Installing the Hardware

This chapter describes how to install the CSM into the Catalyst 6000 family switch and contains these sections:

System Requirements

Before you install the CSM into the Catalyst 6000 family switch, make sure the switch meets the hardware and software requirements listed in this section.

> ⚠ **Caution** You can use the MSFC, which is internal to the Catalyst 6000 family switch, to route traffic on either the client side or the server side of the CSM, but not both simultaneously.

Memory Requirements

The CSM memory is not configurable.

Supported Hardware

Before you can use the CSM, you must have a Supervisor Engine 1A with an MSFC and a Policy Feature Card (PFC) or a Supervisor Engine 2 with an MSFC, and any module that has ports to connect server and client networks.

> ⚠ **Caution** The WS-X6066-SLB-APC Content Switching Module is not fabric enabled but the module can operate in a fabric-enabled chassis like any other nonfabric module.

The following table lists the supported hardware and software for the CSM:

Product Number	Product Description	Minimum Software Version	Recommended Software Version	Cisco IOS Release
Content Switching Module				
WS-X6066-SLB-APC with Supervisor Engine 1A	Content Switching Module	1.1(1)	2.1(1) or higher	12.1(8a)EX
WS-X6066-SLB-APC with Supervisor Engine 2	Content Switching Module	1.2(1)	2.1(1) or higher	12.1(8a)EX
WS-X6066-SLB-APC with Supervisor Engine 2	Content Switching Module	2.2(1)	2.2(1) or higher	12.1(11b)E
Console Cable				
72-876-01	Console Cable	Not applicable	Not applicable	Not applicable
Accessory Kit				
800-05097-01	Accessory kit (contains the Console Cable)	Not applicable	Not applicable	Not applicable

Power Supply

You can place the CSM in any slot in the Catalyst 6000 family chassis except for the slots occupied by the supervisor engine and the standby supervisor engine. The CSM operates on power supplied by the chassis.

Software Requirements

⚠ **Caution**   The CSM cannot be used in a Catalyst 6000 family switch with the Catalyst operating system.

The following table lists lists the software versions for the CSM:

CSM Software Release	Software Part Number	Hardware	Cisco IOS Release	Added Features
1.1(1)	SC6k-SLB-APC-1.1	Supervisor Engine 1A with MSFC and PFC	12.1(6)E or 12.1(7)E	Initial release
1.2(1)	SC6K-1.2-CSM	Supervisor Engine 1A with MSFC and PFC or Supervisor Engine 2 Module with MSFC 2	12.1(8a)E	• Supervisor Engine 2 support • Route Health Injection (RHI)

CSM Software Release	Software Part Number	Hardware	Cisco IOS Release	Added Features
2.1(1)	SC6K-2.1-CSM	Supervisor Engine 1A with MSFC and PFC or Supervisor Engine 2 Module with MSFC 2	12.1(8a)EX	• Firewall load Balancing • Non-TCP load balancing • URL hashing • HTTP 1.1 persistence • Full stateful failover • Generic header parsing • SNMP server health traps • Multiple CSM in a chassis • VPN/Ipsec load balancing • Configurable NAT server
2.2(1)	SC6K-2.2-CSM	Supervisor Engine 1A with MSFC and PFC or Supervisor Engine 2 Module with MSFC 2	12.1(11b)E	• Return error code checking • Increased number of VLANs • Reduced time between health probes • Inband health checking • Configurable pending connection timeout • Real Time Streaming Protocol (RTSP) support.

Environmental Requirements

The following table lists the environmental requirements for the CSM:

Item	Specification
Temperature, ambient operating	0° to 40^oC (32° to 104^oF)
Temperature, ambient nonoperating	-40° to 70^oC (-40° to 158^oF)
Humidity (RH), ambient (noncondensing) operating	10% to 90%
Nonoperating relative humidity (noncondensing)	5% to 95%

Installing the CSM

The following sections describe how to install the CSM:

Preparing to Install the CSM

Before installing the CSM, make sure that the following items are available:

- Catalyst 6000 family switch chassis
- Management station that is available through a Telnet or a console connection to perform configuration tasks

Required Tools

This section describes the tools you need to install the CSM.

> **Note**   Before installing the CSM, you must install the Catalyst 6000 family switch chassis and at least one supervisor engine. For information on installing the switch chassis, refer to the *Catalyst 6000 Family Installation Guide*.

These tools are required to install the CSM into the Catalyst 6000 family switch:

- Flat-blade screwdriver
- Wrist strap or other grounding device
- Antistatic mat or antistatic foam

Installing the CSM

This section describes how to install the CSM into the Catalyst 6000 family switch.

> **Note**   All modules, including the supervisor engine (if you have redundant supervisor engines), support hot swapping. You can add, replace, or remove modules without interrupting the system power or causing other software or interfaces to shut down. For more information about hot-swapping modules, refer to the *Catalyst 6000 Family Module Installation Guide*.

