System Image, Microcode Image, and Configuration File Load Commands

This section describes the function and displays the syntax of each command used to load and copy system images, microcode images, and configuration files. For more information about defaults and usage guidelines, see the corresponding chapter of the *Router Products Command Reference* publication.

async-bootp *tag* [**:***hostname*] *data*
no async-bootp

Use the **async-bootp** global configuration command to enable support for extended BOOTP requests as defined in RFC 1084 when the router is configured for SLIP. Use the **no** form of this command to restore the default.

tag	Item being requested; expressed as filename, integer, or IP dotted-decimal address. See the async-BOOTP tag keywords table in the *Router Products Command Reference* publication for possible values.
:hostname	(Optional) This entry applies only to the host specified. The argument *:hostname* accepts both an IP address and a logical host name.
data	List of IP addresses entered in dotted-decimal notation or as logical host names, a number, or a quoted string.

b
b *filename* [*ip-address*]
b flash [*filename*]

To boot the router manually, use the **b** ROM monitor command.

filename	Name of the system image from which you want to netboot.
ip-address	(Optional) IP address of the TFTP server on which the system image resides. If omitted, this value defaults to the IP broadcast address of 255.255.255.255.
flash *filename*	(Optional) Boots the router from Flash memory with the optional filename of the image you want loaded. The filename is case sensitive. Without a filename, the first valid file in Flash memory is loaded.

[**no**] **boot bootstrap flash** [*filename*]
[**no**] **boot bootstrap mop** *filename* [*mac-address*] [*interface*]
[**no**] **boot bootstrap** [**tftp**] *filename* [*ip-address*]

To configure the filename that is used to boot a secondary bootstrap image, use the **boot bootstrap** global configuration command. Use the **no** form of this command to disable booting from a secondary bootstrap image.

flash	Indicates that the router will be booted from Flash memory.
mop	Indicates that the router will be netbooted from a system image stored on a Digital MOP server.
tftp	(Optional) Indicates that the router will be netbooted from a system image stored on a TFTP server.
filename	(Optional with **flash**) Name of the system image from which you want to netboot. If you omit the filename when booting from Flash, the router uses the first system image stored in Flash memory.

ip-address	(Optional) IP address of the TFTP server on which the system image resides. If omitted, this value defaults to the IP broadcast address of 255.255.255.255.
mac-address	(Optional) MAC address of the MOP server on which the file resides. If the MAC address argument is not included, a broadcast message is sent to all MOP boot servers. The first MOP server to indicate that it has the file will be the server from which the router gets the boot image.
interface	(Optional) Interface out which the router should send MOP requests to reach the MOP server. The interface options are **async**, **dialer**, **ethernet**, **loopback**, **null**, **serial**, and **tunnel**. If the interface argument is not specified, a request will be sent on all interfaces that have MOP enabled, and the interface from which the first response is received will be used to load the software.

boot buffersize *bytes*
no boot buffersize

To modify the buffer size used to load configuration files, use the **boot buffersize** global configuration command. Use the **no** form of this command to return to the default setting.

bytes	Size of the buffer to be used. There is no minimum or maximum buffer size.

[**no**] **boot host mop** *filename* [*mac-address*] [*interface*]
[**no**] **boot host** [**tftp**] *filename* [*ip-address*]

To change the default name of the host configuration filename from which you want to load configuration commands, use the **boot host** global configuration command. Use the **no** form of this command to restore the host configuration filename to the default.

mop	Indicates that the router will be configured from a configuration file stored on a Digital MOP server.
tftp	(Optional) Indicates that the router will be configured from a configuration file stored on a TFTP server.
filename	Name of the file from which you want to load configuration commands.
ip-address	(Optional) IP address of the TFTP server on which the file resides. If omitted, this value defaults to the IP broadcast address of 255.255.255.255.
mac-address	(Optional) MAC address of the MOP server on which the file resides. If the MAC address argument is not included, a broadcast message is sent to all MOP boot servers. The first MOP server to indicate that it has the file is the server from which the router gets the boot image.

interface	(Optional) Interface out which the router should send MOP requests to reach the MOP server. The interface options are **async**, **dialer**, **ethernet**, **serial**, and **tunnel**. If the interface argument is not specified, a request is sent on all interfaces that have MOP enabled, and the interface from which the first response is received is used to load the software.

