



## **Cisco MDS 9148 Multilayer Fabric Switch Quick Start Guide**

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# 1 Overview

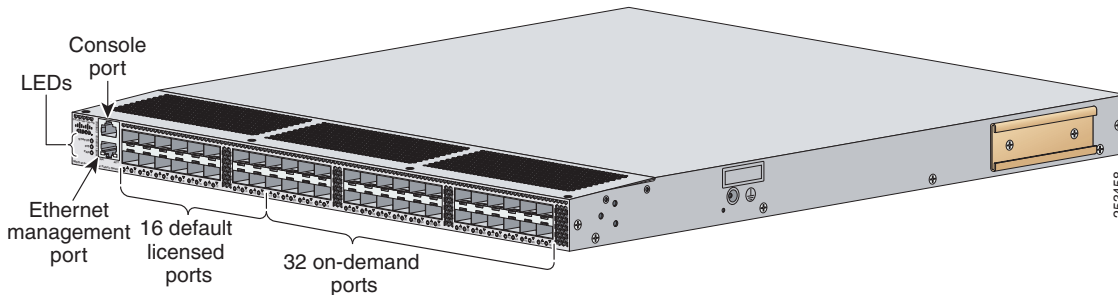
## Cisco MDS 9148 Switch

The Cisco MDS 9148 Multilayer Fabric Switch has 48 Fibre Channel ports with speeds of 8, 4, 2, and 1 Gbps. The Cisco MDS 9148 Switch is a top-of-rack (TOR) Fibre Channel switch based on System-on-a-Chip (SOC) technology, which is a Cisco innovation. The Cisco MDS 9148 Multilayer Fabric Switch has these features:

- 16, 32, or 48 default licensed ports and an 8-port on-demand license.
- 8-, 4-, 2-, 1-Gbps full line rates.
- 128 buffers available as a shared pool to each port group: 32 buffers per Fibre Channel (FC) port. A maximum of 125 buffers per port in a port group.
- Fair bandwidth arbiters.
- Device Manager Quick Config Wizard for the Cisco MDS 9148 Switch.
- Redundant power supplies and fans.
- Enterprise class features such as In-Service Software Upgrades (ISSU), Virtual SANs (VSANs), security features, and quality of service (QoS).
- Consistency with NX-OS.

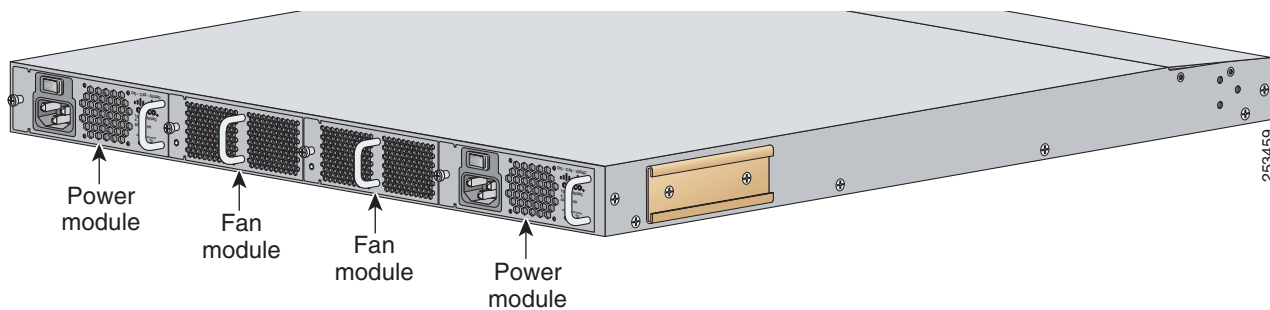
The front of the Cisco MDS 9148 Switch contains the LEDs, the console and management ports, and 48 8-Gbps Fibre Channel Ports. See [Figure 1](#).

**Figure 1 Front View of the Cisco MDS 9148 Switch**



The rear of the Cisco MDS 9148 Switch contains the redundant power supplies, the AC power receptacle, and the fans. See [Figure 2](#).

