Troubleshooting the Router

This appendix contains information about isolating problems with the Cisco 2600 series router and includes the following sections:

For information about obtaining technical support, see the "Obtaining Technical Assistance" section on page xiii.

Cisco 2600 series routers include the following models:

- Cisco 2610 and Cisco 2610XM
- Cisco 2611 and Cisco 2611XM
- Cisco 2612 and Cisco 2613
- Cisco 2620 and Cisco 2620XM
- Cisco 2621 and Cisco 2621XM
- Cisco 2650 and Cisco 2650XM
- Cisco 2651 and Cisco 2651XM
- Cisco 2691

Isolating Problems

The key to problem solving in this system is to try to isolate the problem to a specific subsystem. By comparing what the system is doing to what it should be doing, the task of isolating and solving the problem is greatly simplified.

When problem solving, consider the following subsystems:

- Power and cooling systems—Power supply, power cable, and fan
- Ports, cables, and connections—Ports on the rear panel of the router and the cables that connect to them

Troubleshooting the Power and Cooling Systems

Check the following items to help isolate the problem:

- When the power switch is in the ON position (|) and the power LED is on, make sure the fan is operating. If not, check the fan.
- If the router shuts down after being on a short time, check the environmental conditions. The router might be overheating, resulting in a thermal-induced shutdown. Verify that the chassis intake and exhaust vents are clear. Review the "General Site Requirements" section on page 23. The operating temperature for the router is 32 to 104°F (0 to 40°C).
- If the router fails to boot, but the power LED is on, check the power supply.
- If the router constantly or intermittently reboots, there might be a problem with either the processor or the software, or a DRAM single in-line memory module (SIMM) might be installed incorrectly.

Troubleshooting the Ports, Cables, and Connections

Check the following items to help isolate the problem:

- If the router fails to recognize a port, check the cable connection.
- When the power switch is in the ON position (|), make sure the power LED is on. If not, check the power source and power cable.
- If the system boots, but the console screen is frozen, verify that the console is configured for 9600 baud, 8 data bits, no parity, and 2 stop bits.

Reading the LEDs

The LEDs indicate the current operating condition of the router. By observing the LEDs, you can note any fault condition that the router is encountering, and then contact your system administrator or customer service, when necessary.

Figure A-1 and Figure A-2 show the locations of the LEDs on the front panel of the Cisco 2600 series routers. Table A-2 and Table A-2 describe these LEDs.

Figure A-1 Cisco 261x, Cisco 262x, Cisco 26xxXM, and Cisco 265x Series Routers—Front-Panel LEDs

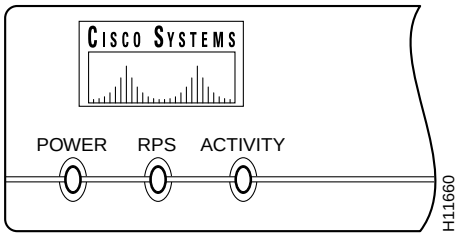

Table A-1 Cisco 261x, Cisco 262x, Cisco 26xxXM, and Cisco 265x Series Routers—Front-Panel LED Descriptions

LED	Description
Power	Indicates the router's operating status. Goes on when power is supplied to the router and the router is operational.
RPS	Off—No RPS[1] is attached. On—RPS is attached and operational. Blinking—RPS is attached, but has a failure.
Activity	Off—In the Cisco IOS software, but no network activity. Blink (500 ms ON, 500 ms OFF)—In ROMMON, no errors. Blink (500 ms ON, 500 ms OFF, 2 sec between codes)—In ROMMON, error detected. Blink (less than 500 ms)—In the Cisco IOS software, the blink rate reflects the level of activity.

1. RPS = Redundant Power System

Figure A-2 Cisco 2691—Front-Panel LEDs

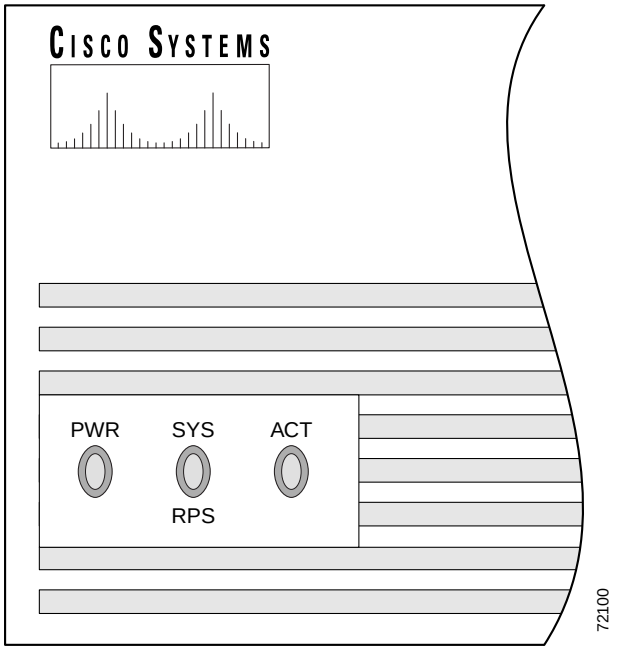

Table A-2 Cisco 2691—Front-Panel LED Descriptions

LED	Description
Power	On—Power is applied to the router.
SYS/RPS	Rapid blinking—System is booting Slow blinking—System error On—System OK
Activity	Off—No system activity Blinking—System activity

