003
- A comma-separated list of port numbers and port ranges enclosed in double quotation marks. For example, 7000-7003, 7006, 7007-7009

**Default**— No value

**Editing Level**—Advanced

`default-peer` *default-peer*— Name of the RADIUS server to which the SAE sends packets for this plug-in.

**Value**— Name of the server as defined with the **shared sae configuration plug-ins pool *name* custom-radius-authentication peer-group** command.

**Default**— No value

**Editing Level**—Normal

**Required Privilege Level**

system

**Required Editing Level**

Basic

# shared sae configuration plug-ins name *name* custom-radius-authentication peer-group

## Syntax

```
shared sae configuration plug-ins name name custom-radius-authentication peer-
group name {
    server-address server-address;
    server-port server-port;
    secret secret;
}
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name name custom-radius-
authentication peer-group]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a RADIUS peer, which is an instance of a RADIUS server. If you define multiple servers, the SAE uses them in cases of failover or as alternate servers for load-balancing purposes.

Note that if you configure more than one RADIUS peer in a plug-in instance that has the same properties, the SNMP counters for the plug-in will not update correctly. The reason is that the software does not know which RADIUS peer to send updates to.

## Options

`name name`— Name of the RADIUS peer.

**Value**—Text

`server-address server-address`— IP address of the RADIUS server to which the SAE sends accounting data or that the SAE uses for authentication and authorization.

**Value**— IP address

**Default**— No value

**Editing Level**—Normal

`server-port` *server-port*— Port used for RADIUS packets.

**Value**— Port number in the range 0–65535.

- RADIUS accounting servers typically use ports 1813 or 1646.
- RADIUS authentication servers typically use ports 1812 or 1645.

**Default**—1812

**Editing Level**—Normal

`secret` *secret*— Password that is shared with the RADIUS server. You must configure the same secret on the RADIUS server.

**Value**— Shared secret; the software encodes the secret using BASE-64.

**Default**— No value

**Editing Level**—Normal

#### Required Privilege Level

system

#### Required Editing Level

Basic

## shared sae configuration plug-ins name *name* ejb-adaptor

### Syntax

```
shared sae configuration plug-ins name name ejb-adaptor {
    jndi-service-provider jndi-service-provider;
    application-server-url application-server-url;
    jndi-sae-event-listener jndi-sae-event-listener;
    event-admitter event-admitter;
    use-ejb-cluster;
    ejb-clustering-strategy (EJBObjectClustering | EJBHomeClustering |
JNDIClustering);
    attributes [(host | router-name | interface-name | interface-alias |
interface-descr | port-id | user-ip-address | login-name | accounting-id | auth-
user-id | if-radius-class | if-session-id | service-name | radius-class | event-
time | session-id | terminate-cause | session-time | in-octets | out-octets | in-
packets | out-packets | nas-ip | user-mac-address | service-session-name |
service-session-tag | user-type | user-radius-class | user-session-id | primary-
user-name | session-volume-quota | subscription-name | login-id | if-index |
event-time-millisecond | nas-port | operational | idle-timeout | user-inet-
address | nas-inet-address | router-type | interface-speed | service-bundle |
user-dn | uid | domain | retailer-dn | password | service-scope | session-timeout
| downstream-bandwidth | upstream-bandwidth | dhcp-packet | aggr-session-id |
aggr-login-name | aggr-user-dn | aggr-user-inet-address | aggr-accounting-id |
aggr-auth-user-id | accounting-interim-time | substitution | pcmm-request-type |
pcmm-application-manager-id | pcmm-billing-correlation-id | l2c-access-mode | l2c-
upstream-rate | l2c-downstream-rate | property)...];
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name ejb-adaptor]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Note that the EJB adapter plug-in works only with the SRC-VTA, which is not yet supported on the C-series platform.

Configure an EJB adapter plug-in that the SRC-VTA uses to communicate with the SAE. The plug-in performs the following functions:

- Filters SAE plug-in events for the SRC-VTA.
- Adapts internal SAE events to EJB-compatible methods.
- Sends SAE tracking events to the SRC-VTA.

`jndi-service-provider` *jndi-service-provider*— Class name of the J2EE application server's JNDI service provider

**Value**— Depends on the type of J2EE application server. Consult documentation for the J2EE application server.

**Default**— `org.jnp.interfaces.NamingContextFactory`

**Editing Level**—Advanced

`application-server-url` *application-server-url*— URL of J2EE application server that is running the JNDI service.

**Value**— Depends on the type of J2EE application server. Consult the documentation for the J2EE application server.

**Default**— `jnp://127.0.0.1:1099`

**Editing Level**—Normal

`jndi-sae-event-listener` *jndi-sae-event-listener*— JNDI name of SAAEventListener EJB of the peer SRC-VTA.

**Value**— JNDI name. For example, `Quota/SAAEventListenerBean`.

**Default**— No value

**Editing Level**—Normal

`event-admitter` *event-admitter*—(Optional) LDAP filter that determines the subscriber and service events that the EJB adapter plug-in sends to the SRC-VTA.

**Value**— See *Installing and Initially Configuring the SRC-VTA* in the *SRC Application Library Guide*.

**Default**— No value

**Editing Level**—Normal

`use-ejb-cluster`—(Optional) Property that specifies whether or not the J2EE application server uses EJB cluster.

**Default**— Disabled

**Editing Level**—Advanced

`ejb-clustering-strategy` (`EJBObjectClustering` | `EJBHomeClustering` | `JNDIClustering`)— Load-balancing scheme of the J2EE application server that hosts the SRC-VTA. See the documentation for the J2EE application server to determine which load-balancing scheme it supports.

**Value**— One of the following:

- `EJBObjectClustering`—load balancing by means of object stubs.

- EJBHomeClustering—load balancing by means of home interface.
- JNDIClustering—Load balancing by means of JNDI

**Default**— EJBObjectClustering

**Editing Level**—Advanced

attributes [(host | router-name | interface-name | interface-alias | interface-descr | port-id | user-ip-address | login-name | accounting-id | auth-user-id | if-radius-class | if-session-id | service-name | radius-class | event-time | session-id | terminate-cause | session-time | in-octets | out-octets | in-packets | out-packets | nas-ip | user-mac-address | service-session-name | service-session-tag | user-type | user-radius-class | user-session-id | primary-user-name | session-volume-quota | subscription-name | login-id | if-index | event-time-millisecond | nas-port | operational | idle-timeout | user-inet-address | nas-inet-address | router-type | interface-speed | service-bundle | user-dn | uid | domain | retailer-dn | password | service-scope | session-timeout | downstream-bandwidth | upstream-bandwidth | dhcp-packet | aggr-session-id | aggr-login-name | aggr-user-dn | aggr-user-inet-address | aggr-accounting-id | aggr-auth-user-id | accounting-interim-time | substitution | pcmm-request-type | pcmm-application-manager-id | pcmm-billing-correlation-id | l2c-access-mode | l2c-upstream-rate | l2c-downstream-rate | property)...]—(Optional) Attributes that are sent to the plug-in. We recommend that you configure only the required attributes. If you do not specify attributes, all attributes are sent. Specifying fewer attributes improves the performance of the SRC network.

## Value

- host—Name of the SAE host
- router-name—Name of the virtual router
- interface-name—Name of the router interface
- interface-alias—Alias of the router interface
- interface-descr—Description of the router interface
- port-id—NAS port ID of the physical interface
- user-ip-address—IP address of the subscriber
- login-name—Login name of the subscriber
- accounting-id—Accounting ID attribute
- auth-user-id—Subscriber ID used for service authentication
- if-radius-class—RADIUS class of the router interface
- if-session-id—Interface session ID assigned by the router
- service-name—Name of the service
- radius-class—RADIUS class attribute
- event-time—Timestamp when the event was created
- session-id—Session ID assigned by the SAE
- terminate-cause—RADIUS termination cause
- session-time—Length of the session in seconds
- in-octets—Number of octets received from the subscriber
- out-octets—Number of octets sent to the subscriber

- `in-packets`—Number of packets received from the subscriber
- `out-packets`—Number of packets sent to the subscriber
- `nas-ip`—NAS IP address that router uses for accounting messages
- `user-mac-address`—MAC address of subscriber session
- `service-session-name`—Name of the service session
- `service-session-tag`—Tag assigned to the service session
- `user-type`—Subscriber session type
- `user-radius-class`—RADIUS class of the subscriber session that is associated with the service session
- `user-session-id`—RADIUS session ID for the subscriber session
- `primary-user-name`—pppLoginName or public Dhcp userName
- `session-volume-quota`—Total volume of data that subscriber can upload or download
- `subscription-name`—Name of the subscription
- `login-id`—Login ID of the subscriber
- `if-index`—SNMP index of the router interface
- `event-time-millisecond`—Event time in milliseconds
- `nas-port`—ID that the router uses to identify interface to RADIUS
- `operational`—Flag that identifies whether an interface was operational at the time of the tracking event
- `idle-timeout`—Idle timeout for service session
- `user-inet-address`—Subscriber INET address
- `nas-inet-address`—NAS INET address of the router
- `router-type`—Type of device driver
- `interface-speed`—Speed of the interface
- `service-bundle`—RADIUS vendor-specific attribute that a subscriber authorization plug-in returns to the SAE
- `user-dn`—DN of the subscriber profile
- `uid`—Subscriber ID used for secondary authentication
- `domain`—Subscriber domain used for secondary authentication
- `retailer-dn`—Retailer DN associated with the domain
- `password`—Password used for secondary authentication
- `service-scope`—List of service scopes
- `session-timeout`—Session timeout in seconds
- `downstream-bandwidth`—Downstream bandwidth for the service
- `upstream-bandwidth`—Upstream bandwidth for the service
- `dhcp-packet`—Contents of the DHCP discover request
- `aggr-session-id`—Accounting session ID of the aggregate service session
- `aggr-login-name`—Login name of the subscriber who started the session
- `aggr-user-dn`—Aggregate service subscriber DN
- `aggr-user-inet-address`—Aggregate service subscriber INET address
- `aggr-accounting-id`—Aggregate service accounting ID
- `aggr-auth-user-id`—Aggregate service subscriber ID
- `accounting-interim-time`—Accounting interim time
- `substitution`—Parameter substitution
- `pcmm-request-type`—PCMM policy event type

- `pcmm-application-manager-id`—PCMM application manager ID
- `pcmm-billing-correlation-id`—PCMM billing correlation ID
- `l2c-access-mode`—L2C access mode
- `l2c-upstream-rate`—L2C upstream rate
- `l2c-downstream-rate`—L2C downstream rate
- `property`—Session property

**Default**— List of all attributes

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

## shared sae configuration plug-ins name *name* external

### Syntax

```
shared sae configuration plug-ins name name external {
    corba-object-reference corba-object-reference;
    state-synchronization;
    attributes [(host | router-name | interface-name | interface-alias |
interface-descr | port-id | user-ip-address | login-name | accounting-id | auth-
user-id | if-radius-class | if-session-id | service-name | radius-class | event-
time | session-id | terminate-cause | session-time | in-octets | out-octets | in-
packets | out-packets | nas-ip | user-mac-address | service-session-name |
service-session-tag | user-type | user-radius-class | user-session-id | primary-
user-name | session-volume-quota | subscription-name | login-id | if-index |
event-time-millisecond | nas-port | operational | idle-timeout | user-inet-
address | nas-inet-address | router-type | interface-speed | service-bundle |
user-dn | uid | domain | retailer-dn | password | service-scope | session-timeout
| downstream-bandwidth | upstream-bandwidth | dhcp-packet | aggr-session-id |
aggr-login-name | aggr-user-dn | aggr-user-inet-address | aggr-accounting-id |
aggr-auth-user-id | accounting-interim-time | substitution | pcmm-request-type |
pcmm-application-manager-id | pcmm-billing-correlation-id | l2c-access-mode | l2c-
upstream-rate | l2c-downstream-rate | property)...];
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name external]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure SAE external plug-ins. You need to configure external plug-ins for SAE plug-in agents for the NIC, for Admission Control Plug-Ins, and for custom plug-ins developed in Common Object Request Broker Architecture (CORBA).

*corba-object-reference corba-object-reference*— Object reference of the external plug-in that is exported to the SAE. When the SAE sends the first event to a registered plug-in, it resolves the object reference.

**Value**— Object reference in one of the following formats:

- The absolute path to the interoperable object reference (IOR) file in the format: "file:// < absolute path > "
- The corbaloc URL in the format corbaloc:: < host > : < portNumber > / < path > where:

- host is the name or IP address of the host that supports the plug-in
  - portNumber is the port number of the host
  - path is the absolute path to the plug-in
- Common Object Services (COS) in the format corbaname:: < host > [: < port > ][/serviceName]# < key > where the key is provided by the publisher of the IOR to the COS naming service.
- The actual IOR in the form IOR: < objectReference >

**Default**— No value

**Editing Level**—Normal

state-synchronization—(Optional) Plug-in implements state synchronization interface

**Editing Level**—Normal

attributes [(host | router-name | interface-name | interface-alias | interface-descr | port-id | user-ip-address | login-name | accounting-id | auth-user-id | if-radius-class | if-session-id | service-name | radius-class | event-time | session-id | terminate-cause | session-time | in-octets | out-octets | in-packets | out-packets | nas-ip | user-mac-address | service-session-name | service-session-tag | user-type | user-radius-class | user-session-id | primary-user-name | session-volume-quota | subscription-name | login-id | if-index | event-time-millisecond | nas-port | operational | idle-timeout | user-inet-address | nas-inet-address | router-type | interface-speed | service-bundle | user-dn | uid | domain | retailer-dn | password | service-scope | session-timeout | downstream-bandwidth | upstream-bandwidth | dhcp-packet | aggr-session-id | aggr-login-name | aggr-user-dn | aggr-user-inet-address | aggr-accounting-id | aggr-auth-user-id | accounting-interim-time | substitution | pcmm-request-type | pcmm-application-manager-id | pcmm-billing-correlation-id | l2c-access-mode | l2c-upstream-rate | l2c-downstream-rate | property)...]—(Optional) Attributes that are sent to the plug-in. We recommend that you configure only the required attributes. If you do not specify attributes, all attributes are sent. Specifying fewer attributes improves the performance of the SRC network.

## Value

- host—Name of the SAE host
- router-name—Name of the virtual router
- interface-name—Name of the router interface
- interface-alias—Alias of the router interface
- interface-descr—Description of the router interface
- port-id—NAS port ID of the physical interface
- user-ip-address—IP address of the subscriber
- login-name—Login name of the subscriber
- accounting-id—Accounting ID attribute
- auth-user-id—Subscriber ID used for service authentication

- `if-radius-class`—RADIUS class of the router interface
- `if-session-id`—Interface session ID assigned by the router
- `service-name`—Name of the service
- `radius-class`—RADIUS class attribute
- `event-time`—Timestamp when the event was created
- `session-id`—Session ID assigned by the SAE
- `terminate-cause`—RADIUS termination cause
- `session-time`—Length of the session in seconds
- `in-octets`—Number of octets received from the subscriber
- `out-octets`—Number of octets sent to the subscriber
- `in-packets`—Number of packets received from the subscriber
- `out-packets`—Number of packets sent to the subscriber
- `nas-ip`—NAS IP address that router uses for accounting messages
- `user-mac-address`—MAC address of subscriber session
- `service-session-name`—Name of the service session
- `service-session-tag`—Tag assigned to the service session
- `user-type`—Subscriber session type
- `user-radius-class`—RADIUS class of the subscriber session that is associated with the service session
- `user-session-id`—RADIUS session ID for the subscriber session
- `primary-user-name`—pppLoginName or public Dhcp userName
- `session-volume-quota`—Total volume of data that subscriber can upload or download
- `subscription-name`—Name of the subscription
- `login-id`—Login ID of the subscriber
- `if-index`—SNMP index of the router interface
- `event-time-millisecond`—Event time in milliseconds
- `nas-port`—ID that the router uses to identify interface to RADIUS
- `operational`—Flag that identifies whether an interface was operational at the time of the tracking event
- `idle-timeout`—Idle timeout for service session
- `user-inet-address`—Subscriber INET address
- `nas-inet-address`—NAS INET address of the router
- `router-type`—Type of device driver
- `interface-speed`—Speed of the interface
- `service-bundle`—RADIUS vendor-specific attribute that a subscriber authorization plug-in returns to the SAE
- `user-dn`—DN of the subscriber profile
- `uid`—Subscriber ID used for secondary authentication
- `domain`—Subscriber domain used for secondary authentication
- `retailer-dn`—Retailer DN associated with the domain
- `password`—Password used for secondary authentication
- `service-scope`—List of service scopes
- `session-timeout`—Session timeout in seconds
- `downstream-bandwidth`—Downstream bandwidth for the service
- `upstream-bandwidth`—Upstream bandwidth for the service
- `dhcp-packet`—Contents of the DHCP discover request
- `aggr-session-id`—Accounting session ID of the aggregate service session

- `aggr-login-name`—Login name of the subscriber who started the session
- `aggr-user-dn`—Aggregate service subscriber DN
- `aggr-user-inet-address`—Aggregate service subscriber INET address
- `aggr-accounting-id`—Aggregate service accounting ID
- `aggr-auth-user-id`—Aggregate service subscriber ID
- `accounting-interim-time`—Accounting interim time
- `substitution`—Parameter substitution
- `pcmm-request-type`—PCMM policy event type
- `pcmm-application-manager-id`—PCMM application manager ID
- `pcmm-billing-correlation-id`—PCMM billing correlation ID
- `l2c-access-mode`—L2C access mode
- `l2c-upstream-rate`—L2C upstream rate
- `l2c-downstream-rate`—L2C downstream rate
- `property`—Session property

**Default**— List of all attributes

**Editing Level**—Basic

#### Required Privilege Level

system

#### Required Editing Level

Basic

## shared sae configuration plug-ins name *name* file-accounting

### Syntax

```
shared sae configuration plug-ins name name file-accounting {
    filename filename;
    template template;
    interval interval;
    fields [(status | nas-id | host | router-name | interface-name | interface-
alias | interface-descr | port-id | user-ip-address | login-name | accounting-id
| auth-user-id | if-radius-class | if-session-id | service-name | radius-class |
event-time | session-id | terminate-cause | session-time | in-octets | out-octets
| in-packets | out-packets | nas-ip | user-mac-address | service-session-name |
service-session-tag | user-type | user-radius-class | user-session-id | primary-
user-name | subscription-name | login-id | if-index | event-time-millisecond |
nas-port | operational | user-inet-address | nas-inet-address | router-type |
interface-speed)...];
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name file-accounting]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a file accounting plug-in, which writes information to a file in a comma-separated format.

*filename filename*— Name and location of the file to which the SAE writes accounting information. The SAE names accounting files by appending the timestamp for the start of the accounting period.

**Value**— Path and name of file

**Default**— /var/acct/log

**Editing Level**—Normal

*template template*— Name of the template that defines header names for the attributes written to the accounting file.

**Value**— Template name

**Default**— std

**Editing Level**—Normal

`interval interval`— Number of hours of information stored in each accounting file.  
When the interval expires, the SAE closes the file, renames it to the archive name, and creates a new file.

Accounting files are aligned with midnight of the day the SAE process starts. If the interval is 24 hours, the SAE starts a new file at midnight every day beginning on the day the SAE process starts.

- If the interval is a divisor of 24 hours (for example, 15 minutes, 30 minutes, 1 hour), there is a repeatable pattern of file starts. For example, if the interval is set to 6 hours, the SAE creates a new file at midnight, 6 am, 12 pm, and 6 pm every day.
- If the interval is not a divisor of 24 hours, then the file start times shift each day to different times of the day.

If the SAE is restarted, the schedule for creating accounting files is reset to start at midnight.

**Value**— Interval in the format hour:minutes

**Default**— 24

**Editing Level**—Normal

`fields [(status | nas-id | host | router-name | interface-name | interface-alias | interface-descr | port-id | user-ip-address | login-name | accounting-id | auth-user-id | if-radius-class | if-session-id | service-name | radius-class | event-time | session-id | terminate-cause | session-time | in-octets | out-octets | in-packets | out-packets | nas-ip | user-mac-address | service-session-name | service-session-tag | user-type | user-radius-class | user-session-id | primary-user-name | subscription-name | login-id | if-index | event-time-millisecond | nas-port | operational | user-inet-address | nas-inet-address | router-type | interface-speed) ...]`—(Optional) List of accounting attributes that are written to the accounting file.

### Value

- `status`—Accounting status
- `nas-id`—NAS identifier
- `host`—Hostname of the SAE
- `router-name`—Router name
- `interface-name`—Interface name
- `interface-alias`—Interface alias
- `interface-descr`—Interface description
- `port-id`—NAS port ID
- `user-ip-address`—Subscriber IP address
- `login-name`—Login name
- `accounting-id`—Accounting ID
- `auth-user-id`—User authentication ID
- `if-radius-class`—Interface RADIUS class
- `if-session-id`—Interface session ID
- `service-name`—Service name

- radius-class—RADIUS class
- event-time—Event time (s)
- session-id—Session ID
- terminate-cause—Terminate cause
- session-time—Session time
- in-octets—Number of input octets
- out-octets—Number of output octets
- in-packets—Number of input packets
- out-packets—Number of output packets
- nas-ip—NAS IP address
- user-mac-address—Subscriber MAC address
- service-session-name—Service session name
- service-session-tag—Service session tag
- user-type—Subscriber session type
- user-radius-class—Subscriber session RADIUS class
- user-session-id—Subscriber session ID
- primary-user-name—Primary subscriber name
- subscription-name—Subscription name
- login-id—Login ID
- if-index—Interface index
- event-time-millisecond—Event time (ms)
- nas-port—NAS port
- operational—Operational flag
- user-inet-address—Subscriber INET address
- nas-inet-address—NAS INET address
- router-type—Router type
- interface-speed—Interface speed

**Default**— status,nas-id,host,router-name,interface-name,interface-alias, interface-descr,port-id,user-ip-address, login-name,accounting-id,auth-user-id,if-radius-class,if-session-id,service-name,radius-class,event-time,session-id, terminate-cause,session-time,in-octets,out-octets,in-packets,out-packets, nas-ip,user-mac-address,service-session-name, service-session-tag,user-type,user-radius-class,user-session-id

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

## shared sae configuration plug-ins name *name* flex-radius-accounting

### Syntax

```
shared sae configuration plug-ins name name flex-radius-accounting {
    load-balancing-mode (failover | roundRobin);
    failback-timer failback-timer;
    timeout timeout;
    retry-interval retry-interval;
    maximum-queue-length maximum-queue-length;
    bind-address bind-address;
    udp-port udp-port;
    error-handling (0 | 1);
    default-peer default-peer;
    template template;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-accounting]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a flexible RADIUS accounting plug-in.

`load-balancing-mode (failover | roundRobin)`— Mode for load-balancing RADIUS servers. You can set up the plug-in to switch between RADIUS servers in case of failure or to load-balance every request.

**Value**— One of the following:

- Failover—The SAE sends requests to the RADIUS server that is configured as the default peer. If the default peer fails, the SAE uses the next server configured in the peer group. The SAE cycles through the configured RADIUS servers as needed.
- Round-robin—The SAE alternates requests between all RADIUS servers configured in the peer group.

**Default**— Failover

**Editing Level**—Normal

`failback-timer` *failback-timer*— Controls if and when the SAE attempts to fail back to the default peer.

**Value**— One of the following:

- Number of seconds after a failover that the SAE attempts to fail back; range is -1–2147483647
- 0—SAE always attempts to fail back
- -1—SAE never attempts to fail back

**Default**— -1

**Editing Level**—Normal

`timeout` *timeout*— Maximum time the SAE waits for a response from a RADIUS server. If the RADIUS server does not respond to the request, the request fails and the SAE logs an error message. Note: configure this attribute to be five times (or more) greater than the `retry-interval` attribute to make sure the fail-over mechanism works without losing any packet.

**Value**— Number of milliseconds in the range -1–9223372036854775807. -1 means that there is no timeout.

**Default**— 15000

**Editing Level**—Normal

`retry-interval` *retry-interval*— Time the SAE waits for a response from a RADIUS server before it resends the RADIUS packet. The SAE keeps sending RADIUS packets until either the server acknowledges the packet or the maximum timeout is reached. Note: configure the `timeout` attribute to be five times (or more) greater than this attribute to make sure the fail-over mechanism works without losing any packet.

**Value**— Number of milliseconds in the range 0–9223372036854775807

**Default**— 3000

**Editing Level**—Normal

`maximum-queue-length` *maximum-queue-length*— Maximum number of unacknowledged RADIUS messages that the plug-in receives from the RADIUS server before it discards new messages.

**Value**— Integer in the range 0–2147483647

**Default**— 10000

**Editing Level**—Normal

`bind-address` *bind-address*—(Optional) Source IP address that the plug-in uses to communicate with the RADIUS server. If you do not specify an address, the global default address is used. You configure the global default address with the **slot number sae radius**

**local-address** command.

**Value**— IP address

**Default**— No value

**Editing Level**—Advanced

`udp-port` *udp-port*—(Optional) Source UDP port or a range of source UDP ports used for communication with the RADIUS server. If you do not specify a UDP port, the global UDP port is used. You configure the global UDP port with the **shared sae configuration global-radius-udp-port** command.

**Value**— One of the following:

- Port number in the range 1–65535
- A range of ports in the format port-port; for example, 7000-7003
- A comma-separated list of port numbers and port ranges enclosed in double quotation marks. For example, "7000-7003, 7006, 7007-7009".

**Default**— No value

**Editing Level**—Advanced

`error-handling` (0 | 1)— Configures the way the SAE handles errors.

**Value**— One of the following:

- 0—Ignores incorrect definitions and logs them for debugging purposes
- 1—Logs errors and discards the affected RADIUS packet

**Default**— 0 (Ignore)

**Editing Level**—Normal

`default-peer` *default-peer*— Name of the RADIUS server to which the SAE sends packets for this plug-in.

**Value**— Name of the server as defined with the **shared sae configuration plug-ins pool name flex-radius-accounting peer-group** command.

**Default**— No value

**Editing Level**—Normal

`template` *template*— Name of RADIUS packet template.

**Value**— Name of template

**Default**— No value  
**Editing Level**—Normal

**Required Privilege Level**

system

**Required Editing Level**

Basic

## shared sae configuration plug-ins name *name* flex-radius-accounting peer-group

### Syntax

```
shared sae configuration plug-ins name name flex-radius-accounting peer-
group name {
    server-address server-address;
    server-port server-port;
    secret secret;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-accounting peer-
group]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a RADIUS peer, which is an instance of a RADIUS server. If you define multiple servers, the SAE uses them in cases of failover or as alternate servers for load-balancing purposes.

Note that if you configure more than one RADIUS peer in a plug-in instance that has the same properties, the SNMP counters for the plug-in will not update correctly. The reason is that the software does not know which RADIUS peer to send updates to.

### Options

*name name*— Name of the RADIUS peer.

**Value**—Text

*server-address server-address*— IP address of the RADIUS server to which the SAE sends accounting data or that the SAE uses for authentication and authorization.

**Value**— IP address

**Default**— No value

**Editing Level**—Normal

`server-port` *server-port*— Port used for RADIUS packets.

**Value**— Port number in the range 0–65535.

- RADIUS accounting servers typically use ports 1813 or 1646.
- RADIUS authentication servers typically use ports 1812 or 1645.

**Default**—1812

**Editing Level**—Normal

`secret` *secret*— Password that is shared with the RADIUS server. You must configure the same secret on the RADIUS server.

**Value**— Shared secret; the software encodes the secret using BASE-64.

**Default**— No value

**Editing Level**—Normal

#### Required Privilege Level

system

#### Required Editing Level

Basic

# shared sae configuration plug-ins name *name* flex-radius-accounting radius-packet-definition

## Syntax

```
shared sae configuration plug-ins name name flex-radius-accounting radius-packet-  
definition name ...
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-accounting radius-  
packet-definition]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a RADIUS packet definition for the plug-in.

## Options

name *name*— Name of the RADIUS attribute instance.

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

## shared sae configuration plug-ins name *name* flex-radius-accounting radius-packet-definition *name* attributes

### Syntax

```
shared sae configuration plug-ins name name flex-radius-accounting radius-packet-
definition name attributes name {
    value;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-accounting radius-
packet-definition name attributes]
```

### Description

Configure RADIUS attributes within a plug-in.

### Options

*name* *name*— Name of the RADIUS attribute.

**Value**—Text

*value*— Value of the RADIUS attribute.

**Value**— Value can be a standard value or an expression. For a list of standard values, see *Configuring Accounting and Authentication Plug-Ins (SRC CLI)* in the *SRC-PE Subscribers and Subscriptions Guide*.

**Default**— No value

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

# shared sae configuration plug-ins name *name* flex-radius-accounting radius-packet-definition *name* vendor-specific

## Syntax

```
shared sae configuration plug-ins name name flex-radius-accounting radius-packet-  
definition name vendor-specific name ...
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-accounting radius-  
packet-definition name vendor-specific]
```

## Description

Configure Juniper Networks vendor-specific attributes (VSAs).

## Options

name *name*—

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

# shared sae configuration plug-ins name *name* flex-radius-accounting radius-packet-definition *name* vendor-specific *name* attributes

## Syntax

```
shared sae configuration plug-ins name name flex-radius-accounting radius-packet-
definition name vendor-specific name attributes name {
    value;
}
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-accounting radius-
packet-definition name vendor-specific name attributes]
```

## Options

*name* *name*— RADIUS attribute definition.

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Basic

# shared sae configuration plug-ins name *name* flex-radius-accounting radius-packet-definition *name* vendor-specific *name* type

## Syntax

```
shared sae configuration plug-ins name name flex-radius-accounting radius-packet-definition name vendor-specific name type name ...
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-accounting radius-packet-definition name vendor-specific name type]
```

## Options

name *name*— Data type of the attribute value.

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

# shared sae configuration plug-ins name *name* flex-radius-accounting radius-packet-definition *name* vendor-specific *name* type *name* attributes

## Syntax

```
shared sae configuration plug-ins name name flex-radius-accounting radius-packet-
definition name vendor-specific name type name attributes name {
    value;
}
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-accounting radius-
packet-definition name vendor-specific name type name attributes]
```

## Options

*name* *name*— RADIUS attribute definition.

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Basic

# shared sae configuration plug-ins name *name* flex-radius-accounting radius-packet-definition *name* vendor-specific-26

## Syntax

```
shared sae configuration plug-ins name name flex-radius-accounting radius-packet-
definition name vendor-specific-26 name ...
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-accounting radius-
packet-definition name vendor-specific-26]
```

## Description

Configure Juniper Networks vendor-specific attributes (VSAs).

## Options

name *name*—

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

## shared sae configuration plug-ins name *name* flex-radius-accounting radius-packet-definition *name* vendor-specific-26 *name* attributes

### Syntax

```
shared sae configuration plug-ins name name flex-radius-accounting radius-packet-
definition name vendor-specific-26 name attributes name {
    value;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-accounting radius-
packet-definition name vendor-specific-26 name attributes]
```

### Options

*name* *name*— RADIUS attribute definition.

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

# shared sae configuration plug-ins name *name* flex-radius-accounting radius-packet-definition *name* vendor-specific-26 *name* type

## Syntax

```
shared sae configuration plug-ins name name flex-radius-accounting radius-packet-definition name vendor-specific-26 name type name ...
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-accounting radius-packet-definition name vendor-specific-26 name type]
```

## Options

name *name*—

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

**shared sae configuration plug-ins name *name* flex-radius-accounting radius-packet-definition *name* vendor-specific-26 *name* type *name* attributes**

**Syntax**

```
shared sae configuration plug-ins name name flex-radius-accounting radius-packet-  
definition name vendor-specific-26 name type name attributes name {  
    value;  
}
```

**Hierarchy Level**

```
[edit shared sae configuration plug-ins name name flex-radius-accounting radius-  
packet-definition name vendor-specific-26 name type name attributes]
```

**Options**

*name* *name*— RADIUS attribute definition.

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Basic

## shared sae configuration plug-ins name *name* flex-radius-authentication

### Syntax

```
shared sae configuration plug-ins name name flex-radius-authentication {
    load-balancing-mode (failover | roundRobin);
    failback-timer failback-timer;
    timeout timeout;
    retry-interval retry-interval;
    maximum-queue-length maximum-queue-length;
    bind-address bind-address;
    udp-port udp-port;
    error-handling (0 | 1);
    default-peer default-peer;
    template template;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-authentication]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a flexible RADIUS authentication plug-in.

`load-balancing-mode (failover | roundRobin)`— Mode for load-balancing RADIUS servers. You can set up the plug-in to switch between RADIUS servers in case of failure or to load-balance every request.

**Value**— One of the following:

- Failover—The SAE sends requests to the RADIUS server that is configured as the default peer. If the default peer fails, the SAE uses the next server configured in the peer group. The SAE cycles through the configured RADIUS servers as needed.
- Round-robin—The SAE alternates requests between all RADIUS servers configured in the peer group.

**Default**— Failover

**Editing Level**—Normal

`failback-timer` *failback-timer*— Controls if and when the SAE attempts to fail back to the default peer.

**Value**— One of the following:

- Number of seconds after a failover that the SAE attempts to fail back; range is -1–2147483647
- 0—SAE always attempts to fail back
- -1—SAE never attempts to fail back

**Default**— -1

**Editing Level**—Normal

`timeout` *timeout*— Maximum time the SAE waits for a response from a RADIUS server. If the RADIUS server does not respond to the request, the request fails and the SAE logs an error message. Note: configure this attribute to be five times (or more) greater than the `retry-interval` attribute to make sure the fail-over mechanism works without losing any packet.

**Value**— Number of milliseconds in the range -1–9223372036854775807. -1 means that there is no timeout.

**Default**— 15000

**Editing Level**—Normal

`retry-interval` *retry-interval*— Time the SAE waits for a response from a RADIUS server before it resends the RADIUS packet. The SAE keeps sending RADIUS packets until either the server acknowledges the packet or the maximum timeout is reached. Note: configure the `timeout` attribute to be five times (or more) greater than this attribute to make sure the fail-over mechanism works without losing any packet.

**Value**— Number of milliseconds in the range 0–9223372036854775807

**Default**— 3000

**Editing Level**—Normal

`maximum-queue-length` *maximum-queue-length*— Maximum number of unacknowledged RADIUS messages that the plug-in receives from the RADIUS server before it discards new messages.

**Value**— Integer in the range 0–2147483647

**Default**— 10000

**Editing Level**—Normal

`bind-address` *bind-address*—(Optional) Source IP address that the plug-in uses to communicate with the RADIUS server. If you do not specify an address, the global default address is used. You configure the global default address with the **slot number sae radius**

**local-address** command.

**Value**— IP address

**Default**— No value

**Editing Level**—Advanced

`udp-port udp-port`—(Optional) Source UDP port or a range of source UDP ports used for communication with the RADIUS server. If you do not specify a UDP port, the global UDP port is used. You configure the global UDP port with the **shared sae configuration global-radius-udp-port** command.

**Value**— One of the following:

- Port number in the range 1–65535
- A range of ports in the format `port-port`; for example, `7000-7003`
- A comma-separated list of port numbers and port ranges enclosed in double quotation marks. For example, `"7000-7003, 7006, 7007-7009"`.

**Default**— No value

**Editing Level**—Advanced

`error-handling (0 | 1)`— Configure the way the SAE handles errors.

**Value**— One of the following:

- 0—Ignores incorrect definitions and logs them for debugging purposes
- 1—Logs errors and discards the affected RADIUS packet

**Default**— 0 (Ignore)

**Editing Level**—Normal

`default-peer default-peer`— Name of the RADIUS server to which the SAE sends packets for this plug-in.

**Value**— Name of the server as defined with the **shared sae configuration plug-ins pool name flex-radius-authentication peer-group** command.

**Default**— No value

**Editing Level**—Normal

`template template`— Name of RADIUS packet template.

**Value**— Name of template

**Default**— No value  
**Editing Level**—Normal

**Required Privilege Level**

system

**Required Editing Level**

Basic

# shared sae configuration plug-ins name *name* flex-radius-authentication peer-group

## Syntax

```
shared sae configuration plug-ins name name flex-radius-authentication peer-
group name {
    server-address server-address;
    server-port server-port;
    secret secret;
}
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-authentication peer-
group]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a RADIUS peer, which is an instance of a RADIUS server. If you define multiple servers, the SAE uses them in cases of failover or as alternate servers for load-balancing purposes.

Note that if you configure more than one RADIUS peer in a plug-in instance that has the same properties, the SNMP counters for the plug-in will not update correctly. The reason is that the software does not know which RADIUS peer to send updates to.

## Options

*name name*— Name of the RADIUS peer.

**Value**—Text

*server-address server-address*— IP address of the RADIUS server to which the SAE sends accounting data or that the SAE uses for authentication and authorization.

**Value**— IP address

**Default**— No value

**Editing Level**—Normal

`server-port` *server-port*— Port used for RADIUS packets.

**Value**— Port number in the range 0–65535.

- RADIUS accounting servers typically use ports 1813 or 1646.
- RADIUS authentication servers typically use ports 1812 or 1645.

**Default**—1812

**Editing Level**—Normal

`secret` *secret*— Password that is shared with the RADIUS server. You must configure the same secret on the RADIUS server.

**Value**— Shared secret; the software encodes the secret using BASE-64.

**Default**— No value

**Editing Level**—Normal

#### Required Privilege Level

system

#### Required Editing Level

Basic

# shared sae configuration plug-ins name *name* flex-radius-authentication radius-packet-definition

## Syntax

```
shared sae configuration plug-ins name name flex-radius-authentication radius-
packet-definition name ...
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-
authentication radius-packet-definition]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a RADIUS packet definition for the plug-in.

## Options

*name name*— Name of the RADIUS attribute instance.

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

## shared sae configuration plug-ins name *name* flex-radius-authentication radius-packet-definition *name* attributes

### Syntax

```
shared sae configuration plug-ins name name flex-radius-authentication radius-
packet-definition name attributes name {
    value;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-
authentication radius-packet-definition name attributes]
```

### Description

Configure RADIUS attributes within a plug-in.