**Figure 2 Rear View of the Cisco MDS 9148 Switch**



### Note

The on-demand ports can be activated in 8-port increments through software licensing.

## 2 Verifying Your Shipping Contents

Verify that you have received all items, including the following:

- Rack-mount kit
- ESD wrist strap
- Cables and connectors
- Any optional items ordered

## 3 Installing the Switch

Install the switch in one of the following enclosures:

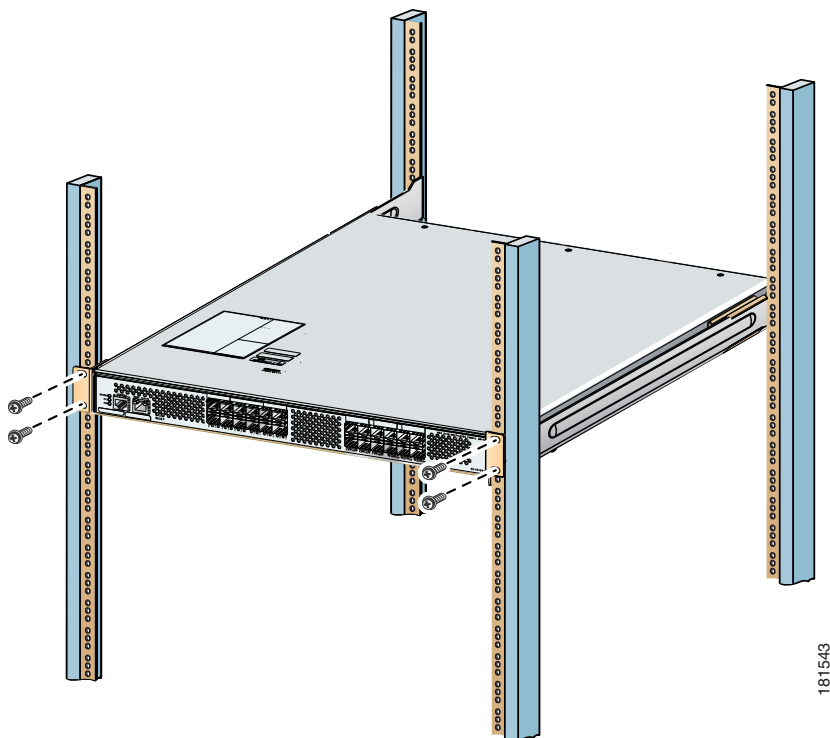
- An open EIA rack
- A perforated or solid-walled EIA cabinet
- A two-post Telco rack



**Note** The C9148 accessory kit now includes a pair of longer variable-position brackets which replace the current pair of fixed short front-mount brackets. With the new variable position brackets, the first set of mounting holes closest to the rack are in identical mounting positions as the current brackets. The remaining three sets of mounting holes allow the chassis to be recessed into the rack, which provides adequate cabling space, and cooling capabilities, and allows you to close the front door of the rack. To view the chassis in the recessed position, see [Figure 4](#).

For an example of a rack mount with fixed short mount brackets, see [Figure 3](#).

