



# Using the Device File Systems, Directories, and Files

- [Information About the Device File Systems, Directories, and Files, on page 1](#)
- [Working with Directories, on page 2](#)
- [Working with Files, on page 5](#)
- [Working with Archive Files, on page 12](#)
- [SSD Re-partitioning, on page 16](#)
- [Examples of Using the File System, on page 18](#)
- [Default Settings for File System Parameters, on page 22](#)
- [Additional References for File Systems, on page 22](#)

## Information About the Device File Systems, Directories, and Files

This section describes file systems, directories, and files on the Cisco NX-OS device.

### File Systems

The syntax for specifying a local file system is `filesystem:[//modules/]`. This table describes file systems that you can reference on your device.

Table 1: File System Syntax Components

| File System Name | Module                  | Description                                                                                                                                                                                        |
|------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| bootflash        | sup-active<br>sup-local | Internal CompactFlash memory located on the active supervisor module used for storing image files, configuration files, and other miscellaneous files. The initial default directory is bootflash. |

| File System Name | Module                    | Description                                                                                                                                             |
|------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| bootflash        | sup-standby<br>sup-remote | Internal CompactFlash memory located on the standby supervisor module used for storing image files, configuration files, and other miscellaneous files. |
| volatile         | —                         | Volatile random-access memory (VRAM) located on a supervisor module used for temporary or pending changes.                                              |
| log              | —                         | Memory on the active supervisor that stores logging file statistics.                                                                                    |
| system           | —                         | Memory on a supervisor module used for storing the running-configuration file.                                                                          |
| debug            | —                         | Memory on a supervisor module used for debug logs.                                                                                                      |

## Directories

You can create directories on bootflash: and external flash memory (slot0:, usb1:, and usb2:). You can navigate through these directories and use them for files.

## Files

You create and access files on bootflash:, volatile:, slot0:, usb1:, and usb2: file systems. You can only access files on the system: file systems. You can use the debug: file system for debug log files specified in the **debug logfile** command.

You can download files, such as system image files, from remote servers using FTP, Secure Copy (SCP), Secure Shell FTP (SFTP), and TFTP. You can also copy files from an external server to the device, because the device can act as an SCP server.

## Working with Directories

This section describes how to work with directories on the Cisco NX-OS device.

### Identifying the Current Directory

You can display the directory name of your current directory.

#### SUMMARY STEPS

1. `pwd`

## DETAILED STEPS

## Procedure

|        | Command or Action                                | Purpose                                      |
|--------|--------------------------------------------------|----------------------------------------------|
| Step 1 | <b>pwd</b><br><br><b>Example:</b><br>switch# pwd | Displays the name of your current directory. |

## Changing the Current Directory

You can change the current directory for file system operations. The initial default directory is bootflash:.

## SUMMARY STEPS

1. (Optional) **pwd**
2. **cd** {*directory* | *filesystem:[//module/][directory]*}

## DETAILED STEPS

## Procedure

|        | Command or Action                                                                                                     | Purpose                                                                                              |
|--------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Step 1 | (Optional) <b>pwd</b><br><br><b>Example:</b><br>switch# pwd                                                           | Displays the name of your current default directory.                                                 |
| Step 2 | <b>cd</b> { <i>directory</i>   <i>filesystem:[//module/][directory]</i> }<br><br><b>Example:</b><br>switch# cd slot0: | Changes to a new current directory. The file system, module, and directory names are case sensitive. |

## Creating a Directory

You can create directories in the bootflash: and flash device file systems.

## SUMMARY STEPS

1. (Optional) **pwd**
2. (Optional) **cd** {*directory* | *filesystem:[//module/][directory]*}
3. **mkdir** [*filesystem:[//module/]*]*directory*

## DETAILED STEPS

## Procedure

|               | Command or Action                                                                                                                                  | Purpose                                                                                                                                                                       |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1</b> | (Optional) <b>pwd</b><br><br><b>Example:</b><br>switch# pwd                                                                                        | Displays the name of your current default directory.                                                                                                                          |
| <b>Step 2</b> | (Optional) <b>cd</b> { <i>directory</i>   <i>filesystem</i> :[// <i>module</i> /][ <i>directory</i> ]}<br><br><b>Example:</b><br>switch# cd slot0: | Changes to a new current directory. The file system, module, and directory names are case sensitive.                                                                          |
| <b>Step 3</b> | <b>mkdir</b> [ <i>filesystem</i> :[// <i>module</i> /]] <i>directory</i><br><br><b>Example:</b><br>switch# mkdir test                              | Creates a new directory. The <i>filesystem</i> argument is case sensitive. The <i>directory</i> argument is alphanumeric, case sensitive, and has a maximum of 64 characters. |

## Displaying Directory Contents

You can display the contents of a directory.

