Configuration Guide

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Updating the Secure Router OS Software

Using Various Methods to Update the Secure Router OS Software

This Configuration Guide discusses updating your ProCurve Secure Router (Boot Code and software) using various update methods (GUI, TFTP, XMODEM, FTP, and compact flash), file management procedures (such as copying and erasing files), and the AutoSynch™ feature. For detailed information regarding specific command syntax, refer to the *Secure Router OS Command Line Interface Reference Guide* on your *ProCurve SROS Documentation* CD.

This guide contains the following information necessary for a successful software update:

- *The Update Procedure* on page 2 – Describes the core procedure for updating the Secure Router OS software (regardless of selected method) and outlines the basic procedures for each of the methods.
- *Determining the Software Versions Installed and Running on a Device* on page 14 – Defines the procedure for determining the current software version using the CLI or GUI.
- *Downloading the Latest Software from ProCurve* on page 15 – Explains the procedure for downloading the latest software and Boot Code from the ProCurve Web site.
- *Secure Router OS File Management Tools* on page 16 – Discusses copying files to flash or compact flash (for creating file backups) and erasing files currently on the system (to create space for the new files).
- *Using the AutoSynch^{TM} Feature* on page 20 – Provides an overview of the new AutoSynch™ feature (added in the J.03.01 release) and the associated commands.

Notes

Secure Router OS file names are case sensitive. For example, **J03_01.biz** *and* **j03_01.biz** *are two different files, as are* **SROS.biz** *and* **SROS.BIZ**.

The software versions in this guide are only examples and may not represent your exact version. The file sizes (in bytes) in these examples may be different than your software files.

While updating your software, maintain the current software and a backup of the current configuration in flash or compact flash whenever possible. If you delete the current software before loading a new one, you may encounter problems with the update procedures.

The Update Procedure

The ProCurve Secure Router OS supports Boot Code and software updates through the Command Line Interface (CLI) and software updates using the Graphical User Interface (GUI) with a variety of file transfer methods (such as TFTP, XMODEM, and FTP). Regardless of your update method, the core update procedure stays the same:

1. Check the current software and Boot Code versions.

    There may be an instance where a software update cannot be performed on top of older versions of software or Boot Code. For example, a successful update to the J.03.01 release software first requires an update to the Boot Code. After noting your current software and Boot Code versions, refer to the release notes for your desired software update to check for restrictions.

2. Download the software and Boot Code files from the ProCurve Web site.

3. Back up current software and configuration.

    For easy configuration management, all ProCurve Secure Routers support both the download and upload of software and configuration files to an external device using TFTP, XMODEM, and FTP. In addition, software and configuration files can be copied to the removable compact flash memory and then saved to a computer with a compact flash interface.

4. Verify there is sufficient space in flash (or compact flash) and erase unnecessary files.

5. Upload the new Boot Code and software.

    For easy software management, all ProCurve Secure Routers support both the download and upload of Boot Code and software files to an external device using TFTP, XMODEM, and FTP. In addition, Boot Code and software files can be copied from a computer to a compact flash card to be inserted into the router.

6. Activate the new Boot Code; then activate the new software.

7. Verify the new Boot Code and software versions.

The following procedures outline the steps for updating the Boot Code and software using the various file transfer methods. These procedures do not contain detailed discussions of each command mentioned, but are intended for quick updates by the knowledgeable user. These procedures assume that the user has obtained the desired software and has it loaded on the connected PC (or terminal) and has made the appropriate file backups. Prior knowledge of the selected file transfer type (TFTP, FTP, or XMODEM) is assumed. Subsequent sections in this guide provide more detailed information regarding specific steps in the update procedure.

Updating the Boot ROM

Updates to the Boot ROM are required periodically to enhance and expand the router's operation. The Boot Code can now be updated from within the Command Line Interface (CLI) (beginning with software release J.03.01). The following procedures explains how to install Boot Code to update the Boot ROM in your router.

Updating the Boot ROM (Bootstrap Mode prior to J.03.01)

This procedure assumes that the user has obtained the desired software, has it loaded on the connected PC (or terminal), and has made the appropriate file backups. Prior knowledge of the selected file transfer type (TFTP, FTP, or XMODEM) is assumed.

1. Transfer the Boot Code to the router using the ProCurve Secure Router GUI, TFTP, XModem, FTP, or compact flash. For information on using these methods, see the appropriate sections in this guide.

2. Connect a console to the router and boot the system.
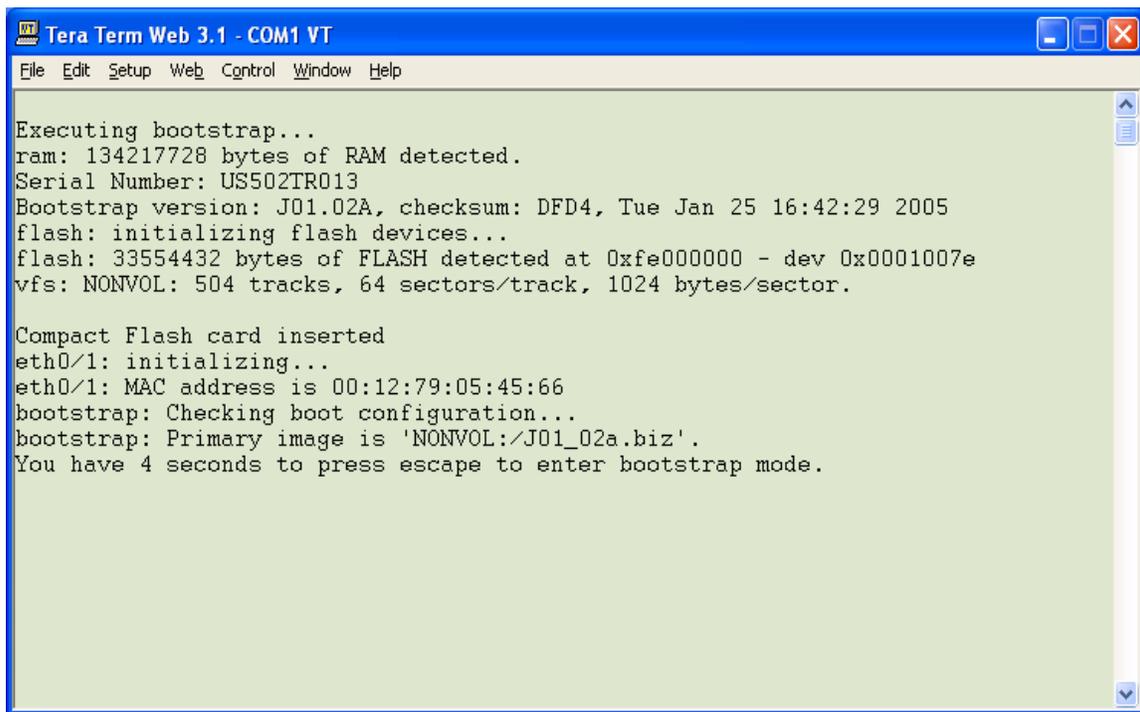
3. Interrupt the boot process by pressing **Escape**.

```
Executing bootstrap...
ram: 134217728 bytes of RAM detected.
Serial Number: US502TR007
Bootstrap version: J03.01, checksum: E77A, Thu Aug 11 16:28:22 2005
flash: initializing flash devices...
flash: 33554432 bytes of FLASH detected at 0xfe000000 - dev 0x0001007e
vfs: NONVOL: 504 tracks, 64 sectors/track, 1024 bytes/sector.

Compact Flash card inserted
eth0/1: initializing...
eth0/1: MAC address is 00:12:79:05:45:5A
```

