



Cisco Content Routing Software, Release 1.1 Commands

This appendix contains an alphabetical listing of all commands of the Content Routing software, Release 1.1.

alias

To establish alternative domain names, use the **alias** command in domain configuration mode.

alias *domain-name*

Syntax Description	<i>domain-name</i> Alternative name of a domain (for example, www.foo.com).
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Defaults	No default behaviors or values
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Command Modes	Domain configuration
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Usage Guidelines	Use this command on both the Content Router and the agent to establish an alternative name for a domain.
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Examples	In the following example, assume you are configuring a domain named www.foobar.com. Here, it is given the alias www.foobar.net. First, enter the alias on the Content Router.
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```
Console (config-domain)# alias www.foobar.net
```

When configuring www.foo.bar.com on the agent, enter the alias on the agent:

```
Console (config-domain)# alias www.foobar.net
```

autosense

To enable autosense on an interface, use the **autosense** interface configuration command. To disable this function, use the **no** form of this command.

autosense

no autosense

Syntax Description This command has no arguments or keywords.

Defaults No default behaviors or values

Command Modes Interface configuration

Usage Guidelines Cisco router Ethernet interfaces do not negotiate duplex settings. If the Content Router is connected to a router directly with a crossover cable, the Content Router Ethernet interface has to be manually set to match the router interface settings. Disable **autosense** before configuring an Ethernet interface. When **autosense** is on, manual configurations are overridden. You must reboot the Content Router to start autosensing.

Examples

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

```
Console(config-if)# no autosense
```

bandwidth

To configure an interface bandwidth, use the **bandwidth** interface configuration command. To disable this function, use the **no** form of this command.

bandwidth *mbits*

no bandwidth

Syntax Description	<i>mbits</i> Bandwidth size in megabits per second (10 or 100).
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Defaults	No default behaviors or values
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Command Modes	Interface configuration
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Usage Guidelines	Use this command to set the bandwidth of an interface to either 10 or 100 megabits.
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Examples	<pre>Console(config-if)# bandwidth 10 Console(config-if)# no bandwidth</pre>
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bloat

To set the level of artificial padding in the DNS Answer packet, use the **bloat** domain configuration command.

bloat *bytes*

Syntax Description	<i>bytes</i> Size of bloat in bytes (0 to 2000). The default is 0.
Defaults	The default bloat size is 0 bytes.
Command Modes	Domain configuration
Usage Guidelines	Use this command to allow the boomerang process to more effectively consider the bandwidth (between an agent and the DNS server) in selecting the most rapidly accessible site. A byte size greater than zero means that DNS Answer packets will be artificially padded.
Examples	Console (config-domain)# bloat 300

boomerang annealing

To set annealing parameters, use the **boomerang annealing** global configuration command.

boomerang annealing past-winners *win-number agent-count agent-number*

Syntax	Description
annealing	(Optional.) Configures the maximum number of previous winners and total number of agents that can be used in each DNS race.
past-winners	Specifies maximum number of previous DNS race winners that can be used in the next DNS race.
<i>win-number</i>	Number of previous winners (0 to 8). The default value is 3.
agent-count	Specifies total number of agents that can participate in each DNS race.
<i>agent-number</i>	Number of agents (1 to 40). The default value is 10.

Defaults

The default *win-number* value is 3. The default *agent-number* value is 10.

Command Modes

Global configuration

Usage Guidelines

Use the **boomerang annealing** command to configure the maximum number of previous winners and the total number of agents used in each DNS race. The DNS race is the race between content routing agents, which determines which agent can answer the DNS request most quickly. (See [Chapter 1, “Introducing the Content Routing Software,”](#) for an overview of the content routing process.) For example, if *agent-number* is 20, the first DNS server to make a request receives 20 DNS responses from 20 randomly selected agents. The first agent response received is the winner of the DNS race. When the same DNS server sends another request, the Content Router routes responses from the winner of the first race, plus 19 other randomly selected agents. The third time the same DNS server sends a request, the last two race winners plus 18 random agents are used, and so on. If the *win-number* value is three, then three is the maximum number of previous race winners that can be included in the race.

To configure the Content Router to send out as many random DNS replies as possible (up to 40), use the **no boomerang annealing** command. For example:

```
Console (config-domain)# no boomerang annealing
```



Note The **no boomerang annealing** command does not set boomerang annealing to default values. Instead, it allows the Content Router to send out as many random DNS replies as possible, up to 40.

Examples

```
Console (config)# boomerang annealing past-winners 5 num-agents 9
```

boomerang client-list

To enter client list configuration mode, use the **boomerang client-list** global configuration command.

boomerang client-list *list-name*

Syntax	Description
client-list	(Optional.) Sets the command-line interface (CLI) to client list configuration mode and specifies a list to create or edit.
<i>list-name</i>	Name of client list.

Defaults No default values or behaviors

Command Modes Global configuration

Usage Guidelines Use the **client-list** command to enter client list configuration mode. Use *list-name* to specify the name of the list you want to edit or to specify a new name for a new list. After using this command, use the **client** command to create or edit a client list.

Examples Console (config)# **boomerang client-list List_A**

Related Commands

- client**
- client-group**

boomerang database

To generate or restores a database file of recent DNS race winners, use the **boomerang database EXEC** command.

boomerang database { dump | restore }

Syntax Description	dump	Generates a database of recent DNS race winners in the /local/boom.db file.
	restore	Restores previous boom.db file contents after system reboots.

Defaults No default behaviors or values

Command Modes EXEC

Usage Guidelines Use the **boomerang database dump** command to generate a record of the eight previous DNS race winners for each DNS server that made a request in each domain. Note that when the same agent wins more than one of the eight previous races, you will see fewer than eight agents listed. This database file is stored in memory. A total of 13,1072 (128K) entries can be stored in boom.db. After rebooting, you can use the **boomerang database restore** command to restore the previous boom.db file contents.



Note You can also find a time-stamped record of the asynchronous probing of requesting DNS servers in /var/log/archive.txt. This file contains an archive of the race results.

Examples

```
Console# boomerang database dump
Console# boomerang database restore
```


boomerang dns

To enable boomerang on the Content Router or to enter domain configuration mode, use the **boomerang dns** global configuration command.

```
boomerang dns enable { direct-mode | wccp-mode }
```

```
boomerang dns domain domain-name
```

Syntax Description		
dns		Configures DNS boomerang distributed reverse proxy.
enable		Enables the boomerang software.
direct-mode		Enables content routing in direct mode, in which a domain name server is configured so that the Content Router is the authoritative DNS server for the domains served by the Content Router. DNS Answer (DNS A) record requests are sent directly to the Content Router.
wccp-mode		Enables content routing in WCCP mode, in which a router redirects DNS packets destined for a domain name server to the Content Router. DNS A record requests for domains served by the Content Router are handled by the Content Router. All other DNS packets are reinserted in the normal traffic flow.
domain		(Optional.) Establishes support for a domain. Sets the command-line interface (CLI) to domain configuration mode.
<i>domain-name</i>		Name of a domain (for example, www.foo.com).

Defaults No default behaviors or values

Command Modes Global configuration

Usage Guidelines Use the **boomerang dns enable** command to enable boomerang on the Content Router and to select the mode of operation. In direct mode, the Content Router is configured as the authoritative DNS server for the domains it serves, and the DNS server must be configured to send DNS requests to the Content Router. In WCCP mode, a router redirects DNS packets destined for a domain name server to the Content Router. DNS requests for domains configured on the Content Router are handled by the Content Router, whereas all other DNS packets are reinserted in the normal traffic flow. See the [“Configuring Direct or WCCP Mode” section on page 2-3](#) for information about configuring for direct or WCCP mode.

Use the **boomerang dns domain** command to establish support for a domain and to enter domain configuration mode. See the [“Configuring Domains on the Content Router” section on page 2-6](#) for more information.

Examples

```
Console (config)# boomerang dns enable direct-mode

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

boomerang timing

To set boomerang timing parameters, use the **boomerang timing** global configuration command.

boomerang timing decay *decayvalue* **sample-freq** *samp-freqvalue*

Syntax	Description
timing	Configures the decay and sample frequency values of a domain.
decay	Specifies how to weight the latest Round Trip Time (RTT) measurement. A lower decay value gives higher priority to recent measurements.
<i>decayvalue</i>	Decay value (1 to 10). The default value is 2.
sample-freq	Sets how many times per minute to sample the delay between the Content Router and agents. (See Figure 1-3 on page 1-4 for more information.)
<i>samp-freqvalue</i>	Sample frequency value in number of times per minute (1 to 600). The default value is 6.

