



Configuration File Management Commands

This chapter provides detailed descriptions of commands used to manage configuration files in Cisco IOS Release 12.2. Configuration files contain the set of commands used to customize the function of the Cisco IOS software.

For configuration information and examples, refer to the “Managing Configuration Files” chapter in the Release 12.2 *Cisco IOS Configuration Fundamentals Configuration Guide*.

Flash Memory File System Types

Cisco platforms generally 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.

Use [Table 31](#) to determine which Flash memory file system type your platform uses.

Table 31 *Flash Memory File System Types*

Type	Platforms
Class A	Cisco 7000 family, Cisco 12000 series routers, LightStream1010 switch
Class B	Cisco 1003, Cisco 1004, Cisco 1005, Cisco 2500 series, Cisco 3600 series, and Cisco 4000 series routers, and Cisco AS5200 access servers
Class C	Cisco MC3810 multiservice concentrators, disk0 of Cisco SC3640 System Controllers

Replaced Commands

Some commands found in this chapter in previous releases of this book have been replaced. Older commands generally continue to provide the same functionality in the current release, but are no longer documented. Support for the older version of these commands may already be removed on your system, or may be removed in a future Cisco IOS software release.

[Table 32](#) maps the old commands to their replacements.

Table 32 Replaced Commands

Old Command	New Command
configure network	copy ftp: [[[/[username[:password]@]location]/directory]/filename] system:running-config
configure overwrite-network	copy ftp: [[[/[username[:password]@]location]/directory]/filename] nvrn:startup-config
copy rcp running-config	copy rcp: [[[/[username@]location]/directory]/filename] system:running-config
copy running-config rcp	copy system:running-config rcp: [[[/[username@]location]/directory]/filename]
copy running-config startup-config	copy system:running-config nvrn:startup-config Note The copy running-config startup-config command has been replaced by the command shown here. However, the copy running-config startup-config command will continue to be supported as a command alias for the copy system:running-config nvrn:startup-config command.
copy running-config tftp	copy system:running-config tftp: [[[/[location]/directory]/filename]
copy tftp running-config	copy tftp: [[[/[location]/directory]/filename] system:running-config
copy tftp startup-config	copy tftp: [[[/[location]/directory]/filename] nvrn:startup-config
erase startup-config	erase nvrn:
show configuration	more nvrn:startup-config
show file	more
show running-config	more system:running-config Note The show running-config command has been replaced by the command shown here. However, the show running-config command will continue to be supported as a command alias for the more system:running-config command.
show startup-config	more nvrn:startup-config Note The show startup-config command has been replaced by the command shown here. However, the show startup-config command will continue to be supported as a command alias for the more nvrn:startup-config command.
write erase	erase nvrn:
write memory	copy running-config startup-config or copy system:running-config nvrn:startup-config

Table 32 *Replaced Commands (continued)*

Old Command	New Command
write network	copy system:running-config ftp:[[/[username[:password]@]location]/directory]/filename]
write terminal	show running-config or more system:running-config

For more information about these command replacements, see the description of the Cisco IOS File System (IFS) in the “Using the Cisco IOS File System” chapter in the Release 12.2 *Cisco IOS Configuration Fundamentals Configuration Guide*.

boot buffersize

The **boot buffersize** global configuration command no longer functions.

Executing this command has no effect on the system. Using this command will not generate CLI errors; the **boot buffersize** command syntax is still allowed to be entered at the CLI and in configuration files in order to accommodate existing configuration scripts used by customers.

boot config

To specify the device and filename of the configuration file from which the router configures itself during initialization (startup), use the **boot config** global configuration command. This command is only available on Class A file system platforms. To remove the specification, use the **no** form of this command.

boot config *file-system-prefix*:[*directory*]/*filename*

no boot config

Syntax Description	<i>file-system-prefix</i> :	File system, followed by a colon (for example, nvr am:, flash :, or slot0 :).
	<i>directory</i> /	(Optional) File system directory the configuration file is located in, followed by a forward slash (/).
	<i>filename</i>	Name of the configuration file.

Defaults	NVRAM (nvr am:)
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Command Modes	Global configuration
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Command History	Release	Modification
	11.0	This command was introduced.

Usage Guidelines

This command is only available on Class A file system platforms.

You set the CONFIG_FILE environment variable in the current running memory when you use the **boot config** command. This variable specifies the configuration file used for initialization (startup). The configuration file must be an ASCII file located in either NVRAM or Flash memory.

**Note**

When you use this global configuration command, you affect only the running configuration. You must save the environment variable setting to your startup configuration to place the information under ROM monitor control and to have the environment variable function as expected. Use the **copy system:running-config nvram:startup-config** command to save the environment variable from your running configuration to your startup configuration.

The software displays an error message and does not update the CONFIG_FILE environment variable in the following situations:

- You specify **nvr**am: as the file system, and it contains only a distilled version of the configuration. (A distilled configuration is one that does not contain access lists.)
- You specify a configuration file in the *filename* argument that does not exist or is not valid.

The router uses the NVRAM configuration during initialization when the CONFIG_FILE environment variable does not exist or when it is null (such as at first-time startup). If the software detects a problem with NVRAM or the configuration it contains, the device enters **setup** mode. See the “Setup Command” chapter in this publication for more information on the **setup** command facility.