bootstrap: Checking boot configuration...
bootstrap: Primary image is 'NONVOL:/SROS.biz'.
bootstrap: User escaped to command line interface.
cli: starting user interface

Press '?' for help.
bootstrap#

4. Copy the Boot Code to a special sector in flash named **boot**.

    bootstrap#copy J03_01-boot.biz boot

    Reading 287413 bytes of code, stand by...
    Image is compressed, inflating...................................
    Verifying image
    Erasing boot sector
    Programming boot sector
    Success!!!

    bootstrap#

5. Reload the router and verify that the correct Boot Code (in bold in the following sample output) was
    booted.

    bootstrap#reload

    Executing bootstrap...
    ram: 134217728 bytes of RAM detected.
    Serial Number: US502TR007
    Bootstrap version: **J03.01**, checksum: E77A, Thu Aug 11 16:28:22 2005
    flash: initializing flash devices...
    flash: 33554432 bytes of FLASH detected at 0xfe000000 - dev 0x0001007e
    vfs: NONVOL: 504 tracks, 64 sectors/track, 1024 bytes/sector.

    Compact Flash card inserted
    eth0/1: initializing...
    eth0/1: MAC address is 00:12:79:05:45:5A
    bootstrap: Checking boot configuration...
    bootstrap: Primary image is 'NONVOL:/J03_01.biz'.
    bootstrap: Booting 'NONVOL:/J03_01.biz'
    bootstrap: Reading 4055042 bytes of code, stand by...
    bootstrap: Inflating, stand by...
    ....
    bootstrap: Verifying, stand by...
    bootstrap: Booting, stand by...

    ProCurve Secure Router 7102dl
    SROS Version: J03.01, Checksum 4FBB524E, Thu Aug 11 16:28:22 2005
    Cause of reset: JTAG Reset
    flash: initializing flash devices...
    flash: 33554432 bytes of FLASH detected at 0xfe000000 - dev 0x0001007e
    vfs: NONVOL: 504 tracks, 64 sectors/track, 1024 bytes/sector.
    Port manager: Probing slot 1... ADSL card found.
    Port manager: Created port adsl 1/1
    Port manager: Probing 1/2: nothing found.
    Port manager: Probing slot 2... Nothing found.
    SNMP Agent: Starting: Success!
    TFTP server: Starting service.

FTP server: Starting service on first mounted drive.
cli: starting user interface
Persistence viewer: Restoring from startup-config...
Persistence viewer: ... done.
Copyright (c) 2004-2005, Hewlett-Packard, Co.
Platform: ProCurve Secure Router 7102dl

…..
Session now available
Press RETURN to get started.

ProCurveSR7102dl>show version

ProCurve Secure Router 7102dl
SROS Version: J03.01
  Checksum: 4FBB524E, built on: Thu Aug 11 16:28:22 2005
Boot ROM version J03.01
  Checksum: 9B84, built on: Tue Aug 11 10:48:20 2005
Copyright (c) 2005-2005, Hewlett-Packard, Co.
Platform: ProCurve Secure Router 7102dl
Serial number US502TR007
Flash: 33554432 bytes DRAM: 134217727 bytes

System uptime is 0 days, 0 hours, 1 minutes, 2 seconds

Current system image file is "NONVOL:/J03_01.biz"
Boot system image file is "NONVOL:/J03_01.biz"
Primary system configuration file is "startup-config"
System booted up using configuration file: "startup-config"
ProCurveSR7102dl>

The current Boot ROM version displays in **bold** in the previous example.

6.   Once you have verified that the correct Boot Code was loaded, delete the Boot Code file as it is no longer needed.

ProCurveSR7102dl#erase J03_01-boot.biz

File deleted
ProCurveSR7102dl#

Note   *SROS file management commands (**copy** and **erase**) were changed in the J.03.01 software release. Refer to Secure Router OS File Management Tools on page 16 for details on the new command syntax.*

Updating the Boot ROM (Beginning With Software Release J.03.01)

This procedure assumes that the user has obtained the desired software, has it loaded on the connected PC (or terminal), and has made the appropriate file backups. Prior knowledge of the selected file transfer type (TFTP, FTP, or XMODEM) is assumed.

1. Transfer the Boot Code to the router using the ProCurve Secure Router GUI, TFTP, XModem, FTP, or compact flash. For information on using these methods, see the appropriate sections in this guide.

2. At the Enable mode prompt (ProCurve#), enter **copy cflash J03_01-boot.biz boot** to copy the **J03_01-boot.biz** Boot Code (located in compact flash) to the special sector in flash named **boot**.