Defaults The default **decay** value is 2. The default **sample-freq** value is 6.

Command Modes Global configuration

Examples Console (config)# **boomerang timing decay 5 sample-freq 24**

boomerang send-packet

To send test packets to determine whether or not a destination accepts boomerang-altered source IP addresses, use the **boomerang send-packet** EXEC command.

```
boomerang send-packet {tcp | udp} dest-port source-port {dest-ip-address | dest-hostname}
{source-ip-address | source-hostname}
```

Syntax Description		
	tcp	Sends a TCP packet.
	udp	Sends a UDP packet.
	<i>dest-port</i>	Destination port number.
	<i>source-port</i>	Source port number.
	<i>dest-ip-address</i>	IP address of the destination site.
	<i>dest-hostname</i>	Name of the destination host.
	<i>source-ip-address</i>	IP address of the source.
	<i>source-hostname</i>	Name of the source host.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines Some networks may have filters that prevent the transmission of packets with source addresses outside the address space of the network. Such filters could inhibit the boomerang process. To determine whether such filters exist, use a sniffer and the **boomerang send-packet** command to send a packet with a source address outside the subnet on which the agent resides. The sniffer should be set up to monitor traffic on the network of the destination site to which the packet is sent. If the sniffer detects this packet, you will know that the destination can accept boomerang-altered source IP addresses.

Examples Console# **boomerang send-packet tcp 53 53 10.1.1.1 10.1.1.2**

cd

To change directories, use the **cd** EXEC command.

```
cd {directoryname}
```

Syntax Description

<i>directoryname</i>	Name of the directory.
----------------------	------------------------

Command Modes

EXEC

Usage Guidelines

Use this command to maneuver between directories and for file management. The directory name becomes the default prefix for all relative paths. Relative paths do not begin with a slash “/”. Absolute paths begin with a slash “/”.

Examples

Relative path:

```
Console# cd etc
```

Absolute path:

```
Console# cd /local/etc
```

Related Commands

dir

lls

ls

mkdir

pwd

check

To check whether superuser accounts are password-protected, use the **check EXEC** command.

check superuser passwords

Syntax	Description
superuser	Keyword.
passwords	Keyword.

Defaults By default, superuser accounts are not password-protected.

Command Modes EXEC

Usage Guidelines This command displays whether or not the superuser account is password-protected. To configure a superuser password, from global configuration mode, use the **user modify** command. A superuser is defined as an administrator or user with full read and write privileges to the cache files and utilities.

Examples

```

Console# check superuser passwords
-----
All super-user accounts are password protected
-----

```

Related Commands

- user modify**
- show user**

clear

To clear the hardware interface, statistics, transaction logs, or WCCP settings, use the **clear** EXEC command.

```
clear { boomerang | interface serial number | logging | statistics { all | boomerang | history | ip | running | services | tcp | transaction-logs } transaction-log }
```

Syntax Description		
boomerang		Clears boomerang one-way delay information.
interface		Clears the hardware interface.
serial		Serial device.
<i>number</i>		Serial interface number (for example, 0).
logging		Clears syslog messages saved in a disk file.
statistics		Clears statistics.
all		Clears all statistics.
boomerang		Clears boomerang statistics.
ip		Clears IP statistics.
history		Clears the statistics history.
running		Clears the running statistics.
services		Clears services statistics.
tcp		Clears TCP statistics.
transaction-logs		Clears transaction log export statistics.
transaction-log		Archives working transaction log file.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines The **clear statistics** command clears all statistical counters from the parameters given. Use this command to monitor fresh statistical data for some or all features without losing configurations.

The **clear transaction-log** command causes the transaction log to be archived immediately to the Content Router hard disk. This command has the same effect as the **transaction-log force archive** command.

Examples

```
Console# clear transaction-log
```

```
Console# clear statistics boomerang
```

Related Commands

show statistics

show interface

show wccp

client

To specify the content routing agents in a client list, use the **client** command in client list configuration mode.

```
client {ip-address | hostname} [nickname name] [delay delay-value]
```

Syntax Description	
<i>hostname</i>	Host name of the agent.
<i>ip-address</i>	IP address of the agent.
nickname	(Optional.) Sets a display nickname for the agent (for example, New York or San Francisco).
<i>name</i>	Agent nickname.
delay	(Optional.) Specifies the one-way propagation delay before the DNS race to the agents begins.
<i>delay-value</i>	One-way propagation delay value in milliseconds (1 to 1000).

Defaults No default behavior or values.

Command Modes Client list configuration

Usage Guidelines Use this command to assign agents to the client list specified by the boomerang client-list command. This command specifies the agents that will compete in DNS races. The optional nickname appears only when you use the show boomerang command. The optional delay configuration overrides the calculated propagation delay between the content routing agent and the Content Router. This is useful if you know that the packet transmission times between the Content Router and agent are asymmetric, for example, if the path includes a satellite hop in one direction but not in the other direction.

To edit a list, use the **boomerang client-list** global configuration command to enter client list configuration mode for that list. To remove a client from a list, use the **no client** command in client list configuration mode. For example:

```
Console (config)# boomerang client-list List_A
Console (config-client-lis)# no client 10.2.3.4
```

To assign a client list to a particular domain, use the **boomerang dns** domain command to enter domain configuration mode for the domain. Then use the **client-group** command to specify the client list for that domain.

Use the **show boomerang** command to see configuration information and other data about client lists.

Examples

```
Console (config-client-lis)# client 10.2.3.4
Console (config-client-lis)# client 10.2.5.7
Console (config-client-lis)# client 10.2.6.8
Console (config-client-lis)# client 10.2.7.9
```


Related Commands

- boomerang**
- client-group**
- show boomerang**

client-group

To assign a client list to a domain, use the **client-group** domain configuration mode command.

client-group *list-name*

Syntax Description	<i>list-name</i>	Name of client list.
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Defaults	No default behaviors or values
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Command Modes	Domain configuration
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Usage Guidelines	<p>To use a client list for a domain, use the boomerang dns domain command to specify the domain, and then use the client-group command to specify the client list you want to use for that domain.</p> <p>Use the show boomerang command to see which clients have been associated with which domains, and for more information about existing client lists.</p>
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Examples	To use client list List_A for domain www.mydomain.com, enter the following commands:
----------	--

```
Console (config)# boomerang dns domain www.mydomain.com
Console (config-domain)# client-group List_A
```

Related Commands	<p>show boomerang</p> <p>client-list</p>
------------------	--

clock

To set, clear, or save the battery-backed clock functions, use the **clock** EXEC command.

```
clock { clear | save | set hh:mm:ss day month year }
```

Syntax Description		
clear		Clears the system clock settings.
save		Saves the system clock settings.
set		Sets the system clock.
<i>hh:mm:ss</i>		Current Universal Coordinated Time (for example, 13:32:00).
<i>day</i>		Day of the month (for example, 1 to 31).
<i>month</i>		Current month (for example, January or February).
<i>year</i>		Current year (for example, 2000).

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines If you have an outside source on your network that provides time services (such as a Network Time Protocol [NTP] server), you do not need to set the system clock manually. When setting the clock, enter the local time. The Content Router calculates UTC based on the time zone set by the **clock timezone** global configuration mode command.

Two clocks exist in the system: the software clock and the hardware clock. The software uses the software clock. The hardware clock is used only at bootup to initialize the software clock.

The **set** keyword sets the software clock.

The **save** keyword writes the current value of the software clock into the hardware clock. This is used to update the hardware clock with the correct time as maintained by NTP. NTP adjusts only the software clock.

The **clear** keyword forces the hardware clock to zero (January 1, 1970), which ensures that the time at bootup is the NTP time or an obviously invalid time.

Examples Console# **clock set 13:32:00 01 February 2000**

Related Commands **clock timezone**
show clock detail

clock timezone

To set the time zone for display purposes, use the **clock timezone** global configuration command. To disable this function, use the **no** form of this command.

clock timezone {*zone hours*} [*minutes*]

no clock timezone

Syntax Description		
	<i>zone</i>	Name of the time zone to be displayed when standard time is in effect.
	<i>hours</i>	Hours offset from Coordinated Universal Time (UTC).
	<i>minutes</i>	(Optional.) Minutes offset from UTC.