[**no**] **boot network mop** *filename* [*mac-address*] [*interface*]
[**no**] **boot network** [**tftp**] *filename* [*ip-address*]

To change the default name of the network configuration file from which you want to load configuration commands, use the **boot network** global configuration command. Use the **no** form of this command to restore the network configuration filename to the default.

mop	Indicates that the router is configured from a configuration file stored on a Digital MOP server.
tftp	(Optional) Indicates that the router will be configured from a configuration file stored on a TFTP server.
filename	Name of the file from which you want to load configuration commands.
ip-address	(Optional) IP address of the TFTP server on which the compressed image file resides. If omitted, this value defaults to the IP broadcast address of 255.255.255.255.
mac-address	(Optional) MAC address of the MOP server on which the file resides. If the MAC address argument is not included, a broadcast message will be sent to all MOP boot servers. The first MOP server to indicate that it has the file will be the server from which the router gets the boot image.

interface	(Optional) Interface out which the router should send MOP requests to reach the MOP server. The interface options are **async**, **dialer**, **ethernet**, **serial**, and **tunnel**. If the interface argument is not specified, a request will be sent on all interfaces that have MOP enabled, and the interface from which the first response is received will be used to load the software.

[**no**] **boot system flash** [*filename*]
[**no**] **boot system mop** *filename* [*mac-address*] [*interface*]
[**no**] **boot system rom**
[**no**] **boot system** [**tftp**] *filename* [*ip-address*]
no boot system

To change the filename of the system image that is loaded onto the router at reboot time, use the **boot system** global configuration command. Use the **no** form of this command to remove the name.

flash	Indicates that the router is booted from Flash memory.
mop	Indicates that the router is netbooted from a system image stored on a Digital MOP server.
rom	Indicates the router is booted from ROM.
tftp	(Optional) Indicates that the router is netbooted from a system image stored on a TFTP server.
filename	(Optional with **flash**) Name of the configuration file from which you want to netboot. It is case sensitive.
ip-address	(Optional) IP address of the TFTP server on which the image file resides. If omitted, this value defaults to the IP broadcast address of 255.255.255.255.

mac-address	(Optional) MAC address of the MOP server on which the file resides. If the MAC address argument is not included, a broadcast message is sent to all MOP boot servers. The first MOP server to indicate that it has the file will be the server from which the router gets the boot image.
interface	(Optional) Interface out which the router should send MOP requests to reach the MOP server. The interface options are **async**, **dialer**, **ethernet**, **serial**, and **tunnel**. If the interface argument is not specified, a request will be sent on all interfaces that have MOP enabled, and the interface from which the first response is received will be used to load the software.

config-register *value*

To change the router configuration register settings, use the **config-register** global configuration command.

value	Hexadecimal or decimal value that represents the 16-bit configuration register value you want to use the next time the router is restarted. The value range is from 0x0 to 0xFFFF (0 to 65535 in decimal). The default is 0x101 for the router models without Flash memory; default is 0x10F for router models with Flash memory.

configure {**terminal** | **memory** | **network**}

To enter global configuration mode, use the **configure** privileged EXEC command.

terminal	Executes configuration commands from the terminal.

memory	Executes the configuration commands stored in NVRAM.
network	Retrieves the configuration commands stored in a file on a server.

copy flash tftp

To copy a system image from Flash memory to a TFTP server, use the **copy flash tftp** EXEC command.

copy tftp flash

To copy a system image using TFTP into Flash memory, use the **copy tftp flash** EXEC command.

copy verify

To verify the checksum of a system image in Flash memory, use the **copy verify** EXEC command.

[**no**] **ip rarp-server** *ip-address*

Use the **ip rarp-server** interface configuration command to allow the router to act as a Reverse Address Resolution Protocol (RARP) server. Use the **no** form of this command to restore the interface to the default of no RARP server support.

ip-address	IP address to be provided in the source protocol address field of the RARP response packet. Normally, this is set to the address you configure as the primary address for the interface.