When you use the **no** form of this command, the router returns to using the default NVRAM configuration file as the startup configuration.

Examples

In the following example, the first line specifies that the router should use the configuration file named router-config located in internal Flash memory to configure itself during initialization. The third line copies the specification to the startup configuration, ensuring that this specification will take effect upon the next reload.

```
Router(config)# boot config flash:router-config
Router(config)# end
Router# copy system:running-config nvram:startup-config
```

The following example instructs a Cisco 7500 series router to use the configuration file named router-config located on the Flash memory card inserted in the second PCMCIA slot of the RSP card during initialization. The third line copies the specification to the startup configuration, ensuring that this specification will take effect upon the next reload.

```
Router (config)# boot config slot1:router-config
Router (config)# end
Router# copy system:running-config nvram:startup-config
```

Related Commands

Command	Description
show bootvar	Displays the contents of the BOOT environment variable, the name of the configuration file pointed to by the CONFIG_FILE environment variable, the contents of the BOOTLDR environment variable, and the configuration register setting.

boot host

To specify the host-specific configuration file to be used at the next system startup, use the **boot host** global configuration command. To restore the host configuration filename to the default, use the **no** form of this command.

boot host *remote-url*

no boot host *remote-url*

Syntax Description

remote-url

Location of the configuration file. Use the following syntax:

- **ftp:**[[[//*username[:password]@*]*location*]/*directory*]/*filename*]
- **rcp:**[[[//*username@*]*location*]/*directory*]/*filename*]
- **tftp:**[[[//*location*]/*directory*]/*filename*]

Defaults

If you do not specify a *filename* using this command, the router uses its configured host name to request a configuration file from a remote server. To form the configuration filename, the router converts its name to all lowercase letters, removes all domain information, and appends *-conf*g or *-conf*ig.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.

Usage Guidelines

This command instructs the system to “Boot using network configuration file *x*,” where *x* is the filename specified in the *remote-url* argument. This command specifies the remote location and filename of the network configuration file to be used at the next system startup, as well as the protocol to be used to obtain the file.

When booting from a network server, routers ignore routing information, static IP routes, and bridging information. As a result, intermediate routers are responsible for handling FTP, rcp, or TFTP requests. Before booting from a network server, verify that a server is available by using the **ping** command.

Use the **service config** command to enable the loading of the specified configuration file at reboot time. Without this command, the router ignores the **boot network** command and uses the configuration information in NVRAM. If the configuration information in NVRAM is invalid or missing, the **service config** command is enabled automatically.

The network server will attempt to load two configuration files from remote hosts. The first is the network configuration file containing commands that apply to all network servers on a network. Use the **boot network** command to identify the network configuration file. The second is the host configuration file containing commands that apply to one network server in particular. Use the **boot host** command to identify the host configuration file.

**Note**

In releases prior to Cisco IOS Release 12.3(2)T and 12.3(1)B, the **service config** command is used in conjunction with the **boot host** or **boot network** command. To enable the router to automatically configure the system from the file specified by the **boot host** or **boot network** command you must enter the **service config** command.

With Cisco IOS Release 12.3(2)T, 12.3(1)B, and later, you no longer have to specify the **service config** command for the **boot host** or **boot network** command to be active.

If you specify both the **no service config** command and the **boot host** command, the router attempts to find the specified host configuration file.

The **service config** command can also be used without the **boot host** or **boot network** command. If you do not specify host or network configuration filenames, the router uses the default configuration files. The default network configuration file is *network-config*. The default host configuration file is *host-config*, where *host* is the hostname of the router. If the Cisco IOS software cannot resolve its hostname, the default host configuration file is *router-config*.

Loading a Configuration File Using rcp

The rcp software requires that a client send the remote username on each rcp request to the network server. If the server has a directory structure (such as UNIX systems), the rcp implementation searches for the configuration files starting in the directory associated with the remote username.

When you load a configuration file from a server using rcp, the Cisco IOS software sends the first valid username in the following list:

1. The username specified in the file-URL, if a username is specified.
2. The username set by the **ip rcmd remote-username** command, if the command is configured.
3. The router host name.

**Note**

An account for the username must be defined on the destination server. If the network administrator of the destination server did not establish an account for the username, this command will not execute successfully.

Loading a Configuration File Using FTP

The FTP protocol requires a client to send a remote username and password on each FTP request to a server. The username and password must be associated with an account on the FTP server. If the server has a directory structure, the configuration file or image copied from the directory associated with the username on the server. Refer to the documentation for your FTP server for more details.

When you load a configuration file from a server using FTP, the Cisco IOS software sends the first valid username in the following list:

1. The username specified in the **boot host** command, if a username is specified.
2. The username set by the **ip ftp username** command, if the command is configured.
3. Anonymous.

The router sends the first valid password in the following list:

1. The password specified in the **boot host** command, if a password is specified.
2. The password set by the **ip ftp password** command, if the command is configured.

3. The router forms a password username@routename.domain. The variable username is the username associated with the current session, routename is the configured host name, and domain is the domain of the router.