Defaults No default behavior or values

Command Modes Global configuration

Usage Guidelines To set and display the local and UTC current time of day without an NTP server, use the **clock timezone** command together with the **clock set** command.

The **clock timezone** parameter specifies the difference between UTC and local time, which is set with the **clock set** command. The UTC and local time are displayed with the **show clock detail EXEC** command.

Examples The following example specifies the local time zone as Pacific Standard Time and offsets 8 hours behind UTC:

```
Console(config)# clock timezone PST -8
```

```
Console(config)# no clock timezone
```

Related Commands

- clock**
- show clock detail**

configure

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

configure

To exit global configuration mode, use the **end**, **Ctrl-Z**, or **exit** commands.

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines Use this command to enter global configuration mode.

Examples

```
Console# configure
Enter configuration commands, one per line. End with CNTL/Z.
Console(config)#
```

Related Commands

- show running-config**
- show startup-config**
- end**
- exit**

copy

To copy configuration or image data from a source to a destination, use the **copy** EXEC command.

```
copy {disk {flash imagename | startup-config filename} | flash {disk imagename} |
running-config {disk filename | startup-config | tftp} | startup-config {disk filename | tftp} |
tech-support {disk filename | tftp} | tftp {disk | flash}}
```

Syntax Description		
disk		Copies image or configuration from or to disk.
flash		Copies image from or to Flash memory.
running-config		Copies from current system configuration.
startup-config		Copies from or to startup configuration.
tech-support		Copies system information for technical support.
tftp		Copies image from or to TFTP server.
<i>imagename</i>		Image name (for example, /local/bin).
<i>filename</i>		Filename of configuration.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines Use the **copy running-config startup-config** command to save the configuration to NVRAM memory. This command is equivalent to the **write** command.

The **copy flash disk *imagename*** command copies the image from Flash memory to the disk.

The **copy disk flash *imagename*** command copies the image from the disk to Flash memory.

The **copy tftp flash** command copies the image from a TFTP server to Flash memory.

The **copy tech-support tftp** command copies technical support information to a TFTP server. You are prompted for the server address following this command.

Examples Console# **copy disk flash /local/bin**

Related Commands **write**
show startup-config

cpfile

To copy one filename to another filename, use the **cpfile** EXEC command.

cpfile *oldfilename newfilename*

Syntax Description	
<i>oldfilename</i>	Name of the old file from which to copy.
<i>newfilename</i>	Name of the new file to copy to.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines Use this command to copy one filename to another. This command only copies dosfs files.

Examples Console# `cpfile ce500-194616.bin cd500-194618.bin`

Related Commands

- copy**
- dir**
- lls**
- ls**
- mkfile**
- rmdir**
- rmname**

cron

To set a cron task, use the **cron** global configuration command. To disable a cron task, use the **no** form of this command.

```
cron {del-tab entryid | file tabfile | save-tab | tab-entry tabentry}
```

```
no cron {del-tab entryid | file tabfile | save-tab | tab-entry tabentry}
```

Syntax Description

del-tab	Deletes tab.
file	Cron tab file.
save-tab	Cron save tab.
tab-entry	Cron tab entry.
<i>entryid</i>	Entry ID (1 to 1000).
<i>tabfile</i>	Cron tab filename.
<i>tabentry</i>	Cron tab entry line.

Defaults

No default behavior or values

Command Modes

Global configuration

Usage Guidelines

The **cron** command is used to set up cron tasks.

To view your existing cron configurations, use the **show cron** command. For example:

```
Console# show cron
==CRON Configuration==
CRON tab file: /local/etc/crontab

Legend 1: min hr day-of-mon mon day-of-wk tclsh script-name
Legend 2: min hr day-of-mon mon day-of-wk tcl tcl-cmd
Sample: 0 5 * * * tclsh /local/test.tcl
```

Examples

```
Console(config)# cron sav-tab
```

```
Console(config)# no cron sav-tab
```

Related Commands

show cron

debug

debug

Related Commands EXEC

Usage Guidelines We recommend that the **debug** command be used only at the direction of Cisco Systems technical support personnel.

Related Commands **no debug**
show debug
undebug

del

To remove a file, use the **del** EXEC command.

del *filename*

Syntax Description	<i>filename</i>	Name of the file to delete.
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Defaults	No default behavior or values
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Command Modes	EXEC
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Usage Guidelines	Use this command to remove a file from any directory. Note that some files are necessary for proper functionality and should not be removed.
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Examples	Console# del /local/tempfile
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Related Commands	cpfile deltree mkdir mkfile rmdir
-------------------------	--

deltree

To remove a directory recursively and all files that it contains, use the **deltree** EXEC command.

deltree *directory*

Syntax Description	<i>directory</i> Name of the directory tree to delete.
Defaults	No default behavior or values
Command Modes	EXEC
Usage Guidelines	Use this command to remove a directory and all files within the directory from the Content Router (dosfs file system). Do not remove necessary files or directories, such as log files or directories, for proper functionality. It may not be possible to move a log file to a new directory without losing functionality.
Examples	Console# deltree /local
Related Commands	del

dir

To view a long list of files in a directory, use the **dir** EXEC command.

dir [*directory*]

Syntax Description

directory (Optional.) Name of the directory to list.

Defaults

If no directory is specified, the current directory is shown by default.

Command Modes

EXEC

Usage Guidelines

Use this command to view a detailed list of files contained within the working directory, including names, sizes, and time created. The equivalent command is **lls**.

Examples

```

Console# dir /local
size      date           time           name           LongName
-----
512       Dec-31-1987   17:02:32      ETC            <DIR>  etc
512       Dec-31-1987   17:02:32      TFTPBOOT      <DIR>  tftpboot
512       Dec-31-1987   17:02:32      VAR           <DIR>  var
512       Jan-07-1988   09:47:52      LIB           <DIR>  lib
4385154   Apr-22-1999   12:25:36      CR25.PAX      cr25.pax
4 DIR(S), 1 FILE(S) 11192642 bytes
2125889536 bytes AVAILABLE ON VOLUME /c0t0d0s1

```

Related Commands

ls
lls

disable

To turn off privileged EXEC commands, use the **disable** EXEC command.

disable

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC command

Usage Guidelines The **disable** command places you in EXEC mode. To turn privileged EXEC mode back on, use the **enable** command.

Examples Console# **disable**

Related Commands **enable**

disk

To configure the Content Router disks, use the **disk** EXEC command.

```
disk { erase-all-partitions devname | manufacture devname | partition devname | prepare
      devname }
```

Syntax Description

erase-all-partitions	Disk initialization procedure. Erases all partitions on a disk.
manufacture	Reformats all partitions and volumes on a disk.
partition	Partitions the hard disk.
prepare	Partitions and formats volumes on a hard disk.
<i>devname</i>	Specifies the device name of the disk drive with the following syntax: /cn1tn2dn3 <ul style="list-style-type: none"> n1 is the SCSI controller number. The value of n1 is always zero for Content Routers. n2 is the target number of the disk drive (0 to 13). Targets 0 and 1 are the Content Router internal disk drives. n3 is the logical unit number. The value of n3 is always zero for Content Routers. <p>The device name is the same as the volume name, but the device name does not include a partition parameter (the “s” number).</p>

Defaults

No default behavior or values

Command Modes

EXEC command

Usage Guidelines

You partition a disk in order to allocate portions of the disk for specified file systems. The partition sizes are not user-configurable. Use the **show disks** command to obtain the names of installed disks.



Caution

Partitioning a disk destroys all of its contents. After partitioning, each file system must be formatted and mounted before it can be used.

Using the **disk prepare** command automates the preparation of a disk. This command partitions the disk and then formats and mounts all the partitions.

The **disk manufacture** command initializes a disk for use by the Content Router, and *must* be run on each disk before that disk is used by the Content Router for the first time. The **disk manufacture** command needs to be executed only once for each disk.



Note

The **disk manufacture** command is executed on each internal Content Router disk by Cisco Systems prior to shipping.

