



Troubleshooting Hardware Components

This chapter describes how to identify and resolve problems that might occur with the hardware components of the Cisco Nexus 2000 Series Fabric Extender (FEX) or Cisco Nexus 2300 Series FEX. It includes the following sections:

- [Overview, page D-1](#)
- [SNMP Traps, page D-1](#)
- [Device Hardware Guidelines, page D-2](#)
- [Contacting Customer Service, page D-3](#)

Overview

The key to success when troubleshooting the system hardware 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.

Problems with the initial power up are often caused by a module that is not firmly connected to the backplane or a power supply that has been disconnected from the power cord connector.

Overheating can also cause problems with the system, though typically only after the system has been operating for an extended period of time. The most common cause of overheating is the failure of a fan tray.

SNMP Traps

You can set SNMP traps to monitor fans, power supplies, and temperature settings, or to test a call home application. Use the following commands to set SNMP traps:

- **test pfmtest-SNMP-trap fan**
- **test pfmtest-SNMP-trap power supply**
- **test pfmtest-SNMP-trap temp-sensor**

Device Hardware Guidelines

Use the recommendations in this section to ensure the proper installation, initialization, and operation of the device. This section includes the following topics:

- [Installation, page D-2](#)
- [Initialization, page D-2](#)
- [Device Operation, page D-2](#)

Installation

When installing the device, follow these best practices:

- Plan your site configuration and prepare the site before installing the chassis.
- Verify that you have the appropriate power supplies and fan trays for your chassis configuration. For each chassis, each module must have the same airflow direction. Either all modules have front-to-back airflow (no black stripe on the front) or all have back-to-front airflow (black stripe on the front). If you have modules that use different airflow directions in the same chassis, you will see an error message.
- Install the chassis following the rack and airflow guidelines in this publication.
- Verify that the chassis and DC power supplies are adequately grounded.

Initialization

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

- Power supplies are supplying power to the system.
- Fan trays are operating normally.
- The system software boots successfully. See the *Cisco Nexus 2000 Series Fabric Extender Software Configuration Guide* for information about booting the system and initial configuration task.

Device Operation

To ensure proper operation of your device, do the following:

- Make a copy of the running configuration to CompactFlash for a safe backup.
- Always enter the **copy running-config startup-config** command after you modify the running configuration and ensure that the system is operating properly.
- Never use the **init system** command unless you understand that you will lose the running and startup configuration as well as the files stored on bootflash:.
- Keep backup copies of the running kickstart and the system images on CompactFlash.

Contacting Customer Service

If you are unable to solve a startup problem after using the troubleshooting suggestions in this chapter, contact a 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 that you received the device
- Chassis serial number (located on a label on the right of the rear panel of the chassis)
- Type of software and release number
- Maintenance agreement or warranty information
- Brief description of the problem
- Brief explanation of the steps that you have already taken to isolate and resolve the problem

To contact Cisco Technical Support, go to:

<http://www.cisco.com/c/en/us/support/web/tsd-cisco-worldwide-contacts.html>.