    ProCurve#**copy cflash J03_01-boot.biz boot**

    Upgrading boot code is a critical process that cannot be interrupted. If
    something were to happen and the process was not able to be completed, it
    would render your unit inoperable. It is for this reason that during a
    bootcode upgrade, all other system tasks will be halted. This means packets
    will not be routed, and all console sessions will not respond during the
    upgrade process. Once the process finishes, the system will function as it
    did before. This process will take approximately 20 seconds. DO NOT REMOVE
    COMPACT FLASH DURING THIS OPERATION!!
    Do you want to proceed? [yes/no]**y**

    WARNING!! A bootcode upgrade has been initiated. Your session will become
    nonresponsive for the duration of the upgrade (approx. 20 seconds). A message
    will be sent when the upgrade is completed.

    Bootcode upgrade process done. Your session should function normally.

    Reading 318189 bytes of code, stand by...
    Image is compressed, inflating......................................
    Verifying image
    Erasing boot sector
    Programming boot sector
    Success!!!

3. Reload the router and verify that the new Boot Code was booted (see sample output below).

    ProCurve#reload
    Save System Configuration? [y/n]**y**
    startup-config
    Done. Success!
    You are about to reboot the system. Continue? [y/n]**y**

Note   *At this point in the update process your terminal session is closed as the router reloads. You must reconnect to the router to verify the new Boot Code. Enter the **show version** command at the Basic prompt to verify the current Boot ROM version.*

---

4. Once you have verified that the correct Boot Code was loaded, delete the file from memory as it is no longer needed.

    ProCurve#erase J03_01-boot.biz
    File deleted
    ProCurve#

Note   *SROS file management commands (**copy** and **erase**) were changed in the J.03.01 software release. Refer to Secure Router OS File Management Tools on page 16 for details on the new command syntax.*

Updating the Software

For easy software management, all ProCurve Secure Routers support Boot Code and software updates from the CLI using TFTP, XMODEM, or FTP or from the GUI. Refer to one of the following sections for instructions on updating the software using a specific method:

Using the GUI

The following procedure outlines updating the Secure Router OS software using the GUI. Refer to Figure 1 on page 8 and Figure 2 on page 8 for a visual representation of these steps.

Note	*To open a GUI session to the router, enter the router IP address into your web browser. Refer to the Quick Start Guide provided with your product for more details on this procedure.*

1. Select **Firmware** (under the **Utilities** heading). Scroll down to the **Upload Firmware** section to upload the desired software from your PC or terminal.

2. Use the **Browse** button to select the software located on your PC or terminal.

3. Select the destination for the software (as flash or cflash).

4. Press **Upload** to begin the file upload.

5. Scroll up to the **Set Primary/Backup Firmware** section and use the **Browse** buttons to select the primary and backup software from the listed files. (All files with a .biz or .BIZ extension located in flash or compact flash are listed in the drop down menu.)

6. Click the **Apply** button to activate the new software.

7. Select the **System Summary** link (under the main **System** listing in the right menu bar) and verify that the new software version is listed.
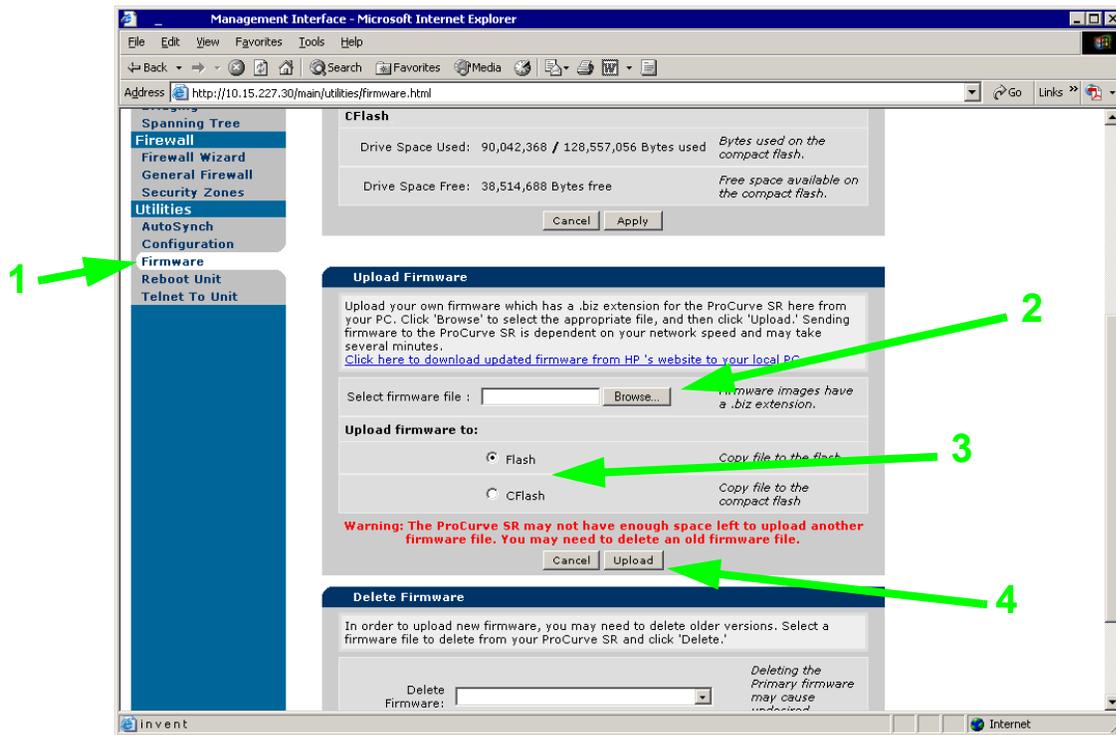
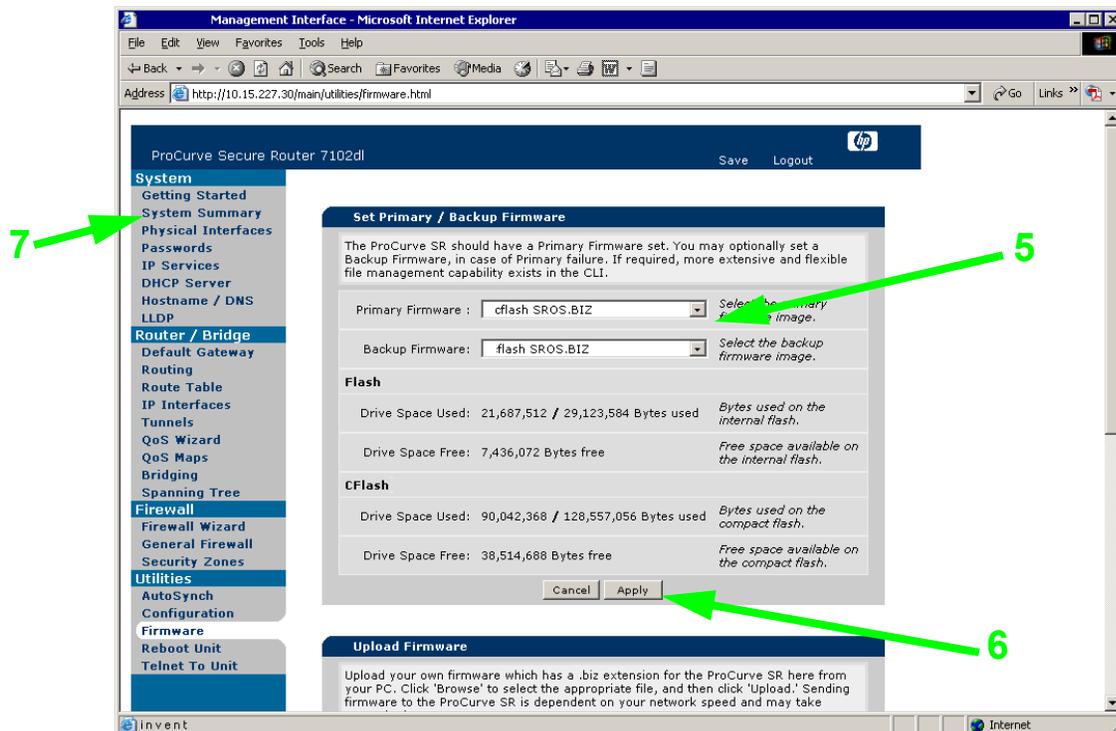**Figure 1. Uploading the Software Using the GUI**