Examples

The following example sets the host filename to wilma-config at address 192.168.7.19:

```
Router(config)# boot host tftp://192.168.7.19/usr/local/tftpdir/wilma-config
Router(config)# service config
```

Related Commands

Command	Description
boot network	Specifies the remote location and filename of the network configuration file to be used at the next system boot (startup).
service config	Enables autoloading of configuration files from a network server.

boot network

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

boot network *remote-url*

no boot network *remote-url*

Syntax Description

<i>remote-url</i>	Location of the configuration file. Use the following syntax: <ul style="list-style-type: none"> ftp:[[[//<i>username[:password]@location]/directory]/filename]</i> rcp:[[[//<i>username@location]/directory]/filename]</i> tftp:[[[//<i>location]/directory]/filename]</i>
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Defaults

The default filename is network-config.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.

Usage Guidelines

This command instructs the system to “Boot using network configuration file *x*,” where *x* is the filename specified in the *remote-url* argument. This command specifies the remote location and filename of the network configuration file to be used at the next system startup, as well as the protocol to be used to obtain the file.

When booting from a network server, routers ignore routing information, static IP routes, and bridging information. As a result, intermediate routers are responsible for handling FTP, rcp, or TFTP requests. Before booting from a network server, verify that a server is available by using the **ping** command.

Use the **service config** command to enable the loading of the specified configuration file at reboot time. Without this command, the router ignores the **boot network** command and uses the configuration information in NVRAM. If the configuration information in NVRAM is invalid or missing, the **service config** command is enabled automatically.

The network server will attempt to load two configuration files from remote hosts. The first is the network configuration file containing commands that apply to all network servers on a network. Use the **boot network** command to identify the network configuration file. The second is the host configuration file containing commands that apply to one network server in particular. Use the **boot host** command to identify the host configuration file.

**Note**

In releases prior to Cisco IOS Release 12.3(2)T and 12.3(1)B, the **service config** command is used in conjunction with the **boot host** or **boot network** command. To enable the router to automatically configure the system from the file specified by the **boot host** or **boot network** command you must enter the **service config** command.

With Cisco IOS Release 12.3(2)T, 12.3(1)B, and later, you no longer have to specify the **service config** command for the **boot host** or **boot network** command to be active.

If you specify both the **no service config** command and the **boot host** command, the router attempts to find the specified host configuration file.

The **service config** command can also be used without the **boot host** or **boot network** command. If you do not specify host or network configuration filenames, the router uses the default configuration files. The default network configuration file is *network-conf*. The default host configuration file is *host-conf*, where *host* is the hostname of the router. If the Cisco IOS software cannot resolve its hostname, the default host configuration file is *router-conf*.

Loading a Configuration File Using rcp

The rcp software requires that a client send the remote username on each rcp request to the network server. If the server has a directory structure (such as UNIX systems), the rcp implementation searches for the configuration files starting in the directory associated with the remote username.

When you load a configuration file from a server using rcp, the Cisco IOS software sends the first valid username in the following list:

1. The username specified in the file-URL, if a username is specified.
2. The username set by the **ip rcmd remote-username** command, if the command is configured.
3. The router host name.

**Note**

An account for the username must be defined on the destination server. If the network administrator of the destination server did not establish an account for the username, this command will not execute successfully.

Loading a Configuration File Using FTP

The FTP protocol requires a client to send a remote username and password on each FTP request to a server. The username and password must be associated with an account on the FTP server. If the server has a directory structure, the configuration file or image copied from the directory associated with the username on the server. Refer to the documentation for your FTP server for more details.

When you load a configuration file from a server using FTP, the Cisco IOS software sends the first valid username in the following list:

1. The username specified in the **boot network** command, if a username is specified.
2. The username set by the **ip ftp username** command, if the command is configured.
3. Anonymous.

The router sends the first valid password in the following list:

1. The password specified in the **boot network** command, if a password is specified.
2. The password set by the **ip ftp password** command, if the command is configured.

3. The router forms a password username@routername.domain. The variable username is the username associated with the current session, routername is the configured host name, and domain is the domain of the router.

Examples

The following example changes the network configuration filename to bridge_9.1 and uses the default broadcast address:

```
Router(config)# boot network tftp:bridge_9.1
Router(config)# service config
```

The following example changes the network configuration filename to bridge_9.1, specifies that rcp is to be used as the transport mechanism, and gives 172.16.1.111 as the IP address of the server on which the network configuration file resides:

```
Router(config)# service config
Router(config)# boot network rcp://172.16.1.111/bridge_9.1
```

Related Commands

Command	Description
boot host	Specifies the remote location and filename of the host-specific configuration file to be used at the next system boot (startup).
service config	Enables autoloading of configuration files from a remote host.

clear parser cache

To clear the parse cache entries and hit/miss statistics stored for the Parser Cache feature, use the **clear parser cache** command in privileged EXEC mode.

clear parser cache

Syntax Description	This command has no arguments or keywords.
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Defaults	No default behavior or values.
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Command Modes	Privileged EXEC
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Command History	Release	Modification
	12.1(5)T	This command was introduced.