Examples

In this example, one of the Content Router disks is initialized:

```
CR4400# disk manufacture /c0t0d0
```



Note The larger the storage capacity of the disk drive, the longer the duration of the **disk manufacture** routine.

Related Commands

disk

dosfs

show disk-partitions

show disks

dns-ttl

To specify the DNS Time To Live (TTL) value contained in the content routing agent's DNS response, use the **dns-ttl** command in domain configuration mode.

dns-ttl *seconds*

Syntax Description

seconds Number of seconds to live (1 to 4294967295). The default is 20.

Defaults

The default number of seconds is 20.

Command Modes

Domain configuration

Usage Guidelines

Use this command to specify the DNS Time To Live value contained in the DNS response generated by the agent. In general, a lower DNS TTL value ensures more recent content, whereas a higher DNS TTL value reduces the Content Router load.

The higher the DNS Time To Live value, the less the load on the Content Router. A lower value means an increased Content Router load, but also means that winning agent addresses (from the DNS race) are used for a shorter length of time. For example, if the DNS TTL is set to 60 seconds, a name server will return to the Content Router to look up a domain name no more than once a minute. In other words, the name server uses the winning agent address for 60 seconds before consulting the Content Router again.



Note

A **dns-ttl** command entered on an agent overrides a **dns-ttl** command entered on the Content Router.

Examples

Console (config-domain)# **dns-ttl 4**

dosfs

To configure the DOS file system, use the **dosfs** EXEC command.

```
dosfs { check volname [force | verbose [force]] | format volname | label volname vol-label | mount
volname {rdonly | rdwr} | repair {automatic | interactive} volname [force | verbose
[force]] | sync syncdevice | unmount volname }
```

Syntax Description		
check		Checks DOS file system.
<i>volname</i>		Volume name.
force		(Optional.) Forces a check or repair.
verbose		(Optional.) Prints extra messages to screen.
format		Erases and formats a file system on a disk device.
label		Sets a device volume label.
<i>vol-label</i>		Label of a volume.
mount		Mounts a disk or volume file system.
rdonly		Mounts a volume as read-only.
rdwr		Mounts a volume as read-write.
repair		Checks and repairs a uvfat/DOS file system.
automatic		Automatic (not interactive) repair.
interactive		Starts a user-interactive repair.
sync		Synchronizes a disk device.
<i>syncdevice</i>		Absolute device name.
unmount		Unmounts a disk or volume file system.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines Use this command to format and mount the DOS file systems after partitioning disks. Use this command to repair DOS file systems that are causing errors.

The default configuration has only one DOS file system. This file system is created on the first disk in the system and has a special name “/local.” This file system contains various files necessary for correct functioning of the Content Router.

The **dosfs format** command formats the dosfs partition to prepare it for a dosfs mount.

The **dosfs mount** command creates and maps data structures that map to the physical dosfs partition on the disk.

The **dosfs unmount** command frees the in-memory data structures that map to the physical dosfs partition on the disk.

Examples

```
Console# dosfs format /local
```

Related Commands

cd
copy
cpfile
del
deltree
dir
ls
mkdir
mkfile

enable

To turn on privileged commands, use the **enable** EXEC command.

enable

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines To return to privileged EXEC mode from user EXEC mode, use the **enable** command. The **disable** command takes you from privileged EXEC mode back to user EXEC mode.

Examples

```
Console> enable
Console#
```

Related Commands **disable**

end

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

end

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes Global configuration

Usage Guidelines Use the **end** command to exit global configuration mode after completing any changes to the running configuration. To save new configurations to NVRAM, use the **write** command.

The **Ctrl-Z** command also exits global configuration mode.

Examples

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

Related Commands **exit**

exception debug

We recommend that the **exception debug** command be used only at the direction of Cisco Systems technical support personnel.

Command Modes Global configuration

exec-timeout

To configure the length of time that an inactive terminal session window will remain open, use the **exec-timeout** global configuration command. To disable the exec timeout, use the **no** form of this command.

exec-timeout *timeout*

no exec-timeout

Syntax Description	<i>timeout</i> Timeout in minutes (0 to 44,640).
Defaults	The default is 150 minutes.
Command Modes	Global configuration
Usage Guidelines	Use this command to establish the length of time, in minutes, that an inactive terminal session window will remain open.
Examples	<pre>Console(config)# exec-timeout 100</pre> <pre>Console(config)# no exec-timeout</pre>

exit

To exit any configuration mode or close an active terminal session and terminate an EXEC mode session, use the **exit** EXEC command.

exit

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC, global, and interface configuration

Usage Guidelines Use the **exit** command in global configuration mode to return to EXEC mode. You can also press **Ctrl-Z** or use the **end** command from any configuration mode to return to EXEC mode.

Use the **exit** command in EXEC command mode to close an active terminal session and terminate the EXEC mode session.

Examples Console# **exit**

Related Commands **end**

fragment-size

To set an artificial IP fragment size for DNS responses sent by content routing agents, use the **fragment-size** domain configuration command.

fragment-size *bytes*

no fragment-size *bytes*

Syntax Description	<i>bytes</i>	Size of IP fragment in bytes (28 to 1980). (The <i>bytes</i> value must be evenly divisible by 8.)
---------------------------	--------------	--

Defaults	This command is disabled by default.
-----------------	--------------------------------------

Command Modes	Domain configuration
----------------------	----------------------

Usage Guidelines	Use this command to make packet loss a factor in selecting the best site to respond to DNS requests. A fragment size of 28 or greater artificially fragments DNS Answer packets sent by the agent. Use numbers evenly divisible by 8 for the <i>bytes</i> value. If the <i>bytes</i> value entered is not divisible by 8, the next smaller number that is evenly divisible by 8 is used instead.
-------------------------	--

To turn fragment size off, use the **no fragment-size** command.



Note	The fragment size set with this command is the payload fragment size. The actual size of the fragment is the fragment-size setting plus the size of any link layer header.
-------------	---

Examples	Console (config-domain)# fragment-size 512
-----------------	---

fullduplex

To configure an interface for full-duplex operation, use the **fullduplex** interface configuration command. To disable this function, use the **no** form of this command.

fullduplex

no fullduplex

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes Interface configuration

Usage Guidelines Use this command to configure an interface for full-duplex operation. Full-duplex allows data to travel in both directions at the same time. A half-duplex setting ensures that data travels in only one direction at any given time. If you encounter excessive collisions or network errors, try configuring the interface for half duplex rather than full duplex.

Examples

```
Console(config-if)# fullduplex  
Console(config-if)# no fullduplex
```

Related Commands **halfduplex**

halfduplex

To configure an interface for half-duplex operation, use the **halfduplex** interface configuration command. To disable this function, use the **no** form of this command.

halfduplex

no halfduplex

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes Interface configuration

Usage Guidelines Use this command to configure an interface for half-duplex operation. Full duplex allows data to travel in both directions at the same time. A half-duplex setting ensures that data travels in only one direction at a time. If you encounter collisions or other network errors, try configuring an interface for half duplex rather than full duplex.

Examples

```
Console(config-if)# halfduplex  
Console(config-if)# no halfduplex
```

Related Commands **fullduplex**

help

To get online help for the command-line interface, use the **help EXEC** or global configuration command.

help

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC, global configuration

Examples

```
Console# help
```

Help may be requested at any point in a command by entering a question mark '?'. If nothing matches, the help list will be empty and you must back up until entering a '?' shows the available options.