Figure 2. Applying the New Software Using the GUI

Using TFTP

The following procedure outlines updating the Secure Router OS software using TFTP. A complete listing of the commands used is found in the example at the end of the following procedure.

1. Enter **copy tftp flash** from the enable command prompt to begin uploading the software from the TFTP server to flash memory, or enter **copy tftp cflash** to upload the software to compact flash.

2. Follow the prompts and enter the appropriate information:
    Address of remote host? (Enter the IP address of the TFTP server.)
    Source filename? (Enter the filename of the software located on the TFTP server.)
    Destination filename? (Enter the filename to use when creating the file in router memory.)

Note   *The default boot path was changed to **cflash SROS.BIZ flash SROS.BIZ** in software release J.02.02A. For systems with software prior to J.02.02A, set the boot path (see Step 3). Verify the change using the **show version** command.*

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3. When the transfer is complete, activate the global configuration mode (using the **config terminal** command) and enter **boot system cflash SROS.BIZ flash SROS.BIZ** to indicate that the primary software is located in compact flash and the backup software is located on internal flash memory.

4. Exit from the global configuration mode.

5. Perform a system reload by entering **reload** from the enable prompt.

6. After the router reboots, log back in and enter the **show version** command to verify that the software was loaded.

TFTP Example

```
ProCurve#copy tftp flash
Address of remote host? 192.22.61.17
Source filename? SROS.BIZ
Destination filename?SROS.BIZ

Initiating TFTP transfer...
Sent 4692461 bytes.
Transfer Complete!

ProCurve#config terminal
ProCurve(config)#boot system cflash SROS.BIZ flash SROS.BIZ
Primary image: CFLASH:/SROS.BIZ
Backup image: NONVOL:/SROS.BIZ

ProCurve#reload
Save system configuration? [ y/n ]y
startup-config
Done. Success!
You are about to reboot the system. Continue? [ y/n ]y
```

Note   *At this point in the update process your terminal session is closed as the router reloads. You must reconnect to the router to verify the new Boot Code. Enter the **show version** command at the Basic prompt to verify the current software version.*

```
ProCurve>show version
ProCurve Secure Router 7102dl
SROS Version: J03.01
Checksum: 5C8D29BE, built on: Mon Jul 25 16:14:46 2005
Boot ROM version J03.01
Checksum: 49C7, built on: Mon Jul 25 16:15:52 2005
Copyright (c) 2005-2005, Hewlett-Packard, Co.
Platform: ProCurve Secure Router 7102dl
Serial number US449TR019
Flash: 33554432 bytes  DRAM: 134217727 bytes
System uptime is 5 days, 13 hours, 20 minutes, 50 seconds
Current system image:        "CFLASH:/SROS.BIZ"
Current configuration-file:   "CFLASH:/startup-config"
Configured system image path:
Primary:               "CFLASH:/SROS.BIZ"
Backup:                "NONVOL:/SROS.BIZ"
Configured configuration-file path:
Primary:               "CFLASH:/startup-config"
Backup:                "NONVOL:/startup-config"
ProCurve>
```

Using XMODEM

The following procedure outlines updating the Secure Router OS software using XMODEM. A complete listing of the commands used is found in the example at the end of the following procedure.

Note   *Setting the **Console** interface connection speed to 115200 (using the **speed** command) will speed up the XMODEM file transfer.*

1. Enter **copy xmodem flash** from the enable command prompt to begin uploading the software from the PC or terminal to flash memory, or enter **copy xmodem cflash** to upload to compact flash.

2. Follow the prompts and enter the appropriate information:
    Destination filename? (Enter the filename to use when creating the file in router flash memory.)

3. The router displays a status message indicating that you may now send the file using your terminal emulation software.