**Figure 3** Example Rack Mount

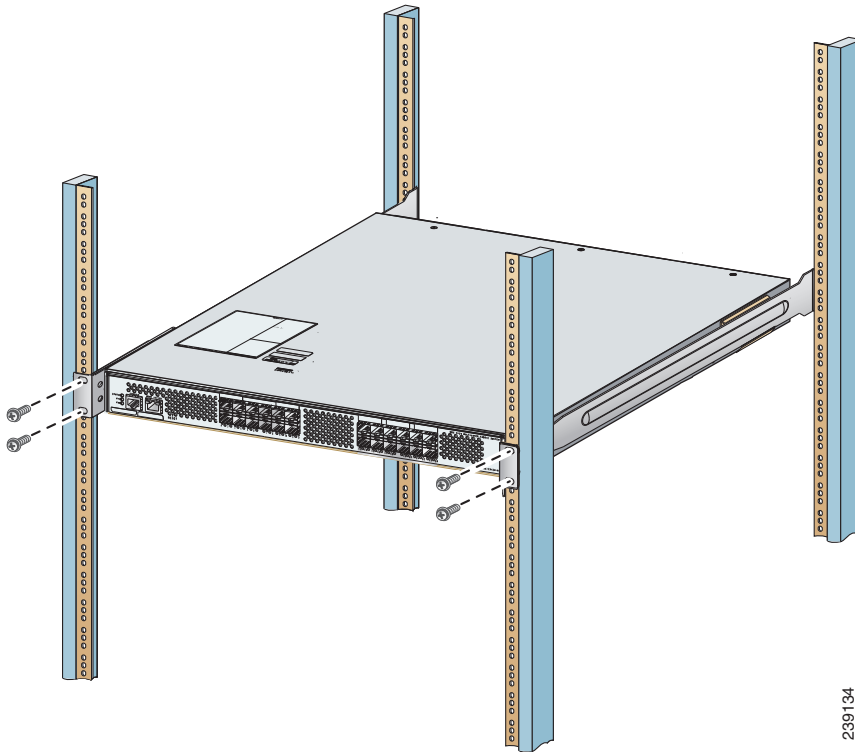


For an example of a rack mount with variable length mount brackets, see [Figure 4](#).



**Note** The new variable length mounting brackets have four sets of mounting holes. The first set of mounting holes allow the switch to be placed in the flush position, which aligns it with the rack. The remaining three sets of mounting holes allow the switch to be recessed into the rack up to a maximum of 2.75 inches.

**Figure 4** Example Rack Mount with Variable Length Mounting Brackets



**Note** Before you install the switch in a rack, you will need to install the rack mount support brackets on the switch.

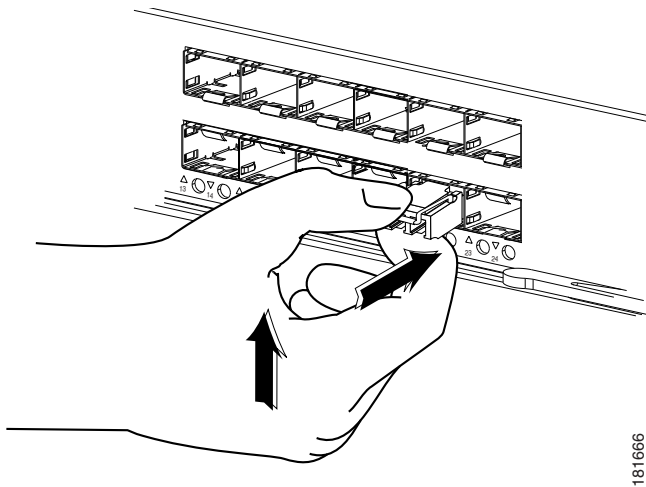
## 4 Installing the SFPs

Install one of the following SFPs in each empty port:

- A Fibre Channel Shortwave 1-, 2-, 4-, or 8-Gbps SFP transceiver, part number DS-SFP-FC8G-SW
- A Fibre Channel Long wavelength 1-, 2-, 4-, or 8-Gbps SFP transceiver, part number DS-SFP-FC8G-LW
- A Fibre Channel Short wavelength 1-, 2-, or 4-Gbps SFP transceiver, part number DS-SFP-FC4G-SW

For SFP installation, see [Figure 5](#).

