



# Troubleshooting

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## Getting Started

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

- Power supplies are supplying power to the system.
- The fan tray assembly is operating.
- System software boots successfully.

If one or more of the above conditions are not met, use the procedures described in this chapter to isolate and, if possible, resolve the problem. If all of the above conditions are met, and the hardware installation is complete, refer to your software release notes for hardware support information and software caveats.

## Solving Problems at the System Component Level

The key to success when troubleshooting the system is to isolate the problem to a specific system component. The first step is to compare what the system *is doing* to what it *should be doing*. Because a startup problem can usually be attributed to a single component, it is more efficient to isolate the problem to a subsystem rather than troubleshoot each separate component in the system.

The switch consists of these subsystems:

- Power supplies
- Fan tray assembly

The chassis fan tray assembly should operate whenever system power is on. You should see the FAN LED turn green and hear the fan tray assembly operating. A red or amber FAN LED indicates that one or more fans in the fan tray assembly is not operating. You should immediately contact a Customer Service representative if the fan tray assembly is not functioning properly. There are no installation adjustments that you can make if the fan tray assembly does not function properly at initial startup.

## Identifying Startup Problems

LEDs indicate all system states in the startup sequence. By checking the LEDs, you can determine when and where the system failed in the startup sequence.

### Procedure

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- Step 1** Turn on the power supplies. You should immediately hear the system fan tray assembly begin to operate.
- Step 2** If the startup information and system banner do not display at startup, verify that the terminal is set correctly and that it is connected properly to the console port.
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## Troubleshooting the Power Supply

If the Power Supply LED does not light after you turn on the power switch, follow these steps to isolate a power subsystem problem:

### Procedure

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- Step 1** Verify that the Power Supply LED on the power supply is green.
- If the Power Supply LED is green, the AC or DC source is good and the power supply is functional.
  - If the Power Supply LED remains off, there might be a problem with the AC source, the DC source, or the power cable.
  - Turn off the power to the switch, connect the power cord to another power source if one is available, and turn on the power.
  - If the Power Supply LED is green, the problem is the first power source.
  - If the Power Supply LED fails to light after you connect the power supply to a new power source, replace the power cord, and turn on the switch.
  - If the Power Supply LED then goes on, return the first power cord for replacement.

If this unit has more than one power cord, repeat Step 1 for each power supply.

If the Power Supply LED still fails to light when the switch is connected to a different power source with a new power cord, the power supply is probably faulty.

If a second power supply is available, install it in the second power supply bay, and contact a customer service representative for further instructions.

**Step 2** If you have a second power supply, repeat Step 1 for this power supply.

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#### What to do next

If you are unable to resolve the problem or if you determine that either a power supply or backplane connector is faulty, see [Contacting Cisco Customer Service, on page 3](#).

## Troubleshooting the Fan Tray

To isolate a fan tray problem, follow these steps:

#### Procedure

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**Step 1** Verify that the FAN LED on the fan tray is green.

If the FAN LED is not green, see [Fan LED](#) to determine whether or not the power subsystem is functioning properly.

**Step 2** Check to determine if the FAN LED is red or amber. If the FAN LED is red, one or more fans' tachometer faults have exceeded the maximum limit. If the FAN LED is amber, one or more fans have encountered tachometer faults.

Do the following:

- To ensure that the fan tray is seated properly, loosen the captive installation screws, remove the fan tray, and reinstall it.
  - Tighten all captive installation screws, and then restart the system.
  - If the FAN LED is still red or amber, the system detects an individual fan failure. Contact a customer service representative for instructions.
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## Status LED Indicators

Refer to "System LED" section in the "Product Overview" chapter. More details will be added here later.

## Contacting Cisco Customer Service

If you are unable to solve a startup problem after using the troubleshooting suggestions in this chapter, contact a Cisco customer service representative for assistance and additional instructions. Before you call, have the following information ready to help your service provider assist you as quickly as possible:

- Date on which you received the switch
- Chassis serial number
- Type of software and release number
- Maintenance agreement or warranty information
- Brief description of the problem
- Brief explanation of the steps you have already taken to isolate and resolve the problem

## Finding the Serial Number

If you contact Cisco Technical Assistance, you need to know the switch serial number. The figure shows where the serial number is located. You can also use the **show version** privileged EXEC command to see the serial number.

*Figure 1: Serial Number Location Cisco Catalyst 9500X Series Switches*