Note   *The default boot path was changed to **cflash SROS.BIZ flash SROS.BIZ** in software release J.02.02A. For systems with software prior to J.02.02A, set the boot path (see Step 3). Verify the change using the **show version** command.*

4. When the transfer is complete, activate the global configuration mode (using the **config terminal** command) and enter **boot system cflash SROS.BIZ flash SROS.BIZ** to indicate that the primary software is located in compact flash and the backup software is located on internal flash memory.

5. Exit from the global configuration mode.

6. Perform a system reload by entering **reload** from the enable prompt.

7. After the router reboots, log back in and enter the **show version** command to verify that the software was loaded.

XMODEM Example

ProCurve#copy xmodem flash
Destination filename?SROS.biz

Begin the Xmodem transfer now...
Press CTRL+X twice to cancel
CCCCCC
Received 4692461 bytes.
Transfer Complete!

ProCurve#config terminal
ProCurve#boot system cflash SROS.BIZ flash SROS.BIZ
Primary image: CFLASH:/SROS.BIZ
Backup image: NONVOL:/SROS.BIZ

ProCurve#reload
Save system configuration? [y/n]**y**
startup-config
Done. Success!
You are about to reboot the system. Continue? [y/n]**y**

Note   *At this point in the update process your terminal session is closed as the router reloads. You must reconnect to the router to verify the new Boot Code. Enter the **show version** command at the Basic prompt to verify the current software version.*

ProCurve>show version
ProCurve Secure Router 7102dl
SROS Version: J03.01
Checksum: 5C8D29BE, built on: Thu Aug 11 16:14:46 2005
Boot ROM version J03.01
Checksum: 49C7, built on: Thu Aug 11 16:15:52 2005
Copyright (c) 2005-2005, Hewlett-Packard, Co.
Platform: ProCurve Secure Router 7102dl
Serial number US449TR019
Flash: 33554432 bytes DRAM: 134217727 bytes
System uptime is 5 days, 13 hours, 20 minutes, 50 seconds
Current system image: "CFLASH:/SROS.BIZ"
Current configuration-file: "CFLASH:/startup-config"
Configured system image path:
Primary: "CFLASH:/SROS.BIZ"
Backup: "NONVOL:/SROS.BIZ"
Configured configuration-file path:
Primary: "CFLASH:/startup-config"
Backup: "NONVOL:/startup-config"
ProCurve>

Using FTP

ProCurve Secure Router products with software J02.xx or greater have a built-in FTP server. In order to transfer files from a computer to the ProCurve Secure Router unit, you will need to install FTP software on the computer and make sure the computer is on a LAN with the router. The following procedure outlines updating the Secure Router OS software using the DOS FTP Utility. A complete listing of the commands used is found in the example at the end of the following procedure.

1. Before beginning the actual software update, configure the router for FTP transfers. Enter **ip ftp agent** from the global configuration prompt.

2. Enter **username hp_user password pass4me** to define a username (**hp_user**) and password (**pass4me**) for FTP authentication.

3. Open a Command Prompt window on your PC. Type **ftp** to display the **ftp>** prompt.

4. Type **open 10.15.200.17** at the **ftp>** prompt to open a session to the router. (Replace **10.15.200.17** with the configured IP address of your router.)

5. Follow the prompts to enter the username and password created in Step 2.

6. Type **binary** at the **ftp>** prompt to indicate a binary file transfer. **Type set to I** displays.

7. Enter **send c:\software\SROS.BIZ** to begin the file transfer to flash. (Replace **c:\software\SROS.BIZ** with the full path filename of the file to upload.)

    When the file upload is successful, **200 PORT command successful** displays.

8. Optional. Enter **dir** at the **ftp>** prompt to display a list of all files contained in flash and verify that the new file is listed.

9. Enter **close** (at the **ftp>** prompt) to exit the FTP session.

Note *The default boot path was changed to* **cflash SROS.BIZ flash SROS.BIZ** *in software release J.02.02A. For systems with software prior to J.02.02A, set the boot path (see Step 3). Verify the change using the* **show version** *command.*

---

10. When the transfer is complete, activate the global configuration mode (using the **config terminal** command) and enter **boot system cflash SROS.BIZ flash SROS.BIZ** where the primary software is located in compact flash and the backup software is located on internal flash memory.

11. Exit from the global configuration mode.

12. Perform a system reload by entering **reload** from the enable prompt.

13. After the router reboots, log back in and enter the **show version** command to verify that the software was loaded.

FTP Example

```
ProCurve#config terminal
ProCurve(config)#ip ftp agent
ProCurve(config)#username hp_user password pass4me
ProCurve(config)#exit
```

Appropriate commands must be issued to preserve configuration.

*************************************DOS FTP Utility Commands **

c:\ftp
ftp>open 10.15.200.17
Connected to 10.15.200.17
220 FTP Server
User (10.15.200.17:(none)):hp_user
331 Password required for hp_user.
Password:
230 User hp_user logged in.
ftp>binary
200 Type set to I.
ftp>send c:\software\SROS.BIZ
200 PORT command successful.
150 BINARY data connection for SROS.BIZ (192.30.10.16, 1305).
226 BINARY transfer complete.
ftp: 4676697 bytes sent in 1.01 seconds 3458000.00Kbytes/sec.
ftp>close

**************************************Return to Router CLI ***

ProCurve#config terminal
ProCurve#boot system cflash SROS.BIZ flash SROS.BIZ
Primary image: CFLASH:/SROS.BIZ
Backup image: NONVOL:/SROS.BIZ

ProCurve#reload
Save system configuration? [y/n]**y**
startup-config
Done. Success!
You are about to reboot the system. Continue? [y/n]**y**

ProCurve>show version
ProCurve Secure Router 7102dl
SROS Version: J03.01
Checksum: 5C8D29BE, built on: Thu Aug 11 16:14:46 2005
Boot ROM version J03.01
Checksum: 49C7, built on: Thu Aug 11 16:15:52 2005
Copyright (c) 2005-2005, Hewlett-Packard, Co.
Platform: ProCurve Secure Router 7102dl
Serial number US449TR019
Flash: 33554432 bytes DRAM: 134217727 bytes
System uptime is 5 days, 13 hours, 20 minutes, 50 seconds
Current system image: "CFLASH:/SROS.BIZ"
Current configuration-file: "CFLASH:/startup-config"
Configured system image path:
Primary: "CFLASH:/SROS.BIZ"
Backup: "NONVOL:/SROS.BIZ"
Configured configuration-file path:
Primary: "CFLASH:/startup-config"
Backup: "NONVOL:/startup-config"
ProCurve>

Determining the Software Versions Installed and Running on a Device

Software version information is available from the ProCurve Secure Router using the GUI or the CLI (via Telnet or VT100). Boot Code version information is only available through the CLI. The processes below explain both methods for determining software versions.