Usage Guidelines	<p>The Parser Cache feature optimizes the parsing (translation and execution) of Cisco IOS software configuration command lines by remembering how to parse recently encountered command lines, decreasing the time required to process large configuration files.</p> <p>The clear parser cache command will free the system memory used by the Parser Cache feature and will erase the hit/miss statistics stored for the output of the show parser statistics EXEC command. This command is only effective when the Parser Cache feature is enabled.</p>
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Examples	The following example shows the clearing of the parser cache:
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```
Router# show parser statistics

Last configuration file parsed:Number of Commands:1484, Time:820 ms

Parser cache:enabled, 1460 hits, 26 misses
Router# clear parser cache
Router# show parser statistics
Last configuration file parsed:Number of Commands:1484, Time:820 ms

Parser cache:enabled, 0 hits, 1 misses
```

Related Commands	Command	Description
	parser cache	Enables or disables the Parser Cache feature.
	show parser statistics	Displays statistics about the last configuration file parsed and the status of the Parser Cache feature.

configure terminal

To enter global configuration mode or to configure the system from the system memory, use the **configure terminal** privileged EXEC command.

configure terminal

Syntax Description This command has no arguments or keywords.

Command Modes Privileged EXEC

Command History	Release	Modification
	10.0	This command was introduced.

Usage Guidelines Use this command to enter global configuration mode. Note that commands in this mode are written to the running configuration file as soon as you enter them (using the Enter key or Carriage Return).

After you enter the **configure** command, the system prompt changes from <router-name># to <router-name>(config)#, indicating that the router is in global configuration mode. To leave global configuration mode and return to the privileged EXEC prompt, type **end** or press **Ctrl-Z**.

To view the changes to the configuration you have made, use the **more system:running-config** command or **show running-config** command in EXEC mode.

Examples In the following example, the user enters global configuration mode:

```
Router# configure
```

```
Configuring from terminal, memory, or network [terminal]?terminal
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
Router(config)#
```

Related Commands	Command	Description
	boot config	Specifies the device and filename of the configuration file from which the router configures itself during initialization (startup).
	copy system:running-config nvram:startup-config	Saves the running configuration as the startup configuration file.
	more system:running-config	Displays the currently running configuration.

configure memory

To configure the system from the system memory, use the **configure memory** privileged EXEC command.

configure memory

Syntax Description	This command has no arguments or keywords.
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Command Modes	Privileged EXEC
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Command History	Release	Modification
	10.0	This command was introduced.

Usage Guidelines	<p>On all platforms except Class A Flash file system platforms, this command executes the commands located in the configuration file in NVRAM (the “startup configuration file”).</p> <p>On Class A Flash file system platforms, if you specify the configure memory command, the router executes the commands pointed to by the CONFIG_FILE environment variable. The CONFIG_FILE environment variable specifies the location of the configuration file that the router uses to configure itself during initialization. The file can be located in NVRAM or any of the Flash file systems supported by the platform.</p> <p>When the CONFIG_FILE environment variable specifies NVRAM, the router executes the NVRAM configuration only if it is an entire configuration, not a distilled version. A distilled configuration is one that does not contain access lists.</p> <p>To view the contents of the CONFIG_FILE environment variable, use the show bootvar EXEC command. To modify the CONFIG_FILE environment variable, use the boot config command and then save your changes by issuing the copy system:running-config nvram:startup-config command.</p> <p>After you enter the configure terminal command, the system prompt changes from <router-name># to <router-name>(config)#, indicating that the router is in global configuration mode. To leave global configuration mode and return to the privileged EXEC prompt, use the end command.</p>
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Examples	In the following example, a router is configured from the configuration file in the memory location pointed to by the CONFIG_FILE environment variable:
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```
Router# configure memory
```

Related Commands	Command	Description
	boot config	Specifies the device and filename of the configuration file from which the router configures itself during initialization (startup).

Command	Description
copy system:running-config nvram:startup-config	Saves the running configuration as the startup configuration file.
show bootvar	Displays the contents of the BOOT environment variable, the name of the configuration file pointed to by the CONFIG_FILE environment variable, the contents of the BOOTLDR environment variable, and the configuration register setting.

configure overwrite-network

The **configure overwrite-network** has been replaced by the **copy** *{ftp-url | rcp-url | tftp-url}* **nvrn:startup-config** command. See the description of the **copy** command in the [“Cisco IOS File System Commands”](#) chapter for more information.

parser cache

To reenable the Cisco IOS software parser cache after disabling it, use the **parser cache** global configuration command. To disable the parser cache, use the **no** form of this command.

- parser cache**
- no parser cache**

Syntax Description This command has no arguments or keywords.

Defaults Parser cache is enabled by default.

Command Modes Global configuration

Command History	Release	Modification
	12.1(5)T	This command was introduced.

Usage Guidelines

The Parser Cache feature optimizes the parsing (translation and execution) of Cisco IOS software configuration command lines by remembering how to parse recently encountered command lines, decreasing the time required to process large configuration files.

The parser cache is enabled by default. However, if you wish to disable the parser cache, you may do so using the **no parser cache** command in global configuration mode. To reenable the parser cache after it has been disabled, use the **parser cache** command.

When the **no parser cache** is issued, the command line appears in the running configuration file. However, if the parser cache is reenabled, no command line appears in the running configuration file.

