

Chapter 16

Configuring the JPS with the C-Web Interface

This chapter describes how to use the C-Web interface to configure the Juniper Policy Server (JPS), a component of the SRC software that acts as a policy server in the PacketCable Multimedia Specification (PCMM) environment.

You can also use the CLI to configure the JPS on a Solaris platform or on a C-series Controller:

- To use the SRC CLI interface, see *SRC-PE Solutions Guide, Chapter 10, Configuring the JPS with the SRC CLI*.
- To use the Solaris platform, see *SRC-PE Solutions Guide, Chapter 11, Configuring the JPS on a Solaris Platform*.

Topics in this chapter include:

- Configuring the JPS with the C-Web Interface on page 146
- Modifying the JPS Configuration with the C-Web Interface on page 146
- Modifying the Subscriber Configuration with the C-Web Interface on page 149
- Configuring the SAE to Interact with the JPS with the C-Web Interface on page 151
- Using the NIC Resolver with the C-Web Interface on page 153
- Managing the JPS with the C-Web Interface on page 154

For information about the JPS, see *SRC-PE Solutions Guide, Chapter 9, Using PCMM Policy Servers*.

Configuring the JPS with the C-Web Interface

You can modify the JPS configuration, which includes configuring the logging destinations and connections to the JPS interfaces. Any configuration changes will be applied within 15 seconds.

You can configure the subscriber, which maps a subscriber address to the CMTS address.

The tasks to configure the JPS for a cable network environment are:

1. Modifying the JPS Configuration with the C-Web Interface on page 146
2. Modifying the Subscriber Configuration with the C-Web Interface on page 149

In addition to configuring the JPS, you might need to perform these tasks:

1. Configuring the SAE to Interact with the JPS with the C-Web Interface on page 151
2. Using the NIC Resolver with the C-Web Interface on page 153

Modifying the JPS Configuration with the C-Web Interface

Tasks to modify the current JPS configuration are:

1. *Configuring General Properties for the JPS with the C-Web Interface* on page 146
2. *Specifying a Policy Server Identifier in Messages with the C-Web Interface* on page 147
3. *Configuring Logging Destinations with the C-Web Interface* on page 147
4. *Specifying Connections to the Application Managers with the C-Web Interface* on page 147
5. *Specifying Connections to RKs with the C-Web Interface* on page 148
6. *Specifying Connections to CMTS Devices with the C-Web Interface* on page 149

Configuring General Properties for the JPS with the C-Web Interface

To configure general properties for the JPS:

1. Click **Configure**, and expand **Slot > Slot: 0**, and then click **JPS**.

The JPS pane appears.

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

Specifying a Policy Server Identifier in Messages with the C-Web Interface

To configure a policy server identifier for the JPS:

1. Click **Configure**, expand **Slot > Slot: 0**, and then click **JPS**.

The JPS pane appears.

2. In the Policy Server ID box, enter a value as described in the Help text in the main pane.
3. Enter information in the remaining boxes as described in the Help text in the main pane, and click **Apply**.

Configuring Logging Destinations with the C-Web Interface

You can configure the logging destination to store messages in a file, or to a system logging facility (Syslog)

You can create or modify loggers. By default, the JPS has four logging destinations (log1, log2, log3, and log4).

Related Topics

- *SRC-PE Monitoring and Troubleshooting Guide, Chapter 4, Configuring Logging for SRC Components with the C-Web Interface*

Specifying Connections to the Application Managers with the C-Web Interface

This section describes how to configure the application manager-to-policy server interface (PKT-MM3) so that the policy server can communicate with application managers.

To configure the connections to the application managers:

1. Click **Configure**, expand **Slot > Slot: 0 > JPS**, and then click **AM Interface**.

The AM Interface pane appears.

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

Related Topics

- *Restarting the JPS with the C-Web Interface* on page 155

Specifying Connections to RKSs with the C-Web Interface

To configure the policy server-to-RKS interface (PKT-MM4) so that policy events can be sent to the RKS, you can configure RKS pairs and their associated application managers.

