



System Image and Microcode Commands

This chapter provides detailed descriptions of the commands used to load and copy system images and microcode images. System images contain the system software. Microcode images contain microcode to be downloaded to various hardware devices.

For configuration information and examples, refer to the “Loading and Maintaining System Images and Microcode” chapter in the *Configuration Fundamentals Configuration Guide*.

Flash Memory File System Types

Cisco platforms use one of three different Flash memory file system types. Some commands are supported on only one or two file system types. This chapter notes commands that are not supported on all file system types.

Refer to Table 22 to determine which Flash memory file system type your platform uses.

Table 22 Flash Memory File System Types

Type	Platforms
Class A	Cisco 7000 family, C12000, LS1010
Class B	Cisco 1003, Cisco 1004, Cisco 1005, Cisco 2500 series, Cisco 3600 series, Cisco 4000 series, Cisco AS5200
Class C	Cisco MC3810, disk0 of SC3640

Replaced Commands

Commands in this chapter that have been replaced by new commands continue to perform their normal functions in the current release but are no longer documented. Support for these commands will cease in a future release.

Table 23 maps the old commands with their replacements.

Table 23 *Mapping Old Commands to New Commands*

Old Command	New Command
copy erase flash	erase flash: or erase flash (Class B Flash file systems only) format (Class A and C Flash file systems only)
copy verify	verify
copy xmodem	copy xmodem: or copy xmodem
copy ymodem	copy ymodem: or copy ymodem
copy verify bootflash	verify bootflash: or verify bootflash
copy verify flash	verify flash: or verify flash
show flh-log	more flh: logfile
verify bootflash	verify bootflash: or verify bootflash
verify flash	verify flash: or verify flash

clear card-message

To remove the user-specified message that is displayed on the LED on the front panel of one or more line cards and revert to the normal status message for the line card, use the **clear card-message** privileged EXEC command.

```
clear card-message {all | slot slot-number}
```

Syntax Description	all	Clears the user-specified LED message on all line cards.
	slot <i>slot-number</i>	Clears the user-specified LED message on a specific line card. Slot numbers range from 0 to 11 for the Cisco 12012 and 0 to 7 for the Cisco 12008.

Command Modes	Privileged EXEC
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Command History	Release	Modification
	11.2 GS	This command was added to support the Cisco 12000 series Gigabit Switch Router.

Usage Guidelines	To specify the message that is displayed on the LED on the front panel of one or more line cards, use the set card-message global configuration command.
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Examples	The following example clears any user-specified message from all line cards.
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```
clear card-message all
```

Related Commands	Command	Description
	set card-message	Specifies the message that is displayed on the LED on the front panel of one or more line cards.

copy erase flash

The **erase flash:** or **erase flash** command replaces the **copy erase flash** command. Refer to the description of the **erase** command for further details.

copy verify

The **verify** command replaces the **copy verify** command. Refer to the description of the **verify** command for further information.

copy verify bootflash

The **verify bootflash:** or the **verify bootflash** command replaces the **copy verify bootflash** command. Refer to the description of the **verify** command for further information.

copy verify flash

The **verify flash:** or the **verify flash** command replaces the **copy verify flash** command. Refer to the description of the **verify** command for further information.

copy xmodem:

The **copy xmodem:** and **copy xmodem** commands are identical. Refer to the description of the **copy** command for more information.

To copy a Cisco IOS image from a local or remote computer (such as a PC, Macintosh, or UNIX workstation) to Flash memory on a Cisco 3600 series router using the Xmodem protocol, use the **copy xmodem:** EXEC command.

copy xmodem: *flash-filesystem:*

Syntax Description	<i>flash-filesystem:</i>	Destination of the copied file.
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Command Modes	EXEC
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Command History	Release	Modification
	11.2 P	This command was introduced.

Usage Guidelines	<p>Copying a file using FTP, rcp, or TFTP is much faster than copying a file using Xmodem. Use the copy xmodem: command only if you do not have access to an FTP, TFTP, or rcp server.</p> <p>This copy operation is performed through the console or AUX port. The AUX port, which supports hardware flow control, is recommended.</p> <p>No output is displayed on the port over which the transfer is occurring. You can use the logging buffered command to log all router messages sent to the console port during the file transfer.</p>
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Examples	<p>The following example initiates a file transfer from a local or remote computer to the router's internal Flash memory using the Xmodem protocol:</p>
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```
copy xmodem: flash:
```

Related Commands	Command	Description
	copy	Copies any file from a source to a destination, use the copy EXEC command.
	copy ymodem:	Copies modem firmware to integrated modems in access servers.
	xmodem	Copies a Cisco IOS image to a Cisco 1600 series or Cisco 3600 series router using the ROM monitor and the Xmodem or Ymodem protocol, use the xmodem ROM monitor command.

copy ymodem:

The **copy ymodem:** and **copy ymodem** commands are identical. Refer to the description of the **copy** command for more information.