Using the GUI

Note	*To open a GUI session to the router, enter the router IP address into your web browser. Refer to the Quick Start Guide provided with your product for more details on this procedure.*

Determining the Current Software Version

1. The initial page of the GUI (**System Summary**) contains the current software version information.

Determining All Software Files (.biz or .BIZ) Installed in Flash or Compact Flash Memory

1. Click on the **Firmware** link (under the **Utilities** heading).
2. Scroll down to the **Delete Firmware** section of the page.
3. Click on the drop down list to display all .biz and .BIZ files currently installed in flash and compact flash memory. The current software file is indicated with (PRIMARY) beside the filename.

Using the CLI

Determining the Current Software Version

To find out what software you are currently using, at either the Basic (ProCurve>) or
Enable (ProCurve#) command prompt enter the following command:

```
ProCurve#show version
ProCurve Secure Router 7102dl
SROS Version: J03.01
  Checksum: 5C8D29BE, built on: Thu Aug 11 16:14:46 2005
Boot ROM version J03.01
  Checksum: 49C7, built on: Thu Aug 11 16:15:52 2005
Copyright (c) 2005-2005, Hewlett-Packard, Co.
Platform: ProCurve Secure Router 7102dl
Serial number US449TR019
Flash: 33554432 bytes  DRAM: 134217727 bytes

System uptime is 5 days, 9 hours, 57 minutes, 41 seconds

Current system image:        "CFLASH:/SROS.BIZ"
Current configuration-file:    "CFLASH:/startup-config"
Configured system image path:
Primary:                "CFLASH:/SROS.BIZ"
Backup:                "CFLASH:/SROS.BIZ"
Configured configuration-file path:
Primary:                "CFLASH:/startup-config"
Backup:                 "NONVOL:/startup-config"
```

The **show version** command in the previous example displays the current software and Boot Code versions (in **bold**) and the location and filenames of the current software and startup configuration. In the previous example, the router boots using the **startup-config** configuration file and **SROS.BIZ** software located in compact flash.

Note	*As of the J.02.02A software release, all routers are shipped with two copies of the current software in flash memory. One copy is named using the software version (such as J02_02A.biz), and the other is named SROS.BIZ. This change was implemented for the new AutoSynch*^{TM} *feature (which uses the SROS.BIZ file). Refer to Using the AutoSynch*^{TM} *Feature on page 20 for more information on this addition. To determine the version of any software file (.biz or .BIZ extension) located in flash (or compact flash) memory, use the following commands at the Enable prompt:*
	ProCurve#show version flash SROS.BIZ Version: J03.01
	ProCurve#show version cflash SROS.BIZ Version: J03.01
	These new commands are compatible with all previously released software, but will not return a version value for Boot Code.

Determining All Software Files (.biz or .BIZ) Installed in Flash or Compact Flash Memory

Enter the **show flash** or **show cflash** commands to display a list of all files installed in the specified memory location. Software files will have a .biz or .BIZ extension.

```
ProCurve#show cflash
4326165 J02_02A.biz
4702896 J03_01.biz
4702896 SROS.BIZ
3770 startup-config
3770 startup-config.bak
13739497 bytes used, 497695255 available, 511434752 total

ProCurve#
```

Downloading the Latest Software from ProCurve

To download the latest software for your router, please visit the ProCurve Web site at http:\\www.procurve.com. Select the **>>Software updates** link (from the left menu bar) and choose your product from the list. For your convenience, the GUI provides a direct link to the ProCurve software download page (see Figure 3 on page 16).

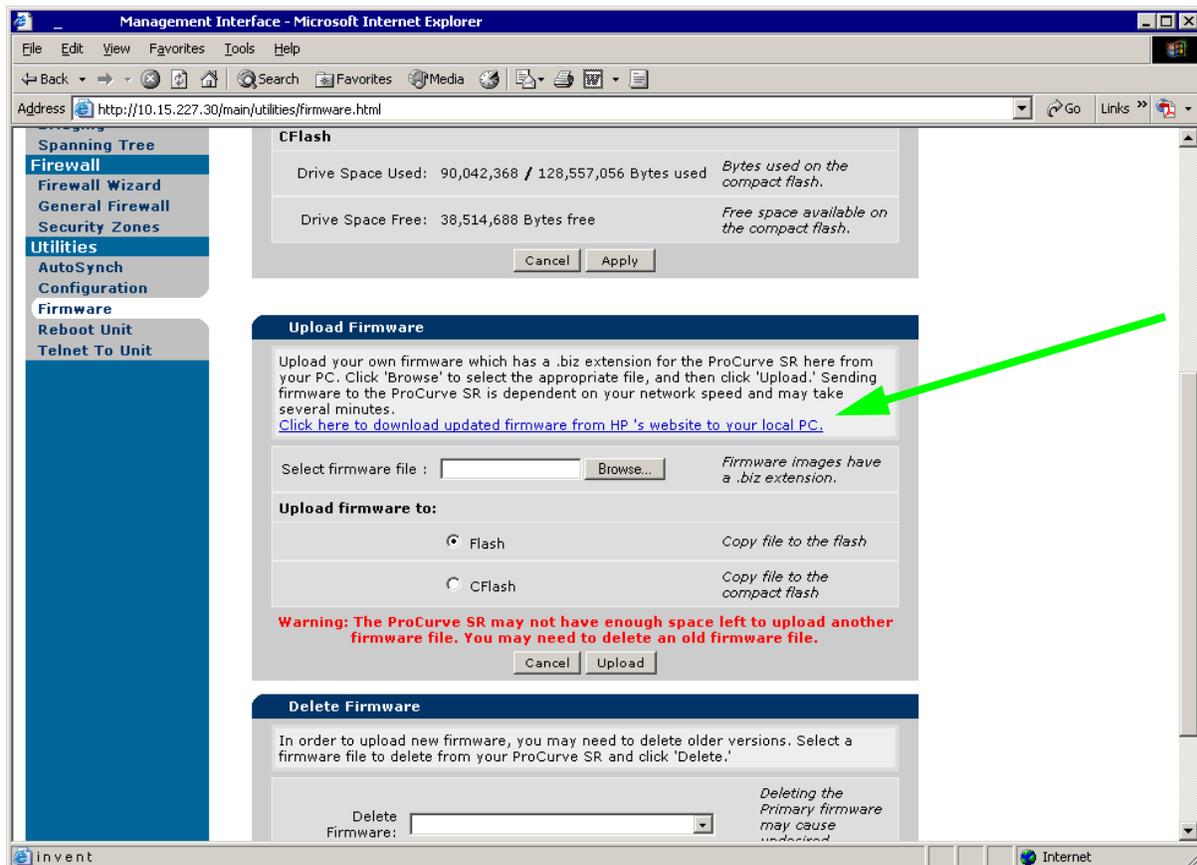| **Note**	*Software updates on the ProCurve Web site are bundled in .zip files that contain the software and other pertinent documentation for the release (release notes, etc.). Download the software update file to your PC and use a zip extractor (such as WinZip) to unzip the files.*

