

# File Transfers

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## Overview

You can download new switch software and upload or download switch configuration files. These features are useful for acquiring periodic switch software upgrades and for storing or retrieving a switch configuration.

This appendix includes the following information:

- Downloading switch software (begins below)
- Transferring switch configurations (begins on page A-18)

For information on how switch memory operates, including primary and secondary flash, see Chapter 6, “Switch Memory and Configuration”.

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### Note

In the switch console interface, the switch software is referred to as the OS, for switch “operating system”.

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## Downloading Switch Software

ProCurve Networking periodically provides switch software updates through the ProCurve website (<http://www.procurve.com>). For more information, see the support and warranty booklet shipped with the switch. After you acquire a new switch software file, you can use one of the following methods for downloading the switch software code to the switch:

### Switch Software Download Features

Feature	Default	Menu	CLI	Web
TFTP	n/a	page A-4	page A-6	—
Xmodem	n/a	page A-11	page A-12	—
Switch-to-Switch	n/a	page A-14	page A-15	
Software Update Manager in ProCurve Manager Plus	Refer to the documentation provided with ProCurve Manager Plus.			

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## General Switch Software Download Rules

- A switch software image downloaded through the menu interface always goes to primary flash.
- After a switch software download, you must reboot the switch to implement the newly downloaded code. Until a reboot occurs, the switch continues to run on the software it was using before the download started.

---

### Note

Downloading new switch software does not change the current switch configuration. The switch configuration is contained in separate files that can also be transferred. Refer to “Transferring Switch Configurations” on page A-18.

In most cases, if a power failure or other cause interrupts a flash image download, the switch reboots with the image previously stored in primary flash. In the unlikely event that the primary image is corrupted (which may occur if a download is interrupted by a power failure), the switch goes into boot ROM mode. In this case, use the boot ROM console to download a new switch software image to primary flash. Refer to “Restoring a Flash Image” on page C-44.

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## Using TFTP To Download Switch Software from a Server

This procedure assumes that:

- An switch software file for the switch has been stored on a TFTP server accessible to the switch. (The switch software file is typically available from the ProCurve website at <http://www.procurve.com>.)
- The switch is properly connected to your network and has already been configured with a compatible IP address and subnet mask.
- The TFTP server is accessible to the switch through IP.

Before you use the procedure, do the following:

- Obtain the IP address of the TFTP server in which the switch software file has been stored.
- If VLANs are configured on the switch, determine the name of the VLAN in which the TFTP server is operating.
- Determine the name of the switch software file stored in the TFTP server for the switch (for example, **G0721.swi**).

---

**Note**

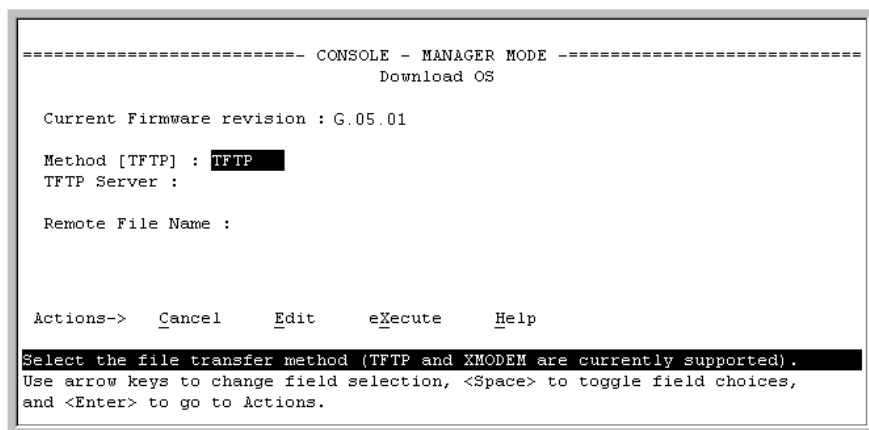
---

If your TFTP server is a Unix workstation, *ensure that the case (upper or lower) that you specify for the filename is the same case as the characters in the switch software filenames on the server.*

## Menu: TFTP Download from a Server to Primary Flash

Note that the menu interface accesses only the primary flash.

