



# Upgrade the Software Image on a Cisco Router

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## Upgrade the Software Image on a Cisco Router

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### Introduction

This document explains how to upgrade the Cisco IOS® software image on your Cisco router. This document applies to Cisco 830, 1700, 1800, 2600, and 2800 Series Routers.

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If Cisco may contact you for more details or for future feedback opportunities, please enter your contact information:

Full Name:

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### Requirements

To perform the steps described in this document, you need to have these items:

- A PC with an Internet connection
- A [crossover Ethernet cable](#)
- TFTP server software on the PC

**Note:** If your PC does not have TFTP server software installed, refer to [Set Up a TFTP Server](#) for instructions.

- A new Cisco IOS software image provided to you by the SMB Technical Assistance Center (SMB TAC)
- Approximately 1 hour of network downtime

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### Upgrade the Software Image

**Note:** This procedure requires you to erase all files in flash memory when you install the new Cisco IOS software image. You will have to re-install Security Device Manager (SDM) after you install the new Cisco IOS software image.

#### Obtain the Software Image File

Follow these steps to obtain a new software image:

1. If you have a software problem that requires an upgrade, contact the [SMB TAC](#) to obtain the software image you need.
2. Once you receive the software, take note of the exact name of the image file.

The file will have a similar name to this example:

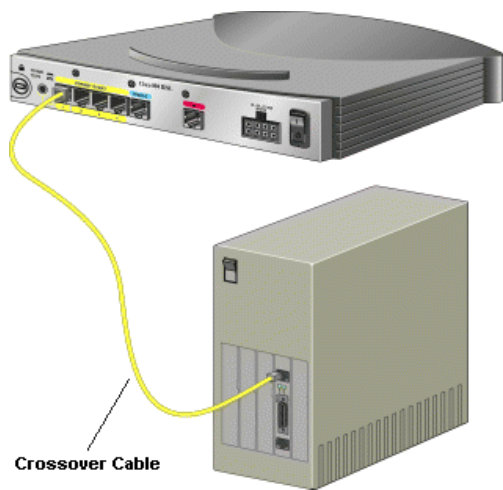
c2600-i-mz.122-28.bin

3. Place the software image file in your C:\TFTP-Root directory.

#### Connect the Router to the PC

Connect the router and the PC. Perform a ping test to verify connectivity.

1. Change your PC IP address to an address that matches the router Ethernet IP address you entered in the LAN Addressing Worksheet (fields **L6A** and **L2A**). For example, if your router has IP address 192.168.10.1, change your PC to 192.168.10.2. To change your PC IP address, go to **Control Panel > Network and Dial-Up Connections > TCP/IP Properties**. For more information on how to configure an IP address on your PC, refer to [Configure an IP Address on Your PC](#).
2. Connect the crossover cable to the RJ-45 Ethernet port of your PC and the yellow Ethernet port of the router.



3. Verify that your PC can send traffic to the router with a ping test.

- a. Go to **Start > Run**
- b. Type **command** or **cmd** to launch a DOS prompt.
- c. Type **ping router IP address** and press **Enter**.

For more information on how to do a ping test, refer to [Troubleshoot Ethernet Connectivity](#).

```

C:\> Command Prompt
C:\>ping 192.168.10.1
Pinging 192.168.10.1 with 32 bytes of data:
Reply from 192.168.10.1: bytes=32 time<10ms TTL=128
Reply from 192.168.10.1: bytes=32 time<10ms TTL=128
Reply from 192.168.10.1: bytes=32 time<10ms TTL=128
Reply from 192.168.10.1: bytes=32 time<10ms TTL=128

Ping statistics for 192.168.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>

```

### Copy the Software Image File to the Router

To copy the software image file to your router, follow these steps:

1. Launch your TFTP Server application.
2. Create a HyperTerminal connection to your router. For more information, refer to [Create a HyperTerminal Connection](#).
3. Log into the router with the username and password you entered in the Internet Worksheet (fields B10 and 11).
4. Type **enable** to enter privileged mode.

```

Router> enable
Password:
Router#

```

5. Type **copy tftp://tftp server IP address/IOSImageName.bin flash:** and press **Enter**, and then press **Enter** again to confirm the destination filename.

```

Router# copy tftp://192.168.10.2/c2600-i-mz.122-28.bin flash:
Destination filename [c2600-i-mz.122-28.bin]?
Accessing tftp://192.168.10.2/c2600-i-mz.122-28.bin...

```

6. Type **y** and press **Enter** to confirm that you want to erase the files in flash memory.

```

Erase flash: before copying? [confirm]y

```



**Caution:** This step will erase all files in flash memory and then install the new software image.

7. Press **Enter** to confirm that you want to remove all files.

```
Erasing the flash:1 filesystem will remove all files! Continue? [confirm]
Erasing device... eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee
eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee
eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee
eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee
Erase of flash:1: complete
```

8. The router displays a message similar to this example when the file transfer begins:

```
Loading //tftp-root/c2600-i-mz.122-28.bin from 192.168.10.2 (via FastEthernet0): !!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
[OK - 7087864 bytes]

Verifying checksum... OK (0x3DA6)
7087864 bytes copied in 105.344 secs (67283 bytes/sec)
Router#
```

9. Type **show version** and press **Enter** to verify your new software image.

```
Router# show version
Cisco Internetwork Operating System Software
IOS (tm) C2600 Software (C2600-I-M), Version 12.2(28), RELEASE SOFTWARE (fc5)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2005 by Cisco Systems, Inc.
Compiled Thu 24-Feb-05 20:56 by kellmill
Image text-base: 0x8000808C, data-base: 0x80A1FECC
```

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### Next Step

You have upgraded the Cisco IOS software image on your Cisco router. You now need to reinstall Security Device Manager on the router. Refer to [Download and Install Security Device Manager](#) for instructions.

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### Troubleshoot the Procedure

This section provides information about common problems that you may encounter. If this information does not solve your problem, contact the [SMB Technical Assistance Center \(SMB TAC\)](#) for assistance.

Problem	Cause(s) and Suggested Solution(s)
The router displays an error that there is insufficient space in flash memory to load the new software image.	Contact the <a href="#">SMB TAC</a> for assistance.
The router displays the error <b>%Error opening tftp://<i>ftps</i>server ip address/filename .</b>	Ensure that your TFTP server application is open. Refer to <a href="#">Set Up a TFTP Server</a> for more information.

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### Related Information

- [Cable Descriptions](#)
- [Set Up a TFTP Server](#)
- [Configure an IP Address on Your PC](#)
- [Troubleshoot Ethernet Connectivity](#)
- [Create a HyperTerminal Connection](#)
- [Download and Install Security Device Manager](#)