Figure 3. Firmware Upload GUI Page

Secure Router OS File Management Tools

Using the CLI

The following commands are available for copying and deleting files to/from flash and compact flash memory. Refer to the *Secure Router OS Command Line Interface Reference Guide* (on your *ProCurve Secure Router OS Documentation* CD) for more details on command syntax and usage.

copy [cflash | flash] <filename> <destination> <filename>

<filename>   Specifies the filename of the file to copy.

<destination>   Specifies the destination for the copied file. For example,
                        specifying *cflash* saves a copy of the specified file to
                        compact flash. Specifying *flash* saves a coy of the specified file
                        to flash memory. Specifying *boot* saves a copy of the specified file to
                        the Boot ROM.

<filename>   Specifies the filename for the copy of the specified file. This filename entry
                              is not valid for copies to the Boot ROM. Files copied to the Boot ROM
                              cannot be renamed during the copy process.

Use the **copy cflash** and **copy flash** commands to create backups of files currently located in flash or compact flash memory. This command can be used to create backup configuration and software files prior to performing a software update. For example, enter **copy cflash SROS.BIZ cflash J03_01.biz** to create a backup of the current software file (SROS.BIZ) and save the backup file (J03_01.biz) to compact flash memory. This command is also used to copy new Boot Code to the Boot ROM (**copy flash J3.01-boot.biz boot**).

Notes   *Updating the Secure Router OS Boot Code while the operating system is running is a new feature in J.03.01. In previous versions of the Secure Router OS, updating the Boot Code was only available from within bootstrap mode. Refer to Updating the Boot ROM on page 3 for more details on updating the Boot Code.*

As of the J.03.01 software release, all routers are shipped with two copies of the current software in flash memory. One copy is named using the software version (such as J03_01.biz), and the other is named SROS.BIZ. This change was implemented for the new AutoSynch™ feature (which uses the SROS.BIZ file). Refer to Using the AutoSynch™ Feature on page 20 for more information on this addition. To determine the version of any software file (.biz or .BIZ extension) located in flash (or compact flash) memory, use the following commands at the Enable prompt:

ProCurve#show version flash SROS.BIZ
Version: J03.01

ProCurve#show version cflash SROS.BIZ
Version: J03.01

These new commands are compatible with all previously released software, but will not return a version value for Boot Code.

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copy [cflash | flash] [tftp | xmodem]

[cflash | flash]   Specifies the current location of the file to copy.

[tftp | xmodem]   Specifies the destination for the copied file as either an external TFTP
                          server (tftp) or a connected terminal (xmodem).

Use the listed copy commands to create copies of files currently located in flash or compact flash memory and store them to an external TFTP server (TFTP) or connected terminal (XMODEM). This command can be used to create off-system backup configuration and software files prior to performing a software update.

erase [SROS.BIZ | startup-config]

SROS.BIZ	Erases the SROS.BIZ file stored in flash memory. The SROS.BIZ file is the current software. If the AutoSynch™ feature is enabled (using the **autosynch-mode** command), the SROS.BIZ file is removed from both flash and compact flash.
startup-config	Erases the startup configuration file stored in flash memory. If the AutoSynch™ feature is enabled (using the **autosynch-mode** command), the startup-config file is removed from both flash and compact flash.

Use the **erase** command to erase the software and configuration file currently located in flash or compact flash memory. This command can be used to create space on the system before uploading the new software and startup configuration file.

Note	*If you delete the current software files before loading a new one, you may encounter problems with the update procedure. Upload the new software files to the compact flash card to avoid this situation.*

erase [cflash | flash] <filename>

**[cflash	flash]**	Specifies the current location of the file to erase.
<filename>	Specifies the filename of the file to erase.

Use the **erase cflash** and **erase flash** commands to erase any unnecessary files currently located in flash or compact flash memory. This command can be used to create space on the system before uploading the new software and startup configuration file.

Note	*If you delete the current software file before loading a new one, you may encounter problems with the update procedure. Utilize the file space available through the compact flash card to avoid this situation.*

Using the GUI

The ProCurve Secure Router OS currently supports erasing software files (.biz or .BIZ) from within the GUI. (Other files must be deleted through the CLI.) The following procedure explains erasing software files using the GUI.

Note	*To open a GUI session to the router, enter the router IP address into your web browser. Refer to the Quick Start Guide provided with your product for more details on this procedure.*

1. Select **Firmware** (under the **Utilities** heading). Scroll down to the **Delete Firmware** section to delete software files from flash or compact flash memory (see Figure 4 on page 19).