1. In the console Main Menu, select **Download OS** to display this screen:



```
----- CONSOLE - MANAGER MODE -----
                          Download OS

Current Firmware revision : G.05.01

Method [TFTP] : TFTP
TFTP Server :
Remote File Name :

Actions->  _Cancel      _Edit      eXecute      _Help

Select the file transfer method (TFTP and XMODEM are currently supported).
Use arrow keys to change field selection, <Space> to toggle field choices,
and <Enter> to go to Actions.
```

**Figure A-1. Example of the Download OS Screen (Default Values)**

2. Press [E] (for **E**dit).
3. Ensure that the **Method** field is set to **TFTP** (the default).
4. In the **TFTP Server** field, type in the IP address of the TFTP server in which the switch software file has been stored.
5. In the **Remote File Name** field, type the name of the switch software file. If you are using a UNIX system, remember that the filename is case-sensitive.
6. Press [Enter], then [X] (for **eX**ecute) to begin the switch software download. The following screen then appears:

```
----- CONSOLE - MANAGER MODE -----  
Download OS  
Current Firmware revision : G.05.01  
Method [TFTP] : TFTP  
TFTP Server : 13.28.227.105  
  
Remote File Name : G_05_02.swi  
  
Received 370,000 bytes of OS download.  
+-----+  
|*****|  
+-----+
```

**Figure A-2. Example of the Download OS Screen During a Download**

A “progress” bar indicates the progress of the download. When the entire switch software file has been received, all activity on the switch halts and you will see **Validating and writing system software to FLASH...**

7. After the primary flash memory has been updated with the new switch software, you must reboot the switch to implement the newly downloaded code. From the Main Menu and press **[6]** (for **Reboot Switch**). You will then see this prompt:

```
Continue reboot of system? : No
```

Press the space bar once to change No to Yes, then press **[Enter]** to begin the reboot.

---

**Note**

---

When you use the menu interface to download switch software, the new image is always stored in primary flash. Also, using the **Reboot Switch** option in the Main Menu always reboots the switch from primary flash. Rebooting the switch from the CLI gives you more options. Refer to “Rebooting the Switch” on page 6-17.

8. After you reboot the switch, confirm that the switch software downloaded correctly:
  - a. From the Main Menu, select **1. Status and Counters**, and from the Status and Counters menu, select **1. General System Information**
  - b. Check the **Firmware revision** line.
  - c. From the CLI, use the command **show version** or **show flash**.

## CLI: TFTP Download from a Server to Primary or Secondary Flash

This command automatically downloads a switch software image to primary or secondary flash.

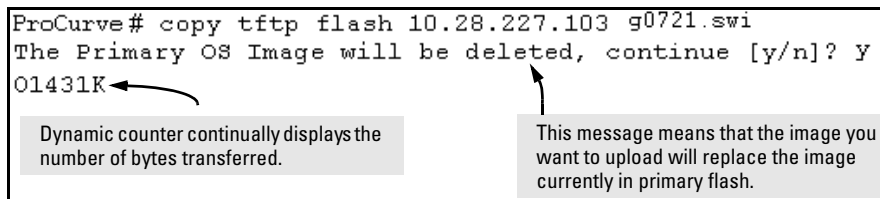
**Syntax:** `copy tftp flash < ip-address > < remote-os-file > [< primary | secondary >]`

Note that if you do not specify the flash destination, the Xmodem download defaults to primary flash.

For example, to download a switch software file named G0502.swi from a TFTP server with the IP address of 10.28.227.103 to primary flash:

1. Execute **copy** as shown below:

```
ProCurve# copy tftp flash 10.28.227.103 g0721.swi
The Primary OS Image will be deleted, continue [y/n]? Y
01431K
```



Dynamic counter continually displays the number of bytes transferred.

This message means that the image you want to upload will replace the image currently in primary flash.

**Figure A-3. Example of the Command to Download Switch Software**

2. When the switch finishes downloading the switch software file from the server, it displays this progress message:

### **Validating and Writing System Software to FLASH . . .**

3. When the switch is ready to activate the downloaded software you will see this message:

### **System software written to FLASH.**

### **You will need to reboot to activate.**

At this point, use the boot command to reboot the switch and activate the software you just downloaded:

```
ProCurve # boot
```

(For more on these commands, refer to “Rebooting the Switch” on page 6-17.)