## SUMMARY STEPS

1. **dir** [*directory* | *filesystem*:[//*module*/][*directory*]]

## DETAILED STEPS

## Procedure

|               | Command or Action                                                                                                                                 | Purpose                                                                                                                                |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1</b> | <b>dir</b> [ <i>directory</i>   <i>filesystem</i> :[// <i>module</i> /][ <i>directory</i> ]]<br><br><b>Example:</b><br>switch# dir bootflash:test | Displays the directory contents. The default is the current working directory. The file system and directory names are case sensitive. |

## Deleting a Directory

You can remove directories from the file systems on your device.

### Before you begin

Ensure that the directory is empty before you try to delete it.

## SUMMARY STEPS

1. (Optional) **pwd**

2. (Optional) **dir** [*filesystem* :[//*module*/]][*directory*]
3. **rmdir** [*filesystem* :[//*module*/]][*directory*]

## DETAILED STEPS

### Procedure

|               | Command or Action                                                                                                                         | Purpose                                                                                                                                                                                                                   |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1</b> | (Optional) <b>pwd</b><br><br><b>Example:</b><br>switch# pwd                                                                               | Displays the name of your current default directory.                                                                                                                                                                      |
| <b>Step 2</b> | (Optional) <b>dir</b> [ <i>filesystem</i> :[// <i>module</i> /]][ <i>directory</i> ]<br><br><b>Example:</b><br>switch# dir bootflash:test | Displays the contents of the current directory. The file system, module, and directory names are case sensitive.<br><br>If the directory is not empty, you must delete all the files before you can delete the directory. |
| <b>Step 3</b> | <b>rmdir</b> [ <i>filesystem</i> :[// <i>module</i> /]][ <i>directory</i> ]<br><br><b>Example:</b><br>switch# rmdir test                  | Deletes a directory. The file system and directory name are case sensitive.                                                                                                                                               |

## Accessing Directories on Standby Supervisor Modules

This example shows how to list the files on the standby supervisor module:

```
switch# dir bootflash://sup-remote
12198912    Aug 27 16:29:18 2003  m9500-sflek9-kickstart-mzg.1.3.0.39a.bin
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-sflek9-kickstart-mz.1.3.1.1.bin
41574014   Nov 21 16:34:47 2003  m9500-sflek9-mz.1.3.1.1.bin

Usage for bootflash://sup-remote
67747169 bytes used
116812447 bytes free
184559616 bytes total
```

This example shows how to delete a file on the standby supervisor module:

```
switch# delete bootflash://sup-remote/aOldConfig.txt
```

## Working with Files

This section describes how to work with files on the Cisco NX-OS device.

## Moving Files

You can move a file from one directory to another directory.



**Caution** If a file with the same name already exists in the destination directory, that file is overwritten by the moved file.

You can use the **move** command to rename a file by moving the file within the same directory.

### SUMMARY STEPS

1. (Optional) **pwd**
2. (Optional) **dir** *[filesystem:[//module/][directory]]*
3. **move** *[filesystem:[//module/][directory /] | directory/]source-filename { {filesystem:[//module/][directory /] | directory/}[target-filename] | target-filename}*

### DETAILED STEPS

#### Procedure

|               | Command or Action                                                                                                                                                                                                                         | Purpose                                                                                                                                                                                                                                                                                                                            |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1</b> | (Optional) <b>pwd</b><br><br><b>Example:</b><br>switch# pwd                                                                                                                                                                               | Displays the name of your current default directory.                                                                                                                                                                                                                                                                               |
| <b>Step 2</b> | (Optional) <b>dir</b> <i>[filesystem:[//module/][directory]]</i><br><br><b>Example:</b><br>switch# dir bootflash                                                                                                                          | Displays the contents of the current directory. The file system and directory name are case sensitive.                                                                                                                                                                                                                             |
| <b>Step 3</b> | <b>move</b> <i>[filesystem:[//module/][directory /]   directory/]source-filename { {filesystem:[//module/][directory /]   directory/}[target-filename]   target-filename}</i><br><br><b>Example:</b><br>switch# move test old_tests/test1 | Moves a file.<br><br>The file system, module, and directory names are case sensitive.<br><br>The <i>target-filename</i> argument is alphanumeric, case sensitive, and has a maximum of 64 characters. If the <i>target-filename</i> argument is not specified, the filename defaults to the <i>source-filename</i> argument value. |

## Copying Files

This example shows how to copy the file called samplefile from the root directory of the slot0: file system to the mystorage directory:

```
switch# copy slot0:samplefile slot0:mystorage/samplefile
```

This example shows how to copy a file from the current directory level:

```
switch# copy samplefile mystorage/samplefile
```

This example shows how to copy a file from the active supervisor module bootflash to the standby supervisor module bootflash:

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

You can also use the **copy** command to upload and download files from the slot0: or bootflash: file system to or from a FTP, TFTP, SFTP, or SCP server.