To copy a Cisco IOS image from a local or remote computer (such as a PC, Macintosh, or UNIX workstation) to Flash memory on a Cisco 3600 series router using the Ymodem protocol, use the **copy ymodem:** EXEC command.

copy ymodem: *flash-filesystem:*

Syntax Description	<i>flash-filesystem:</i>	Destination of the copied file.
Command Modes	EXEC	
Command History	Release	Modification
	11.2 P	This command was introduced.
Usage Guidelines	<p>Copying a file using FTP, rcp, or TFTP is much faster than copying a file using Ymodem. Use the copy ymodem: command only if you do not have access to an FTP, TFTP, or rcp server.</p> <p>This copy operation is performed through the console or AUX port. The AUX port, which supports hardware flow control, is recommended.</p> <p>No output is displayed on the port over which the transfer is occurring. You can use the logging buffered command to log all router messages sent to the console port during the file transfer.</p>	
Examples	<p>The following example initiates a file transfer from a local or remote computer to the router's internal Flash memory using the Ymodem protocol:</p> <pre>copy ymodem: flash:</pre>	
Related Commands	Command	Description
	copy xmodem:	The copy xmodem: and copy xmodem commands are identical. Refer to the description of the copy command for more information.

erase flash:

The **erase flash:** and **erase flash** commands are identical. Refer to the **erase** command for further details.

execute-on

To execute commands remotely on a line card, use the **execute-on slot** privileged EXEC command.

execute-on {**slot** *slot-number* | **all**} *command*

Syntax Description		
slot <i>slot-number</i>	Executes the command on the line card in the specified slot. Slot numbers range from 0 to 11 on the Cisco 12012 and 0 to 7 on the Cisco 12008.	
all	Executes the command on all line cards.	
<i>command</i>	Cisco IOS command to execute on the line card.	

Command Modes Privileged EXEC

Command History	Release	Modification
	11.2 GS	This command was added to support the Cisco 12000 series Gigabit Switch Routers.

Usage Guidelines Use this command to execute a command on one or all line cards to monitor and maintain information on one or more line cards.

You can use the **execute-on** privileged EXEC command only from Cisco IOS software running on the GRP card.



Note In Cisco IOS Release 11.2(9)GS, the **execute-on** command does not work properly on commands that require input, the “more” autopaging mechanism does not function, and the line card help is not available.



Note Because not all statistics are maintained on the line cards, the output from some of the **show** commands might not be consistent.

You can also use the **attach** privileged EXEC command, but using the **execute-on slot** command saves you some steps. For example, first you must use the **attach** command to connect you to the Cisco IOS software running on the line card, next you must issue the command, and finally you must disconnect from the line card to return to the Cisco IOS software running on the GRP card. With the **execute-on slot** command, you can perform three steps with one command.

In addition, the **execute-on all** command allows you to perform the same command on all line cards.

Examples

The following example executes the **show controllers** command on the line card in slot 4:

```
Router# execute-on slot 4 show controllers
===== Line Card (Slot 4) =====
```

```
Interface POS0
Hardware is BFLC POS
lcpos_instance struct    6033A6E0
RX POS ASIC addr space  12000000
TX POS ASIC addr space  12000100
SUNI framer addr space  12000400
SUNI rsop intr status   00
CRC16 enabled, HDLC enc, int clock
no loop
```

```
Interface POS1
Hardware is BFLC POS
lcpos_instance struct    6033CEC0
RX POS ASIC addr space  12000000
TX POS ASIC addr space  12000100
SUNI framer addr space  12000600
SUNI rsop intr status   00
CRC32 enabled, HDLC enc, int clock
no loop
```

```
Interface POS2
Hardware is BFLC POS
lcpos_instance struct    6033F6A0
RX POS ASIC addr space  12000000
TX POS ASIC addr space  12000100
SUNI framer addr space  12000800
SUNI rsop intr status   00
CRC32 enabled, HDLC enc, int clock
no loop
```

```
Interface POS3
Hardware is BFLC POS
lcpos_instance struct    60341E80
RX POS ASIC addr space  12000000
TX POS ASIC addr space  12000100
SUNI framer addr space  12000A00
SUNI rsop intr status   00
CRC32 enabled, HDLC enc, ext clock
no loop
Router#
```

