

Updating the Catalyst 3900 Software

As enhancements are made to the Catalyst 3900, you may need to update the software, or microcode, that is contained in the Catalyst 3900. This chapter describes how to upgrade the Catalyst 3900 flash electrically erasable programmable read-only memory (EEPROM).



Caution After downloading the new software you must reset the switch. The Catalyst 3900 is not operational while it is resetting. Before starting this procedure, make sure the network will not be effected.

The download procedures depend on the download method you choose. This chapter provides information about the following:

- TFTP Considerations
- Downloading New Code via TFTP
- Storing and Retrieving Configuration Parameters via TFTP
- Downloading via a Serial Link
- Downloading via the System Request Menu

Note Before you can use your ATM module, you must download the ATM firmware to your switch or stack of switches. You can download the firmware using TFTP or a serial link.

TFTP Considerations

When using TFTP to update the Catalyst 3900 software, remember the following:

- Do not configure multiple TFTP servers to download code updates using TFTP to a single Catalyst 3900 (or to multiple VLANs).
- If the download is interrupted or corrupted, you must download a new image using the serial port download. For more information on updating software via the serial link, refer to the “Downloading via a Serial Link” section.
- If the network broadcast traffic is 200 packets per second or more, the TFTP request might not be initiated by the Catalyst 3900. You must reset the Catalyst 3900 and download a new image using the serial port download. For more information on updating software via the serial link, refer to the “Downloading via a Serial Link” section.

Downloading New Code via TFTP

You can use TFTP to update the main image and the ATM firmware of the Catalyst 3900. To perform a software download via TFTP, the Catalyst 3900 must have access to a TFTP server. Perform the following steps to download the software:

Step 1 Copy the binary file `cat3900-main-gz.x-y-z.bin` from CCO to the TFTP server and prepare the TFTP server.

Note If you are copying the file from diskette, the name may differ due to DOS naming limitations.

Step 2 If you have not already done so, start a console session as described in the section “Planning for Configuration and Management.”

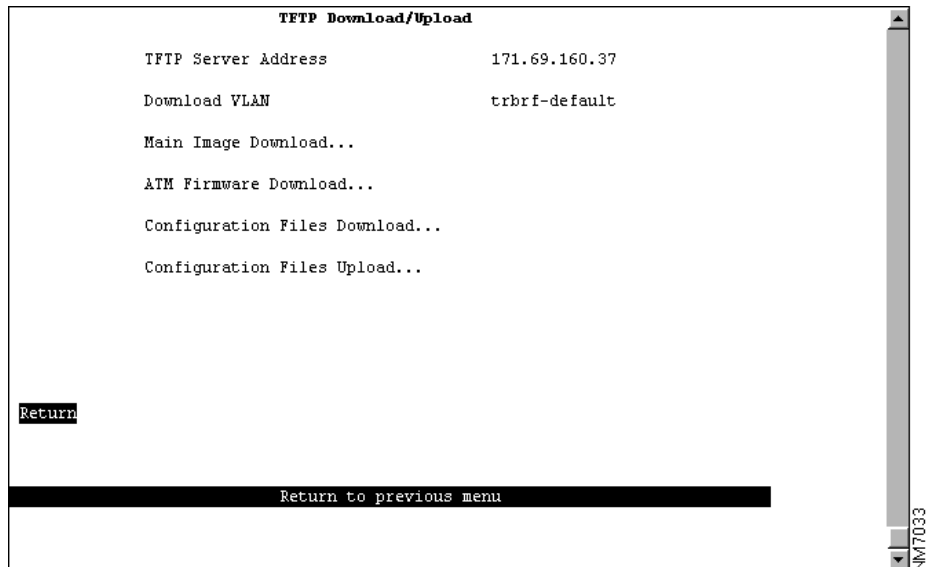
Step 3 Select **Download/Upload** on the Main Menu. The Download/Upload panel (Figure 10-1) is displayed.

Figure 10-1 Download/Upload Panel



Step 4 Select **TFTP Download/Upload**. The TFTP Download/Upload panel (Figure 10-2) is displayed.

Figure 10-2 TFTP Download/Upload Panel



Step 5 Fill in the following fields:

- TFTP Server Address—IP address of the TFTP server.
- Download VLAN—Name of the TrBRF in which the TFTP server resides. The default is trbrf-default.

Step 6 Select **Main Image Download** or **ATM Firmware Download**.