Examples

In the following example, the Cisco IOS software Parser Cache feature is disabled:

```
Router(config)# no parser cache
```

Related Commands	Command	Description
	clear parser cache	Clears the parse cache entries and hit/miss statistics stored for the Parser Cache feature.
	show parser statistics	Displays statistics about the last configuration file parsed and the status of the Parser Cache feature.

service compress-config

To compress startup configuration files, use the **service compress-config** global configuration command. To disable compression, use the **no** form of this command.

service compress-config

no service compress-config

Syntax Description	This command has no arguments or keywords.
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Defaults	Disabled
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Command Modes	Global configuration
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Command History	Release	Modification
	10.0	This command was introduced.

Usage Guidelines	<p>After you configure the service compress-config command, the router will compress configuration files every time you save a configuration to the startup configuration. For example, when you enter the copy system:running-config nvram:startup-config command, the running configuration will be compressed before storage in NVRAM.</p>
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If the file compression succeeds, the following message is displayed:

```
Compressing configuration from configuration-size to compressed-size
[OK]
```

If the boot ROMs do not recognize a compressed configuration, the following message is displayed:

```
Boot ROMs do not support NVRAM compression Config NOT written to NVRAM
```

If the file compression fails, the following message is displayed:

```
Error trying to compress nvram
```

One way to determine whether a configuration file will be compressed enough to fit into NVRAM is to use a text editor to enter the configuration, then use the UNIX **compress** command to check the compressed size. To get a closer approximation of the compression ratio, use the UNIX **compress -b12** command.

Once the configuration file has been compressed, the router functions normally. At boot time, the system recognizes that the configuration file is compressed, uncompresses it, and proceeds normally. A **partition nvram:startup-config** command uncompresses the configuration before displaying it.

To disable compression of the configuration file, enter configuration mode and specify the **no service compress-config** command. Then, exit global configuration mode and enter the **copy system:running-config nvram:startup-config** command. The router displays an OK message if it is

able to write the uncompressed configuration to NVRAM. Otherwise, the router displays an error message indicating that the configuration is too large to store. If the configuration file is larger than the physical NVRAM, the following message is displayed:

```
##Configuration too large to fit uncompressed in NVRAM Truncate configuration? [confirm]
```

When the file is truncated, commands at the end of the file are erased. Therefore, you will lose part of your configuration. To truncate and save the configuration, type **Y**. To not truncate and not save the configuration, type **N**.

Examples

In the following example, the configuration file is compressed:

```
Router# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)# service compress-config
Router(config)# end
Router#
%SYS-5-CONFIG_I: Configured from console by console
Router# copy system:running-config nvram:startup-config
Building configuration...
Compressing configuration from 1179 bytes to 674 bytes
[OK]
```

Related Commands

Command	Description
partition nvram:startup-config	Separates Flash memory into partitions on Class B file system platforms.

service config

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

service config

no service config

Syntax Description This command has no arguments or keywords.

Defaults Disabled, except on systems without NVRAM or with invalid or incomplete information in NVRAM. In these cases, autoloading of configuration files from a network server is enabled automatically.

Command Modes Global configuration

Command History	Release	Modification
	10.0	This command was introduced.

Usage Guidelines Usually, the **service config** command is used in conjunction with the **boot host** or **boot network** command. You must enter the **service config** command to enable the router to automatically configure the system from the file specified by the **boot host** or **boot network** command.

With IOS software versions 12.3(2)T, 12.3(1)B, and later, you no longer have to specify the **service config** command for the **boot host** or **boot network** command to be active.

If you specify both the **no service config** command and the **boot host** command, the router attempts to find the specified host configuration file. The **service config** command can also be used without the **boot host** or **boot network** command. If you do not specify host or network configuration filenames, the router uses the default configuration files. The default network configuration file is network-config. The default host configuration file is host-config, where host is the hostname of the router. If the Cisco IOS software cannot resolve its hostname, the default host configuration file is router-config.

Examples In the following example, a router is configured to autoloading the default network and host configuration files. Because no **boot host** or **boot network** commands are specified, the router uses the broadcast address to request the files from a TFTP server.

```
Router(config)# service config
```

The following example changes the network configuration filename to bridge_9.1, specifies that rcp is to be used as the transport mechanism, and gives 172.16.1.111 as the IP address of the server on which the network configuration file resides:

```
Router(config)# service config
Router(config)# boot network rcp://172.16.1.111/bridge_9.1
```

Related Commands

Command	Description
boot host	Changes the default name of the host configuration filename from which to load configuration commands.
boot network	Changes the default name of the network configuration file from which to load configuration commands.

show configuration

The **show configuration** command has been replaced by the **show startup-config** and **more nvram:startup-config** commands. See the description of the **more** command in the “Cisco IOS File System Commands” chapter for more information.

show derived-config

To display the composite results of all the configuration commands that apply to an interface, including commands that come from sources such as static templates, dynamic templates, dialer interfaces, and authentication, authorization, and accounting (AAA) per-user attributes, use the **show derived-config** command in privileged EXEC mode.

show derived-config [*interface type number*]

Syntax Description	interface type number (Optional) Displays the derived configuration for a specific interface. If you use the interface keyword, you must specify the interface type and the interface number (for example, interface ethernet 0).
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Command Modes	Privileged EXEC
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Command History	<table><tr><th>Release</th><th>Modification</th></tr><tr><td>12.1</td><td>This command was introduced.</td></tr></table>	Release	Modification	12.1	This command was introduced.
Release	Modification				
12.1	This command was introduced.				