To configure the policy server-to-RKS interface:

1. Click **Configure**, expand **Slot > Slot: 0 > JPS**, and then click **RKS Interface**.

The RKS Interface pane appears.

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

Configuring RKS Pairs with the C-Web Interface

By default, the JPS has four RKS pairs. All parameters that share the same RKS pair name configure the connection to that RKS pair. Any configured RKS pair can be used as the value for the default RKS pair or the RKS pair associated with a specific application manager.



NOTE: When running more than one JPS in a group to provide redundancy, all the JPSs in that group must have the same RKS pair configuration (including the default RKS pair and any configured RKS pairs associated with a specific application manager).

To configure the RKS pair:

1. Click **Configure**, and expand **Slot > Slot: 0 > JPS > RKS Interface**.
2. Click the specified RKS pair (for example, pair 1).

The RKS Pair:pair 1 pane appears.

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

Configuring RKS Pairs for Associated Application Managers with the C-Web Interface

By default, the JPS has four associated application managers. All parameters that share the same application manager name configure the RKS pair to which events associated with a specific application manager are sent.

To configure the associated application manager:

1. Click **Configure**, and expand **Slot > Slot: 0 > JPS > RKS Interface**.
2. Click the specified AM (for example, AM:1).

The RKS Interface/AM:1 pane appears.

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

Specifying Connections to CMTS Devices with the C-Web Interface

To configure the policy server-to-CMTS interface (PKT-MM2) so that the policy server can communicate with CMTS devices:

1. Click **Configure**, expand **Slot > Slot: 0 > JPS**, and then click **CMTS Interface**.

The CMTS Interface pane appears.

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

Modifying the Subscriber Configuration with the C-Web Interface

To locate the CMTS device associated with a subscriber, the JPS maps the subscriber IP address in a message to the CMTS IP address to which the message must be delivered. This mapping specifies the subscriber IP pools associated with CMTS devices.

The tasks to configure a CMTS device to which the JPS can connect and the pools of subscriber IP addresses that are managed by that CMTS device are:

1. *Configuring Subscriber IP Pools as IP Address Ranges with the C-Web Interface on page 150*
2. *Configuring Subscriber IP Pools as IP Subnets with the C-Web Interface on page 150*

Configuring Subscriber IP Pools as IP Address Ranges with the C-Web Interface

To configure subscriber IP pools that are managed by the CMTS device as IP address ranges:

1. Click **Configure**, expand **Slot > Slot: 0 > JPS**, and then click **CMTS Registry**.

The CMTS Registry pane appears.

2. From the Create new list, select **CMTS**.
3. In the dialog box, type an IPv4 or IPv6 address for the new CMTS, and click **OK**.

The CMTS: *< ip address >* pane appears.

4. From the Create new list, select **Range Pool**.
 5. In the dialog box, enter a number for the new Range Pool, and click **OK**.
- The Range Pool: *< number >* pane appears.
6. Enter the information in the main pane as described in the Help text, and click **Apply**.

Configuring Subscriber IP Pools as IP Subnets with the C-Web Interface

To configure subscriber IP pools that are managed by the CMTS device as IP subnets:

1. Click **Configure**, expand **Slot > Slot: 0 > JPS**, and then click **CMTS Registry**.

The CMTS Registry pane appears.

2. From the Create new list, select **CMTS**.
3. In the dialog box, type an IPv4 or IPv6 address for the new CMTS, and click **OK**.

The CMTS: *< ip address >* pane appears.

4. From the Create new list, select **Subnet Pool**.
 5. In the dialog box, enter a network IP address/mask for the new Subnet Pool, and click **OK**.
- The Subnet Pool: *< ip address/mask >* pane appears.
6. Enter the information in the main pane as described in the Help text, and click **Apply**.

