



Troubleshooting

The LEDs on the front panel provide troubleshooting information about the switch. They show failures in the power-on self-test (POST), port-connectivity problems, and overall switch performance. For a full description of the switch LEDs, see the “LEDs” section on page 1-12.

You can also get statistics from the browser interface, from the command-line interface (CLI), or from an Simple Network Management Protocol (SNMP) workstation. See the *Cisco IOS Desktop Switching Software Configuration Guide*, the *Cisco IOS Desktop Switching Command Reference* (online only), or the documentation that came with your SNMP application for details.

This chapter describes the following topics for troubleshooting problems:

- Understanding POST results
- Diagnosing problems

Understanding POST Results

Table 3-1 lists the eight POST tests and their associated LEDs.

POST tests run automatically each time the switch is powered on. When the switch begins POST, the port LEDs turn amber for 2 seconds, and then they turn green. The System LED flashes green, and the RPS LED turns off. As each test runs, the port LEDs, starting with number 1, turn off. The port LEDs for ports 2 to 8 each turn off in turn as the system completes a test.

When POST completes successfully, the port LEDs return to the status mode display, indicating that the switch is operational. If a test fails, the port LED associated with the test turns amber, and the system LED turns amber.


Note

POST failures are usually fatal. Call Cisco Systems if your switch does not pass POST.

Table 3-1 *POST Test Descriptions*

Switch LED	Component Tested
LED 1	DRAM
LED 2	Flash memory
LED 3	Switch CPU
LED 4	System board
LED 5	CPU interface ASIC
LED 6	Switch core ASIC
LED 7	Ethernet controller ASIC
LED 8	Ethernet interfaces

Diagnosing Problems

Common switch problems fall into the following categories:

- Poor performance
- No connectivity
- Corrupted software

Table 3-2 describes how to detect and resolve these problems.

Table 3-2 Common Problems and Their Solutions

Symptom	Possible Cause	Resolution
Poor performance or excessive errors.	Duplex autonegotiation mismatch.	See the <i>Cisco IOS Desktop Switching Software Configuration Guide</i> for information on identifying autonegotiation mismatches.
	Cabling distance exceeded. <ul style="list-style-type: none"> • Port statistics show excessive frame check sequence (FCS), late-collision, or alignment errors. • For 100BaseTX connections: <ul style="list-style-type: none"> – The distance between the port and the attached device exceeds 100 meters. – If the switch is attached to a repeater, the total distance between the two end stations exceeds the 100BaseT cabling guidelines. • For 10BaseT connections: The distance between the port and the attached device exceeds 100 meters. 	<ul style="list-style-type: none"> • See the <i>Cisco IOS Desktop Switching Software Configuration Guide</i> for information on displaying port statistics. • Reduce the cable length to within the recommended distances. See your 100BaseT repeater documentation for cabling guidelines. • Reduce the cable length to within the recommended distances.
	Bad adapter in attached device. <ul style="list-style-type: none"> • Excessive errors found in port statistics. • STP checking for possible loops. 	<ul style="list-style-type: none"> • Run adapter card diagnostic utility. • Wait 30 seconds for LED to turn green.

Table 3-2 Common Problems and Their Solutions (continued)

Symptom	Possible Cause	Resolution
No connectivity.	<p>Incorrect or bad cable.</p> <p>The following are indicated by no link at both ends:</p> <ul style="list-style-type: none"> • A crossover cable was used when a straight-through was required, or vice-versa. • The cable is wired incorrectly. • STP checking for possible loops. 	<ul style="list-style-type: none"> • For the correct pinouts and the proper application of crossover vs. straight-through cables, see the “Crossover and Straight-Through Cable Pinouts” section on page B-4. • Replace with a tested good cable. • Wait 30 seconds for LED to turn green.
Unreadable characters on the management console.	Incorrect baud rate.	Reset the emulation software to 9600 baud.
System LED is amber on the Catalyst 3508, 3512, or 3524 XL switch.	Nonfatal or fatal POST error detected.	Use the show POST command to see which POST test failed.

Table 3-2 Common Problems and Their Solutions (continued)

Symptom	Possible Cause	Resolution
System LED is amber on the Catalyst 3524-PWR XL.	<ul style="list-style-type: none"> Internal fan fault detected. Switch is overheating. Nonfatal or fatal POST error detected. 	<ul style="list-style-type: none"> Either check the switch itself or use the show env command to check if a fan on the switch has failed. The Catalyst 3524-PWR XL switch can operate normally with one failed fan. Replace the switch at your convenience. Use the show env command to check if an overtemperature condition exists. If it does: <ul style="list-style-type: none"> Place the switch in an environment that is within 32 to 113°F (0 to 45°C). Make sure fan intake and exhaust areas are clear. <p>If a multiple-fan failure is causing the switch to overheat, replace the switch.</p> Use the show POST command to see which POST test failed.
Cisco IP Phone fails to power on when connected to a Catalyst 3524-PWR XL switch.	Improper cabling.	Make sure the switch is connected to the LAN-to-phone jack on the Cisco IP Phone.