## Copying Files to the HTTP Server

You can copy a file from boot flash, running configuration, or startup configuration to the HTTP server in the default path of server using the new feature HTTP PUT. The HTTP PUT functionality copies a file into the HTTP server via the default or the management VRF. It uses the HTTP POST method to upload the files and HTTP upload can be done via v4/v6 interface to v4/v6 HTTP server.

### SUMMARY STEPS

1. (Optional) **pwd**
2. **copy bootflash :///<filename> http:// <httpserver-ip> /path source-interface <interface>**
3. **copy bootflash :///<filename> http:// <httpserver-ip>/path vrf <default/management>**
4. **copy running-config http://<httpserver-ip>/path vrf <default/management>**
5. **copy startup-config http://<httpserver-ip>/path vrf <default/management>**

### DETAILED STEPS

#### Procedure

|               | Command or Action                                                                                                                                                                                                                              | Purpose                                                                                                   |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Step 1</b> | (Optional) <b>pwd</b><br><br><b>Example:</b><br>switch# pwd                                                                                                                                                                                    | Displays the name of your current default directory.                                                      |
| <b>Step 2</b> | Required: <b>copy bootflash :///&lt;filename&gt; http:// &lt;httpserver-ip&gt; /path source-interface &lt;interface&gt;</b><br><br><b>Example:</b><br>switch# copy bootflash:///<filename><br>http://httpserver-ip/path source-interface <int> | Copies the file from the boot flash into the HTTP server via the source interface.                        |
| <b>Step 3</b> | Required: <b>copy bootflash :///&lt;filename&gt; http:// &lt;httpserver-ip&gt;/path vrf &lt;default/management&gt;</b><br><br><b>Example:</b><br>switch# copy bootflash:///<filename><br>http://httpserver-ip/path vrf <default/management>    | Copies the file from the boot flash into the HTTP server via the default or the management VRF interface. |

|               | Command or Action                                                                                                                                                                                                 | Purpose                                                                                                     |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Step 4</b> | Required: <b>copy running-config http://&lt;httpserver-ip&gt;/path vrf &lt;default/management&gt;</b><br><br><b>Example:</b><br>switch# copy running-config<br>http://httpserver-ip/path vrf <default/management> | Copies the running configuration file into the HTTP server via the default or the management VRF interface. |
| <b>Step 5</b> | Required: <b>copy startup-config http://&lt;httpserver-ip&gt;/path vrf &lt;default/management&gt;</b><br><br><b>Example:</b><br>switch# copy startup-config<br>http://httpserver-ip/path vrf <default/management> | Copies the startup configuration file into the HTTP server via the default or the management VRF interface. |

**Example**

This example shows how to copy a file to an HTTP server via the default VRF interface:

```
switch# copy n3000-uk9-kickstart.6.0.2.U5.0.995.bin http://12.1.2.10/httproot vrf default
Enter username: test
Enter host password for user 'test':
301 - Moved permanently to <a href="/httproot/">/httproot/</a>Copy
complete, now saving to disk (please wait)...
switch#
```

## Copying Files Using HTTP or HTTPS

You can make copies of files from remote server to local device using HTTP or HTTPS.



**Note** Beginning with Cisco NX-OS Release 10.4(3)F, the **copy http** or **copy https** command supports TLS version 1.3 and 1.2 on Cisco Nexus switches.

### SUMMARY STEPS

1. (Optional) **pwd**
2. (Optional) **dir [filesystem:][module/][directory]**
3. **copy https:// username:password@directory/filename bootflash: vrf management**
4. **copy http:// directory/filename bootflash: vrf management**

