Contents

1 Configuring USB

1.1 Introduction

1.1.1 Overview

Universal Serial Bus (USB) is an external bus standard. In this document, it refers to peripheral devices in line with the USB standard, such as USB flash drives. USB devices are hot-swappable. They serve to copy files (such as configuration files and log files) from a communication device or copy external data (such as system upgrade files) to an internal storage device.

USB devices are applied in scenarios such as file system management and upgrade. The detailed scenarios are specified in configuration guides for different features. This document describes only the identification, viewing, use, and removal of USB devices.

1.2 Configuration Task Summary

USB configuration includes the following tasks:

(1) [Using a USB](#)

(2) Ejecting a USB Device

1.3 Using a USB Device

1. Overview

When you insert a USB device into a USB port, the system automatically finds the USB device. The driver module of the system, upon identifying the USB device, initializes the device and loads the file system in it. Then, the system reads and writes the USB device. Run commands (**cd**, **copy, delete** or **dir**) of the file system to operate the USB device.

2. Restrictions and Guidelines

● The system only uses products that support standard Small Computer System Interface (SCSI) commands (generally USB flash drives). Other products, including USB flash drives attached to USB network interface cards (NICs) and those with virtual USB drives, are not supported.

● A USB device supports file allocation tables (FATs) only. Other file systems can be used on a USB device only after they are converted to FATs through a PC.

3. Prerequisites

Insert a USB device.

4. Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Run commands of the file system to operate the USB device. Configure one of the following tasks.

○ Enter the USB device partition.

cd usb: [*directory*]

The path name, if not specified, is the name of the root path of the USB device partition by default.

○ Copy files between file systems.

copy *source-url dstination-url*

When the file to be copied exists on the target URL, the target file system determines the action, for example, reporting an error, overwriting the file, or asking users to make the choice.

○ Delete a file in the USB device.

delete usb: [*file-url*]

○ Check whether the file is in the USB device.

dir usb: [*file-url*]

The path name, if not specified, is the name of the root path of the USB device partition by default.

ⓘ **Note**

● When multiple partitions exist in the USB device, only the first FAT partition is accessible.

● The concept of parent directory is not available for the USB device path. After accessing the USB device by running **cd usb***:\, return to the flash file system by running **cd flash:**.

1.4 Ejecting a USB Device

1. **Overview**

This feature ejects a USB device while keeping the data stored in the device intact.

2. **Restrictions and Guidelines**

● Do not remove a USB device when the system is using it. Otherwise, the data stored in the device will be damaged. Therefore, disconnect the USB device from the system before removing it.

● Upon successful disconnection, the system prints a prompt. After that, remove the device. USB device disconnection failure indicates that the system is using the device. Remove the device when the system is not using it.

3. **Procedure**

(1) Enter the privileged EXEC mode.

enable

(2) Remove the USB device.

usb remove *device-id*

1.5 Monitoring

Run the **show** command to check the USB device.

Table 1-1   Monitoring

Command	Purpose
show usb	Displays the information about the inserted USB device.

1.6   Configuration Examples

1.6.1   Configuring USB Basic Features

1.   Requirements

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

- Insert the USB flash drive into the port.
- Copy the **config.txt** file in the drive to **Flash**.
- Run the **usb remove** command to remove the USB device.

2.   Notes

- After you insert a USB flash drive into the port, the system displays a prompt of successful loading of the drive.
- Before removing the USB device, run the corresponding command to eject it. This is to avoid an error resulted from the system using the device.

3.   Procedure

(1) After you insert a USB flash drive into the port, the system finds the USB device and loads the drive. After that, the system prints the following prompt information:

```
*Jan  1 00:09:42: %USB-5-USB_DISK_FOUND: USB Disk <Mass Storage> has been
inserted to USB port 0!
*Jan  1 00:09:42: %USB-5-USB_DISK_PARTITION_MOUNT: Mount usb0
(type:FAT32),size : 15789711360B(15789.7MB)
```

ⓘ   **Note**

Mass Storage specifies the name of the identified device. "**usb0**" specifies the first USB device. **Size** specifies the size of the partition. As shown above, the USB flash drive has a space of 15789.7 MB.

(2) Copy the **config.txt** file in the drive to Flash.

```
Hostname# dir usb0:/
Directory of usb0:/
   1 -rwx           4  Tue Jan  1 00:00:00 1980  fac_test
   2 -rwx           1  Mon Sep 30 13:15:48 2013  config.txt
2 files, 0 directories
15,789,711,360 bytes total (15,789,686,784 bytes free)
Hostname#
Hostname# copy usb0:/config.txt flash:/
```

```
Copying: !
Accessing usb0:/config.txt finished, 1 bytes prepared
Flushing data to flash:/config.txt...
Flush data done
```

(3) Remove the USB device.

```
Hostnam# usb remove 0
OK, now you can pull out the device 0.
```

4.   Verification

Insert the USB flash drive to check the USB device.

```
Hostname> enable
Hostname# show usb
Device: Mass Storage
ID: 0
URL prefix: usb0
Disk Partitions:
usb0(type:vfat)
Size:15789711360B(15789.7MB)
Available size:15789686784B(15789.6MB)
```

Run the **dir** command to check whether the **config.txt** file in the flash is copied successfully.

```
Hostname# dir flash:/
Directory of flash:/
  20 ----              1  Thu Jan  1 00:04:51 2020  config.txt
1 files, 0 directories
5,095,424 bytes total (4,960,256 bytes free)
```

Run the **show usb** command to check whether the USB device is removed. The device with ID 0 is not displayed when the **show usb** command is run.

```
Hostname# show usb
  No partition found.
```

5.   Common Errors

- A device that uses non-standard SCSI is inserted into the USB port.
- The system cannot identify the USB device as the device is not a FAT.