### Options

*name* *name*— Name of the RADIUS attribute.

**Value**—Text

*value*— Value of the RADIUS attribute.

**Value**— Value can be a standard value or an expression. For a list of standard values, see *Configuring Accounting and Authentication Plug-Ins (SRC CLI)* in the *SRC-PE Subscribers and Subscriptions Guide*.

**Default**— No value

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

## shared sae configuration plug-ins name *name* flex-radius-authentication radius-packet-definition *name* vendor-specific

### Syntax

```
shared sae configuration plug-ins name name flex-radius-authentication radius-
packet-definition name vendor-specific name ...
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-
authentication radius-packet-definition name vendor-specific]
```

### Description

Configure Juniper Networks vendor-specific attributes (VSAs).

### Options

name *name*—

**Value**—Text

### Required Privilege Level

system

### Required Editing Level

Basic

## shared sae configuration plug-ins name *name* flex-radius-authentication radius-packet-definition *name* vendor-specific *name* attributes

### Syntax

```
shared sae configuration plug-ins name name flex-radius-authentication radius-
packet-definition name vendor-specific name attributes name {
    value;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-
authentication radius-packet-definition name vendor-specific name attributes]
```

### Options

*name* *name*— RADIUS attribute definition.

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

# shared sae configuration plug-ins name *name* flex-radius-authentication radius-packet-definition *name* vendor-specific *name* type

## Syntax

```
shared sae configuration plug-ins name name flex-radius-authentication radius-  
packet-definition name vendor-specific name type name ...
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-  
authentication radius-packet-definition name vendor-specific name type]
```

## Options

name *name*— Data type of the attribute value.

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

## shared sae configuration plug-ins name *name* flex-radius-authentication radius-packet-definition *name* vendor-specific *name* type *name* attributes

### Syntax

```
shared sae configuration plug-ins name name flex-radius-authentication radius-
packet-definition name vendor-specific name type name attributes name {
    value;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-
authentication radius-packet-definition name vendor-
specific name type name attributes]
```

### Options

name *name*— RADIUS attribute definition.

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

# shared sae configuration plug-ins name *name* flex-radius-authentication radius-packet-definition *name* vendor-specific-26

## Syntax

```
shared sae configuration plug-ins name name flex-radius-authentication radius-
packet-definition name vendor-specific-26 name ...
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-
authentication radius-packet-definition name vendor-specific-26]
```

## Description

Configure Juniper Networks vendor-specific attributes (VSAs).

## Options

name *name*—

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

## shared sae configuration plug-ins name *name* flex-radius-authentication radius-packet-definition *name* vendor-specific-26 *name* attributes

### Syntax

```
shared sae configuration plug-ins name name flex-radius-authentication radius-
packet-definition name vendor-specific-26 name attributes name {
    value;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-
authentication radius-packet-definition name vendor-specific-26 name attributes]
```

### Options

*name* *name*— RADIUS attribute definition.

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

# shared sae configuration plug-ins name *name* flex-radius-authentication radius-packet-definition *name* vendor-specific-26 *name* type

## Syntax

```
shared sae configuration plug-ins name name flex-radius-authentication radius-
packet-definition name vendor-specific-26 name type name ...
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-
authentication radius-packet-definition name vendor-specific-26 name type]
```

## Options

name *name*—

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

## shared sae configuration plug-ins name *name* flex-radius-authentication radius-packet-definition *name* vendor-specific-26 *name* type *name* attributes

### Syntax

```
shared sae configuration plug-ins name name flex-radius-authentication radius-
packet-definition name vendor-specific-26 name type name attributes name {
    value;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name flex-radius-
authentication radius-packet-definition name vendor-specific-
26 name type name attributes]
```

### Options

*name* *name*— RADIUS attribute definition.

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

## shared sae configuration plug-ins name *name* interface-subscriber-limit

### Syntax

```
shared sae configuration plug-ins name name interface-subscriber-limit {
    concurrent-subscribers concurrent-subscribers;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name interface-subscriber-limit]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a plug-in that limits the number of authenticated subscribers who connect to an IP interface on the router.

*concurrent-subscribers* *concurrent-subscribers*— Number of authenticated subscribers who can connect to an IP interface on the router simultaneously.

**Value**— Integer in the range 0–2147483647

**Default**— 1

**Editing Level**—Normal

### Required Privilege Level

system

### Required Editing Level

Basic

## shared sae configuration plug-ins name *name* internal

### Syntax

```
shared sae configuration plug-ins name name internal {
    plug-in-class plug-in-class;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name internal]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure an internal plug-in.

*plug-in-class plug-in-class*— Class name of the plug-in.

**Value**— Fully qualified name of the Java class

**Default**— No value

**Editing Level**—Normal

### Required Privilege Level

system

### Required Editing Level

Basic

# shared sae configuration plug-ins name *name* internal properties

## Syntax

```
shared sae configuration plug-ins name name internal properties name {
    value;
}
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name name internal properties]
```

## Description

Configure the property name and value pairs that make up the plug-in.

## Options

*name* *name*— Name of the property for which you want to define a value.

**Value**—Text

*value*— Value for the property.

**Value**— Value for the property.

**Default**— No value

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Normal

## shared sae configuration plug-ins name *name* ldap-authentication

### Syntax

```
shared sae configuration plug-ins name name ldap-authentication {
    method (search | bind);
    server server;
    bind-dn bind-dn;
    bind-password bind-password;
    search-filter search-filter;
    (ldaps);
    search-base-dn search-base-dn;
    name-attribute name-attribute;
    password-attribute password-attribute;
    service-bundle-attribute service-bundle-attribute;
    session-volume-quota session-volume-quota;
    timeout timeout;
    signature-dn signature-dn;
    blacklist;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name ldap-authentication]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure an LDAP authentication plug-in. This plug-in performs authentication against different directories using different authentication methods.

`method (search | bind)`—LDAP authentication method that the SAE uses. Both search and bind have different implications for system security and performance. When you design the system, consider:

- Search—Because the SAE retrieves passwords from the directory, the directory must allow read access to the password. Allowing read access can be a security risk because an attacker may be able to read passwords in subscriber profiles. However, to lower the risk of password exposure, you can store passwords in encrypted (hashed) form.
- Bind—The SAE sends the password to the directory for authentication. The advantage is that passwords never need to be read from the directory. However, passwords are sent in clear text, and an attacker could intercept them. Bind is a relatively expensive operation that can affect system performance.

**Value**— One of the following:

- **Search**—The SAE searches the directory for the username that the subscriber enters, retrieves the found object, and compares the password stored in the object with the provided password. You can store passwords in clear text or encrypted (hashed) format by using the crypt (UNIX `/etc/passwd`), SHA, or MD5 algorithms. The format for a hashed password is: `{crypt}hashed password`, `{sha}base64 SHA password`, or `{md5}base64 MD5 password`.
- **Bind**—The SAE performs a directory search, retrieves the DN of the found object, and tries to bind this DN and the password that the subscriber provides. If you specify the bind method, the plug-in uses the provided username and password to authenticate the directory (bind). You can store passwords in clear text or encrypted (hashed) format by using the crypt (UNIX `/etc/passwd`), SHA, or MD5 algorithms. You must use an encryption method that the directory supports.

**Default**— Search

**Editing Level**—Normal

`server server`—(Optional) List of IP addresses of the LDAP authentication server(s).

**Value**— Comma-separated list of IP addresses

**Default**— 127.0.0.1

**Editing Level**—Normal

`bind-dn bind-dn`—(Optional) DN used to authenticate access to the directory.

**Value**— DN

**Default**— `cn = ssp, ou = Components, o = Operators, < base >`

**Editing Level**—Normal

`bind-password bind-password`—(Optional) Password that the SAE uses to authenticate its access to the directory to search for the subscriber profile. If you do not specify a bind DN or bind password, the SAE uses anonymous access.

**Value**— Characters that make up the password. The SRC software encodes the secret using base64.

**Default**— ssp

**Editing Level**—Normal

`search-filter search-filter`—(Optional) Additional LDAP search filter that the SAE uses to search the directory for the subscriber profile. The initial search uses a search filter in the form `(&(nameAttribute = userName) filter)`. The search is successful when the username and the filter match.

**Value**— Search filter syntax defined in RFC 2254—The String

Representation of LDAP Search Filters (December 1997)

**Default**— (objectClass = umcSubscriber)

**Editing Level**—Normal

`ldaps`—Enables LDAPS as the secure protocol used for LDAP connections with the directory. Enabling LDAPS causes communication with the directory to be encrypted with Secure Sockets Layer (SSL).

**Value**— `ldaps`—Enable LDAPS

**Default**— Disabled

**Editing Level**—Advanced

`search-base-dn` *search-base-dn*—(Optional) Base DN for searching entries in the directory. If you do not specify a base DN, the SAE uses the DN of the associated retailer object.

Also, if you do not specify the base DN, the SAE takes a username in the form `subscriber@domain` and maps domain to a retailer object by comparing domain with the domain names stored in the retailer object. There are two special cases:

- If domain is empty, first the virtual router name and then the name default are tried.
- If a retailer defines \* (asterisk) as a domain name, it is used to map all domains that cannot be mapped directly.

**Value**— DN

**Default**— No value

**Editing Level**—Normal

`name-attribute` *name-attribute*—(Optional) Name of the directory attribute that holds the username.

**Value**— Attribute name

**Default**— `uniqueID`

**Editing Level**—Normal

`password-attribute` *password-attribute*—(Optional) Name of the directory attribute that stores the password.

**Value**— Directory attribute name

**Default**— `userPassword`

**Editing Level**—Normal

`service-bundle-attribute` *service-bundle-attribute*—(Optional) Name of the directory attribute that contains the name of the service bundle that is used for subscriber authentication. This value is made available to the subscriber classification process and can be used to select the subscriber profile to load.

**Value**— Directory attribute name

**Default**— No value

**Editing Level**—Normal

`session-volume-quota` *session-volume-quota*—(Optional) Name of the LDAP attribute that contains the value of the session volume quota. The LDAP plug-in sets the session volume quota to this value.

**Value**— Name of LDAP attribute

**Default**— No value

**Editing Level**—Normal

`timeout` *timeout*—(Optional) Maximum time the SAE waits for a response from a directory server. If the directory server does not respond to the request, the request fails and the SAE logs an error message.

**Value**— Number of milliseconds in the range 0–2147483647

**Default**— 5000

**Editing Level**—Advanced

`signature-dn` *signature-dn*—DES Signature DN

**Value**—Text

**Default**— < base >

**Editing Level**—Expert

`blacklist`—(Optional) Directory blacklisting

**Default**—true

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

## shared sae configuration plug-ins name *name* pcmm-rks

### Syntax

```
shared sae configuration plug-ins name name pcmm-rks {
    load-balancing-mode (failover | roundRobin);
    failback-timer failback-timer;
    timeout timeout;
    retry-interval retry-interval;
    maximum-queue-length maximum-queue-length;
    bind-address bind-address;
    udp-port udp-port;
    feid-mso-data feid-mso-data;
    feid-mso-domain-name feid-mso-domain-name;
    trusted-element;
    default-peer default-peer;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name pcmm-rks]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a PCMM record-keeping server plug-in.

`load-balancing-mode (failover | roundRobin)`— Mode for load-balancing RADIUS servers. You can set up the plug-in to switch between RADIUS servers in case of failure or to load-balance every request.

**Value**— One of the following:

- Failover—The SAE sends requests to the RADIUS server that is configured as the default peer. If the default peer fails, the SAE uses the next server configured in the peer group. The SAE cycles through the configured RADIUS servers as needed.
- Round-robin—The SAE alternates requests between all RADIUS servers configured in the peer group.

**Default**— Failover

**Editing Level**—Normal

`failback-timer` *failback-timer*— Controls if and when the SAE attempts to fail back to the default peer.

**Value**— One of the following:

- Number of seconds after a failover that the SAE attempts to fail back; range is -1–2147483647
- 0—SAE always attempts to fail back
- -1—SAE never attempts to fail back

**Default**— -1

**Editing Level**—Normal

`timeout` *timeout*— Maximum time the SAE waits for a response from a RADIUS server. If the RADIUS server does not respond to the request, the request fails and the SAE logs an error message. Note: configure this attribute to be five times (or more) greater than the `retry-interval` attribute to make sure the fail-over mechanism works without losing any packet.

**Value**— Number of milliseconds in the range -1–9223372036854775807. -1 means that there is no timeout.

**Default**— 15000

**Editing Level**—Normal

`retry-interval` *retry-interval*— Time the SAE waits for a response from a RADIUS server before it resends the RADIUS packet. The SAE keeps sending RADIUS packets until either the server acknowledges the packet or the maximum timeout is reached. Note: configure the `timeout` attribute to be five times (or more) greater than this attribute to make sure the fail-over mechanism works without losing any packet.

**Value**— Number of milliseconds in the range 0–9223372036854775807

**Default**— 3000

**Editing Level**—Normal

`maximum-queue-length` *maximum-queue-length*— Maximum number of unacknowledged RADIUS messages that the plug-in receives from the RADIUS server before it discards new messages.

**Value**— Integer in the range 0–2147483647

**Default**— 10000

**Editing Level**—Normal

`bind-address` *bind-address*—(Optional) Source IP address that the plug-in uses to communicate with the RADIUS server. If you do not specify an address, the global default address is used. You configure the global default address with the **slot number sae radius local-address** command.

**Value**— IP address  
**Default**— No value  
**Editing Level**—Advanced

`udp-port` *udp-port*—(Optional) Source UDP port or a range of source UDP ports used for communication with the RADIUS server. If you do not specify a UDP port, the global UDP port is used. You configure the global UDP port with the **shared sae configuration global-radius-udp-port** command.

**Value**— One of the following:

- Port number in the range 1–65535
- A range of ports in the format port-port; for example, 7000-7003
- A comma-separated list of port numbers and port ranges enclosed in double quotation marks. For example, "7000-7003, 7006, 7007-7009".

**Default**— No value  
**Editing Level**—Advanced

`feid-mso-data` *feid-mso-data*—(Optional) MSO-defined data in the financial entity ID (FEID) attribute, which is included in event messages.

**Value**— First eight bytes of the FEID attribute  
**Default**— The first eight bytes are filled with zeros.  
**Editing Level**—Normal

`feid-mso-domain-name` *feid-mso-domain-name*— The MSO domain name that uniquely identifies the MSO for billing and settlement purposes.

**Value**— Domain name up to 239 bytes; begins at the ninth byte of the FEID attribute  
**Default**— No value  
**Editing Level**—Normal

`trusted-element`—(Optional) When the SAE is running as a policy server—which means that the SAE sends event messages directly to the RKS—enables the SAE as a trusted network element.

**Default**— Enabled  
**Editing Level**—Normal

`default-peer` *default-peer*— Configure an RKS peer, which is an instance of an RKS. You must configure at least one RKS peer.

**Value**— Name of the server as defined with the **shared sae configuration plug-ins pool PccmRKSPugin peer-group** command.

**Default**— No value

**Editing Level**—Normal

#### **Required Privilege Level**

system

#### **Required Editing Level**

Basic

## shared sae configuration plug-ins name *name* pcmm-rks peer-group

### Syntax

```
shared sae configuration plug-ins name name pcmm-rks peer-group name {
    server-address server-address;
    server-port server-port;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name pcmm-rks peer-group]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a RADIUS peer, which is an instance of a RADIUS server. If you define multiple servers, the SAE uses them in cases of failover or as alternate servers for load-balancing purposes.

Note that if you configure more than one RADIUS peer in a plug-in instance that has the same properties, the SNMP counters for the plug-in will not update correctly. The reason is that the software does not know which RADIUS peer to send updates to.

### Options

*name name*— Name of the RADIUS peer.

**Value**—Text

*server-address server-address*— IP address of the RKS server to which the SAE sends accounting data

**Value**— IP address

**Default**— No value

**Editing Level**—Normal

*server-port server-port*— Port used for sending accounting packets.

**Value**— Port number in the range 0–65535

**Default**— 1813  
**Editing Level**—Normal

**Required Privilege Level**

system

**Required Editing Level**

Basic

## shared sae configuration plug-ins name *name* qos-profile-tracking

### Syntax

```
shared sae configuration plug-ins name name qos-profile-tracking {
    threads threads;
    default-qos-profile default-qos-profile;
    separator separator;
    qos-profile-prefix qos-profile-prefix;
    service-selection-attribute service-selection-attribute;
    search-filter search-filter;
    invisible-qos-service invisible-qos-service;
    qos-profile-parameter-name qos-profile-parameter-name;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name qos-profile-tracking]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a QoS-tracking plug-in that you can use to ensure that, as a subscriber activates and deactivates services, the required QoS profile is attached to the subscriber interface.

*threads threads*— Number of working threads that all QTP instances share when they process QTP events.

**Value**— Integer in the range 1–100.

**Default**— 1

**Editing Level**—Advanced

*default-qos-profile default-qos-profile*—(Optional) Name of the QoS profile that is attached to the interface when QoS services have been deactivated.

**Value**— Name of QoS profile

**Default**— No value

**Editing Level**—Normal

`separator separator`— Character that is placed between QoS profile input values when the system concatenates the values during the process of creating QoS profile names.

**Value**— Any character that is valid in QoS profile names on the router.

**Default**— A single hyphen (-)

**Editing Level**—Advanced

`qos-profile-prefix qos-profile-prefix`— Prefix added to the QoS service name as part of the process to determine the name of the QoS profile that needs to be attached to an interface for a particular service.

**Value**— Prefix that, when combined with QoS profile input values, matches a QoS profile on the router.

**Default**— qos-profile

**Editing Level**—Normal

`service-selection-attribute service-selection-attribute`— Name of the attribute in the service definition that you want the QTP to use as QoS profile input values. The QTP uses these values to determine the name of the QoS profile that needs to be attached to an interface for a group of QoS services.

**Value**— Name of any attribute in the service object; for example, `serviceCategory`, `sspDesignAndGraphics`. For a list of attribute names for the `sspService` object class, see the documentation for the LDAP schema in the SRC software distribution in the folder *SDK/doc/ldap* or on the Juniper Networks Web site at

<http://www.juniper.net/techpubs/software/management/sdx>

**Default**— `serviceName`

**Editing Level**—Normal

`search-filter search-filter`— Search filter that the SAE uses to search service objects in the directory to find QoS services. You can set up the filter to search the values of any attribute in the service object, such as service name, category, or tracking plug-in. The search is successful when a value matches the filter.

**Value**— Search filter in a format similar to the LDAP search filter. See *Managing Tiered and Premium Services with QoS on JUNOS Routers* in the *SRC Solutions Guide* for a list of the values that you can use for filters.

**Default**— `(attribute.trackPlugin = )` Note that you must add a search value after the equal sign.

**Editing Level**—Normal

`invisible-qos-service invisible-qos-service`— Name of the hidden QoS profile attachment service that the QTP uses to attach QoS profiles to and remove QoS profiles from a

router interface.

**Value**— Name of the configured service  
**Default**— svc-qos-attach  
**Editing Level**—Normal

`qos-profile-parameter-name` *qos-profile-parameter-name*— Name of the variable parameter used in the QoS profile name field in the QoS profile attachment action of the policy group that is assigned to the hidden QoS service. When the QTP obtains the name of the required QoS profile, it substitutes that value for the variable parameter.

**Value**— Valid parameter name  
**Default**— qpName  
**Editing Level**—Advanced

**Required Privilege Level**

system

**Required Editing Level**

Basic

## shared sae configuration plug-ins name *name* radius-accounting

### Syntax

```
shared sae configuration plug-ins name name radius-accounting {
    load-balancing-mode (failover | roundRobin);
    failback-timer failback-timer;
    nas-ip (SspIp | ErxIp);
    timeout timeout;
    retry-interval retry-interval;
    maximum-queue-length maximum-queue-length;
    bind-address bind-address;
    udp-port udp-port;
    username (login-name | accounting-id | auth-user-name | manager-id);
    calling-station-id (mac | no);
    default-peer default-peer;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name radius-accounting]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a basic RADIUS accounting plug-in. This plug-in sends accounting information to an external RADIUS accounting server or a group of accounting servers.

`load-balancing-mode (failover | roundRobin)`— Mode for load-balancing RADIUS servers. You can set up the plug-in to switch between RADIUS servers in case of failure or to load-balance every request.

**Value**— One of the following:

- Failover—The SAE sends requests to the RADIUS server that is configured as the default peer. If the default peer fails, the SAE uses the next server configured in the peer group. The SAE cycles through the configured RADIUS servers as needed.
- Round-robin—The SAE alternates requests between all RADIUS servers configured in the peer group.

**Default**— Failover

**Editing Level**—Normal

`failback-timer` *failback-timer*— Controls if and when the SAE attempts to fail back to the default peer.

**Value**— One of the following:

- Number of seconds after a failover that the SAE attempts to fail back; range is -1–2147483647
- 0—SAE always attempts to fail back
- -1—SAE never attempts to fail back

**Default**— -1

**Editing Level**—Normal

`nas-ip` (`SspIp` | `ErxIp`)—(Optional) Value of the NAS-Ip attribute.

**Value**— One of the following:

- SSP local IP—IP address of the SAE
- RADIUS client IP—IP address of the virtual router

**Default**— No value

**Editing Level**—Normal

`timeout` *timeout*— Maximum time the SAE waits for a response from a RADIUS server. If the RADIUS server does not respond to the request, the request fails and the SAE logs an error message. Note: configure this attribute to be five times (or more) greater than the `retry-interval` attribute to make sure the fail-over mechanism works without losing any packet.

**Value**— Number of milliseconds in the range -1–9223372036854775807. -1 means that there is no timeout.

**Default**— 15000

**Editing Level**—Normal

`retry-interval` *retry-interval*— Time the SAE waits for a response from a RADIUS server before it resends the RADIUS packet. The SAE keeps sending RADIUS packets until either the server acknowledges the packet or the maximum timeout is reached. Note: configure the `timeout` attribute to be five times (or more) greater than this attribute to make sure the fail-over mechanism works without losing any packet.

**Value**— Number of milliseconds in the range 0–9223372036854775807

**Default**— 3000

**Editing Level**—Normal

`maximum-queue-length` *maximum-queue-length*—Maximum number of unacknowledged RADIUS messages that the plug-in receives from the RADIUS server before it discards new messages.

**Value**— Integer in the range 0–2147483647

**Default**— 10000

**Editing Level**—Normal

`bind-address` *bind-address*—(Optional) Source IP address that the plug-in uses to communicate with the RADIUS server. If you do not specify an address, the global default address is used. You configure the global default address with the **slot number sae radius local-address** command.

**Value**— IP address

**Default**— No value

**Editing Level**—Advanced

`udp-port` *udp-port*—(Optional) Source UDP port or a range of source UDP ports used for communication with the RADIUS server. If you do not specify a UDP port, the global UDP port is used. You configure the global UDP port with the **shared sae configuration global-radius-udp-port** command.

**Value**— One of the following:

- Port number in the range 1–65535
- A range of ports in the format `port-port`; for example, `7000-7003`
- A comma-separated list of port numbers and port ranges enclosed in quotation marks. For example, `"7000-7003, 7006, 7007-7009"`.

**Default**— No value

**Editing Level**—Advanced

`username` (`login-name` | `accounting-id` | `auth-user-name` | `manager-id`)—Value of the User-Name attribute (RADIUS attribute [1]).

**Value**— One of the following:

- `login-name`—Name used for login
- `accounting-id`—Value stored in the subscriber profile
- `auth-user-name`—Name used to authenticate a service
- `manager-id`—Value of the manager ID in the service subscription; use this setting to identify subscribers to enterprise services. Manager ID is the value of `modifiersName` (DN of the administrator who last modified the entry in the directory) in the subscription. If `modifiersName` does not exist, manager ID is the value of `creatorsName` (DN of the administrator who created the entry in the

directory).

**Default**— login-name

**Editing Level**—Normal

`calling-station-id (mac | no)`— Specifies whether the SAE sends the MAC address of the subscriber in the Calling-Station-Id attribute.

**Value**— One of the following:

- `mac`—Sends the MAC address in the Calling-Station-Id attribute
- `no`—Does not send the MAC address in the Calling-Station-Id attribute

**Default**— no

**Editing Level**—Normal

`default-peer default-peer`— Name of the RADIUS server to which the SAE sends packets for this plug-in.

**Value**— Name of the server as defined with the **shared sae configuration plug-ins pool RadiusAcctPlugin peer-group** command.

**Default**— No value

**Editing Level**—Normal

#### Required Privilege Level

system

#### Required Editing Level

Basic

## shared sae configuration plug-ins name *name* radius-accounting peer-group

### Syntax

```
shared sae configuration plug-ins name name radius-accounting peer-group name {
    server-address server-address;
    server-port server-port;
    secret secret;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name radius-accounting peer-group]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a RADIUS peer, which is an instance of a RADIUS server. If you define multiple servers, the SAE uses them in cases of failover or as alternate servers for load-balancing purposes.

Note that if you configure more than one RADIUS peer in a plug-in instance that has the same properties, the SNMP counters for the plug-in will not update correctly. The reason is that the software does not know which RADIUS peer to send updates to.

### Options

*name name*— Name of the RADIUS peer.

**Value**—Text

*server-address server-address*— IP address of the RADIUS server to which the SAE sends accounting data or that the SAE uses for authentication and authorization.

**Value**— IP address

**Default**— No value

**Editing Level**—Normal

*server-port server-port*— Port used for RADIUS packets.

**Value**— Port number in the range 0–65535.

- RADIUS accounting servers typically use ports 1813 or 1646.
- RADIUS authentication servers typically use ports 1812 or 1645.

**Default**—1812

**Editing Level**—Normal

`secret` *secret*— Password that is shared with the RADIUS server. You must configure the same secret on the RADIUS server.

**Value**— Shared secret; the software encodes the secret using BASE-64.

**Default**— No value

**Editing Level**—Normal

**Required Privilege Level**

system

**Required Editing Level**

Basic

## shared sae configuration plug-ins name *name* radius-authentication

### Syntax

```
shared sae configuration plug-ins name name radius-authentication {
    load-balancing-mode (failover | roundRobin);
    failback-timer failback-timer;
    nas-ip (SspIp | ErxIp);
    timeout timeout;
    retry-interval retry-interval;
    maximum-queue-length maximum-queue-length;
    bind-address bind-address;
    udp-port udp-port;
    default-peer default-peer;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins name name radius-authentication]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a basic RADIUS accounting plug-in. This plug-in sends authentication information to an external RADIUS authentication server or a group of redundant servers.

`load-balancing-mode (failover | roundRobin)`— Mode for load-balancing RADIUS servers. You can set up the plug-in to switch between RADIUS servers in case of failure or to load-balance every request.

**Value**— One of the following:

- Failover—The SAE sends requests to the RADIUS server that is configured as the default peer. If the default peer fails, the SAE uses the next server configured in the peer group. The SAE cycles through the configured RADIUS servers as needed.
- Round-robin—The SAE alternates requests between all RADIUS servers configured in the peer group.

**Default**— Failover

**Editing Level**—Normal

`failback-timer` *failback-timer*— Controls if and when the SAE attempts to fail back to the default peer.

**Value**— One of the following:

- Number of seconds after a failover that the SAE attempts to fail back; range is -1–2147483647
- 0—SAE always attempts to fail back
- -1—SAE never attempts to fail back

**Default**— -1

**Editing Level**—Normal

`nas-ip` (`SspIp` | `ErxIp`)—(Optional) Value of the NAS-Ip attribute.

**Value**— One of the following:

- SSP local IP—IP address of the SAE
- RADIUS client IP—IP address of the virtual router

**Default**— No value

**Editing Level**—Normal

`timeout` *timeout*— Maximum time the SAE waits for a response from a RADIUS server. If the RADIUS server does not respond to the request, the request fails and the SAE logs an error message. Note: configure this attribute to be five times (or more) greater than the `retry-interval` attribute to make sure the fail-over mechanism works without losing any packet.

**Value**— Number of milliseconds in the range -1–9223372036854775807. -1 means that there is no timeout.

**Default**— 15000

**Editing Level**—Normal

`retry-interval` *retry-interval*— Time the SAE waits for a response from a RADIUS server before it resends the RADIUS packet. The SAE keeps sending RADIUS packets until either the server acknowledges the packet or the maximum timeout is reached. Note: configure the `timeout` attribute to be five times (or more) greater than this attribute to make sure the fail-over mechanism works without losing any packet.

**Value**— Number of milliseconds in the range 0–9223372036854775807

**Default**— 3000

**Editing Level**—Normal

`maximum-queue-length` *maximum-queue-length*—Maximum number of unacknowledged RADIUS messages that the plug-in receives from the RADIUS server before it discards new messages.

**Value**— Integer in the range 0–2147483647

**Default**— 10000

**Editing Level**—Normal

`bind-address` *bind-address*—(Optional) Source IP address that the plug-in uses to communicate with the RADIUS server. If you do not specify an address, the global default address is used. You configure the global default address with the **slot number sae radius local-address** command.

**Value**— IP address

**Default**— No value

**Editing Level**—Advanced

`udp-port` *udp-port*—(Optional) Source UDP port or a range of source UDP ports used for communication with the RADIUS server. If you do not specify a UDP port, the global UDP port is used. You configure the global UDP port with the **shared sae configuration global-radius-udp-port** command.

**Value**— One of the following:

- Port number in the range 1–65535
- A range of ports in the format port-port; for example, 7000-7003
- A comma-separated list of port numbers and port ranges enclosed in double quotation marks. For example, "7000-7003, 7006, 7007-7009".

**Default**— No value

**Editing Level**—Advanced

`default-peer` *default-peer*— Name of the RADIUS server to which the SAE sends packets for this plug-in.

**Value**— Name of the server as defined with the **shared sae configuration plug-ins pool RadiusAuthPlugin peer-group** command.

**Default**— No value

**Editing Level**—Normal

## Required Privilege Level

system

## **Required Editing Level**

Basic

# shared sae configuration plug-ins name *name* radius-authentication peer-group

## Syntax

```
shared sae configuration plug-ins name name radius-authentication peer-group name
{
    server-address server-address;
    server-port server-port;
    secret secret;
}
```

## Hierarchy Level

```
[edit shared sae configuration plug-ins name name radius-authentication peer-group]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a RADIUS peer, which is an instance of a RADIUS server. If you define multiple servers, the SAE uses them in cases of failover or as alternate servers for load-balancing purposes.

Note that if you configure more than one RADIUS peer in a plug-in instance that has the same properties, the SNMP counters for the plug-in will not update correctly. The reason is that the software does not know which RADIUS peer to send updates to.

## Options

*name name*— Name of the RADIUS peer.

**Value**—Text

*server-address server-address*— IP address of the RADIUS server to which the SAE sends accounting data or that the SAE uses for authentication and authorization.

**Value**— IP address

**Default**— No value

**Editing Level**—Normal

`server-port` *server-port*— Port used for RADIUS packets.

**Value**— Port number in the range 0–65535.

- RADIUS accounting servers typically use ports 1813 or 1646.
- RADIUS authentication servers typically use ports 1812 or 1645.

**Default**—1812

**Editing Level**—Normal

`secret` *secret*— Password that is shared with the RADIUS server. You must configure the same secret on the RADIUS server.

**Value**— Shared secret; the software encodes the secret using BASE-64.

**Default**— No value

**Editing Level**—Normal

#### Required Privilege Level

system

#### Required Editing Level

Basic

## **shared sae configuration plug-ins name *name* schedule-authorization**

### **Syntax**

```
shared sae configuration plug-ins name name schedule-authorization {  
}
```

### **Hierarchy Level**

```
[edit shared sae configuration plug-ins name name schedule-authorization]
```

### **Release Information**

Statement introduced in SRC Release 1.0.0

### **Description**

Create an authorization plug-in that authorizes a scheduled service.

### **Required Privilege Level**

system

### **Required Editing Level**

Basic

## shared sae configuration plug-ins state-synchronization

### Syntax

```
shared sae configuration plug-ins state-synchronization {
    fail-queue-size fail-queue-size;
    fail-queue-age fail-queue-age;
    batch-time batch-time;
    keepalive-time keepalive-time;
}
```

### Hierarchy Level

```
[edit shared sae configuration plug-ins state-synchronization]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a state synchronization plug-in. Some plug-ins, such as the ACP plug-in and the SAE plug-in agent for the NIC, support state synchronization with the SAE. The state synchronization plug-in allows external plug-ins to maintain the state of active subscriber, service, and interface sessions without having to store intermediate versions of the state locally.

### Options

*fail-queue-size fail-queue-size*— Maximum number of plug-in events that are stored while the communication with a state synchronization plug-in is interrupted.

**Value**— Integer in the range -1–2147483647. -1 means unlimited.

**Default**— 5000

**Editing Level**—Basic

*fail-queue-age fail-queue-age*— Mximum time for which plug-in events are stored while the communication with a state synchronization plug-in is interrupted.

**Value**— Integer in the range -1–2147483647. -1 means unlimited.

**Default**— -1

**Editing Level**—Basic

*batch-time batch-time*— Time the SAE waits for other plug-ins to become ready before starting a synchronization sequence.

**Value**— Number of seconds in the range 0–2147483647

**Default**— 60

**Editing Level**—Basic

`keepalive-time` *keepalive-time*— Time the SAE waits after an event before sending a ping to the remote plug-in.

**Value**— Number of seconds in the range 0–2147483647

**Default**— 60

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Normal

# shared sae configuration policy-management-configuration

## Syntax

```
shared sae configuration policy-management-configuration {  
    enable-junose-classifier-expansion;  
}
```

## Hierarchy Level

```
[edit shared sae configuration policy-management-configuration]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Specify whether or not the SAE expands the JUNOSE classify-traffic conditions into multiple classifiers before it installs the policy on the router.

## Options

`enable-junose-classifier-expansion`—(Optional) Enables or disables the expansion of JUNOSE classify-traffic conditions into multiple classifiers before it installs the policy on the router.

You would use this feature in policies that are used in IP multimedia subsystem (IMS) environments. You can also use it to simplify the configuration of JUNOSE policies.

Because classifier expansion uses processing resources when the policy is created, you should set this property to true only if you are going to use the feature.

**Default**— Disabled

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Normal

# shared sae configuration radius-packet-template

## Syntax

```
shared sae configuration radius-packet-template name ...
```

## Hierarchy Level

```
[edit shared sae configuration radius-packet-template]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a RADIUS packet template that contains the definition of RADIUS packets. You can use the template to define the content of RADIUS packets that the SAE sends to RADIUS servers. You can then apply the template to flexible RADIUS plug-ins.

## Options

`name name`— Name of the RADIUS packet template.

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

## shared sae configuration radius-packet-template *name* radius-attributes

### Syntax

```
shared sae configuration radius-packet-template name radius-attributes name ...
```

### Hierarchy Level

```
[edit shared sae configuration radius-packet-template name radius-attributes]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Create a RADIUS attribute instance.

### Options

*name* *name*— Name of the file-accounting template. RADIUS attribute instance. The name you assign to the RADIUS attribute instance must match a RADIUS attribute instance name listed in *Configuring Accounting and Authentication Plug-Ins (SRC CLI)* in the *SRC-PE Subscribers and Subscriptions Guide*.

**Value**—Text

### Required Privilege Level

system

### Required Editing Level

Basic

## shared sae configuration radius-packet-template *name* radius-attributes *name* attributes

### Syntax

```
shared sae configuration radius-packet-template name radius-
attributes name attributes name {
    value;
}
```

### Hierarchy Level

```
[edit shared sae configuration radius-packet-template name radius-
attributes name attributes]
```

### Description

Configure RADIUS attributes within a plug-in.

### Options

*name* *name*— Name of the RADIUS attribute.

**Value**—Text

*value*— Value of the RADIUS attribute.

**Value**— Value can be a standard value or an expression. For a list of standard values, see *Configuring Accounting and Authentication Plug-Ins (SRC CLI)* in the *SRC-PE Subscribers and Subscriptions Guide*.

**Default**— No value

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

## shared sae configuration radius-packet-template *name* radius-attributes *name* vendor-specific

### Syntax

```
shared sae configuration radius-packet-template name radius-attributes name vendor-specific name ...
```

### Hierarchy Level

```
[edit shared sae configuration radius-packet-template name radius-attributes name vendor-specific]
```

### Description

Configure Juniper Networks vendor-specific attributes (VSAs).

### Options

*name name*—

**Value**—Text

### Required Privilege Level

system

### Required Editing Level

Basic

## shared sae configuration radius-packet-template *name* radius-attributes *name* vendor-specific *name* attributes

### Syntax

```
shared sae configuration radius-packet-template name radius-
attributes name vendor-specific name attributes name {
    value;
}
```

### Hierarchy Level

```
[edit shared sae configuration radius-packet-template name radius-
attributes name vendor-specific name attributes]
```

### Options

*name* *name*— RADIUS attribute definition.

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

## **shared sae configuration radius-packet-template *name* radius-attributes *name* vendor-specific *name* type**

### **Syntax**

```
shared sae configuration radius-packet-template name radius-attributes name vendor-specific name type name ...
```

### **Hierarchy Level**

```
[edit shared sae configuration radius-packet-template name radius-attributes name vendor-specific name type]
```

### **Options**

*name* *name*—Data type of the attribute value.

**Value**—Text

### **Required Privilege Level**

system

### **Required Editing Level**

Basic

# shared sae configuration radius-packet-template *name* radius-attributes *name* vendor-specific *name* type *name* attributes

## Syntax

```
shared sae configuration radius-packet-template name radius-
attributes name vendor-specific name type name attributes name {
    value;
}
```

## Hierarchy Level

```
[edit shared sae configuration radius-packet-template name radius-
attributes name vendor-specific name type name attributes]
```

## Options

*name* *name*— RADIUS attribute definition.

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Basic

## shared sae configuration radius-packet-template *name* radius-attributes *name* vendor-specific-26

### Syntax

```
shared sae configuration radius-packet-template name radius-attributes name vendor-specific-26 name ...
```

### Hierarchy Level

```
[edit shared sae configuration radius-packet-template name radius-attributes name vendor-specific-26]
```

### Description

Configure Juniper Networks vendor-specific attributes (VSAs).