2. Click on the **Delete Firmware** drop down menu to display a list of all software files (.biz and .BIZ) stored in flash and compact flash memory.

3. Select the software file to delete from the drop down list; then click the **Delete** button. A confirmation dialog displays. Click **OK** to continue the file deletion. A message appears at the bottom of the GUI (in green) to confirm the file was successfully deleted.

Note   *If you delete the current software file before loading a new one (indicated with (PRIMARY) beside the filename in the drop down list), you may encounter problems with the update procedure. Utilize the file space available through the compact flash card to avoid this situation.*
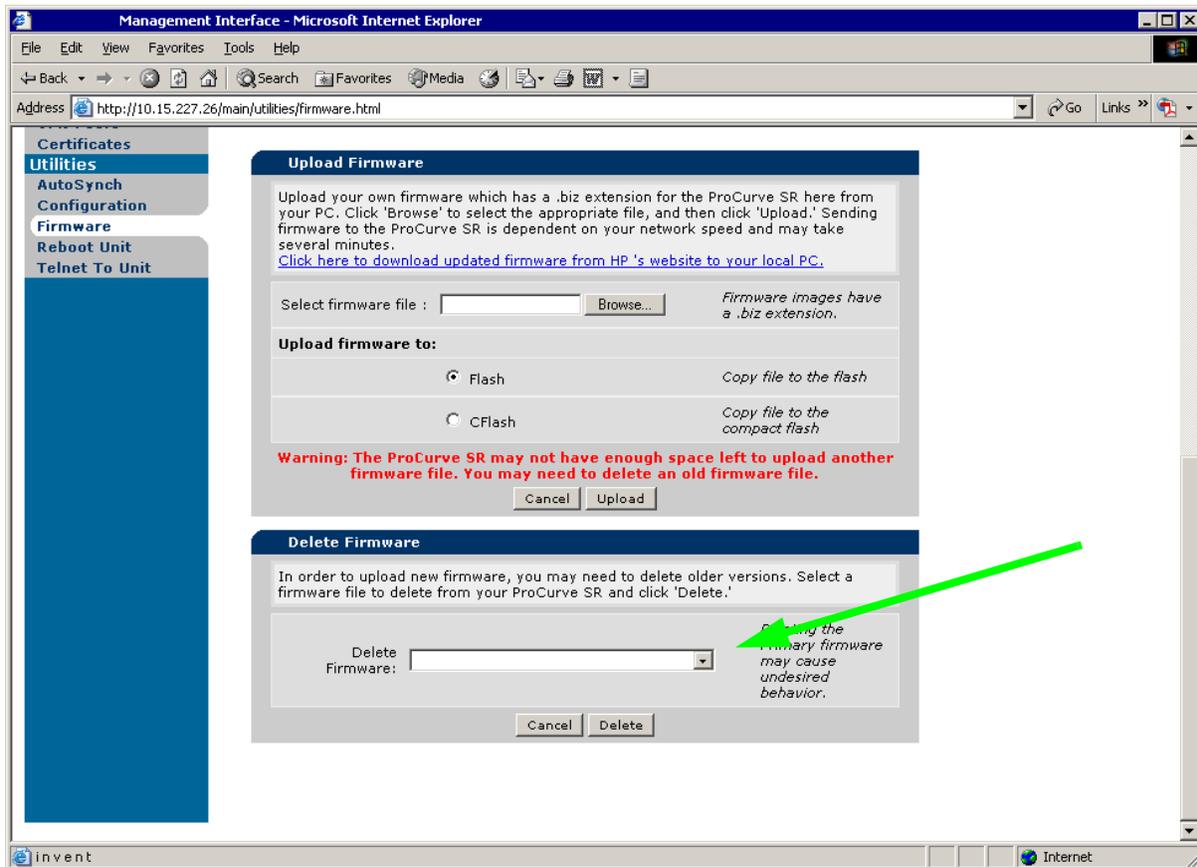

Figure 4. Deleting Software Files Using the GUI

Using the AutoSynch™ Feature

The AutoSynch™ feature configures the system to synchronize the startup-config and SROS.BIZ files located on compact flash with internal flash. When enabled, the system compares the two files in the two locations and replaces the files located in internal flash memory with the ones from the compact flash card (regardless of which set of files is more current). This allows you to maintain the version of operating system, and the configuration for that operating system, at the desired level. To accomplish this, a synchronization check is performed on the system any time there is a change in the startup-config or SROS.BIZ files on the compact flash card.

The AutoSynch™ feature allows for quick installation and router updates by inserting a compact flash card containing the desired software (must be renamed from the desired operating system software, such as J03_01.biz to SROS.BIZ) and startup configuration file (must be named startup-config) into a router with AutoSynch™ enabled. The ProCurve Secure Routers automatically boot from the compact flash (and secondarily from internal flash). After booting, with AutoSynch™ enabled, the router will synchronize the files in internal flash memory with the desired files from compact flash.

By default, the AutoSynch™ feature is disabled. Use the **autosynch-mode** command to enable this feature.

Status commands associated with the AutoSynch™ feature include **show version flash SROS.BIZ** and **show autosynch-status**.

The **show version flash** command opens the specified software file (.biz or .BIZ) and returns the current Secure Router OS version information.

> **ProCurve>enable**
> **ProCurve#show version flash SROS.BIZ**
> Version:J03.01

The **show autosynch-status** command displays the current AutoSynch™ configuration and the statistics for the **SROS.BIZ** and **startup-config** files (if AutoSynch™ is enabled).

> **ProCurve>enable**
> **ProCurve#show autosynch-status**
> AutoSynch: Mode - Enabled
> AutoSynch: SROS.BIZ synched
> AutoSynch: startup-config synched

Caution   *With* AutoSynch™ *enabled, verify that no synchronization is in progress before removing the compact flash card. Use the* **show autosynch-status** *to determine if synchronization is in progress. If the status message displays* **In progress***, do not remove the compact flash card until the synchronization process is complete.*