Two styles of help are provided:

1. Full help is available when you are ready to enter a command argument (e.g. 'show ?') and describes each possible argument.
2. Partial help is provided when an abbreviated argument is entered and you want to know what arguments match the input (e.g. 'show stat?').

```
Console# show stat?
```

```
icmp          ICMP Statistics
ip            Display IP Statistics
mbuf         mbuf Statistics
netstat      Internet Socket Connections
routing      Routing Statistics
tcp          Display TCP Statistics
transaction-logs Display Transaction-log Export Statistics
udp          UDP Statistics
```

```
Console# show stat ?
```

```
authentication Authentication Statistics
bypass          Display Bypass Statistics
cfs             Display Cache File System statistics
dns-cache      DNS-Cache Statistics
ftp            Display FTP caching statistics
```

hostname

To configure the Content Router network name, use the **hostname** global configuration command. To reset the host name to the default setting, use the **no** form of this command.

hostname *name*

no hostname

Syntax Description	<i>name</i>	New host name for the Content Router; the name is case sensitive. The name may be from 1 to 22 alphanumeric characters.
---------------------------	-------------	---

Defaults	The default host name is the Content Router model number (CR4430).
-----------------	--

Command Modes	Global configuration
----------------------	----------------------

Usage Guidelines	Use this command to configure the host name for the Content Router. The host name is used for the command prompts and default configuration filenames.
-------------------------	--

Examples	The following example changes the host name to sandbox:
-----------------	---

```
Console(config)# hostname sandbox
sandbox(config)#
```

```
sandbox(config)# no hostname
Console(config)#
```

inetd

To configure, enable, and disable TCP/IP services, use the **inetd** global configuration command. To disable TCP/IP services, use the **no** form of this command.

inetd enable *service concurrent_tasks*

no inetd enable *service concurrent_tasks*

Syntax Description	enable	Enables TCP/IP service.
	<i>service</i>	Name of the service to be enabled: echo, discard, chargen, TFP, RCP, Telnet, and TFTP.
	<i>concurrent_tasks</i>	Maximum number of concurrent sessions supported for the specified service (1 to 20).

Command Modes Global configuration

Defaults

- echo:** Disabled.
- discard:** Disabled.
- chargen:** Disabled.
- ftp:** Five sessions.
- rcp:** Five sessions.
- tftp:** Five sessions.
- telnet:** Three sessions.

Usage Guidelines Use these commands to configure the parameters of TCP/IP services on the Content Router. The limit for any service is a maximum of 20 tasks. Use the **show inetd** command to list current inetd configurations and the number of current tasks running.

Examples

```
Console(config)# inetd enable ftp 5
Console(config)# no inetd enable ftp
```

Related Commands **show inetd**

install

To install a new version of Content Routing software, use the **install** EXEC command.

install *paxfilename*

Syntax Description	<i>paxfilename</i> Name of the .pax file you want to install.
Defaults	No default behavior or values
Command Modes	EXEC
Usage Guidelines	Install and run the .pax file from the <i>/local</i> directory only. When the install command is executed, the .pax file is expanded. The expanded files overwrite the existing files in the Content Router. The newly installed version takes effect after the system image is reloaded.
Examples	Console# install cr4430.pax
Related Commands	reload

interface

To configure an Ethernet interface, use the **interface** global configuration command. To disable an Ethernet interface, use the **no** form of this command.

interface ethernet *number*

no interface ethernet *number*

Syntax Description	ethernet	Ethernet IEEE 802.3 interface to configure.
	<i>number</i>	0 or 1. The Ethernet interface number.

Defaults No default behavior or values

Command Modes Global configuration

Usage Guidelines Use the **interface** command to begin interface configuration, such as setting an IP address for an interface, a subnet mask for an interface, a broadcast address, or manually setting the speed or duplex mode.

Examples

```

Console(config)# interface ethernet 0
Console(config-if)# ?
Configure Interface commands:
  autosense  Interface autosense
  bandwidth  Interface speed
  exit        Exit from interface mode
  fullduplex Interface fullduplex
  halfduplex Interface halfduplex
  ip          Interface Internet Protocol Config commands
  no          Negate a command or set its defaults
Console(config-if)# exit
Console(config)#

Console(config)# no interface ethernet 0

```

Related Commands **show interface**

ip

To configure the IP interface, use the **ip** interface configuration command. To disable this function, use the **no** form of this command.

ip { **address** *ip-address ip-subnet* | **broadcast-address** *ip-address* }

no ip { **address** [*ip-address ip-subnet*] | **broadcast-address** }

Syntax Description

address	Sets the IP address of an interface.
broadcast-address	Sets the broadcast address of an interface.
<i>ip-address</i>	IP address.
<i>ip-subnet</i>	IP subnet mask.

Defaults

No default behavior or values

Command Modes

Interface configuration

Usage Guidelines

Use this command to set or change the IP address and subnet mask of the Content Router (interface ethernet 0). The Content Router requires a reboot in order for the new IP address to take effect.

Examples

```
Console(config-if)# ip address 10.10.10.10 255.0.0.0
```

```
Console(config-if)# no ip broadcast-address
```


ip

To configure IP commands, use the **ip** global configuration command.

ip { **default-gateway** *ipaddress* | **domain-name** *domainname* | **name-server** *ipaddress* | **route** *destaddr* *netmask* *gateway* }

no ip { **default-gateway** *ipaddress* | **domain-name** *domainname* | **name-server** *ipaddress* | **route** *destaddr* *netmask* *gateway* }

Syntax Description		
default-gateway	Specifies default gateway (if not routing IP).	
<i>ipaddress</i>	IP address of default gateway.	
domain-name	Specifies domain name.	
<i>domainname</i>	Domain name.	
name-server	Specifies address of name server.	
<i>ipaddress</i>	IP address of name server.	
route	Net route.	
<i>destaddr</i>	Destination route address.	
<i>netmask</i>	Netmask.	
<i>gateway</i>	Gateway address.	

Defaults No default behavior or values

Command Modes Global configuration

Usage Guidelines To define a default gateway, use the **ip default-gateway** global configuration command. To delete the IP default gateway, use the **no** form of this command.

The Content Router uses the default gateway to route IP packets when there is no specific route found to the destination.

To define a default domain name, use the **ip domain-name** global configuration command. To remove the IP default domain name, use the **no** form of this command.

The Content Router appends the configured domain name to any IP host name that does not contain a domain name. The appended name is resolved by the DNS server and then added to the host table. The Content Router must have at least one domain name server specified for the host name resolution to work correctly. Use the **ip name-server** *hostname* command to specify domain name servers.

To specify the address of one or more name servers to use for name and address resolution, use the **ip name-server** global configuration command. To disable IP name servers, use the **no** form of this command.

For proper resolution of host name to IP address or IP address to host name, the Content Router uses DNS servers. Use the **ip name-server** command to point the Content Router to a specific DNS server. You can configure up to eight servers.

To configure static IP routing, use the **ip route** global configuration command. To disable an IP routing, use the **no** form of this command.

Use the **ip route** command to add a specific static route for a network host. Any IP packet designated for the specified host uses the configured route.

Examples

```
Console(config)# ip default-gateway 192.168.7.18
Console(config)# no ip default-gateway
Console(config)# ip route 172.16.227.128 ffffffff80 172.16.227.250
Console(config)# no ip route 172.16.227.128 ffffffff80 172.16.227.250
Console(config)# ip domain-name cisco.com
Console(config)# no ip domain-name
Console(config)# ip name-server 10.11.12.13
Console(config)# no ip name-server 10.11.12.14
```


Related Commands

show ip route

ip-ttl

To specify the IP Time To Live (TTL) value contained in the content routing agent's DNS response, use the **ip-ttl** command in domain configuration mode.

ip-ttl *hops*

Syntax Description	<i>hops</i> Number of hops to live (1 to 255). The default is 255.
Defaults	The default is 255 hops.
Command Modes	Domain configuration
Usage Guidelines	Use this command to set the IP TTL artificially low in order to restrict the number of hops that agent DNS responses can travel.
 Note	An ip-ttl command entered on an agent overrides an ip-ttl command entered on the Content Router.
Examples	Console (config-domain)# ip-ttl 5

key

To specify the keyword that is used to encrypt packets sent between the Content Router and agents, use the **key** domain configuration command.

key {**0** | **7**} *keyword*

Syntax Description	0	Indicates that the keyword will be clear text.
	7	Indicates that the keyword will be a type 7 encrypted key.
	<i>keyword</i>	Keyword shared by a Content Router and an agent.

Defaults No default behavior or values

Command Modes Domain configuration

Usage Guidelines Use this command to specify the same shared keyword on the Content Router and each agent. You can use a unique keyword for each domain.