## DETAILED STEPS

## Procedure

|               | Command or Action                                                                                                                                                                                                        | Purpose                                                                                                |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>Step 1</b> | (Optional) <b>pwd</b><br><br><b>Example:</b><br>switch# pwd                                                                                                                                                              | Displays the name of your current default directory.                                                   |
| <b>Step 2</b> | (Optional) <b>dir</b> [ <i>filesystem:[//module/][directory]</i> ]<br><br><b>Example:</b><br>switch# dir bootflash                                                                                                       | Displays the contents of the current directory. The file system and directory name are case sensitive. |
| <b>Step 3</b> | <b>copy https:// username:password@directory/filename</b><br><b>bootflash: vrf management</b><br><br><b>Example:</b><br>switch(config)# copy<br>https://username1:pwd1@192.168.0.1/test.txt<br>bootflash: vrf management | Copies the specified files from remote server to local device using <b>https</b> option.               |
| <b>Step 4</b> | <b>copy http:// directory/filename</b> <b>bootflash: vrf management</b><br><br><b>Example:</b><br>switch(config)# copy http://192.168.0.1/test.txt<br>bootflash: vrf management                                          | Copies the specified files from remote server to local device using <b>http</b> option.                |

## Deleting Files

You can delete a file from a directory.

## SUMMARY STEPS

1. (Optional) **dir** [*filesystem:[//module/][directory]*]
2. **delete** {*filesystem:[//module/][directory/]* | *directory/*} *filename*

## DETAILED STEPS

## Procedure

|               | Command or Action                                                                                                  | Purpose                                                                                                |
|---------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>Step 1</b> | (Optional) <b>dir</b> [ <i>filesystem:[//module/][directory]</i> ]<br><br><b>Example:</b><br>switch# dir bootflash | Displays the contents of the current directory. The file system and directory name are case sensitive. |

|               | Command or Action                                                                                                                                               | Purpose                                                                                                                                                                                                                                                                           |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 2</b> | <b>delete</b> <i>{filesystem:[//module/][directory/]   directory/}</i> <i>filename</i><br><br><b>Example:</b><br><pre>switch# delete test old_tests/test1</pre> | <p>Deletes a file. The file system, module, and directory names are case sensitive. The <i>source-filename</i> argument is case sensitive.</p> <p><b>Caution</b><br/>If you specify a directory, the <b>delete</b> command deletes the entire directory and all its contents.</p> |

## Displaying File Contents

You can display the contents of a file.

### SUMMARY STEPS

1. **show file** *[filesystem:[//module/]][directory/]filename*

### DETAILED STEPS

#### Procedure

|               | Command or Action                                                                                                                                  | Purpose                     |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| <b>Step 1</b> | <b>show file</b> <i>[filesystem:[//module/]][directory/]filename</i><br><br><b>Example:</b><br><pre>switch# show file bootflash:test-results</pre> | Displays the file contents. |

## Displaying File Checksums

You can display checksums to check the file integrity.

### SUMMARY STEPS

1. **show file** *[filesystem:[//module/]][directory/]filename {cksum | md5sum}*

### DETAILED STEPS

#### Procedure

|               | Command or Action                                                                                                                                                        | Purpose                                            |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| <b>Step 1</b> | <b>show file</b> <i>[filesystem:[//module/]][directory/]filename {cksum   md5sum}</i><br><br><b>Example:</b><br><pre>switch# show file bootflash:trunks2.cfg cksum</pre> | Displays the checksum or MD5 checksum of the file. |

## Compressing and Uncompressing Files

You can compress and uncompress files on your Cisco NX-OS device using Lempel-Ziv 1977 (LZ77) coding.

### SUMMARY STEPS

1. (Optional) **dir** [*filesystem:[//module/]directory*]
2. **gzip** [*filesystem:[//module/][directory/] | directory/]filename*
3. **gunzip** [*filesystem:[//module/][directory/] | directory/]filename .gz*

### DETAILED STEPS

#### Procedure

|               | Command or Action                                                                                                                         | Purpose                                                                                                                                |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1</b> | (Optional) <b>dir</b> [ <i>filesystem:[//module/]directory</i> ]<br><br><b>Example:</b><br>switch# dir bootflash:                         | Displays the contents of the current directory. The file system and directory name are case sensitive.                                 |
| <b>Step 2</b> | <b>gzip</b> [ <i>filesystem:[//module/][directory/]   directory/]filename</i><br><br><b>Example:</b><br>switch# gzip show_tech            | Compresses a file. After the file is compressed, it has a .gz suffix.                                                                  |
| <b>Step 3</b> | <b>gunzip</b> [ <i>filesystem:[//module/][directory/]   directory/]filename .gz</i><br><br><b>Example:</b><br>switch# gunzip show_tech.gz | Uncompresses a file. The file to uncompress must have the .gz suffix. After the file is uncompressed, it does not have the .gz suffix. |

## Displaying the Last Lines in a File

You can display the last lines of a file.

