CHAPTER 4

Configuring the SIP

This chapter provides information about configuring the SIP on the Cisco ASR 1000 Series Routers. It includes the following sections:

For information about managing your system images and configuration files, refer to other sections of this document, and the *Cisco IOS Configuration Fundamentals Configuration Guide* and *Cisco IOS Configuration Fundamentals Command Reference* publications that correspond to your Cisco IOS XE software release.

Configuration Tasks

This section describes how to configure the SIP.

It includes the following topics:

Some of the Cisco IOS XE software features on the Cisco ASR 1000 Series Routers are supported on the SIPs. Use this chapter while also referencing the list of supported features on the SIPs in Chapter 3, "Overview of the SIP."

Note When referring to other platform documentation, be sure to note any SIP-specific configuration guidelines described in this document.

Identifying Slots and Subslots for the SIP and SPAs

This section describes how to specify the physical locations of a SIP and SPA on the Cisco ASR 1000 Series Routers within the command-line interface (CLI) to configure or monitor the devices.

Specifying the Slot Location for a SIP

The Cisco ASR 1000 Series Routers support different chassis models, each of which supports a certain number of chassis slots.

- The Cisco ASR 1006 Router supports three chassis slots for SIPs.
- The Cisco ASR 1004 Router supports two chassis slots for SIPs.
- The Cisco ASR 1002 Router supports one chassis slot for a SIP that is permanently installed, and the integrated Route Processor and Gigabit Ethernet ports reside in SPA subslot 0.

Some commands allow you to display information about the SIP itself, such as **show platform**, **show diag**, and **show diag subslot**. These commands require you to specify the chassis slot location where the SIP that you want information about is installed.

Specifying the SIP Subslot Location for a SPA

SIP subslots begin their numbering with "0" and have a horizontal orientation, as shown in Figure 4-1.

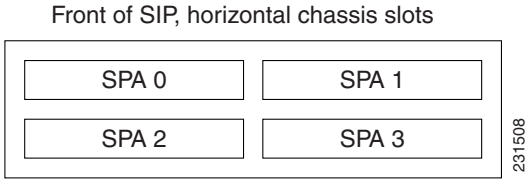
The Cisco ASR 1000 Series SIP supports four subslots for the installation of SPAs. The subslot locations are oriented as follows:

- SIP subslot 0—Top-left subslot
- SIP subslot 1—Top-right subslot
- SIP subslot 2—Bottom-left subslot
- SIP subslot 3—Bottom-right subslot

Note In the Cisco ASR 1002 Router, SIP subslot 0 is not available for SPA insertion. It is the slot that is used for the integrated Route Processor and Gigabit Ethernet ports.

Figure 4-1 shows the SPA numbering sequence on a Cisco ASR 1000 Series Routers SIP.

Figure 4-1 Cisco ASR 1000 Series SIP SPA Numbering



The SIP subslot numbering is indicated by a small numeric label beside the subslot on the faceplate.

Just as with the SIPs, some commands allow you to display information about the SPA itself, such as **show diag subslot**. These commands require you to specify both the physical location of the SIP and SPA in the format, *slot*/*subslot*, where:

- *slot*—Specifies the chassis slot number in the Cisco ASR 1000 Series Aggregation Services Routers where the SIP is installed.
- *subslot*—Specifies the slot of the SIP where the SPA is installed.

To display the operational status for a SPA installed in the SIP, enter the **show platform** command.

Hardware Module Scheduling Commands

The following hardware module scheduling commands are supported on the Cisco ASR 1000 Series Routers.

Command	Purpose
Router(config)# **hw-module slot** *slot-number* **qos input [bandwidth** *value_in_Kbps* **| strict priority | weight** *weight*]	This is a global configuration command. • *slot-number*—Specifies the number of the SIP slot. • **bandwidth** *value_in_Kbps*—Sets the minimum bandwidth in Kbps for QoS • **strict priority**—Sets the minimum bandwidth for a high priority QoS queue • **weight** *weight*—Indicates the excess QoS scheduling weight By default, without using this command, each SIP slot has zero minimum bandwidth and its scheduled base has an excess sharing weight proportional to CC's aggregated bandwidth. The **no** form of this command sets scheduling parameters back to the default.

Ingress Scheduling

Use the following command for ingress scheduling.

Command	Purpose
Router(config)# **plim qos input map ip precedence-based**	This command enables IP precedence-based classification. By default, without using this command, the Gigabit Ethernet SPA enables IP precedence-based classification for the Cisco ASR 1000 Series Router. The **no** form of this command disables precedence-based classification.

Resetting a SIP

To reset a SIP, use the following command in privileged EXEC configuration mode:

Command	Purpose
Router# **hw-module module** *slot* **reload | start | stop**	Resets the SIP in the specified slot, where: • *slot*—Specifies the chassis slot number where the SIP is installed. • **reload**—Stops the SIP, then automatically restarts the SIP. • **start**—Starts the SIP taking it out of reset mode. • **stop**—Stops the SIP holding it in reset mode.