Examples Console (config-domain)# **key 0 wontsay**

lls

To view a long list of directory names, use the **lls** EXEC command.

lls [*directory*]

Syntax Description	<i>directory</i> (Optional.) Name of the directory for which you want a long list of files.
Defaults	No default behavior or values.
Command Modes	EXEC
Usage Guidelines	This command provides detailed information about files and subdirectories stored in the present working directory to be viewed (including size, date, time of creation, DOS name, and long name of the file). This information can also be viewed with the dir command.
Examples	<pre> Console# lls Console# lls /local size date time name LongName ----- 512 Dec-31-1987 17:02:32 ETC <DIR> etc 512 Dec-31-1987 17:02:32 TFTPBOOT <DIR> tftpboot 512 Dec-31-1987 17:02:32 VAR <DIR> var 512 Jan-07-1988 09:47:52 LIB <DIR> lib 4385154 Apr-22-1999 12:25:36 CR25.PAX cr25.pax 4 DIR(S), 3 FILE(S) 11192642 bytes 2125922304 bytes AVAILABLE ON VOLUME /c0t0d0s1 </pre>
Related Commands	<p>dir</p> <p>ls</p>

logging

To configure system logging, use the **logging** global configuration command. To disable logging functions, use the **no** form of this command.

```
logging {hostname | ip-address | console loglevels | disk filename loglevels | event-export events
loglevels facility | facility facility | on | recycle size | trap loglevels}
```

```
no logging {hostname | ip-address | console loglevels | disk filename loglevels | event-export
events loglevels facility | facility facility | on | recycle size | trap loglevels}
```

Syntax Description

<i>hostname</i>	Syslog server host name.
<i>ip-address</i>	IP address.
console	Sets console logging level.
<i>loglevels</i>	Use one of these keywords:
• alerts	Immediate action needed.
• critical	Immediate action needed.
• debugging	Debugging messages.
• emergencies	System is unusable.
• errors	Error conditions.
• informational	Informational messages.
• notification	Normal but significant conditions.
• warning	Warning conditions.
disk	Stores log in a file.
<i>filename</i>	Name of the log file.
event-export	Syslog event export configuration.
<i>events</i>	Use one of these keywords:
• critical-events	Exports critical events.
• notice-events	Exports notice events.
• url-tracking	Tracks URLs to syslog.
• warning-events	Exports warning events.
<i>facility</i>	Use one of these keywords:
• cron/at	Cron.
• daemon	System daemons.
• kernel	Kernel.
• line-printer	Line printer system.
• local0	Local use.
• local1	Local use.
• local2	Local use.
• local3	Local use.
• local4	Local use.
• local5	Local use.
• local6	Local use.

• local7	Local use.
• mail	USENET news.
• news	Mail system.
• security	Authorization system.
• syslog	Syslog itself.
• user	User process.
• uucp	UUCP system.
facility	Facility parameter for syslog messages.
on	Enables logging to all destinations.
recycle	Overwrites syslog.txt when it surpasses the recycle size.
<i>size</i>	Size of syslog file in bytes (1 to 50,000,000).
trap	Sets syslog server logging level.

Defaults

Logging: On

Priority of message for console: Warning

Priority of message for file: Debugging

Log file: /local/var/log/syslog.txt

Log file recycle size: 5,000,000 bytes

Command Modes

Global configuration

Usage Guidelines

Use this command to set specific parameters of the system log file. System logging is always enabled internally. The system log file is located on the dosfs partition as /local/var/log/syslog.txt. To configure the Content Router to send varying levels of event messages to an external syslog host, use the **logging hostname** command. Logging can be configured to send various levels of messages to the console using the **logging console loglevels** command. It can also be configured to export event messages using the **logging event-export events** command.

Examples

```
Console(config)# logging console warnings
```

```
Console(config)# no logging console warnings
```

ls

To view a list of files or subdirectory names within a dosfs directory, use the **ls** EXEC command.

ls [*directory*]

Syntax Description	<i>directory</i> (Optional.) Name of the directory for which you want a list of files.
Defaults	No default behavior or values
Command Modes	EXEC
Usage Guidelines	To list the filenames and subdirectories within a particular directory, use the ls <i>directory</i> command; to list the filenames and subdirectories of the current working directory, use the ls command. To view the present working directory, use the pwd command.
Examples	<pre> Console# ls /local etc tftpboot var lib cr25.pax 2125922304 bytes AVAILABLE ON VOLUME /c0t0d0s1 </pre>
Related Commands	<p>dir</p> <p>lls</p> <p>pwd</p>

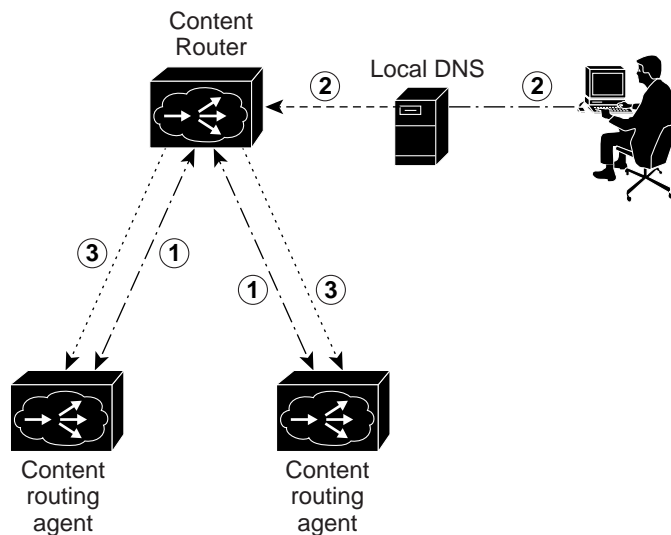
max-propagation-delay

To establish the maximum one-way delay from the Content Router to the agents, use the **max-propagation-delay** domain configuration command.

max-propagation-delay *msec*

Syntax Description	<i>msec</i>	Number of milliseconds (1 to 1000). The default is 500.
Defaults	The default is 500 msec.	
Command Modes	Domain configuration	
Usage Guidelines	Use this command to specify the maximum delay before the Content Router forwards a DNS request to an agent. In abnormal cases, the maximum one-way delay may become large. The max-propagation-delay value prevents the delay from being excessive. Figure C-1 outlines how the one-way delay is determined.	

Figure C-1 One-Way Delay



- ① Content Router calculates round trip time (RTT) to agent and back.
- ② DNS request is sent to Content Router.
- ③ Content Router forwards request to agents, with a one-way delay deduced from RTT.

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Examples

```
Console (config-domain)# max-propagation-delay 200
```

mkdir

To create a directory, use the **mkdir** EXEC command.

mkdir *directory*

Syntax Description	<i>directory</i>	Name of the directory to create.
---------------------------	------------------	----------------------------------

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

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

Usage Guidelines	Use this command to create a new directory or subdirectory in the Content Router file system.
-------------------------	---

Examples	Console# mkdir /oldpaxfiles
-----------------	------------------------------------

Related Commands	dir lls ls pwd rmdir
-------------------------	---

mkfile

To create a new file, use the **mkfile** EXEC command.

mkfile *filename*

Syntax Description	<i>filename</i>	Name of the file you want to create.
---------------------------	-----------------	--------------------------------------

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

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

Usage Guidelines	Use this command to create a new file in any directory of the Content Router.
-------------------------	---

Examples	Console# mkfile traceinfo
-----------------	----------------------------------

Related Commands	lls ls mkdir
-------------------------	---

no

To negate an interface configuration mode command or set its defaults, use the **no** interface configuration command.

no { **autosense** | **bandwidth** | **fullduplex** | **halfduplex** | **ip** }

Syntax Description	Command	Description
	autosense	Autosense capability on an interface.
	bandwidth	Interface speed.
	fullduplex	Full-duplex interface.
	halfduplex	Half-duplex interface.
	ip	Interface Internet Protocol (IP) configuration commands.

Defaults No default behavior or values

Command Modes Interface configuration

Usage Guidelines Use this command to negate an interface configuration mode command or to set its defaults.

Examples Console(config-if)# **no autosense**

no

To undo a global configuration command or set its defaults, use the **no** form of a command to undo the original command.

no *command*

Syntax Description

<i>command</i>	Use one of the following commands:
• boomerang	Configures boomerang parameters.
• clock	Configures time-of-day clock.
• cron	Cron commands.
• end	Exits configuration mode.
• exception	Exception handling.
• exec-timeout	Configures exec timeout.
• hostname	Configures the system network name.
• inetd	Configures inetd.
• interface	Configures an Ethernet interface.
• ip	Internet Protocol configuration commands.
• logging	Configures system logging (syslog).
• ntp	Configures Network Time Protocol (NTP).
• snmp-server	Configures SNMP.
• tacacs	Configures TACACS+ authentication.
• tcp	Configures TCP parameters.
• terminal	Current terminal commands.
• tftp-server	Configures TFTP server.
• transaction-logs	Configures transaction logging.
• trusted-host	Configures a trusted host.
• wccp	Configures Web Cache Communication Protocol.