4. To confirm that the switch software downloaded correctly, execute **show system** and check the Firmware revision line.

If you need information on primary/secondary flash memory and the boot commands, refer to “Using Primary and Secondary Flash Image Options” on page 6-12.

## Using Secure Copy and SFTP

*This feature is available only on the Series 2600, 2600-PWR, and 2800 Switches.*

For some situations you may want to use a secure method to issue commands or copy files to the switch. By opening a secure, encrypted SSH session you can then use a third-party software application to take advantage of Secure Copy (SCP) and Secure ftp (SFTP). SCP and SFTP provide a secure alternative to TFTP for transferring information that may be sensitive (like switch configuration files) to and from the switch. Essentially you are creating a secure SSH tunnel as a way to transfer files with SFTP and SCP channels.

To use these commands you must install on the administrator workstation a third-party application software client that supports the SFTP and/or SCP functions. Some examples of software that supports SFTP and SCP are PuTTY, Open SSH, WinSCP, and SSH Secure Shell. Most of these are freeware and may be downloaded without cost or licensing from the internet. There are differences in the way these clients work, so be sure you also download the documentation.

As described earlier in this chapter you can use a TFTP client on the administrator workstation to update software images. This is a plain text mechanism and it connects to a standalone TFTP server or another ProCurve switch acting as a TFTP server to obtain the software image file(s). Using SCP and SFTP allows you to maintain your switches with greater security. You can also roll out new software images with automated scripts that make it easier to upgrade multiple switches simultaneously and securely.

SFTP (secure file transfer protocol) is unrelated to FTP, although there are some functional similarities. Once you set up an SFTP session through an SSH tunnel, some of the commands are the same as FTP commands. Certain commands are not allowed by the SFTP server on the switch, such as those that create files or folders. If you try to issue commands such as **create** or **remove** using SFTP the switch server returns an error message.

You can use SFTP just as you would TFTP to transfer files to and from the switch, but with SFTP your file transfers are encrypted and require authentication, so they are more secure than they would be using TFTP. SFTP works only with SSH version 2 (SSH v2).

---

**Note**

SFTP over SSH version 1 (SSH v1) is not supported. A request from either the client or the switch (or both) using SSH v1 generates an error message. The actual text of the error message differs, depending on the client software in use. Some examples are:

```
Protocol major versions differ: 2 vs. 1  
Connection closed
```

```
Protocol major versions differ: 1 vs. 2  
Connection closed
```

```
Received disconnect from <ip-addr>: /usr/local/  
libexec/sftp-server: command not supported  
Connection closed
```

---

SCP (secure copy) is an implementation of the BSD **rcp** (Berkeley UNIX remote copy) command tunneled through an SSH connection.

SCP is used to copy files to and from the switch when security is required. SCP works with both SSH v1 and SSH v2. Be aware that the most third-party software application clients that support SCP use SSHv1.

## How It Works

The general process for using SCP and SFTP involves three steps:

1. Open an SSH tunnel between your computer and the switch if you haven't already done so. (This step assumes that you have already set up SSH on the switch.)
2. Execute **ip ssh filetransfer** to tell the switch that you want to enable secure file transfer.
3. Use a third-party client application for SCP and SFTP commands.



## The SCP/SFTP Process

To use SCP and SFTP:

1. Open an SSH session as you normally would to establish a secure encrypted tunnel between your computer and the switch. For more detailed directions on how to open an SSH session see the chapter titled “*Configuring Secure Shell (SSH)*” in the *Access Security Guide* for your switch. Please note that this is a one-time procedure for new switches or connections. If you have already done it once you should not need to do it a second time.
2. To enable secure file transfer on the switch (once you have an SSH session established between the switch and your computer), open a terminal window and type in the following command:

```
ProCurve(config)# ip ssh filetransfer
```

### Command Options

If you need to enable SSH v2 (which is required for SFTP) enter this command:

```
ProCurve(config)# ip ssh version 2
```

---

**Note**

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As a matter of policy, administrators should *not* enable the SSHv1-only or the SSHv1-or-v2 advertisement modes. SSHv1 is supported on only some legacy switches (such as the ProCurve Series 2500 switches).