**Figure 5** SFP Installation



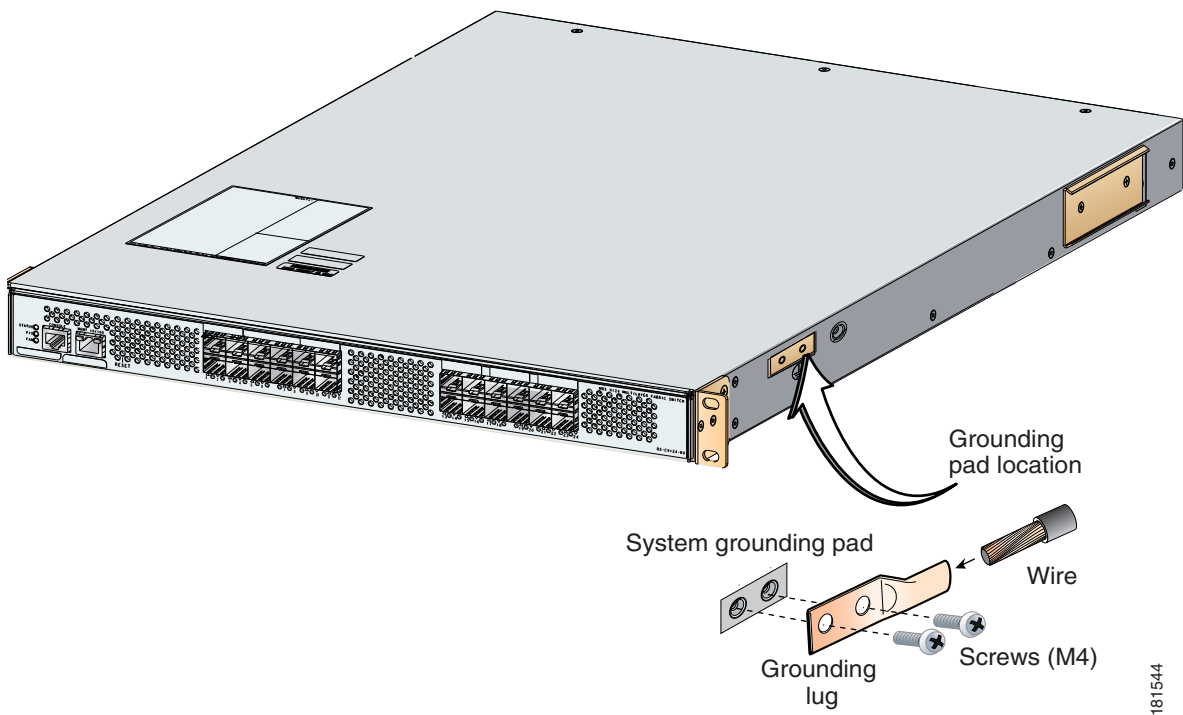
## 5 Powering Up the Switch

To power up the switch, follow these steps:

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**Step 1** Ground the switch, as shown in [Figure 6](#).

**Figure 6**     **Switch Ground**



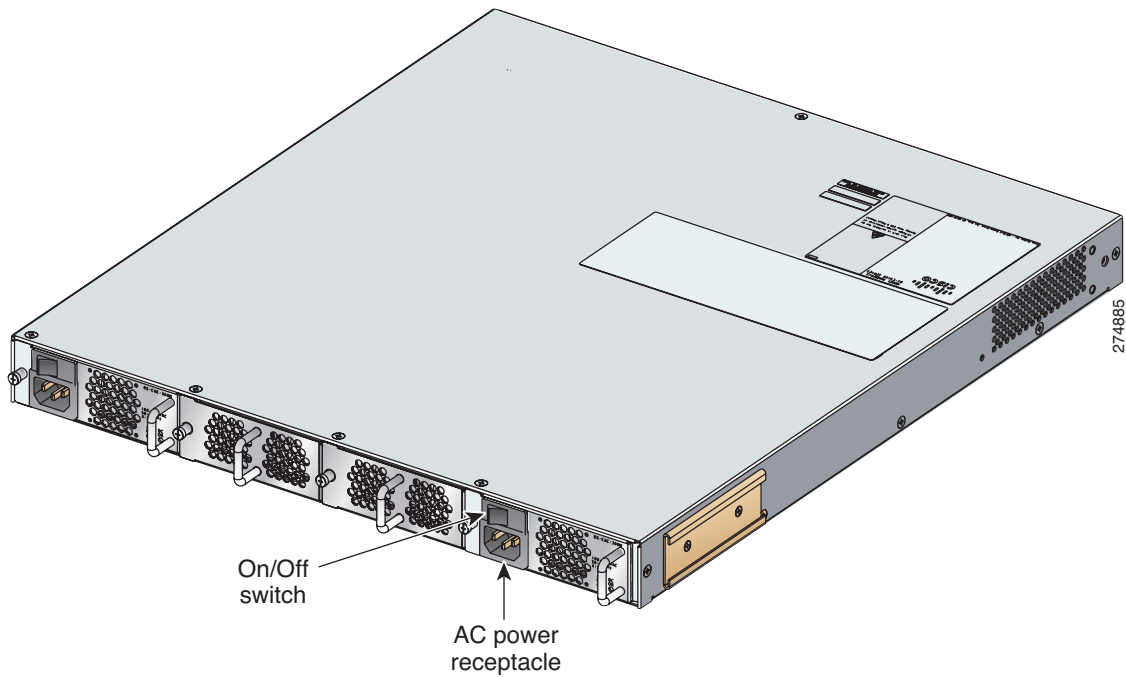
**Step 2**     Connect the power cable to the AC power receptacle, and then plug it in (see [Figure 7](#)).