Related Commands

Command	Description
atm sonet	Sets the mode of operation and thus control the type of the ATM cell used for cell-rate decoupling on the SONET PLIM.

microcode

To specify the location of the microcode that you want to download from Flash memory into the writable control store (WCS) on a Cisco 7000 series with RSP7000 or Cisco 7500 series, use the **microcode** global configuration command. Use the **no** form of this command to load the microcode bundled with the system image.

microcode *interface* [*flash-filesystem:filename* [*slot*] | **system** [*slot*]]

no microcode *interface* [*flash-filesystem:filename* [*slot*] | **system** [*slot*]]

Syntax Description	
<i>interface</i>	One of the following interface processor names: aip, cip, eip, feip, fip, fsip, hip, mip, sip, sp, ssp, trip, vip, or vip2 .
<i>flash-filesystem:</i>	(Optional) Flash file system. The colon is required. Valid file systems include bootflash, slot0, and slot1. Slave devices such as slaveslot0 are invalid. The slave's file system is not available during microcode reloads.
<i>filename</i>	(Optional) Name of the microcode file.
<i>slot</i>	(Optional) Number of the slot. Range is 0 to 15.
system	(Optional) If system is specified, the router loads the microcode from the microcode bundled into the system image you are running for that interface type.

Defaults The default is to load from the microcode bundled in the system image.

Command Modes Global configuration

Command History	Release	Modification
	11.0	This command was introduced.

Usage Guidelines When using HSA for simple hardware backup, ensure that the master and slave RSP card contain the same microcode image in the same location when the router is to load the interface processor microcode from a Flash file system. Thus, if the slave RSP becomes the master, it will be able to find the microcode image and download it to the interface processor.

Examples In the following example, all FIP cards will be loaded with the microcode found in Flash memory file `fip.v141-7` when the system is booted, when a card is inserted or removed, or when the **microcode reload** global configuration command is issued. The configuration is then written to the startup configuration file.

```
Router(config)# microcode fip slot0:fip.v141-7
Router(config)# end
Router# copy system:running-config nvram:startup-config
```

Related Commands

Command	Description
more flh:logfile	Views the system console output generated during the Flash load helper operation.

microcode (Cisco IOS image)

To load a Cisco IOS software image on a line card from Flash memory or the GRP card on a Cisco 12000 series Gigabit Switch Router, use the **microcode** global configuration command. To load the microcode bundled with the GRP system image, use the **no** form of this command.

```
microcode interface {flash file-id [slot] | system [slot]}
```

```
no microcode interface [flash file-id [slot] | system [slot]]
```

Syntax Description	
<i>interface</i>	One of the following interface names: oc12-atm , oc12-pos , or oc3-pos-4 .
flash	Loads the image from the Flash file system.
<i>file-id</i>	Specifies the device and filename of the image file to download. A colon (:) must separate the device and filename (for example, slot0:gsr-p-mz). Valid devices are as follows: <ul style="list-style-type: none"> • bootflash—Internal Flash memory. • slot0—First PCMCIA slot. • slot1—Second PCMCIA slot.
<i>slot</i>	(Optional) Slot number of the line card that you want to copy the software image to. Slot numbers range from 0 to 11 for the Cisco 12012 and 0 to 7 for the Cisco 12008. If you do not specify a slot number, the Cisco IOS software image is downloaded on all line cards.
system	Loads the image from the software image on the GRP card.

Defaults The default is to load the image from the GRP card.

Command Modes Global configuration

Command History	Release	Modification
	10.3	This command was introduced.
	11.2 GS	This command was modified to load the Cisco IOS software image onto a line card in the Cisco 12000 series Gigabit Switch Routers.

Usage Guidelines You must be in configuration mode to enter this command. Immediately after you enter the **microcode reload** command and press **Return**, the system reloads all microcode. Global configuration mode remains enabled. After the reloading is complete, enter the **exit** command to return to the EXEC system prompt.