### Options

*name name*—

**Value**—Text

### Required Privilege Level

system

### Required Editing Level

Basic

## shared sae configuration radius-packet-template *name* radius-attributes *name* vendor-specific-26 *name* attributes

### Syntax

```
shared sae configuration radius-packet-template name radius-
attributes name vendor-specific-26 name attributes name {
    value;
}
```

### Hierarchy Level

```
[edit shared sae configuration radius-packet-template name radius-
attributes name vendor-specific-26 name attributes]
```

### Options

*name* *name*— RADIUS attribute definition.

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

## **shared sae configuration radius-packet-template *name* radius-attributes *name* vendor-specific-26 *name* type**

### **Syntax**

```
shared sae configuration radius-packet-template name radius-attributes name vendor-specific-26 name type name ...
```

### **Hierarchy Level**

```
[edit shared sae configuration radius-packet-template name radius-attributes name vendor-specific-26 name type]
```

### **Options**

*name* *name*—

**Value**—Text

### **Required Privilege Level**

system

### **Required Editing Level**

Basic

# shared sae configuration radius-packet-template *name* radius-attributes *name* vendor-specific-26 *name* type *name* attributes

## Syntax

```
shared sae configuration radius-packet-template name radius-
attributes name vendor-specific-26 name type name attributes name {
    value;
}
```

## Hierarchy Level

```
[edit shared sae configuration radius-packet-template name radius-
attributes name vendor-specific-26 name type name attributes]
```

## Options

*name* *name*— RADIUS attribute definition.

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Basic

# shared sae configuration script-extension

## Syntax

```
shared sae configuration script-extension {
    flexible-radius-script flexible-radius-script;
    dynamic-radius-script dynamic-radius-script;
}
```

## Hierarchy Level

```
[edit shared sae configuration script-extension]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Options

`flexible-radius-script` *flexible-radius-script*— Python script name of flexible radius plug-in

**Value**—

**Default**— flexRadius

**Editing Level**—Basic

`dynamic-radius-script` *dynamic-radius-script*— Python script name of local dynamic radius server

**Value**—

**Default**— dynRadius

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Expert

# shared sae configuration service-activation

## Syntax

```
shared sae configuration service-activation {
    retry-time retry-time;
    retry-limit retry-limit;
    activate-on-modification;
}
```

## Hierarchy Level

```
[edit shared sae configuration service-activation]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure session reactivation behavior. If a service session fails unexpectedly, the SAE tries to start the session again in the background. You can change how many times the SAE tries to activate the session and the interval between these attempts. In most instances, the default values do not need to be changed.

## Options

`retry-time retry-time`— Time between attempts to activate a service session if activation fails or to deactivate a service session if deactivation fails. This process takes place in the background.

**Value**— Number of seconds in the range -1-9223372036854775807; -1 indicates no limit

**Default**— 60

**Editing Level**—Basic

`retry-limit retry-limit`— Number of times the SAE tries to activate a service session if activation fails or to deactivate a service session if deactivation fails. This process takes place in the background. Limit number of times to retry service failed background activation.

**Value**— Integer in the range -1-2147483647; -1 indicates no limit

**Default**— -1

**Editing Level**—Basic

`activate-on-modification`—(Optional) When a service subscription is modified, normally only services that are currently active are updated. If this flag is set, any activate-on-

login service that is currently not active is automatically activated. This flag can be used to force service activations that failed e.g. due to an invalid definition at activation time.

**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Expert

# shared sae configuration service-schedule

## Syntax

```
shared sae configuration service-schedule {
    years-in-future years-in-future;
    years-in-past years-in-past;
}
```

## Hierarchy Level

```
[edit shared sae configuration service-schedule]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure parameters related to service schedules.

## Options

*years-in-future years-in-future*—(Optional) Amount of time in the future from the year that the SRC system is started, that the scheduler can see.

**Value**— Integer in the range 1–100

**Default**— No value

**Editing Level**—Basic

*years-in-past years-in-past*—(Optional) Amount of time in the past, from the year that the SRC system is started, that the scheduler can see.

**Value**— Integer in the range 1–100

**Default**— No value

**Editing Level**—Basic

## Required Privilege Level

system

**Required Editing Level**

Expert

# shared sae configuration session-job-manager

## Syntax

```
shared sae configuration session-job-manager {
    number-of-threads number-of-threads;
}
```

## Hierarchy Level

```
[edit shared sae configuration session-job-manager]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure the number of threads used for session-related activity; for example, interim accounting, subscriber and service session timeout, idle timeouts, aggregate service keepalives, and remote session monitoring.

## Options

`number-of-threads number-of-threads`— Number of threads used for session-related activity.

**Value**— Integer in the range 1–50

**Default**— 10

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Expert

## shared sae configuration subscriber-sessions

### Syntax

```
shared sae configuration subscriber-sessions {
    assigned-ip-idle-timeout assigned-ip-idle-timeout;
    allow-same-ip-login;
}
```

### Hierarchy Level

```
[edit shared sae configuration subscriber-sessions]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure an idle timeout for sessions of assigned IP subscribers, and specify whether or not the SAE allows multiple logins from the same IP address.

### Options

*assigned-ip-idle-timeout assigned-ip-idle-timeout*— Interval after which assigned IP subscriber sessions are deactivated if no service session is active.

**Value**— Number of seconds in the range 0–2147483647

**Default**— 900

**Editing Level**—Basic

*allow-same-ip-login*—(Optional) Enables or disables whether the SAE allows a login from the same IP address without requiring that the previous session logs out first.

- If enabled, the SAE logs in the new subscriber session and automatically logs out the previous session.
- If disabled, the SAE denies login requests if a subscriber session for an IP address is active.

**Default**— Disabled

**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Normal

## shared sae configuration time-based-policies

### Syntax

```
shared sae configuration time-based-policies {
    action-threshold action-threshold;
    preparation-time preparation-time;
    max-worker-threads max-worker-threads;
}
```

### Hierarchy Level

```
[edit shared sae configuration time-based-policies]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the action threshold and preparation time for all schedules. You cannot set these values for individual schedules.

### Options

*action-threshold action-threshold*— Maximum delay that the service allows for a time-related change to occur.

**Value**— Number of milliseconds in the range 0–9223372036854775807.

The recommended range is 60000-300000 milliseconds

**Default**— 300000 (5 minutes)

**Editing Level**—Basic

*preparation-time preparation-time*— Preparation time allowed for a state transition.

When you set the preparation time, take into consideration system load and performance.

Factors such as the number of subscribers, the number of active services, the number of schedule services, the speed of the processor on the system, as well as other conditions might affect the amount of time to process all the scheduled actions at a specified scheduled time.

**Value**— Number of milliseconds in the range 0–9223372036854775807

**Default**— 300000 (5 minutes)

**Editing Level**—Basic

*max-worker-threads max-worker-threads*—(Optional) The maximum number of

worker threads for service scheduling.

**Value**— Integer in the range 0-2147483647

**Default**—

**Editing Level**—Basic

### **Required Privilege Level**

system

### **Required Editing Level**

Normal

# shared sae dhcp-classifier rule

## Syntax

```
shared sae dhcp-classifier rule name {
    target target;
}
```

## Hierarchy Level

```
[edit shared sae dhcp-classifier rule]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a rule in a classifier script.

## Options

*name name*— Name of a classification script.

**Value**—Text

*target target*—(Optional) Result of the classification script that is returned to the SAE.

**Value**— The result depends on the type of classification script:

- Subscriber classification script—An LDAP query that uniquely identifies a subscriber entry in the directory.
- DHCP classification script—DHCP profile.

**Default**— Not applicable

**Editing Level**—Basic

## Required Privilege Level

system

**Required Editing Level**

Basic

## shared sae dhcp-classifier rule *name* condition

### Syntax

```
shared sae dhcp-classifier rule name condition name ...
```

### Hierarchy Level

```
[edit shared sae dhcp-classifier rule name condition]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure match conditions used to find a target. You can configure multiple conditions for each classifier rule.

### Options

*name name*— Match conditions used to find a target. For information about configuring match conditions, see *Classifying Interfaces and Subscribers with the SRC CLI* in *SRC-PE Subscribers and Subscriptions Guide*.

**Value**—Text

### Required Privilege Level

system

### Required Editing Level

Basic

# shared sae dhcp-classifier rule *name* script

## Syntax

```
shared sae dhcp-classifier rule name script {
    script-value;
    include include;
}
```

## Hierarchy Level

```
[edit shared sae dhcp-classifier rule name script]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Options

*script-value*—(Optional) Script target. A script that can contain definitions of custom functions that can be called during the matching process. The complete content of the script is interpreted when the classifier is initially loaded. Because you can insert code into a script target, you can use the classification script to perform various tasks.

**Value**— Script enclosed in quotation marks.

**Default**— No value

**Editing Level**—Basic

include *include*—(Optional) Script reference

**Value**—Text

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Basic

# shared sae group

## Syntax

```
shared sae group name ...
```

## Hierarchy Level

```
[edit shared sae group]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a group of SAE configuration properties.

## Options

*name name*— Name of a shared SAE configuration.

**Value**— Text

## Required Privilege Level

system

## Required Editing Level

Basic

# shared sae subscriber-classifier rule

## Syntax

```
shared sae subscriber-classifier rule name {
    target target;
}
```

## Hierarchy Level

```
[edit shared sae subscriber-classifier rule]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a rule in a classifier script.

## Options

*name name*— Name of a classification script.

**Value**—Text

*target target*—(Optional) Result of the classification script that is returned to the SAE.

**Value**— The result depends on the type of classification script:

- Subscriber classification script—An LDAP query that uniquely identifies a subscriber entry in the directory.
- DHCP classification script—DHCP profile.

**Default**— Not applicable

**Editing Level**—Basic

## Required Privilege Level

system

**Required Editing Level**

Basic

# shared sae subscriber-classifier rule *name* condition

## Syntax

```
shared sae subscriber-classifier rule name condition name ...
```

## Hierarchy Level

```
[edit shared sae subscriber-classifier rule name condition]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure match conditions used to find a target. You can configure multiple conditions for each classifier rule.

## Options

*name name*— Match conditions used to find a target. For information about configuring match conditions, see *Classifying Interfaces and Subscribers with the SRC CLI* in *SRC-PE Subscribers and Subscriptions Guide*.

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

# shared sae subscriber-classifier rule *name* script

## Syntax

```
shared sae subscriber-classifier rule name script {
    script-value;
    include include;
}
```

## Hierarchy Level

```
[edit shared sae subscriber-classifier rule name script]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Options

*script-value*—(Optional) Script target. A script that can contain definitions of custom functions that can be called during the matching process. The complete content of the script is interpreted when the classifier is initially loaded. Because you can insert code into a script target, you can use the classification script to perform various tasks.

**Value**— Script enclosed in quotation marks.

**Default**— No value

**Editing Level**—Basic

include *include*—(Optional) Script reference

**Value**—Text

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Basic

## slot *number* sae

### Syntax

```
slot number sae {
    base-dn base-dn;
    real-portal-address real-portal-address;
    java-runtime-environment java-runtime-environment;
    java-heap-size java-heap-size;
    java-new-size java-new-size;
    java-garbage-collection-options java-garbage-collection-options;
    port-offset port-offset;
    snmp-agent;
    shared shared;
}
```

### Hierarchy Level

```
[edit slot number sae]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure local properties for the SAE, including the base DN, interface the SAE uses to communicate with the router, path to the JRE, Java heap size, Java garbage collection options, and port offset. The statement also specifies the shared configuration object that holds the shared SAE configuration, and it enables or disables SNMP.

### Options

**base-dn** *base-dn*— Distinguished name (DN) of the root directory for the SAE. You must set this attribute if you use a directory-naming scheme different from the default.

**Value**— DN of the root directory for the SAE.

**Default**— *o= umc*

**Editing Level**—Advanced

**real-portal-address** *real-portal-address*— Interface on the SAE that the SAE uses for communication with the router. If you clear this field, the interface is assumed to be the interface that was used to connect the router driver to the SAE. If the SAE has multiple network interfaces, you must specify the interfaces that are used to communicate with the router.

**Value**— IP address of the interface

**Default**— One of the IP addresses configured on the host (except 127.0.0.1)

**Editing Level**—Basic

`java-runtime-environment` *java-runtime-environment*— Path to the Java runtime environment (JRE) The SRC software requires a JRE that conforms to the Java 2 specification. The SRC software has been tested with Sun's JRE. See the SRC Release Notes for information about which version of the Sun JRE is distributed with the SRC software. We expect other JREs to work, but have not verified whether they do.

**Value**— Absolute or relative directory path. This path is the default installation path for the JRE that is distributed with the SRC software and installed with the other SRC components.

**Default**— `../jre/bin/java`

**Editing Level**—Expert

`java-heap-size` *java-heap-size*— Maximum Java heap (memory) size available to the JRE.

**Value**— Number of megabytes followed by m. For example, 896m. Change this value if you experience problems caused by lack of memory. Set the value lower than the available physical memory to avoid low performance caused by disk swapping. See the documentation for the JRE for valid values.

**Default**— The value is calculated dynamically to 70 % of the available real memory.

**Editing Level**—Advanced

`java-new-size` *java-new-size*— Maximum Java new generation heap (memory) size available to the JRE when the SAE starts.

**Value**— Integer in the range 0- < Java heap size > . Specify the value in bytes or add m for megabytes, k for kilobytes, or g for gigabytes. For example, 24m. See the documentation for the JRE for valid values.

**Default**— 24m

**Editing Level**—Advanced

`java-garbage-collection-options` *java-garbage-collection-options*— Garbage collection functionality of the Java Virtual Machine.

**Value**— Options defined by the JVM

**Default**— `-Xbatch -XX: + UseConcMarkSweepGC -XX:`

`CMSInitiatingOccupancyFraction = 80 -XX: + UseParNewGC -XX:`

`SurvivorRatio = 1 -XX:InitialTenuringThreshold = 8 -XX:`

`MaxTenuringThreshold = 10 -XX:TargetSurvivorRatio = 90 -XX:`

`+ UseCMSCompactAtFullCollection -XX:CMSFullGCsBeforeCompaction = 0 -XX: + CMSClassUnloadingEnabled -XX: + CMSParallelRemarkEnabled`

**Editing Level**—Advanced

`port-offset` *port-offset*— Port offset for SAE instances. The offset is added to the OA port, RADIUS socket, and administration HTTPS server ports.

**Value**— Integer in the range 0–65535. Set to 0 if you install multiple SAE instances on the same host.

**Default**— 0

**Editing Level**—Expert

`snmp-agent`—(Optional) Enables the SAE to communicate with the SNMP agent.

**Editing Level**—Basic

`shared` *shared*— Shared configuration object that holds most of the SAE specific configuration.

**Value**— Name of the object in the format `"/SAE/ < path > "`. The `< path >` is separated by `/` and can contain multiple levels. The effective configuration is combined by all configuration objects in the path, with more specific configuration in the lower levels of the path.

**Default**— `/SAE/POP-ID;`

**Editing Level**—Basic

#### Required Privilege Level

system

#### Required Editing Level

Basic

## slot *number* sae initial

### Syntax

```
slot number sae initial {
    static-dn static-dn;
    dynamic-dn dynamic-dn;
}
```

### Hierarchy Level

```
[edit slot number sae initial]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure initial properties for SRC components.

### Options

`static-dn static-dn`—(Optional) Location of administrator-defined configuration data in the directory.

**Value**—Text

**Default**—ou = staticConfiguration,ou = Configuration,o = Management,  
o = umc

**Editing Level**—Expert

`dynamic-dn dynamic-dn`—(Optional) Location of programmatically-defined configuration data in the directory.

**Value**—Text

**Default**—ou = dynamicConfiguration,ou = Configuration,o = Management,  
o = umc

**Editing Level**—Expert

### Required Privilege Level

system

**Required Editing Level**

Basic

## slot *number* sae initial directory-connection

### Syntax

```
slot number sae initial directory-connection {
    url url;
    backup-urls [backup-urls...];
    principal principal;
    credentials credentials;
    protocol (ldaps);
    timeout timeout;
    check-interval check-interval;
    blacklist;
    snmp-agent;
}
```

### Hierarchy Level

```
[edit slot number sae initial directory-connection]
```

### Description

Configure properties for the directory connection.

### Options

`url url`—(Optional) URL that identifies the location of the primary directory server.

**Value**— URL

**Default**—`ldap://127.0.0.1:389`

**Editing Level**—Basic

`backup-urls [backup-urls...]`—(Optional) URLs that identify the locations of backup directory servers. Backup servers are used if the primary directory server is not accessible.

**Value**— List of URLs

**Editing Level**—Basic

`principal principal`— DN that the SRC component uses for authentication to access the directory.

**Value**— DN.

When you specify the DN, you can use `<base>` to indicate the base DN.

**Editing Level**—Basic

`credentials` *credentials*— Password with which the SRC component accesses the directory.

**Value**— Password

**Editing Level**—Basic

`protocol` (`ldaps`)—(Optional) Security protocol used to connect to the directory. If you do not configure a security protocol, plain socket is used.

**Value**

- `ldaps`— LDAPS which uses SSL.

**Editing Level**—Expert

`timeout` *timeout*—(Optional) Maximum amount of time during which the directory must respond to a connection request.

**Value**—Integer in the range 1–2147483647 s

**Default**—10

**Editing Level**—Expert

`check-interval` *check-interval*—(Optional) Time interval at which the directory monitoring system verifies its connection to the directory. If the directory connection fails after this interval, the directory monitoring system initiates a connection to another directory.

**Value**—Integer in the range 15–2147483647 s

**Default**—60

**Editing Level**—Expert

`blacklist`—(Optional) Specifies whether the directory monitoring system prevents connection to a directory if the directory fails to respond during 10 polling intervals.

**Default**—false

**Editing Level**—Basic

`snmp-agent`—(Optional) Specifies whether the SDX SNMP agent exports MIBs for this directory connection.

**Default**—false  
**Editing Level**—Expert

**Required Privilege Level**

system

**Required Editing Level**

Basic

## slot *number* sae initial directory-eventing

### Syntax

```
slot number sae initial directory-eventing {
    eventing;
    signature-dn signature-dn;
    polling-interval polling-interval;
    event-base-dn event-base-dn;
    dispatcher-pool-size dispatcher-pool-size;
}
```

### Hierarchy Level

```
[edit slot number sae initial directory-eventing]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Change configuration for directory eventing properties. In most cases, you can use the default configuration for these properties.

### Options

`eventing`—(Optional) Enable an SRC component to poll the directory for changes.

**Default**—true

**Editing Level**—Normal

`signature-dn signature-dn`—(Optional) DN of the directory entry that specifies the `usedDirectory` attribute for the SRC CLI. The `usedDirectory` attribute identifies the vendor of the directory server.

**Value**—DN

**Default**—o = umc

**Editing Level**—Expert

`polling-interval polling-interval`—(Optional) Interval at which an SRC component polls the directory to check for directory changes.

**Value**—Integer in the range 15–2147483647 s

**Default**—30**Editing Level**—Normal`event-base-dn` *event-base-dn*—(Optional)

DN of an entry superior to the data associated with an SRC component in the directory.

If you are storing non-SRC data in the directory, and that data changes frequently whereas the SRC data does not, you may need to adjust the default value to improve performance. For optimal performance, set the value to the DN of an entry superior to both the SRC data and the changing non-SRC data.

**Value**—DN**Default**—o = UMC**Editing Level**—Expert

`dispatcher-pool-size` *dispatcher-pool-size*—(Optional) Number of directory change notifications that can be sent simultaneously to the SRC component.

**Value**—Integer in the range 0–2147483647**Default**—1**Editing Level**—Expert**Required Privilege Level**

system

**Required Editing Level**

Basic

## slot *number* sae radius

### Syntax

```
slot number sae radius {
    local-address local-address;
    local-nas-id local-nas-id;
}
```

### Hierarchy Level

```
[edit slot number sae radius]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the local address that the SAE uses to communicate with RADIUS servers, the network access server (NAS) ID that identifies the SAE when it sends RADIUS messages, and the real portal address that the SAE uses to communicate with the router.

### Options

`local-address local-address`— Local IP address on the SAE host used for communication with RADIUS servers.

**Value**— IP address; should be a unique NAS IP address.

In an installation in which the SAE is equipped with multiple network interfaces, you must specify the interface that communicates with external RADIUS servers. Typically, you must configure the RADIUS server to accept requests from a client; use this IP address for the RADIUS client configuration. Even if the RADIUS server is running on the same server as the SAE, do not use 127.0.0.1 as the local address, because this address is typically the loopback address for a server.

**Editing Level**—Basic

`local-nas-id local-nas-id`— String that identifies the SAE when it sends RADIUS authentication and accounting messages.

**Value**— Text string that identifies the SAE. Typically, the string is the name

of the SAE host.  
**Editing Level**—Basic

**Required Privilege Level**

system

**Required Editing Level**

Basic

# clear sae directory-blacklist

## Syntax

```
clear sae directory-blacklist
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Delete directory blacklist or remove a server from the directory blacklist. A server is added to the blacklist if it repeatedly fails to respond while the server is running and accepting requests.

## Required Privilege Level

clear

# clear sae registered equipment

## Syntax

```
clear sae registered equipment <mac-address mac-address> <force> <persistent>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Delete entries in the equipment registration cache.

## Options

*mac-address mac-address*—(Optional) MAC address of equipment registrations.

**Value**— MAC address in the format xx:xx:xx:xx:xx:x

**Default**— No value

*force*—(Optional) Flag indicating that no confirmation is requested before the software clears the equipment registration.

**Default**— Disabled

*persistent*—(Optional) Flag indicating that equipment registration is also removed from the directory. If you do not set this flag, the equipment registration is removed only from the memory. Disabled

**Default**—false

## Required Privilege Level

clear

# clear sae registered login

## Syntax

```
clear sae registered login <mac-address mac-address> <force> <persistent>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Delete entries in the login registration cache.

## Options

*mac-address mac-address*—(Optional) MAC address of login registrations.

**Value**— MAC address in the format xx:xx:xx:xx:xx:xx

**Default**— No value

*force*—(Optional) Flag indicating that no confirmation is requested before the software clears the login registration.

**Default**— Disabled

*persistent*—(Optional) Flag indicating that login registration is also removed from the directory. If you do not set this flag, the login registration is removed only from the memory.

**Default**— Disabled

## Required Privilege Level

clear

## **monitor sae statistics sessions**

### **Syntax**

```
monitor sae statistics sessions
```

### **Release Information**

Command introduced in SRC Release 3.1.0

### **Description**

Display real-time SNMP statistics for subscriber and service sessions.

### **Required Privilege Level**

view

# request sae import-pilot-license

## Syntax

```
request sae import-pilot-license file-name file-name <server-address server-address> <name-space name-space> <authentication-dn authentication-dn> <password password>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Import the pilot license into the directory.

## Options

*file-name file-name*— Name of the file that contains the license.

**Value**— Text

**Default**— No value

*server-address server-address*—(Optional) IP address of server to which you want to import the pilot license.

**Value**— IP address

**Default**— No value

*name-space name-space*—(Optional) The string < base > is replaced with this value.

**Value**— Text

**Default**— No value

*authentication-dn authentication-dn*—(Optional) DN used for authentication with the directory.

**Value**— Text

**Default**— No Value

*password password*—(Optional) Password used for authentication with the directory.

**Value**— Text  
**Default**— No value

**Required Privilege Level**

maintenance

# request sae load configuration

## Syntax

```
request sae load configuration
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Reload SAE configuration data from the directory. The new configuration takes effect immediately.

## Required Privilege Level

maintenance

## **request sae load domain-map**

### **Syntax**

```
request sae load domain-map
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Reload the mapping of domain names to retailer entries. This mapping is made available to the SAE's subscriber classification script.

### **Required Privilege Level**

maintenance

# request sae load interface-classification

## Syntax

```
request sae load interface-classification
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Reload the interface classification scripts from the directory, and apply the result of the interface classification changes to the router as follows:

- For every unmanaged interface that becomes managed, new default policies are downloaded to the router.
- For every managed interface whose default policy group has changed, the old default policies are replaced by the new ones.
- For every managed interface that becomes unmanaged, an error message in the error log is displayed and no changes are applied until the interface goes down.

## Required Privilege Level

maintenance

## **request sae load services**

### **Syntax**

```
request sae load services
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Reload the following objects from the directory: services, scopes, virtual routers, policies, service mutex groups, and service schedules. Related service sessions are activated, deactivated, or reactivated, as needed.

### **Required Privilege Level**

maintenance

# request sae load subscriptions

## Syntax

```
request sae load subscriptions
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Reload all subscriptions from the directory. Related service sessions are activated, deactivated, or reactivated as needed.

## Required Privilege Level

maintenance

# request sae login ip authenticated-dhcp

## Syntax

```
request sae login ip authenticated-dhcp virtual-router virtual-router address
address login-name login-name mac-address mac-address interface-type (ipv4 |
ipv6) <service-bundle service-bundle> <radius-class radius-class> <interface-name
interface-name> <interface-alias interface-alias> <interface-description
interface-description> <nas-port-id nas-port-id>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Log in a simulated subscriber that is an authenticated DHCP subscriber. Logging in simulated subscribers allows you to test your SRC application without the need for a router or other device.

## Options

*virtual-router virtual-router*— Name of a simulated virtual router that you want to appear in the simulated subscriber session.

**Value**— Text

**Default**— No value

*address address*— IP address from which you log in simulated subscribers.

**Value**— IP address

**Default**— No value

*login-name login-name*— Fully qualified name used to log in simulated subscribers.

**Value**— Fully qualified name

**Default**— No value

*mac-address mac-address*— MAC address used to log in simulated subscribers.

**Value**— MAC address in the format xx:xx:xx:xx:xx:xx

**Default**— 00:00:00:00:00:01

`interface-type (ipv4 | ipv6)` — Selects between IPv4 or IPv6 subscribers

**Value**

- `ipv4`—IPv4
- `ipv6`—IPv6

`service-bundle service-bundle`—(Optional) Service bundle used when logging in simulated subscribers.

**Value**— Service bundle name

**Default**— No value

`radius-class radius-class`—(Optional) RADIUS class used when logging in simulated subscribers.

**Value**— RADIUS class

**Default**— No value

`interface-name interface-name`—(Optional) Virtual interface used when logging in simulated subscribers.

**Value**— Virtual router name

**Default**— No value

`interface-alias interface-alias`—(Optional) Interface description used when logging in simulated subscribers. If you are simulating JUNOS routers, interface alias is the description that is configured on JUNOS routers with the **interface description** command.

**Value**— Text

**Default**— No value

`interface-description interface-description`—(Optional) Alternate interface name used when logging in simulated subscribers. This is the interface name that is used by SNMP.

**Value**— If you are simulating a:

- JUNOS router, the format of the description is `ip < slot > / < port > . < subinterface >`
- JUNOS routing platform, ifDesc is the same as interfaceName.

**Default**— No value

`nas-port-id` *nas-port-id*—(Optional) Port identifier of an interface used when logging in simulated subscribers.

**Value**— Includes interface name and additional layer 2 information. For example, fastEthernet 3/1.

**Default**— No value

### Required Privilege Level

maintenance

# request sae login ip authenticated-interface

## Syntax

```
request sae login ip authenticated-interface virtual-router virtual-router
address address login-name login-name interface-type (ipv4 | ipv6) <service-
bundle service-bundle> <radius-class radius-class> <interface-name interface-
name> <interface-alias interface-alias> <interface-description interface-
description> <nas-port-id nas-port-id>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Log in a simulated subscriber that is an authenticated interface subscriber. Logging in simulated subscribers allows you to test your SRC application without the need for a router or other device.

## Options

`virtual-router virtual-router`— Name of a simulated virtual router that you want to appear in the simulated subscriber session.

**Value**— Text

**Default**— No value

`address address`— IP address from which you log in simulated subscribers.

**Value**— IP address

**Default**— No value

`login-name login-name`— Fully qualified name used to log in simulated subscribers.

**Value**— Fully qualified name

**Default**— No value

`interface-type (ipv4 | ipv6)` — Selects between IPv4 or IPv6 subscribers

**Value**

- `ipv4`—IPv4

- `ipv6`—IPv6

`service-bundle` *service-bundle*—(Optional) Service bundle used when logging in simulated subscribers.

**Value**— Service bundle name

**Default**— No value

`radius-class` *radius-class*—(Optional) RADIUS class used when logging in simulated subscribers.

**Value**— RADIUS class

**Default**— No value

`interface-name` *interface-name*—(Optional) Virtual interface used when logging in simulated subscribers.

**Value**— Virtual router name

**Default**— No value

`interface-alias` *interface-alias*—(Optional) Interface description used when logging in simulated subscribers. If you are simulating JUNOS routers, interface alias is the description that is configured on JUNOS routers with the **interface description** command.

**Value**— Text

**Default**— No value

`interface-description` *interface-description*—(Optional) Alternate interface name used when logging in simulated subscribers. This is the interface name that is used by SNMP.

**Value**— If you are simulating a:

- JUNOS router, the format of the description is `ip < slot > / < port > . < subinterface >`
- JUNOS routing platform, ifDesc is the same as interfaceName.

**Default**— No value

`nas-port-id` *nas-port-id*—(Optional) Port identifier of an interface used when logging in simulated subscribers.

**Value**— Includes interface name and additional layer 2 information. For example, fastEthernet 3/1.

**Default**— No value

### Required Privilege Level

maintenance

# request sae login ip unauthenticated-dhcp

## Syntax

```
request sae login ip unauthenticated-dhcp virtual-router virtual-router address
address mac-address mac-address interface-type (ipv4 | ipv6) <login-name login-
name> <service-bundle service-bundle> <radius-class radius-class> <interface-name
interface-name> <interface-alias interface-alias> <interface-description
interface-description> <nas-port-id nas-port-id>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Log in a simulated subscriber that is an unauthenticated DHCP subscriber. Logging in simulated subscribers allows you to test your SRC application without the need for a router or other device.

## Options

*virtual-router virtual-router*— Name of a simulated virtual router that you want to appear in the simulated subscriber session.

**Value**— Text

**Default**— No value

*address address*— IP address from which you log in simulated subscribers.

**Value**— IP address

**Default**— No value

*mac-address mac-address*— MAC address used to log in simulated subscribers.

**Value**— MAC address in the format xx:xx:xx:xx:xx:xx

**Default**— 00:00:00:00:00:01

*interface-type (ipv4 | ipv6)* — Selects between IPv4 or IPv6 subscribers

**Value**

- *ipv4*—IPv4

- `ipv6`—IPv6

`login-name` *login-name*—(Optional) Fully qualified name used to log in simulated subscribers.

**Value**— Fully qualified name

**Default**— No value

`service-bundle` *service-bundle*—(Optional) Service bundle used when logging in simulated subscribers.

**Value**— Service bundle name

**Default**— No value

`radius-class` *radius-class*—(Optional) RADIUS class used when logging in simulated subscribers.

**Value**— RADIUS class

**Default**— No value

`interface-name` *interface-name*—(Optional) Virtual interface used when logging in simulated subscribers.

**Value**— Virtual router name

**Default**— No value

`interface-alias` *interface-alias*—(Optional) Interface description used when logging in simulated subscribers. If you are simulating JUNOS routers, interface alias is the description that is configured on JUNOS routers with the **interface description** command.

**Value**— Text

**Default**— No value

`interface-description` *interface-description*—(Optional) Alternate interface name used when logging in simulated subscribers. This is the interface name that is used by SNMP.

**Value**— If you are simulating a:

- JUNOS router, the format of the description is `ip < slot > / < port > . < subinterface >`
- JUNOS routing platform, ifDesc is the same as interfaceName.

**Default**— No value

`nas-port-id` *nas-port-id*—(Optional) Port identifier of an interface used when logging in simulated subscribers.

**Value**— Includes interface name and additional layer 2 information. For example, fastEthernet 3/1.

**Default**— No value

### Required Privilege Level

maintenance

# request sae login ip unauthenticated-interface

## Syntax

```
request sae login ip unauthenticated-interface virtual-router virtual-router
interface-name interface-name interface-type (ipv4 | ipv6) <address address>
<login-name login-name> <service-bundle service-bundle> <radius-class radius-
class> <interface-alias interface-alias> <interface-description interface-
description> <nas-port-id nas-port-id>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Log in a simulated subscriber that is an unauthenticated interface subscriber. Logging in simulated subscribers allows you to test your SRC application without the need for a router or other device.

## Options

`virtual-router virtual-router`— Name of a simulated virtual router that you want to appear in the simulated subscriber session.

**Value**— Text

**Default**— No value

`interface-name interface-name`— Virtual interface used when logging in simulated subscribers.

**Value**— Virtual interface name

**Default**— No value

`interface-type (ipv4 | ipv6)` — Selects between IPv4 or IPv6 subscribers

### Value

- `ipv4`—IPv4
- `ipv6`—IPv6

`address address`—(Optional) IP address from which you log in simulated subscribers.

**Value**— IP address

**Default**— No value

`login-name` *login-name*—(Optional) Fully qualified name used to log in simulated subscribers.

**Value**— Fully qualified name

**Default**— No value

`service-bundle` *service-bundle*—(Optional) Service bundle used when logging in simulated subscribers.

**Value**— Service bundle name

**Default**— No value

`radius-class` *radius-class*—(Optional) RADIUS class used when logging in simulated subscribers.

**Value**— RADIUS class

**Default**— No value

`interface-alias` *interface-alias*—(Optional) Interface description used when logging in simulated subscribers. If you are simulating JUNOS routers, interface alias is the description that is configured on JUNOS routers with the **interface description** command.

**Value**— Text

**Default**— No value

`interface-description` *interface-description*—(Optional) Alternate interface name used when logging in simulated subscribers. This is the interface name that is used by SNMP.

**Value**— If you are simulating a:

- JUNOS router, the format of the description is `ip <slot> / <port> . <subinterface>`
- JUNOS routing platform, ifDesc is the same as interfaceName.

**Default**— No value

`nas-port-id` *nas-port-id*—(Optional) Port identifier of an interface used when logging in simulated subscribers.

**Value**— Includes interface name and additional layer 2 information. For example, fastEthernet 3/1.

**Default**— No value

### Required Privilege Level

maintenance

# request sae logout dn

## Syntax

```
request sae logout dn <filter filter> <force>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Log out subscribers who are accessible by DN. All subscribers who have a subscriber profile in the directory are accessible by DN.

## Options

*filter filter*—(Optional) DN or DNs of subscribers that you want to log out.

**Value**— All or part of the subscriber DN

**Default**— No value

*force*—(Optional) Flag indicating that no confirmation is requested before the software logs out subscribers.

**Default**— Disabled

## Required Privilege Level

clear

# request sae logout ip

## Syntax

```
request sae logout ip <filter filter> <force>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Log out subscribers who are accessible by IP address. The following types of subscribers are accessible by IP address: DHCP subscribers, authenticated PPP subscribers, and static IP subscribers who have logged in through a portal.

## Options

*filter filter*—(Optional) IP address or addresses of subscribers that you want to log out.

**Value**— All or part of the subscriber IP address

**Default**— No value

*force*—(Optional) Flag indicating that no confirmation is requested before the software logs out subscribers.

**Default**— Disabled

## Required Privilege Level

clear

## request sae logout login-name

### Syntax

```
request sae logout login-name <filter filter> <force>
```

### Release Information

Command introduced in SRC Release 1.0.0

### Description

Log out subscribers who are accessible by login name. All authenticated subscribers are accessible by login name.

### Options

`filter filter`—(Optional) Login name or names of subscribers that you want to log out.

**Value**— All or part of the login name

**Default**— No value

`force`—(Optional) Flag indicating that no confirmation is requested before the software logs out subscribers.

**Default**— Disabled

### Required Privilege Level

clear

# request sae logout session-id

## Syntax

```
request sae logout session-id <filter filter> <force>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Log out subscribers who are accessible by session ID. All subscribers are accessible by session ID.

## Options

*filter filter*—(Optional) Session ID or IDs of subscribers that you want to log out.

**Value**— All or part of the subscriber session ID

**Default**— No value

*force*—(Optional) Flag indicating that no confirmation is requested before the software logs out subscribers.

**Default**— Disabled

## Required Privilege Level

clear

# request sae modify device failover

## Syntax

```
request sae modify device failover <ip-address ip-address> <tcp-port tcp-port>
<use-failover-server> virtual-router virtual-router <force>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Modify failover server parameters.

## Options

*ip-address ip-address*—(Optional) IP address of an alternate SAE server to which a router or other device can reconnect when the device driver closes its connection. If the driver is configured to use this failover IP address, it sends this IP address to the router or other device when it closes its connection. The device then attempts to open a new connection to the failover IP address. This address is not applicable to the PCMM driver.

**Value**— IP address

**Default**— 0.0.0.0

*tcp-port tcp-port*—(Optional) Port of an alternate SAE server to which a router or other device can reconnect when the device driver closes its connection. If the driver is configured to use this failover port, it sends this failover port to the router or other device when it closes its connection. The device then attempts to open a new connection to this failover port. This TCP port is not applicable to the PCMM driver.

**Value**— Port number

**Default**— 0

*use-failover-server*—(Optional) If you set this flag, then the device driver sends its own failover IP address and port to the router or other device when it closes its connection. The device then attempts to open a new connection to the failover IP address and port. This flag is not applicable to the PCMM router driver.

**Default**— Disabled

*virtual-router virtual-router*— Virtual router name.

**Value**— Name of the virtual router.

- For JUNOS router drivers, use the format `virtualRouterName@routerName`.
- For JUNOS router drivers and PCMM drivers, use the format `default@routerName`.

**Default**— No value

`force`—(Optional) Flag indicating that no confirmation is requested before the software proceeds with the modification.

**Default**— Disabled

### Required Privilege Level

reset

# request sae remove-pilot-license

## Syntax

```
request sae remove-pilot-license <host-id host-id> <server-address server-address> <name-space name-space> <authentication-dn authentication-dn> <password password> <all>
```

## Release Information

Command introduced in SRC Release 3.0.0

## Description

Remove the pilot license from the directory.