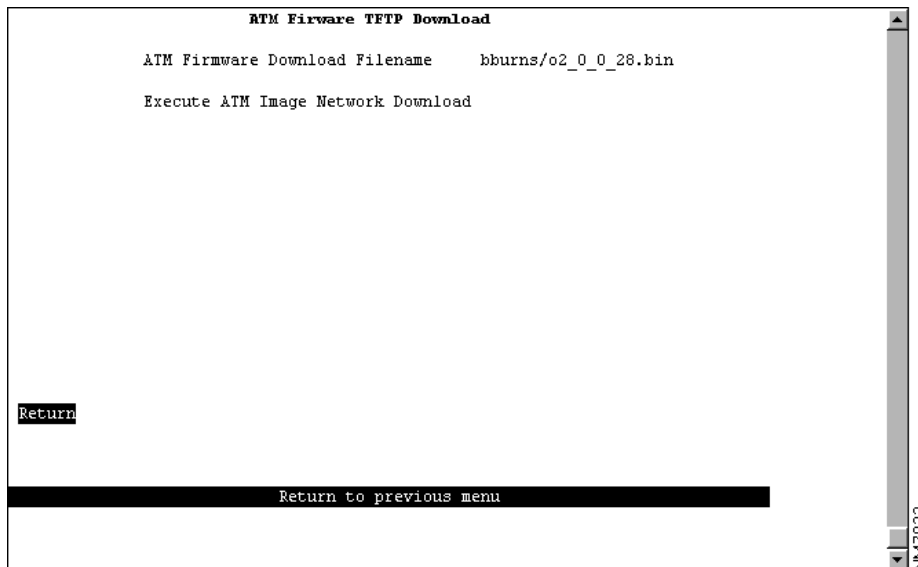
- If you select Main Image Download, the Main Image Download panel (Figure 10-3) is displayed.

Figure 10-3 Main Image Download Panel



- If you select **ATM Firmware Download**, the ATM Firmware Download panel (Figure 10-4) is displayed.

Figure 10-4 ATM Firmware Download Panel



- Step 7** Specify the path and filename as it exists on the TFTP server.
- Step 8** Depending on whether you are downloading a main image or the ATM firmware, do one of the following:
- Select **Execute Main Image Switch Network Download**. Or, if the switch is part of a stack, select **Execute Main Image Stack Network Download**.
 - Select **Execute ATM Image Switch Network Download**. Or, if the switch is part of a stack, select **Execute ATM Image Stack Network Download**.
- Step 9** If the Catalyst 3900 is participating in a stack, you will be prompted to specify whether you want to download the new software to a single switch or to the entire stack.
- Step 10** Enter **Y** or **N** to confirm the download when the following message is displayed:
- ```
Please confirm new code download via network (Y or N):
```

---

**Note** Do not interrupt the download while it is writing to Flash or the image will be corrupted and need to be reloaded. While the Catalyst 3900 is writing to Flash the Mode LED will be blinking.

---

- Step 11** Press **Enter** when you see the message:
- ```
Download complete - reset switch to activate new software.
Press <Enter> to continue.....
```
- Step 12** Reset the Catalyst 3900 to activate the new code by selecting Reset on the Main Menu panel or by pressing the Reset button.

Storing and Retrieving Configuration Parameters via TFTP

You can also use TFTP to store and retrieve the configuration parameters for the Catalyst 3900. To store and retrieve parameters, do the following:

- Step 1** If you have not already done so, start a console session as described in the section “Planning for Configuration and Management.”
- Step 2** Select **Download/Upload** on the Main Menu. The Download/Upload panel (Figure 10-1) is displayed.
- Step 3** Select **TFTP Download/Upload**. The TFTP Download/Upload panel (Figure 10-2) is displayed.
- Step 4** Fill in the following fields:
 - TFTP Server Address—IP address of the TFTP server.
 - Download VLAN—Name of the TrBRF in which the TFTP server resides. The default is trbrf-default.
- Step 5** Select the desired option.

To store the current configuration on the TFTP server, do the following:

- Select **Config Files Upload**. The Configuration Files TFTP Upload panel (Figure 10-5) is displayed.

Figure 10-5 Configuration Files TFTP Upload



- Specify the name that you want to use for storing the configuration information.

Note If the switch is part of a stack, you should back up the configuration of each switch in the stack. The filenames for the configuration backups should be in the format *filename.1, filename.2, filename.3 ... filename.x*. Where *filename.1* is the backup file for the configuration of switch 1 in the stack, *filename.2* is the backup file for the configuration of switch 2 in the stack, and so forth.

- Select **Execute Config File Network Upload**. Or, if the switch is part of a stack, select **Execute Config File Stack Network Upload**.

To retrieve configuration information that has been stored on a TFTP server:

- Select **Config Files Download**. The Configuration Files TFTP Download panel (Figure 10-6) is displayed.

Figure 10-6 Configuration Files TFTP Download Panel



- Specify the name that was used in storing the configuration information.
- Select **Execute Config File Network Download**. Or, if the switch is part of a stack, select **Execute Config File Stack Network Download**.