Configuring the SAE to Interact with the JPS with the C-Web Interface

You must configure the SAE as an application manager to allow it to interact with PCMM-compliant policy servers. The policy server acts as a policy decision point that manages the relationships between application managers and CMTS devices. Policy servers that manage the same group of CMTS devices are grouped together and are simultaneously active. The policy server group provides a way for the SAE to communicate with any CMTS device that is managed by a policy server in the policy server group. To provide redundancy, the SAEs are grouped in an SAE community that connects to a policy server group. Only one of the SAEs in the SAE community is active. The active SAE establishes connections to all the policy servers in the policy server group. The active SAE will fail over to a redundant SAE only when it loses the connection to all the policy servers in the policy server group. State synchronization enables the SAE to synchronize its state with all the CMTS devices connected to a policy server group.

The tasks to configure the SAE as an application manager are:

- Specifying Application Managers for the Policy Server with the C-Web Interface on page 151
- *Specifying Application Manager Identifiers for Policy Servers with the C-Web Interface* on page 152
- *Adding Objects for Policy Servers to the Directory with the C-Web Interface* on page 152
- *Configuring Initialization Scripts with the C-Web Interface* on page 153
- Enabling State Synchronization with the C-Web Interface on page 153

Specifying Application Managers for the Policy Server with the C-Web Interface

To specify the SAE community that connects to a policy server group, you need to add an application manager group object to the directory.

To specify the application manager for the policy server:

1. Click **Configure**, expand **Shared**, and then click **Network**.

The Network pane appears.

2. From the Create new list, select **Application Manager Group**.
3. In the dialog box, enter a name for the new Application Manager Group, and click **OK**.

The Application Manager Group: < name > pane appears.

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

Related Topics

- *Adding Objects for Policy Servers to the Directory with the C-Web Interface* on page 152
- *Configuring Initialization Scripts with the C-Web Interface* on page 153.

Specifying Application Manager Identifiers for Policy Servers with the C-Web Interface

The application manager identifier (AMID) identifies the application manager (such as the SAE) in messages sent to and from the policy server. The SAE constructs the AMID value by concatenating two fields: Application Manager Tag and Application Type.

The Application Manager Tag value is obtained from the specification of application managers for policy servers.

The Application Type value is obtained during service activation from the specification of the PCMM Application Type value when you configure normal services.

Related Topics

- *Specifying Application Manager Identifiers for Policy Servers with the C-Web Interface* on page 152
- *Configuring Services with the C-Web Interface* on page 235

Adding Objects for Policy Servers to the Directory with the C-Web Interface

To communicate with policy servers, the SAE creates and manages pseudointerfaces that it associates with a policy decision point object in the directory. Each policy server in the SRC network must appear in the directory as a policy decision point object.

To add a policy server to the directory:

1. Click **Configure**, expand **Shared**, and then click **Network**.
The Network pane appears.
2. From the Create new list, select **Policy Decision Point**.
3. In the dialog box, enter a name for the new Policy Decision Point, and click **OK**.
The Policy Decision Point: <name> pane appears.
4. Enter the information in the main pane as described in the Help text, and click **Apply**.

Related Topics

- *Specifying Application Manager Identifiers for Policy Servers with the C-Web Interface* on page 152

Configuring Initialization Scripts with the C-Web Interface

When the SAE establishes a connection with a policy server, it runs an initialization script to customize the setup of the connection.

To configure initialization scripts for the SAE:

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

The Scripts pane appears.

2. Click the **Create** button.
3. In the Pcomm box, enter the information as described in the Help text in the main pane, and click **Apply**. For the JPS, we recommend setting this value to **amlorPublisher**.

The script is run when the connection between a policy server and the SAE is established and again when the connection is dropped.

Enabling State Synchronization with the C-Web Interface

State synchronization is achieved when the SAE is configured to communicate with the policy server over the COPS connection.

To enable state synchronization with policy servers:

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

The Pcomm pane appears.

2. Click the **Create** button.
3. Clear the Disable Full Sync checkbox to enable full synchronization.
4. If the policy server or devices do not support policies defined in PCMM-I03, make sure the Disable PCMM I03 checkbox is selected and that the correct value is displayed in the Session Recovery Retry Interval box. Refer to the Help text in the main pane as needed.
5. Click **Apply**.