To confirm that SSH is enabled type in the command

```
ProCurve(config)# show ip ssh
```

3. Once you have confirmed that you have enabled an SSH session (with the **show ip ssh** command) you can then open your third-party software client application to begin using the SCP or SFTP commands to safely transfer files or issue commands to the switch.

If you need to disable secure file transfer:

```
ProCurve(config)# no ip ssh filetransfer
```

## Authentication

Switch memory allows up to ten public keys. This means the authentication and encryption keys you use for your third-party client SCP/SFTP software can differ from the keys you use for the SSH session, even though both SCP and SFTP use a secure SSH tunnel.

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### Note

SSH authentication through a TACACS+ server and use of SCP or SFTP through an SSH tunnel are mutually exclusive. Thus, if the switch is configured to use TACACS+ for authenticating a secure Telnet SSH session on the switch, you cannot enable SCP or SFTP. Also, if SCP or SFTP is enabled on the switch, you cannot enable TACACS+ authentication for a secure Telnet SSH. The switch displays a message similar to the following if there is an attempt to configure either option when the other is already configured:

```
RADIUS/TACACS authentication for ssh sessions and
secure file transfer(scp/sftp) may not be configured
simultaneously.
```

To provide username/password authentication on a switch providing SCP or SFTP support, use the switch's local username/password facility. Otherwise, you can use the switch's local public key for authentication.

---

Some clients such as PSCP (PuTTY SCP) automatically compare switch host keys for you. Other clients require you to manually copy and paste keys to the **\$HOME/.ssh/known\_hosts** file. Whatever SCP/SFTP software tool you use, after installing the client software you must verify that the switch host keys are available to the client.

Because the third-party software utilities you may use for SCP/SFTP vary, you should refer to the documentation provided with the utility you select before performing this process.

## SCP/SFTP Operating Notes

- When an SFTP client connects, the switch provides a file system displaying all of its available files and folders. No file or directory creation is permitted by the user. Files may only be uploaded or downloaded, according to the permissions mask. All of the necessary files the switch will need are already in place on the switch. You do not need to (nor can you create) new files.
- The switch supports one SFTP session or one SCP session at a time.

- All files have read-write permission. Several SFTP commands, such as `create` or `remove`, are not allowed and return an error message. The switch displays the following files:

```
/
+---cfg
|   running-config
|   startup-config
+---log
|   crash-data
|   crash-log
|   event log
+---os
|   primary
|   secondary
\---ssh
    +---mgr_keys
    |   authorized_keys
    \---oper_keys
        authorized_keys
```

Once you have configured your switch for secure file transfers with SCP and SFTP, files can be copied to or from the switch in a secure (encrypted) environment and TFTP is no longer necessary.

## Using Xmodem to Download Switch Software From a PC or UNIX Workstation

This procedure assumes that:

- The switch is connected via the Console RS-232 port to a PC operating as a terminal. (Refer to the *Installation and Getting Started Guide* you received with the switch for information on connecting a PC as a terminal and running the switch console interface.)
- The switch software is stored on a disk drive in the PC.
- The terminal emulator you are using includes the Xmodem binary transfer feature. (For example, in the HyperTerminal application included with Windows NT, you would use the **Send File** option in the **Transfer** dropdown menu.)

### Menu: Xmodem Download to Primary Flash

Note that the menu interface accesses only the primary flash.

1. From the console Main Menu, select
  - 7. Download OS**
2. Press [E] (for **E**dit).
3. Use the Space bar to select **XMODEM** in the **Method** field.
4. Press [Enter], then [X] (for **eX**ecute) to begin the switch software download. The following message then appears:

**Press enter and then initiate Xmodem transfer  
from the attached computer....**

5. Press [Enter] and then execute the terminal emulator command(s) to begin Xmodem binary transfer. For example, using HyperTerminal:
  - a. Click on **Transfer**, then **Send File**.
  - b. Type the file path and name in the Filename field.
  - c. In the Protocol field, select **Xmodem**.
  - d. Click on the **Send** button.