### SUMMARY STEPS

1. **tail** [*filesystem:[//module/][directory/]filename*] [*lines*]

### DETAILED STEPS

#### Procedure

|               | Command or Action                                                                                                                      | Purpose                                                                                                |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>Step 1</b> | <b>tail</b> [ <i>filesystem:[//module/][directory/]filename</i> ] [ <i>lines</i> ]<br><br><b>Example:</b><br>switch# tail ospf-gr.conf | Displays the last lines of a file. The default number of lines is 10. The range is from 0 to 80 lines. |

## Redirecting show Command Output

This example shows how to direct the output to a file on the bootflash: file system:

```
switch# show interface > bootflash:switch1-intf.cfg
```

This example shows how to direct the output to a file on external flash memory:

```
switch# show interface > slot0:switch-intf.cfg
```

This example shows how to direct the output to a file on a TFTP server:

```
switch# show interface > tftp://10.10.1.1/home/configs/switch-intf.cfg
Preparing to copy...done
```

This example shows how to direct the output of the **show tech-support** command to a file:

```
switch# show tech-support > Samplefile
Building Configuration ...
switch# dir
 1525859      Jul 04 00:51:03 2003 Samplefile
Usage for volatile://
 1527808 bytes used
19443712 bytes free
20971520 bytes total
```

## Finding Files

This example shows how to find a file in the current default directory:

```
switch# find smm_shm.cfg
/usr/bin/find: ./lost+found: Permission denied
./smm_shm.cfg
./newer-fs/isan/etc/routing-sw/smm_shm.cfg
./newer-fs/isan/etc/smm_shm.cfg
```

## Working with Archive Files

The Cisco NX-OS software supports archive files. You can create an archive file, append files to an existing archive file, extract files from an archive file, and list the files in an archive file.

## Creating an Archive Files

You can create an archive file and add files to it. You can specify the following compression types:

- bzip2
- gzip

- Uncompressed

The default is gzip.

## SUMMARY STEPS

1. **tar create** {**bootflash:** | **volatile:**} *archive-filename* [**absolute**] [**bz2-compress**] [**gz-compress**] [**remove**] [**uncompressed**] [**verbose**] *filename-list*

## DETAILED STEPS

| Procedure |                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | Command or Action                                                                                                                                                                                                                       | Purpose                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Step 1    | <b>tar create</b> { <b>bootflash:</b>   <b>volatile:</b> } <i>archive-filename</i> [ <b>absolute</b> ] [ <b>bz2-compress</b> ] [ <b>gz-compress</b> ] [ <b>remove</b> ] [ <b>uncompressed</b> ] [ <b>verbose</b> ] <i>filename-list</i> | <p>Creates an archive file and adds files to it. The filename is alphanumeric, not case sensitive, and has a maximum length of 240 characters.</p> <p>The <b>absolute</b> keyword specifies that the leading backslash characters (\) should not be removed from the names of the files added to the archive file. By default, the leading backslash characters are removed.</p> <p>The <b>bz2-compress</b>, <b>gz-compress</b>, and <b>uncompressed</b> keywords determine the compression utility used when files are added, or later appended, to the archive and the decompression utility to use when extracting the files. If you do not specify an extension for the archive file, the defaults are as follows:</p> <ul style="list-style-type: none"> <li>• For <b>bz2-compress</b>, the extension is .tar.bz2.</li> <li>• For <b>gz-compress</b>, the extension is .tar.gz.</li> <li>• For <b>uncompressed</b>, the extension is .tar.</li> </ul> <p>The <b>remove</b> keyword specifies that the Cisco NX-OS software should delete the files from the file system after adding them to the archive. By default, the files are not deleted.</p> <p>The <b>verbose</b> keyword specifies that the Cisco NX-OS software should list the files as they are added to the archive. By default, the files are listed as they are added.</p> |

## Example

This example shows how to create a gzip compressed archive file:

```
switch# tar create bootflash:config-archive gz-compress bootflash:config-file
```

# Appending Files to an Archive File

You can append files to an existing archive file on your Cisco NX-OS device.

**Before you begin**

You have created an archive file on your Cisco NX-OS device.