[**no**] **microcode** *interface* [**flash** | **rom** | **system**] [*filename*]

To specify the location of the microcode you want to download from Flash memory into the writable control store (WCS) on a Cisco 7000, use the **microcode** interface configuration command.

interface	One of the following interface processor names: **aip**, **fip**, **fsip**, **hip**, **mip**, **trip**, **eip**, or **sp**.
flash	(Optional) If the **flash** keyword is specified, a *filename* argument is required, unless you are using the **no microcode** *interface-type* **flash** command.
rom	(Optional) If specified, no further arguments are necessary. For example, the command **microcode fip rom** specifies that all FDDI Interface Processors (FIPs) should be loaded from their onboard ROM microcode. This onboard ROM microcode is not the same as the eight ROMs on the RP that contain the system image.
system	(Optional) If specified, the router loads the microcode from the microcode bundled into the system image you are running for that interface type.
filename	(Optional) Filename of the microcode in Flash memory you want to download. This argument is used only with the **flash** keyword. If you use the **flash** keyword, the name of the microcode file in Flash is required unless the command is **no microcode** *interface* **flash**. (This command results in the same default condition as the command **microcode** *interface* **rom**, which indicates that the card should be loaded from its onboard ROM microcode.)

microcode reload

To signal to the Cisco 7000 series router that all microcode configuration commands have been entered and the processor cards should be reloaded, use the **microcode reload** interface configuration command.

[**no**] **mop device-code** {**cisco** | **ds200**}

To identify the type of device sending MOP sysid messages and request program messages, use the **mop device-code** global configuration command. Use the **no** form of this command to set the identity to the default value.

cisco	Denotes a Cisco device code.
ds200	Denotes a DECserver 200 device code.

mop retransmit-timer *seconds*
no mop retransmit-timer

To configure the length of time the router waits before retransmitting boot requests to a MOP server, use the **mop retransmit-timer** global configuration command. Use the **no** form of the command to reinstate the default value.

seconds	Length of time, in seconds, that the router waits before retransmitting a message. The value is a number from 1 to 20.

mop retries *count*
no mop retries

To configure the number of times a router will retransmit boot requests to a MOP server, use the **mop retries** global configuration command. Use the **no** form of this command to reinstate the default value.

count	Number of times a router will retransmit a MOP boot request. The value is a number from 3 to 24.

o
o/r

To list the value of the boot field (bits 0-3) in the configuration register, use the ROM monitor **o** command. To reset the value of the boot field so that the router boots from ROM, use the ROM monitor **o/r** command.

reload

To reload the operating system, use the **reload** EXEC command.

[**no**] **service compress-config**

To compress configuration files on the Cisco 7000 series, Cisco 4000, Cisco 3000, and AGS+ routers, which have NVRAM, use the **service compress-config** global configuration command. To disable compression, use the **no** form of this command.

[**no**] **service config**

To enable autoloading of configuration files from a network server, use the **service config** global configuration command. Use the **no** form of this command to restore the default.

show async-bootp

Use the **show async-bootp** privileged EXEC command to display the parameters that have been configured for SLIP extended BOOTP requests.

show configuration

Use the **show configuration** EXEC command to display the contents of the nonvolatile memory, if present and valid.

The nonvolatile memory stores the configuration information in the network server in text form as configuration commands. The **show configuration** command shows the version number of the software used when you last executed the **write memory** command.

show flash [**all**]

Use the **show flash** EXEC command to verify Flash memory. The **show flash** command displays the type of Flash memory present, any files that might currently exist in Flash memory, and the amounts of Flash memory used and remaining.

all	(Optional) Shows complete information about Flash memory, including information about the individual ROM devices in Flash memory and the names and sizes of all system image files stored in Flash, including those that are invalidated.

show microcode

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

show version

Use the **show version** EXEC command to display the configuration of the system hardware, the software version, the names and sources of configuration files, and the boot images.

[**no**] **tftp-server system** *filename* [*access-list-number*]

To specify TFTP server operation for a router, use the **tftp-server system** global configuration command. To remove a previously defined filename, use the **no** form of this command with the appropriate filename and, optionally, access list number.

filename	Name you give the router ROM file
access-list-number	(Optional) IP access list number

write erase

To erase the configuration information in nonvolatile memory, use the **write erase** EXEC command.

write memory

To copy the current configuration information to nonvolatile memory, use the **write memory** EXEC command.

write network

To copy the current configuration information to a network server, use the **write network** EXEC command.

write terminal

To display the current configuration information on the terminal, use the **write terminal** EXEC command.