Contents

1 Configuring File System Management

1.1 Introduction

1.1.1 Overview

Files required for running a device, including configuration files and system software, are saved in the storage media of the device. File system management refers to the management of directories and files in storage media, including creation, deletion, modification and viewing of files.

1.1.2 Basic Concepts

The storage media supported by devices include fixed media (Flash) and pluggable media (USB flash drive). Each storage medium is called a file system.

1. Storage media and file system name

- The file system of Flash-type storage media is named as "flash:".
- The file system of USB drive-type storage media is named as "usb:".

2. Default file system

The file system used by default after a user logs in to the device when multiple storage media are available for the device.

3. Name of folder and file

The name of a folder or file can contain numbers, letters or special characters except asterisk (*), vertical bar symbol (|), backslash (\), slash (/), question mark (?), angle brackets (<>), quotation mark ("), and colon (:).

4. Root directory

The root directory is the default directory once the user logs in to the device. It is expressed by a slash (/). For example, "flash:/" indicates the root directory of Flash.

5. Working directory

The working directory is also called the current working directory. The default working directory is the root directory of Flash.

6. Path

The location of a file or folder.

> ⓘ   **Note**

filesystem: specifies the uniform resource locator (URL) of a file system, followed by a colon (:). File systems include **flash:**, **usb:,** and **tmp:**. In addition, *directory* indicates a file name with the path, or specifies a path name. If the name starts with a slash (/), the path is an absolute path; otherwise, the path is a relative path.

1.1.3 Way to Manage Files

To manage files, log in to the system directly or use File Transfer Protocol (FTP) or Trivial File Transfer Protocol (TFTP).

Table 1-1   Way to Manage Files

Way to Manage Files	Application Scenario
Direct login to the system	A device fails to access information, and you need to repair the device or manage the files and directories in the device.
FTP	FTP is applicable to file transfer scenarios which do not require high security of network, and widely used for version upgrade.
TFTP	In laboratory LAN with good network conditions, use TFTP to load and upgrade versions online.

1.2 Configuration Task Summary

Configuration of file system management includes the following tasks: All the configuration tasks below are optional. Select the configuration tasks as required.

- Configuring a Directory
  - Displaying the Working Directory
  - Changing the Working Directory
  - Displaying Directory Information
  - Creating a Directory
- Configuring a File
  - Displaying File Content
  - Displaying File Information
  - Copying a File
  -
  - copy source-url dstination-url
  - Deleting a File
  - Ejecting a USB Device
  - Erasing a File System

○ Configuring Prompt Level

1.3 Configuring a Directory

1.3.1 Displaying the Working Directory

1. Overview

This feature displays the complete path of the current working directory.

2. Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Display the complete path of the current working directory.

pwd

1.3.2 Changing the Working Directory

1. Overview

This feature changes the current working directory.

2. Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Change the current working directory.

cd [*filesystem*:] [*directory*]

1.3.3 Displaying Directory Information

1. Overview

This feature displays the list of files and sub-directories under a directory.

2. Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Display the files under a directory.

dir [*filesystem*:] [*file-url*]

1.3.4 Creating a Directory

1. Overview

This feature creates a directory.

2.   Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Create a directory.

mkdir [*filesystem*:] *directory*

1.3.5 Deleting a Directory

1.   Overview

This feature deletes a directory.

2.   Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Delete an empty directory.

rmdir [*filesystem*:] *directory*

1.4   Configuring a File

1.4.1 Displaying File Content

1.   Overview

This feature displays the content of a file.

2.   Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Display the content of a file.

more [**/ascii** | **/binary**] [*filesystem*:] *file-url*

1.4.2 Displaying File Information

1.   Overview

This feature displays the information of a file.

2.   Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Display the information of a file.

file [*filesystem*:] *file-url*

1.4.3 Copying a File

1.   Overview

This feature copies a file.

2.   Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Copy a file.

copy *source-url dstination-url*

1.4.4 Renaming a File

1.   Overview

This feature renames a file.