**SUMMARY STEPS**

- 1. `tar append {bootflash: | volatile:}archive-filename [absolute] [remove] [verbose] filename-list`

**DETAILED STEPS**

| Procedure |                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | Command or Action                                                                                            | Purpose                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Step 1    | <code>tar append {bootflash:   volatile:}archive-filename [absolute] [remove] [verbose] filename-list</code> | <p>Adds files to an existing archive file. The archive filename is not case sensitive.</p> <p>The <b>absolute</b> keyword specifies that the leading backslash characters (\) should not be removed from the names of the files added to the archive file. By default, the leading backslash characters are removed.</p> <p>The <b>remove</b> keyword specifies that the Cisco NX-OS software should delete the files from the filesystem after adding them to the archive. By default, the files are not deleted.</p> <p>The <b>verbose</b> keyword specifies that the Cisco NX-OS software should list the files as they are added to the archive. By default, the files are listed as they are added.</p> |

**Example**

This example shows how to append a file to an existing archive file:

```
switch# tar append bootflash:config-archive.tar.gz bootflash:new-config
```

# Extracting Files from an Archive File

You can extract files to an existing archive file on your Cisco NX-OS device.

**Before you begin**

You have created an archive file on your Cisco NX-OS device.

## SUMMARY STEPS

1. **tar extract** {**bootflash:** | **volatile:**}*archive-filename* [**keep-old**] [**screen**] [**to** {**bootflash:** | **volatile:**}*/directory-name*] [**verbose**]

## DETAILED STEPS

### Procedure

|        | Command or Action                                                                                                                                                                                                          | Purpose                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Step 1 | <b>tar extract</b> { <b>bootflash:</b>   <b>volatile:</b> } <i>archive-filename</i> [ <b>keep-old</b> ] [ <b>screen</b> ] [ <b>to</b> { <b>bootflash:</b>   <b>volatile:</b> } <i>/directory-name</i> ] [ <b>verbose</b> ] | <p>Extracts files from an existing archive file. The archive filename is not case sensitive.</p> <p>The <b>keep-old</b> keyword indicates that the Cisco NX-OS software should not overwrite files with the same name as the files being extracted.</p> <p>The <b>screen</b> keyword specifies that the Cisco NX-OS software should display the contents of the extracted files to the terminal screen.</p> <p>The <b>to</b> keyword specifies the target file system. You can include a directory name. The directory name is alphanumeric, case sensitive, and has a maximum length of 240 characters.</p> <p>The <b>verbose</b> keyword specifies that the Cisco NX-OS software should display the names of the files as they are extracted.</p> |

### Example

This example shows how to extract files from an existing archive file:

```
switch# tar extract bootflash:config-archive.tar.gz
```

## Displaying the Filenames in an Archive File

You can display the names of the files in an archive files using the **tar list** command.

**tar list** {**bootflash:** | **volatile:**}*archive-filename*

The archive filename is not case sensitive.

```
switch# tar list bootflash:config-archive.tar.gz
config-file
new-config
```

# SSD Re-partitioning

You can configure SSD re-partitioning to increase the configuration storage space. This also increases the size of logflash storage. This configuration takes effect after a system reload, and the additional cfg and logflash storage space may decrease the size of the bootflash.

We recommend that you perform a backup of all the software images, configurations, and personal data before performing the SSD re-partitioning.

Starting with Release 10.5(1), you can automatically detect SSD partition size on the switch to match the expected configured size. An information syslog is seen during bootup in the **show logging log** or **show logging nvram** commands to indicate the switch booted with an unexpected SSD partitioning size.

```
%PLATFORM-2-SSD_PARTITION_CHECK: Incorrect <device> partition size detected - please contact
Cisco TAC for additional information
```

Extended partitioning scheme is not support for platforms with a 64GB SSD.

## SUMMARY STEPS

1. **system flash sda resize**

## DETAILED STEPS

### Procedure

|               | Command or Action                                                                                                                                                                        | Purpose                                  |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| <b>Step 1</b> | <b>system flash sda resize</b><br><br><b>Example:</b><br><br><pre>switch# system flash sda resize ? &lt;CR&gt; extended  Cfg=1GB, logflash=39GB standard  Cfg=64MB, logflash=4 8GB</pre> | Resize persistent storage to new scheme. |

### Example

Following is an example for standard resize:

```
switch# system flash sda resize standard
```

```
!!!! WARNING !!!!
```

```
Attempts will be made to preserve drive contents during
the resize operation, but risk of data loss does exist.
Backing up of bootflash, logflash, and running configuration
is recommended prior to proceeding.
```

```
!!!! WARNING !!!!
```

```
current scheme is
```

```

sda            8:0    0 119.2G  0 disk
|-sda1         8:1    0   512M  0 part
|-sda2         8:2    0    32M  0 part /mnt/plog
|-sda3         8:3    0   128M  0 part /mnt/pss
|-sda4         8:4    0 114.5G  0 part
/isan/vdc_1/virtual-instance/guestshell+/rootfs/bootflash
|-sda5         8:5    0    64M  0 part /mnt/cfg/0
|-sda6         8:6    0    64M  0 part /mnt/cfg/1
`-sda7         8:7    0     4G  0 part /logflash