## Options

*host-id host-id*—(Optional) Host ID identifying the pilot license to be removed.

**Value**— *hostid*

**Default**— No value

*server-address server-address*—(Optional) IP address of server to which you want to import the pilot license.

**Value**— IP address

**Default**— No value

*name-space name-space*—(Optional) The string *< base >* is replaced with this value.

**Value**— Text

**Default**— No value

*authentication-dn authentication-dn*—(Optional) DN used for authentication with the directory.

**Value**— Text

**Default**— No Value

*password password*—(Optional) Password used for authentication with the directory.

**Value**— Text  
**Default**— No value

all—(Optional) Remove all pilot licenses.

**Required Privilege Level**

maintenance

# request sae shutdown device

## Syntax

```
request sae shutdown device <name name> <force>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Shut down the specified device driver.

## Options

*name name*—(Optional) Device name or names that are managing the drivers that you want to shut down.

**Value**— All or part of the device name.

- For JUNOSe router drivers, use the format *virtualRouterName@routerName*.
- For JUNOS router drivers and PCMM drivers, use the format *default@routerName*.

**Default**— No value

*force*—(Optional) Flag indicating that no confirmation is requested before proceeding with the device driver shutdown.

**Default**— Disabled

## Required Privilege Level

maintenance

# show sae directory-blacklist

## Syntax

```
show sae directory-blacklist
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display the directory blacklist.

## Required Privilege Level

view

# show sae drivers

## Syntax

```
show sae drivers <device-name device-name> < (brief) > <maximum-results maximum-
results>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display the state of SAE device drivers. Each device driver manages one logical router instance. For example, a JUNOS routing platform, a JUNOSe virtual router, a PCMM device, or another third-party device.

## Options

*device-name device-name*—(Optional) Name of a device.

**Value**— All or part of the device name.

- For JUNOSe router drivers, use the format *virtualRouterName@routerName*.
- For JUNOS router drivers and PCMM drivers, use the format *default@routerName*.

**Default**— No value

(Optional) Output style

**Value**

- *brief*— Display only virtual router names.

**Default**— Detail

*maximum-results maximum-results*—(Optional) Number of results to be displayed.

**Value**—Integer in the range 1–2147483647

**Default**— 25

**Required Privilege Level**

view

## show sae interfaces

### Syntax

```
show sae interfaces <interface-name interface-name> <virtual-router virtual-router> < (brief) > <maximum-results maximum-results>
```

### Release Information

Command introduced in SRC Release 1.0.0

### Description

Display information about router interfaces that the SAE is managing.

### Options

*interface-name interface-name*—(Optional) Name of router interface.

**Value**— All or part of the interface name

**Default**— No value

*virtual-router virtual-router*—(Optional) Name of virtual router.

**Value**— All or part of the virtual router name

**Default**— No value

(Optional) Output style.

**Value**

- **brief**— Display only interface names.

**Default**— Detail

*maximum-results maximum-results*—(Optional) Number of results to be displayed.

**Value**— Integer in the range 1–2147483647

**Default**— 25

**Required Privilege Level**

view

## **show sae licenses**

### **Syntax**

```
show sae licenses
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Display licenses and the status of licenses running on the SAE.

### **Required Privilege Level**

view

# show sae policies

## Syntax

```
show sae policies <group group> < (brief) > <maximum-results maximum-results>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display policy groups.

## Options

*group group*—(Optional) Name of a policy group.

**Value**— All or part of the policy group name

**Default**— No value

(Optional) Output style.

**Value**

- **brief**— Display only policy group names.

**Default**—detail

*maximum-results maximum-results*—(Optional) Number of results to be displayed.

**Value**—Integer in the range 1–2147483647

**Default**— 25

## Required Privilege Level

view

# show sae registered equipment

## Syntax

```
show sae registered equipment <mac-address mac-address> < (brief) > <maximum-  
results maximum-results>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display equipment registrations.

## Options

*mac-address mac-address*—(Optional) MAC address of equipment registrations.

**Value**— MAC address in the format *xx:xx:xx:xx:xx:xx*

**Default**— No value

(Optional) Output style.

### Value

- **brief**— Display only the MAC address of registered equipment.

**Default**— Detail

*maximum-results maximum-results*—(Optional) Number of results to be displayed.

**Value**—Integer in the range 1–2147483647

**Default**— 25

## Required Privilege Level

view

# show sae registered login

## Syntax

```
show sae registered login <mac-address mac-address> < (brief) > <maximum-results
maximum-results>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display login registrations.

## Options

`mac-address mac-address`—(Optional) MAC address of login registrations.

**Value**— MAC address in the format xx:xx:xx:xx:xx:xx

**Default**— No value

(Optional) Output style

### Value

- **brief**— Display only the MAC address of login registrations.

**Default**— Detail

`maximum-results maximum-results`—(Optional) Number of results to be displayed.

**Value**—Integer in the range 1–2147483647

**Default**— 25

## Required Privilege Level

view

# show sae services

## Syntax

```
show sae services <name name> <secret> < (brief) > <maximum-results maximum-
results>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display the state of services running on the SAE.

## Options

`name name`—(Optional) Name of service.

**Value**— All or part of the service name

**Default**— No value

`secret`—(Optional) Display subscriber sessions and service sessions for hidden services.

**Default**— Disabled

(Optional) Output style

**Value**

- `brief`— Display only service names.

**Default**— Detail

`maximum-results maximum-results`—(Optional) Number of results to be displayed.

**Value**—Integer in the range 1–2147483647

**Default**— 25

**Required Privilege Level**

view

# show sae statistics device

## Syntax

```
show sae statistics device <name name> < (brief) >
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display SNMP information for routers and other devices that the SAE is managing. For example, Juniper Networks routers, PCMM devices, and other third-party devices.

## Options

*name name*—(Optional) Name of a device.

**Value**— All or part of the device name.

- For JUNOSe router drivers, use the format *virtualRouterName@routerName*.
- For JUNOS router drivers and PCMM drivers, use the format *default@routerName*.

**Default**— No value

(Optional) Output style

**Value**

- *brief*— Display only device names.

**Default**— Detail

## Required Privilege Level

view

# show sae statistics device common

## Syntax

```
show sae statistics device common < (junos | junose-cops | packetcable-cops |  
proxy | aaa) >
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display SNMP statistics for all device drivers of a particular type.

## Options

(Optional) Display SNMP statistics for a specified device driver type.

### Value

- junos— JUNOS router drivers.
- junose-cops— JUNOSe router drivers.
- packetcable-cops— PCMM device drivers.
- proxy— Third-party device drivers.
- aaa— AAA device drivers.

**Default**— No value

## Required Privilege Level

view

## **show sae statistics directory**

### **Syntax**

```
show sae statistics directory
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Display SNMP statistics about the directory.

### **Required Privilege Level**

view

# show sae statistics directory connections

## Syntax

```
show sae statistics directory connections <id id> < (brief) >
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display SNMP statistics for directory connections.

## Options

*id id*—(Optional) Directory connection ID.

**Value**— All or part of the connection ID

**Default**— No value

(Optional) Output style

### Value

- **brief**— Display only directory connection IDs.

**Default**— Detail

## Required Privilege Level

view

## **show sae statistics license client**

### **Syntax**

```
show sae statistics license client
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Display SNMP information about the state of client licenses.

### **Required Privilege Level**

view

# show sae statistics license device

## Syntax

```
show sae statistics license device <name name> < (brief) >
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display SNMP information about the state of licenses on specified devices.

## Options

*name name*—(Optional) Name of a device.

**Value**— All or part of the device name.

- For JUNOS router drivers, use the format *virtualRouterName@routerName*.
- For JUNOS router drivers and PCMM drivers, use the format *default@routerName*.

**Default**— No value

(Optional) Output style

**Value**

- *brief*— Display only device names.

**Default**— Detail

## Required Privilege Level

view

## **show sae statistics license local**

### **Syntax**

```
show sae statistics license local
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Display SNMP information about the state of local licenses.

### **Required Privilege Level**

view

## show sae statistics policy-management

### Syntax

```
show sae statistics policy-management
```

### Release Information

Command introduced in SRC Release 1.0.0

### Description

Display SNMP information about the policy engine, policy decision point, and the shared object repository where the policy objects are stored.

### Required Privilege Level

view

## **show sae statistics process**

### **Syntax**

```
show sae statistics process
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Display SNMP information about the SAE server process.

### **Required Privilege Level**

view

# show sae statistics radius

## Syntax

```
show sae statistics radius
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display SNMP RADIUS information. Display SNMP statistics for RADIUS clients.

## Required Privilege Level

view

## show sae statistics radius client

### Syntax

```
show sae statistics radius client (accounting | authentication) <ip-address ip-  
address> <udp-port udp-port> < (brief) >
```

### Release Information

Command introduced in SRC Release 1.0.0

### Description

Display SNMP information about RADIUS clients.

### Options

Display SNMP information for either RADIUS accounting clients or RADIUS authentication clients.

#### Value

- **accounting**— Display SNMP information for RADIUS accounting clients.
- **authentication**— Display SNMP information for RADIUS authentication clients.

**Default**— No value

**ip-address** *ip-address*—(Optional) IP address or addresses of RADIUS clients.

**Value**— All or part of the client IP address

**Default**— No value

**udp-port** *udp-port*—(Optional) Port number for RADIUS clients.

**Value**— All or part of the client port number

**Default**— No value

(Optional) Output style.

**Value**

- `brief`— Display only a list of the clients that are accessible by IP address and port number.

**Default**— Detail**Required Privilege Level**

view

## **show sae statistics sessions**

### **Syntax**

```
show sae statistics sessions
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Display SNMP statistics for subscriber sessions and service sessions.

### **Required Privilege Level**

view

# show sae subscribers

## Syntax

```
show sae subscribers <maximum-results maximum-results> <secret> < (brief | terse) >
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display information about subscriber sessions.

## Options

`maximum-results maximum-results`—(Optional) Number of results to be displayed.

**Value**—Integer in the range 1–2147483647

**Default**— 25

`secret`—(Optional) Display subscriber sessions and service sessions for hidden services.

**Default**— Disabled

(Optional) Output style

### Value

- `brief`— Display subscriber session information. Service sessions are not displayed.
- `terse`— Display subscriber session ID, login name, and IP address.

**Default**— Detail

## Required Privilege Level

view

## show sae subscribers dn

### Syntax

```
show sae subscribers dn <filter filter>
```

### Release Information

Command introduced in SRC Release 1.0.0

### Description

Display subscriber sessions accessible by DN. All subscribers who have a subscriber profile in the directory are accessible by DN.

### Options

*filter filter*—(Optional) DN of the subscribers.

**Value**— All or part of the subscriber DN

**Default**— No value

### Required Privilege Level

view

# show sae subscribers ip

## Syntax

```
show sae subscribers ip <address address>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display subscriber sessions that are accessible by IP address. The following subscribers are accessible by IP address: DHCP subscribers, authenticated PPP subscribers, and static IP subscribers who have logged in through a portal.

## Options

`address address`—(Optional) IP address of subscriber sessions.

**Value**— All or part of the subscriber IP address

**Default**— No value

## Required Privilege Level

view

## show sae subscribers login-name

### Syntax

```
show sae subscribers login-name <filter filter>
```

### Release Information

Command introduced in SRC Release 1.0.0

### Description

Display subscriber sessions accessible by login name. All authenticated subscribers are accessible by login name.

### Options

*filter filter*—(Optional) Login name of subscriber sessions.

**Value**— All or part of the subscriber login name

**Default**— No value

### Required Privilege Level

view

## show sae subscribers service-name

### Syntax

```
show sae subscribers service-name <filter filter>
```

### Release Information

Command introduced in SRC Release 1.0.0

### Description

Display all active subscriber sessions activated from a subscription to the specified service name.

### Options

`filter filter`—(Optional) Service name of subscriber sessions.

**Value**— All or part of the service name

**Default**— No value

### Required Privilege Level

view

## show sae subscribers session-id

### Syntax

```
show sae subscribers session-id <filter filter>
```

### Release Information

Command introduced in SRC Release 1.0.0

### Description

Display subscriber sessions by session ID.

### Options

*filter filter*—(Optional) ID of subscriber sessions.

**Value**— All or part of the subscriber session ID

**Default**— No value

### Required Privilege Level

view

# show sae threads

## Syntax

```
show sae threads
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display information about threads and their priority on the SAE.

## Required Privilege Level

view



# Network Information Collector (NIC)

The following table summarizes the command-line interface (CLI) for the network information collector (NIC). Configuration statements and operational commands are listed in alphabetical order.

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## shared nic scenario

### Syntax

```
shared nic scenario name ...
```

### Hierarchy Level

```
[edit shared nic scenario]
```

### Description

Configure a NIC configuration scenario to use. A configuration scenario defines the type of resolution to be performed.

### Options

`name name`— Name of a NIC configuration scenario.

**Value**— Name of a configuration scenario that has been established for the NIC.

### Required Privilege Level

system

### Required Editing Level

Basic

## shared nic scenario *name* agents

### Syntax

```
shared nic scenario name agents name ...
```

### Hierarchy Level

```
[edit shared nic scenario name agents]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a NIC agent in a NIC configuration scenario.

### Options

*name name*— Name of a NIC agent in a configuration scenario.

**Value**—Text

### Required Privilege Level

system

### Required Editing Level

Basic

## shared nic scenario *name* agents *name* configuration consolidator

### Syntax

```
shared nic scenario name agents name configuration consolidator {
    resolvers-list resolvers-list;
    roles-list roles-list;
    source-agent source-agent;
    agent-processor agent-processor;
    network-data-types network-data-types;
    publishingInterval publishingInterval;
    event-life-expectancy event-life-expectancy;
}
```

### Hierarchy Level

```
[edit shared nic scenario name agents name configuration consolidator]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure properties for consolidator agents. When you use a configuration scenario, you typically change the source-agent option.

Before you change the value of this statement or the value of any of the options for this statement, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

*resolvers-list resolvers-list*—(Optional) Names of NIC resolvers to which this agent sends events. If you do not define a list of NIC resolvers, you must define a list of roles.

**Value**— List of paths to NIC resolvers; paths are relative to the static configuration object. Separate resolvers with commas.

**Default**— No value

**Editing Level**—Expert

*roles-list roles-list*—(Optional) Names of NIC roles to which this agent sends events. All resolvers that participate in a role receive events.

If you do not define the names of the NIC roles, you must define a list of resolvers.

**Value**— Names of NIC roles in the format *realmName : roleName* . Use commas to separate one role from another in the list.

**Default**— No value  
**Editing Level**—Expert

`source-agent` *source-agent*— Path to the agent for which this consolidator agent publishes data.

**Value**— Text

Example—/agents/InterfaceIdInterface

**Default**— No value  
**Editing Level**—Basic

`agent-processor` *agent-processor*— Name of the Java class that the NIC agent uses to generate the data value object.

**Value**— Path to Java class  
**Default**— No value  
**Editing Level**—Expert

`network-data-types` *network-data-types*— Data types that the agent publishes.

For more information, see the documentation for the NIC resolution process.

If the agent publishes mappings, specify two data types in the format *key* , *value* . Use commas to separate entries.

**Value**— Data type in the format *key* or *key* , *value* , where

- *key* —Name of data key
- *value* — Name of data value

Example—IpPool, InterfaceId

**Default**— No value  
**Editing Level**—Expert

`publishingInterval` *publishingInterval*—(Optional) Interval at which the NIC agent sends updates to the NIC resolvers.

**Value**— Number of seconds in the range 0–2147483647  
**Default**—60

**Editing Level**—Expert

`event-life-expectancy` *event-life-expectancy*—(Optional) Length of time that data is valid after the NIC proxy receives data associated with events published by this agent.

**Value**— Number of seconds in the range 0–4294967295

- 0—Data does not expire
- Other values—Actual life expectancy of data

**Default**—0  
**Editing Level**—Expert

**Required Privilege Level**

system

**Required Editing Level**

Basic

## shared nic scenario *name* agents *name* configuration directory

### Syntax

```
shared nic scenario name agents name configuration directory {
    principal principal;
    credentials credentials;
    key-attribute-processor key-attribute-processor;
    value-attribute-processor value-attribute-processor;
    mapping-attribute-processor mapping-attribute-processor;
    publishing-interval publishing-interval;
    resolvers-list resolvers-list;
    roles-list roles-list;
    search-base search-base;
    search-filter search-filter;
    search-scope (object | one-level | sub-tree);
    server-url server-url;
    directory-backup-urls directory-backup-urls;
    key-attribute-name key-attribute-name;
    value-attribute-name value-attribute-name;
    network-data-types network-data-types;
    event-life-expectancy event-life-expectancy;
    enable-directory-eventing;
    directory-connection-id directory-connection-id;
    snmp-agent;
    share-directory-connection;
    polling-interval polling-interval;
    retry-interval retry-interval;
}
```

### Hierarchy Level

[edit shared nic scenario *name* agents *name* configuration directory]

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure properties for directory agents. When you use a configuration scenario provided in the SRC software, you typically change only the following options:

- search-base
- search-filter
- search-scope
- server-url

- `authentication-dn`
- `password`

`principal principal`— DN that the NIC agent uses for authentication to access the directory.

**Value**— *DN, base*

Example—*cn= nic,ou= Components,o= Operators, base*

**Default**— *cn = nic, ou = Components, o = Operators, < base >*

**Editing Level**—Basic

`credentials credentials`— Password with which the NIC agent accesses the directory.

**Value**— *password*

**Default**— *nic*

**Editing Level**—Basic

`key-attribute-processor key-attribute-processor`—(Optional) Java class that the NIC agent uses to generate the network data object named key.

The object includes a list of attributes from the directory. If no class is specified, there can be only one key attribute (in the `key.attrNames` property).

This value is ignored if a mapping processor is specified.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Path to Java class

Example—*net.juniper.smgt.gateway.nic.agent.dir. DnAttributeProcessor*

**Default**— No value

**Editing Level**—Expert

`value-attribute-processor value-attribute-processor`—(Optional) Name of the Java class that the NIC agent uses to generate the data value object. Specify only if the agent publishes mappings.

If no class is specified, there can be only one value attribute (in the `value.attrNames` property).

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Path to Java class

**Default**— No value

**Editing Level**—Expert

`mapping-attribute-processor` *mapping-attribute-processor*—(Optional) Name of the Java class that the NIC agent uses to process the key object and the value object, and to produce the mapping object DataPair. If no class is specified, NIC uses the key and value attribute processors.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Path to Java class

**Default**— No value

**Editing Level**—Expert

`publishing-interval` *publishing-interval*—(Optional) Interval at which the NIC agent sends updates to the NIC resolvers.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Number of seconds in the range 0–2147483647

**Default**— 60

**Editing Level**—Expert

`resolvers-list` *resolvers-list*—(Optional) Names of NIC resolvers to which this agent sends events. If you do not define a list of the NIC resolvers, you must define a list of roles.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— List of paths to NIC resolvers; paths are relative to the static configuration object. Separate resolvers with commas.

Example—`/realms/ip/B1, /realms/sharedIp/B1, /realms/login/D1`

**Default**— No value

**Editing Level**—Expert

`roles-list` *roles-list*—(Optional) Names of NIC roles to which this agent sends events.

All resolvers that participate in a role receive events. If you do not define the names of the NIC roles, you must define a list of resolvers.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Names of NIC roles in the format *realmName:roleName*. Use commas to separate one role from another in the list.

**Default**— No value

**Editing Level**—Expert

`search-base` *search-base*— DN of the location in the directory from which the agent should read information.

**Value**— *DN, base*

**Default**— No value

**Editing Level**—Basic

`search-filter` *search-filter*—(Optional) Directory search filter that the agent should use.

**Value**— LDAP search filter

**Default**— No value

**Editing Level**—Basic

`search-scope` (*object* | *one-level* | *sub-tree*)—(Optional) Location in the directory relative to the base DN from which the NIC agent can retrieve information.

**Value**— One of the following options:

- 0—Object; entry specified in the Search Base field only
- 1—One level; entry specified in the Search Base field and objects that are subordinate by one level
- 2—Subtree of entry specified in the Search Base field

**Default**— *sub-tree*

**Editing Level**—Basic

`server-url` *server-url*— URL that identifies the location of the primary directory server to which this NIC agent connects.

**Value**— Location of the directory that stores configuration information in URL string format *protocol:// host:portNumber* where:

- *protocol* —ldap or ldaps
- *host* —IP address or name of directory host
- *portNumber* —Number of TCP/IP port

Example—ldap://127.0.0.1:389/

**Default**— No value

**Editing Level**—Basic

*directory-backup-urls directory-backup-urls*—(Optional) URLs that identify the locations of backup directory servers. Backup servers are used if the primary directory server is not accessible.

**Value**— URLs of redundant directories separated by semicolons.

Example—ldap://127.0.0.1:389/

**Default**— No value

**Editing Level**—Basic

*key-attribute-name key-attribute-name*— Name of the directory attribute that the NIC agent uses for the network data object called key. You can define these attribute names if you use a customized key attribute processor.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Name of one or more attributes in the directory. Use commas to separate attribute names.

Example—virtualRouterName

**Default**— No value

**Editing Level**—Expert

*value-attribute-name value-attribute-name*—(Optional) Directory attribute that the NIC agent uses for the network data object called value. Specify only if the agent publishes mappings.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Name of an attribute in the directory.

Example—SaeId

**Default**— No value

**Editing Level**—Expert

`network-data-types` *network-data-types*— Names of the data types that this NIC agent publishes.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Data type in the form *key, value*. If there is more than one data type, separate entries with commas.

Example

- Agent to publish IP pools—`networkDataTypes = IpPool`
- Agent is to publish mappings between IP pools and VRs—`networkDataTypes = IpPool, Vr`

**Default**— No value

**Editing Level**—Expert

`event-life-expectancy` *event-life-expectancy*—(Optional) Length of time that data is valid after the NIC proxy receives data associated with events published by this agent.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Number of seconds in the range 0–4294967295

- 0—Data does not expire
- Other values—Actual life expectancy of data

**Default**— 0

**Editing Level**—Expert

`enable-directory-eventing`—(Optional) Specifies whether NIC polls the directory for changes.

**Value**—

- true—Enable polling.
- false—Disable polling

**Default**—true

**Editing Level**—Expert

`directory-connection-id` *directory-connection-id*— Name for directory connection in SNMP agent view.

**Value**— ID for connection manager.

Example—DIRAGENT\_POOL\_VR

**Default**— No value

**Editing Level**—Expert

`snmp-agent`—(Optional) Enable the SDX SNMP agent to export MIBs for this directory connection.

**Editing Level**—Expert

`share-directory-connection`—(Optional) Enable DES listeners of NIC agents to share a connection to the directory.

Do not change this value unless instructed to do so by Juniper Networks.

**Editing Level**—Expert

`polling-interval` *polling-interval*— Time interval at which the SRC component polls the directory.

**Value**—Integer in the range 30–2147483647

**Default**— 30

**Editing Level**—Expert

`retry-interval` *retry-interval*— Length of time that the directory monitoring system waits to initiate a directory connection after an unsuccessful attempt to connect to the directory.

**Value**—Integer in the range -2147483648–2147483647 s

**Default**— No value

**Editing Level**—Expert

**Required Privilege Level**

system

**Required Editing Level**

Basic

# shared nic scenario *name* agents *name* configuration properties

## Syntax

```
shared nic scenario name agents name configuration properties {
    resolvers-list resolvers-list;
    roles-list roles-list;
    data-sources data-sources;
    network-data-types network-data-types;
    publishing-interval publishing-interval;
    event-life-expectancy event-life-expectancy;
    reverse-values;
}
```

## Hierarchy Level

```
[edit shared nic scenario name agents name configuration properties]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure properties agents. A properties agent retrieves information from one or more specified property files and makes event information based on the information in the file available to the NIC.

Although a properties agent may be used by an SRC application, typically you do not need to configure it. Before you change the value of this statement or the value of any of the options for this statement, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

`resolvers-list resolvers-list`—(Optional) Names of NIC resolvers to which this agent sends events. If you do not define a list of the NIC resolvers, you must define a list of roles.

**Value**— List of paths to NIC resolvers; paths are relative to the static configuration object. Separate resolvers with commas.

**Default**— No value

**Editing Level**—Expert

`roles-list roles-list`—(Optional) Names of NIC roles to which this agent sends events. All resolvers that participate in a role receive events.

If you do not define the names of the NIC roles, you must define a list of resolvers.

**Value**— Names of NIC roles in the format *realmName* : *roleName* . Use commas to separate one role from another in the list.

**Default**— No value

**Editing Level**—Expert

`data-sources` *data-sources*— List of URIs or filenames of property files that provides information about NIC events to the NIC system. You must provide at least one URI or filename.

At this time, the only supported format for the data source is a property file.

**Value**— URIs or filenames separated by commas

**Default**— No value

**Editing Level**—Basic

`network-data-types` *network-data-types*— Data types that the agent publishes.

For more information, see the documentation for the NIC resolution process.

If the agent publishes mappings, specify two data types in the format *key* , *value* . Use commas to separate entries.

**Value**— Data type in the format *key* or *key* , *value* , where

- *key* —Name of data key
- *value* — Name of data value

Example—IpPool, InterfaceId

**Default**— No value

**Editing Level**—Expert

`publishing-interval` *publishing-interval*—(Optional) Interval at which the NIC agent sends updates to the NIC resolvers.

**Value**— Number of seconds in the range 0–2147483647

**Default**—60

**Editing Level**—Expert

`event-life-expectancy` *event-life-expectancy*—(Optional) Length of time that data is valid after the NIC proxy receives data associated with events published by this agent.

**Value**— Number of seconds in the range 0–4294967295

- 0—Data does not expire
- Other values—Actual life expectancy of data

**Default**—0

**Editing Level**—Expert

`reverse-values`—(Optional) Specifies whether a property name is made available as a NIC key or a NIC value. If enabled, properties are published as keys.

**Editing Level**—Normal

### **Required Privilege Level**

system

### **Required Editing Level**

Basic

## shared nic scenario *name* agents *name* configuration sae-client

### Syntax

```
shared nic scenario name agents name configuration sae-client {
    principal principal;
    credentials credentials;
    subscriber-id (user-ip-address | dn | login-name | interface-name | primary-
user-name);
    sae-connection-threads sae-connection-threads;
    sae-retry-interval sae-retry-interval;
    resolvers-list resolvers-list;
    roles-list roles-list;
    search-base search-base;
    search-filter search-filter;
    search-scope (object | one-level | sub-tree);
    server-url server-url;
    directory-backup-urls directory-backup-urls;
    key-attribute-name key-attribute-name;
    value-attribute-name value-attribute-name;
    network-data-types network-data-types;
    event-life-expectancy event-life-expectancy;
    enable-directory-eventing;
    directory-connection-id directory-connection-id;
    snmp-agent;
    share-directory-connection;
    polling-interval polling-interval;
    retry-interval retry-interval;
}
```

### Hierarchy Level

```
[edit shared nic scenario name agents name configuration sae-client]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure properties for SAE client agents. When you use a configuration scenario provided in the SRC software, you typically change only the following options:

- search-base
- search-filter
- search-scope
- server-url

- `backup-servers-url`
- `principal`
- `credentials`

`principal` *principal*— DN that the NIC agent uses for authentication to access the directory.

**Value**— *DN, base*

Example—*cn= umcadmin, base*

**Default**— *cn = umcadmin, < base >*

**Editing Level**—Basic

`credentials` *credentials*— Password with which the NIC agent accesses the directory.

**Value**— *password*

**Default**—*admin123*

**Editing Level**—Basic

`subscriber-id` (*user-ip-address | dn | login-name | interface-name | primary-user-name*)— The SAE subscriber type. The NIC passes subscriber ID of the specified type to the SAE external interface of active SAEs to determine which SAE has a user session for the subscriber.

**Value**— One of the following options:

- *user-ip-address* —Subscriber's IP address
- *dn* —DN that identifies the subscriber in the directory
- *login-name* —Login name that identifies the subscriber
- *interface-name* —Name of the interface through which the subscriber traffic passes
- *primary-user-name* —User name that identifies the subscriber

**Default**— No value

**Editing Level**—Basic

`sae-connection-threads` *sae-connection-threads*—(Optional) Size of the thread pool for contacting SAEs during resolution. These threads are shared among all resolution requests and are spanned in parallel one thread per SAE per resolution request. You may want to set this value higher than the default if you have multiple SAEs in your network and a high resolution rate.

**Value**— Number of threads

**Default**— 5  
**Editing Level**—Advanced

`sae-retry-interval` *sae-retry-interval*—(Optional) Min. length of time that the agent waits before it sends a resolution request to a particular SAE after an unsuccessful attempt to contact it.

**Value**— Retry interval in seconds  
**Default**— 30  
**Editing Level**—Advanced

`resolvers-list` *resolvers-list*—(Optional) Names of NIC resolvers to which this agent sends events. If you do not define a list of the NIC resolvers, you must define a list of roles.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— List of paths to NIC resolvers; paths are relative to the static configuration object. Separate resolvers with commas.

Example—/realms/ip/B1,/realms/sharedIp/B1,/realms/login/D1

**Default**— No value  
**Editing Level**—Expert

`roles-list` *roles-list*—(Optional) Names of NIC roles to which this agent sends events. All resolvers that participate in a role receive events. If you do not define the names of the NIC roles, you must define a list of resolvers.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Names of NIC roles in the format *realmName:roleName*. Use commas to separate one role from another in the list.  
**Default**— No value  
**Editing Level**—Expert

`search-base` *search-base*— DN of the location in the directory from which the agent should read information.

**Value**— *DN, base*  
**Default**— No value  
**Editing Level**—Basic

`search-filter` *search-filter*—(Optional) Directory search filter that the agent should use.

**Value**— LDAP search filter

**Default**— No value

**Editing Level**—Basic

`search-scope` (`object` | `one-level` | `sub-tree`)—(Optional) Location in the directory relative to the base DN from which the NIC agent can retrieve information.

**Value**— One of the following options:

- 0—Object; entry specified in the Search Base field only
- 1—One level; entry specified in the Search Base field and objects that are subordinate by one level
- 2—Subtree of entry specified in the Search Base field

**Default**— `sub-tree`

**Editing Level**—Basic

`server-url` *server-url*— URL that identifies the location of the primary directory server to which this NIC agent connects.

**Value**— Location of the directory that stores configuration information in URL string format `protocol:// host :portNumber` where:

- *protocol* —`ldap` or `ldaps`
- *host* —IP address or name of directory host
- *portNumber* —Number of TCP/IP port

Example—`ldap://127.0.0.1:389/`

**Default**— No value

**Editing Level**—Basic

`directory-backup-urls` *directory-backup-urls*—(Optional) URLs that identify the locations of backup directory servers. Backup servers are used if the primary directory server is not accessible.

**Value**— URLs of redundant directories separated by semicolons.

Example—`ldap://127.0.0.1:389/`

**Default**— No value

**Editing Level**—Basic

`key-attribute-name` *key-attribute-name*— Name of the directory attribute that the NIC agent uses for the network data object called key. You can define these attribute names if you use a customized key attribute processor.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Name of one or more attributes in the directory. Use commas to separate attribute names.

Example—virtualRouterName

**Default**— No value

**Editing Level**—Expert

`value-attribute-name` *value-attribute-name*—(Optional) Directory attribute that the NIC agent uses for the network data object called value. Specify only if the agent publishes mappings.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Name of an attribute in the directory.

Example—Saeld

**Default**— No value

**Editing Level**—Expert

`network-data-types` *network-data-types*— Names of the data types that this NIC agent publishes.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Data type in the form *key*, *value*. If there is more than one data type, separate entries with commas.

Example

- Agent to publish IP pools—`networkDataTypes = IpPool`
- Agent is to publish mappings between IP pools and VRs—`networkDataTypes = IpPool, Vr`

**Default**— No value

**Editing Level**—Expert

`event-life-expectancy` *event-life-expectancy*—(Optional) Length of time that data is valid after the NIC proxy receives data associated with events published by this agent.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Number of seconds in the range 0–4294967295

- 0—Data does not expire
- Other values—Actual life expectancy of data

**Default**— 0

**Editing Level**—Expert

`enable-directory-eventing`—(Optional) Specifies whether NIC polls the directory for changes.

**Value**—

- `true`—Enable polling.
- `false`—Disable polling

**Default**—`true`

**Editing Level**—Expert

`directory-connection-id` *directory-connection-id*— Name for directory connection in SNMP agent view.

**Value**— ID for connection manager.

Example—`DIRAGENT_POOL_VR`

**Default**— No value

**Editing Level**—Expert

`snmp-agent`—(Optional) Enable the SDX SNMP agent to export MIBs for this directory connection.

**Editing Level**—Expert

`share-directory-connection`—(Optional) Enable DES listeners of NIC agents to share a connection to the directory.

Do not change this value unless instructed to do so by Juniper Networks.

**Editing Level**—Expert

`polling-interval` *polling-interval*— Time interval at which the SRC component polls the directory.

**Value**—Integer in the range 30–2147483647

**Default**— 30

**Editing Level**—Expert

`retry-interval` *retry-interval*— Length of time that the directory monitoring system waits to initiate a directory connection after an unsuccessful attempt to connect to the directory.

**Value**—Integer in the range -2147483648–2147483647 s

**Default**— No value

**Editing Level**—Expert

## Required Privilege Level

system

## Required Editing Level

Basic

# shared nic scenario *name* agents *name* configuration sae-plugin

## Syntax

```
shared nic scenario name agents name configuration sae-plugin {
    resolvers-list resolvers-list;
    plug-in-event-type (Interface | User);
    key-attribute-name key-attribute-name;
    key-attribute-processor key-attribute-processor;
    value-attribute-name value-attribute-name;
    value-attribute-processor value-attribute-processor;
    naming-context naming-context;
    event-filter event-filter;
    share-the-event-system;
    number-of-events number-of-events;
    network-data-types network-data-types;
    event-life-expectancy event-life-expectancy;
}
```

## Hierarchy Level

```
[edit shared nic scenario name agents name configuration sae-plugin]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure properties for SAE plug-in agents. When you use a configuration scenario provided in the SRC software, you typically change only the following options:

- `event-filter`
- `number-of-events`

`resolvers-list resolvers-list`—(Optional) Names of NIC resolvers to which this agent sends events. If you do not define a list of the NIC resolvers, you must define a list of roles.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— List of paths to NIC resolvers; paths are relative to the static configuration object. Separate resolvers with commas.

Example—`/realms/db/E1`

**Default**— No value**Editing Level**—Expert

`plug-in-event-type` (Interface | User) —(Optional) Types of plug-in events that the agent supports.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— One of the following:

- User—Agent supports user-tracking plug-in events.
- Interface—Agent supports interface-tracking plug-in events.

**Default**—User**Editing Level**—Expert

`key-attribute-name` *key-attribute-name* — Names of the plug-in attributes that provide information for the data key. You can define these attribute names if you use a customized key attribute processor.

The list can contain one or more plug-in attributes. If the format of the single plug-in attribute is not a string or you specify multiple plug-in attributes, the agent passes the data to the key processor to construct the data value in string format. In this case, you must specify the processor in the Key Attribute Processor field.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Name of one or more attributes in the directory. Use commas to separate attribute names.

Example—PA\_USER\_DN,PA\_ROUTER\_NAME

**Default**— No value**Editing Level**—Expert

`key-attribute-processor` *key-attribute-processor* —(Optional) Name of the Java class that the agent uses to generate the data key object. If no class is specified, there can be only one key event attribute.

Configure a key attribute processor if the agent acquires for the key value either a single plug-in attribute that is not in string format or multiple plug-in attributes.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Path to Java class

Example—`net.juniper.smgmt.gateway.nic.agent.saeplugin.InterfaceIdProcessor`

**Default**— No value

**Editing Level**—Expert

`value-attribute-name value-attribute-name`— List of plug-in attributes that provide information for the data value.

The list can contain one or more plug-in attributes. If the format of the single plug-in attribute is not a string or you specify multiple plug-in attributes, the agent passes the data to the value processor to construct the data value in string format. In this case, you must specify the processor for the value attribute processor option.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— List of comma-separated plug-in attributes.

Example—`PA_USER_DN, PA_ROUTER_NAME`

**Default**— No value

**Editing Level**—Expert

`value-attribute-processor value-attribute-processor`—(Optional) Name of the Java class that the agent uses to generate the data value object. If no class is specified, there can be only one value event attribute.

Configure a value attribute processor if the agent acquires for the data value either a single plug-in attribute that is not in string format or multiple plug-in attributes.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Path to Java class

Example—`net.juniper.smgmt.gateway.nic.agent.saeplugin.InterfaceProcessor`

**Default**— No value**Editing Level**—Expert

`naming-context` *naming-context*— CORBA naming context in which the agent publishes references.

If you configure event sharing for multiple SAE plug-in agents, this setting must be identical for all those agents.

The incoming interface is bound under the specified context with the name `saePort`. The mirror interface has the name `mirrorPort`.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— String that must match the context name in the `objectref` property for this SAE plug-in. For more information, see the documentation for the NIC resolution process.

Example—`nicstestDNottawa`

This example matches the context name of the following `objectref` property:

`corbaname::10.10.10.10:900/NameService#nicstestDNottawa/saePort`

In this property:

- `10.10.10.10`—Address of the machine running the CORBA naming server
- `900`—TCP/IP port
- `saePort`—Name of plug-in (in this case, the agent eventing system)

**Default**— No value**Editing Level**—Expert

`event-filter` *event-filter*— LDAP filter that restricts the events that the agent collects.

**Value**— *pluginAttribute* = *attributeValue*

where

- *pluginAttribute* — Plug-in attribute name
- *attributeValue* — Value of filter

Example—PA\_USER\_TYPE = INTF

**Default**— No value

**Editing Level**—Basic

`share-the-event-system`—(Optional) Enable an agent to share the event system with other agents in the same host. If you configure event sharing for multiple SAE plug-in agents, this setting must be identical for all those agents.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Editing Level**—Expert

`number-of-events` *number-of-events*—(Optional) Number of events that the SAE sends to the agent at one time during state synchronization. This value is used if state synchronization is enabled.

