Chapter 9

Configuring the SAE with the C-Web Interface

This chapter describes how to use the C-Web interface to configure general SAE properties. You can use the C-Web interface to configure the SAE on a Solaris platform or on a C-series platform.

To use the SRC CLI to configure an SAE on a Solaris platform or on a C-series platform, see *SRC-PE Network Guide, Chapter 2, Configuring the SAE with the SRC CLI*.

Topics in this chapter include:

Configuring LDAP Access to Directory Data with the C-Web Interface

The SRC software stores subscriber, service, persistent login, policy, router, and cached subscriber profiles and session data in a directory. The SAE uses LDAP to store and retrieve the data.

If you do not store data in the local directory, you need to configure the LDAP connections to the directories in which the data is stored. You can also select the filter that the SAE uses to search for subscriptions in the directory and directory eventing parameters for data stored in the directory.

The tasks to configure LDAP access to directory data are:

Configuring Access Through LDAPS to Service and Subscriber Data

You can secure connections between a router and an external directory that contains service data or subscriber data, and you can configure the router to use LDAPS when it connects to the same data source.

To use LDAPS to secure connections between a router and an external directory:

1. Do one of the following:

   a. To configure service data, click **Configure**, expand **Shared > SAE > LDAP**, and then click **Service Data**.

      The Service Data pane appears.

   b. To configure subscriber data, click **Configure**, expand **Shared > SAE > LDAP**, and then click **Subscriber Data.**

      The Subscriber Data pane appears.

2. Click **Create**.

3. Select **ldaps** from the Secured Ldap Protocol list.

4. In the router initialization script you specify the directory context.

   The */opt/UMC/sae/lib/poolPublisher.py* script and the */opt/UMC/sae/lib/IorPublisher.py* script provide examples of how to configure a directory context, For example, from the */opt/UMC/sae/lib/IorPublisher.py* script:

   ```
   dirContext = Ssp.registry.get('ServiceDataSource.component').getContext()
   ```

   In addition, you can change the directory context.

   For information about how to use InitialDirContext class or the DirContext class to specify directory context, see:

http://java.sun.com/j2se/1.4.2/docs/api/javax/naming/directory/InitialDirContext.html

http://java.sun.com/j2se/1.4.2/docs/api/javax/naming/directory/DirContext.html

Configuring Access to Subscriber Data

To configure SAE access to subscriber data:

1. Click **Configure**, expand **Shared > SAE > LDAP**, and then click **Subscriber Data.**

   The Subscriber Data pane appears.

2. Click **Create**, enter information as described in the Help text in the main pane, and then click **Apply**.

Configuring Access to Service Data

To configure SAE access to service data:

1. Click **Configure**, expand **Shared > SAE > LDAP**, and then click **Service Data**.

   The Service Data pane appears.

2. Click **Create**, enter information as described in the Help text in the main pane, and then click **Apply**.

Configuring Access to Policy Data

To configure SAE access to subscriber data:

1. Click **Configure**, expand **Shared > SAE > LDAP**, and then click **Policy Data**.

   The Policy Data pane appears.

2. Click **Create**, enter information as described in the Help text in the main pane, and then click **Apply**.

Configuring Access to the Persistent Login Cache

To configure SAE access to persistent login cache data:

1. Click **Configure**, expand **Shared > SAE > LDAP**, and then click **Persistent Log Cache**.

   The Persistent Login Cache pane appears.

2. Click **Create**, enter information as described in the Help text in the main pane, and then click **Apply**.

Configuring the Location of Network Device Data

To configure SAE access to network device data:

1. Click **Configure**, expand **Shared > SAE**, and then click **Network Device Data**.

   The Network Device Data pane appears.

2. Enter information as described in the Help text in the main pane, and click **Apply**.

Enabling Automatic Discovery of Changes in SAE Configuration Data

To enable automatic discovery of changes in SAE configuration data:

1. Click **Configure**, expand **Shared > SAE**, and then click **LDAP**.

   The LDAP pane appears.

2. Click **Create**, enable the Enable Directory Eventing box as described in the Help text in the main pane, and then click **Apply**.

Setting the Timeout and Number of Events for SAE Directory Eventing

To configure the directory eventing timeout and the number of simultaneous events that the SAE can receive from the directory:

1. Click **Configure**, expand **Shared > SAE > LDAP**, and then click **Directory Eventing**.

   The Directory Eventing pane appears.

2. Click **Create**, enter information as described in the Help text in the main pane, and then click **Apply**.

Related Topics

- For information about setting up SAE groups, see *SRC-PE Getting Started Guide, Chapter 21, Setting Up an SAE with the SRC CLI.*

Storing Subscriber and Service Session Data with the C-Web Interface

To aid in recovering from an SAE failover, the SAE stores subscriber and service session data in flat files on the SAE host. The SRC component that controls the storage of session data on the SAE is called the session store. The session store queues data and then writes the data to session store files on the SAE host's disk. After the data has been written to disk, it can survive a server reboot.