> **Warning**   **During this procedure, wear grounding wrist straps to avoid ESD damage to the card. Do not directly touch the backplane with your hand or any metal tool, or you could shock yourself.**
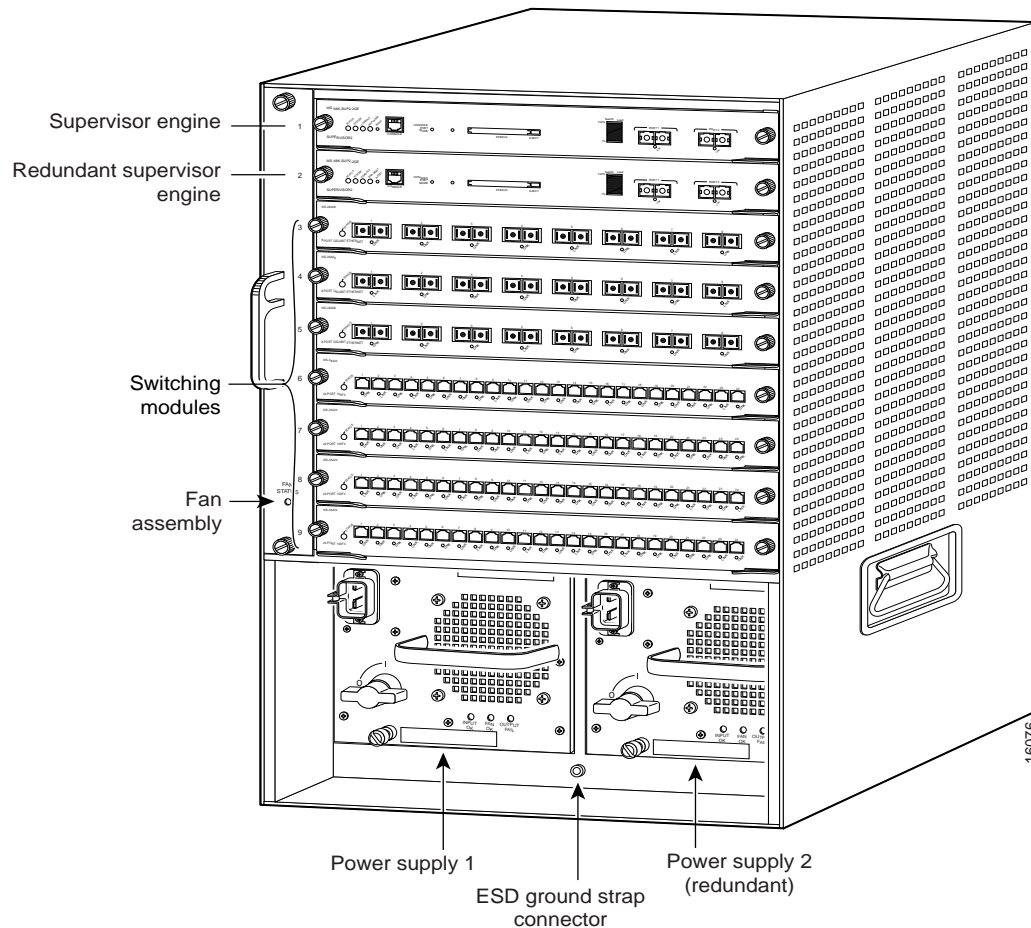
To install the CSM into the Catalyst 6000 family switch, perform these steps:

Step 1   Make sure you take the necessary precautions to prevent ESD damage.

Step 2   Choose a slot for the CSM. See Figure 2-1 for slot numbers on a Catalyst 6000 family switch.

✎
Note   Slot 1 is reserved for the supervisor engine. Slot 2 can contain an additional supervisor engine in case the supervisor engine in slot 1 fails. If a redundant supervisor engine is not required, you can insert the CSM in slots 2 through 9 on a 9-slot chassis, slots 2 through 6 on the 6-slot chassis, or slots 2 through 13 on the 13-slot chassis.