Figure A-2 through Figure A-7 show the location of the Cisco 2600 series rear-panel LEDs. Table A-3 and Table A-4 describe these LEDs.

Note Not all router models are shown in these illustrations. The speed and number of Ethernet and Token Ring interfaces varies depending on the router model. LED labels and functionality will also vary depending on the router model.

Figure A-3 Cisco 2611—Rear-Panel LEDs

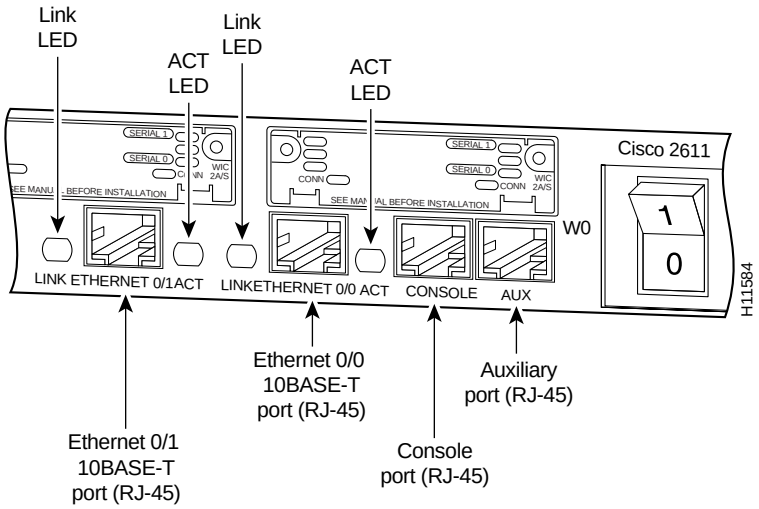

Figure A-4 Cisco 2613 —Rear-Panel LEDs

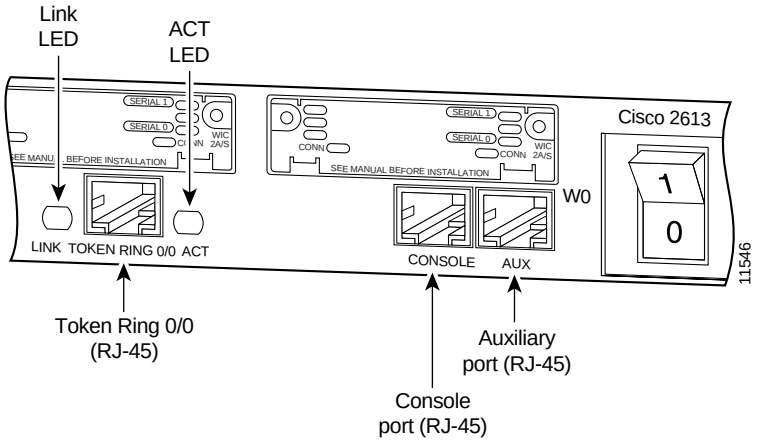

Figure A-5 Cisco 2621—Rear-Panel LEDs

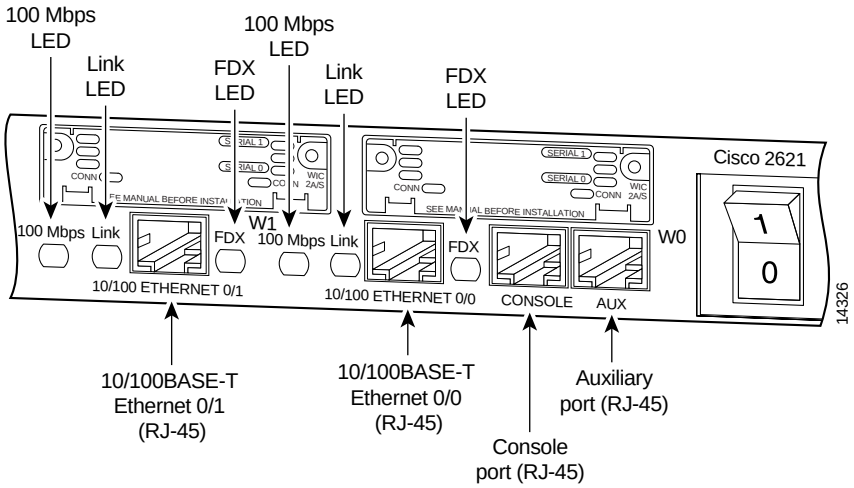

Figure A-6 Cisco 2651—Rear-Panel LEDs

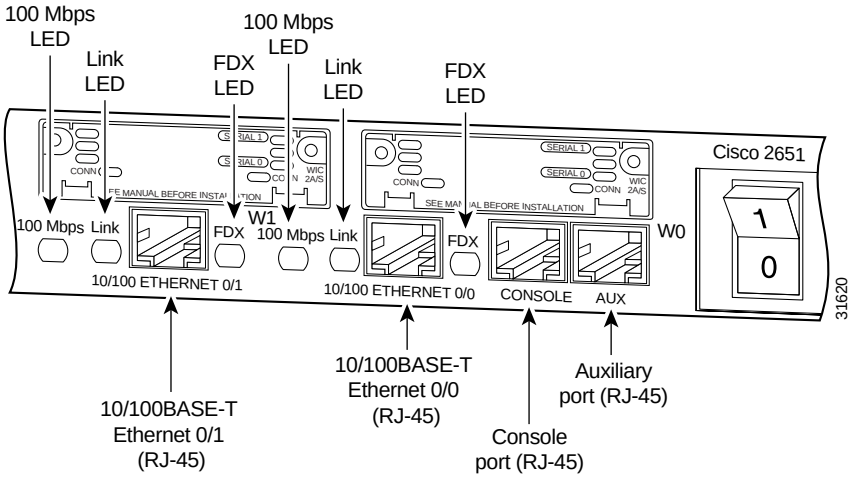

Table A-3 Cisco 261x, Cisco 262x, Cisco 26xxXM, and Cisco 265x Series Routers—Rear-Panel LED Descriptions

LED	Description