```

```

target scheme is
sda            8:0    0 64G|120GB|250GB  0 disk
|-sda1         8:1    0    512M  0 part
|-sda2         8:2    0    32M  0 part /mnt/plog
|-sda3         8:3    0   128M  0 part /mnt/pss
|-sda4         8:4    0   110.5G  0 part /bootflash
|-sda5         8:5    0    64M  0 part /mnt/cfg/0
|-sda6         8:6    0    64M  0 part /mnt/cfg/1
|_sda7         8:7    0     8G  0 part /logflash

```

Continue? (y/n) [n] y

A module reload is required for the resize operation to proceed  
Please, do not power off the module during this process.

Following is an example for extended resize:

```
switch# system flash sda resize extended
```

```
!!!! WARNING !!!!
```

Attempts will be made to preserve drive contents during  
the resize operation, but risk of data loss does exist.  
Backing up of bootflash, logflash, and running configuration  
is recommended prior to proceeding.

```
!!!! WARNING !!!!
```

```

current scheme is
sda            8:0    0 119.2G  0 disk
|-sda1         8:1    0   512M  0 part
|-sda2         8:2    0    32M  0 part /mnt/plog
|-sda3         8:3    0   128M  0 part /mnt/pss
|-sda4         8:4    0 110.5G  0 part /bootflash
|-sda5         8:5    0    64M  0 part /mnt/cfg/0
|-sda6         8:6    0    64M  0 part /mnt/cfg/1
`-sda7         8:7    0     8G  0 part /logflash

```

```

target scheme is
sda            8:0    0 120GB|250GB  0 disk
|-sda1         8:1    0   512M  0 part
|-sda2         8:2    0    32M  0 part /mnt/plog
|-sda3         8:3    0   128M  0 part /mnt/pss
|-sda4         8:4    0    rem  0 part /bootflash
|-sda5         8:5    0   1.0G  0 part /mnt/cfg/0
|-sda6         8:6    0   1.0G  0 part /mnt/cfg/1
|_sda7         8:7    0    39G  0 part /logflash

```

Continue? (y/n) [n] y

A module reload is required for the resize operation to proceed  
Please, do not power off the module during this process.

# Examples of Using the File System

This section includes example of using the file system on the Cisco NX-OS device.

## Accessing Directories on Standby Supervisor Modules

This example shows how to list the files on the standby supervisor module:

```
switch# dir bootflash://sup-remote
 12198912    Aug 27 16:29:18 2003  m9500-sflek9-kickstart-mzg.1.3.0.39a.bin
 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-sflek9-kickstart-mz.1.3.1.1.bin
41574014    Nov 21 16:34:47 2003  m9500-sflek9-mz.1.3.1.1.bin

Usage for bootflash://sup-remote
 67747169 bytes used
116812447 bytes free
184559616 bytes total
```

This example shows how to delete a file on the standby supervisor module:

```
switch# delete bootflash://sup-remote/aOldConfig.txt
```

## Moving Files

You can move a file from one directory to another directory.




---

**Caution** If a file with the same name already exists in the destination directory, that file is overwritten by the moved file.

---

You can use the **move** command to rename a file by moving the file within the same directory.

### SUMMARY STEPS

1. (Optional) **pwd**
2. (Optional) **dir** [filesystem://module/][directory]
3. **move** [filesystem://module/][directory /] | directory/]source-filename { [filesystem://module/][directory /] | directory/}[target-filename] | target-filename }

## DETAILED STEPS

| Procedure |                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                    |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | Command or Action                                                                                                                                                                                                                                                               | Purpose                                                                                                                                                                                                                                                                                                                            |
| Step 1    | (Optional) <b>pwd</b><br><br><b>Example:</b><br>switch# pwd                                                                                                                                                                                                                     | Displays the name of your current default directory.                                                                                                                                                                                                                                                                               |
| Step 2    | (Optional) <b>dir</b> [ <i>filesystem:[//module/][directory]</i> ]<br><br><b>Example:</b><br>switch# dir bootflash                                                                                                                                                              | Displays the contents of the current directory. The file system and directory name are case sensitive.                                                                                                                                                                                                                             |
| Step 3    | <b>move</b> [ <i>filesystem:[//module/][directory /]   directory/</i> ] <i>source-filename</i> { [ <i>filesystem:[//module/][directory /]   directory/</i> ]} [ <i>target-filename</i> ]   <i>target-filename</i> }<br><br><b>Example:</b><br>switch# move test old_tests/test1 | Moves a file.<br><br>The file system, module, and directory names are case sensitive.<br><br>The <i>target-filename</i> argument is alphanumeric, case sensitive, and has a maximum of 64 characters. If the <i>target-filename</i> argument is not specified, the filename defaults to the <i>source-filename</i> argument value. |

