



Command-Line Interface

This chapter provides a summary of the commands included in Cisco Content Routing software, Release 1.1. The command summary tables are grouped alphabetically in categories: user level (EXEC) commands, privileged level (EXEC) commands, interface configuration commands, global configuration commands, domain configuration commands, client list configuration commands, and show (EXEC) commands.



Note

For more detailed information about each command, refer to [Appendix C, “Cisco Content Routing Software, Release 1.1 Commands.”](#)

EXEC Mode

To execute a command, enter the command at the EXEC system prompt and press the **Return** key.

There are two EXEC prompt levels: privileged and user. The **enable** and **disable** commands switch between the two levels. The user level EXEC command line is available to users if they enter a valid password. The user level EXEC commands are a subset of the privileged level EXEC commands. The user level EXEC prompt is the host name followed by a greater-than sign (>). The prompt for the privileged level EXEC command line is the pound sign (#). In the following example, a user accesses the privileged level EXEC command line from the user level.

```
Console> enable
Console#
```

Use the **Delete** or **Backspace** key sequences to edit commands when you type commands at the EXEC prompt.

As a shortcut, you can abbreviate commands to the fewest letters that make them unique. For example, the letters **sho** can be entered for the **show** command.

Certain EXEC commands display multiple screens with the following prompt at the bottom of the screen:

```
--More--
```

Press the **Spacebar** to continue the output, or press **Return** to display the next line. Press any other key to return to the prompt. Also, at the --More-- prompt, you can enter a ? to display the help message.

To leave EXEC mode, use the **exit** command at the system prompt:

```
Console# exit
```

The EXEC commands are listed and described in the [“EXEC Commands” section on page B-4](#).

Global Configuration Mode

To enter global configuration mode, use the **configure EXEC** command. You must be in global configuration mode to enter global configuration commands.

```
Console# configure  
Console(config)#
```

To exit global configuration mode, use the **end** global configuration command:

```
Console(config)# end
```

You can also exit global configuration mode by entering the **exit** command or pressing **Ctrl-Z**.

The global configuration commands are listed and described in the [“Global Configuration Commands” section on page B-7](#).

Interface Configuration Mode

To enter interface configuration mode, from the global configuration mode prompt, enter the number of the interface you wish to configure:

```
Console(config)# interface ethernet 0  
Console(config-if)#
```

The interface configuration commands are listed and described in the [“Interface Configuration Commands” section on page B-9](#).

To exit interface configuration mode, enter **exit** to return to global configuration mode:

```
Console(config-if)# exit  
Console(config)#
```

Domain Configuration Mode

To enter domain configuration mode, from the global configuration mode prompt, enter the **boomerang dns domain domain-name** command.

```
Console(config)# boomerang dns domain www.foo.com  
Console(config-domain)#
```

The domain configuration commands are listed and described in the [“Domain Configuration Commands” section on page B-10](#).

To exit domain configuration mode, enter **exit** to return to global configuration mode:

```
Console(config-domain)# exit  
Console(config)#
```

Client List Configuration Mode

To enter client list configuration mode, from the global configuration mode prompt, enter the **boomerang client-list** *list-name* command. For example:

```
Console(config)# boomerang client-list List_C
Console(config-client-lis)#
```

The client list configuration command is described in the “[Client List Configuration Command](#)” section on page B-11.

To exit client list configuration mode, enter **exit** to return to global configuration mode:

```
Console(config-client-lis)# exit
Console(config)#
```

Check Command Syntax

The user interface provides error isolation in the form of an error indicator, a caret symbol (^). The ^ symbol appears at the point in the command string where you have entered an incorrect command, keyword, or argument.

In the following example, suppose you want to set the clock. Use context-sensitive help to check the syntax for setting the clock.

An example of a mistake is:

```
Console# clock set 1222
                ^
%Invalid input detected at '^' marker.
Console# clock ?
set          Set the time and date
Console# clock
```

The help output shows that the **set** keyword is required. Check the syntax for entering the time:

```
Console# clock set ?
hh:mm:ss Current time
Console# clock set
```

Enter the current time:

```
Console# clock set 13:32:00
% Incomplete command.
```

The system indicates that you need to provide additional arguments to complete the command. Press the **Up Arrow** to automatically repeat the previous command entry. Then add a space and question mark (?) to reveal the additional arguments:

```
Console# clock set 13:32:00 ?
<1-31> Day of the month
January Month of the year
```

Now you can complete the command entry:

```
Console# clock set 13:32:00 23 February 97
                ^
%Invalid input detected at '^' marker.
```