Using the NIC Resolver with the C-Web Interface

If you are using the NIC to map the subscriber IP address to the SAE, you need to configure a NIC host. The NIC system uses IP address pools to map IP addresses to SAEs. You configure the local address pools in the application manager configuration for a policy server group. These pools are published in the NIC. The NIC maps subscriber IP addresses in requests received through the portal or Advanced Services Gateway to the policy server group that currently manages that CMTS device.

The OnePopPcmm sample configuration data supports this scenario for a PCMM environment in which you use the assigned IP subscriber method to log in subscribers and in which you use the NIC to determine the subscriber's SAE. The OnePopPcmm configuration supports one point of presence (POP). NIC replication can be used to provide high availability. The realm for this configuration accommodates the situation in which IP pools are configured locally on each application manager group object.

The resolution process takes a subscriber's IP address as the key and returns a reference to the SAE managing this subscriber as the value.

The following agents collect information for resolvers in this realm:

- Directory agent PoolVr collects and publishes information about the mappings of IP pools to the policy server group.
- Directory agent VrSaeld collects and publishes information about the mappings of policy server groups to SAEs.

Related Topics

- *Specifying Application Manager Identifiers for Policy Servers with the C-Web Interface* on page 152
- *Configuring NIC with the C-Web Interface* on page 107

Managing the JPS with the C-Web Interface

After you have installed the JPS and applied the local configuration of the JPS, you can perform these tasks:

- *Starting the JPS with the C-Web Interface* on page 155
- *Restarting the JPS with the C-Web Interface* on page 155
- *Stopping the JPS with the C-Web Interface* on page 155
- *Displaying JPS Status with the C-Web Interface* on page 156

Related Topics

- *Modifying the JPS Configuration with the C-Web Interface* on page 146
- *SRC-PE Monitoring and Troubleshooting Guide, Chapter 14, Monitoring the System with the C-Web Interface*

Starting the JPS with the C-Web Interface

You must start the JPS when you install the JPS without rebooting the JPS host.

To start the JPS:

1. Click **Manage > Enable**.

The Enable pane appears.

2. From the **Component** list, select **JPS**, and click **OK**.

The system responds with a start message. If the JPS is already running, the system responds with a warning message.

Related Topics

- *Starting the JPS with the C-Web Interface* on page 155
- *Stopping the JPS with the C-Web Interface* on page 155
- *Displaying JPS Status with the C-Web Interface* on page 156

Restarting the JPS with the C-Web Interface

To restart the JPS:

1. Click **Manage > Restart**.

The Restart pane appears.

2. From the **Component** list, select **JPS**, and click **OK**.

The system responds with a start message. If the JPS is already running, the system responds with a shutdown message and then a start message.

Related Topics

- *Starting the JPS with the C-Web Interface* on page 155
- *Stopping the JPS with the C-Web Interface* on page 155
- *Displaying JPS Status with the C-Web Interface* on page 156

Stopping the JPS with the C-Web Interface

To stop the JPS:

1. Click **Manage > Disable**.

The Disable pane appears.

2. From the **Component** list, select **JPS**, and click **OK**.

The system responds with a shutdown message. If the JPS is not running when you issue the command, the system responds with a status message.

Related Topics

- *Starting the JPS with the C-Web Interface* on page 155
- *Restarting the JPS with the C-Web Interface* on page 155
- *Displaying JPS Status with the C-Web Interface* on page 156

Displaying JPS Status with the C-Web Interface

To display the JPS status:

1. Click **Monitor > Component**.

The Installed Components pane appears.

2. Locate jps in the Name column. The Version and Status columns display the JPS status.

Related Topics

- *Starting the JPS with the C-Web Interface* on page 155
- *Restarting the JPS with the C-Web Interface* on page 155
- *Stopping the JPS with the C-Web Interface* on page 155