Defaults

No default behavior or values

Command Modes

Global configuration

Usage Guidelines

Use the **no** command to disable functions or negate a command. If you need to negate a specific command, such as the default gateway IP address, you must include the specific string in your command, such as **no ip default-gateway ip-address**.

Examples

```
Console(config)# wccp version 2
```

```
Console(config)# no wccp version 2
```

no

To undo a domain configuration mode command or set its defaults, use the **no** form of a command to undo the original command.

no *command*

Syntax Description	<i>command</i>	Use one of the following commands:
	• alias	Establishes alternative domain names.
	• bloat	Sets bloat size for DNS responses sent by agents.
	• client	Specifies content routing agents.
	• dns-ttl	Specifies the DNS Time To Live value contained in the agent's DNS response.
	• fragment-size	Sets artificial IP fragment size for DNS responses sent by agents.
	• ip-ttl	Specifies the IP Time To Live value contained in the agent's DNS response.
	• key	Specifies the same shared keyword on the Content Router and each agent.
	• max-propagation-delay	Specifies the maximum one-way propagation delay before the DNS race begins.
	• origin-server	Specifies the IP address of the origin server.
	• server-delay	Specifies an extra delay for the "last chance" DNS response sent to the origin server.

Defaults No default behavior or values

Command Modes Domain configuration

Usage Guidelines Use the **no** command to disable functions or negate a command. If you need to negate a specific command, such as the origin server IP address, you must include the specific string in your command, such as **no origin-server ip-address**.

Examples

```
Console(config-domain)# client 10.22.33.44
Console(config-domain)# no client 10.22.33.44
```

no debug

To disable the debugging functions, use the **no debug** EXEC command.

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines We recommended that the debug commands be used only at the direction of Cisco Systems technical support personnel.

Related Commands

- debug**
- show debug**
- undebug**

ntp

To configure the Network Time Protocol (NTP) and to allow the system clock to be synchronized by a time server, use the **ntp server** global configuration command. To disable this function, use the **no** form of this command.

ntp server {*hostname* | *ip-address*}

no ntp server {*hostname* | *ip-address*}

Syntax Description

hostname Host name of the time server providing the clock synchronization (maximum of four NTP servers).

ip-address IP address of the time server providing the clock synchronization (maximum of four NTP servers).

Defaults

The default NTP version number is 3.

Command Modes

Global configuration

Usage Guidelines

Use this command to synchronize the Content Router clock with the specified server.

Examples

```
Console(config)# ntp server 172.16.22.44
Console(config)# no ntp server 172.16.22.44
```

Related Commands

clock
show clock
show ntp

ntpdate

To set the software clock (time and date) using a Network Time Protocol (NTP) server, use the **ntpdate** EXEC command.

```
ntpdate {hostname | ip-address}
```

Syntax Description	<i>hostname</i>	NTP host name.
	<i>ip-address</i>	NTP server IP address.

Defaults No default behavior or values.

Command Modes EXEC

Usage Guidelines Use NTP to find the current time of day and set the Content Router current time to match. The time must be saved to the hardware clock using the **clock save** command if it is to be restored after a reload.

Examples Console# **ntpdate 10.11.23.40**

Related Commands

- clock clear**
- clock save**
- clock set**
- show clock**

origin-server

To specify the IP address of the origin server that contains the web content for the domain, use the **origin-server** domain configuration command.

origin-server *ip-address hostname*

Syntax Description

<i>ip-address</i>	IP address of the origin server.
<i>hostname</i>	Origin server host name.

Defaults

No default behavior or values

Command Modes

Domain configuration

Usage Guidelines

Use this command on the Content Router so that the IP address of the origin server is in the information sent to agents. This tells the agents where to get requested web pages when there is a cache miss. This is also the address that is returned if none of the agents are able to respond.



Note You must use the **origin-server** command when you configure the Content Router in direct mode. In WCCP mode, if all content is supplied through push technology from the origin server to the content server, then it is not necessary to use the **origin-server** command. However, the **origin-server** command is necessary in WCCP mode if the content servers pull the content from the origin server.

Examples

```
Console (config-domain)# origin-server 10.2.1.1 www.servername.com
```

ping

To send echo packets for diagnosing basic network connectivity on networks, use the **ping** (packet internet groper) EXEC command.

```
ping {hostname | ip-address}
```

Syntax Description

<i>hostname</i>	Host name of system to ping.
<i>ip-address</i>	IP address of system to ping.

Defaults

No default behavior or values

Command Modes

EXEC

Usage Guidelines

To use this command with the *hostname* argument, be sure DNS functionality is configured on your Content Router. To force the timeout of a nonresponsive host, or to eliminate a loop cycle, enter **Ctrl-C**.

Examples

```
Console# ping mycacheengine
```

pwd

To show the current directory, use the **pwd** EXEC command.

pwd

Syntax Description This command has no arguments or keywords.

Command Modes EXEC

Usage Guidelines Use this command to display the present working directory of the Content Router.

Examples Console# **pwd**

Related Commands

- cd**
- dir**
- lls**
- ls**

reload

To halt and perform a cold restart on the Content Router, use the **reload** EXEC command.

reload

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines To reboot the Content Router, use the **reload** command. If no configurations are saved to Flash memory, you will be prompted to enter configuration parameters upon restart. Any open connections will be dropped after you issue this command, and the file system will be reformatted upon restart.

Examples Console# **reload**

Related Commands **install**
write
write erase

rename

To rename a file on your Content Router, use the **rename** EXEC command.

rename *sourcefile destinationfile*

Syntax Description

<i>sourcefile</i>	Source file or path name of the file you want to rename.
<i>destinationfile</i>	Destination file or path name of the new file.

Command Modes

EXEC

Usage Guidelines

Use this command to rename any file within the Content Router.

Examples

Console# **rename ce25.pax ce6399.pax**

Related Commands

cpfile

rmdir

To delete a directory, use the **rmdir** EXEC command.

rmdir *directory*

Syntax Description	<i>directory</i> Name of the directory you want to delete.
Command Modes	EXEC
Usage Guidelines	Use this command to remove any directory from the Content Router file system. The rmdir command removes empty directories only.
Examples	Console# rmdir /local/oldpaxfiles
Related Commands	lls ls mkdir

server-delay

To specify a delay in the “last chance” DNS response sent by the Content Router, use the **server-delay** domain configuration command.

server-delay *msec*

Syntax Description	<i>msec</i>	Number of milliseconds before the Content Router DNS response (32 to 999).
Defaults	The default delay is 100 milliseconds.	
Command Modes	Domain configuration	
Usage Guidelines	In case all agents are down, the Content Router sends a final DNS response to the requesting name server. Use this command to specify how long the Content Router should wait before sending this DNS response.	
Examples	Console (config-domain)# server-delay 200	

show arp

To display the Address Resolution Protocol (ARP) table, use the **show arp** EXEC command.

show arp

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Examples

```
Console# show arp
LINK LEVEL ARP TABLE
destination      gateway          flags  Refcnt    Use      Interface
171.69.227.129   00:e0:b0:e2:6d:a2  405   1         0        fei0
Console#
```

Related Commands

- show disks**
- show dosfs**

show boomerang

To display Content Router and agent information, use the **show boomerang** EXEC command.

```
show boomerang {all | client-list list-name | domain domain-name | global}
```

Syntax Description	boomerang	Displays boomerang-specific configuration information.
	all	Displays all of the show boomerang information.
	client-list	Displays configuration information for specified client list.
	<i>list-name</i>	Name assigned to a list of agents with the boomerang client-list command.
	domain	Displays configuration information for specified domain.
	<i>domain-name</i>	Name of domain (for example, www.foo.com).
	global	Displays boomerang global DNS statistics.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines On a Content Router, this command displays the current average latency between the Content Router and its agents. (Agents are described as “Boomerang Clients” in the output.) If the agent is repeatedly unreachable, the word “unknown” is displayed instead of a number. See [Table C-1 on page C-76](#) for a breakdown of the information displayed by the **show boomerang** command.