The caret symbol (^) and help response indicate an error at 97. To list the correct syntax, enter the command up to the point where the error occurred and then enter a question mark (?):

```
Console# clock set 13:32:00 23 February ?
<1993-2035> Year
Console# clock set 13:32:00 23 February
```

Enter the year using the correct syntax and press **Return** to execute the command:

```
Console# clock set 13:32:00 23 February 2001
```

System Help

You can obtain help when you enter commands by using the following methods:

- For a brief description of the context-sensitive help system, enter **help**.
- For a list of all commands for a command mode, enter a question mark (?) at the system prompt.
- To obtain a list of commands that start with a particular character set, enter an abbreviated command immediately followed by a question mark (?).

```
Console# cl?
clear clock
```

- To list the command keywords or arguments, enter a question mark (?) in place of a keyword or argument on the command line:

```
Console# clock ?
clear Clear the current time from the battery-backed clock
save Save the current time into the battery-backed clock
set Set the local time and date
```

Save Configuration Changes

To avoid losing new configurations, save them to NVRAM using the **copy** or **write** commands, as shown in the following example:

```
Console# copy running-config startup-config
```

or

```
Console# write
```

See the command description for the **copy running-config startup-config** command for more information on the running versus saved configuration modes.

EXEC Commands

The EXEC commands are entered in the EXEC mode. User level EXEC commands are listed in [Table B-1](#). Privileged level EXEC commands are listed in [Table B-2](#).

Table B-1 Content Routing Software, Release 1.1 User Level EXEC Commands

User EXEC Commands	Syntax	Description
cd	cd { <i>directoryname</i> }	Changes directory
cpfile	cpfile <i>oldfilename newfilename</i>	Copies dosfs files
del	del <i>filename</i>	Removes file
deltree	deltree <i>directory</i>	Removes directory recursively
dir	dir [<i>directory</i>]	Displays long list files in directory
disable	disable	Turns off privileged EXEC commands
enable	enable	Turns on privileged EXEC commands
exit	exit	Exits from the EXEC command line
help	help	Assistance for command-line interface
lls	lls [<i>directory</i>]	Displays directory files in long list format
ls	ls [<i>directory</i>]	Displays files in directory
mkdir	mkdir <i>directory</i>	Makes directory
mkfile	mkfile <i>filename</i>	Makes file (for testing)
ping	ping { <i>hostname</i> <i>ip-address</i> }	Sends echo packets
pwd	pwd	Present working directory
rename	rename <i>sourcefile destinationfile</i>	Renames a file (pathname)
rmdir	rmdir <i>directory</i>	Removes directory
show	See the “ show Commands ” section on page B-11 .	See the “ show Commands ” section on page B-11 .
type	type <i>filename</i>	Displays a file
whoami	whoami	Displays current user’s name

Table B-2 Content Routing Software, Release 1.1 Privileged Level EXEC Commands

Privileged EXEC Commands	Syntax	Description
boomerang database	boomerang database { dump restore }	Generates and restores a database file of recent DNS race winners
boomerang send-packet	boomerang send-packet { tcp udp } <i>dest-port source-port</i> { <i>dest-ip-address</i> <i>dest-hostname</i> } { <i>source-ip-address</i> <i>source-hostname</i> }	Sends test packets to determine whether or not a network allows traffic with boomerang-altered source IP addresses
cd	cd { <i>directoryname</i> }	Changes directory
check	check superuser passwords	Checks whether superuser accounts are password-protected
clear	clear { boomerang interface serial <i>number</i> logging statistics { all boomerang history ip } running services tcp transaction-logs transaction-log }	Resets functions

Table B-2 Content Routing Software, Release 1.1 Privileged Level EXEC Commands (continued)