The Cisco MDS 9148 Switch supports only AC power supply. The power supply status is indicated on a front panel LED.

The Cisco MDS 9148 Switch includes a front panel reset button that resets the switch without cycling the power.

**Step 3**     Power up the switch (see [Figure 7](#)).

**Figure 7** Power Receptacle and On/Off Switch on Cisco MDS 9148 Switch

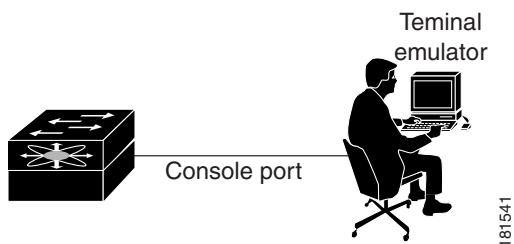


## 6 Setting Up a Network

To set up a network, follow these steps:

- Step 1** Ensure that the Mgmt0 port is connected to the management network.
- Step 2** Ensure that the console port is connected to the PC serial port (or to a terminal server), as shown in [Figure 8](#). For example, on a Windows PC used as a terminal emulator, you can use HyperTerminal. The default baud rate on the console port is 9600.

**Figure 8** Connection to Terminal Emulator.



**Note**

See [Figure 1](#) for the physical location of the Mgmt 0 port and console ports.

**Step 3** Use the switch setup utility that appears on the console connection.

**Step 4** Use the switch setup utility to do the following:

- a. Set the admin password for the switch.



**Caution**

Make sure that you configure a strong password. Short, easy-to-decipher passwords are not allowed by Cisco NX-OS software. Strong passwords are at least eight characters long and contain numbers, uppercase letters, and lowercase letters.

- b. Assign an IP address and a netmask to the switch, as shown in Example 1.

**Example 1** *IP Address Step in the Setup Utility*

```
Continue with Out-of-band (mgmt0) management configuration? {yes/no}: yes  
Mgmt0 IPv4 address: 209.165.200.225  
Mgmt0 IPv4 netmask: 255.255.255.224
```

- c. Set up the default gateway.



**Note**

The switch is now ready to be managed via the Mgmt port using Telnet or Device Manager or Fabric Manager.

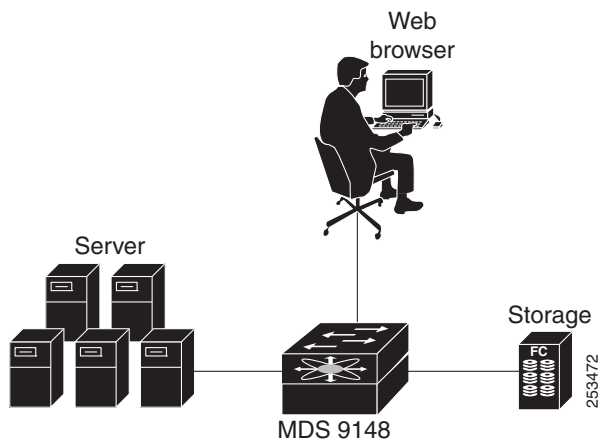
## 7 Connecting Devices

To connect devices, follow these steps:

**Step 1** Connect a server to the switch (see [Figure 9](#)).

**Step 2** Connect a storage device to the switch (see [Figure 9](#)).

**Figure 9** *Server and Storage Connection*



**Note**

For more information about switch installation and configuration, see the *Cisco MDS 9100 Series Hardware Installation Guide* and the appropriate CISCO MDS 9000 Family NX-OS feature configuration guides.

