



# Troubleshooting

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The front-panel LEDs provide troubleshooting information about the switch. They show power-on self-test (POST) failures, port-connectivity problems, and overall switch performance. For a full description of the LEDs, see the [“LEDs” section on page 1-10](#).

You can also get statistics from the Cluster Management Suite (CMS), the command-line interface (CLI), the Cisco Intelligence Engine 2100 (IE2100) Series Configuration Registrar, or a Simple Network Management Protocol (SNMP) workstation. Refer to the switch software configuration guide, the switch command reference, or the documentation that came with your IE2100 or SNMP application for details.

This chapter provides these topics for troubleshooting problems:

- [Understanding POST Results, page 4-2](#)
- [Diagnosing Problems, page 4-2](#)

# Understanding POST Results

When the switch powers on, it automatically begins POST, a series of tests that verifies that the switch functions properly. When the switch begins POST, the system LED is off. If POST completes successfully, the LED turns green. If POST fails, the LED turns amber.

**Note**

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The uplink port status LEDs provide system and status information during POST. On the Catalyst 2955T-12, the uplink ports are labeled 1 and 2. On the Catalyst 2955C-12 and Catalyst 2955S-12, the uplink ports are labeled 13 and 14.

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

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## Diagnosing Problems

Common switch problems fall into these categories:

- Poor performance
- No connectivity
- Corrupted software

Table 4-1 describes how to detect and solve these problems.

*Table 4-1 Common Problems and Solutions*

Symptom	Possible Cause	Resolution
<b>Poor performance or excessive errors.</b>	Duplex autonegotiation mismatch.	Refer to the switch software configuration guide for information about identifying autonegotiation mismatches.
	<b>Cabling distance exceeded.</b>	<ul style="list-style-type: none"> <li>Refer to the switch software configuration guide for information about displaying port statistics.</li> <li>Reduce cable length to within the recommended distances.</li> </ul>
	<ul style="list-style-type: none"> <li>Port statistics show excessive frame check sequence (FCS), late-collision, or alignment errors.</li> <li>For 10BASE-T, 100BASE-TX, and 1000BASE-T connections: <ul style="list-style-type: none"> <li>The distance between the port and the attached device exceeds 328 feet (100 meters).</li> </ul> </li> <li>For 100 and 1000 speed connections: <ul style="list-style-type: none"> <li>Wrong cable type (not Cat 5) attached to device and switch</li> <li>If the switch is attached to a repeater, the total distance between the two end stations exceeds the cabling guidelines.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Replace wrong cable type with Cat 5 cable.</li> <li>Refer to your repeater documentation for cabling guidelines.</li> </ul>
	<b>Bad adapter in attached device.</b>	<ul style="list-style-type: none"> <li>Excessive errors found in port statistics.</li> </ul>
<b>Spanning Tree Protocol (STP) checking for possible loops.</b>		Wait 30 seconds for port status LED to turn green.

Table 4-1 Common Problems and Solutions (continued)

Symptom	Possible Cause	Resolution
<b>No connectivity.</b>	<p><b>Incorrect or bad cable.</b></p> <p>No link at both ends.</p> <ul style="list-style-type: none"> <li>• A crossover cable was used when a straight-through was required, or vice-versa.</li> <li>• The cable is wired incorrectly.</li> <li>• STP checking for possible loops.</li> </ul>	<ul style="list-style-type: none"> <li>• For the correct pinouts and the proper application of crossover vs. straight-through cables, see the <a href="#">“Cable and Adapter Specifications”</a> section on page B-7.</li> <li>• Replace it with a tested good cable.</li> <li>• Wait 30 seconds for port status LED to turn green.</li> </ul>
<b>Unreadable characters on the management console.</b>	Incorrect baud rate.	Reset the terminal-emulation software to 9600 baud.
<b>System LED (Uplink port status 13 LED) is amber, and all port LEDs are off.</b>	Corrupted software.	Attach a monitor to the serial port to display the switch boot loader. For more information, refer to the switch software configuration guide.
<b>System LED (Uplink port 13 LED) is amber.</b>	<ul style="list-style-type: none"> <li>• Nonfatal or fatal POST error detected.</li> </ul>	<ul style="list-style-type: none"> <li>• Use the <b>show post</b> privileged EXEC command to see which POST test failed.</li> </ul>