Step 6 Confirm the download or upload.

Note Do not interrupt the download or upload while it is writing to Flash or the information will be corrupted. While the Catalyst 3900 is writing to Flash the Mode LED will be blinking.

Step 7 Press **Enter** when you see the message:

```
Download complete - reset switch to activate new software.
Press <Enter> to continue.....
```

Step 8 Reset the Catalyst 3900 to activate the new code by selecting the Reset option on the Main Menu panel or by pressing the Reset button.

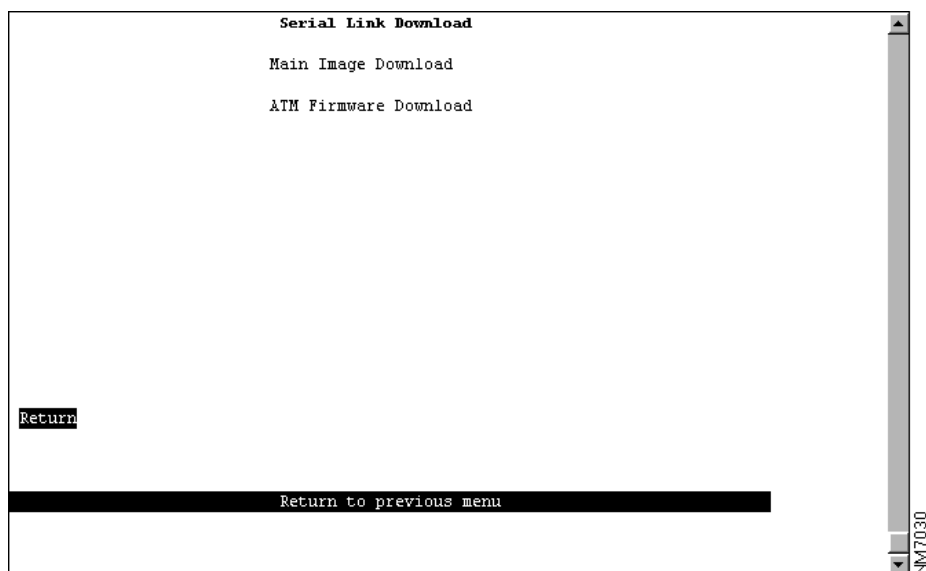
Downloading via a Serial Link

You can use the serial link to update the main image or the ATM firmware of the Catalyst 3900. To perform a software upgrade through the serial port, your terminal emulator must support the Xmodem protocol.

To download software through the serial port, do the following:

- Step 1** Insert the upgrade disk in your terminal drive.
- Step 2** If you have not already done so, start a console session as described in the “Planning for Configuration and Management” section.
- Step 3** Select **Download/Upload** on the Main Menu. The Download/Upload panel (Figure 10-1) is displayed.
- Step 4** Select **Serial Link Download**. The Serial Link Download panel (Figure 10-7) is displayed.

Figure 10-7 Serial Link Download Panel



- Step 5** Select **Main Image Download** or **ATM Firmware Download**.
- Step 6** Confirm the download. The download takes approximately 12 minutes at 9600 baud.
When the download is complete, the following messages appear:

```
Console: Beginning Xmodem download of main image
Console: Waiting for binary file.... Done
Console: Preparing Flash...Done.
Console: Saving Main Image into Flash...Done
Please confirm switch reset (Y or N):
```
- Step 7** Enter **Y** to confirm the reset. The procedure is complete.

Downloading via the System Request Menu

This section provides information on initiating the download procedure with the System Request Menu.

Note This function should be used only with the direction of Cisco service personnel.

Follow these steps to begin a software upgrade:

- Step 1** If you have not already done so, start a console session as described in the “Planning for Configuration and Management” chapter and advance to the Copyright panel.
- Step 2** Press the System Request button (SYSREQ). The System Request Menu is displayed.
- Step 3** Select your download option from the console.
- Step 4** The following messages appear:
- ```
SYSREQ: Beginning Xmodem download of main (or boot) image
SYSREQ: Waiting for binary file....
```
- Step 5** Use a terminal emulator program on your PC to download the binary file using Xmodem protocol. The download takes approximately 12 minutes at 9600 baud.
- When the download is complete, the following messages appear:
- ```
SYSREQ: Beginning Xmodem download of main image
SYSREQ: Waiting for binary file.... Done
SYSREQ: Preparing Flash....Done.
SYSREQ: Saving Main Image into Flash...Done
SYSREQ: Press any key to return to System Request menu.
```
- Step 6** Once the download is complete, press any key.
- Step 7** On the System Request Menu, select **Reset the system** to reset the Catalyst 3900.