Usage Guidelines

Configuration commands can be applied to an interface from sources such as static templates, dynamic templates bound by resource pooling, dialer interfaces, AAA per-user attributes and the configuration of the physical interface. The **show derived-config** command displays all the commands that apply to an interface.

The output for the **show derived-config** command is nearly identical to that of the **show running-config** command. It differs when the configuration for an interface is derived from a template, a dialer interface, or some per-user configuration. In those cases, the commands derived from the template, dialer interface, and so on, will be displayed for the affected interface.

If the same command is configured differently in two different sources that apply to the same interface, the command coming from the source that has the highest precedence will appear in the display.

Examples

The following examples show sample output for the **show running-config** and **show derived-config** commands for serial interface 0:23 and dialer interface 0. The output of the **show running-config** and **show derived-config** commands is the same for dialer interface 0 because none of the commands that apply to that interface are derived from any sources other than the configuration of the dialer interface. The output for the **show running-config** and **show derived-config** commands for serial interface 0:23 differs because some of the commands that apply to serial interface 0:23 come from dialer interface 0.

```
Router# show running-config interface Serial0:23

Building configuration...

Current configuration :296 bytes
!
interface Serial0:23
  description PRI to ADTRAN (#4444150)
  ip unnumbered Loopback0
  encapsulation ppp
```



```
dialer rotary-group 0
isdn switch-type primary-dms100
isdn incoming-voice modem
isdn calling-number 4444150
peer default ip address pool old_pool
end
```

Router# **show running-config interface Dialer0**

Building configuration...

```
Current configuration :257 bytes
!
interface Dialer0
  description Dialin Users
  ip unnumbered Loopback0
  no ip proxy-arp
  encapsulation ppp
  dialer in-band
  dialer idle-timeout 30
  dialer-group 1
  peer default ip address pool new_pool
  ppp authentication pap chap callin
end
```

Router# **show derived-config interface Serial0:23**

Building configuration...

```
Derived configuration :332 bytes
!
interface Serial0:23
  description PRI to ADTRAN (#4444150)
  ip unnumbered Loopback0
  encapsulation ppp
  dialer rotary-group 0
  isdn switch-type primary-dms100
  isdn incoming-voice modem
  isdn calling-number 4444150
  peer default ip address pool new_pool
  ppp authentication pap chap callin
end
```

Router# **show derived-config interface Dialer0**

Building configuration...

```
Derived configuration :257 bytes
!
interface Dialer0
  description Dialin Users
  ip unnumbered Loopback0
  no ip proxy-arp
  encapsulation ppp
  dialer in-band
  dialer idle-timeout 30
  dialer-group 1
  peer default ip address pool new_pool
  ppp authentication pap chap callin
end
```

■ show derived-config

Related Commands

Command	Description
show running-config	Displays the contents of the currently running configuration file or the configuration for a specific interface.

show file

The **show file** command has been replaced by the **more** command. See the description of the **more** command in the “[Cisco IOS File System Commands](#)” chapter for more information.

show parser statistics

To displays statistics about the last configuration file parsed and the status of the Parser Cache feature, use the show parser statistics command in privileged EXEC mode.

show parser statistics

Syntax Description	This command has no arguments or keywords.
---------------------------	--

Defaults	No default behavior or values.
-----------------	--------------------------------

Command Modes	Privileged EXEC
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Command History	Release	Modification
	12.1(5)T	This command was introduced.

Usage Guidelines	<p>The show parser statistics command displays two sets of data:</p> <ul style="list-style-type: none">• The number of commands in the configuration file that was last copied into the running configuration, and the time it took for the system to parse them (a configuration file can be loaded into the running configuration at system startup, or by issuing commands such as the copy source running-config command).• The status of the Parser Cache feature (enabled or disabled) and the number of command matches (indicated by hits/misses) since the system was started or since the parser cache was cleared.
-------------------------	--

The Parser Cache feature optimizes the parsing (translation and execution) of Cisco IOS software configuration command lines by remembering how to parse recently encountered command lines, decreasing the time required to process large configuration files.

Examples	The following example shows sample output from the show parser statistics command:
-----------------	---

```
Router# show parser statistics
```

```
Last configuration file parsed: Number of Commands: 1484, Time: 1272 ms
```

```
Parser cache: disabled, 0 hits, 2 misses
```

In this example, the Parser Cache feature is disabled, but shows the hit/miss statistics for the two commands issued while the parser cache was last enabled.