**Value**— Integer in the range 1-2147483647

**Default**—50

**Editing Level**—Basic

`network-data-types` *network-data-types*— Data types that the agent publishes.

For more information, see the documentation for the NIC resolution process.

If the agent publishes mappings, specify two data types in the format *key*, *value* . Use commas to separate entries.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Data type in the format *key* or *key* , *value* , where

- *key* —Name of data key
- *value* — Name of data value

Example—Dn, Vr

**Default**— No value

**Editing Level**—Expert

`event-life-expectancy` *event-life-expectancy*—(Optional) Length of time that data is valid after the NIC proxy receives data associated with events published by this agent.

Before you change the value of this option, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**Value**— Number of seconds in the range 0–4294967295

- 0—Data does not expire
- Other values—Actual life expectancy of data

**Default**— 0

**Editing Level**—Expert

### Required Privilege Level

system

### Required Editing Level

Basic

## shared nic scenario *name* agents *name* configuration xml

### Syntax

```
shared nic scenario name agents name configuration xml {
    resolvers-list resolvers-list;
    roles-list roles-list;
    data-source data-source;
    search-base search-base;
    search-filter search-filter;
    search-scope (0 | 1 | 2);
    mapping-file mapping-file;
    root-tag-name root-tag-name;
    key-attribute-name key-attribute-name;
    key-attribute-processor key-attribute-processor;
    value-attribute-name value-attribute-name;
    value-attribute-processor value-attribute-processor;
    network-data-types network-data-types;
    publishing-interval publishing-interval;
    event-life-expectancy event-life-expectancy;
    enable-eventing;
}
```

### Hierarchy Level

```
[edit shared nic scenario name agents name configuration xml]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure an XML agent. An XML agent retrieves information from a specified XML document and makes information available to the NIC based on specified tags in the file. An XML agent provides information about one type of data or mappings.

Although an XML agent may be used by an SRC application, typically you do not need to configure it. Before you change the value of this statement or the value of any of the options for this statement, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

**resolvers-list** *resolvers-list*—(Optional) Names of NIC resolvers to which this agent sends events. If you do not define a list of the NIC resolvers, you must define a list of roles.

**Value**— List of paths to NIC resolvers; paths are relative to the static

configuration object. Separate resolvers with commas.

**Default**— No value

**Editing Level**—Expert

`roles-list` *roles-list*—(Optional) Names of NIC roles to which this agent sends events. All resolvers that participate in a role receive events.

If you do not define the names of the NIC roles, you must define a list of resolvers.

**Value**— Names of NIC roles in the format *realmName* : *roleName* . Use commas to separate one role from another in the list.

**Default**— No value

**Editing Level**—Expert

`data-source` *data-source*— URI of the XML document that provides information about NIC events to the NIC system. You must provide a URI for the XML document.

At this time, the only supported schema is a file.

**Value**— URI

**Default**— No value

**Editing Level**—Basic

`search-base` *search-base*—(Optional) Root XML element in the specified XML document at which the agent starts to search the XML document. If you do not specify an element for the search base, the agent starts searching at the top of the file.

**Value**— XML element

**Default**— No value

**Editing Level**—Normal

`search-filter` *search-filter*—(Optional) Search filter that the agent uses to read entries in an XML document.

**Value**— Search filter syntax defined in RFC 2254— The String Representation of LDAP Search Filters (December 1997)

**Default**— No value

**Editing Level**—Normal

`search-scope` ( 0 | 1 | 2 )—(Optional) Level at which the agent searches the XML document.

**Value**— Search level:

- Object—Searches the object defined by the search base entry.

- One level—Specifies objects at the same level as the object defined by the search base entry.
- Subtree—Searches objects subordinate to the object defined by the search base entry.

**Default**— No value

**Editing Level**—Basic

`mapping-file` *mapping-file*—(Optional) Name of the property file that maps XML tag names to corresponding Java class names. Enter a value if the XML document does not conform to the SDX XML schema.

**Value**— Filename

**Default**— No value

**Editing Level**—Normal

`root-tag-name` *root-tag-name*—(Optional) Tag name of the root XML element in the data source. Enter a value if the XML document does not follow the SDX XML schema.

**Value**— Tag name

**Default**— No value

**Editing Level**—Normal

`key-attribute-name` *key-attribute-name*— List of XML attribute names to be used in constructing the key network data object for a custom processor.

**Value**—Text

**Editing Level**—Expert

`key-attribute-processor` *key-attribute-processor*—(Optional) The name of the Java class for processing the key object.

If specified, it will be used to produce the key network data object by using the list of attributes read from the directory. If no class is specified, there must be only one key LDAP attribute (in the `key.attrNames` property), and the attribute value must be in the proper format expected by the data type.

**Value**—Text

**Editing Level**—Expert

`value-attribute-name` *value-attribute-name*—(Optional) List of LDAP attribute names to be used in constructing a value for the network data object. Specified attribute names if the agent publishes mappings or if you use a custom processor.

**Value**— List of attribute names. Use commas to separate entries.

**Editing Level**—Expert

`value-attribute-processor` *value-attribute-processor*—(Optional) The name of the Java class for processing the value object.

If specified, it will be used to produce the value network data object by using the list of attributes read from the directory. If no class is specified, there must be only one value attribute (in the `value.attrNames` property), and the attribute value must be in the proper format expected by the data type.

**Value**—Text

**Editing Level**—Expert

`network-data-types` *network-data-types*— Data types that the agent publishes.

For more information, see the documentation for the NIC resolution process.

If the agent publishes mappings, specify two data types in the format *key* , *value* . Use commas to separate entries.

**Value**— Data type in the format *key* or *key* , *value* , where

- *key* —Name of data key
- *value* — Name of data value

Example—IpPool, InterfaceId

**Default**— No value

**Editing Level**—Expert

`publishing-interval` *publishing-interval*—(Optional) Interval at which the NIC agent sends updates to the NIC resolvers.

**Value**— Number of seconds in the range 0–2147483647

**Default**—60

**Editing Level**—Expert

`event-life-expectancy` *event-life-expectancy*—(Optional) Length of time that data is valid after the NIC proxy receives data associated with events published by this agent.

**Value**— Number of seconds in the range 0–4294967295

- 0—Data does not expire
- Other values—Actual life expectancy of data

**Default**—0

**Editing Level**—Expert

`enable-eventing`—(Optional) Enable Eventing

**Default**—true

**Editing Level**—Expert

### Required Privilege Level

system

### Required Editing Level

Basic

## shared nic scenario *name* hosts

### Syntax

```
shared nic scenario name hosts name ...
```

### Hierarchy Level

```
[edit shared nic scenario name hosts]
```

### Description

Configure a NIC host for a specified NIC configuration scenario.

### Options

*name name*— Name of the NIC host.

**Value**—Text

### Required Privilege Level

system

### Required Editing Level

Basic

# shared nic scenario *name* hosts logger

## Syntax

```
shared nic scenario name hosts logger name ...
```

## Hierarchy Level

```
[edit shared nic scenario name hosts logger]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a logging component for NIC. Logging can be to a file or to the system logging utility.

## Options

`name name`— Name of a NIC logging component.

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Normal

## shared nic scenario *name* hosts logger *name* file

### Syntax

```
shared nic scenario name hosts logger name file {
    filter filter;
    filename filename;
    rollover-filename rollover-filename;
    maximum-file-size maximum-file-size;
}
```

### Hierarchy Level

```
[edit shared nic scenario name hosts logger name file]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure logging of messages to a file.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**— The default value is different for each type of component.

**Editing Level**—Basic

*filename filename*— Absolute path of the filename that contains the current logs.

**Note:** Make sure that the user under which the J2EE application server or Web application server runs has write access to this folder. If this user does not have write access to the default folder, configure the component or application to write logs in folders to which the user has write access.

**Value**— Filename

**Default**— No value

**Editing Level**—Basic

*rollover-filename rollover-filename*—(Optional) Absolute path of the filename that

contains the log history. When the log file reaches the maximum size, the software closes the log file and renames it with the name you specify for the rollover file. If a previous rollover file exists, the software overwrites it. The software then reopens the log file and continues to save event messages in it.

**Value**— Path of filename

Example—`/opt/UMC/sae/var/log/sae.alt`

**Default**— The default value is different for each type of component.

**Editing Level**—Normal

`maximum-file-size` *maximum-file-size*—(Optional) Maximum size of the log file and the rollover file.

Do not set the maximum file size to a value greater than the available disk space.

**Value**—Integer in the range 0–2147483647 kbytes

**Default**— 1000000

**Editing Level**—Normal

### Required Privilege Level

system

### Required Editing Level

Basic

## shared nic scenario *name* hosts logger *name* syslog

### Syntax

```
shared nic scenario name hosts logger name syslog {
    filter filter;
    host host;
    facility facility;
    format format;
}
```

### Hierarchy Level

```
[edit shared nic scenario name hosts logger name syslog]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure logging of messages to system logging.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**—/error-

**Editing Level**—Basic

*host host*— IP address or name of a host that collects event messages by means of a standard system logging daemon.

**Value**— IP address or hostname

**Default**—loghost

**Editing Level**—Basic

*facility facility*—(Optional) Type of system log in accordance with the system logging protocol.

**Value**—Integer in the range 0–23

**Default**— 3

**Editing Level**—Advanced

*format format*—(Optional) MessageFormat string that specifies how the information in an event message is printed. (The strings {#} are replaced with the log information [...]).

**Value**— MessageFormat string as specified in <http://java.sun.com/j2se/1.4.2/docs/api/java/text/MessageFormat.html>.

The fields available for events are:

- 0—Time and date of the event
- 1—Name of the thread generating the event
- 2—Text message of the event
- 3—Category of the event
- 4—Priority of the event

**Default**— None

**Editing Level**—Advanced

**Required Privilege Level**

system

**Required Editing Level**

Basic

## shared nic scenario *name* hosts *name* configuration

### Syntax

```
shared nic scenario name hosts name configuration {
    hosted-resolvers hosted-resolvers;
    hosted-agents hosted-agents;
}
```

### Hierarchy Level

```
[edit shared nic scenario name hosts name configuration]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure NIC hosts.

### Options

`hosted-resolvers hosted-resolvers`— List of resolvers that should run on this host.

**Value**— Names of NIC resolvers which include the path of the locations of the NIC resolvers relative to the static configuration object. A forward slash (/) separates components in a path.

Example—/realms/sharedIp/A1,/realms/sharedIp/B1,/realms/sharedIp/C1,/realms/ip/A1,/realms/ip/B1,/realms/ip/C1,/realms/dn/A1,/realms/dn/B1,/realms/dn/C1,/realms/login/A1,/realms/login/B1,/realms/login/C1,/realms/login/D1

**Default**— No value

**Editing Level**—Basic

`hosted-agents hosted-agents`— List of paths to NIC agents that this host supports.

**Value**— Names of NIC agents that include the path of the locations of the NIC agents relative to the static configuration object. A forward slash (/) separates components in a path.

Example—/agents/VrSaeId,/agents/Router, /agents/PoolInterfaceId,/agents/  
InterfaceIdInterface

**Default**— No value

**Editing Level**—Basic

### Required Privilege Level

system

### Required Editing Level

Basic

# shared nic scenario *name* hosts *name* configuration logger

## Syntax

shared nic scenario *name* hosts *name* configuration logger *name* ...

## Hierarchy Level

[edit shared nic scenario *name* hosts *name* configuration logger]

## Release Information

Statement introduced in SRC Release 1.0.0

## Options

name *name*—

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Normal

# shared nic scenario *name* hosts *name* configuration logger *name* file

## Syntax

```
shared nic scenario name hosts name configuration logger name file {
    filter filter;
    filename filename;
    rollover-filename rollover-filename;
    maximum-file-size maximum-file-size;
}
```

## Hierarchy Level

```
[edit shared nic scenario name hosts name configuration logger name file]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure logging of messages to a file.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**— The default value is different for each type of component.

**Editing Level**—Basic

*filename filename*— Absolute path of the filename that contains the current logs.

**Note:** Make sure that the user under which the J2EE application server or Web application server runs has write access to this folder. If this user does not have write access to the default folder, configure the component or application to write logs in folders to which the user has write access.

**Value**— Filename

**Default**— No value

**Editing Level**—Basic

*rollover-filename rollover-filename*—(Optional) Absolute path of the filename that contains the log history. When the log file reaches the maximum size, the software closes the log file and renames it with the name you specify for the rollover file. If a previous rollover file exists, the software overwrites it. The software then reopens the log file and continues to save event

messages in it.

**Value**— Path of filename

Example—`/opt/UMC/sae/var/log/sae.alt`

**Default**— The default value is different for each type of component.

**Editing Level**—Normal

`maximum-file-size` *maximum-file-size*—(Optional) Maximum size of the log file and the rollover file.

Do not set the maximum file size to a value greater than the available disk space.

**Value**—Integer in the range 0–2147483647 kbytes

**Default**— 1000000

**Editing Level**—Normal

**Required Privilege Level**

system

**Required Editing Level**

Basic

# shared nic scenario *name* hosts *name* configuration logger *name* syslog

## Syntax

```
shared nic scenario name hosts name configuration logger name syslog {
    filter filter;
    host host;
    facility facility;
    format format;
}
```

## Hierarchy Level

```
[edit shared nic scenario name hosts name configuration logger name syslog]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure logging of messages to system logging.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**—/error-

**Editing Level**—Basic

*host host*— IP address or name of a host that collects event messages by means of a standard system logging daemon.

**Value**— IP address or hostname

**Default**—loghost

**Editing Level**—Basic

*facility facility*—(Optional) Type of system log in accordance with the system logging protocol.

**Value**—Integer in the range 0–23

**Default**— 3

**Editing Level**—Advanced

*format format*—(Optional) MessageFormat string that specifies how the information in an event

message is printed. (The strings {#} are replaced with the log information [...]).

**Value**— MessageFormat string as specified in <http://java.sun.com/j2se/1.4.2/docs/api/java/text/MessageFormat.html>.

The fields available for events are:

- 0—Time and date of the event
- 1—Name of the thread generating the event
- 2—Text message of the event
- 3—Category of the event
- 4—Priority of the event

**Default**— None

**Editing Level**—Advanced

#### Required Privilege Level

system

#### Required Editing Level

Basic

## shared nic scenario *name* nic-locators

### Syntax

```
shared nic scenario name nic-locators name ...
```

### Hierarchy Level

```
[edit shared nic scenario name nic-locators]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a NIC locator or NIC proxy, a NIC component that requests data resolution.

### Options

`name name`— Name of the NIC locator.

**Value**—Text

### Required Privilege Level

system

### Required Editing Level

Normal

## shared nic scenario *name* nic-locators *name* resolution

### Syntax

```
shared nic scenario name nic-locators name resolution {
    resolver-name resolver-name;
    key-type key-type;
    value-type value-type;
    expect-multiple-values;
    constraints constraints;
}
```

### Hierarchy Level

```
[edit shared nic scenario name nic-locators name resolution]
```

### Description

Configure properties for a NIC proxy (NIC locator), the NIC component that requests information on behalf of an application.

*resolver-name resolver-name*— NIC resolver that the NIC proxy uses. This resolver must be the same as one that is configured on the NIC host.

**Value**— Path to the NIC resolver.

Example—/realms/ip/A1,/realms/dn/A1.

**Default**— No value

**Editing Level**—Basic

*key-type key-type*— Type of data used that the key provides for the NIC resolution. You can provide a qualifier to a data type to distinguish between different instances of a data type in a resolution scenario, or to provide information about a data type to clarify the use of that data type in a resolution.

**Value**— One of the following types:

- Ip —Subscriber's IP address
- Vr—Virtual router
- Interface—Name of router's interface
- InterfaceId—Identifier of an interface on the router
- Dn—LDAP distinguished name for subscriber
- LoginName—Subscriber login ID
- AnyString—Other information

To qualify data types, enter a qualifier within parentheses.

Example—LoginName(username).

**Default**— No value

**Editing Level**—Basic

`value-type` *value-type*— Type of value to be returned in the resolution. The value type varies according to the application that uses the NIC proxy.

**Value**— One of the following types:

- SaeId—SAE server ID
- LoginName—Subscriber login ID
- AnyString—Other information

To qualify data types, enter a qualifier within parentheses.

Example—LoginName(username).

**Default**— No value

**Editing Level**—Basic

`expect-multiple-values`—(Optional) Specifies whether or not the key can have multiple corresponding values.

**Editing Level**—Basic

`constraints` *constraints*—(Optional) Data type that a resolver uses during the resolution process. A constraint represents a condition that must or may be satisfied before the next stage of the resolution process can proceed.

Configure a constraint only if the constraint will be provided by the application in the resolution request. Typically, you do not need to configure constraints.

**Value**— Data types of constraints specified for the NIC resolution. Separate data types with commas.

**Default**— No value

**Editing Level**—Advanced

**Required Privilege Level**

system

**Required Editing Level**

Normal

# shared nic scenario *name* realms

## Syntax

```
shared nic scenario name realms name ...
```

## Hierarchy Level

```
[edit shared nic scenario name realms]
```

## Description

Configure a NIC realm, the NIC component that consists of a group of resolvers that perform a series of resolution tasks to provide a mapping from a specified key to a specified data type.

Typically, you use the default realm configuration for the NIC configuration scenarios in the SRC software.

## Options

`name name`— Name of the NIC realm.

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

# shared nic scenario *name* realms *name* configuration custom-resolver classname

## Syntax

```
shared nic scenario name realms name configuration custom-resolver classname name
{
    value;
}
```

## Hierarchy Level

```
[edit shared nic scenario name realms name configuration custom-
resolver classname]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure an identifier to distinguish between different instances of the same data type in a resolution sequence. For the value enter the name of the data type.

## Options

*name name*— Identifier to append to data type

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Advanced

# shared nic scenario *name* realms *name* configuration transitions

## Syntax

```
shared nic scenario name realms name configuration transitions name {
    value;
}
```

## Hierarchy Level

```
[edit shared nic scenario name realms name configuration transitions]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a set of resolution sequences that map a property to a value.

## Options

*name name*— Identifier for a resolution that represents one transition, or step, in the resolution process. Use ? to view the list of transitions for this realm, a group of resolvers that perform a series of resolution tasks to provide a mapping from a specified key to a specified data type.

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

## Required Privilege Level

system

## Required Editing Level

Normal

## shared nic scenario *name* realms *name* resolvers

### Syntax

```
shared nic scenario name realms name resolvers name ...
```

### Hierarchy Level

```
[edit shared nic scenario name realms name resolvers]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure NIC resolvers— the components that process NIC resolution requests.

Before you change the value of this statement or the value of any of the options for this statement, contact Juniper Networks Professional Services or Juniper Networks Customer Support.

### Options

*name* *name*— Name of the NIC resolver.

**Value**—Text

### Required Privilege Level

system

### Required Editing Level

Basic

# shared nic scenario *name* realms *name* resolvers *name* configuration

## Syntax

```
shared nic scenario name realms name resolvers name configuration {
    resolver-role resolver-role;
    resolvers-list resolvers-list;
    roles-list roles-list;
}
```

## Hierarchy Level

```
[edit shared nic scenario name realms name resolvers name configuration]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure resolution from a NIC key to a NIC value.

## Options

`resolver-role resolver-role`—Configure a transition that defines a key to value mapping.

**Value**—Text

**Editing Level**—Normal

`resolvers-list resolvers-list`—(Optional) Names of NIC resolvers to which this agent sends events. If you do not define a list of the NIC resolvers, you must define a list of roles.

**Value**—List of paths to NIC resolvers; paths are relative to the static configuration object. Separate resolvers with commas.

Example—`/realms/ip/A1, /realms/ip/B1`

**Default**—No value

**Editing Level**—Normal

`roles-list roles-list`—(Optional) Names of NIC roles to which this agent sends events. All resolvers that participate in a role receive events.

If you do not define the names of the NIC roles, you must define a list of resolvers.

**Value**— Names of NIC roles in the format *realmName* : *roleName* . Use commas to separate one role from another in the list.

**Default**— No value

**Editing Level**—Normal

**Required Privilege Level**

system

**Required Editing Level**

Basic

## slot *number* network-publisher directory-connection

### Syntax

```
slot number network-publisher directory-connection {
    url url;
    base-dn base-dn;
    principal principal;
    credentials credentials;
}
```

### Hierarchy Level

```
[edit slot number network-publisher directory-connection]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Configure directory connection properties that the network publisher uses to connect to the Juniper Networks database.

### Options

`url url`—(Optional) URL that the network publisher uses to connect to the Juniper Networks database.

**Value**— URL

**Default**—`ldap://127.0.0.1:389`

**Editing Level**—Basic

`base-dn base-dn`—(Optional) Specify the distinguished name (DN) of the subtree in the Juniper Networks database that stores data collected from JUNOS routing platforms.

**Value**— DN

**Default**—`o = Network, < base >`

**Editing Level**—Basic

`principal principal`—(Optional) Specify the DN that defines the username with which the network publisher accesses the Juniper Networks database.

**Value**— DN

**Default**—cn = cli,ou = Components,o = Operators, < base >

**Editing Level**—Basic

*credentials credentials*—(Optional) Specify the password with which the network publisher accesses the Juniper Networks database.

**Value**— *password*

**Default**—cli

**Editing Level**—Basic

### Required Privilege Level

No specific privilege required.

### Required Editing Level

Basic

# slot *number* network-publisher logger

## Syntax

```
slot number network-publisher logger name ...
```

## Hierarchy Level

```
[edit slot number network-publisher logger]
```

## Release Information

Statement introduced in SRC Release 3.0.0

## Description

Configure logging to a file or to a system log server.

## Options

`name name`— Configure logging to a file or to a system log server.

**Value**—Text

## Required Privilege Level

No specific privilege required.

## Required Editing Level

Basic

## slot *number* network-publisher logger *name* file

### Syntax

```
slot number network-publisher logger name file {
    filter filter;
    filename filename;
    rollover-filename rollover-filename;
    maximum-file-size maximum-file-size;
}
```

### Hierarchy Level

```
[edit slot number network-publisher logger name file]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Configure logging to save messages in a file.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**— The default value is different for each type of component.

**Editing Level**—Basic

*filename filename*— Absolute path of the filename that contains the current logs.

**Note:** Make sure that the user under which the J2EE application server or Web application server runs has write access to this folder. If this user does not have write access to the default folder, configure the component or application to write logs in folders to which the user has write access.

**Value**— Filename

**Default**— By default, SRC components and applications write log files in the folder in which the component or application is started.

**Editing Level**—Basic

`rollover-filename` *rollover-filename*—(Optional) Absolute path of the filename that contains the log history. When the log file reaches the maximum size, the software closes the log file and renames it with the name you specify for the rollover file. If a previous rollover file exists, the software overwrites it. The software then reopens the log file and continues to save event messages in it.

**Value**— Path of filename

Example—`/opt/UMC/sae/var/log/sae.alt`

**Default**— The default value is different for each type of component.

**Editing Level**—Normal

`maximum-file-size` *maximum-file-size*—(Optional) Maximum size of the log file and the rollover file.

Do not set the maximum file size to a value greater than the available disk space.

**Value**—Integer in the range 0–2147483647 kbytes

**Default**— 1000000

**Editing Level**—Normal

### Required Privilege Level

No specific privilege required.

### Required Editing Level

Basic

## slot *number* network-publisher logger *name* syslog

### Syntax

```
slot number network-publisher logger name syslog {
    filter filter;
    host host;
    facility facility;
    format format;
}
```

### Hierarchy Level

```
[edit slot number network-publisher logger name syslog]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Configure logging to send messages to the system log server.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**— The default value is different for each type of component.

**Editing Level**—Basic

*host host*— IP address or name of a host that collects event messages by means of a standard system logging daemon.

**Value**— IP address or hostname

**Default**—loghost

**Editing Level**—Basic

*facility facility*—(Optional) Type of system log in accordance with the system logging protocol.

**Value**—Integer in the range 0–23

**Default**— 3

**Editing Level**—Advanced

`format` *format*—(Optional) MessageFormat string that specifies how the information in an event message is printed. (The strings {#} are replaced with the log information [...]).

**Value**— MessageFormat string as specified in <http://java.sun.com/j2se/1.4.2/docs/api/java/text/MessageFormat.html>.

The fields available for events are:

- 0—Time and date of the event
- 1—Name of the thread generating the event
- 2—Text message of the event
- 3—Category of the event
- 4—Priority of the event

**Editing Level**—Advanced**Required Privilege Level**

No specific privilege required.

**Required Editing Level**

Basic

## slot *number* network-publisher routers

### Syntax

```
slot number network-publisher routers {
    router-release-number router-release-number;
    router-script-version router-script-version;
}
```

### Hierarchy Level

```
[edit slot number network-publisher routers]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Configure connections between JUNOS routing platforms and the network publisher. The network publisher connects to the JUNOScript server on a JUNOS routing platform. Properties defined at this hierarchy level are applied by all the configured JUNOS routing platforms unless you specify different properties for a particular device.

`router-release-number router-release-number`—(Optional) Release number of the JUNOS software running on the JUNOS routing platforms.

**Value**—Text

**Default**— No value

**Editing Level**—Basic

`router-script-version router-script-version`—(Optional) Version of JUNOScript running on the JUNOS routing platforms.

**Value**—Text

**Default**— 1.0

**Editing Level**—Expert

### Required Privilege Level

No specific privilege required.

**Required Editing Level**

Basic

## slot *number* network-publisher routers authentication

### Syntax

```
slot number network-publisher routers authentication {
    login-name login-name;
    credentials credentials;
    protocol (telnet | ssh);
}
```

### Hierarchy Level

```
[edit slot number network-publisher routers authentication]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Configure authentication properties for the JUNOS routing platforms to which the network publisher connects. Properties defined at this hierarchy level are applied to all the configured JUNOS routing platforms unless you specify different properties for a particular device.

### Options

`login-name login-name`—(Optional) Username to log in to the JUNOS software.

**Value**—Text

**Default**— No value

**Editing Level**—Basic

`credentials credentials`—(Optional) Password to log in to the JUNOS software.

**Value**— *password*

**Default**— No value

**Editing Level**—Basic

`protocol (telnet | ssh)`—(Optional) Authentication protocol that network publisher uses to access a JUNOS routing platform.

**Value**

- `telnet`— Use JUNOScript over a Telnet connection.
- `ssh`— (Recommended) Use JUNOScript over an SSH connection.

**Default**—`ssh`

**Editing Level**—Basic

### **Required Privilege Level**

No specific privilege required.

### **Required Editing Level**

Basic

## slot *number* network-publisher routers router

### Syntax

```
slot number network-publisher routers router router-name {
    address address;
    router-release-number router-release-number;
    router-script-version router-script-version;
}
```

### Hierarchy Level

```
[edit slot number network-publisher routers router]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Configure connections between a particular JUNOS routing platform and the network publisher. The network publisher connects to the JUNOScript server on a JUNOS routing platform. Properties defined at this hierarchy level take precedence over those defined at the slot 0 network-publisher routers hierarchy level.

### Options

*router-name router-name*— Name of a specific JUNOS routing platform.

**Value**—Text

*address address*— IP address of a JUNOS routing platform.

**Value**—IP address

**Editing Level**—Basic

*router-release-number router-release-number*—(Optional) Release number of the JUNOS software running on the JUNOS routing platforms.

**Value**—Text

**Default**— No value

**Editing Level**—Basic

`router-script-version` *router-script-version*—(Optional) Version of JUNOScript running on the JUNOS routing platforms.

**Value**—Text

**Default**—1.0

**Editing Level**—Expert

#### **Required Privilege Level**

No specific privilege required.

#### **Required Editing Level**

Basic

## slot *number* network-publisher routers router *router-name* authentication

### Syntax

```
slot number network-publisher routers router router-name authentication {
    login-name login-name;
    credentials credentials;
    protocol (telnet | ssh);
}
```

### Hierarchy Level

```
[edit slot number network-publisher routers router router-name authentication]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Configure authentication properties for the JUNOS routing platforms to which the network publisher connects. Properties defined at this hierarchy level are applied to all the configured JUNOS routing platforms unless you specify different properties for a particular device.

### Options

`login-name login-name`—(Optional) Username to log in to the JUNOS software.

**Value**—Text

**Default**— No value

**Editing Level**—Basic

`credentials credentials`—(Optional) Password to log in to the JUNOS software.

**Value**— *password*

**Default**— No value

**Editing Level**—Basic

`protocol (telnet | ssh)`—(Optional) Authentication protocol that network publisher uses to access a JUNOS routing platform.

**Value**

- `telnet`— Use JUNOScript over a Telnet connection.
- `ssh`— (Recommended) Use JUNOScript over an SSH connection.

**Default**—`ssh`

**Editing Level**—Basic

### Required Privilege Level

No specific privilege required.

### Required Editing Level

Basic

## slot *number* network-publisher routers router *router-name* test-mode

### Syntax

```
slot number network-publisher routers router router-name test-mode {
    enable-file-input;
    enable-file-output;
    input-location input-location;
    output-location output-location;
}
```

### Hierarchy Level

```
[edit slot number network-publisher routers router router-name test-mode]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Configure information to test the network publisher.

Use an input file to test a configuration before routes to the NIC are available or before VPNs are configured. You can also use an input file to set up a test configuration for demonstration purposes.

Use an output file to review the information that the network publisher has gathered.

### Options

`enable-file-input`—(Optional) Configure the network publisher to use data in a file, rather than in the directory, when you run the network publisher.

#### Editing Level—Basic

`enable-file-output`—(Optional) Configure the network publisher to collect data from JUNOS routing platforms and store that information in a file, rather than in the directory.

#### Editing Level—Basic

`input-location input-location`—(Optional) Location in the directory where input files are located. In most cases, you do not need to change the value of this option.

**Note:** Input filenames should be in the format `router_name_1.xml`. where `router_name` is the hostname of the JUNOS routing platform.

**Value**—Text

**Default**—`sample/junos/rt`

**Editing Level**—Advanced

`output-location` *output-location*—(Optional) Location in the directory where output files are located. In most cases, you do not need to change the value of this option.

**Note:** Output filenames should be in the format `router_name_1.xml` where `router_name` is the hostname of the JUNOS routing platform.

**Value**—Text

**Default**—`var/junos/rt`

**Editing Level**—Advanced

### Required Privilege Level

No specific privilege required.

### Required Editing Level

Basic

## slot *number* network-publisher routers test-mode

### Syntax

```
slot number network-publisher routers test-mode {
    enable-file-input;
    enable-file-output;
    input-location input-location;
    output-location output-location;
}
```

### Hierarchy Level

```
[edit slot number network-publisher routers test-mode]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Configure information to test the network publisher.

Use an input file to test a configuration before routes to the NIC are available or before VPNs are configured. You can also use an input file to set up a test configuration for demonstration purposes.

Use an output file to review the information that the network publisher has gathered.

### Options

`enable-file-input`—(Optional) Configure the network publisher to use data in a file, rather than in the directory, when you run the network publisher.

#### **Editing Level**—Basic

`enable-file-output`—(Optional) Configure the network publisher to collect data from JUNOS routing platforms and store that information in a file, rather than in the directory.

#### **Editing Level**—Basic

`input-location input-location`—(Optional) Location in the directory where input files are located. In most cases, you do not need to change the value of this option.

**Note:** Input filenames should be in the format `router_name_1.xml`, where `router_name` is the hostname of the JUNOS routing platform.

**Value**—Text

**Default**—`sample/junos/rt`

**Editing Level**—Advanced

`output-location` *output-location*—(Optional) Location in the directory where output files are located. In most cases, you do not need to change the value of this option.

**Note:** Output filenames should be in the format `router_name_1.xml` where `router_name` is the hostname of the JUNOS routing platform.

**Value**—Text

**Default**—`var/junos/rt`

**Editing Level**—Advanced

### Required Privilege Level

No specific privilege required.

### Required Editing Level

Basic

## slot *number* network-publisher select

### Syntax

```
slot number network-publisher select {
    route-table-filter route-table-filter;
    route-entry-filter route-entry-filter;
}
```

### Hierarchy Level

```
[edit slot number network-publisher select]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Specify the routing tables and the entries in the routing tables from which the network publisher collects routing information.

The network publisher can collect information from JUNOS IPv4 and IPv6 routing tables. By default, it collects information from all IPv4 routing tables, including tables for VPNs, and entries for all protocols. Based on your network configuration, consider which protocols to exclude from the configuration for network publisher.

The network publisher saves the information collected in the Juniper Networks database.

### Options

`route-table-filter route-table-filter`—(Optional) Routing table from which the network publisher collects information.

**Value**— Routing table name

**Editing Level**—Advanced

`route-entry-filter route-entry-filter`—(Optional) Routing table entry from which the network publisher collects information.

**Value**— Name of routing table entry

**Editing Level**—Advanced

**Required Privilege Level**

No specific privilege required.

**Required Editing Level**

Basic

## slot *number* nic

### Syntax

```
slot number nic {
    base-dn base-dn;
    java-runtime-environment java-runtime-environment;
    java-heap-size java-heap-size;
    java-new-size java-new-size;
    java-garbage-collection-options java-garbage-collection-options;
    java-64bit;
    snmp-agent;
    hostname hostname;
    scenario-name scenario-name;
    runtime-group runtime-group;
}
```

### Hierarchy Level

```
[edit slot number nic]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure NIC local operating properties.

### Options

*base-dn base-dn*— Distinguished name (DN) of the root directory for the NIC.

**Value**— DN

**Default**— o = umc

**Editing Level**—Basic

*java-runtime-environment java-runtime-environment*— Path to the Java runtime environment (JRE).

**Value**— Directory path

**Default**— ../jre/bin/java

**Editing Level**—Expert

`java-heap-size` *java-heap-size*— Maximum Java heap (memory) size available to the JRE. The value is inserted when the JRE starts. See documentation for the Java runtime environment for valid values.

**Value**— Number of megabytes in the format ###m

**Default**— 128m

**Editing Level**—Advanced

`java-new-size` *java-new-size*— Maximum Java new generation heap (memory) size available to the JRE when the NIC starts.

**Value**— Integer in the range 0– < Java heap size > . Specify the value in bytes or add m for megabytes, k for kilobytes, or g for gigabytes. For example, 64m. See the documentation for the JRE for valid values.

**Default**— 24m

**Editing Level**—Advanced

`java-garbage-collection-options` *java-garbage-collection-options*— Garbage collection functionality of the Java Virtual Machine.

**Value**— Options defined by the JVM

**Default**— -Xbatch -XX:CMSInitiatingOccupancyFraction = 80 -XX:

+ UseParNewGC -XX:SurvivorRatio = 1 -XX:InitialTenuringThreshold = 8 -

XX:MaxTenuringThreshold = 10 -XX: + UseCMSCompactAtFullCollection -

XX:CMSFullGCsBeforeCompaction = 0 -XX: + CMSClassUnloadingEnabled -

XX: + CMSParallelRemarkEnabled -XX: + UseConcMarkSweepGC

**Editing Level**—Advanced

`java-64bit`—(Optional) Start the java virtual machine in 64 bit mode

**Editing Level**—Basic

`snmp-agent`—(Optional) Enable the NIC to communicate with the SNMP agent. By using SNMP, you can view SNMP counters with an SNMP browser.

**Default**—false

**Editing Level**—Basic

`hostname` *hostname*— Name of the NIC host. In most cases, use the name DemoHost because this is the hostname used in most NIC configuration scenarios. Refer to the documentation to verify that the NIC configuration scenario you use includes DemoHost as the NIC host.

**Value**— NIC hostname

**Default**— DemoHost for most configuration scenarios

**Editing Level**—Basic

`scenario-name` *scenario-name*— Name of the NIC scenario under the static configuration namespace.

- Value**— NIC hostname
- Default**— DemoHost for most configuration scenarios
- Editing Level**—Basic

`runtime-group` *runtime-group*—(Optional) Group to which this NIC host belongs for use with NIC replication. NIC hosts that run in the same system must specify the same runtime group. If you do not specify a value for the group, the NIC host creates the configuration.

- Value**— Group name
- Default**— No value
- Editing Level**—Basic

**Required Privilege Level**

No specific privilege required.

**Required Editing Level**

Basic

## slot *number* nic initial

### Syntax

```
slot number nic initial {
    static-dn static-dn;
    dynamic-dn dynamic-dn;
}
```

### Hierarchy Level

```
[edit slot number nic initial]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure initial properties for the NIC.

### Options

`static-dn static-dn`—(Optional) Location of administrator-defined configuration data in the directory.

**Value**—Text

**Default**—l = NIC, ou = staticConfiguration, ou = Configuration,  
o = Management, o = umc

**Editing Level**—Expert

`dynamic-dn dynamic-dn`—(Optional) Location of programmatically defined configuration data in the directory.

**Value**—DN

**Default**— ou = dynamicConfiguration, ou = Configuration, o = Management,  
< base >

**Editing Level**—Expert

### Required Privilege Level

No specific privilege required.

**Required Editing Level**

Basic

## slot *number* nic initial directory-connection

### Syntax

```
slot number nic initial directory-connection {
    url url;
    backup-urls [backup-urls...];
    principal principal;
    credentials credentials;
    protocol (ldaps);
    timeout timeout;
    check-interval check-interval;
    blacklist;
    snmp-agent;
}
```

### Hierarchy Level

```
[edit slot number nic initial directory-connection]
```

### Description

Configure properties for the directory connection.

### Options

`url url`—(Optional) URL that identifies the location of the primary directory server.

**Value**— URL

**Default**—`ldap://127.0.0.1:389`

**Editing Level**—Basic

`backup-urls [backup-urls...]`—(Optional) URLs that identify the locations of backup directory servers. Backup servers are used if the primary directory server is not accessible.

**Value**— List of URLs

**Editing Level**—Basic

`principal principal`— DN that the SRC component uses for authentication to access the directory.

**Value**— DN.

When you specify the DN, you can use `<base>` to indicate the base DN.

**Editing Level**—Basic

`credentials` *credentials*— Password with which the SRC component accesses the directory.