Privileged EXEC Commands	Syntax	Description
clock	clock { clear save set <i>hh:mm:ss day month year</i> }	Sets system clock
configure	configure	Enters global configuration mode
copy	copy { disk { flash <i>imagename</i> startup-config <i>filename</i> } flash { disk <i>imagename</i> } running-config { disk <i>filename</i> startup-config tftp } startup-config { disk <i>filename</i> tftp } tech-support { disk <i>filename</i> tftp } tftp { disk flash } }	Copies configuration or image data
cpfile	cpfile <i>oldfilename newfilename</i>	Copies dosfs files
debug	debug	Debugging functions
del	del <i>filename</i>	Removes file
deltree	deltree <i>directory</i>	Removes directory recursively
dir	dir [<i>directory</i>]	Displays long list files in directory
disable	disable	Turns off privileged EXEC commands
disk	disk { erase-all-partitions <i>devname</i> manufacture <i>devname</i> partition <i>devname</i> prepare <i>devname</i> }	Disk management commands
dosfs	dosfs { check <i>volname</i> [force verbose [force]] format <i>volname</i> label <i>volname vol-label</i> mount <i>volname</i> { rdonly rdwr } repair { automatic interactive } <i>volname</i> [force verbose [force]] sync <i>syncdevice</i> unmount <i>volname</i> }	DOS file system commands
enable	enable	Turns on privileged EXEC commands
exit	exit	Exits from the EXEC command line
help	help	Assistance for command line-interface
install	install <i>paxfilename</i>	Installs a new version of the system software
lls	lls [<i>directory</i>]	Displays directory files in long list format
ls	ls [<i>directory</i>]	Displays files in directory
mkdir	mkdir <i>directory</i>	Makes directory
mkfile	mkfile <i>filename</i>	Makes file (for testing)
no debug	no debug	Disables debugging functions
ntpdate	ntpdate { <i>hostname</i> <i>ip-address</i> }	Sets the Network Time Protocol (NTP) server name
ping	ping { <i>hostname</i> <i>ip-address</i> }	Sends echo packets
pwd	pwd	Present working directory
reload	reload	Halts and performs a cold restart
rename	rename <i>sourcefile destinationfile</i>	Renames a file (pathname)

Table B-2 Content Routing Software, Release 1.1 Privileged Level EXEC Commands (continued)

Privileged EXEC Commands	Syntax	Description
rmdir	rmdir <i>directory</i>	Removes directory
tcsh	The tcsh command is for Cisco Systems internal use only.	Shell for TCL
terminal	terminal monitor	Current terminal commands
transaction-log force	transaction-log force { archive export }	Forces the immediate creation of a transaction log.
type	type <i>filename</i>	Displays a file
undebug	undebug	Disables debugging functions (see also debug)
whoami	whoami	Displays current user's name
write	write [erase memory terminal]	Writes running configuration to memory or terminal

Global Configuration Commands

The Content Routing software global configuration commands are entered in global configuration mode. The global configuration commands are listed in [Table B-3](#).

Table B-3 Content Routing Software, Release 1.1 Global Configuration Commands

Global Configuration Command	Syntax	Description
boomerang annealing	boomerang annealing past-winners <i>win-number</i> agent-count <i>agent-number</i>	Sets annealing parameters
boomerang client-list	boomerang client-list <i>list-name</i>	Enters client list configuration mode
boomerang dns	boomerang dns enable { direct-mode wccp-mode } boomerang dns domain <i>domain-name</i>	Enables boomerang on the Content Router Enters domain configuration mode for the specified domain
boomerang timing	boomerang timing decay <i>decayvalue</i> sample-freq <i>samp-freqvalue</i>	Sets boomerang timing parameters
clock timezone	clock timezone { <i>zone hours</i> } [<i>minutes</i>]	Configures time-of-day clock
cron	cron { del-tab <i>entryid</i> file <i>tabfile</i> save-tab tab-entry <i>tabentry</i> }	Cron commands
end	end	Exits configuration mode
exception debug	exception debug	Exception handling
exec-timeout	exec-timeout <i>timeout</i>	Configures EXEC mode timeout interval
exit	exit	Exits configuration mode
help	help	Assistance for command-line interface

Table B-3 Content Routing Software, Release 1.1 Global Configuration Commands (continued)