In addition to the Cisco IOS image that resides on the GRP card, each line card on a Cisco 12000 series has a Cisco IOS image. When the router is reloaded, the specified image is loaded onto the GRP card and then automatically downloaded to all the line cards.

Normally, you want the same Cisco IOS image on the GRP card and all line cards. However, if you want to upgrade a line card with a new version of microcode for testing or to fix a defect, you might need to load a Cisco IOS image that is different from the one on the line card. Additionally, you might need to load a new image on the line card to work around a problem that is affecting only one of the line cards.

To load a Cisco IOS image on a line card, first use the **copy tftp** command to download the Cisco IOS image to a slot on one of the PCMCIA Flash memory cards. Then use the **microcode** command to download the image to the line card followed by the **microcode reload** command to start the image. To verify that the correct image is running on the line card, use the **execute-on slot slot show version** command.

For information on how to load Cisco IOS images, refer to the “Loading Images and Configuration Files” chapter in the *Configuration Fundamentals Configuration Guide*. For additional information, refer to the “Observing System Startup and Performing a Basic Configuration” chapter in the Cisco 12000 series installation and configuration guides.

Examples

In the following example, the Cisco IOS software image in slot 0: is downloaded to the line card in slot 10. This software image is used when the system is booted, a line card is inserted or removed, or the **microcode reload** global configuration command is issued.

To verify that the correct version is loaded, use the **execute-on slot 10 show version** command.

```
Router(config)# microcode oc3-POS-4 flash slot0:ftp.v141-7 10
Router(config)# microcode reload 10
Router(config)# exit
Router#
```

Related Commands

Command	Description
microcode reload	Reloads the Cisco IOS image on a line card on the Cisco 7000 series with RSP7000, Cisco 7500 series, or Cisco 12000 series routers after all microcode configuration commands have been entered.

microcode reload

To reload the Cisco IOS image on a line card on the Cisco 7000 series with RSP7000, Cisco 7500 series, or Cisco 12000 series routers after all microcode configuration commands have been entered, use the **microcode reload** global configuration command.

microcode reload [*slot-number*]

Syntax Description

<i>slot-number</i>	(Optional) Slot number of the line card that you want to reload the Cisco IOS software image on. Slot numbers range from 0 to 11 for the Cisco 12012 and 0 to 7 for the Cisco 12008. If you do not specify a slot number, the Cisco IOS software image is reloaded on all line cards.
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Command Modes

Global configuration

Command History

Release	Modification
11.2 GS	This command was modified to add the <i>slot-number</i> option.

Usage Guidelines

In addition to the Cisco IOS image that resides on the GRP card, each line card on Cisco 12000 series routers has a Cisco IOS image. When the router is reloaded, the specified Cisco IOS image is loaded onto the GRP card and automatically downloaded to all the line cards.

Normally, you want the same Cisco IOS image on the GRP card and all line cards. However, if you want to upgrade a line card with a new version of microcode for testing or to fix a defect, you might need to load a different Cisco IOS image. Additionally, you might need to load a new image on the line card to work around a problem affecting only one of the line cards.

To load a Cisco IOS image on a line card, first use the **copy tftp** command to download the Cisco IOS image to a slot on one of the PCMCIA Flash memory cards. Then use the microcode command to download the image to the line card, followed by the **microcode reload** command to start the image. To verify that the correct image is running on the line card, use the **execute-on slot slot show version** command.

For information on how to load Cisco IOS images, refer to the “Loading Images and Configuration Files” chapter in the *Configuration Fundamentals Configuration Guide*. For additional information, refer to the “Observing System Startup and Performing a Basic Configuration” chapter in the Cisco 12000 series installation and configuration guides.

Examples

In the following example, the Cisco IOS software is reloaded on the line card in slot 10:

```
Router(config)# microcode reload 10
Router(config)# end
Router#
```

Related Commands	Command	Description
	microcode (Cisco IOS image)	Loads a Cisco IOS software image on a line card from Flash memory or the GRP card on a Cisco 12000 series Gigabit Switch Router.
	microcode query	Specifies the location of the microcode that you want to download from Flash memory into the writable control store (WCS) on a Cisco 7000 series with RSP7000 or Cisco 7500 series, use the microcode global configuration command.

more fh:logfile

To view the system console output generated during the Flash load helper operation, use the **more fh:logfile** privileged EXEC command.

more fh:logfile

Syntax Description This command has no arguments or keywords.