**Value**— Password

**Editing Level**—Basic

`protocol` (`ldaps`)—(Optional) Security protocol used to connect to the directory. If you do not configure a security protocol, plain socket is used.

**Value**

- `ldaps`— LDAPS which uses SSL.

**Editing Level**—Expert

`timeout` *timeout*—(Optional) Maximum amount of time during which the directory must respond to a connection request.

**Value**—Integer in the range 1–2147483647 s

**Default**—10

**Editing Level**—Expert

`check-interval` *check-interval*—(Optional) Time interval at which the directory monitoring system verifies its connection to the directory. If the directory connection fails after this interval, the directory monitoring system initiates a connection to another directory.

**Value**—Integer in the range 15–2147483647 s

**Default**—60

**Editing Level**—Expert

`blacklist`—(Optional) Specifies whether the directory monitoring system prevents connection to a directory if the directory fails to respond during 10 polling intervals.

**Default**—false

**Editing Level**—Basic

`snmp-agent`—(Optional) Specifies whether the SDX SNMP agent exports MIBs for this directory connection.

**Default**—false  
**Editing Level**—Expert

**Required Privilege Level**

No specific privilege required.

**Required Editing Level**

Basic

## slot *number* nic initial directory-eventing

### Syntax

```
slot number nic initial directory-eventing {
    eventing;
    signature-dn signature-dn;
    polling-interval polling-interval;
    event-base-dn event-base-dn;
    dispatcher-pool-size dispatcher-pool-size;
}
```

### Hierarchy Level

```
[edit slot number nic initial directory-eventing]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Change configuration for directory eventing properties. In most cases, you can use the default configuration for these properties.

### Options

`eventing`—(Optional) Enable an SRC component to poll the directory for changes.

**Default**—true

**Editing Level**—Normal

`signature-dn signature-dn`—(Optional) DN of the directory entry that specifies the `usedDirectory` attribute for the SRC CLI. The `usedDirectory` attribute identifies the vendor of the directory server.

**Value**—DN

**Default**—o = umc

**Editing Level**—Expert

`polling-interval polling-interval`—(Optional) Interval at which an SRC component polls the directory to check for directory changes.

**Value**—Integer in the range 15–2147483647 s

**Default**—30**Editing Level**—Normal`event-base-dn` *event-base-dn*—(Optional)

DN of an entry superior to the data associated with an SRC component in the directory.

If you are storing non-SRC data in the directory, and that data changes frequently whereas the SRC data does not, you may need to adjust the default value to improve performance. For optimal performance, set the value to the DN of an entry superior to both the SRC data and the changing non-SRC data.

**Value**—DN**Default**—o = UMC**Editing Level**—Expert

`dispatcher-pool-size` *dispatcher-pool-size*—(Optional) Number of directory change notifications that can be sent simultaneously to the SRC component.

**Value**—Integer in the range 0–2147483647**Default**—1**Editing Level**—Expert**Required Privilege Level**

No specific privilege required.

**Required Editing Level**

Basic

# request network-publisher execute

## Syntax

```
request network-publisher execute
```

## Release Information

Command introduced in SRC Release 3.0.0

## Description

Run the network publisher. The network publisher is a NIC component that connects to JUNOS routing platforms and collects information, such as information about system interfaces and VPNs, from IPv4 and IPv6 routing tables. After collecting the information, the network publisher stores this information in the Juniper Networks database for access by the NIC.

Before you run this command, make sure that the network publisher is configured and that the NIC is enabled.

## Required Privilege Level

maintenance

# request nic clear scenario-data

## Syntax

```
request nic clear scenario-data
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Remove data stored for NIC scenarios. Run this command when you switch from one NIC configuration scenario to another.

Before you run this command, disable NIC by using the `disable component nic` command.

## Required Privilege Level

maintenance

# request nic restart agent

## Syntax

```
request nic restart agent <name name>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Restart NIC agents. If you do not specify an agent name, the software restarts all NIC agents.

You can restart a NIC agent to have the agent read all data in the directory again. Restart a NIC agent if the agent is not synchronized with the directory, or if you switch from one directory to another.

## Options

`name name`—(Optional) Name of the NIC agent to restart.

**Value**— Agent name. The agents included with the SRC software are:

- AcctIdIp
- DnVr
- Enterprise
- IpAcctId
- IpLoginName
- IpVr
- LoginNameVr
- PoolVr
- UserNameVr
- VrSaeId

**Default**— No value

## Required Privilege Level

maintenance

# request nic restart resolver

## Syntax

```
request nic restart resolver <name name>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Restart NIC resolvers. If you do not specify a resolver name, the software restarts all resolvers.

In rare instances, such as when you are troubleshooting a NIC configuration, you may want to restart a NIC resolver.

## Options

`name name`—(Optional) Name of the NIC resolver to restart.

**Value**— Resolver name

**Default**— No value

## Required Privilege Level

maintenance

## show nic data

### Syntax

```
show nic data <maximum-results maximum-results>
```

### Release Information

Command introduced in SRC Release 1.0.0

### Description

Display data that NIC uses during resolutions.

### Options

`maximum-results maximum-results`—(Optional) Number of results to be displayed.

**Value**—Integer in the range 1–2147483647

**Default**—25

### Required Privilege Level

view

# show nic data agent

## Syntax

```
show nic data agent <name name>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display the data that NIC agents store.

## Options

*name name*—(Optional) Name of a NIC agent.

**Value**— Agent name. The agents included with the SRC software are:

- AcctIdIp
- DnVr
- Enterprise
- IpAcctId
- IpLoginName
- IpVr
- LoginNameVr
- PoolVr
- UserNameVr
- VrSaeId

**Default**— No value

## Required Privilege Level

view

## show nic data resolver

### Syntax

```
show nic data resolver <name name>
```

### Release Information

Command introduced in SRC Release 1.0.0

### Description

Display data that NIC resolvers store.

### Options

name *name*—(Optional) Name of a NIC resolver.

**Value**— Resolver name

**Default**— No value

### Required Privilege Level

view

# show nic statistics

## Syntax

```
show nic statistics
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display statistics for NIC.

## Required Privilege Level

view

# show nic statistics agent

## Syntax

```
show nic statistics agent <name name>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display statistics for NIC agents. If you do not specify an agent name, the command displays statistics for all NIC agents.

## Options

*name name*—(Optional) Name of a NIC agent.

**Value**— Agent name. The agents included with the SRC software are:

- AcctIdIp
- DnVr
- Enterprise
- IpAcctId
- IpLoginName
- IpVr
- LoginNameVr
- PoolVr
- UserNameVr
- VrSaeId

**Default**— No value

## Required Privilege Level

view

# show nic statistics host

## Syntax

```
show nic statistics host
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display statistics for the NIC host.

## Required Privilege Level

view

## **show nic statistics process**

### **Syntax**

```
show nic statistics process
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Display process information for the NIC.

### **Required Privilege Level**

view

# show nic statistics resolver

## Syntax

```
show nic statistics resolver <name name>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display statistics for NIC resolvers. If you do not specify a resolver name, the software displays statistics for all resolvers.

## Options

`name name`—(Optional) Name of a NIC resolver.

**Value**— Resolver name

**Default**— No value

## Required Privilege Level

view

# test nic resolve

## Syntax

```
test nic resolve locator locator key key <constraints constraints>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Issue a resolution request to the NIC host to test NIC resolution for a specified key.

## Options

*locator locator*— Name of a NIC locator. A NIC locator can resolve the value of one or more NIC keys. Each NIC configuration scenario provides configuration for an associated NIC locator.

**Value**— Name of a NIC locator

*key key*— The NIC key to resolve.

**Value**— NIC key in the form `NIC data type:key string`; for example:  
Ip:10.10.10.10.

*constraints constraints*—(Optional) List of values for NIC constraints. Constraints are NIC data types that a resolver uses when it executes a role (also referred to as a transition) in the resolution process. A role resolves a NIC key to a NIC value.

**Value**— Constraints in the form: `[constraint (,constraint)*]`. For each constraint, use the format: `NIC data type:key string`. For example,  
[AnyString(conn):false, domain:virneo]

## Required Privilege Level

maintenance

# SNMP Agent

The following table summarizes the SRC command-line interface (SRC CLI) for configuring the SNMP agent. Configuration statements are listed in alphabetical order.

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<a href="#">snmp</a>
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<a href="#"><u>snmp notify event category</u></a>
<a href="#"><u>snmp notify event category category-name event</u></a>
<a href="#"><u>snmp notify target</u></a>
<a href="#"><u>snmp v3 snmp-community</u></a>
<a href="#"><u>snmp v3 usm local-engine user</u></a>
<a href="#"><u>snmp v3 usm local-engine user username authentication-md5</u></a>
<a href="#"><u>snmp v3 usm local-engine user username authentication-sha</u></a>
<a href="#"><u>snmp v3 usm local-engine user username privacy-aes</u></a>
<a href="#"><u>snmp v3 usm local-engine user username privacy-des</u></a>
<a href="#"><u>snmp v3 vacm access group</u></a>
<a href="#"><u>snmp v3 vacm access group group-name default-context-prefix security-model</u></a>
<a href="#"><u>snmp v3 vacm access group group-name default-context-prefix security-model security-level</u></a>
<a href="#"><u>snmp v3 vacm security-to-group security-model</u></a>
<a href="#"><u>snmp v3 vacm security-to-group security-model security-name</u></a>
<a href="#"><u>snmp view</u></a>
<a href="#"><u>snmp view view-name oid</u></a>

# snmp

## Syntax

```
snmp {
    contact contact;
    name name;
    location location;
    description description;
    address [address...];
}
```

## Hierarchy Level

```
[edit snmp]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure SNMP system information.

## Options

`contact contact`—(Optional) Administrative contact for the system being managed by SNMP.

**Value**—Text

**Editing Level**—Basic

`name name`—(Optional) Name of the system being managed by SNMP.

**Value**—Text

**Editing Level**—Basic

`location location`—(Optional) Location of the system being managed by SNMP.

**Value**—Text

**Editing Level**—Basic

`description` *description*—(Optional) Description of the system being managed by SNMP.

**Value**—Text  
**Editing Level**—Basic

`address` [*address . . .*]—(Optional) Listening address on which to receive incoming SNMP requests.

**Value**— IP address; list of addresses.  
**Default**— The SNMP agent listens on all IPv4 interfaces.  
**Editing Level**—Basic

**Required Privilege Level**

snmp

**Required Editing Level**

Basic

# snmp agent

## Syntax

```
snmp agent {
    trap-history-limit trap-history-limit;
    component-polling-interval component-polling-interval;
    protocol-log-level protocol-log-level;
}
```

## Hierarchy Level

```
[edit snmp agent]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure SNMP agent.

## Options

*trap-history-limit trap-history-limit*—(Optional) Maximum number of elements stored in the SNMP trap history table.

**Value**—Integer in the range 1–2147483647

**Default**—800

**Editing Level**—Basic

*component-polling-interval component-polling-interval*—(Optional) Interval at which the SRC component is polled to determine whether it is running and to generate up and down event traps.

**Value**—Integer in the range 10–2147483647 seconds

**Default**—60

**Editing Level**—Basic

*protocol-log-level protocol-log-level*—(Optional) The log level for SNMP requests received from the master agent and responses to the requests. To enable packet-level logging, set it to 9 or less.

**Value**—Integer in the range 0–100

**Default**—20  
**Editing Level**—Expert

**Required Privilege Level**

snmp

**Required Editing Level**

Basic

# snmp agent initial

## Syntax

```
snmp agent initial {
    base-dn base-dn;
    host-id host-id;
}
```

## Hierarchy Level

```
[edit snmp agent initial]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure initial properties for the SNMP agent.

## Options

*base-dn base-dn*— DN of the directory used for the SNMP agent configuration data.

**Value**— DN

**Default**—\${system ldap client base-dn}

**Editing Level**—Basic

*host-id host-id*— Identifier of the system management configuration in the directory server that provides the remaining configuration for the SNMP agent. If the entry does not exist, the entry and the subentries for the components and traps is automatically created in the system management configuration.

**Value**— DN

**Default**—ou = POP-ID,ou = System Management,ou = Configuration,  
o = Management,o = umc

**Editing Level**—Basic

## Required Privilege Level

snmp

**Required Editing Level**

Basic

## snmp agent initial directory-connection

### Syntax

```
snmp agent initial directory-connection {
    url url;
    backup-urls [backup-urls...];
    principal principal;
    credentials credentials;
    protocol (ldaps);
    timeout timeout;
    check-interval check-interval;
    blacklist;
    snmp-agent;
}
```

### Hierarchy Level

```
[edit snmp agent initial directory-connection]
```

### Description

Configure properties for the directory connection.

### Options

`url url`—(Optional) URL that identifies the location of the primary directory server.

**Value**— URL

**Default**—`ldap://127.0.0.1:389`

**Editing Level**—Basic

`backup-urls [backup-urls...]`—(Optional) URLs that identify the locations of backup directory servers. Backup servers are used if the primary directory server is not accessible.

**Value**— List of URLs

**Editing Level**—Basic

`principal principal`— DN that the SRC component uses for authentication to access the directory.

**Value**— DN.

When you specify the DN, you can use `< base >` to indicate the base DN.

**Editing Level**—Basic

`credentials` *credentials*— Password with which the SRC component accesses the directory.

**Value**— Password

**Editing Level**—Basic

`protocol` (`ldaps`)—(Optional) Security protocol used to connect to the directory. If you do not configure a security protocol, plain socket is used.

**Value**

- `ldaps`— LDAPS which uses SSL.

**Editing Level**—Expert

`timeout` *timeout*—(Optional) Maximum amount of time during which the directory must respond to a connection request.

**Value**—Integer in the range 1–2147483647 s

**Default**—10

**Editing Level**—Expert

`check-interval` *check-interval*—(Optional) Time interval at which the directory monitoring system verifies its connection to the directory. If the directory connection fails after this interval, the directory monitoring system initiates a connection to another directory.

**Value**—Integer in the range 15–2147483647 s

**Default**—60

**Editing Level**—Expert

`blacklist`—(Optional) Specifies whether the directory monitoring system prevents connection to a directory if the directory fails to respond during 10 polling intervals.

**Default**—false

**Editing Level**—Basic

`snmp-agent`—(Optional) Specifies whether the SDX SNMP agent exports MIBs for this directory connection.

**Default**—false  
**Editing Level**—Expert

**Required Privilege Level**

snmp

**Required Editing Level**

Basic

## snmp agent initial directory-eventing

### Syntax

```
snmp agent initial directory-eventing {
    eventing;
    signature-dn signature-dn;
    polling-interval polling-interval;
    event-base-dn event-base-dn;
    dispatcher-pool-size dispatcher-pool-size;
}
```

### Hierarchy Level

```
[edit snmp agent initial directory-eventing]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Change configuration for directory eventing properties. In most cases, you can use the default configuration for these properties.

### Options

`eventing`—(Optional) Enable an SRC component to poll the directory for changes.

**Default**—true

**Editing Level**—Normal

`signature-dn signature-dn`—(Optional) DN of the directory entry that specifies the usedDirectory attribute for the SRC CLI. The usedDirectory attribute identifies the vendor of the directory server.

**Value**—DN

**Default**—o = umc

**Editing Level**—Expert

`polling-interval polling-interval`—(Optional) Interval at which an SRC component polls the directory to check for directory changes.

**Value**—Integer in the range 15–2147483647 s

**Default**—30**Editing Level**—Normal`event-base-dn` *event-base-dn*—(Optional)

DN of an entry superior to the data associated with an SRC component in the directory.

If you are storing non-SRC data in the directory, and that data changes frequently whereas the SRC data does not, you may need to adjust the default value to improve performance. For optimal performance, set the value to the DN of an entry superior to both the SRC data and the changing non-SRC data.

**Value**—DN**Default**—o = UMC**Editing Level**—Expert

`dispatcher-pool-size` *dispatcher-pool-size*—(Optional) Number of directory change notifications that can be sent simultaneously to the SRC component.

**Value**—Integer in the range 0–2147483647**Default**—1**Editing Level**—Expert**Required Privilege Level**

snmp

**Required Editing Level**

Basic

# snmp agent java

## Syntax

```
snmp agent java {
    heap-size heap-size;
}
```

## Hierarchy Level

```
[edit snmp agent java]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure local Java Runtime Environment (JRE) properties for the SNMP agent.

## Options

*heap-size heap-size*—(Optional) Maximum amount of Java heap (memory) available to the JRE. Do not change this value unless instructed to do so by Juniper Networks.

**Value**— Number of megabytes in the format *integerm*

**Default**—160m

**Editing Level**—Basic

## Required Privilege Level

snmp

## Required Editing Level

Basic

# snmp agent logger

## Syntax

```
snmp agent logger name ...
```

## Hierarchy Level

```
[edit snmp agent logger]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure the logging destination.

## Options

`name name`— Name used to group parameters for the logging destination.

**Value**—Text

## Required Privilege Level

snmp

## Required Editing Level

Basic

## snmp agent logger *name* file

### Syntax

```
snmp agent logger name file {
    filter filter;
    filename filename;
    rollover-filename rollover-filename;
    maximum-file-size maximum-file-size;
}
```

### Hierarchy Level

```
[edit snmp agent logger name file]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the logging destination for file-based logging.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**— The default value is different for each type of component.

**Editing Level**—Basic

*filename filename*— Absolute path of the filename that contains the current logs.

**Note:** Make sure that the user under which the J2EE application server or Web application server runs has write access to this folder. If this user does not have write access to the default folder, configure the component or application to write logs in folders to which the user has write access.

**Value**— Filename

**Default**— By default, SRC components and applications write log files in the folder in which the component or application is started.

**Editing Level**—Basic

`rollover-filename rollover-filename`—(Optional) Absolute path of the filename that contains the log history. When the log file reaches the maximum size, the software closes the log file and renames it with the name you specify for the rollover file. If a previous rollover file exists, the software overwrites it. The software then reopens the log file and continues to save event messages in it.

**Value**— Path of filename

Example—`/opt/UMC/sae/var/log/sae.alt`

**Default**— The default value is different for each type of component.

**Editing Level**—Normal

`maximum-file-size maximum-file-size`—(Optional) Maximum size of the log file and the rollover file.

Do not set the maximum file size to a value greater than the available disk space.

**Value**—Integer in the range 0–2147483647 kbytes

**Default**— 1000000

**Editing Level**—Normal

## Required Privilege Level

snmp

## Required Editing Level

Basic

## snmp agent logger *name* syslog

### Syntax

```
snmp agent logger name syslog {
    filter filter;
    host host;
    facility facility;
    format format;
}
```

### Hierarchy Level

```
[edit snmp agent logger name syslog]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the logging destination for syslog-based logging.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**— The default value is different for each type of component.

**Editing Level**—Basic

*host host*— IP address or name of a host that collects event messages by means of a standard system logging daemon.

**Value**— IP address or hostname

**Default**—loghost

**Editing Level**—Basic

*facility facility*—(Optional) Type of system log in accordance with the system logging protocol.

**Value**—Integer in the range 0–23

**Default**— 3

**Editing Level**—Advanced

*format format*—(Optional) MessageFormat string that specifies how the information in an event message is printed. (The strings {#} are replaced with the log information [...]).

**Value**— MessageFormat string as specified in <http://java.sun.com/j2se/1.4.2/docs/api/java/text/MessageFormat.html>.

The fields available for events are:

- 0—Time and date of the event
- 1—Name of the thread generating the event
- 2—Text message of the event
- 3—Category of the event
- 4—Priority of the event

**Editing Level**—Advanced**Required Privilege Level**

snmp

**Required Editing Level**

Basic

# snmp community

## Syntax

```
snmp community community {
    authorization (read-only | read-write);
    clients clients;
    oid oid;
}
```

## Hierarchy Level

```
[edit snmp community]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a community string, which defines the access control for client systems.

## Options

`community community`—Community name.

**Value**—Text

`authorization (read-only | read-write)`—(Optional) Authorization type.

**Value**

- `read-only`—Allow read-only access
- `read-write`—Allow read and write access

**Default**—`read-only`

**Editing Level**—Basic

`clients clients`—IP address or subnet of the SNMP client hosts that are authorized to use this community. By default, all clients are allowed.

**Value**—Text

**Default**—0.0.0.0/0  
**Editing Level**—Basic

`oid oid`—(Optional) Object identifier (OID) used to represent a subtree of MIB objects to which access is allowed.

**Value**—Text  
**Default**— Access to the full OID tree  
**Editing Level**—Basic

**Required Privilege Level**

snmp

**Required Editing Level**

Basic

# snmp monitor

## Syntax

```
snmp monitor {
    security-name security-name;
}
```

## Hierarchy Level

```
[edit snmp monitor]
```

## Release Information

Statement introduced in SRC Release 3.0.0

## Description

Provide active monitoring of SRC MIB objects as configured. The software generates associated notification events when specified criteria are met.

## Options

*security-name security-name*—SNMPv3 username to access a monitored MIB object.  
SNMPv3 provides security by controlling access to the objects.

**Value**— *username*

**Default**— No value

**Editing Level**—Normal

## Required Privilege Level

snmp

## Required Editing Level

Normal

# snmp monitor alarm

## Syntax

```
snmp monitor alarm name {
    interval interval;
    sample-type (absolute-value | delta-value);
    ignore-startup-alarm;
    event event;
    variable variable;
    strict-oid;
}
```

## Hierarchy Level

```
[edit snmp monitor alarm]
```

## Release Information

Statement introduced in SRC Release 3.0.0

## Description

Monitor the value of a MIB object. You can configure how often to sample a value, the type of sampling to perform, the type of alarm or trigger to use the sampled value, and the event to generate in response to a specified condition.

**Note:** Configure one alarm condition at a time.

## Options

*name name*— Name of the alarm (also referred to as a trigger).

**Value**—Text

*interval interval*— Interval between monitoring samples.

**Value**—Integer in the range seconds

**Default**—600

**Editing Level**—Normal

*sample-type (absolute-value | delta-value)*— Method of sampling to use for the specified variable.

**Note:** Existence tests disregard the sample type when set to delta-value.

**Value**

- **absolute-value**— Use actual value of the trigger to compare to the threshold value.
- **delta-value**— Use the delta (difference between two samples) to compare to the value.

**Default**— No value

**Editing Level**—Normal

**ignore-startup-alarm**—(Optional) Whether the alarm can be sent when it is first activated. If this option is set, the monitor expression is not evaluated when the alarm activates the first time. If not set, the first evaluation is done after the alarm is activated.

**Default**—false

**Editing Level**—Normal

**event** *event*—(Optional) The name of the event to be generated in response to the alarm condition. If you do not specify an event, the software uses one of the following DISMAN notification events: `mteTriggerFired` in existence or boolean tests, and `mteTriggerRising` or `mteTriggerFalling` in threshold tests.

**Value**— *event name*

**Default**— None

**Editing Level**—Normal

**variable** *variable*— Object identifier (OID) of the MIB variable to be monitored. The OID can be a an identifier in dotted decimal notation or the name of a MIB object.

**Value**— *OID or name*

**Default**— No value

**Editing Level**—Normal

**strict-oid**—(Optional) Monitor the SNMP object instance specified by the variable attribute. If you do not set this option, the software monitors all objects in the MIB branch specified by the variable option.

**Default**—false

**Editing Level**—Normal

**Required Privilege Level**

snmp

**Required Editing Level**

Normal

## snmp monitor alarm *name* boolean-test

### Syntax

```
snmp monitor alarm name boolean-test {
    comparison (equal | unequal | less | less-or-equal | greater | greater-or-
equal);
    value value;
}
```

### Hierarchy Level

```
[edit snmp monitor alarm name boolean-test]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Define a monitor test to compare a sample value to a specified value or range of values. If the condition specified for the test is met, the software generates the event. The software generates the event again after the status of the condition changes to false then to true again.

**Note:** Configure only one monitor test at a time.

### Options

`comparison (equal | unequal | less | less-or-equal | greater | greater-or-equal)`— Type of boolean comparison to perform.

### Value

- `equal`— True if the sample value equals object value.
- `unequal`— True if the sample value does not equal the object value.
- `less`— True if the sample is less than the object value.
- `less-or-equal`— True if the sample value is less than or equal to the object value.
- `greater`— True if the sample value is greater than the object value.
- `greater-or-equal`— True if the sample value is greater than or equal to the object value.

**Default**— No value

**Editing Level**—Normal

value *value*— Value against which to compare the sample value.

**Value**—Integer in the range -2147483648–2147483647

**Default**— No Value

**Editing Level**—Normal

**Required Privilege Level**

snmp

**Required Editing Level**

Normal

## snmp monitor alarm *name* delta-discontinuity-check

### Syntax

```
snmp monitor alarm name delta-discontinuity-check {
    variable variable;
    strict-oid;
}
```

### Hierarchy Level

```
[edit snmp monitor alarm name delta-discontinuity-check]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Configure SNMP to detect a discontinuity in values to prevent false alarms caused by the value of a MIB object being reset. Use this statement when the sample type is delta-value (a change in the value of a monitored MIB object is compared to a threshold value). You define a variable, called a discontinuity marker, which is a MIB object to use to validate the delta, or difference, between values. The marker object should be of type TimeTicks, DateAndTime, or Timestamp.

Before the SNMP agent calculates a delta, it checks the discontinuity marker for the trigger condition at the end of a polling interval. A change in the value of the discontinuity marker indicates that a discontinuity occurs. As a result, the agent does not perform the test for the associated trigger condition until the next polling interval.

### Options

`variable variable`— Object identifier (OID) or name of a discontinuity marker.

**Value**— Marker object of type TimeTicks, DateAndTime or Timestamp

**Default**— No value

**Editing Level**—Normal

`strict-oid`—(Optional) Monitor the discontinuity marker instance specified by the variable attribute. If you do not set this option, the software monitors all discontinuity objects subordinate to the value set by the variable option.

**Default**—false

**Editing Level**—Normal

**Required Privilege Level**

snmp

**Required Editing Level**

Normal

## snmp monitor alarm *name* existence-test

### Syntax

```
snmp monitor alarm name existence-test {
    type (present | absent | changed);
}
```

### Hierarchy Level

```
[edit snmp monitor alarm name existence-test]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Define a monitor test to identify when an object appears, disappears, or changes value. If the test criteria are met, the test is successful.

**Note:** Configure only one monitor test at a time.

### Options

`type (present | absent | changed)` — Type of monitor test to perform.

#### Value

- `present` — Test for appearance of object.
- `absent` — Test for disappearance of object.
- `changed` — Test for change in value of object.

**Default** — No value

**Editing Level** — Normal

### Required Privilege Level

snmp

**Required Editing Level**

Normal

## snmp monitor alarm *name* threshold-test

### Syntax

```
snmp monitor alarm name threshold-test {
    rising-threshold rising-threshold;
    falling-threshold falling-threshold;
}
```

### Hierarchy Level

```
[edit snmp monitor alarm name threshold-test]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Define a threshold monitor test. A threshold test compares the sample value to a configured upper and lower threshold. The monitor generates a corresponding event when the value of the monitored object falls below the lower threshold or rises above the upper threshold.

After a rising threshold event is generated, it is generated again only after the sample value falls below the lower threshold. Similarly, a subsequent falling threshold event is generated when the sample value rises above the upper threshold.

**Note:** Configure only one monitor test at a time.

### Options

*rising-threshold* *rising-threshold*— Upper threshold for the sample value. The software generates an event when the sample value is greater than or equal to the rising threshold, and the value at the last sampling interval is less than this threshold.

**Value**—Integer in the range -2147483648–2147483647

**Default**— No value

**Editing Level**—Normal

*falling-threshold* *falling-threshold*— Lower threshold for the sample value. The software generates an event when the sample value is less than or equal to the falling threshold, and the value at the last sampling interval is greater than this threshold.

**Value**—Integer in the range -2147483648–2147483647

**Default**— No value

**Editing Level**—Normal

**Required Privilege Level**

snmp

**Required Editing Level**

Normal

## snmp monitor event

### Syntax

```
snmp monitor event name ...
```

### Hierarchy Level

```
[edit snmp monitor event]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Options

*name name*— The name of the event to be invoked in response to a trigger or an alarm. When the event is invoked, SNMP sends a notification or an snmp-set.

**Value**—Text

### Required Privilege Level

snmp

### Required Editing Level

Normal

## snmp monitor event *name* notification

### Syntax

```
snmp monitor event name notification {
    oid oid;
    strict-object [strict-object...];
    wildcarded-object [wildcarded-object...];
}
```

### Hierarchy Level

```
[edit snmp monitor event name notification]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Define an event for which SNMP sends a notification.

**Note:** Do not define an event notification and an snmp-set for the same event.

### Options

oid *oid*— Notification Object identifier (OID).

**Value—** *OID*

**Default—** No value

**Editing Level—**Normal

strict-object [*strict-object...*]—(Optional) OIDs of VARBIND objects to be used as specified

**Value—** *OID*

**Default—** No value

**Editing Level—**Normal

wildcarded-object [*wildcarded-object...*]—(Optional) OIDs of VARBIND objects include subidentifiers from the corresponding monitored object appended to the object.

**Value—** *OID*

**Default**— No value  
**Editing Level**—Normal

**Required Privilege Level**

snmp

**Required Editing Level**

Normal

## snmp monitor event *name* snmp-set

### Syntax

```
snmp monitor event name snmp-set {
    variable variable;
    value value;
    strict-oid;
}
```

### Hierarchy Level

```
[edit snmp monitor event name snmp-set]
```

### Release Information

Statement introduced in SRC Release 3.0.0

### Description

Define an event that sets a MIB variable. Do not define an event notification and an snmp-set for the same event.

### Options

*variable variable*— Object identifier (OID) of MIB variable to be set

**Value**— *OID*

**Default**— No value

**Editing Level**—Normal

*value value*— Object value to set

**Value**—Integer in the range -2147483648–2147483647

**Default**— No value

**Editing Level**—Normal

*strict-oid*—(Optional) Monitor the OID exactly as specified by the variable option. If not set, the software adds any suffixes to any OID matches.

**Default**—false

**Editing Level**—Normal

**Required Privilege Level**

snmp

**Required Editing Level**

Normal

# snmp notify alarm category

## Syntax

```
snmp notify alarm category category-name ...
```

## Hierarchy Level

```
[edit snmp notify alarm category]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure alarm category.

## Options

*category-name category-name*— Category name for alarm.

**Value**— Category name from list of possible completions, including:

- acp
- jps
- nic-host
- policy-decision-point
- policy-engine
- radius-accounting-peer
- radius-authentication-peer
- sae
- sae-router-driver
- sdx-redirector
- system-management

## Required Privilege Level

snmp

## Required Editing Level

Basic

## snmp notify alarm category *category-name* alarm

### Syntax

```
snmp notify alarm category category-name alarm alarm-name {
    interval interval;
    critical critical;
    major major;
    minor minor;
}
```

### Hierarchy Level

```
[edit snmp notify alarm category category-name alarm]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure alarm.

### Options

*alarm-name alarm-name*— Alarm name.

**Value**— Alarm name from list of possible completions, depending on the specified alarm category

*interval interval*—(Optional) Interval at which the variable associated with the trap is polled.

**Value**—Integer in the range 1–2147483647

**Default**—60

**Editing Level**—Basic

*critical critical*— Threshold above which a critical alarm is generated.

**Value**—Integer in the range 0–2147483647

**Editing Level**—Basic

major *major*— Threshold above which a major alarm is generated.

**Value**—Integer in the range 0–2147483647

**Editing Level**—Basic

minor *minor*— Threshold above which a minor alarm is generated.

**Value**—Integer in the range 0–2147483647

**Editing Level**—Basic

### Required Privilege Level

snmp

### Required Editing Level

Basic

# snmp notify event category

## Syntax

```
snmp notify event category category-name ...
```

## Hierarchy Level

```
[edit snmp notify event category]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure event category.

## Options

*category-name* *category-name*— Category name for event trap.

**Value**— Category name from list of possible completions, including:

- acp
- directory-eventing-system
- jps
- nic-host
- sae
- sae-router-driver
- system-management

## Required Privilege Level

snmp

## Required Editing Level

Basic

## snmp notify event category *category-name* event

### Syntax

```
snmp notify event category category-name event event-name ...
```

### Hierarchy Level

```
[edit snmp notify event category category-name event]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Enable event notification.

### Options

*event-name* *event-name*— Event trap name.

**Value**— Event name from list of possible completions, depending on the specified event category

### Required Privilege Level

snmp

### Required Editing Level

Basic

# snmp notify target

## Syntax

```
snmp notify target target-name {
    address address;
    port port;
    community community;
    type (trapv1 | trapv2 | inform);
}
```

## Hierarchy Level

```
[edit snmp notify target]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure notification target.

## Options

*target-name target-name*— Notification target name.

**Value**—Text

*address address*— IPv4 or IPv6 address of the system to receive notifications.

**Value**—IP address

**Editing Level**—Basic

*port port*—(Optional) SNMP trap port number.

**Value**—Integer in the range 0–65535

**Default**—162

**Editing Level**—Basic

*community community*— Community string used when sending traps.

**Value**—Text

**Editing Level**—Basic

`type (trapv1 | trapv2 | inform)`— Type of notifications to receive.

**Value**

- `trapv1`—SNMPv1 trap
- `trapv2`—SNMPv2c trap
- `inform`—SNMPv2 inform

**Editing Level**—Basic

**Required Privilege Level**

`snmp`

**Required Editing Level**

Basic

## snmp v3 snmp-community

### Syntax

```
snmp v3 snmp-community community-index {
    community-name community-name;
    security-name security-name;
    address address;
}
```

### Hierarchy Level

```
[edit snmp v3 snmp-community]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Map an SNMPv1 or SNMPv2c community string to a security name. Optionally, you can specify the IPv4 or IPv6 addresses of the SNMP client hosts that are authorized to use this community. By default, all SNMP clients using this community string are authorized to access the agent.

### Options

*community-index community-index*— Unique index that identifies an SNMP community.

**Value**—Text

*community-name community-name*—(Optional) A community string for an SNMPv1 or SNMPv2c community. If unspecified, the community index is used.

**Value**—Text

**Editing Level**—Basic

*security-name security-name*— The view-based access control model (VACM) security name to associate with the community string.

**Value**—Text

**Editing Level**—Basic

`address address`— IP address or subnet of the SNMP client hosts that are authorized to use this community.

**Value**—Text

**Default**— 0.0.0.0/0

**Editing Level**—Basic

#### Required Privilege Level

snmp

#### Required Editing Level

Basic

## snmp v3 usm local-engine user

### Syntax

```
snmp v3 usm local-engine user username ...
```

### Hierarchy Level

```
[edit snmp v3 usm local-engine user]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Specify a user associated with an SNMPv3 group. By default, no authentication or encryption is specified for the SNMPv3 user.

### Options

`username username`—SNMPv3 user-based security model (USM) username

**Value**—Text

### Required Privilege Level

snmp

### Required Editing Level

Basic

## snmp v3 usm local-engine user *username* authentication-md5

### Syntax

```
snmp v3 usm local-engine user username authentication-md5 {  
    authentication-password authentication-password;  
}
```

### Hierarchy Level

```
[edit snmp v3 usm local-engine user username authentication-md5]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure Message Digest 5 (MD5) as the authentication type for the SNMPv3 user.

### Options

`authentication-password authentication-password`— Password used for authentication.

**Value**— Password; must be at least eight characters

**Editing Level**— Basic

### Required Privilege Level

snmp

### Required Editing Level

Basic

## snmp v3 usm local-engine user *username* authentication-sha

### Syntax

```
snmp v3 usm local-engine user username authentication-sha {  
    authentication-password authentication-password;  
}
```

### Hierarchy Level

```
[edit snmp v3 usm local-engine user username authentication-sha]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure Secure Hash Algorithm (SHA) as the authentication type for the SNMPv3 user.

### Options

`authentication-password authentication-password`— Password used for authentication.

**Value**— Password; must be at least eight characters

**Editing Level**— Basic

### Required Privilege Level

snmp

### Required Editing Level

Basic

## snmp v3 usm local-engine user *username* privacy-aes

### Syntax

```
snmp v3 usm local-engine user username privacy-aes {  
    privacy-password privacy-password;  
}
```

### Hierarchy Level

```
[edit snmp v3 usm local-engine user username privacy-aes]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure Advanced Encryption Standard (AES) for the SNMPv3 user.

**Note:** Before you configure encryption, you must configure MD5 or SHA authentication.

### Options

`privacy-password privacy-password`— Privacy password for the SNMPv3 user.

**Value**— Password; must be at least eight characters

**Editing Level**—Basic

### Required Privilege Level

snmp

### Required Editing Level

Basic

## snmp v3 usm local-engine user *username* privacy-des

### Syntax

```
snmp v3 usm local-engine user username privacy-des {  
    privacy-password privacy-password;  
}
```

### Hierarchy Level

```
[edit snmp v3 usm local-engine user username privacy-des]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure Data Encryption Standard (DES) for the SNMPv3 user.

**Note:** Before you configure encryption, you must configure MD5 or SHA authentication.

### Options

`privacy-password privacy-password`— Privacy password for the SNMPv3 user.

**Value**— Password; must be at least eight characters

**Editing Level**—Basic

### Required Privilege Level

snmp

### Required Editing Level

Basic

## snmp v3 vacm access group

### Syntax

```
snmp v3 vacm access group group-name ...
```

### Hierarchy Level

```
[edit snmp v3 vacm access group]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Define access privileges granted to a group.

### Options

*group-name group-name*— Name for a collection of SNMP security names that belong to the same SNMP access policy.

**Value**—Text

### Required Privilege Level

snmp

### Required Editing Level

Basic

## snmp v3 vacm access group *group-name* default-context-prefix security-model

### Syntax

```
snmp v3 vacm access group group-name default-context-prefix security-model (any | v1 | v2c | usm) ...
```

### Hierarchy Level

```
[edit snmp v3 vacm access group group-name default-context-prefix security-model]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure security model for access privileges.

### Options

Type of security model used for access privileges.

#### Value

- **any**—Any security model
- **v1**—SNMPv1 model
- **v2c**—SNMPv2c model
- **usm**—SNMPv3 user-based security model

### Required Privilege Level

snmp

### Required Editing Level

Basic

## snmp v3 vacm access group *group-name* default-context-prefix security-model (any | v1 | v2c | usm) security-level

### Syntax

```
snmp v3 vacm access group group-name default-context-prefix security-model (any |
v1 | v2c | usm) security-level (authentication | none | privacy) {
    read-view read-view;
    write-view write-view;
}
```

### Hierarchy Level

```
[edit snmp v3 vacm access group group-name default-context-prefix security-
model (any | v1 | v2c | usm) security-level]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure access privileges granted to a particular security model.

