C H A P T E R

7

Working with Configuration Files

This chapter describes how to initially configure switches using the configuration files so they can be accessed by other devices. This chapter includes the following sections:

Working with Configuration Files

For example, you might want to download the same configuration file to several switches that have the same hardware configuration so that they have identical module and port configurations.

This section describes how to work with configuration files and has the following topics:

Displaying Configuration Files

show running-config

```
switch# show running-config
Building Configuration ...
 interface port-channel 98
interface fc1/1
 interface fc1/2
interface mgmt0
ip address 172.22.95.112 255.255.255.0
no shutdown
vsan database
vsan 2
clock summer-time Pacific 1 Sun Apr 02:00 5 Sun Oct 02:00 60
switchname switch112
```

show startup-config

```
switch# show startup-config
```

```
boot system system-237; ep-41
boot kickstart boot-237 ep-41
ip domain-name cisco.com
```

Downloading Configuration Files to the Switch

You can configure a switch in the Cisco MDS 9000 Family by using configuration files you create or download from another switch. In addition, you can store configuration files on a bootflash device on the supervisor module and you can configure the switch using a configuration stored on an external CompactFlash disk.

Before you begin downloading a configuration file using a remote server, do the following:

• Ensure the configuration file to be downloaded is in the correct directory on the remote server.

• Ensure that the permissions on the file are set correctly. Permissions on the file should be set to world-read.

• Ensure the switch has a route to the remote server. The switch and the remote server must be in the same subnetwork if you do not have a router or default gateway to route traffic between subnets.

Check connectivity to the remote server using the   command.

From a Remote Server

To configure a switch in the Cisco MDS 9000 Family using a configuration file downloaded from a remote server using TFTP, FTP, SCP, or SFTP, follow these steps:

Step 1   Log into the switch through the console port or through a Telnet or SSH session.

Step 2   Configure the switch using the configuration file downloaded from the remote server using the **copy** *<scheme>* **://** *<server address>* **system:running-config** command, where *scheme* is TFTP, FTP, SCP, or SFTP.

The configuration file downloads and the commands are executed as the file is parsed line by line.

Use the following command to download a configuration file from a remote server to the running configuration.

```
copy <scheme>://<url> system:running-config
```

From an External CompactFlash Disk (slot0:)

Note

Step 1

Step 2   **cd**   **dir** commands. (See the "Copying Files" section on page 7-6.)

Step 3   Configure the switch using the configuration file stored on the external CompactFlash disk using the **copy** *<source file>* **system:running-config** command.

The commands are executed as the file is parsed line by line.

Use the following command to download a configuration file from an external CompactFlash to the running configuration:

```
copy slot0:dns-config.cfg system:running-config
```

Saving Configuration Files to an External Device

To a Remote Server

Step 1

Step 2 **copy system:running-config <　　　> :// <　>**

Step 3

```
copy system:running-config       ://
```

```
copy nvram:startup-config       ://
```

To an External CompactFlash Disk (slot0:)

Step 1

Step 2   **cd**   **dir**

Step 3   **copy system:running-config** *<destination file>*

```
copy system:running-config slot0:dns-config.cfg
```

```
copy nvram:startup-config slot0:dns-config.cfg
```

Saving the Configuration

After you have created a running configuration in system memory, you can save it to the startup configuration in NVRAM.

Use the following **copy** command to save the configuration to NVRAM:

```
copy system:running-config nvram:startup-config
```

frequently throughout this guide.

To cancel the copy operation initiated by another switch, use the following command:

```
system startup-config abort
```

To cancel the operation locally and throughout the fabric, enter **Ctrl-c** on the console or telnet session of the initiator switch.

See the "Preserving Module Configuration" section on page 10-9.

Saving Startup Configurations in the Fabric

As of Cisco MDS SAN-OS Release 2.1(1a), you can use Cisco Fabric Services (CFS) to instruct the other switches in the fabric to save their configurations to their local NVRAM using the following **copy** command:

```
copy running-config startup-config fabric
```

Note   If any remote switch in the fabric fails to complete the **copy running-config startup-config fabric** process, the request is discarded on the initiator switch and the failure errors are displayed in the initiator switch CLI session.

You can use the **show cfs application** command to verify that the Fabric Startup Configuration Manager (FSCM) application is enabled.

```
show cfs application
```

```
Application   Enabled   Scope
--------------------------------------------
ntp           No        Physical
fscm          Yes       Physical
role          No        Physical
radius        No        Physical
tacacs        No        Physical
fctimer       No        Physical
syslogd       No        Physical
callhome      No        Physical
device-alias  Yes       Physical
port-security No        Logical

Total number of entries = 10
```

Unlocking the Startup Configuration File

The startup configuration file can be locked by applications on the switch. To display locks on the startup configuration file, use the following command:

```
switch# show system internal sysmgr startup-config locks
```

To release a lock on the startup configuration file, use the following command:

```
switch# system startup-config unlock 10
```

Copying Files

The syntax for the   command follows and is explained in Table 7-1.

```
switch#      <scheme>   <username@><server> <file name>
<scheme>   <username@><server> <file name>
```

Table 7-1   copy Command Syntax

Scheme	Server	File Name
	—	User-specified
volatile	—	User-specified
nvram	—	startup-config or snapshot-config
system	—	running-config
tftp[1]	IP address or DNS name	User-specified
ftp		
scp (secure copy)		
sftp		
core	*slot-number*	Process identifier number

1. When downloading and uploading files, a TFTP limitation restricts a TFTP client to a 32 MB file size and some TFTP servers to a 16 MB file size.

This example shows how to copy a file from the active supervisor module's (sup-1 in slot 5) bootflash to the standby supervisor module's (sup-2 in slot 6) bootflash.

```
copy bootflash:system_image bootflash://sup-2/system_image
```

This example shows how to overwrite the contents of an existing configuration in NVRAM.

```
copy nvram:snapshot-config nvram:startup-config
Warning: this command is going to overwrite your current startup-config.
Do you wish to continue? {y/n} [y] y
```

```
switch# copy system:running-config bootflash:my-config
```

```
switch# copy scp://user@10.1.7.2/system-image bootflash:system-image
```

```
switch# copy sftp://172.16.10.100/myscript.txt volatile:myscript.txt
```

show version image

Backing Up the Current Configuration

-
-
-
-

Rolling Back to a Previous Configuration

-

    Note

-

Note

Restoring the Configured Redundancy Mode

Tip

Step 1

Step 2

Step 3

Accessing Remote File Systems

Step 1

```
    12198912    Aug 27 16:29:18 2003   m9500-sf1ek9-kickstart-mzg.1.3.0.39a.bin
     1921922    Sep 14 19:58:12 2003   aOldImage
     1864931    Apr 29 12:41:50 2003   bOldImage
     1864931    Apr 29 12:41:59 2003   dplug2
       12288    Apr 18 20:23:11 2003   lost+found/
    12097024    Nov 21 16:34:18 2003   m9500-sf1ek9-kickstart-mz.1.3.1.1.bin
    41574014    Nov 21 16:34:47 2003   m9500-sf1ek9-mz.1.3.1.1.bin
        1024    Oct 28 20:24:59 2003   newer-fs/
     2021518    Oct 11 15:49:41 2003   plugin-69a
Usage for bootflash://sup-remote
  102081536 bytes used
   82478080 bytes free
  184559616 bytes total
```

Step 2

```
    switch# del aOldImage
```

Deleting Files

-
  delete dns_config.cfg

-
  delete slot0:dns_config.cfg

-
  delete slot0:test
                    y

-
  delete bootflash:my-dir