



CHAPTER 5

Maintaining the Cisco PGW 2200 Softswitch

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This chapter contains the recommended hardware maintenance procedures for the Cisco PGW 2200 Softswitch. The Cisco PGW 2200 Softswitch performs call-processing, trunk resource management, alarm management, and routing. Cisco PGW 2200 Softswitches also provide various Cisco telephony solutions with Advanced Intelligent Network (AIN) capabilities, including the ability to detect conditions that cause the Cisco PGW 2200 Softswitch to query service logic for further call-processing instructions. Cisco PGW 2200 Softswitches can be installed in simplex or continuous service configurations. In simplex configurations, only one Cisco PGW 2200 Softswitch is equipped. In continuous service configurations, two Cisco PGW 2200 Softswitches are equipped. Only one Cisco PGW 2200 Softswitch is active at any given time in a continuous service configuration, while the other Cisco PGW 2200 Softswitch operates in standby mode. The Cisco PGW 2200 Softswitch runs on a variety of Sun Netra UNIX systems.

This chapter briefly describes hardware maintenance for the Cisco PGW 2200 Softswitch. For more detailed information, see the documentation provided by Sun Microsystems for your hardware platform. For information on upgrading and maintaining Cisco PGW 2200 Softswitch software, see the *Cisco PGW 2200 Softswitch Release 9.8 Software Installation and Configuration Guide*.

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Checking Equipment Status

You can quickly determine the status of the Cisco PGW 2200 Softswitch by using the following methods:

- Reading the Cisco PGW 2200 Softswitch LEDs
- Querying the system using UNIX and Man-Machine Language MML commands.

The UNIX and MML commands for querying the status of the system are found in [Chapter 3, “Cisco PGW 2200 Softswitch Platform Operations.”](#) Information about the LEDs on the Cisco PGW 2200 Softswitch is found in the sections that follow.

LEDs

See Sun documentation for the specific Cisco PGW 2200 Softswitch hardware platform you are using.

Sun Netra T 1120/1400 and Sun Netra T 1125/1405

The Sun Netra t 1120/1400 and Sun Netra t 1125/1405 have the following LEDs:

- POWER—Green LED is illuminated at all times when the system is on.
- SYSTEM—Green LED is off during power-up procedures and is illuminated when UNIX is running and the alarms driver is installed. This LED is reset by a hardware watchdog timeout, or when the user-defined Alarm 3 (spare) is asserted.
- ALARM1—Amber LED is illuminated when the user-defined Alarm 1 is asserted.
- ALARM2—Amber LED is illuminated when the user-defined Alarm 2 is asserted.
- SPARE—Amber LED is reserved for future use.

The DC-powered Sun Netra t 1120/1400 displays the following additional LEDs:

- SUPPLY A—Green LED is illuminated when DC input A is present and the system is powered on.
- SUPPLY B—Green LED is illuminated when DC input B is present and the system is powered on.

Sun Netra X4200 M2

See Appendix C, Status Indicator LEDs, in the *Sun Netra™ X4200 M2 Server Service Manual* from the Sun Microsystems documentation at the following URL.

<http://docs.sun.com/app/docs/doc/820-0063-11>

Sun Fire X4600 M2

See Appendix C, LEDs and Jumpers, in the *Sun Fire™ X4600 and Sun Fire X4600 M2 Servers Service Manual* from the Sun Microsystems documentation at the following URL.

<http://docs.sun.com/source/819-4342-16/appendix3.html#d0e7233>

Maintaining Technical Support Staff

Skill Level of Personnel

The engineering staff must collectively have training specific to the Sun Netra to support the product in the field. To be classified as “certified” by Sun, support personnel must successfully complete the Sun certification training courses and pass the Solaris administrator’s certification examinations.

All engineers must be able to perform the following tasks:

- User assistance
- Problem diagnosis and duplication
- Hardware replacement

- Patch distribution

The technical profile portion of the Sun audit analyzes the technical ability of service personnel and determines if the number of support staff is sufficient for quality customer support.

Staff Software Troubleshooting Tools

The support engineers must have a current version of SunSolve to assist in troubleshooting and resolving problems.

Maintaining Components

For more detailed information, see the *Cisco PGW 2200 Softswitch Hardware Installation Guide (Release 7 & 9)*.

Software Upgrades

See the *Cisco PGW 2200 Softswitch Release 9.8 Software Installation and Configuration Guide* for a description of the procedures for software upgrades.