LINK	When on, a link has been established with the hub or switch at the other end of the cable.
ACT	Packets are being transmitted or received on the Ethernet interface.
FDX	When on, the interface is in full-duplex mode. When off, the interface is in half-duplex mode.
100 Mbps	When on, the speed of the interface is 100 Mbps. When off, the speed of the interface is 10 Mbps.

Figure A-7 Cisco 2691—Rear-Panel LEDs

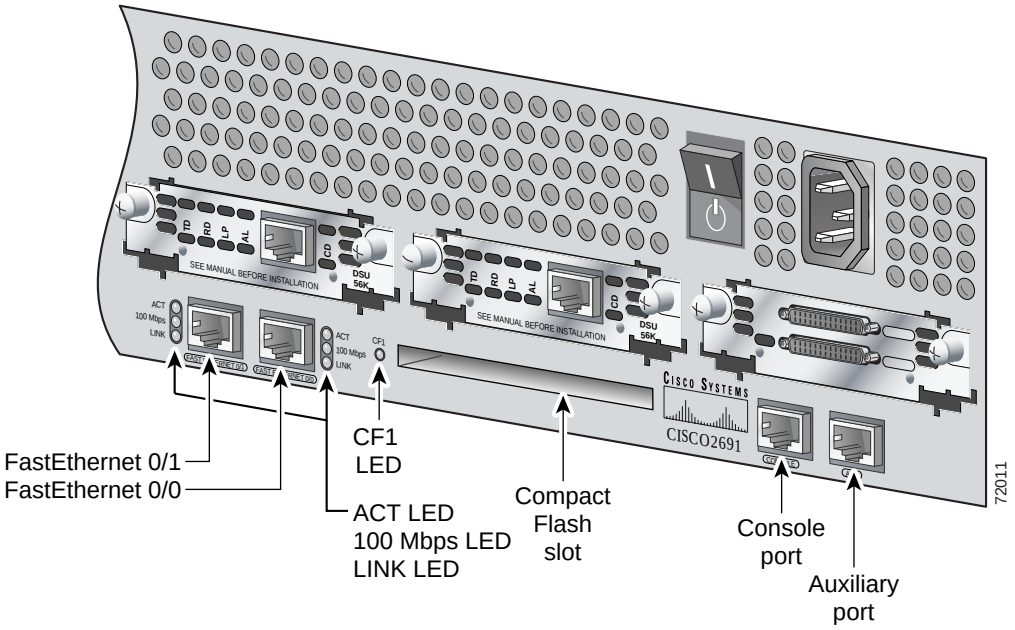

Table A-4 Cisco 2691—Rear-Panel LED Descriptions

LED	Description
LINK	On when a link has been established with the hub or switch at the other end of the cable.
ACT	On when packets are being transmitted or received on the Ethernet interface.
100 Mbps	On when the speed of the interface is 100 Mbps. Off when the speed of the interface is 10 Mbps.
CF1	On when the Flash device is being accessed—either READ or WRITE.