### Options

Security level granted to a security model. If you are configuring the SNMPv1 or SNMPv2c security model, use none as the security level.

#### Value

- **authentication**— Provides authentication but no encryption
- **none**— Provides no authentication and no encryption
- **privacy**— Provides authentication and encryption

*read-view read-view*—(Optional) View used for SNMP Get requests.

**Value**—Text

**Default**—none

**Editing Level**—Basic

*write-view write-view*—(Optional) View used for SNMP Set requests.

**Value**—Text  
**Default**—none  
**Editing Level**—Basic

**Required Privilege Level**

snmp

**Required Editing Level**

Basic

# snmp v3 vacm security-to-group security-model

## Syntax

```
snmp v3 vacm security-to-group security-model (v1 | v2c | usm) ...
```

## Hierarchy Level

```
[edit snmp v3 vacm security-to-group security-model]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure security model context for a group.

## Options

Type of security model.

### Value

- v1—SNMPv1 model
- v2c—SNMPv2c model
- usm—SNMPv3 user-based security model

## Required Privilege Level

snmp

## Required Editing Level

Basic

## snmp v3 vacm security-to-group security-model (v1 | v2c | usm) security-name

### Syntax

```
snmp v3 vacm security-to-group security-model (v1 | v2c | usm) security-
name security-name {
    group-name group-name;
}
```

### Hierarchy Level

```
[edit snmp v3 vacm security-to-group security-model (v1 | v2c | usm) security-
name]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Map a security name in the specified security model to a named group.

### Options

*security-name security-name*— Security name to assign to group. If the security model is usm, the security name is the username configured at the `[edit snmp v3 usm local-engine user]` hierarchy level.

**Value**—Text

*group-name group-name*— Group to which the security name is assigned.

**Value**—Text

**Editing Level**—Basic

### Required Privilege Level

snmp

**Required Editing Level**

Basic

# snmp view

## Syntax

```
snmp view view-name ...
```

## Hierarchy Level

```
[edit snmp view]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Define a MIB view.

## Options

*view-name view-name*— MIB view name that identifies a group of MIB objects for which to define access. Each MIB object in a view has a common OID prefix. Each object identifier represents a subtree of the MIB object hierarchy.

**Value**—Text

## Required Privilege Level

snmp

## Required Editing Level

Basic

## snmp view *view-name* oid

### Syntax

```
snmp view view-name oid oid {
    (include | exclude);
}
```

### Hierarchy Level

```
[edit snmp view view-name oid]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Specify an object identifier (OID) that represents a subtree of MIB objects for the view.

### Options

*oid oid*— Object identifier (OID) that represents a subtree of MIB objects.

**Value**—Text

Specifies whether the OID is included in or excluded from the view.

**Value**

- *include*—Include this OID in the view
- *exclude*—Exclude this OID from the view

**Editing Level**—Basic

### Required Privilege Level

snmp

**Required Editing Level**

Basic

# Juniper Policy Server (JPS)

The following table summarizes the SRC command-line interface (SRC CLI) for the JPS. Configuration statements and operational commands are listed in alphabetical order.

JPS
Configuration Statements
<a href="#">slot number jps</a>
<a href="#">slot number jps am-interface</a>
<a href="#">slot number jps cmts-interface</a>
<a href="#">slot number jps cmts-registry cmts</a>
<a href="#">slot number jps cmts-registry cmts cmts-ip range-pool</a>
<a href="#">slot number jps cmts-registry cmts cmts-ip subnet-pool</a>
<a href="#">slot number jps logger</a>
<a href="#">slot number jps logger name file</a>
<a href="#">slot number jps logger name syslog</a>
<a href="#">slot number jps rks-interface</a>
<a href="#">slot number jps rks-interface am</a>
<a href="#">slot number jps rks-interface rks-pair</a>
Operational Commands
<a href="#">show jps statistics</a>
<a href="#">show jps statistics am</a>
<a href="#">show jps statistics am connections</a>
<a href="#">show jps statistics cmts-locator</a>
<a href="#">show jps statistics cmts</a>
<a href="#">show jps statistics cmts connections</a>
<a href="#">show jps statistics message-handler</a>

<a href="#">show jps statistics message-handler message-flow</a>
<a href="#">show jps statistics process</a>
<a href="#">show jps statistics rks</a>

## slot *number* jps

### Syntax

```
slot number jps {
    java-heap-size java-heap-size;
    snmp-agent;
    policy-server-id policy-server-id;
    use-psid-in-gate-commands;
    cmts-message-buffer-size cmts-message-buffer-size;
    am-message-buffer-size am-message-buffer-size;
}
```

### Hierarchy Level

```
[edit slot number jps]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the Juniper Policy Server (JPS).

### Options

*java-heap-size java-heap-size*—Maximum amount of Java heap (memory) available to the JRE.

**Value**—Number of megabytes in the format *integerm*

**Default**—400m

**Editing Level**—Advanced

*snmp-agent*—(Optional) Enables the JPS to communicate with the SNMP agent.

**Editing Level**—Basic

*policy-server-id policy-server-id*—(Optional) Network-wide unique identifier for the JPS that is sent to CMTS devices in Pdp-Config messages and gate commands generated by the JPS.

**Value**—Integer in the range 0–65535

**Default**—0

**Editing Level**—Basic

`use-psid-in-gate-commands`—(Optional) Specifies whether gate control messages (such as gate-info messages) generated by this JPS should contain its policy server identifier. These gate control messages are not generated by an application manager for forwarding by the JPS.

When the JPS is communicating only with PCMM I03 CMTS devices, the value must be true.  
When the JPS is communicating with any pre-PCMM I03 CMTS devices, the value must be false.

**Default**—false

**Editing Level**—Basic

`cmts-message-buffer-size` *cmts-message-buffer-size*—(Optional) Maximum number of messages buffered for each CMTS destination.

**Value**—Integer in the range 1–2147483647

**Editing Level**—Advanced

`am-message-buffer-size` *am-message-buffer-size*—(Optional) Maximum number of messages buffered for each application manager destination.

**Value**—Integer in the range 1–2147483647

**Editing Level**—Advanced

**Required Privilege Level**

No specific privilege required.

**Required Editing Level**

Basic

## slot *number* jps am-interface

### Syntax

```
slot number jps am-interface {
    pep-id pep-id;
    listening-address listening-address;
    validate-pcmm-objects;
    message-max-length message-max-length;
    message-read-buffer-size message-read-buffer-size;
    message-write-buffer-size message-write-buffer-size;
    open-connection-timeout open-connection-timeout;
}
```

### Hierarchy Level

```
[edit slot number jps am-interface]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the application manager-to-policy server interface (PKT-MM3) so that the policy server can communicate with application managers.

### Options

`pep-id pep-id`—(Optional) Network-wide unique identifier for this JPS instance. Changes apply only to COPS connections that are established after you make the change.

**Value**—Text

**Default**—SDX-JPS

**Editing Level**—Basic

`listening-address listening-address`—(Optional) Local IP address on which the JPS listens for incoming connections from application managers. If no value is specified, the JPS listens on all IP addresses. Changes take effect only after you restart the JPS.

**Value**—IP address

**Editing Level**—Basic

`validate-pcmm-objects`—(Optional) Specifies whether to validate PCMM objects received

from PDPs.

**Default**—true

**Editing Level**—Advanced

`message-max-length` *message-max-length*—(Optional) Maximum length of incoming messages.

**Value**—Integer in the range 1–2147483647

**Editing Level**—Advanced

`message-read-buffer-size` *message-read-buffer-size*—(Optional) Size of message read buffer.

**Value**—Integer in the range 1–2147483647

**Editing Level**—Advanced

`message-write-buffer-size` *message-write-buffer-size*—(Optional) Size of message write buffer.

**Value**—Integer in the range 1–2147483647

**Editing Level**—Advanced

`open-connection-timeout` *open-connection-timeout*—(Optional) Maximum time to wait for the initial PCMM messages to be exchanged after a TCP connection is established. The connection is dropped when initial PCMM messages are not exchanged within this time period.

**Value**— Number of seconds in the range 1–65535

**Default**—5

**Editing Level**—Advanced

#### Required Privilege Level

No specific privilege required.

#### Required Editing Level

Basic

## slot *number* jps cmts-interface

### Syntax

```
slot number jps cmts-interface {
    cmts-addresses [cmts-addresses...];
    keepalive-interval keepalive-interval;
    synch-despite-unreachable-pep;
    synch-despite-pre-i03-pep;
    use-ssq-ssc-with-pre-i03-pep;
    local-address local-address;
    message-max-length message-max-length;
    message-read-buffer-size message-read-buffer-size;
    message-write-buffer-size message-write-buffer-size;
    open-connection-timeout open-connection-timeout;
    connection-open-retry-interval connection-open-retry-interval;
    sent-message-timeout sent-message-timeout;
    validate-pcmm-objects;
}
```

### Hierarchy Level

```
[edit slot number jps cmts-interface]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the policy server-to-CMTS interface (PKT-MM2) so that the policy server can communicate with CMTS devices.

### Options

*cmts-addresses* [*cmts-addresses...*]— IP addresses of all the CMTS devices to which the JPS will try to connect.

**Value**— List of IP addresses

**Editing Level**—Basic

*keepalive-interval* *keepalive-interval*—(Optional) Interval between keepalive messages sent from the COPS client (CMTS device) to the COPS server (JPS). Changes apply only to COPS connections that are established after you make the change.

**Value**— Number of seconds in the range 0-65535. A value of 0 means that no keepalive messages will be exchanged between the CMTS device and the JPS.

**Default**—60

**Editing Level**—Basic

`synch-despite-unreachable-pep`—(Optional) Controls whether synchronization proceeds when the JPS receives a synchronization request from an application manager (such as the SAE) and the JPS is not connected to a CMTS device to which it should be connected.

If a CMTS device is not connected and `synch-despite-unreachable-pep` is false, synchronization does not proceed and ends with a transport-error in a synch-complete message. If a CMTS device is not connected and `synch-despite-unreachable-pep` is true, synchronization proceeds only with the connected CMTS devices and ends with a state-data-incomplete error in a synch-complete message.

**Default**—true

**Editing Level**—Basic

`synch-despite-pre-i03-pep`—(Optional) Controls whether synchronization proceeds when the JPS receives a synchronization request from an application manager (such as the SAE) and the JPS is connected to a pre-PCMM I03 CMTS device.

If any connected CMTS device is pre-PCMM I03 and `synch-despite-pre-i03-pep` is false, synchronization does not proceed and ends with a state-data-incomplete error in a synch-complete message. If any connected CMTS device is pre-PCMM I03 and `synch-despite-pre-i03-pep` is true, synchronization proceeds; whether the pre-PCMM I03 CMTS devices are included in the synchronization depends on the `use-ssq-ssc-with-pre-i03-pep` value.

**Default**—true

**Editing Level**—Basic

`use-ssq-ssc-with-pre-i03-pep`—(Optional) Controls whether synchronization includes both pre-PCMM I03 and PCMM I03 CMTS devices when the JPS receives a synchronization request from an application manager (such as the SAE) and the JPS is connected to a pre-PCMM I03 CMTS device. Relevant only when at least one pre-PCMM I03 CMTS device is connected and `synch-despite-pre-i03-pep` is specified as true.

If `use-ssq-ssc-with-pre-i03-pep` is false, synchronization proceeds only with PCMM I03 CMTS devices and ends with a state-data-incomplete error in a synch-complete message. If `use-ssq-ssc-with-pre-i03-pep` is true, synchronization proceeds with both PCMM I03 and pre-PCMM I03 CMTS devices. With the pre-PCMM I03 CMTS devices, an SSQ solicits Gate-Info-Acks which are filtered based on the original Synch-Request's application manager ID and subscriber ID (if any). The Gate-Info-Acks are transformed into Synch-Reports. Note that if two synchronization attempts must send SSQs to pre-PCMM I03 CMTS devices concurrently, the second attempt is rejected with an insufficient-resources error in a synch-complete message.

**Default**—false

**Editing Level**—Basic

`local-address local-address`—(Optional) Source IP address that the JPS uses to communicate with CMTS devices. If a JPS has only one IP address, this value can be left blank.

**Value**— IP address. If no value is specified and there is more than one local address, a random local address is used as the source address.

**Editing Level**—Basic

`message-max-length message-max-length`—(Optional) Maximum length of incoming messages.

**Value**—Integer in the range 1–2147483647

**Editing Level**—Advanced

`message-read-buffer-size message-read-buffer-size`—(Optional) Size of message read buffer.

**Value**—Integer in the range 1–2147483647

**Editing Level**—Advanced

`message-write-buffer-size message-write-buffer-size`—(Optional) Size of message write buffer.

**Value**—Integer in the range 1–2147483647

**Editing Level**—Advanced

`open-connection-timeout open-connection-timeout`—(Optional) Maximum time to wait for the initial PCMM messages to be exchanged after a TCP connection is established. The connection is dropped when initial PCMM messages are not exchanged within this time period.

**Value**— Number of seconds in the range 1–65535

**Default**—5

**Editing Level**—Advanced

`connection-open-retry-interval connection-open-retry-interval`—(Optional) Time to wait before the JPS tries to reconnect to CMTS devices.

**Value**— Number of seconds in the range 1–2147483647

**Editing Level**—Advanced

`sent-message-timeout sent-message-timeout`—(Optional) Maximum time to wait for the sent messages to be exchanged after a TCP connection is established. This value must

be less than held-decs-max-age and pending-rks-event-max-age of the corresponding RKS interface.

**Value**—Integer in the range 1–2147483647 s

**Editing Level**—Advanced

`validate-pcmm-objects`—(Optional) Specifies whether to validate PCMM objects received from PEPs.

**Default**—true

**Editing Level**—Advanced

### Required Privilege Level

No specific privilege required.

### Required Editing Level

Basic

## **slot *number* jps cmts-registry cmts**

### **Syntax**

```
slot number jps cmts-registry cmts cmts-ip ...
```

### **Hierarchy Level**

```
[edit slot number jps cmts-registry cmts]
```

### **Release Information**

Statement introduced in SRC Release 1.0.0

### **Description**

Configure a CMTS device to which the JPS can connect and the pools of subscriber IP addresses that are managed by the CMTS device.

### **Options**

*cmts-ip* *cmts-ip*— IP address of the CMTS device.

**Value**—IP address

### **Required Privilege Level**

No specific privilege required.

### **Required Editing Level**

Basic

## slot *number* jps cmts-registry cmts *cmts-ip* range-pool

### Syntax

```
slot number jps cmts-registry cmts cmts-ip range-pool pool-index {
    low low;
    high high;
}
```

### Hierarchy Level

```
[edit slot number jps cmts-registry cmts cmts-ip range-pool]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure subscriber IP pools in IP address ranges.

### Options

*pool-index pool-index*—Address range pool index

**Value**—Integer in the range -2147483648–2147483647

*low low*— First IP address in the IP range for the pool of subscriber IP addresses that are managed by the CMTS device.

**Value**—IP address

**Editing Level**—Basic

*high high*— Last IP address in the IP range for the pool of subscriber IP addresses that are managed by the CMTS device.

**Value**—IP address

**Editing Level**—Basic

### Required Privilege Level

No specific privilege required.

## **Required Editing Level**

Basic

## slot *number* jps cmts-registry cmts *cmts-ip* subnet-pool

### Syntax

```
slot number jps cmts-registry cmts cmts-ip subnet-pool subnet {
    exclude [exclude...];
}
```

### Hierarchy Level

```
[edit slot number jps cmts-registry cmts cmts-ip subnet-pool]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure subscriber IP pools in IP subnets.

### Options

*subnet subnet*— IP address and mask of the subnet for the pool of subscriber IP addresses that are managed by the CMTS device.

**Value**— IP address/IP mask

*exclude [exclude...]*—(Optional) IP addresses of the subnet that are excluded from the subscriber IP pool managed by the CMTS device.

**Value**—IP address

**Editing Level**—Basic

### Required Privilege Level

No specific privilege required.

### Required Editing Level

Basic

## **slot *number* jps logger**

### **Syntax**

```
slot number jps logger name ...
```

### **Hierarchy Level**

```
[edit slot number jps logger]
```

### **Release Information**

Statement introduced in SRC Release 1.0.0

### **Description**

Configure the logging destination.

### **Options**

*name name*— Name used to group parameters for the logging destination.

**Value**—Text

### **Required Privilege Level**

No specific privilege required.

### **Required Editing Level**

Basic

## slot *number* jps logger *name* file

### Syntax

```
slot number jps logger name file {
    filter filter;
    filename filename;
    rollover-filename rollover-filename;
    maximum-file-size maximum-file-size;
}
```

### Hierarchy Level

```
[edit slot number jps logger name file]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure logging of messages to a file.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**— The default value is different for each type of component.

**Editing Level**—Basic

*filename filename*— Absolute path of the filename that contains the current logs.

**Note:** Make sure that the user under which the J2EE application server or Web application server runs has write access to this folder. If this user does not have write access to the default folder, configure the component or application to write logs in folders to which the user has write access.

**Value**— Filename

**Default**— By default, SRC components and applications write log files in the folder in which the component or application is started.

**Editing Level**—Basic

`rollover-filename` *rollover-filename*—(Optional) Absolute path of the filename that contains the log history. When the log file reaches the maximum size, the software closes the log file and renames it with the name you specify for the rollover file. If a previous rollover file exists, the software overwrites it. The software then reopens the log file and continues to save event messages in it.

**Value**— Path of filename

Example—`/opt/UMC/sae/var/log/sae.alt`

**Default**— The default value is different for each type of component.

**Editing Level**—Normal

`maximum-file-size` *maximum-file-size*—(Optional) Maximum size of the log file and the rollover file.

Do not set the maximum file size to a value greater than the available disk space.

**Value**—Integer in the range 0–2147483647 kbytes

**Default**— 1000000

**Editing Level**—Normal

### Required Privilege Level

No specific privilege required.

### Required Editing Level

Basic

## slot *number* jps logger *name* syslog

### Syntax

```
slot number jps logger name syslog {
    filter filter;
    host host;
    facility facility;
    format format;
}
```

### Hierarchy Level

```
[edit slot number jps logger name syslog]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure logging of messages to system logging.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**— The default value is different for each type of component.

**Editing Level**—Basic

*host host*— IP address or name of a host that collects event messages by means of a standard system logging daemon.

**Value**— IP address or hostname

**Default**—loghost

**Editing Level**—Basic

*facility facility*—(Optional) Type of system log in accordance with the system logging protocol.

**Value**—Integer in the range 0–23

**Default**— 3

**Editing Level**—Advanced

`format` *format*—(Optional) MessageFormat string that specifies how the information in an event message is printed. (The strings {#} are replaced with the log information [...]).

**Value**— MessageFormat string as specified in <http://java.sun.com/j2se/1.4.2/docs/api/java/text/MessageFormat.html>.

The fields available for events are:

- 0—Time and date of the event
- 1—Name of the thread generating the event
- 2—Text message of the event
- 3—Category of the event
- 4—Priority of the event

**Editing Level**—Advanced**Required Privilege Level**

No specific privilege required.

**Required Editing Level**

Basic

## slot *number* jps rks-interface

### Syntax

```
slot number jps rks-interface {
    element-id element-id;
    local-address local-address;
    local-port [local-port...];
    retry-interval retry-interval;
    local-timeout local-timeout;
    mso-data mso-data;
    mso-domain-name mso-domain-name;
    default-rks-pair default-rks-pair;
    pending-rks-event-max-size pending-rks-event-max-size;
    pending-rks-event-max-age pending-rks-event-max-age;
    held-decs-max-size held-decs-max-size;
    held-decs-max-age held-decs-max-age;
    bcid-cache-size bcid-cache-size;
    bcid-cache-age bcid-cache-age;
    use-default-when-am-requests-unconfigured-rks;
}
```

### Hierarchy Level

```
[edit slot number jps rks-interface]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the the policy server-to-RKS interface (PKT-MM4) so that policy events can be sent to the RKS. As part of the configuration, you can configure RKS pairs and their associated application managers.

### Options

*element-id element-id*—Network-wide unique identifier for RKS event origin.

**Value**—Integer in the range 0–99999

**Editing Level**—Basic

*local-address local-address*—(Optional) Source IP address used to communicate with the RKS. If no value is specified and there is more than one local address, the JPS randomly selects a local address to be used as the source address.

**Value**—IP address  
**Editing Level**—Basic

`local-port [local-port...]`—(Optional) Source UDP port or a pool of ports used to communicate with the RKS.

**Value**—Text  
**Editing Level**—Basic

`retry-interval retry-interval`—(Optional) Time the JPS waits for a response from an RKS before it resends the packet. The JPS keeps sending packets until either the RKS acknowledges the packet or the maximum timeout is reached.

**Value**—Integer in the range 0–2147483647  
**Editing Level**—Basic

`local-timeout local-timeout`—(Optional) Maximum time (ms) the JPS waits for a response from an RKS.

**Value**—Integer in the range 0–2147483647 ms  
**Editing Level**—Basic

`mso-data mso-data`—(Optional) MSO-defined data in the financial entity ID (FEID) attribute, which is included in event messages.

**Value**— ASCII character string of 8 bytes; first eight bytes of the FEID attribute.  
**Editing Level**—Basic

`mso-domain-name mso-domain-name`—(Optional) MSO domain name in the financial entity ID (FEID) attribute that uniquely identifies the MSO for billing and settlement purposes.

**Value**— ASCII character string of up to 239 bytes; begins at the ninth byte of the FEID attribute.  
**Editing Level**—Basic

`default-rks-pair default-rks-pair`—(Optional) Default RKS pair that the JPS uses unless an RKS pair is configured for a given application manager.

**Value**—Text  
**Editing Level**—Basic

`pending-rks-event-max-size` *pending-rks-event-max-size*—(Optional)  
Maximum number of RKS events waiting for Gate-Set/Del-Ack/Err messages.

**Value**—Integer in the range 0–2147483647

**Editing Level**—Advanced

`pending-rks-event-max-age` *pending-rks-event-max-age*—(Optional) The oldest age of RKS events waiting for Gate-Set/Del-Ack/Err messages. The maximum age must be greater than sent-message-timeout of the corresponding CMTS interface.

**Value**— Number of seconds in the range 0–2147483647

**Editing Level**—Advanced

`held-decs-max-size` *held-decs-max-size*—(Optional) Maximum number of outstanding Gate-Info requests.

**Value**—Integer in the range 0–2147483647

**Editing Level**—Advanced

`held-decs-max-age` *held-decs-max-age*—(Optional) The oldest age of outstanding Gate-Info requests. The maximum age must be greater than sent-message-timeout of the corresponding CMTS interface.

**Value**— Number of seconds in the range 0–2147483647

**Editing Level**—Advanced

`bcid-cache-size` *bcid-cache-size*—(Optional) Size of billing correlation ID (BCID) cache.

**Value**—Integer in the range 0–2147483647

**Editing Level**—Advanced

`bcid-cache-age` *bcid-cache-age*—(Optional) The oldest age of billing correlation ID (BCID) in cache.

**Value**—Integer in the range 0–2147483647 s

**Editing Level**—Advanced

`use-default-when-am-requests-unconfigured-rks`—(Optional) Specifies whether the default RKS pair is used when an application manager requests the use of an unconfigured RKS pair.

If true, use the default RKS pair (normally used in cases where no RKS pair specific to an

application manager is configured for a given application manager). If false, only use the default RKS pair when no RKS pair specific to an application manager is found.

**Default**—false

**Editing Level**—Advanced

#### **Required Privilege Level**

No specific privilege required.

#### **Required Editing Level**

Basic

## slot *number* jps rks-interface am

### Syntax

```
slot number jps rks-interface am am-name {
    am-id am-id;
    rks-pair-name rks-pair-name;
    trusted;
}
```

### Hierarchy Level

```
[edit slot number jps rks-interface am]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure RKS pairs for associated application managers.

### Options

*am-name* *am-name*— Name used to group parameters for the associated application manager. All parameters that share the same application manager name configure the RKS pair to which events associated with a specific application manager are sent.

#### **Value**—Text

*am-id* *am-id*— Identifier of the application manager. The application manager includes this identifier in all messages that it sends to the JPS. The JPS passes this ID to the CMTS device in gate control messages. The CMTS device returns the ID associated with the gate to the JPS. The JPS sends events associated with this application manager to the RKS pair specified by *rks-pair-name* with the same application manager name (*am-name*).

If no value is specified, the RKS pair configuration is not defined for this application manager. If you must set *trusted* to true without defining the RKS pair configuration, you must specify a value for *am-id* and not specify a value for *rks-pair-name*.

**Value**—Integer in the range 0–2147483647

**Editing Level**—Basic

*rks-pair-name* *rks-pair-name*—(Optional) RKS pair that the JPS will send events to

when those events are triggered by gate transitions associated with the application manager specified by `am-id` with the same application manager name (`am-name`).

If no value is specified, the RKS pair configuration is not defined for this application manager. Use when you must set `trusted` to `true` without defining the RKS pair configuration.

**Value**—Text

**Editing Level**—Basic

`trusted`—(Optional) Specifies whether this application manager is a trusted network element to the JPS.

If an application manager is trusted by the JPS and it provides a billing correlation ID (BCID) as part of a gate-set message, the JPS reuses the BCID provided by the application manager instead of generating a new one. If an application manager is trusted by the JPS and it specifies an RKS pair as part of a gate-set message, the JPS uses the RKS pair supplied by the application manager instead of using the one specified by `rks-pair-name` (which might not be defined in the JPS configuration). However, the RKS pair specified by the application manager is used only if the RKS pair exists in the JPS configuration. If the application manager specifies an RKS pair that does not exist in the JPS configuration, the default RKS pair is used.

**Editing Level**—Basic

#### **Required Privilege Level**

No specific privilege required.

#### **Required Editing Level**

Basic

## slot *number* jps rks-interface rks-pair

### Syntax

```
slot number jps rks-interface rks-pair rks-pair-name {
    primary-address primary-address;
    primary-port primary-port;
    secondary-address secondary-address;
    secondary-port secondary-port;
}
```

### Hierarchy Level

```
[edit slot number jps rks-interface rks-pair]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure RKS pairs. When running more than one JPS in a group to provide redundancy, all the JPSs in that group must have same RKS pair configuration (including the default RKS pair and any configured RKS pairs associated with a specific application manager).

### Options

*rks-pair-name* *rks-pair-name*—RKS pair name

**Value**—Text

*primary-address* *primary-address*— IP address of the primary RKS for this RKS pair.

**Value**—IP address

**Editing Level**—Basic

*primary-port* *primary-port*—(Optional) UDP port on the primary RKS to which the JPS sends events.

**Value**—Integer in the range 1–65535

**Default**—1813

**Editing Level**—Basic

`secondary-address` *secondary-address*—(Optional) IP address of the secondary RKS for this RKS pair.

**Value**—IP address

**Editing Level**—Basic

`secondary-port` *secondary-port*—(Optional) UDP port on the secondary RKS to which the JPS sends events.

**Value**—Integer in the range 1–65535

**Default**—1813

**Editing Level**—Basic

### Required Privilege Level

No specific privilege required.

### Required Editing Level

Basic

## **show jps statistics**

### **Syntax**

```
show jps statistics
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Display JPS statistics, including information about the server process and the current state of the JPS.

### **Required Privilege Level**

view

# show jps statistics am

## Syntax

```
show jps statistics am
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display statistics for the application manager-to-policy server interface.

## Required Privilege Level

view

## show jps statistics am connections

### Syntax

```
show jps statistics am connections <ip-address ip-address>
```

### Release Information

Command introduced in SRC Release 1.0.0

### Description

Display statistics for JPS application manager connections.

### Options

`ip-address ip-address`—(Optional) IP address for the application manager.

**Value**— All or part of the IP address. If the IP address filter is not specified, all application managers are selected.

**Default**— No value

### Required Privilege Level

view

# **show jps statistics cmts-locator**

## **Syntax**

```
show jps statistics cmts-locator
```

## **Release Information**

Command introduced in SRC Release 1.0.0

## **Description**

Display statistics for the CMTS locator.

## **Required Privilege Level**

view

## **show jps statistics cmts**

### **Syntax**

```
show jps statistics cmts
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Display JPS statistics for the policy server-to-CMTS interface.

### **Required Privilege Level**

view

## show jps statistics cmts connections

### Syntax

```
show jps statistics cmts connections <ip-address ip-address>
```

### Release Information

Command introduced in SRC Release 1.0.0

### Description

Display statistics for JPS CMTS connections.

### Options

`ip-address ip-address`—(Optional) IP address for the CMTS device.

**Value**— All or part of the IP address. If the IP address filter is not specified, all CMTS devices are selected.

**Default**— No value

### Required Privilege Level

view

## **show jps statistics message-handler**

### **Syntax**

```
show jps statistics message-handler
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Display statistics for the JPS message handler.

### **Required Privilege Level**

view

## show jps statistics message-handler message-flow

### Syntax

```
show jps statistics message-handler message-flow <id id>
```

### Release Information

Command introduced in SRC Release 1.0.0

### Description

Display statistics for JPS message flows.

### Options

`id id`—(Optional) Identifier for message flow.

**Value**— All or part of the message flow ID. If the message flow ID filter is not specified, all message flows are selected.

**Default**— No value

### Required Privilege Level

view

## **show jps statistics process**

### **Syntax**

```
show jps statistics process
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Display information about the JPS server process.

### **Required Privilege Level**

view

# show jps statistics rks

## Syntax

```
show jps statistics rks
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display JPS statistics for the policy server-to-RKS interface.

## Required Privilege Level

view



# IP Multimedia Subsystem (IMS)

The following table summarizes the SRC command-line interface (SRC CLI) for supporting IMS. Configuration statements and operational commands are listed in alphabetical order.

IMS
Configuration Statements
<a href="#">shared ims aracf-rq configuration nic-proxy-configuration</a>
<a href="#">shared ims aracf-rq configuration nic-proxy-configuration name cache</a>
<a href="#">shared ims aracf-rq configuration nic-proxy-configuration name nic-host-selection</a>
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Operational Commands
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<a href="#">test ims aracf-rq str</a>

# shared ims aracf-rq configuration nic-proxy-configuration

## Syntax

```
shared ims aracf-rq configuration nic-proxy-configuration name {
}
```

## Hierarchy Level

```
[edit shared ims aracf-rq configuration nic-proxy-configuration]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure a NIC proxy.

## Options

*name name*—

**Value**—Text

## Required Privilege Level

system system

## Required Editing Level

Basic

## shared ims aracf-rq configuration nic-proxy-configuration *name* cache

### Syntax

```
shared ims aracf-rq configuration nic-proxy-configuration name cache {
    cache-size cache-size;
    cache-cleanup-interval cache-cleanup-interval;
    cache-entry-age cache-entry-age;
}
```

### Hierarchy Level

```
[edit shared ims aracf-rq configuration nic-proxy-configuration name cache]
```

### Description

Configure the NIC proxy cache properties. You can modify cache properties for the NIC proxy to optimize the resolution performance for your network configuration and system resources. Typically, you can use the default settings for the cache properties.

*cache-size cache-size*—(Optional) Maximum size of the cache in which the NIC proxy retains data. If you decrease the cache size or disable the cache while the NIC proxy is running, the NIC proxy removes entries in order of descending age until the cache size meets the new limit.

**Value**— Integer in the range 0–2147483647

**Default**—10000

**Editing Level**—Advanced

*cache-cleanup-interval cache-cleanup-interval*— Time interval at which the NIC proxy removes expired entries from its cache.

**Value**— Number of seconds in the range 5–2147483

**Default**—15

**Editing Level**—Advanced

*cache-entry-age cache-entry-age*—(Optional) Maximum time that the NIC proxy can cache an entry. The NIC proxy compares this property with the life expectancy of each entry and uses the lower value to determine when to remove the entry.

**Value**— Number of seconds in the range 0–4294967295

- 0 or unspecified—Life expectancy of the data, which determines

- expiration of data
- Other values—Actual time that the NIC proxy caches entries

**Editing Level**—Advanced

**Required Privilege Level**

system system

**Required Editing Level**

Advanced

## shared ims aracf-rq configuration nic-proxy-configuration *name* nic-host-selection

### Syntax

```
shared ims aracf-rq configuration nic-proxy-configuration name nic-host-selection
{
    groups [groups...];
    selection-criteria (roundRobin | randomPick | priorityList);
}
```

### Hierarchy Level

```
[edit shared ims aracf-rq configuration nic-proxy-configuration name nic-host-selection]
```

### Description

Configure the mechanism that a NIC proxy uses to select NIC system if multiple systems are available. You use NIC host selection when you use NIC replication.

`groups [groups...]`—(Optional) List of groups of NIC hosts that the NIC proxy can contact for resolution requests.

**Value**— Names of groups.

**Default**— No value

**Editing Level**—Advanced

`selection-criteria (roundRobin | randomPick | priorityList)`— Selection criteria that the NIC proxy uses to determine which NIC host to contact. Configure selection criteria if you configure more than one group.

**Value**— One of the following criteria:

- `roundRobin`—NIC proxy selects NIC hosts in a fixed, cyclic order. The NIC proxy always selects the next host in the list.
- `randomPick`—NIC proxy selects NIC hosts randomly from the list.
- `priorityList`—NIC proxy selects NIC hosts according to their assigned priorities in the list. If the host with the highest priority in the list is not available, the NIC proxy tries the host with the next-highest priority, and so on.

Use round-robin or random pick to distribute resolution requests among NIC hosts. Use priority list if you prefer to use a particular NIC host; for example, you may reduce operating cost by using a local NIC host.

**Default**— `roundRobin`

**Editing Level**—Advanced

**Required Privilege Level**

system system

**Required Editing Level**

Advanced

## shared ims aracf-rq configuration nic-proxy-configuration *name* nic-host-selection blacklisting

### Syntax

```
shared ims aracf-rq configuration nic-proxy-configuration name nic-host-
selection blacklisting {
    try-next-system-on-error;
    number-of-retries-before-blacklisting number-of-retries-before-blacklisting;
    blacklist-retry-interval blacklist-retry-interval;
}
```

### Hierarchy Level

```
[edit shared ims aracf-rq configuration nic-proxy-configuration name nic-host-
selection blacklisting]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure how to handle nonresponsive NIC hosts. When a NIC host does not respond, it is blacklisted which means that other NIC hosts are contacted until the blacklisted host becomes available again.

### Options

*try-next-system-on-error*—(Optional) Specifies whether or not the NIC proxy should contact the next specified NIC host if a NIC host is determined to be unavailable. Configure this property only if you configure more than one group.

**Default**—true

**Editing Level**—Advanced

*number-of-retries-before-blacklisting* *number-of-retries-before-blacklisting*— Number of times the NIC proxy tries to communicate with a NIC host before the NIC proxy stops communicating with the NIC host for a period of time.

**Value**—Integer in the range 0–2147483647

**Default**—3

**Editing Level**—Advanced

*blacklist-retry-interval* *blacklist-retry-interval*— Interval at which the NIC

proxy attempts to connect to an unavailable NIC host.

**Value**—Integer in the range 15–2147483647 s  
**Default**—15  
**Editing Level**—Advanced

**Required Privilege Level**

system system

**Required Editing Level**

Basic

## shared ims aracf-rq configuration nic-proxy-configuration *name* resolution

### Syntax

```
shared ims aracf-rq configuration nic-proxy-configuration name resolution {
    resolver-name resolver-name;
    key-type key-type;
    value-type value-type;
    expect-multiple-values;
    constraints constraints;
}
```

### Hierarchy Level

```
[edit shared ims aracf-rq configuration nic-proxy-configuration name resolution]
```

### Description

Configure properties for a NIC proxy (NIC locator), the NIC component that requests information on behalf of an application.

*resolver-name resolver-name*— NIC resolver that the NIC proxy uses. This resolver must be the same as one that is configured on the NIC host.

**Value**— Path to the NIC resolver.

Example—*/realms/ip/A1,/realms/dn/A1*.

**Default**— No value

**Editing Level**—Basic

*key-type key-type*— Type of data used that the key provides for the NIC resolution. You can provide a qualifier to a data type to distinguish between different instances of a data type in a resolution scenario, or to provide information about a data type to clarify the use of that data type in a resolution.

**Value**— One of the following types:

- Ip —Subscriber's IP address
- Vr—Virtual router
- Interface—Name of router's interface
- InterfaceId—Identifier of an interface on the router
- Dn—LDAP distinguished name for subscriber

- `LoginName`—Subscriber login ID
- `AnyString`—Other information

To qualify data types, enter a qualifier within parentheses.

Example—`LoginName(username)`.

**Default**— No value

**Editing Level**—Basic

`value-type value-type`— Type of value to be returned in the resolution. The value type varies according to the application that uses the NIC proxy.

**Value**— One of the following types:

- `SaeId`—SAE server ID
- `LoginName`—Subscriber login ID
- `AnyString`—Other information

To qualify data types, enter a qualifier within parentheses.

Example—`LoginName(username)`.

**Default**— No value

**Editing Level**—Basic

`expect-multiple-values`—(Optional) Specifies whether or not the key can have multiple corresponding values.

**Editing Level**—Basic

`constraints constraints`—(Optional) Data type that a resolver uses during the resolution process. A constraint represents a condition that must or may be satisfied before the next stage of the resolution process can proceed.

Configure a constraint only if the constraint will be provided by the application in the resolution request. Typically, you do not need to configure constraints.

