

Troubleshooting the Installation

Catalyst 2900s are tested extensively and burned-in before leaving the factory. However, if your system appears to have problems starting up, use the information in this chapter to help isolate the cause.

When the initial system boot is complete, verify the following:

- Power is being supplied to the system.
- The system fan is operating.
- System software boots successfully.
- The supervisor engine module and the switching module are properly installed in their slots, and each is initialized without problems.

If the startup sequence fails before these conditions are met, use the procedures in this chapter to isolate and, if possible, resolve the problem.

If you are unable to easily solve the problem, contact a customer service representative for assistance and further instructions. Before you call, have the following information ready to help your service provider assist you as quickly as possible:

- Date you received the switch
- Chassis serial number (located on a label on the right of the rear panel of the chassis)
- Type of software and release number
- Brief description of the problem you are having
- Brief explanation of the steps you have already taken to isolate and resolve the problem
- Maintenance agreement or warranty information

Problem Solving with Subsystems

The key to problem solving the system is to try to isolate the problem to a specific subsystem. The first step in solving startup problems is to compare what the system is doing to what it should be doing. Since a startup problem can usually be attributed to a single component, it is more efficient to first isolate the problem to a subsystem rather than troubleshoot each separate component in the system.

The switch consists of the following subsystems.

- Power subsystem—Includes the power supply and fan
- Cooling subsystem—The chassis fan assembly should be operating whenever system power is on. You should be able to hear the fan assembly to determine whether or not it is operating. If the fan LED is red, you should immediately contact a customer service representative. The fan assembly is located in the interior of the chassis, and there are no installation adjustments to make if it does not function properly at initial startup.
- Processors subsystem—The supervisor engine module contains the system operating software, so check here if you have trouble with the system software.
- Status LED—The status LED on the supervisor engine module and switching module indicate whether the supervisor engine module is able to initialize the card.

Identifying Startup Problems

When you start the Catalyst 2900 for the first time, observe the startup sequence described in the section “Starting the System” in the chapter “Cabling Instructions.” This section contains a more detailed description of the normal startup sequence and describes what to do if the system does *not* perform that sequence as expected.

With the exception of the system fan assembly, LEDs indicate all system states in the startup sequence. By checking the state of the LEDs, you can determine when and where the system failed in the startup sequence.

When you plug in the power supply to start the system, the following should occur:

- You should immediately hear the system fan operating. If not, proceed to the next section “Troubleshooting the Power Subsystem.”
- The PS LED on the supervisor engine module turns green when you plug in the switch.

- The LEDs on the supervisor engine module operate as follows:
 - The status LED is orange while the system boot sequence is initialized; it then turns green. If the system software is unable to start up, this LED turns red.
 - The port LEDs are green after the system has completed a successful boot. A flashing orange LED indicates a port failure. An orange LED indicates that the port has been disabled by software.
 - The fan LED should always remain green. This LED shows red only if the system detects a fan failure.

If the LEDs on the supervisor engine module faceplate are not green or if the fan LED is red, proceed to the section “Troubleshooting the Supervisor Engine Module and the Switching Module” later in this chapter.

- When all LEDs go on to indicate that the system has booted successfully, the initial system banner should be displayed on the console screen. If it is not displayed, refer to the section “Connecting the Console Terminal” in the chapter “Cabling Instructions” to verify that the terminal is set correctly and that it is properly connected to the supervisor engine module console port.

Troubleshooting the Power Subsystem

If the LED is red, the power supply has detected an anomaly or voltage outage and needs to be serviced. If you are unable to resolve the problem or if you determine that either the power supply or chassis connector is faulty, contact a customer service representative for instructions.

Troubleshooting the Supervisor Engine Module and the Switching Module

Check the following to help isolate a supervisor engine module or switching module problem:

- Are all status LEDs on?
- Are any status LEDs on the supervisor engine module or switching module red or orange?

Troubleshooting the Supervisor Engine Module and the Switching Module

If the status LED on a switching module is orange, the module might be disabled. Refer to the *Catalyst 2900 Configuration Guide and Command Reference* to configure or enable the interfaces. After the system reinitializes the interfaces, the status LED on the module should be green.

If you still experience trouble with the startup, contact a customer service representative for assistance.



Warning Ultimate disposal of this product should be handled according to all national laws and regulations. To see translated versions of this warning, refer to the appendix “Translated Safety Warnings.”



Warning There is the danger of explosion if the battery is replaced incorrectly. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer’s instructions. To see translated versions of this warning, refer to the appendix “Translated Safety Warnings.”