## 8 Installing Cisco Device Manager

To install Cisco Device Manager, follow these steps:

- Step 1** Enter the IP address you assigned to your switch in your **Address** field of your browser to begin the Cisco Device Manager installation.
- Step 2** Click the **Device Manager** link, shown in [Figure 10](#).

**Figure 10** Cisco Device Manager Installation



- Step 3** Follow the onscreen instructions to install Cisco Device Manager.

## 9 Using the Quick Config Wizard

To enable ports and assign zone memberships, follow these steps:

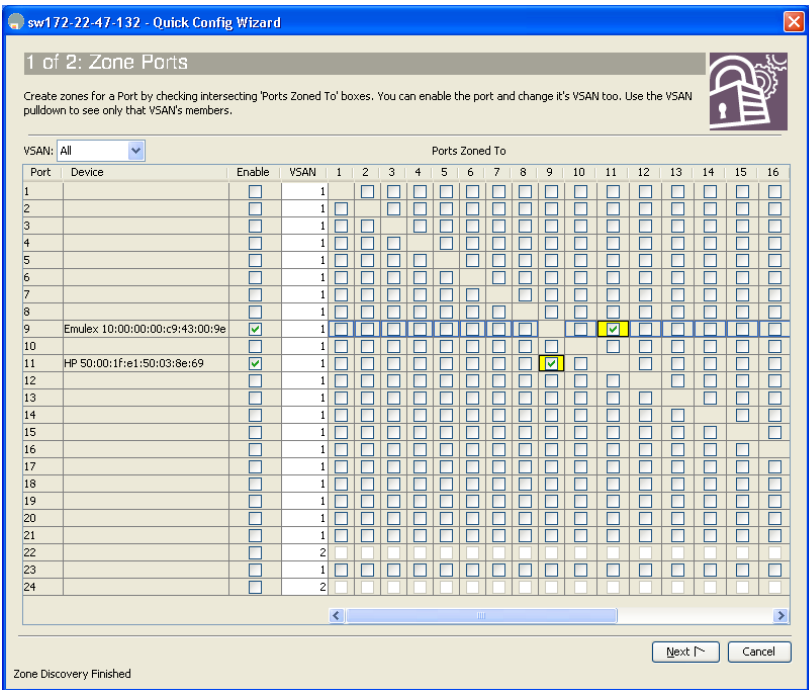
- Step 1** Click the **Device Manager** icon on your desktop to log in.
- Step 2** Enter a password in the **Password** field (see [Figure 11](#)).
- Step 3** Click **Open** (see [Figure 11](#)).

Figure 11 Device Manager Login



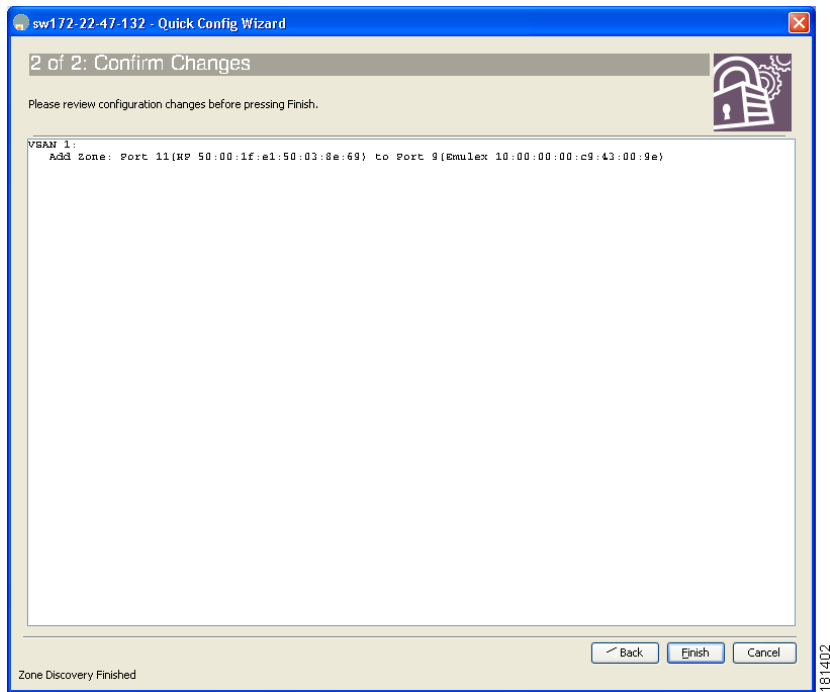
- Step 4** Click **FC**, and then choose **Quick Config**.
- Step 5** Enable two ports by checking the two corresponding check boxes in the **Enable** column, as shown in [Figure 12](#).