You can configure how the SAE stores session data for JUNOSe routers, JUNOS routing platforms, simulated routers, and *PacketCable Multimedia Specification* (PCMM) devices.

Session Store Files

Session store files are numbered flat files. Session store files are located in a directory on the SAE host. You can configure the size of session store files. After the maximum size has been reached, the session store creates a new file and begins writing data to the new file.

Store operations, such as adding a session to the store (put store operations) or removing a session from the store (remove store operations), are queued in a buffer before they are written to the session store file. You can configure parameters that determine when the session store writes a queue to a session store file.

Session store files are deleted if they have not been modified and if no session activity has taken place for one week. All the data files that contain the sessions associated with a particular virtual router are deleted at the same time.

Active and Passive Session Stores

You can have a community of SAEs and duplicate session store data on each SAE in the community in case of an SAE failover. SAE communities are made up of SAEs that you configure as connected SAEs for a virtual router object.

SAEs in a community are given the role of either active SAE or passive SAE. The active SAE keeps session data up to date within the community. Each active session store opens a Transmission Control Protocol (TCP) connection to its passive SAE. The TCP connection triggers the creation of a passive session store in that SAE. When the active session store writes operations to the session store file, it passes them to passive session stores on all SAEs in the community.

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

Standby SAEs

In a community of SAEs, one SAE can provide redundancy for the active SAE. The redundant (standby) SAE connects to the active SAE through a COPS-PR connection. State as well as session data is replicated from the active SAE to the standby SAE to reduce the failover time from one SAE to another.

A standby SAE can respond to SAE failures and connection failures between an SAE and a JUNOSe router. Connection failures between an active SAE and a standby SAE may not be immediately detected, because each SAE continues to function for a period of time. When a standby SAE does detect that state information is different on the two SAEs, it resynchronizes data between the two.

NOTE: We recommend that you use a highly reliable and available connection between an active SAE and a standby SAE to ensure availability of the two SAEs.

Session Store File Rotation

The session store periodically rotates the session store files. During rotation, the session store copies put store operations for live sessions from the oldest file to the end of the newest file. (Live sessions are sessions that have been created but not yet deleted.) It then deletes the oldest file. Sessions are rotated in batches, and you can configure the number of sessions that are rotated at the same time, and how much disk space is used by live sessions before files are rotated. No session store activity can take place while a batch of sessions is rotated.

Configuring the Session Store Feature on the C-Web Interface

You can configure three things for the session store feature:

- Configure session store parameters for a router or device driver. See *Configuring Session Store Parameters for a Device Driver* on page 68.
- Configure global session store parameters that are shared by all session store instances (active or passive) on the SAE. See *Configuring Global Session Store Parameters with the C-Web Interface* on page 68.
- Reduce the size of session objects that the SAE sends across the network for the session store feature. See *Reducing the Size of Objects for the Session Store Feature* on page 69.

Configuring Session Store Parameters for a Device Driver

To configure session store parameters within a device driver configuration:

1. Click **Configure**, expand **Shared > SAE > Configuration**, and then click **Driver.**

   The Driver pane appears.

2. In the side pane, expand the type of driver that you want to configure, and then click **Session Store**.

   The Session Store pane appears.

3. Click **Create**, enter information as described in the Help text in the main pane, and then click **Apply**.

Configuring Global Session Store Parameters with the C-Web Interface

This section describes how to 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 device driver configuration. See *Configuring Session Store Parameters for a Device Driver* on page 68.

To configure global session store parameters:

1. Click **Configure**, expand **Shared > SAE > Configuration > Driver**, and then click **Session Store**.

   The Session Store pane appears.

2. Click **Create**, enter information as described in the Help text in the main pane, and then click **Apply**.

Reducing the Size of Objects for the Session Store Feature

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 property reduces the size of objects, but increases the CPU load on the SAE.

To specify whether or not session objects are compressed:

1. Click **Configure**, expand **Shared > SAE**, and then click **Configuration**.

   The SAE Configuration pane appears.

2. Click **Create**, enable the Compress Session Data box as described in the Help text in the main pane, and then click **Apply**.

Related Topics

- For information about setting up SAE groups, see *SRC-PE Getting Started Guide, Chapter 21, Setting Up an SAE with the SRC CLI*.

Configuring the Number of Threads for Sessions on the C-Web Interface

To configure the number of threads used to handle session-related activity:

1. Click **Configure**, expand **Shared > SAE**, and then click **Session Job Manager**.

   The Session Job Manager pane appears.

2. Click **Create**, enter the number of threads as described in the Help text in the main pane, and then click **Apply**.