The download will then commence. It can take several minutes, depending on the baud rate set in the switch and in your terminal emulator.

6. After the primary flash memory has been updated with the new operating system, you must reboot the switch to implement the newly downloaded software. Return to the Main Menu and press [6] (for **Reboot Switch**). You will then see this prompt:

```
Continue reboot of system? : No
```

Press the space bar once to change No to Yes, then press [Enter] to begin the reboot.

7. To confirm that the switch software downloaded correctly:
  - a. From the Main Menu, select

### **1. Status and Counters**

#### **1. General System Information**

- b. Check the **Firmware revision** line.

## **CLI: Xmodem Download from a PC or Unix Workstation to Primary or Secondary Flash**

Using Xmodem and a terminal emulator, you can download a switch software file to either primary or secondary flash.

**Syntax:** copy xmodem flash [< primary | secondary >]

Note that if you do not specify the flash destination, the Xmodem download defaults to primary flash.

For example, to download a switch software file named G0103.swi from a PC (running a terminal emulator program such as HyperTerminal) to primary flash:

1. Execute the following command in the CLI:

```
ProCurve# copy xmodem flash
The Primary OS Image will be deleted, continue [y/n]? y
Press 'Enter' and start XMODEM on your host...
```

**Figure A-4. Example of the Command to Download Switch Software Using Xmodem**

2. Execute the terminal emulator commands to begin the Xmodem transfer. For example, using HyperTerminal:
  - a. Click on **Transfer**, then **Send File**.
  - b. Type the file path and name in the Filename field.
  - c. In the Protocol field, select **Xmodem**.
  - d. Click on the **Send** button.

The download can take several minutes, depending on the baud rate used in the transfer.

3. When the download finishes, you must reboot the switch to implement the newly downloaded switch software. To do so, use one of the following commands:

**boot system flash <primary | secondary>**

Reboots the switch from the selected flash memory.

-o/-

**reload**

Reboots the switch from the flash image currently in use.

(For more on these commands, refer to “Rebooting the Switch” on page 6-17.)

4. To confirm that the operating system downloaded correctly, use the **show system**, **show version**, or **show flash** CLI commands.

Check the **Firmware revision** line. It should show the switch software version that you downloaded in the preceding steps.

If you need information on primary/secondary flash memory and the boot commands, refer to “Using Primary and Secondary Flash Image Options” on page 6-12.

## Switch-to-Switch Download

You can use TFTP to transfer a switch software file between two ProCurve switches that use the same software code base. The menu interface enables you to transfer primary-to-primary or secondary-to-primary. The CLI enables all combinations of flash location options.

### Menu: Switch-to-Switch Download to Primary Flash

Using the menu interface, you can download switch software from either the primary or secondary flash of one switch to the primary flash of another switch.

1. From the switch console Main Menu in the switch to receive the download, select **7. Download OS** screen.
2. Ensure that the **Method** parameter is set to **TFTP** (the default).
3. In the **TFTP Server** field, enter the IP address of the remote switch containing the switch software you want to download.
4. For the **Remote File Name**, enter one of the following:
  - To download the switch software from the primary flash of the source switch, type **flash** or **/os/primary** in lowercase characters.
  - To download the switch software from the secondary flash of the source switch, type **/os/secondary**.
5. Press **[Enter]**, then **[X]** (for **eXecute**) to begin the switch software download.
6. A “progress” bar indicates the progress of the download. When the entire operating system has been received, all activity on the switch halts and the following messages appear:

#### **Validating and writing system software to FLASH...**

7. After the primary flash memory has been updated with the new operating system, you must reboot the switch to implement the newly downloaded software. From the Main Menu, press **[6]** (for **Reboot Switch**). You will then see this prompt:

```
Continue reboot of system? : No
```

Press the space bar once to change No to Yes, then press **[Enter]** to begin the reboot.

8. To confirm that the operating system downloaded correctly:
  - a. From the Main Menu, select

#### **Status and Counters**

### General System Information

- b. Check the **Firmware revision** line.