Figure 12 Enable Zone Ports



- Step 6** Select one of the two enabled ports that you want in a zone by checking its check box in the **Ports Zoned To** area. When you check this check box, the second enabled port automatically becomes checked. Both ports are now members of the same zone.
- Step 7** Click **Next**.  
You see a summary of your changes, as shown in [Figure 13](#).

**Figure 13** Confirm Changes



**Step 8** Click **Finish** to save your changes.

**Step 9** Repeat Steps 2 through 5 to create more zones.



**Note** A maximum of 12 zones with two ports each can be created with the Quick Config Wizard.



**Note** For more information about installing Cisco Device Manager and using the Quick Config Wizard, see the *Cisco MDS 9000 Family Fabric manager Configuration Guide*.

## 10 Creating VSANs

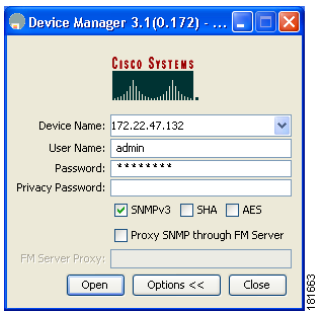
To create VSANs, follow these steps:

**Step 1** Click the **Device Manager** icon on your desktop to log in.

**Step 2** Enter a password in the **Password** field (see [Figure 14](#)).

**Step 3** Click the **Open** button (see [Figure 14](#)).

**Figure 14** Device Manager Login

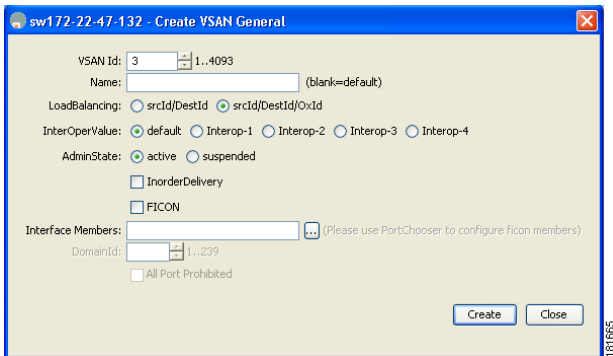


**Step 4** Click FC, and then choose VSANs.

**Step 5** Click Create.

**Step 6** Use the Create VSAN General dialog box to create a VSAN, as shown in [Figure 15](#).

**Figure 15** VSAN Creation



**Step 7** Click Finish to save your changes.

**Step 8** Repeat Step 6 and 7 to create more VSANs.



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**Note** For more information on how to create VSANs, see the *Cisco MDS 9000 Family CLI Configuration Guide*.

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This completes the installation of your Cisco MDS 9148. The switch is now ready to use.

# 11 Need Help?

## Obtaining Technical Assistance

Cisco Technical Support provides 24-hour-a-day award-winning technical assistance. The Cisco Technical Support and Documentation website on Cisco.com features extensive online support resources. In addition, if you have a valid Cisco service contract, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not have a valid Cisco service contract, contact your reseller.

## Cisco Technical Support and Documentation Website

The Cisco Technical Support and Documentation website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day at this URL:

<http://www.cisco.com/cisco/web/support/index.html>

Access to all tools on the Cisco Technical Support and Documentation website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

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