## Copying Files

This example shows how to copy the file called samplefile from the root directory of the slot0: file system to the mystorage directory:

```
switch# copy slot0:samplefile slot0:mystorage/samplefile
```

This example shows how to copy a file from the current directory level:

```
switch# copy samplefile mystorage/samplefile
```

This example shows how to copy a file from the active supervisor module bootflash to the standby supervisor module bootflash:

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

You can also use the **copy** command to upload and download files from the slot0: or bootflash: file system to or from a FTP, TFTP, SFTP, or SCP server.

## Deleting a Directory

You can remove directories from the file systems on your device.

**Before you begin**

Ensure that the directory is empty before you try to delete it.

## SUMMARY STEPS

1. (Optional) **pwd**
2. (Optional) **dir** *[filesystem :[/module/][directory]]*
3. **rmdir** *[filesystem :[/module/]]directory*

## DETAILED STEPS

## Procedure

|               | Command or Action                                                                                                     | Purpose                                                                                                                                                                                                                   |
|---------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1</b> | (Optional) <b>pwd</b><br><br><b>Example:</b><br>switch# pwd                                                           | Displays the name of your current default directory.                                                                                                                                                                      |
| <b>Step 2</b> | (Optional) <b>dir</b> <i>[filesystem :[/module/][directory]]</i><br><br><b>Example:</b><br>switch# dir bootflash:test | Displays the contents of the current directory. The file system, module, and directory names are case sensitive.<br><br>If the directory is not empty, you must delete all the files before you can delete the directory. |
| <b>Step 3</b> | <b>rmdir</b> <i>[filesystem :[/module/]]directory</i><br><br><b>Example:</b><br>switch# rmdir test                    | Deletes a directory. The file system and directory name are case sensitive.                                                                                                                                               |

## Displaying File Contents

This example shows how to display the contents of a file on an external flash device:

```
switch# show file slot0:test
configure terminal
interface ethernet 1/1
no shutdown
end
show interface ethernet 1/1
```

This example shows how to display the contents of a file that resides in the current directory:

```
switch# show file myfile
```

## Displaying File Checksums

This example shows how to display the checksum of a file:

```
switch# show file bootflash:trunks2.cfg cksum
583547619
```

This example shows how to display the MD5 checksum of a file:

```
switch# show file bootflash:trunks2.cfg md5sum
3b94707198aabefcf46459de10c9281c
```

## Compressing and Uncompressing Files

This example shows how to compress a file:

```
switch# dir
1525859      Jul 04 00:51:03 2003 Samplefile
...
switch# gzip volatile:Samplefile
switch# dir
266069      Jul 04 00:51:03 2003 Samplefile.gz
...
```

This example shows how to uncompress a compressed file:

```
switch# dir
266069      Jul 04 00:51:03 2003 Samplefile.gz
...
switch# gunzip samplefile
switch# dir
1525859      Jul 04 00:51:03 2003 Samplefile
...
```

## Redirecting show Command Output

This example shows how to direct the output to a file on the bootflash: file system:

```
switch# show interface > bootflash:switch1-intf.cfg
```

This example shows how to direct the output to a file on external flash memory:

```
switch# show interface > slot0:switch-intf.cfg
```

This example shows how to direct the output to a file on a TFTP server:

```
switch# show interface > tftp://10.10.1.1/home/configs/switch-intf.cfg
Preparing to copy...done
```

This example shows how to direct the output of the **show tech-support** command to a file:

```
switch# show tech-support > Samplefile
Building Configuration ...
switch# dir
1525859      Jul 04 00:51:03 2003 Samplefile
Usage for volatile://
1527808 bytes used
19443712 bytes free
```

20971520 bytes total

## Finding Files

This example shows how to find a file in the current default directory:

```
switch# find smm_shm.cfg
/usr/bin/find: ./lost+found: Permission denied
./smm_shm.cfg
./newer-fs/isan/etc/routing-sw/smm_shm.cfg
./newer-fs/isan/etc/smm_shm.cfg
```

## Default Settings for File System Parameters

This table lists the default settings for the file system parameters.

**Table 2: Default File System Settings**

| Parameters         | Default    |
|--------------------|------------|
| Default filesystem | bootflash: |

## Additional References for File Systems

This section includes additional information related to the file systems.