Figure 2-1   Slot Numbers on Catalyst 6000 Family Switches

Step 3   Check that there is enough clearance to accommodate any interface equipment that you will be connecting directly to the supervisor engine or switching module ports.
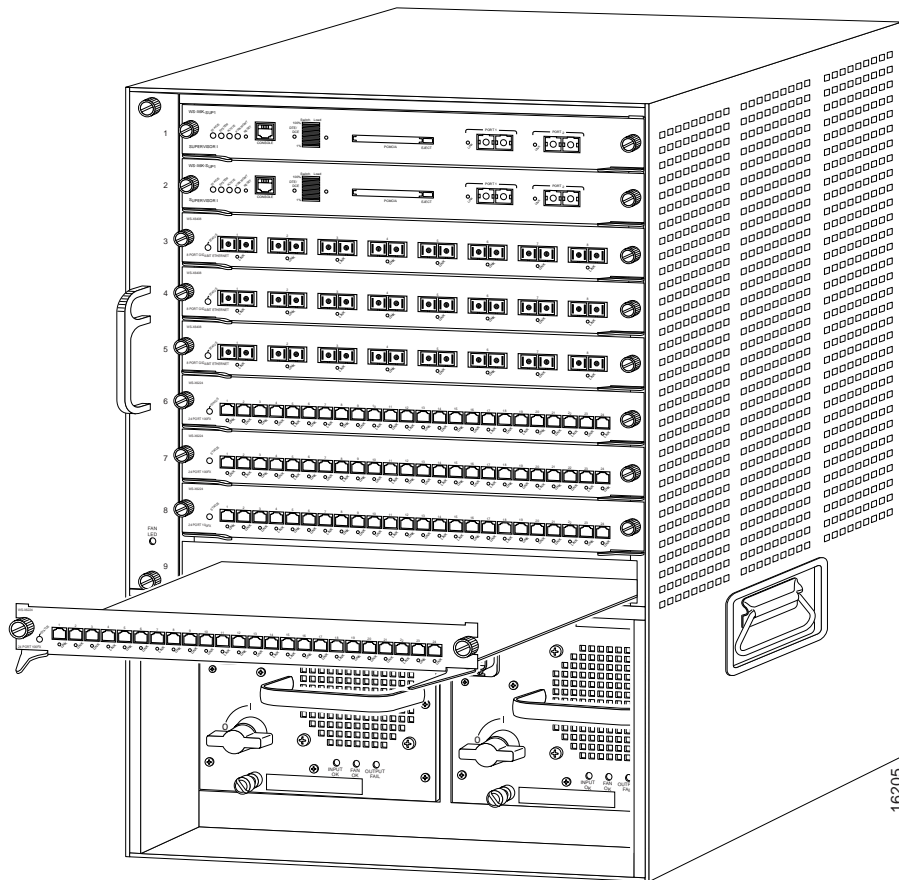
✎
Note   If possible, place switching modules between empty slots that contain only switching-module filler plates (Cisco part number 800-00292-01).
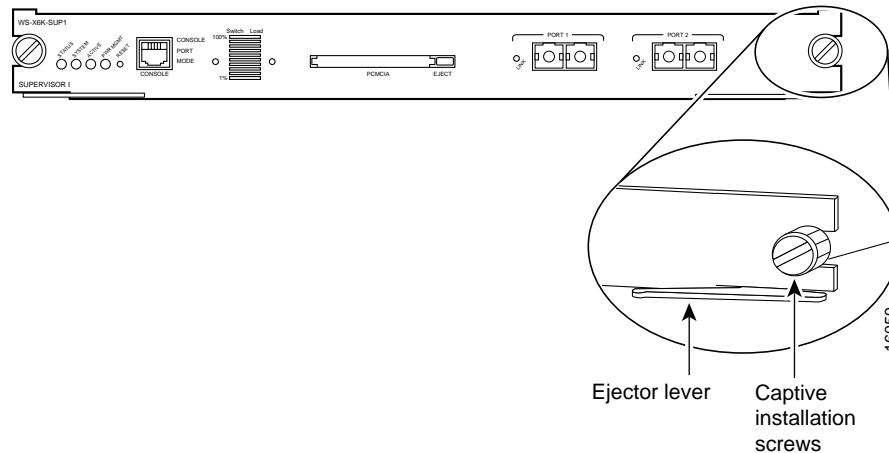
⚠️

Warning   **Blank faceplates (filler panels) serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards and faceplates are in place.**

Step 4   Loosen the captive installation screws that secure the switching module filler plate (or an existing switching module) to the desired slot.

Step 5   Remove the switching module filler plate (or an existing switching module).

Step 6   Hold the handle of the CSM with one hand, and place your other hand under the carrier support. Do not touch the printed circuit boards or connector pins.

Step 7   Place the CSM in the slot. Align the notch on the sides of the switching module carrier with the groove in the slot. (See Figure 2-2.)

Figure 2-2   Installing Modules in the Catalyst 6000 Family Switch

Step 8   Keep the CSM at a 90-degree angle to the backplane and carefully slide the CSM into the slot until the switching module faceplate contacts the ejector levers. (See Figure 2-3.)

Figure 2-3 Ejector Levers and Captive Installation Screws

Ejector lever   Captive installation screws

Step 9   Using the thumb and forefinger of each hand, simultaneously push in the left and right levers to fully seat the CSM in the backplane connector.

⚠

Caution   Always use the ejector levers when installing or removing the CSM. A module that is partially seated in the backplane will cause the system to halt and subsequently crash.

✎

Note   If you perform a hot swap, the console displays the message "Module *n* has been inserted." This message does not appear, however, if you are connected to the Catalyst 6000 family switch through a Telnet session.

Step 10   Use a screwdriver to tighten the captive installation screws on the left and right ends of the CSM.

This completes the CSM installation procedure.

Verifying the Installation

When you install the CSM into the Catalyst 6000 family switch, the module goes through a boot sequence that requires no intervention. At the successful conclusion of the boot sequence, the green Status LED will light and remain on. If the Status LED does not show green, or shows a different color, refer to Table 1-2 on page 1-5 to determine the module's status.