Table 33 describes the key output fields:

Table 33 *show parser statistics Output Fields*

Last configuration file parsed:	Displays statistics on the last configuration file copied into the running configuration (at startup or using the copy command).
Number of commands:	The number of command lines in the last configuration file parsed.
Time:	Time (in milliseconds) taken for the system to load the last configuration file.
Parser cache:	Displays whether the Parser Cache feature is enabled or disabled, and the hit/miss statistics related to the feature. Statistics are stored since the initialization of the system, or since the last time the parser cache was cleared.
hits	Number of commands the parser cache was able to parse more efficiently by matching them to similar commands executed previously.
misses	Number of commands the parser cache was unable to match to previously executed commands. The performance enhancement provided by the Parser Cache feature cannot be applied to unmatched commands.

In the following example the **show parser statistics** command is used to compare the parse-time of a large configuration file with the Parser Cache feature disabled and enabled. In this example, a configuration file with 1484 access list commands is loaded into the running configuration.

```
Router# configure terminal
!parser cache is disabled
Router(config)# no parser cache
!configuration file is loaded into the running configuration
Router# copy slot0:acl_list running-config
. . .
Router# show parser statistics
Last configuration file parsed: Number of Commands: 1484, Time: 1272 ms

Parser cache: disabled, 0 hits, 2 misses

!the parser cache is reenabled
Router(config)# parser cache
!configuration file is loaded into the running configuration
Router# copy slot0:acl_list running-config
. . .
Router# show parser statistics
Last configuration file parsed: Number of Commands: 1484, Time: 820 ms

Parser cache: enabled, 1460 hits, 26 misses
```

These results show an improvement to the load time for the same configuration file from 1272 milliseconds (ms) to 820 ms when the Parser Cache feature was enabled. As indicated in the “hits” field of the **show** command output, 1460 commands were able to be parsed more efficiently by the parser cache.

show parser statistics

Related Commands

Command	Description
clear parser cache	Clears the parse cache entries and hit/miss statistics stored for the Parser Cache feature.
parser cache	Enables or disables the Parser Cache feature.

show running-config

To display the contents of the currently running configuration file or the configuration for a specific class map, interface, map class, policy map, or virtual circuit (VC) class, use the **show running-config** command in privileged EXEC mode.

show running-config [*options*]

Syntax Description	<i>options</i>	(Optional) One of the following options can be entered with the command: <ul style="list-style-type: none">• brief—Displays the configuration without certification data.• class-map <i>name</i>—Displays class map information. The linenum keyword can be used with the class-map <i>name</i> option.• full—Displays the full configuration.• interface <i>type number</i>—Displays interface-specific configuration information. If you use the interface keyword, you must specify the interface type and the interface number (for example, interface ethernet 0). Common interfaces include async, ethernet, fastEthernet, group-async, loopback, null, serial, and virtual-template. Use the show run interface ? command to determine the interfaces available on your system.• linenum—Displays line numbers in the output. The brief or full keyword can be used with the linenum keyword.• map-class—Displays map class information. This option is described separately; see the show running-config map-class command page.• policy-map <i>name</i>—Displays policy map information. The linenum keyword can be used with the policy-map <i>name</i> option.• vc-class <i>name</i>—Displays VC class information (display available only on limited routers such as the Cisco 7500 series). The linenum keyword can be used with the vc-class <i>name</i> option.• —Allows addition of output modifiers and is available with all the keywords for this command.
Defaults	The show running-config command without any arguments or keywords displays the entire contents of the running configuration file.	
Command Modes	Privileged EXEC	
Command History	Release	Modification
	11.0	This command was introduced.
	12.0	This command was replaced by the more system:running-config command.

12.0(1)T	The output modifier (l) was added.
12.2(4)T	The linenum keyword was added.

Usage Guidelines

The **show running-config** command is technically a command alias of the **more system:running-config** command. Although **more** commands are recommended (due to their uniform structure across platforms and their expandable syntax), the **show running-config** command remains enabled to accommodate its widespread use, and to allow typing shortcuts such as **show run**.

The **show running-config interface** command is useful when there are multiple interfaces and you want to look at the configuration of a specific interface.

The **linenum** keyword causes line numbers to be displayed in the output. This option is useful for identifying a particular portion of a very large configuration.

Examples

The following example shows the configuration for serial interface 1:

```
Router# show running-config interface serial 1
```

```
Building configuration...
```

```
Current configuration:
```

```
!
interface Serial1
 no ip address
 no ip directed-broadcast
 no ip route-cache
 no ip mroute-cache
 shutdown
end
```

The following example shows the configuration for Ethernet interface 0/0. Line numbers are displayed in the output.

```
Router# show running-config interface ethernet 0/0 linenum
```

```
Building configuration...
```

```
Current configuration : 104 bytes
```

```
1 : !
2 : interface Ethernet0/0
3 : ip address 10.4.2.63 255.255.255.0
4 : no ip route-cache
5 : no ip mroute-cache
6 : end
```

The following example shows how to set line numbers in the command output, and then use the output modifier to start the display at line 10:

```
Router# show running-config linenum | begin 10
```

```
10 : boot-start-marker
11 : boot-end-marker
12 : !
13 : no logging buffered
14 : enable password #####
15 : !
16 : spe 1/0 1/7
17 : firmware location bootflash:mica-modem-pw.2.7.1.0.bin
```



```

18 : !
19 : !
20 : resource-pool disable
21 : !
22 : no aaa new-model
23 : ip subnet-zero
24 : ip domain name cisco.com
25 : ip name-server 172.16.11.48
26 : ip name-server 172.16.2.133
27 : !
28 : !
29 : isdn switch-type primary-5ess
30 : !
.
.
.
126 : end