Command Modes Privileged EXEC

Command History	Release	Modification
	11.3 AA	This command was introduced.

Usage Guidelines If you are a remote Telnet user performing the Flash upgrade without a console connection, this command allows you to retrieve console output when your Telnet connection has terminated due to the switch to the ROM image. The output indicates what happened during the download, and is particularly useful if the download fails.

This command is a form of the **more** command. Refer to the **more** command for details.

Examples

The following is sample output from the **more flh:logfile** command:

```
Router# more flh:logfile

%FLH: abc/igs-kf.914 from 172.16.1.111 to flash...

System flash directory:
File Length Name/status
  1  2251320 abc/igs-kf.914

[2251384 bytes used, 1942920 available, 4194304 total]
Accessing file 'abc/igs-kf.914' on 172.16.1.111...
Loading from 172.16.13.111:

Erasing device..... erased
Loading from 172.16.13.111:
- [OK -
2251320/4194304 bytes]

Verifying checksum... OK (0x97FA)
Flash copy took 79292 msec
%FLH: Re-booting system after download
Loading abc/igs-kf.914 at 0x3000040, size = 2251320 bytes [OK]

F3: 2183364+67924+259584 at 0x3000060
```

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Cisco Internetwork Operating System Software
Cisco IOS (tm) GS Software (GS7), Version 11.0
Copyright (c) 1986-1995 by cisco Systems, Inc.
Compiled Tue 06-Dec-94 14:01 by smith
Image text-base: 0x00001000, data-base: 0x005A9C94

cisco 2500 (68030) processor (revision 0x00) with 4092K/2048K bytes of memory.

Processor board serial number 00000000
DDN X.25 software, Version 2.0, NET2 and BFE compliant.
ISDN software, Version 1.0.
Bridging software.
Enterprise software set supported. (0x0)
1 Ethernet/IEEE 802.3 interface.
2 Serial network interfaces.
--More--

1 ISDN Basic Rate interface.
32K bytes of non-volatile configuration memory.

4096K bytes of processor board System flash (Read ONLY)

Related Commands

Command	Description
more	Displays a file, use the more EXEC command.

set card-message

To specify the message that is displayed on the LED on the front panel of one or more line cards, use the **set card-message** privileged EXEC command. To remove the message, use the **clear card-message** global command.

```
set card-message {all | slot slot-number} [expire seconds] [blink seconds] message
```

Syntax Description		
all		Specifies that the LED message is set on all line cards.
slot slot-number		Specifies that the LED message is set on a specific line card. Slot numbers range from 0 to 11 for the Cisco 12012 and 0 to 7 for the Cisco 12008.
expire seconds		(Optional) Specifies how long the message is displayed on the front panel LED. The range is 0 to 31536000 seconds. When you select 0, the message remains on the LED until you clear it by using the clear card-message command. When the time expires, the user-specified message is removed, and the LED displays the status message based on the line card's last state.
blink seconds		(Optional) Specifies how often the message blinks (that is, goes on and off) in seconds. The range is 1 to 10 seconds. If blink is not specified, the message does not blink.
message		Specifies the text to display on the LED on the front panel of one or more line cards. The message can be up to eight alphanumeric characters (four characters per line).

Defaults System LED message is displayed.

Command Modes Privileged EXEC

Command History	Release	Modification
	11.2 GS	This command was added to support the Cisco 12000 series Gigabit Switch Routers.

Usage Guidelines The user-specified message is also displayed in the **show diag** command output.

To revert to the normal status message for the line card, use the **clear card-message** global configuration command.

Examples The following example sets the message USER MSG to display on the LED on line card 3. This message blinks every two seconds.

```
Router# set card-message slot 3 blink 2 USER MSG
```

Related Commands

Command	Description
clear card-message	Removes the user-specified message that is displayed on the LED on the front panel of one or more line cards and revert to the normal status message for the line card, use the clear card-message privileged EXEC command.
show diag	Displays hardware information for an interface on Cisco 7500 series routers.

show flh-log

The **more flh:logfile** command replaces the **show flh-log** command. Refer to the **more flh:logfile** command for more information.

show microcode

To show the microcode bundled into a Cisco 7000 series with RSP7000 or Cisco 7500 series system, use the **show microcode EXEC** command.

show microcode

Syntax Description This command has no arguments or keywords.

Command Modes EXEC

Command History

Release	Modification
10.0	This command was introduced.