2.   Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Rename a file or folder.

rename *source-url destination-url*

1.4.5 Deleting a File

1.   Overview

This feature deletes a file.

2.   Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Delete a file.

delete [*filesystem*:] *file-url*

1.4.6 Ejecting a USB Device

1.   Overview

This feature ejects a USB device.

2.   Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Eject a USB device.

eject usb0

1.4.7 Erasing a File System

1. Overview

This feature erases a file system of a device.

2. Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Erase the file system of a USB device.

erase usb0

1.4.8 Configuring Prompt Level

1. Overview

This feature configures the prompt level for executing a file or folder.

- When the prompt level is set to **noisy**, the system asks you to confirm all the files.

- When the prompt level is set to **quiet**, the system seldom gives a prompt.

2. Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Configure the prompt level for operating a file.

file prompt [**noisy** | **quiet**]

1.5 Monitoring

Run the **show** commands to check the running status of a configured function to verify the configuration effect.

Table 1-1   File System Management Monitoring

Command	Purpose
show disk [**usb**	**flash**]	Displays the USB flash drive or Flash information.
show file systems	Displays information about file systems.
show mount	Displays information about the file system mounted on the device.

1.6 Configuration Examples

1.6.1 Configuring Basic Features of File System Management

1. **Requirements**

Operate the files in the device after logging in to the device through the Console port or with a Telnet connection.

2. **Notes**

- Display the files and sub-directories under the current directory.
- Create the **test** directory.
- Copy the **config.text** file to the **test** directory and name it **test.text**.

3. **Procedure**

(1) Display the files and sub-directories under the current directory.

```
Device# dir flash:/

Directory of flash:/

Number  Properties    Size            Time                    Name

------  ----------  ----------  -----------------------  --------------------

1       -rw-        9.9k        Fri Jan  3 02:49:39 2020  Hostname.text

2       -rw-        113.3M      Sat Jun 13 14:15:17 2020

3       -rw-        5.3k        Wed Jun 10 14:12:45 2020  cfgmpls

4       drwx        4.0k        Mon Jan  6 21:12:20 2020  startup

5       -rw-        2.6k        Sat Jun 13 16:13:12 2020  cfgpol

6       -rwx        1.6k        Thu May 21 13:39:30 2020  rsa1_private.bin

7       drwx        4.0k        Thu Nov 14 23:34:40 2019  vsd

8       -rw-        3.9k        Thu Jan  1 10:53:27 1970  virtual_switch.text

9       drwx        4.0k        Mon Jan  6 21:13:23 2020  uft

10       drwx        4.0k         Fri Nov 15 00:31:04 2019  rg_licns

11       -rw-        7.5k         Wed Jun 30 10:33:50 2021  config.text

…

33 files, 22 directories

1,939,972,096 bytes data total (383,688,704 bytes free)
```

```
3,959,422,976 bytes flash total (383,688,704 bytes free)
```

(2) Create the **test** directory. Copy the **config.text** file to the **test** directory and name it **test.text**.

```
Device# mkdir test
```

(3) Copy the **config.text** file to the **test** directory and name it **test.text**.

```
Device# copy config.text flash:/test/test.text

Copying, press Ctrl+C to quit

!

Accessing flash:/config.text finished, 7652 bytes prepared

Flushing data to flash:/test/test.text...

Flush data done

Copy success.
```

4. Verification

Enter the **test** directory.

```
Device# cd test
```

Display the current working path.

```
Device# pwd

flash:/test
```

Display the files under the **test** directory.

```
Device# dir

Directory of flash:/test

Number   Properties    Size              Time                       Name

------   ----------   ----------   -----------------------   --------------------

  1        -rw-        7.5k         Tue Jan  7 19:56:44 2020  test.text

1 file, 0 directories

1,939,972,096 bytes data total (383,676,416 bytes free)

3,959,422,976 bytes flash total (383,676,416 bytes free)
```