### CLI: Switch-To-Switch Downloads

You can download a switch software file between two switches that use the same code base and which are connected on your LAN. To do so, use a **copy tftp** command from the destination switch. The options for this CLI feature include:

- Copy from primary flash in the source to either primary or secondary in the destination.
- Copy from either primary or secondary flash in the source to either primary or secondary flash in the destination.

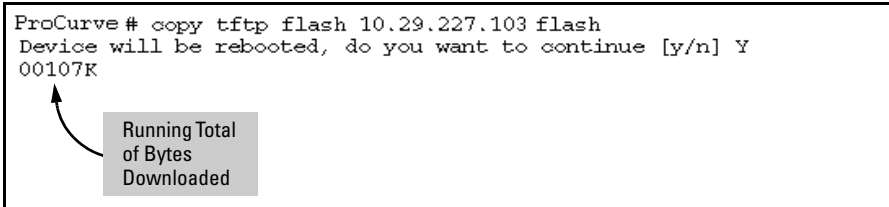
**Downloading from Primary Only.** This command (executed in the destination switch) downloads the switch software from the source switch's primary flash to either the primary or secondary flash in the destination switch.

**Syntax:**      `copy tftp flash < ip-addr > flash [primary | secondary]`

If you do not specify either a primary or secondary flash location for the destination, the download automatically goes to primary flash.

For example, to download switch software from primary flash in a switch with an IP address of 10.28.227.103 to the primary flash in the destination switch, you would execute the following command in the destination switch's CLI:

```
ProCurve# copy tftp flash 10.29.227.103 flash
Device will be rebooted, do you want to continue [y/n] Y
00107K
```



**Figure A-5. Switch-To-Switch, from Primary in Source to Either Flash in Destination**

**Downloading from Either Flash in the Source Switch to Either Flash in the Destination Switch.** This command (executed in the destination switch) gives you the most options for downloading between switches.

**Syntax:**      `copy tftp flash < ip-addr > < /os/primary > | < /os/secondary > [primary | secondary]`

If you do not specify either a primary or secondary flash location for the destination, the download automatically goes to primary flash.

For example, to download switch software from secondary flash in a switch with an IP address of 10.28.227.103 to the secondary flash in the destination switch, you would execute the following command in the destination switch's CLI:

```
ProCurve#copy tftp flash 10.29.227.103 /os/secondary secondary  
Device will be rebooted, do you want to continue [y/n] Y  
01084K
```

**Figure A-6. Switch-to-Switch, from Either Flash in Source to Either Flash in Destination**

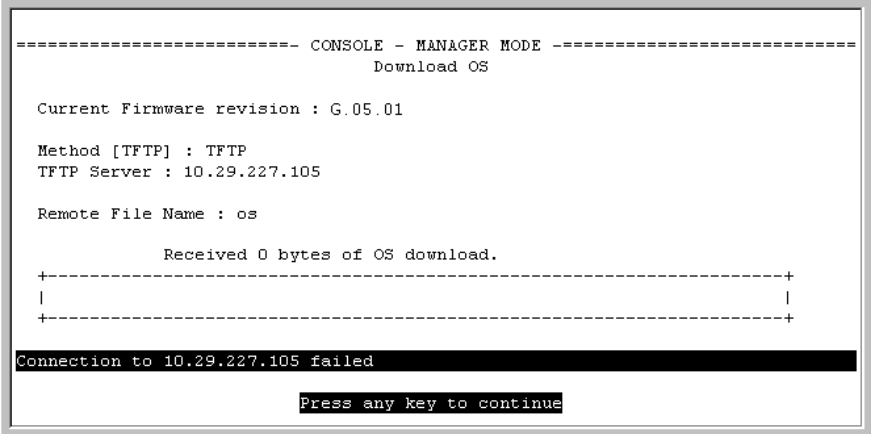
## Using ProCurve Manager Plus to Update Switch Software

ProCurve Manager Plus include a software update utility for updating on ProCurve switch products. For further information, refer to the *Getting Started Guide* and the *Administrator's Guide*, provided electronically with the application.



