Updating Firmware Configuration

To update the firmware configuration of the Catalyst 1900 and Catalyst 2820 switches, use the Firmware Configuration Menu (see Figure B-1), displayed when you select the **[F] Filename for firmware upgrades** option from the Management Console Main Menu. Use this menu to display the firmware version used by the switch and to perform firmware upgrades. The size of the Flash memory is displayed in the System Information area in the menu. The Upgrade status field in the System Information area shows if a firmware upgrade is in progress.

Figure B-1 Firmware Configuration Menu

```
Catalyst 1900 - Firmware Configuration

-----------------System Information------------
FLASH:  1024K bytes
V9.00.00 Standard Edition
Upgrade status:
No upgrade currently in progress.

--------------------Settings------------------
[S] TFTP Server name or IP address
[F] Filename for firmware upgrades
[A] Accept upgrade transfer from other hosts    Disabled

--------------------Actions-------------------
[U] System XMODEM upgrade        [D] Download test subsystem (XMODEM)
[T] System TFTP upgrade          [X] Exit to Main Menu

Enter Selection:
```

When the switch is upgrading firmware, it downloads the upgrade file into a temporary area. After existing firmware validates the file, the new image is transferred into Flash memory, the switch resets, and the new firmware begins executing. If the upgrade file is invalid, the temporary image is discarded, the existing firmware continues to execute, and the firmware upgrade ends.

Caution During the download of the upgrade file, the switch might not respond to commands for as long as 1 minute. This is normal and correct. If you interrupt the download by turning the switch off and on, the firmware could be corrupted. If this happens, restart the firmware by following the procedure described in the "Using the Diagnostic Console" section in the "Troubleshooting" chapter of the installation and configuration guide for your switch.

How you upgrade the firmware depends on your installation:

- From a TFTP server—First enter the name of the TFTP server and the name of the file containing the upgrade. The upgrade can be initiated through the management console or through any SNMP-compatible management station. The switch retrieves the upgrade file from the server through TFTP.
- From a TFTP client—The upgrade can be done via a TFTP client.
- With the XMODEM protocol—The upgrade can be done via the XMODEM protocol after you attach a management station to the console port on the switch.

[A] Accept upgrade transfer from other hosts—Enable **[E]** or disable **[D]** the switch from accepting a TFTP "put" upgrade from another host on the network. To prevent unauthorized upgrades, use the Disabled setting. The default setting is Enabled.

[D] Download test subsystem (XMODEM)—For Cisco personnel only.

[X] Exit to Main Menu—Display the Management Console Main Menu.

The following sections provide information on the **[S] TFTP Server name or IP address**, **[F] Filename for firmware upgrades**, **[U] System XMODEM upgrade**, and **[T] System TFTP upgrade** options on the Firmware Configuration Menu.

Downloading the Switch Firmware from a TFTP Server

To download the switch firmware from a TFTP server, follow these steps:

Step 1 Download the switch firmware image from Cisco Connection Online (CCO) to your TFTP server.

Step 2 From the Firmware Configuration Menu, select the **[S] TFTP Server name or IP address** option**,** and enter the IP address or name of the TFTP server where the upgrade file is located.

Step 3 Select the **[F] Filename for firmware upgrades** option from the menu**,** and enter the name of the upgrade file.

Step 4 Select the **[T] System TFTP upgrade** option from the menu to initiate the TFTP download.

The switch contacts the server to download the upgrade file to the switch.

Step 5 Verify the upgrade is in progress. The System Information section of the Firmware Upgrade Menu will read `in-progress`.

After the download, the switch does not respond to commands for approximately 1 minute. When the download is complete, the switch resets and begins using the new firmware.

Note You can also initiate a TFTP download by setting the upgradeTFTPInitiate MIB object.

Downloading the Switch Firmware from a TFTP Client

To download the switch firmware from a TFTP client, follow these steps:

Step 1 Download the switch firmware image from CCO to the TFTP client.

Step 2 From the TFTP client workstation, establish a TFTP session with the IP address assigned to the switch.

Step 3 Ensure that the TFTP client is in binary transfer mode.

Step 4 Enable **[A] Accept upgrade transfer from other hosts**.

Step 5 Use the appropriate command (such as, **put** *upgrade_filename*) to download the upgrade file from the client workstation to the switch.

Step 6 Verify the upgrade is in progress. The System Information section of the Firmware Configuration Menu will read `in-progress`.

After the download, the switch does not respond to commands for approximately 1 minute. When the download is complete, the switch resets and begins using the new firmware.

Downloading Switch Firmware with the XMODEM Protocol

This procedure is largely dependent on the modem software you are using. ProComm and HyperTerminal are examples of applications that use the XMODEM protocol.

