
Chapter 3

Updating Software Images and Configuration Files

This chapter provides an overview of CLI commands that the user would employ to copy and save both configuration files and software image files to and from TFTP servers to routing switch flash.

Downloading and Uploading a Software Image to a TFTP Server

For easy software image management, all HP routing switches support the download and upload of software images between them and a TFTP server on the network.

The user can download or upload a software image to either the **primary** or **secondary flash** on an HP 9304M and 9308M routing switch. HP routing switches provide two different storage locations for image storage, although only one is active at any time. This dual storage capability allows the user either to have redundant images for additional booting reliability or to preserve one software image while testing out another.

By default, the primary image will become active upon reload.

USING THE CLI

To initiate transfers of software images to and from a TFTP server from the CLI, the user would enter one of the following **copy...** commands:

- **copy flash tftp <ip address> <text> <primary | secondary>** to upload a copy of the software image to a TFTP server

EXAMPLE: HP9300# copy flash tftp 192.22.33.4 test.img secondary

- **copy tftp flash <ip address> <text> <primary | secondary>** to download a copy of the software image from a TFTP server into router flash

EXAMPLE 1: HP9300# copy tftp flash 192.22.33.4 test.img primary

To download into the secondary storage location you would enter the command listed below instead:

EXAMPLE 2: HP9300# copy tftp flash 192.22.33.4 test.img secondary

USING THE WEB MANAGEMENT INTERFACE

To initiate transfers of software images to and from a TFTP server from the Web management interface, the user would do the following:

1. Select the TFTP [image](#) link. The panel shown in **Figure 3.1** will appear.
2. Enter the **address** of the TFTP server where the image is to be transfer to or from.
3. Enter the **image file name**.
4. Specify the origin or destination of the system image code for system **flash**.
5. Select the **copy from server** button to save the image to system flash or the **save to server** button to save the image from system flash to the server.

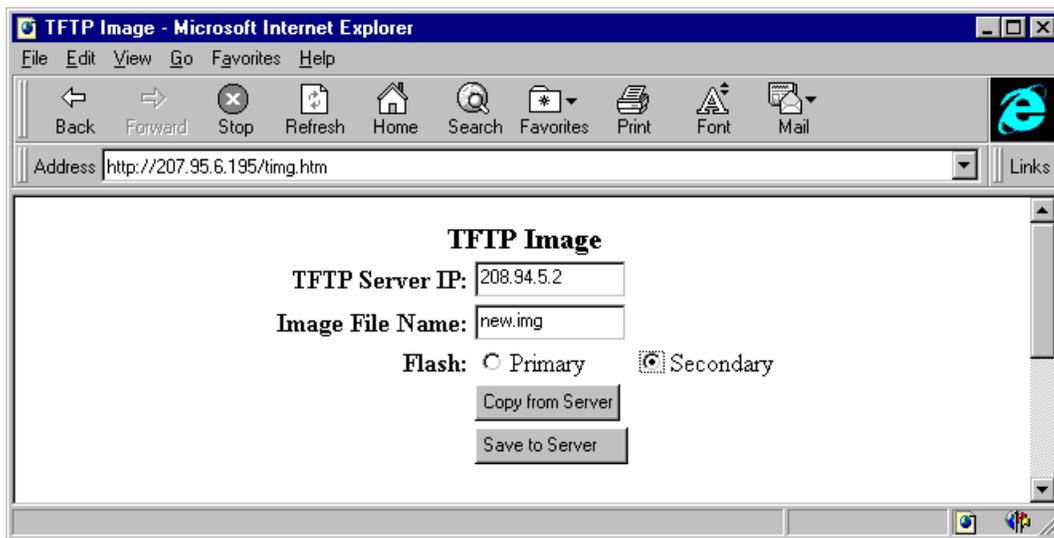


Figure 3.1 TFTP transfer screen for software images

Executable Boot Command

The user can use boot commands to immediately initiate software boots from a software image stored in primary or secondary flash on an HP routing switch or from a BootP or TFTP server. The user can test new versions of code on a routing switch or choose the preferred boot source from the console boot prompt without requiring a system reset.

NOTE: It is very important to verify a successful TFTP transfer of the boot code occurs before resetting the system. Otherwise there will not be any image from which to boot the system.

The IP address noted in the command would be the address of the TFTP server from which the boot code is being retrieved.

By default, the routing switch will first attempt to boot from the image stored in its **primary flash**, then its **secondary flash** and then from a TFTP server. The user can modify this booting sequence at the global CONFIG level of the CLI with the **boot system ...** command.

USING THE CLI

To initiate an immediate boot from the CLI, the user would enter one of the **boot system...** commands as described in **Appendix B**.

USING THE WEB MANAGEMENT INTERFACE

To initiate an immediate boot, the user would select the [boot sequence](#) link from the menu. A panel will appear and prompt the user to select one of the following locations from which to boot: primary flash, secondary flash, TFTP server or BootP server. If booting from a server, the user will also need to enter the IP address and file name, selecting the **add** button after all entries are complete.

Downloading and Uploading a Configuration File to a TFTP Server

For easy configuration management, all HP routing switches support both the download and upload of configuration files between it and a TFTP server on the network.

Uploading (Saving) or Downloading a Configuration File to or from a TFTP Server

The user can upload either the start-up configuration file or the running configuration file to the TFTP server for backup and use in booting the system.