## Troubleshooting TFTP Downloads

When using the menu interface, if a TFTP download fails, the Download OS screen indicates the failure.



```
----- CONSOLE - MANAGER MODE -----
Download OS

Current Firmware revision : G.05.01

Method [TFTP] : TFTP
TFTP Server : 10.29.227.105

Remote File Name : os

Received 0 bytes of OS download.

+-----+
|                                             |
+-----+

Connection to 10.29.227.105 failed

Press any key to continue
```

Message Indicating cause of TFTP Download Failure

**Figure A-7. Example of Message for Download Failure**

To find more information on the cause of a download failure, examine the messages in the switch’s Event Log by executing this CLI command:

```
ProCurve# show log tftp
```

(For more on the Event Log, see “Using Logging To Identify Problem Sources” on page C-23.)

Some of the causes of download failures include:

- Incorrect or unreachable address specified for the **TFTP Server** parameter. This may include network problems.
- Incorrect VLAN.
- Incorrect name specified for the **Remote File Name** parameter, or the specified file cannot be found on the TFTP server. This can also occur if the TFTP server is a Unix machine and the case (upper or lower) for the filename on the server does not match the case for the filename entered for the **Remote File Name** parameter in the Download OS screen.
- One or more of the switch’s IP configuration parameters are incorrect.

## File Transfers

### Transferring Switch Configurations

- For a Unix TFTP server, the file permissions for the switch software file do not allow the file to be copied.
- Another console session (through either a direct connection to a terminal device or through Telnet) was already running when you started the session in which the download was attempted.

---

#### Note

If an error occurs in which normal switch operation cannot be restored, the switch automatically reboots itself. In this case, an appropriate message is displayed after the switch reboots.

---

---

## Transferring Switch Configurations

### Transfer Features

Feature	Default	Menu	CLI	Web
use TFTP to copy from a remote host to a config file	n/a	—	below	—
use TFTP to copy a config file to a remote host	n/a	—	page A-19	—
use Xmodem to copy a configuration from a serially connected host to a config file	n/a	—	page A-19	—
Use Xmodem to copy a config file to a serially connected host	n/a	—	page A-20	—

Using the CLI commands described in this section, you can copy switch configurations to and from a switch.

### TFTP: Copying a Configuration from a Remote Host.

**Syntax:** `copy tftp < startup-config | running-config>< ip-address > < remote-file >`

This command copies a configuration from a remote host to the startup-config file in the switch. (Refer to Chapter 6, “Switch Memory and Configuration” for information on the startup-config file.)

For example, to download a configuration file named **sw4100** in the **configs** directory on drive "d" in a remote host having an IP address of 10.28.227.105:

```
ProCurve# copy tftp startup-config 10.28.227.105
d:\configs\sw4100
```

### **TFTP: Copying a Configuration File to a Remote Host.**

**Syntax:** copy < startup-config | running-config > tftp < ip-addr > < remote-file >

This command copies the switch's startup configuration (startup-config file) to a remote TFTP host.

For example, to upload the current startup configuration to a file named **sw4100** in the configs directory on drive "d" in a remote host having an IP address of 10.28.227.105:

```
ProCurve# copy startup-config tftp 10.28.227.105
          d:\configs\sw4100
```

**Xmodem: Copying a Configuration File from the Switch to a Serially Connected PC or Unix Workstation.** To use this method, the switch must be connected via the serial port to a PC or Unix workstation to which you want to copy the configuration file. You will need to:

- Determine a filename to use.
- Know the directory path you will use to store the the configuration file.

**Syntax:** copy < startup-config | running-config > xmodem < pc | unix >

For example, to copy a configuration file to a PC serially connected to the switch:

1. Determine the file name and directory location on the PC.

2. Execute the following command:

```
ProCurve# copy startup-config xmodem pc
```

3. After you see the following prompt, press **[Enter]**.

```
Press 'Enter' and start XMODEM on your host...
```

4. Execute the terminal emulator commands to begin the file transfer.

**Xmodem: Copying a Configuration File from a Serially Connected PC or Unix Workstation.** To use this method, the switch must be connected via the serial port to a PC or Unix workstation on which is stored the configuration file you want to copy. To complete the copying, you will need to know the name of the file to copy and the drive and directory location of the file.

