Connecting the Cisco MDS 9396V Switch

The Cisco MDS 9396V switch provides the following types of ports:

- Console port to an RS-232 port that you can use to create a local management connection.
- Mgmt0 is 10/100/1000Base-T Ethernet port that you can use to access and manage the switch by IP address, such as through the CLI of Fabric Manager.
- Mgmt1 is 100/1000Base-X Ethernet port that can be used to export analytic data. It is currently disabled and will be available for future use.
- Fibre Channel ports that you can use to connect to the SAN, or for in-band management.
- USB port—USB port that you can use for configuration file backups and capturing logs to file.

This chapter describes how to connect the various components of the Cisco MDS 9396V switch.

Preparing for Network Connections

When preparing your site for network connections to the Cisco MDS 9396V switch, consider the following for each type of interface:

- Cabling required for each interface type
- Distance limitations for each signal type
- Additional interface equipment needed

Before installing the component, have all additional external equipment and cables available.

Connecting the Console Port

This section describes how to connect the RS-232 console port to a PC. The console port allows you to perform the following functions:

- Configure the switch from the CLI.
- Monitor network statistics and errors.
- Configure SNMP agent parameters.
- Download software updates to the switch or distribute software images residing in flash memory to attached devices.
- Perform initial switch configuration
- Perform password recovery

Connecting the Console Port to a PC

To connect the console port to a PC, follow these steps:

Before you begin

You can connect the console port to a PC serial port for local administrative access to the Cisco MDS 9396V switch.

Note The PC must support VT100 terminal emulation. The terminal emulation software—frequently a PC application such as HyperTerminal Plus—makes communication between the Cisco MDS 9396V switch and your PC possible during setup and configuration.

Step 1 Configure the baud rate and character format of the PC terminal emulation program to match the following management port default characteristics:

- 9600 baud
- 8 data bits
- 1 stop bit
- No parity

Step 2 Connect the supplied RJ-45 to DB-9 female adapter or RJ-45 to DB-25 female adapter (depending on your PC connection) to the PC serial port.

Step 3 Connect one end of the supplied console cable (a rollover RJ-45 to RJ-45 cable) to the console port. Connect the other end to the RJ-45 to DB-9 (or RJ-45 to DB-25) adapter at the PC serial port.

Connecting a Modem to a Console Port before Switch Power On

Caution Do not connect the console port to a modem while the switch is booting. Connect the console port to a modem either before powering the switch on or after the switch has completed the boot process.

To connect the console port to a modem before the switch is powered on, follow these steps:

Step 1 Connect the supplied console cable (a rollover RJ-45 to RJ-45 cable) to the console port.

Step 2 Connect the other end of the console cable to the supplied RJ-45 to DB-25 adapter.

Step 3 Connect the RJ-45-to-DB-25 adapter to the DB-25 port on the modem.

Step 4 Power on the switch.

The switch boots automatically, and the following default console port characteristics are applied to the modem connection:

- 9600 baud
- 8 data bits
- 1 stop bit
- No parity
- Default initialization string (ATE0Q1&D2&C1S0=1\015) if previously configured

Note For instructions on how to change these settings, see the *Cisco Fabric Manager Fundamentals Configuration Guide* for instructions on how to change these settings.

Connecting a Modem to a Console Port after Switch Power On

To connect the console port to a modem after the switch is powered on, follow these steps:

Step 1 Ensure that the system has completed booting and the system image is running.

Step 2 Connect the supplied console cable (a rollover RJ-45 to RJ-45 cable) to the console port.

Step 3 Connect the other end of the console cable to the supplied RJ-45 to DB-25 adapter.

Step 4 Connect the RJ-45-to-DB-25 adapter to the DB-25 port on the modem.

Step 5 Initialize and configure the modem as specified in the *Cisco MDS 9000 Series Fundamentals Configuration Guide*.

Connecting the Management Port

The 10/100/1000Base-T MGMT ETH0 port and 100/1000BASE-X MGMT ETH1 port are located on the left side of the front panel (labeled MGMT ETH0 and MGMT ETH1). MGMT ETH0 is RJ45 port below the console port, MGMT ETH1 is 1x1 SFP cage above the console port.

MGMT ETH0 is the default Ethernet management port (interface mgmt0). This port is used for out-of-band management of the Cisco MDS 9396V switch and data streaming to remote receivers.

Note The MGMT1 Ethernet port is disabled in Cisco MDS NX-OS Release 9.4(1).

Use a modular, RJ-45, straight-through UTP cable to connect the management ports to an external hub or switch. To connect to a router, use a crossover cable.

Connecting to a Fibre Channel Port

The Fibre Channel ports in the Cisco MDS 9396V switch are compatible with LC-type fiber-optic SFP+ transceivers and cables. You can use these ports to connect to the SAN or for in-band management. For information about configuring the switch for in-band management, see the *Cisco MDS 9000 Series Fundamentals Configuration Guide*.

Each transceiver must match the transceiver on the other end of the cable, and the cable must not exceed the stipulated cable length for reliable communications. SFP+ transceivers can be ordered separately or with the Cisco MDS 9396V switch.

Use SFP transceivers supported by Cisco MDS only. For list of supported SFP+ transceivers, refer to *Cisco MDS 9000 Family Pluggable Transceivers Data Sheet*.

Warning Class 1 laser product. Statement 1008

Invisible laser radiation may be emitted from disconnected fibers or connectors. Do not stare into beams or view directly with optical instruments. Statement 1051

Note Wear an ESD wrist strap connected to the chassis when handling transceivers. Keep optical connectors covered when not in use, and do not touch connector ends. The fiber-optic connectors must be free of dust, oil, and other contaminants.

Powering Up the Switch

To power up the switch, you must connect one or two power supplies. The number of power supplies and power sources used depends on the following conditions:

- If you are using combined power (not using power redundancy), you must connect a minimuim of one power supply to a power source.
- If you are using power supply (n+1) redundancy, you must connect two power supplies a single AC power source.
- If you are using grid (n+n) redundancy, you must use two power supplies and two power sources—you must connect each power supply to a different power source.

To power up the switch, perform these steps:

Before you begin

You must have the following before powering up the switch:

- Switch installed in a rack and connected to an earth ground.
- Recommended power cable for your nation or region.
- AC power source with the required amperage located within reach of the power cable being used.

Step 1 Connect a power supply to an AC power source as follows:

a. Using the recommended power cable for your country or region , connect the C19 plug on the power cable to the power receptacle on the power supply.

b. Connect the other end of the power cable to the AC power source.

c. Verify that the LED is on and green. If the LED is off, check the AC power source circuit breaker to be sure that it is turned on.

Step 2 If you are using the power supply (n+1) redundancy, you must connect the second power supply as follows:

a. Using the recommended power cable for your country or region , connect the C19 plug on the power cable to the power receptacle on the second power supply.

b. Connect the other end of the power cable to the AC power source used by the other power supply.

c. Verify that the LED is on and green. If the LED is off, check the AC power source circuit breaker to be sure that it is turned on.

Step 3 If you are using the grid (n+n) redundancy, you must connect the second power supply as follows:

a. Using the recommended power cable for your country or region , connect the C19 plug on the power cable to the power receptacle on the second power supply.

b. Connect the other end of the power cable to a second AC power source (this is a different power source than the one used by the first power supply).

c. Verify that the LED is on and green. If the LED is off, check the AC power source circuit breaker to be sure that it is turned on.