**Value**— Data types of constraints specified for the NIC resolution. Separate data types with commas.

**Default**— No value

**Editing Level**—Advanced

**Required Privilege Level**

system system

**Required Editing Level**

Normal

## shared ims aracf-rq configuration nic-proxy-configuration *name* test-nic-bindings

### Syntax

```
shared ims aracf-rq configuration nic-proxy-configuration name test-nic-bindings {
    use-test-bindings;
}
```

### Hierarchy Level

```
[edit shared ims aracf-rq configuration nic-proxy-configuration name test-nic-bindings]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure key-value mappings to be used to test a NIC resolution.

### Options

`use-test-bindings`—(Optional) Test the NIC resolutions without having to configure or run a NIC host. The values returned are those configured in the key-values property.

**Default**—false

**Editing Level**—Basic

### Required Privilege Level

system system

### Required Editing Level

Basic

# shared ims aracf-rq configuration nic-proxy-configuration *name* test-nic-bindings key-values

## Syntax

```
shared ims aracf-rq configuration nic-proxy-configuration name test-nic-  
bindings key-values name {  
    value;  
}
```

## Hierarchy Level

```
[edit shared ims aracf-rq configuration nic-proxy-configuration name test-nic-  
bindings key-values]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure keys and associated values to use for testing. Define all of values to be returned for specified keys.

## Options

*name* *name*—

**Value**—Text

*value*—

**Value**—Text

**Editing Level**—Basic

## Required Privilege Level

system system

## Required Editing Level

Advanced

# shared ims aracf-rq configuration redundancy

## Syntax

```
shared ims aracf-rq configuration redundancy {
    event-notification;
    state-synchronization-timeout state-synchronization-timeout;
    state-synchronization;
    state-sync-bulk-size state-sync-bulk-size;
}
```

## Hierarchy Level

```
[edit shared ims aracf-rq configuration redundancy]
```

## Release Information

Statement introduced in SRC Release 3.1.0

## Description

Configure IMS failover.

## Options

*event-notification*—(Optional) Enables event notification. When event notification is enabled, the SRC Diameter Gateway will send RAR requests if a specific action is specified in the initial AAR and specific events occur.

**Default**—false

**Editing Level**—Advanced

*state-synchronization-timeout* *state-synchronization-timeout*—(Optional) Time to wait for initial full synchronization request from the SAE after starting or restarting IMS. Incoming requests are blocked when waiting for initial full synchronization. If IMS does not receive any full synchronization signal from the SAE after the configured time, IMS will accept incoming requests from its peer. The suggested waiting time is the sum of state-synchronization batch time and the ping interval.

**Value**—Integer in the range 0–2147483647 s

**Default**—120

**Editing Level**—Normal

*state-synchronization*—(Optional) Enables state synchronization for IMS from the SAE. With state synchronization enabled, the state of the IMS can be synchronized at any time.

**Default**—false  
**Editing Level**—Basic

`state-sync-bulk-size` *state-sync-bulk-size*—(Optional) Number of events that the SAE sends to the SRC Diameter Gateway at one time during state synchronization. This value is used if state synchronization is enabled.

**Value**—Integer in the range 1–1000  
**Default**— 50  
**Editing Level**—Basic

**Required Privilege Level**

system system

**Required Editing Level**

Basic

## shared ims aracf-rq configuration subscriber-types

### Syntax

```
shared ims aracf-rq configuration subscriber-types (ip | login-name) {
    subscriber-id-type (address | login-name | primary-user-name);
    nic-proxy nic-proxy;
}
```

### Hierarchy Level

```
[edit shared ims aracf-rq configuration subscriber-types]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure a subscriber type.

### Options

Subscriber type used to construct the subscriber URI. The subscriber types are the same ones that you can use in applications created with the SAE CORBA remote API.

#### Value

- `ip`—
- `login-name`—

`subscriber-id-type (address | login-name | primary-user-name)`— Type of information used to identify a subscriber. It is used to pass the correct argument to the subscriber URI.

**Value**— One of the following types:

- `address`—Subscriber's IP address
- `login-name`—Subscriber's login name
- `primary-user-name`—Primary username

**Editing Level**—Basic

`nic-proxy` *nic-proxy*— Configuration that contains the NIC proxy configuration properties for the subscriber type.

**Value**—Text  
**Editing Level**—Basic

**Required Privilege Level**

system system

**Required Editing Level**

Basic

## slot *number* ims aracf-rq

### Syntax

```
slot number ims aracf-rq {
    protocol (tcp | sctp);
    port port;
    address address;
    origin-host origin-host;
    origin-realm origin-realm;
}
```

### Hierarchy Level

```
[edit slot number ims aracf-rq]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the A-RACF Rq interface.

`protocol (tcp | sctp)`—(Optional) Protocol to use for the transport connection.

**Value**— tcp or sctp

**Editing Level**—Basic

`port port`—(Optional) Port to use for incoming connections.

**Value**— Port number

**Default**—3868

**Editing Level**—Basic

`address address`—(Optional) IP address of the local peer.

**Value**— IP address

**Default**— 127.0.0.1

**Editing Level**—Basic

`origin-host origin-host`—(Optional) Diameter identifier for the endpoint that is the originator of the Diameter message. The Origin-Host AVP (AVP Code 264) is of type

DiameterIdentity and is present in all Diameter messages.

**Value**—Text

**Editing Level**—Basic

*origin-realm* *origin-realm*—(Optional) Diameter identifier for the realm of the endpoint that is the originator of the Diameter message. The Origin-Realm AVP (AVP Code 296) is of type DiameterIdentity and is present in all Diameter messages.

**Value**—Text

**Editing Level**—Basic

### **Required Privilege Level**

No specific privilege required.

### **Required Editing Level**

Basic

## slot *number* ims aracf-rq peer

### Syntax

```
slot number ims aracf-rq peer name {
    address address;
    port port;
    origin-host origin-host;
    watchdog-timeout watchdog-timeout;
    incoming-queue-limit incoming-queue-limit;
}
```

### Hierarchy Level

```
[edit slot number ims aracf-rq peer]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the remote Diameter peers.

### Options

*name* *name*— Name of SPDF Diameter peer from which this A-RACF accepts connections.

**Value**—Text

*address* *address*—(Optional) IP address of the remote peer.

**Value**— IP address

**Default**— 127.0.0.1

**Editing Level**—Basic

*port* *port*—(Optional) TCP port used of the remote peer.

**Value**— TCP port number

**Default**— 3868

**Editing Level**—Basic

`origin-host` *origin-host*—Diameter identifier for the endpoint that is the originator of the Diameter message. The Origin-Host AVP (AVP Code 264) is of type DiameterIdentity and is present in all Diameter messages.

**Value**—Text  
**Editing Level**—Basic

`watchdog-timeout` *watchdog-timeout*—(Optional) Watchdog timeout of the connection to the remote peer (in ms).

**Value**—Text  
**Default**—30000  
**Editing Level**—Basic

`incoming-queue-limit` *incoming-queue-limit*—(Optional) Size of incoming message queue, before system rejects messages.

**Value**—Text  
**Default**—100  
**Editing Level**—Basic

**Required Privilege Level**

No specific privilege required.

**Required Editing Level**

Basic

## slot *number* ims aracf-rq test templates aar

### Syntax

```
slot number ims aracf-rq test templates aar name {
    origin-host origin-host;
    origin-realm origin-realm;
    af-charging-identifier af-charging-identifier;
    authorization-lifetime authorization-lifetime;
    user-name user-name;
    specific-action [(indication-of-bearer-release | indication-of-subscriber-
detachment)...];
}
```

### Hierarchy Level

```
[edit slot number ims aracf-rq test templates aar]
```

### Release Information

Statement introduced in SRC Release 3.1.0

### Description

Configure AAR test settings.

### Options

name *name*— Name of AAR message.

**Value**—Text

origin-host *origin-host*—(Optional) Diameter identifier for the endpoint that is the originator of the Diameter message.

**Value**—Text

**Editing Level**—Basic

origin-realm *origin-realm*—(Optional) Diameter identifier for the realm of the endpoint that is the originator of the Diameter message.

**Value**—Text

**Editing Level**—Basic

`af-charging-identifier` *af-charging-identifier*—(Optional) Charging identifier for the Application Function (AF).

**Value**—Text  
**Editing Level**—Basic

`authorization-lifetime` *authorization-lifetime*—(Optional) Timeout for an authorization. The A-RACF interprets this value as a request for a soft-state reservation.

**Value**—Integer in the range 0–2147483647  
**Editing Level**—Basic

`user-name` *user-name*—(Optional) Subscriber name.

**Value**—Text  
**Editing Level**—Basic

`specific-action` [(`indication-of-bearer-release` | `indication-of-subscriber-detachment`) . . . ]—(Optional) Specific actions.

**Value**

- `indication-of-bearer-release`—
- `indication-of-subscriber-detachment`—

**Editing Level**—Basic

**Required Privilege Level**

No specific privilege required.

**Required Editing Level**

Basic

## slot *number* ims aracf-rq test templates aar *name* globally-unique-address

### Syntax

```
slot number ims aracf-rq test templates aar name globally-unique-address {
    framed-ip-address framed-ip-address;
}
```

### Hierarchy Level

```
[edit slot number ims aracf-rq test templates aar name globally-unique-address]
```

### Release Information

Statement introduced in SRC Release 3.1.0

### Description

Specify the globally unique address AVP.

### Options

*framed-ip-address framed-ip-address*—(Optional) IPv4 address or fully qualified domain name.

**Value**—Text

**Editing Level**—Basic

### Required Privilege Level

No specific privilege required.

### Required Editing Level

Basic

## slot *number* ims aracf-rq test templates aar *name* media-component-description

### Syntax

```
slot number ims aracf-rq test templates aar name media-component-
description media-component-number {
    af-application-identifier af-application-identifier;
    media-type (audio | video | data | application | control | text | message |
other);
    flow-status (enabled | removed);
    max-requested-download-bandwidth max-requested-download-bandwidth;
    max-requested-upload-bandwidth max-requested-upload-bandwidth;
}
```

### Hierarchy Level

```
[edit slot number ims aracf-rq test templates aar name media-component-
description]
```

### Release Information

Statement introduced in SRC Release 3.1.0

### Description

Configure AAR test settings for service information about media types. The service information is used to determine QoS requirements for the media type.

### Options

*media-component-number media-component-number*—Specify media component number. It contains the ordinal number of a media component

**Value**—Integer in the range 1–2147483647

*af-application-identifier af-application-identifier*—Service name.

**Value**—Text

**Editing Level**—Basic

*media-type* (audio | video | data | application | control | text | message | other)—(Optional) Media type.

**Value**— One of the following values:

- audio
- video
- data
- application
- control
- text
- message
- other

**Default**—0

**Editing Level**—Basic

`flow-status (enabled | removed)`—(Optional) Action taken for the AAR.

**Value**

- enabled—
- removed—

**Default**— Enabled

**Editing Level**—Basic

`max-requested-download-bandwidth max-requested-download-bandwidth—`  
(Optional) Maximum download bandwidth requested.

**Value**—Integer in the range 0–2147483647

**Editing Level**—Basic

`max-requested-upload-bandwidth max-requested-upload-bandwidth—`  
(Optional) Maximum upload bandwidth requested.

**Value**—Integer in the range 0–2147483647

**Editing Level**—Basic

### Required Privilege Level

No specific privilege required.

### Required Editing Level

Basic

# slot *number* ims aracf-rq test templates aar *name* media-component-description *media-component-number* media-sub-component

## Syntax

```
slot number ims aracf-rq test templates aar name media-component-
description media-component-number media-sub-component flow-number {
    flow-description [flow-description...];
    max-requested-download-bandwidth max-requested-download-bandwidth;
    max-requested-upload-bandwidth max-requested-upload-bandwidth;
}
```

## Hierarchy Level

```
[edit slot number ims aracf-rq test templates aar name media-component-
description media-component-number media-sub-component]
```

## Release Information

Statement introduced in SRC Release 3.1.0

## Description

Configure AAR test settings for the QoS and filters for the IP flows.

## Options

*flow-number* *flow-number*—Flow number; the ordinal number of the IP flow.

**Value**—Integer in the range 1–2147483647

*flow-description* [*flow-description...*]—(Optional) Flow description AVP contains the classifier (or filter) information. The syntax of this AVP has the following restrictions:

- Only permit action should be used as action.
- No options shall be used.

A subcomponent may include up to two flow descriptions (uplink and downlink), including:

- Direction(in—uplink or out—downlink)
- Source IP address

- Destination IP address
- Source port
- Destination port
- Protocol

**Value**—Text

**Editing Level**—Basic

`max-requested-download-bandwidth` *max-requested-download-bandwidth—*  
(Optional) Maximum download bandwidth requested.

**Value**—Integer in the range 0–2147483647

**Editing Level**—Basic

`max-requested-upload-bandwidth` *max-requested-upload-bandwidth—*  
(Optional) Maximum upload bandwidth requested.

**Value**—Integer in the range 0–2147483647

**Editing Level**—Basic

### Required Privilege Level

No specific privilege required.

### Required Editing Level

Basic

## slot *number* ims initial

### Syntax

```
slot number ims initial {
    static-dn static-dn;
    dynamic-dn dynamic-dn;
}
```

### Hierarchy Level

```
[edit slot number ims initial]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure initial properties for SRC components.

### Options

`static-dn static-dn`—(Optional) Location of administrator-defined configuration data in the directory.

**Value**—Text

**Default**—ou = staticConfiguration,ou = Configuration,o = Management,  
o = umc

**Editing Level**—Expert

`dynamic-dn dynamic-dn`—(Optional) Location of programmatically-defined configuration data in the directory.

**Value**—Text

**Default**—ou = dynamicConfiguration,ou = Configuration,o = Management,  
o = umc

**Editing Level**—Expert

### Required Privilege Level

No specific privilege required.

## **Required Editing Level**

Basic

## slot *number* ims initial directory-connection

### Syntax

```
slot number ims initial directory-connection {
    url url;
    backup-urls [backup-urls...];
    principal principal;
    credentials credentials;
    protocol (ldaps);
    timeout timeout;
    check-interval check-interval;
    blacklist;
    snmp-agent;
}
```

### Hierarchy Level

```
[edit slot number ims initial directory-connection]
```

### Description

Configure properties for the directory connection.

### Options

`url url`—(Optional) URL that identifies the location of the primary directory server.

**Value**— URL

**Default**—`ldap://127.0.0.1:389`

**Editing Level**—Basic

`backup-urls [backup-urls...]`—(Optional) URLs that identify the locations of backup directory servers. Backup servers are used if the primary directory server is not accessible.

**Value**— List of URLs

**Editing Level**—Basic

`principal principal`— DN that the SRC component uses for authentication to access the directory.

**Value**— DN.

When you specify the DN, you can use `<base>` to indicate the base DN.

**Editing Level**—Basic

`credentials` *credentials*— Password with which the SRC component accesses the directory.

**Value**— Password

**Editing Level**—Basic

`protocol` (`ldaps`)—(Optional) Security protocol used to connect to the directory. If you do not configure a security protocol, plain socket is used.

**Value**

- `ldaps`— LDAPS which uses SSL.

**Editing Level**—Expert

`timeout` *timeout*—(Optional) Maximum amount of time during which the directory must respond to a connection request.

**Value**—Integer in the range 1–2147483647 s

**Default**—10

**Editing Level**—Expert

`check-interval` *check-interval*—(Optional) Time interval at which the directory monitoring system verifies its connection to the directory. If the directory connection fails after this interval, the directory monitoring system initiates a connection to another directory.

**Value**—Integer in the range 15–2147483647 s

**Default**—60

**Editing Level**—Expert

`blacklist`—(Optional) Specifies whether the directory monitoring system prevents connection to a directory if the directory fails to respond during 10 polling intervals.

**Default**—false

**Editing Level**—Basic

`snmp-agent`—(Optional) Specifies whether the SDX SNMP agent exports MIBs for this directory connection.

**Default**—false  
**Editing Level**—Expert

**Required Privilege Level**

No specific privilege required.

**Required Editing Level**

Basic

## slot *number* ims initial directory-eventing

### Syntax

```
slot number ims initial directory-eventing {
    eventing;
    signature-dn signature-dn;
    polling-interval polling-interval;
    event-base-dn event-base-dn;
    dispatcher-pool-size dispatcher-pool-size;
}
```

### Hierarchy Level

```
[edit slot number ims initial directory-eventing]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Change configuration for directory eventing properties. In most cases, you can use the default configuration for these properties.

### Options

`eventing`—(Optional) Enable an SRC component to poll the directory for changes.

**Default**—true

**Editing Level**—Normal

`signature-dn signature-dn`—(Optional) DN of the directory entry that specifies the `usedDirectory` attribute for the SRC CLI. The `usedDirectory` attribute identifies the vendor of the directory server.

**Value**— DN

**Default**—o = umc

**Editing Level**—Expert

`polling-interval polling-interval`—(Optional) Interval at which an SRC component polls the directory to check for directory changes.

**Value**—Integer in the range 15–2147483647 s

**Default**—30  
**Editing Level**—Normal

`event-base-dn` *event-base-dn*—(Optional)

DN of an entry superior to the data associated with an SRC component in the directory.

If you are storing non-SRC data in the directory, and that data changes frequently whereas the SRC data does not, you may need to adjust the default value to improve performance. For optimal performance, set the value to the DN of an entry superior to both the SRC data and the changing non-SRC data.

**Value**—DN  
**Default**—o = UMC  
**Editing Level**—Expert

`dispatcher-pool-size` *dispatcher-pool-size*—(Optional) Number of directory change notifications that can be sent simultaneously to the SRC component.

**Value**—Integer in the range 0–2147483647  
**Default**—1  
**Editing Level**—Expert

#### Required Privilege Level

No specific privilege required.

#### Required Editing Level

Basic

# slot *number* ims logger

## Syntax

```
slot number ims logger name ...
```

## Hierarchy Level

```
[edit slot number ims logger]
```

## Release Information

Statement introduced in SRC Release 1.0.0

## Description

Configure the logging destination.

## Options

*name* *name*— Name used to group parameters for the logging destination.

**Value**— Text

## Required Privilege Level

No specific privilege required.

## Required Editing Level

Basic

## slot *number* ims logger *name* file

### Syntax

```
slot number ims logger name file {
    filter filter;
    filename filename;
    rollover-filename rollover-filename;
    maximum-file-size maximum-file-size;
}
```

### Hierarchy Level

```
[edit slot number ims logger name file]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the logging destination for file-based logging.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**— The default value is different for each type of component.

**Editing Level**—Basic

*filename filename*— Absolute path of the filename that contains the current logs.

**Note:** Make sure that the user under which the J2EE application server or Web application server runs has write access to this folder. If this user does not have write access to the default folder, configure the component or application to write logs in folders to which the user has write access.

**Value**— Filename

**Default**— By default, SRC components and applications write log files in the folder in which the component or application is started.

**Editing Level**—Basic

`rollover-filename rollover-filename`—(Optional) Absolute path of the filename that contains the log history. When the log file reaches the maximum size, the software closes the log file and renames it with the name you specify for the rollover file. If a previous rollover file exists, the software overwrites it. The software then reopens the log file and continues to save event messages in it.

**Value**— Path of filename

Example—`/opt/UMC/sae/var/log/sae.alt`

**Default**— The default value is different for each type of component.

**Editing Level**—Normal

`maximum-file-size maximum-file-size`—(Optional) Maximum size of the log file and the rollover file.

Do not set the maximum file size to a value greater than the available disk space.

**Value**—Integer in the range 0–2147483647 kbytes

**Default**— 1000000

**Editing Level**—Normal

#### Required Privilege Level

No specific privilege required.

#### Required Editing Level

Basic

## slot *number* ims logger *name* syslog

### Syntax

```
slot number ims logger name syslog {
    filter filter;
    host host;
    facility facility;
    format format;
}
```

### Hierarchy Level

```
[edit slot number ims logger name syslog]
```

### Release Information

Statement introduced in SRC Release 1.0.0

### Description

Configure the logging destination for syslog-based logging.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**— The default value is different for each type of component.

**Editing Level**—Basic

*host host*— IP address or name of a host that collects event messages by means of a standard system logging daemon.

**Value**— IP address or hostname

**Default**—loghost

**Editing Level**—Basic

*facility facility*—(Optional) Type of system log in accordance with the system logging protocol.

**Value**—Integer in the range 0–23

**Default**— 3

**Editing Level**—Advanced

*format format*—(Optional) MessageFormat string that specifies how the information in an event message is printed. (The strings {#} are replaced with the log information [...]).

**Value**— MessageFormat string as specified in <http://java.sun.com/j2se/1.4.2/docs/api/java/text/MessageFormat.html>.

The fields available for events are:

- 0—Time and date of the event
- 1—Name of the thread generating the event
- 2—Text message of the event
- 3—Category of the event
- 4—Priority of the event

**Editing Level**—Advanced**Required Privilege Level**

No specific privilege required.

**Required Editing Level**

Basic

# show ims aracf-rq peers

## Syntax

```
show ims aracf-rq peers <peer-name peer-name> < (brief) >
```

## Release Information

Command introduced in SRC Release 3.1.0

## Description

Display information for a peer instance.

## Options

*peer-name peer-name*—(Optional) Name of a peer. If no peer name is provided, it will display status for all configured peers.

**Value**— All or part of the peer name.

**Default**— No value

(Optional) Output style.

### Value

- **brief**— Display only names and connectivity.

**Default**— Detail

## Required Privilege Level

view

# show ims statistics aracf rq

## Syntax

```
show ims statistics aracf rq
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Display A-RACF Rq statistics, including information about the server process and the current state of the A-RACF Rq interface.

## Required Privilege Level

view

## **show ims statistics aracf rq process**

### **Syntax**

```
show ims statistics aracf rq process
```

### **Release Information**

Command introduced in SRC Release 1.0.0

### **Description**

Display information about the IMS server process.

### **Required Privilege Level**

view

# test ims aracf-rq aar session-modify

## Syntax

```
test ims aracf-rq aar session-modify session-id session-id aar-name aar-name
```

## Release Information

Command introduced in SRC Release 3.1.0

## Description

Simulate AAR request for service modification of an existing Diameter session.

## Options

`session-id` *session-id*— Session ID to be modified.

**Value**—Text

**Default**— No value

`aar-name` *aar-name*— Name of AAR message.

**Value**—Text

## Required Privilege Level

view

## test ims aracf-rq aar session-start

### Syntax

```
test ims aracf-rq aar session-start aar-name aar-name <framed-ip-address framed-  
ip-address> <user-name user-name> <origin-host origin-host> <origin-realm origin-  
realm>
```

### Release Information

Command introduced in SRC Release 3.1.0

### Description

Simulate initial AAR request for service activations.

### Options

*aar-name aar-name*— Name of AAR for activating service.

**Value**—Text

**Default**— No value

*framed-ip-address framed-ip-address*—(Optional) Subscriber IP address. If specified, this value overrides the value in the AAR message.

**Value**—Text

**Default**— No value

*user-name user-name*—(Optional) Subscriber name. If specified, this value overrides the value in the AAR message.

**Value**—Text

**Default**— No value

*origin-host origin-host*—(Optional) Host of the simulator that generates the AAR packet. If specified, this value overrides the value in the AAR message.

**Value**—Text

**Default**— No value

`origin-realm` *origin-realm*—(Optional) Origin realm of the simulator that generates this packet. If specified, this value overrides the value in the AAR message.

**Value**—Text

**Default**— No value

### Required Privilege Level

view

# test ims aracf-rq str

## Syntax

test ims aracf-rq str session-id *session-id*

## Release Information

Command introduced in SRC Release 3.1.0

## Description

Simulate STR requests to deactivate Diameter session.

## Options

session-id *session-id*— Session ID to be terminated.

**Value**—Text  
**Default**— No value

## Required Privilege Level

view

# License Management

The following table summarizes the SRC command-line interface (SRC CLI) for supporting license management. Configuration statements and operational commands are listed in alphabetical order.

License Management
Configuration Statements
<a href="#">shared license-server alarm</a>
<a href="#">shared license-server corba</a>
<a href="#">shared license-server email</a>
<a href="#">shared license-server engine</a>
<a href="#">shared license-server logging logger</a>
<a href="#">shared license-server logging logger name file-logger</a>
<a href="#">shared license-server logging logger name syslog-logger</a>
<a href="#">shared license-server persistence-control</a>
<a href="#">shared license-server repository</a>
Operational Commands
<a href="#">request license import</a>
<a href="#">request license remove</a>
<a href="#">request license usage-report</a>
<a href="#">show license allocated</a>

# shared license-server alarm

## Syntax

```
shared license-server alarm {
    threshold threshold;
    report-server report-server;
}
```

## Hierarchy Level

```
[edit shared license-server alarm]
```

## Release Information

Statement introduced in SRC Release 3.1.0

## Description

Configure the SRC license server to send alarms to administrators through SNMP and e-mail messages.

## Options

`threshold threshold`— A threshold as a percentage of licensed capacity that, when exceeded, sends SNMP minor traps and initiates e-mail alerts to the system administrator.

**Value**—Integer in the range 0–100

**Default**— 80

**Editing Level**—Normal

`report-server report-server`—(Optional) SNMP server to receive warning traps.

**Value**— IP address or hostname

**Default**— No value

**Editing Level**—Normal

## Required Privilege Level

system

## Required Editing Level

Basic

## shared license-server corba

### Syntax

```
shared license-server corba {
    orb-configuration-property-file orb-configuration-property-file;
}
```

### Hierarchy Level

```
[edit shared license-server corba]
```

### Release Information

Statement introduced in SRC Release 3.1.0

### Description

Use the CORBA configuration to define the location of the property file for the object request broker (ORB). Typically, you do not need to change this property.

### Options

`orb-configuration-property-file orb-configuration-property-file`— ORB configuration property file.

**Value**— *filename*

**Default**— *etc/jacorb.properties*

**Editing Level**—Expert

### Required Privilege Level

system

### Required Editing Level

Expert

## shared license-server email

### Syntax

```
shared license-server email {
    server server;
    alarm-report-address alarm-report-address;
    usage-report-address usage-report-address;
}
```

### Hierarchy Level

```
[edit shared license-server email]
```

### Release Information

Statement introduced in SRC Release 3.1.0

### Description

Configure e-mail addresses to receive messages about license server warnings or license server usage reports.

### Options

*server server*— SMTP e-mail server to receive alarms and usage reports.

**Value**— IP address or hostname

**Default**— No value

**Editing Level**—Normal

*alarm-report-address alarm-report-address*— E-mail address of the system administrator to receive warning e-mail messages.

**Value**— E-mail address

**Default**— No value

**Editing Level**—Normal

*usage-report-address usage-report-address*—(Optional) E-mail address of the system administrator to receive usage report e-mail messages.

**Value**— E-mail address

**Default**— No value

**Editing Level**—Normal

**Required Privilege Level**

system

**Required Editing Level**

Basic

## shared license-server engine

### Syntax

```
shared license-server engine {
    service-session-unit-size service-session-unit-size;
    sae-service-unit-size sae-service-unit-size;
    lease-renew-interval lease-renew-interval;
    allocate-license-threshold allocate-license-threshold;
    release-license-threshold release-license-threshold;
}
```

### Hierarchy Level

```
[edit shared license-server engine]
```

### Release Information

Statement introduced in SRC Release 3.1.0

### Description

Configure general properties for the SRC license server.

### Options

*service-session-unit-size service-session-unit-size*— Size of each license unit for the service session property; this is the size of the license unit allocated to the SAE.

**Value**—Integer in the range -2147483648–2147483647

**Default**— 50

**Editing Level**—Expert

*sae-service-unit-size sae-service-unit-size*—(Optional) Size of each license unit for the SAE service property; this is the size of the license unit allocated to the SAE.

**Value**—Integer in the range -2147483648–2147483647

**Default**— 25

**Editing Level**—Expert

*lease-renew-interval lease-renew-interval*— Lease period for the licenses that the SAE client receives.

**Value**— Number of seconds in the range 0-129600 **Note:** 604800 is 1 week;

129600 is 2 weeks.  
**Default**— 604800 (one week)  
**Editing Level**—Expert

`allocate-license-threshold` *allocate-license-threshold*— Threshold, as a percentage of the chunk size, at which the SAE client obtains more licenses.

**Value**—Integer in the range 0–100  
**Default**— 90  
**Editing Level**—Expert

`release-license-threshold` *release-license-threshold*— Threshold, as a percentage of the chunk size, at which the SAE client releases one license unit.

**Value**—Integer in the range 0–100  
**Default**— 10  
**Editing Level**—Expert

**Required Privilege Level**

system

**Required Editing Level**

Expert

# shared license-server logging logger

## Syntax

```
shared license-server logging logger name ...
```

## Hierarchy Level

```
[edit shared license-server logging logger]
```

## Release Information

Statement introduced in SRC Release 3.1.0

## Description

Configure logging properties for the SRC licnese server.

## Options

*name name*—

**Value**—Text

## Required Privilege Level

system

## Required Editing Level

Basic

## shared license-server logging logger *name* file-logger

### Syntax

```
shared license-server logging logger name file-logger {
    filter filter;
    filename filename;
    rollover-filename rollover-filename;
    maximum-file-size maximum-file-size;
}
```

### Hierarchy Level

```
[edit shared license-server logging logger name file-logger]
```

### Release Information

Statement introduced in SRC Release 3.1.0

### Description

Configure logging of messages to a file.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**— The default value is different for each type of component.

**Editing Level**—Basic

*filename filename*— Absolute path of the filename that contains the current logs.

**Note:** Make sure that the user under which the J2EE application server or Web application server runs has write access to this folder. If this user does not have write access to the default folder, configure the component or application to write logs in folders to which the user has write access.

**Value**— Filename

**Default**— No value

**Editing Level**—Basic

*rollover-filename rollover-filename*—(Optional) Absolute path of the filename that

contains the log history. When the log file reaches the maximum size, the software closes the log file and renames it with the name you specify for the rollover file. If a previous rollover file exists, the software overwrites it. The software then reopens the log file and continues to save event messages in it.

**Value**— Path of filename

Example—`/opt/UMC/sae/var/log/sae.alt`

**Default**— The default value is different for each type of component.

**Editing Level**—Normal

`maximum-file-size` *maximum-file-size*—(Optional) Maximum size of the log file and the rollover file.

Do not set the maximum file size to a value greater than the available disk space.

**Value**—Integer in the range 0–2147483647 kbytes

**Default**— 1000000

**Editing Level**—Normal

### Required Privilege Level

system

### Required Editing Level

Basic

# shared license-server logging logger *name* syslog-logger

## Syntax

```
shared license-server logging logger name syslog-logger {
    filter filter;
    host host;
    facility facility;
    format format;
}
```

## Hierarchy Level

```
[edit shared license-server logging logger name syslog-logger]
```

## Release Information

Statement introduced in SRC Release 3.1.0

## Description

Configure logging of messages to system logging.

*filter filter*—(Optional) Filter to define which event messages the software logs or ignores. Filters can specify the logging level, such as debug, or can specify expressions. For information about expressions, see the documentation that describes how to configure logging.

**Value**— Log filter

**Default**—/error-

**Editing Level**—Basic

*host host*— IP address or name of a host that collects event messages by means of a standard system logging daemon.

**Value**— IP address or hostname

**Default**—loghost

**Editing Level**—Basic

*facility facility*—(Optional) Type of system log in accordance with the system logging protocol.

**Value**—Integer in the range 0–23

**Default**— 3

**Editing Level**—Advanced

`format` *format*—(Optional) MessageFormat string that specifies how the information in an event message is printed. (The strings `{#}` are replaced with the log information [...]).

**Value**— MessageFormat string as specified in <http://java.sun.com/j2se/1.4.2/docs/api/java/text/MessageFormat.html>.

The fields available for events are:

- 0—Time and date of the event
- 1—Name of the thread generating the event
- 2—Text message of the event
- 3—Category of the event
- 4—Priority of the event

**Default**— None

**Editing Level**—Advanced

**Required Privilege Level**

system

**Required Editing Level**

Basic

# shared license-server persistence-control

## Syntax

```
shared license-server persistence-control {
    root-directory-of-the-license-server root-directory-of-the-license-server;
    work-directory-of-the-license-server work-directory-of-the-license-server;
    license-server-state-cache-file license-server-state-cache-file;
}
```

## Hierarchy Level

```
[edit shared license-server persistence-control]
```

## Release Information

Statement introduced in SRC Release 3.1.0

## Description

Configure the root directory, the working directory, and the cache file location for the SRC license server.

## Options

*root-directory-of-the-license-server root-directory-of-the-license-server*— Root directory of the license server.

**Value**— DN

**Default**— */opt/UMC/licsvr*

**Editing Level**—Expert

*work-directory-of-the-license-server work-directory-of-the-license-server*— Work directory of the license server, in which license server states are saved.

**Value**— Directory path

**Default**— *var/run*

**Editing Level**—Expert

*license-server-state-cache-file license-server-state-cache-file*— Cache file for license server state information.

**Value**— *filename*

**Default**— *state*

**Editing Level**—Expert

**Required Privilege Level**

system

**Required Editing Level**

Expert

## shared license-server repository

### Syntax

```
shared license-server repository {
    ldap-server-address ldap-server-address;
    server-port server-port;
    search-base search-base;
    authentication-dn authentication-dn;
    password password;
}
```

### Hierarchy Level

```
[edit shared license-server repository]
```

### Release Information

Statement introduced in SRC Release 3.1.0

### Description

Configure access to the Juniper Networks database for the SRC license server.

### Options

`ldap-server-address ldap-server-address`— IP address or hostname of the LDAP server that stores licensing data.

This is a required property. If no value is assigned, the license server does not start. If this value is removed while the license server is running, the server rejects licensing requests. After a new value is entered and the license server connects to the LDAP server, the license server accepts license requests again.

**Value**— IP address or hostname

**Default**— 127.0.0.1

**Editing Level**—Expert

`server-port server-port`— Port of the LDAP server that stores licensing data.

**Value**—Integer in the range 0–65535

**Default**— 389

**Editing Level**—Expert

`search-base` *search-base*— Base directory of the LDAP server that stores licensing data.

**Value**— DN

**Default**— *o= umc*

**Editing Level**—Expert

`authentication-dn` *authentication-dn*— DN used by the SAE to authenticate access to the LDAP server that stores licensing data.

**Value**— DN

**Default**— *cn= licsvr, ou= Components, o= Operators, o= umc*

**Editing Level**—Expert

`password` *password*— Password used to authenticate access to the LDAP server that stores licensing data.

**Value**— *password*

**Default**— *licsvr*

**Editing Level**—Expert

#### Required Privilege Level

system

#### Required Editing Level

Expert

# request license import

## Syntax

```
request license import file-name file-name <server-address server-address> <name-space name-space> <authentication-dn authentication-dn> <password password> <master-license>
```

## Release Information

Command introduced in SRC Release 1.0.0

## Description

Import an SRC license into the directory. The license can be either a pilot license or a server license. Use the `master-license` option to install a server, or master, license.

## Options

`file-name file-name`— Name of the file that contains the SRC license information.

**Value**— Filename

**Default**— No value

`server-address server-address`—(Optional) IP address for the primary directory server. For C-series platforms, this is the platform that has the Juniper Networks database configured to have a primary role.

**Value**— IP address

**Default**— No value

`name-space name-space`—(Optional) Base distinguished name (DN) for the directory. In most cases you can use the default `< base >`.

**Value**— Base DN

**Default**— `< base >`

`authentication-dn authentication-dn`—(Optional) DN used for directory authentication.

**Value**— DN

**Default**— No value

`password password`—(Optional) Password used for directory authentication.

**Value**— Password  
**Default**— No value

`master-license`—(Optional) License is a server, or master, license.

**Required Privilege Level**

`maintenance`

# request license remove

## Syntax

```
request license remove <license-id license-id> <server-address server-address>
<name-space name-space> <authentication-dn authentication-dn> <password password>
<master-license> <all>
```

## Release Information

Command introduced in SRC Release 3.0.0

## Description

Remove an SRC license from the directory. Use the `master-license` option to remove a server, or master, license.

## Options

`license-id license-id`—(Optional) License ID identifying the license to be removed.

**Value**— license ID

**Default**— No value

`server-address server-address`—(Optional) IP address for the primary directory server. For C-series platforms, this is the platform that has the Juniper Networks database configured to have a primary role.

**Value**— IP address

**Default**— No value

`name-space name-space`—(Optional) Base distinguished name (DN) for the directory. In most cases you can use the default `< base >`.

**Value**— Base DN

**Default**— `< base >`

`authentication-dn authentication-dn`—(Optional) DN used for directory authentication.

**Value**— DN

**Default**— No value

`password password`—(Optional) Password used for directory authentication.

**Value**— Password  
**Default**— No value

`master-license`—(Optional) Remove the master license.

`all`—(Optional) Remove all licenses.

**Required Privilege Level**

maintenance

# request license usage-report

## Syntax

```
request license usage-report <slot slot>
```

## Release Information

Command introduced in SRC Release 3.1.0

## Description

Create a license usage report. The report lists the date the report was created, and for each license the customer identification information, the license serial number, and the number of licenses installed. It also lists the number of concurrent active SAE service sessions (maximum number of license units) that can be allocated, and the maximum number of concurrent active SAE service sessions allocated since the license was installed or since the last license usage report was created.

## Options

`slot slot`—(Optional) Number of the slot for which you want to request a license report.

**Value**— Currently the chassis has only one slot. The valid value is 0.

**Default**— 0

## Required Privilege Level

maintenance

## show license allocated

### Syntax

```
show license allocated <virtual-router virtual-router> <slot slot>
```

### Release Information

Command introduced in SRC Release 3.1.0

### Description

Display information stored in the most recent usage report for the license server. The usage report provides information about the maximum number of concurrent service sessions in use per virtual router since the last time a usage report was generated, and compares this number with the maximum number of sessions allowed by the SRC server license.

### Options

`virtual-router virtual-router`—(Optional) Name of virtual router for which to display license usage information.

**Value**— VR name

**Default**— No value

`slot slot`—(Optional) Number of the slot for which you want to display license usage information.

**Value**— Currently the chassis has only one slot. The valid value is 0.

**Default**— 0

### Required Privilege Level

No specific privilege required.