**Syntax:**      copy xmodem startup-config < pc | unix >

For example, to copy a configuration file from a PC serially connected to the switch:

1. Execute the following command:

```
ProCurve# copy xmodem startup-config pc
Device will be rebooted, do you want to continue [y/n]? y
Press 'Enter' and start XMODEM on your host...
```

2. After you see the above prompt, press **[Enter]**.
3. Execute the terminal emulator commands to begin the file transfer.
4. When the download finishes, you must reboot the switch to implement the newly downloaded OS. To do so, use one of the following commands:

```
boot system flash < primary | secondary >
Reboots from the selected flash.
```

-or-

```
reload
Reboots from the flash image currently in use.
```

(For more on these commands, refer to “Rebooting the Switch” on page 6-17.)

## Copying Diagnostic Data to a Remote Host, PC, or Unix Workstation

You can use the CLI to copy the following types of switch data to a text file in a management device:

- **Command Output:** Sends the output of a switch CLI command as a file on the destination device.
- **Event Log:** Copies the switch's Event Log into a file on the destination device.
- **Crash Data:** OS-specific data useful for determining the reason for a system crash.
- **Crash Log:** Processor-Specific operating data useful for determining the reason for a system crash.

### Copying Command Output to a Destination Device

This command directs the displayed output of a CLI command to a file in a destination device.

**Syntax:**      `copy command-output <"cli-command"> tftp <ip-address>`  
                  `<filepath-filename>`

`copy command-output <"cli-command"> xmodem`

For example, to use Xmodem to copy the output of **show config** to a serially connected PC:

```
ProCurve# copy command-output "show config" xmodem pc
Press 'Enter' and start XMODEM on your host...
Transfer complete
```

**Figure A-8. Example of Sending Command Output to a File on an Attached PC**

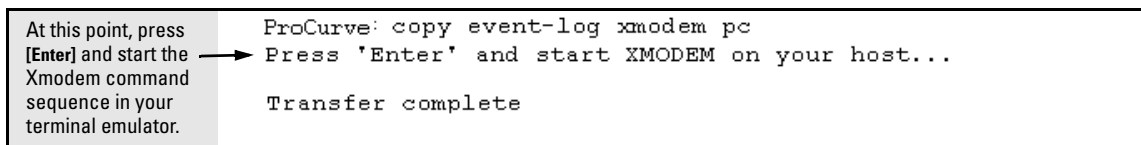
Note that the command you specify must be enclosed in double-quote marks.

### Copying Event Log Output to a Destination Device

This command uses TFTP or Xmodem to copy the Event Log content to a PC or UNIX workstation on the network.

**Syntax:**      `copy event-log tftp < ip-address > < filepath and filename >`  
                  `copy event-log xmodem`

For example, to copy the event log to a PC connected to the switch:



**Figure A-9. Example of Sending Event Log Content to a File on an Attached PC**

### Copying Crash Data Content to a Destination Device

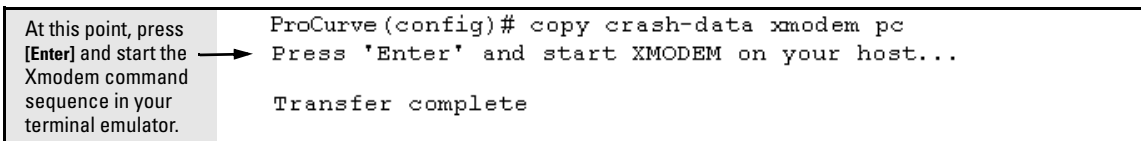
This command uses TFTP or Xmodem to copy the Crash Data content to a PC or UNIX workstation on the network. You can copy individual slot information or the master switch information. If you do not specify either, the command defaults to the master data.

**Syntax:**      `copy crash-data [< slot-id | master >] xmodem`  
                  `copy crash-data [< slot-id | master >] tftp < ip-address > < filename >`

*where: slot-id = a - h, and retrieves the crash log or crash data from the processor on the module in the specified slot.*

*master   Retrieves crash log or crash data from the switch's chassis processor.*

For example, to copy the switch's crash data to a file in a PC:



**Figure A-10. Example of Copying Switch Crash Data Content to a PC**



**File Transfers**

Copying Diagnostic Data to a Remote Host, PC, or Unix Workstation

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