Contents

1 Configuring TFTP Client

1.1 Introduction

1.1.1 Overview

Trivial File Transfer Protocol (TFTP) is a specific application of Transmission Control Protocol/Internet Protocol (TCP/IP). File transfer between TFTP client and server is implemented based on User Datagram Protocol (UDP), and the default port number is **69**. Compared with the TCP-based FTP protocol, TFTP does not require authentication or have complex packets. It is suitable for a stable network environment and small file transfer.

> 🛈 **Note**
>
> TFTP is suitable for small file transfer, and FTP supports transfer of large files.

1.1.2 Principles

You can configure a source IP address for the TFTP client and use it to communicate with a TFTP server. With this IP address, the TFTP client can connect to the server and share files with the server. Specifying the egress interface of packets facilitates interface management.

1.1.3 Protocols and Standards

- RFC783: Trivial FILE TRANSFER PROTOCOL (TFTP)

1.2 Configuration Task Summary

All the configuration tasks below are optional. Select the configuration tasks as required.

- Enabling the TFTP Client to Upload Files
- Enabling the TFTP Client to Download Files
- Binding the Source IP Address to the TFTP Client

1.3 Enabling the TFTP Client to Upload Files

1.3.1 Overview

You can upload files from the TFTP client to the TFTP server.

1.3.2 Restrictions and Guidelines

During file transfer, do not insert or remove a storage medium or transmission medium to or from the device to avoid transmission errors.

1.3.3 Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Enter the global configuration mode.

configure terminal

(3) Upload files.

copy flash:[*local-directoryl*] *local-file* { **tftp: | oob_tftp:** } *lldestination-ip-address* [*lremote-directory*] *lremote-file*

1.4 Enabling the TFTP Client to Download Files

1.4.1 Overview

You can download files from the TFTP server to the TFTP client.

1.4.2 Restrictions and Guidelines

During file transfer, do not insert or remove a storage medium or transmission medium to or from the device to avoid transmission errors.

1.4.3 Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Enter the global configuration mode.

configure terminal

(3) Download files.

copy { **tftp:** | **oob_tftp:** } *lldestination-ip-address* [*lremote-directory*] *lremote-file* **flash:** [*local-directoryl*] *local-file*

The directory specified by *local-directory* must be already configured on the device. This command does not automatically create a directory.

1.5 Binding the Source IP Address to the TFTP Client

1.5.1 Overview

You can bind a source IP address to the TFTP client so that the client can use this IP address to communicate with the server for file upload or download.

1.5.2 Procedure

(1) Enter the privileged EXEC mode.

enable

(2) Enter the global configuration mode.

configure terminal

(3) Bind a source IP address to the TFTP client.

tftp-client source { **ip** *ipv4-address* | **ipv6** *ipv6-address* | interface-type interface-number }

By default, no source IP address is bound to the TFTP client. Instead, an IP address is selected for the client based on the route.

1.6 Monitoring

Run the **debug** command to output debugging information.

> ⚠ **Caution**
>
> The output debugging information occupies system resources. Therefore, disable the debugging function immediately after use.

Table 1-1 Monitoring

Command	Purpose
debug tftp	Debugs the TFTP client.

1.7 Configuration Examples

1.7.1 Configuring the TFTP Client

1. Requirements

A local device needs to upload a file to a remote TFTP server, and download another file from the TFTP server.

2. Topology

Figure 1-1 Configuring the TFTP Client

Device A   TFTP Server

G0/1   192.168.21.100/24
192.168.21.26/24
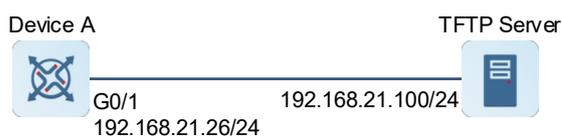
3. Notes

- Upload the **local-file** file in the **Flash** directory on device A to the **root** directory of the TFTP server with an IP address 192.168.21.100, and rename the file **remote-file**.

- Download the **remote-file** file from the **root** directory of the TFTP server with the IP address 192.168.21.100 to the **Flash** directory on device A, and save the file as **local-file**.

4. Procedure

(1) Configure the TFTP server.

Set the IP address of the TFTP Server to 192.168.21.100/24.

(2) Configure device A.

a. Configure an IP address.

```
DeviceA> enable
DeviceA# configure terminal
DeviceA(config)# interface gigabitethernet 0/1
DeviceA(config-if-GigabitEthernet 0/1)# ip address 192.168.21.26 255.255.255
DeviceA(config-if-GigabitEthernet 0/1)# exit
```
b. Upload the file.

```
DeviceA# copy flash:local-file tftp://192.168.23.69/root/remote-file
```
c. Download the file.

```
DeviceA# copy tftp://192.168.23.69/root/remote-file flash:local-file
```

5. Verification

Check whether the **remote-file** file is configured on the TFTP server.

Run the **dir** command on device A to check whether the **local-file** file is configured in the **home** directory of the Flash.

6. Configuration Files

Device A configuration file

```
hostname DeviceA
!
 interface gigabitethernet 0/1
 ip address 192.168.21.26 255.255.255.0
!
```

7. Common Errors

● The format of the uploaded or downloaded file is incorrect.