Global Configuration Command	Syntax	Description
hostname	hostname <i>name</i>	Configures the Content Router network name
inetd	inetd { enable <i>service</i> }	Configures inetd
interface	interface ethernet <i>number</i>	Configures an Ethernet interface
ip	ip { default-gateway <i>ipaddress</i> domain-name <i>domainname</i> name-server <i>ipaddress</i> route <i>destaddr netmask gateway</i> }	Internet Protocol configuration commands
logging	logging { <i>hostname</i> <i>ip-address</i> console <i>loglevels</i> disk <i>filename</i> <i>loglevels</i> event-export <i>events</i> <i>loglevels</i> <i>facility</i> facility <i>facility</i> on recycle <i>size</i> trap <i>loglevels</i> }	Configures system logging (syslog)
no	no <i>command</i>	Negates a global configuration command or sets its defaults
ntp	ntp server { <i>hostname</i> <i>ip-address</i> }	Configures Network Time Protocol (NTP)
snmp-server community	snmp-server community <i>string</i>	Enables SNMP; sets community string
snmp-server contact	snmp-server contact <i>line</i>	Text for MIB object sysContact
snmp-server enable traps	snmp-server enable traps	Enables SNMP traps
snmp-server host	snmp-server host { <i>hostname</i> <i>ip-address</i> } <i>communitystring</i>	Specifies SNMP trap host
snmp-server location	snmp-server location <i>line</i>	Text for MIB object sysLocation
tcp	tcp { client-mss <i>maxsegsize</i> client-receive-buffer <i>kbytes</i> client-rw-timeout <i>seconds</i> client-satellite client-send-buffer <i>kbytes</i> cwnd-base <i>factor</i> init-ssthresh <i>value</i> keepalive-probe-cnt <i>count</i> keepalive-probe-interval <i>seconds</i> keepalive-timeout <i>seconds</i> listen-queue <i>length</i> server-mss <i>maxsegsize</i> server-receive-buffer <i>kbytes</i> server-rw-timeout <i>seconds</i> server-satellite server-send-buffer <i>kbytes</i> }	Configures TCP parameters
terminal	terminal length <i>lines</i>	Current terminal commands
tftp-server	tftp-server dir <i>directory</i>	Configures TFTP server
transaction-logs	transaction-logs { archive { files <i>maxnumfiles</i> interval { <i>seconds</i> every-day { at <i>time</i> every <i>hour</i> } every-hour { at <i>minute</i> every <i>interval</i> } every-week [on <i>days</i> [at <i>time</i>]] } enable export { enable ftp-server { <i>hostname</i> <i>servipaddr</i> } <i>login</i> <i>passw</i> <i>directory</i> } interval { <i>minutes</i> / every-day { at <i>time</i> every <i>hour</i> } every-hour { at <i>minute</i> every <i>interval</i> } every-week [on <i>days</i> [at <i>time</i>]] } } file-marker sanitize }	Configures transaction logging

Table B-3 Content Routing Software, Release 1.1 Global Configuration Commands (continued)

Global Configuration Command	Syntax	Description
trusted-host	trusted-host { <i>hostname</i> <i>ip-address</i> domain-lookup }	Configures a trusted host
user add	user add <i>username</i> [password [0 1] <i>password</i>] [capability [admin-access ftp-access http-access telnet-access]] [uid <i>userid</i>]	Adds user accounts
user delete	user delete { username <i>username</i> uid <i>userid</i> }	Deletes user accounts
user modify	user modify { uid <i>number</i> username <i>name</i> } {[add-capability [admin-access ftp-access http-access telnet-access]] [del-capability [admin-access ftp-access http-access telnet-access]] [password [0 1] <i>password</i>]}	Modifies user accounts
wccp dns-boomerang router-list-num	wccp dns-boomerang router-list-num <i>number</i> [I2-redirect] [password <i>passw</i>] [weight <i>percentage</i>]	Configures a router list for a Content Router in WCCP mode
wccp flow-redirect	wccp flow-redirect enable	Redirects moved flows
wccp port-list	wccp port-list <i>listnum</i> <i>portnum</i>	Port list for use in WCCP services
wccp router-list	wccp router-list <i>number</i> <i>ip-address</i>	Router list for use in WCCP services
wccp shutdown	wccp shutdown max-wait <i>seconds</i>	WCCP shutdown parameter
wccp slow-start	wccp slow-start enable	Accepts load in slow-start mode
wccp version	wccp version 2	Enables WCCP Version 2

Interface Configuration Commands

The Content Routing software interface configuration commands are entered in interface configuration mode.

To enter interface configuration mode, from global configuration mode, use the **interface** command. For example:

```
Console(config)# interface ethernet 1
```

To exit the interface configuration mode, enter **exit** to return to the global configuration mode.

```
Console(config-if)# exit
Console(config)#
```

Interface configuration commands are listed in [Table B-4](#).

Table B-4 Content Routing Software, Release 1.1 Interface Configuration Commands

Interface Command	Syntax	Description
autosense	autosense	Enables autosense on an interface
bandwidth	bandwidth <i>mbits</i>	Interface speed
exit	exit	Exits from interface mode

Table B-4 Content Routing Software, Release 1.1 Interface Configuration Commands (continued)

Interface Command	Syntax	Description
fullduplex	fullduplex	Interface full-duplex mode
halfduplex	halfduplex	Interface half-duplex mode
ip	ip { address <i>ip-address ip-subnet</i> broadcast-address <i>ip-address</i> }	Interface Internet Protocol configuration commands
no	no { autosense bandwidth fullduplex halfduplex ip }	Negates a command or sets its defaults

Domain Configuration Commands

The Content Routing software domain configuration commands are entered in domain configuration mode. The domain configuration commands are listed in [Table B-5](#).