To download the switch firmware via XMODEM, follow these steps:

Step 1 Download the switch firmware image from CCO to the XMODEM host.

Step 2 Enter the baud rate (2400, 9600, 19200, 38400, or 57600) of the console port on the switch and on the management station. You can set the baud rate for the console port from the RS-232 Port Configuration Menu.

Step 3 From the Firmware Configuration Menu, select **U System XMODEM upgrade** to use the XMODEM protocol to download the upgrade file.

Step 4 At the prompt, select **Y** to start the download.

After the download, the switch does not respond to commands for approximately 1 minute. When the download is complete, the switch resets and begins using the new firmware.

Downloading Module Firmware from a TFTP Server

This procedure is for upgrading the FDDI and ATM module firmware, *not* the switch firmware. The options you use in this procedure depend on whether you have an FDDI module or an ATM module in the expansion slot.

To download the module firmware from a TFTP server, follow these steps:

Step 1 Download the module firmware image from CCO to your TFTP server.

Step 2 From the Firmware Configuration Menu, select **[S] TFTP Server name or IP address**, and enter the IP address or name of the TFTP server where the FDDI or ATM upgrade file is located.

Step 3 Select the **[F] Filename for firmware upgrades** option from the menu, and enter the name of the upgrade file.

Step 4 Select the **[3] FDDI or ATM (A) TFTP upgrade** option (for slot A) or the **[4] FDDI or ATM (B) TFTP upgrade** option (for slot B) to initiate the TFTP download.

The switch contacts the server to download the upgrade file to the switch.

Step 5 Verify the upgrade is in progress. The System Information section of the Firmware Configuration Menu will read `in-progress`.

When the download is complete, the FDDI or ATM module resets and begins using the new firmware.

Upgrading Module Firmware from a TFTP Client

This procedure is for upgrading the FDDI and ATM module firmware, *not* the switch firmware. The options you use in this procedure depend on whether you have an FDDI module or an ATM module in the expansion slot.

To download the module firmware from a TFTP client, follow these steps:

Caution If you interrupt the transfer by turning the switch off and on or by removing and reinserting the module, the firmware could get corrupted. For recovery procedures, refer to the installation and configuration guide for your switch.

Follow these steps to download the latest module firmware from a TFTP client to your FDDI or ATM module.

Step 1 Download the module firmware image from CCO into an appropriate directory on your TFTP client.

Step 2 From the client management station, establish a TFTP session with the IP address of the switch. Make sure the client station is in binary transfer mode.

Step 3 Enter the **[A] Accept upgrade transfer from other hosts** option from the menu, and enable this option.

Step 4 Use the appropriate command (such as, **put** *upgrade_filename*) to download the upgrade file from the client workstation to the switch.

Step 5 Verify the upgrade is in progress. The System Information section of the Firmware Configuration Menu will read `in-progress`.

Note When you download the firmware to Flash memory, the module does not respond to commands for approximately 1 minute. This is normal and correct. Do not turn off the switch until after the FDDI or ATM module resets and begins using the new firmware.

After existing firmware validates the file, the new image is transferred into Flash memory, the module resets, and the new firmware begins executing. If the upgrade file is invalid, the temporary image is discarded, the existing firmware continues to execute, and the firmware upgrade ends.

Upgrading Module Firmware with the XMODEM Protocol

This procedure is largely dependent on the modem software you are using. ProComm, HyperTerminal, tip, or minicom are examples of applications that use the XMODEM protocol.

Caution If you interrupt the transfer by turning the switch off and on or by removing and reinserting the module, the firmware could get corrupted. For recovery procedures, refer to the installation and configuration guide for your switch.

Follow these steps to download the latest firmware by using XMODEM.

Step 1 Download the module firmware image from CCO into an appropriate directory on your XMODEM host.

Step 2 Enter the baud rate (2400, 9600, 19200, 38400, or 57600) of the console port on the switch and the management station. You can set the baud rate for the console port from the RS-232 Port Configuration Menu.

Step 3 Enter the **[1] FDDI or ATM (A) XMODEM upgrade** option (for slot A) or the **[2] FDDI or ATM (B) XMODEM upgrade** option (for slot B).

Step 4 At the prompt, select **Y** to start the download.

Step 5 Verify the upgrade is in progress. The System Information section of the Firmware Configuration Menu will read `in-progress`.

Note When you download the firmware to Flash memory, the module does not respond to commands for approximately 1 minute. This is normal and correct. Do not turn off the switch until after the FDDI or ATM module resets and begins using the new firmware.

After existing firmware validates the file, the new image is transferred into Flash memory, the module resets, and the new firmware begins executing. If the upgrade file is invalid, the temporary image is discarded, the existing firmware continues to execute, and the firmware upgrade ends.