The start-up config file represents the configuration that is currently saved in flash. The running configuration file represents the configuration active on the system RAM but not yet saved to flash. These changes could represent a short-term requirement or general configuration change.

USING THE CLI

To initiate transfers of configuration files to or from a TFTP server using the CLI, the user would enter one of the following commands:

copy startup-config tftp to upload a copy of the startup configuration file from the routing switch to a TFTP server

copy running-config tftp to upload a copy of the running configuration file from the routing switch to a TFTP server

copy tftp startup-config to download a copy of the startup configuration file from a TFTP server to a routing switch

USING THE WEB MANAGEMENT INTERFACE

To initiate transfers of configuration files to and from a TFTP server using the Web management interface, the user would do the following:

1. Select the TFTP [image](#) link. The panel shown in **Figure 3.2** will appear.
2. Enter the IP **address** of the TFTP server that will be sending or receiving the file.
3. Enter the **configuration file name**.
4. Select the appropriate **copy** or **save** button to initiate the transfer.

NOTE: While TFTP transfers are in process, a red bar labeled 'processing' will display on the screen. When the TFTP transfer is actively transferring image or configuration data, a green bar labeled 'loading' will display. When a successful transfer is complete a message will appear stating, "TFTP transfer complete."

Should there be any problems with the TFTP transfer, one of the error codes listed in the next section will display on the screen.

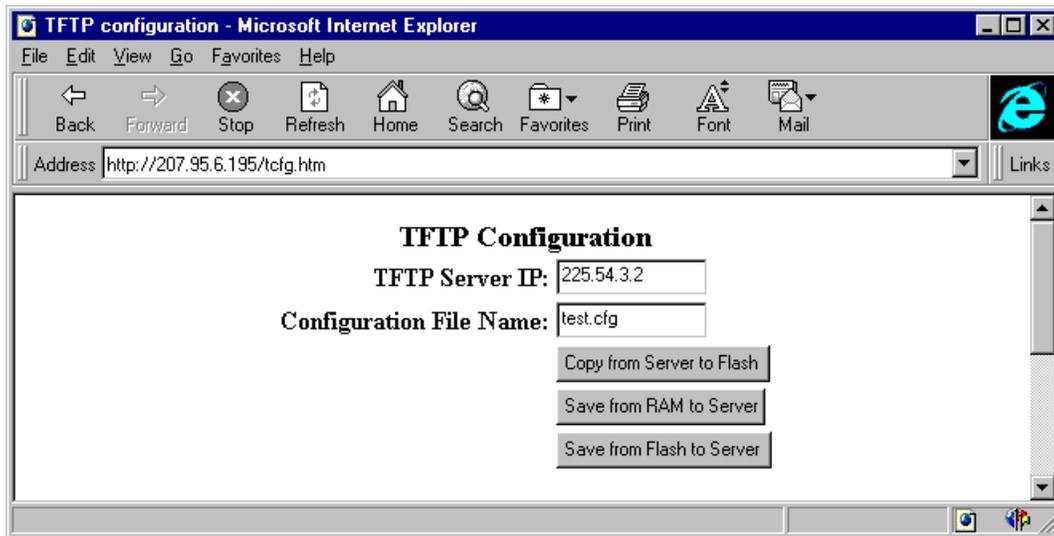


Figure 3.2 TFTP transfer screen for software configuration files

Diagnostic Error Codes for TFTP Transfers

Should an error occur when a TFTP transfer to or from an HP routing switch is in process, an error code will display on the screen. A summary of error codes is noted below.

1	Flash read preparation failed.
2	Flash read failed.
3	Flash write preparation failed.
4	Flash write failed.
5	TFTP session timeout.
6	TFTP out of buffer space.
7	TFTP busy, only one TFTP session can be active.
8	File type check failed.
16	TFTP remote - general error.
17	TFTP remote - no such file.
18	TFTP remote - access violation.
19	TFTP remote - disk full.
20	TFTP remote - illegal operation.
21	TFTP remote - unknown transfer ID.
22	TFTP remote - file already exists.
23	TFTP remote - no such user.

Error Code Troubleshooting

For error types 1 through 4, a flash error has occurred during the download. The user should retry the download, and if it fails again, he or she contact customer support.

For error type 5, if TFTP fails because of time out, check IP connectivity and whether or not the TFTP server is running.

Error type 6 will register if the user is trying to upload a configuration file that is bigger than the maximum configuration size supported.

Error type 7 will register when another TFTP transfer is active via another CLI session or NMS connection. The user should wait and retry later.

Error type 8 will register when user is attempting to copy the incorrect image code into a system.

For error types 16 through 23, the message represents an error in the TFTP configuration. The user should check the configuration and retry the TFTP transfer.

Saving or Erasing Image and Configuration Files

The user can save modified configuration files to the permanent startup configuration file or erase software images or configuration files.

USING THE CLI

- ***erase flash primary*** will erase the image stored in primary flash of the system.
- ***erase flash secondary*** will erase the image stored in secondary flash of the system.
- ***erase startup-config*** will erase the configuration stored in the startup configuration file; however, the running configuration remains intact until system reboot.
- ***write memory*** will save the running configuration file into the startup configuration file.

NOTE: All of these commands are found at the privileged level of the CLI. Please refer to **Appendix B** for a detailed description of these commands.

USING THE WEB MANAGEMENT INTERFACE

Image and configuration files cannot be deleted using the Web management interface.