Table B-5 Content Routing Software, Release 1.1 Domain Configuration Commands

Domain Configuration Command	Syntax	Description
alias	alias <i>domain-name</i>	Establishes alternative domain names
bloat	bloat <i>bytes</i>	Sets a level of artificial padding in the DNS Answer packet
client-group	client-group <i>list-name</i>	Assigns a client-list to a domain
dns-ttl	dns-ttl <i>seconds</i>	Specifies the DNS Time To Live (TTL) value contained in the agent's DNS response
fragment-size	fragment-size <i>bytes</i>	Sets an IP fragment size for DNS responses sent by agents
ip-ttl	ip-ttl <i>hops</i>	Specifies the IP Time To Live value contained in the agent's DNS response
key	key { 0 7 } <i>word</i>	Specifies a keyword that is used to encrypt packets sent between the Content Router and agents
max-propagation-delay	max-propagation-delay <i>msec</i>	Specifies the maximum one-way propagation delay from the Content Router to the content routing agents
no	no <i>command</i>	Negates a domain configuration mode command or sets its defaults
origin-server	origin-server <i>ip-address</i>	Specifies the IP address and domain name of the origin server
server-delay	server-delay <i>msec</i>	Specifies a delay in the DNS response sent by the Content Router to the origin server

Client List Configuration Command

The Content Routing software client list configuration command is entered in client list configuration mode. The client list configuration command is described in [Table B-6](#).

Table B-6 Content Routing Software, Release 1.1 Client List Configuration Commands

Client List Configuration Command	Syntax	Description
client	client { <i>ip-address</i> <i>hostname</i> } [nickname <i>name</i>] [delay <i>delay-value</i>]	Specifies the content routing agents in a client list

show Commands

The Content Routing software **show** commands are entered in EXEC mode. The **show** commands are listed in [Table B-7](#).

Table B-7 Content Routing Software, Release 1.1 show Commands

EXEC show Command	Syntax	Description
show arp	show arp	Displays ARP entries
show boomerang	show boomerang { all client-list <i>list-name</i> domain <i>domain-name</i> global }	Displays Content Router and agent information
show clock	show clock [detail]	Displays the system clock
show cron	show cron	Displays cron information
show debugging	show debugging	Displays the state of each debugging option
show disk-partitions	show disk-partitions <i>devname</i>	Displays disk partitions
show disks	show disks	Displays disk names
show events	show events <i>number</i> { all critical notice warning }	Displays system events
show file-descriptors	show file-descriptors	Displays file descriptors
show flash	show flash	Displays Flash memory content
show hardware	show hardware	Displays system hardware status
show hosts	show hosts	Displays IP domain name, name servers, and host table
show inetd	show inetd	Displays the inetd daemon activity information
show interface	show interface { ethernet <i>number</i> scsi <i>number</i> }	Displays hardware interface information
show ip routes	show ip routes	Displays IP routing table
show logging	show logging	Displays system logging (syslog)
show memory	show memory [free]	Displays memory blocks and statistics
show ntp	show ntp status	Displays the NTP parameters
show processes	show processes [cpu memory]	Displays processes

Table B-7 Content Routing Software, Release 1.1 show Commands (continued)

EXEC show Command	Syntax	Description
show running-config	show running-config [boomerang { client-list <i>list-name</i> domain <i>domain-name</i> }]	Displays current operating configuration
show snmp	show snmp	Displays SNMP statistics
show stacktrace	show stacktrace { <i>task-ID</i> exception }	Displays task stack trace
show startup-config	show startup-config	Displays startup configuration
show statistics	show statistics { icmp ip mbuf netstat transaction-logs udp }	Displays statistics
show tcp	show tcp	Displays TCP configuration information
show tech-support	show tech-support [page]	Displays system information for Cisco technical support
show tftp-server	show tftp-server	Displays TFTP server configuration
show transaction-logging	show transaction-logging [entries <i>number</i>]	Displays transaction logging information
show trusted-hosts	show trusted-hosts	Displays system hardware and software status
show user	show user { uid <i>number</i> username <i>name</i> }	Displays information for a particular user
show users	show users	Displays all users
show version	show version	Displays system version
show wccp	show wccp { router status }	Displays WCCP information