Examples The following is sample output from the **show microcode** command:

```
Router# show microcode
```

```
Microcode bundled in system
```

Card Type	Microcode Version	Target Hardware Version	Description
SP	2.3	11.x	SP version 2.3
EIP	1.1	1.x	EIP version 1.1
TRIP	1.2	1.x	TRIP version 1.2
FIP	1.4	2.x	FIP version 1.4
HIP	1.1	1.x	HIP version 1.1
SIP	1.1	1.x	SIP version 1.1
FSIP	1.1	1.x	FSIP version 1.1

verify bootflash:

Either of the identical **verify bootflash:** or **verify bootflash** commands replaces the **copy verify bootflash** command. Refer to the **verify** command for more information.

verify flash:

Either of the identical **verify flash:** or **verify flash** commands replaces the **copy verify flash** command. Refer to the **verify** command for more information.

xmodem

To copy a Cisco IOS image to a Cisco 1600 series or Cisco 3600 series router using the ROM monitor and the Xmodem or Ymodem protocol, use the **xmodem** ROM monitor command.

```
xmodem [-c] [-y] [-e] [-f] [-r] [-x] [-s data-rate] [filename]
```

Syntax Description	
-c	(Optional) CRC-16 checksumming, which is more sophisticated and thorough than standard checksumming.
-y	(Optional) Uses Ymodem protocol for higher throughput.
-e	(Optional) Erases the first partition in Flash memory before starting the download. This option is only valid for the Cisco 1600.
-f	(Optional) Erases all of Flash memory before starting the download. This option is only valid for the Cisco 1600.
-r	(Optional) Downloads the file to DRAM. The default is Flash memory.
-x	(Optional) Do not execute Cisco IOS image on completion of the download.
-s <i>data-rate</i>	(Optional) Sets the console port's data rate during file transfer. Values are 1200, 2400, 4800, 9600, 19200, 38400, and 115200 bps. The default rate is specified in the configuration register. This option is only valid for the Cisco 1600 series.
<i>filename</i>	(Optional) Filename to copy. This argument is ignored when -r is specified, because only one file can be copied to DRAM. On the Cisco 1600 series, files are loaded to the ROM for execution.

Defaults Xmodem protocol with 8-bit CRC, file downloaded into Flash memory and executed on completion.

Command Modes ROM monitor

Command History	Release	Modification
	11.2 P	This command was introduced.

Usage Guidelines The Cisco 3600 series does not support XBOOT functionality. If your Cisco IOS image is erased or damaged, you cannot load a new image over the network.

Use the **xmodem** ROM monitor command to download a new system image to your router from a local personal computer (such as a PC, Mac, or UNIX workstation), or a remote computer over a modem connection, to the router's console port. The computer must have a terminal emulation application that supports these protocols.

Cisco 3600 series

Your router must have enough DRAM to hold the file being transferred, even if you are copying to Flash memory. The image is copied to the first file in internal Flash memory. Any existing files in Flash memory are erased. There is no support for partitions or copying as a second file.

Cisco 1600 series

If you include the **-r** option, your router must have enough DRAM to hold the file being transferred. To run from Flash, an image must be positioned as the first file in Flash memory. If you are copying a new image to boot from Flash, erase all existing files first.

**Caution**

A modem connection from the telephone network to your console port introduces security issues that you should consider before enabling the connection. For example, remote users can dial into your modem and access the router's configuration settings.

**Note**

If the file to be downloaded is not a valid router image, the copy operation is automatically terminated.

Examples

The following example uses the **xmodem -c filename** ROM monitor command to copy the file **new-ios-image** from a remote or local computer:

```
rommon > xmodem -c new-ios-image
Do not start the sending program yet...
      File size      Checksum   File name
1738244 bytes (0x1a8604)  0xdd25  george-admin/c3600-i-mz
```

WARNING: All existing data in bootflash will be lost!

Invoke this application only for disaster recovery.

Do you wish to continue? y/n [n]: **yes**

Ready to receive file new-ios-image ...

Related Commands

Command	Description
copy xmodem:	The copy xmodem: and copy xmodem commands are identical. Refer to the description of the copy command for more information.
copy ymodem:	Copies a Cisco IOS image from a local or remote computer (such as a PC, Macintosh, or UNIX workstation) to Flash memory on a Cisco 3600 series router using the Ymodem protocol, use the copy ymodem: EXEC command.