```

Related Commands

Command	Description
boot config	Specifies the device and filename of the configuration file from which the router configures itself during initialization (startup).
configure terminal	Enters global configuration mode.
copy running-config startup-config	Copies the running configuration to the startup configuration. (Command alias for the copy system:running-config nvram:startup-config command.)
show running-config map-class	Displays only map-class configuration information from the running configuration file.
show startup-config	Displays the contents of NVRAM (if present and valid) or displays the configuration file pointed to by the CONFIG_FILE environment variable. (Command alias for the more:nvram startup-config command.)

show running-config map-class

To display only map-class configuration information from the running configuration file, use the **show running-config map-class** privileged EXEC command.

```
show running-config map-class [atm [map-class-name] | dialer [map-class-name]] frame-relay [map-class-name]
```

Syntax Description	atm	(Optional) Displays only ATM map-class configuration lines.
	dialer	(Optional) Displays only dialer map-class configuration lines.
	frame-relay	(Optional) Displays only Frame Relay map-class configuration lines.
	map-class-name	(Optional) Displays only configuration lines for the specified map-class.

Defaults Displays all map-class configuration in the running configuration file.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.1	The map-class extension to the show running-config command was introduced to show only lines pertaining to dialer or Frame Relay map classes.
	12.1(2)T	The atm , dialer , and frame-relay keywords and <i>map-class-name</i> argument were introduced.

Usage Guidelines Use the **show running-config map-class** command to display the following information from the running configuration file:

- All map classes configured on the router .
- Map classes configured specifically for ATM, Frame Relay, or dialer .
- A specific ATM, Frame Relay, or dialer map class.

Examples The following output examples assume that a user has configured 2 Frame Relay map classes named "cir60" and "cir70," 1 ATM map class named "vc100," and 1 dialer map class named "dialer1."

All Map Classes Configured on the Router Example

```
Router# show running-config map-class

Building configuration...
Current configuration:
!
map-class frame-relay cir60
  frame-relay bc 16000
  frame-relay adaptive-shaping becn
```

```
!  
map-class frame-relay cir70  
  no frame-relay adaptive-shaping  
  frame-relay priority-group 2  
!  
map-class atm vc100  
  atm aal5mux  
!  
map-class dialer dialer1  
  dialer idle-timeout 10  
end
```

All Frame Relay Map Classes Example

Router# **show running-config map-class frame-relay**

```
Building configuration...  
Current configuration:  
!  
map-class frame-relay cir60  
  frame-relay bc 16000  
  frame-relay adaptive-shaping becn  
!  
map-class frame-relay cir70  
  no frame-relay adaptive-shaping  
  frame-relay priority-group 2  
end
```

A Specific Map Class Example

Router# **show running-config map-class frame-relay cir60**

```
Building configuration...  
Current configuration:  
!  
map-class frame-relay cir60  
  frame-relay bc 16000  
  frame-relay adaptive-shaping becn  
end
```

Related Commands	Command	Description
	map-class atm	Specifies the ATM map class for an SVC.
	map-class dialer	Defines a class of shared configuration parameters associated with the dialer map command for outgoing calls from an ISDN interface and for PPP callback.
	map-class frame-relay	Specifies a map class to define QoS values for a Frame Relay VC.
	more	Displays contents of the currently running configuration file (equivalent to the
	system:running-config	show running-config command.)

show startup-config

To display the contents of the configuration file that will be used at the next system startup, use the **show startup-config** or **more nvram:startup-config** command in Privileged EXEC mode.

```
show startup-config [l {begin | exclude | include} string]
```

Syntax Description	begin <i>string</i>	(Optional) Begin the output from the first line to match the specified string. The pipe () is required.
	exclude <i>string</i>	(Optional) Exclude from the output any line that matches the specified string. The pipe () is required.
	include <i>string</i>	(Optional) Displays only lines that match the specified string. The pipe () is required.

Defaults	None.
----------	-------

Command Modes	Privileged EXEC
---------------	-----------------

Command History	Release	Modification
	11.0	This command was introduced.

Usage Guidelines

The **show startup-config** command displays the contents of NVRAM (if present and valid) or displays the configuration file pointed to by the CONFIG_FILE environment variable.

As with all **show** commands, you can specify the output you are interested in more precisely using the pipe (|) option combined with the **begin**, **include**, and **exclude** keywords. For more information on these options, see the documentation of the **more begin**, **more exclude**, **more include**, **show begin**, **show exclude**, and **show include** commands.

In Cisco IOS Release 12.0 the **show startup-config** command was deprecated in favor of the **more nvram:startup-config** command. Although **more** commands are recommended (due to their uniform structure across platforms and their expandable syntax), the **show startup-config** command remains enabled to accommodate its widespread use, and to allow typing shortcuts such as **show start**.

Related Commands	Command	Description
	boot config	Specifies the device and filename of the configuration file from which the router configures itself during initialization (startup).
	copy running-config startup-config	Copies the running configuration to the startup configuration. (Command alias for the copy system:running-config nvram:startup-config command.)