Note The delay time for agents may differ from one domain to another because of updates during the execution of the command.

Preventing Denial of Service Attacks

This command also shows the number of DNS packets received that have a bogus IP source address. Packets bearing these source addresses are typically used with the intention of using the Content Router in a denial of service attempt, or trying to overload the Content Router. Packets with these source addresses are discarded by the Content Router in direct mode, or reinserted into the original packet stream in WCCP mode. Bogus IP source addresses include the following:

- Global broadcast (255.255.255.255)
- 16-bit broadcast (x.y.255.255)
- 24-bit broadcast (x.y.z.255.255)
- Directed broadcast
- Multicast (Class D) (239.255.255.255 to 244.0.0.0)
- Loopback (127.0.0.0 to 127.255.255.255)

- Experimental (240.0.0.0 to 255.255.254)
- Content Router's own IP address
- IP addresses of multiple DNS requests sent by the same server to the same domain within the same second



Note If a possible denial of service attempt occurs, the following syslog message is displayed:

```
possible Denial-of-Service attack from 127.2.2.1 on domain www.mydomain.com;
ignoring DNS query!
```

Examples

Console# **show boomerang all**

```
DNS packets with unknown domain:0
Number of PTR Type requests (valid/invalid/total):15/0/15

Domain or Alias                A pkts   SOA pkts   MX pkts   Unsupported
www.boomexample.com            28        4           5          0
www.boomtest.org                14        1           7          0

Client Group:list1
Maximum Configured Delay: 500 msec
23 queries sent to resolvers, 12 responses received

Client List:list1                One-way   Probe      Races
                                Delay (msec) Timeouts   Won
10.2.3.4                          23.741    0%         5   21.7%
10.2.4.4                          303.908   0%         0   0.0%
10.2.5.4                          63.695    0%         2   8.6%
10.2.6.4                          83.718    0%         2   8.6%
10.2.7.4                          103.544   0%         0   0.0%
10.2.8.6                          203.620   0%         0   0.0%

Client List:list2                One-way   Probe      Races
                                Delay (msec) Timeouts   Won
10.2.8.7                          203.646   0%         0   0.0%
10.2.8.8                          203.636   0%         0   0.0%
10.2.8.9                          202.965   0%         0   0.0%
10.2.8.10                         unknown    100%        0   0.0%

1 minute input rate 0 requests/sec, output rate 0 services/sec
5 minute input rate 0 requests/sec, output rate 0 services/sec
10 minute input rate 0 requests/sec, output rate 0 services/sec
current counts:50 requests, 44 fulfillls, 0 fails
23 queries sent to resolvers, 12 responses received
0 bogus source address, 0 bogus length
0 bogus client source address, 0 no buffer
2 elements in dproxy-domain database, 5 denial-of-service attempts
```

Table C-1 describes the fields in the display.

Table C-1 show boomerang Field Descriptions

Field	Description
DNS packets with unknown domain	Number of DNS packets received in which the domain has not been configured on the system.
Number of PTR Type requests	Number of PTR type requests.
Domain or Alias	Name or alias of the current domain.
A pkts	Number of DNS Address (A) packets received.
SOA pkts	Number of DNS Start of Authority (SOA) packets received.
MX pkts	Number of DNS Mail eXchange (MX) packets received.
Unsupported	Number of DNS requests other than A, SOA, or MX packets. (These unsupported packets are discarded.)
Client group	Name of client list assigned to this domain.
Maximum Configured Delay	Configured maximum one-way delay. (One-way delays greater than this value are reduced to this value.)
Queries sent to resolvers	Number of DNS queries sent to resolvers.
Responses received	Number of DNS responses received.
Client list	Name of client list. The agents in the client list are listed below this heading.
One-way Delay	Observed delay in packets sent from the Content Router to the agent; calculated by dividing the round trip time by 2.
Probe Timeouts	Percentage of keepalive probes sent to the agent for which a response was not received.
Races won	Number of DNS races this agent won.
input rate	Average number of valid DNS requests received per second over the past 1, 5, and 10 minutes.
output rate	Average number of valid DNS requests serviced per second over the past 1, 5 and 10 minutes.
current counts	DNS request counts.
• requests	Total number of valid DNS requests.
• fulfills	Total number of valid DNS requests sent to agents.
• fails	Total number of valid DNS requests were not serviced (usually because of lack of memory).
bogus source addresses	Number of bogus source addresses received.
bogus length	Number of times a packet of the wrong length was received.
no buffer	Number of times a free packet was requested when none were available.

Table C-1 show boomerang Field Descriptions (continued)

Field	Description
elements in dproxy-domain database	Number of elements in the dproxy (DNS server) domain database. (There is one element for every unique combination of DNS server and content routing domain.)
denial-of-service attempts	Number of times denial-of-service attempts were detected.

Related Commands **max-propagation-delay**

show clock

To display the system clock, use the **show clock** EXEC command.

show clock [detail]

Syntax Description	detail	(Optional.) Displays detailed information; indicates the clock source on your network that provides the time service and the current summer-time setting (if any).
---------------------------	---------------	--

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

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

Examples	<pre> Console# show clock Wed Apr 28 20:52:48 1999 GMT Console# show clock detail Tue Jun 1 14:48:18 1999 GMT Tue Jun 1 07:48:18 1999 LocalTime Epoch: 928248498 seconds UTC offset: -25200 seconds (-7 hr 0 min) timezone: PST summerzone: PDT summer offset: 0 minutes daylight: summer </pre>
-----------------	--

Related Commands	clock clear clock save clock set
-------------------------	---

show cron

To display cron information, use the **show cron EXEC** command.

show cron

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Examples

```
Console# show cron
==CRON Configuration==
  CRON tab file: /local/etc/crontab

  Legend 1: min hr day-of-mon mon day-of-wk tclsh script-name
  Legend 2: min hr day-of-mon mon day-of-wk tcl tcl-cmd
  Sample: 0 5 * * * tclsh /local/test.tcl

Crontab for user: "root"

Id      Type      Source  Entry
1       log_recycle  api    0 * * * * tclsh /local/lib/tcl/recycle.tcl 50000
00 /local/var/log/syslog.txt
```

show debugging

To display the state of each debugging option, use the **show debugging** EXEC command.

show debugging

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines This command displays only the type of debugging enabled, not the specific subset of the command. For example, it shows that ICP debugging is enabled but does not define whether that debugging is monitoring ICP client or server packet transfer.

Examples

```
Console# debug logging all
Console# show debugging
debug logging is on
```

Related Commands

- debug**
- no debug**
- undebug**

show disk-partitions

To view information about your disk partitions, use the **show disk-partitions** EXEC command.

show disk-partitions *devname*

Syntax Description	<i>devname</i>	Device name.
--------------------	----------------	--------------

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

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

Usage Guidelines	Use this command to display partition information about a particular disk. The command show disks displays the names of the disks currently attached to the Content Router.
------------------	--

Examples	Console# show disk-partitions devname
----------	--

Related Commands	disk partition disk prepare show disks
------------------	---

show disks

To view information about your disks, use the **show disks** EXEC command.

show disks

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines The **show disks** command displays the names of the disks currently attached to the Content Router. You can partition a disk using the **disk partition** command.

Examples

```
Console# show disks
/c0t0d0 (scsi bus 0, unit 0, lun 0)
/c0t1d0 (scsi bus 0, unit 1, lun 0)
```

Related Commands

- disk partition**
- disk prepare**
- show disk-partitions**

show events

To display a number of system events by category, use the **show events EXEC** command.

show events *number* {**all** | **critical** | **notice** | **warning**}

Syntax Description	<i>number</i>	Number of events to display (1 to 65535).
	all	Shows all events.
	critical	Shows critical events.
	notice	Shows notice events.
	warning	Shows warning events.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines Use this command to show the chosen number of events by category.

Examples

```
Console# show events 10 notice
Notice: Waiting for admin traffic on port 8001
Thu, 01 Mar 2000 00:00:10 GMT
Notice: Waiting for Web traffic on port 80
Thu, 01 Mar 2000 00:00:09 GMT
Notice: Waiting for Web Proxy traffic on port 8080
Thu, 01 Mar 2000 00:00:10 GMT
Notice: Waiting for admin traffic on port 8001
Thu, 01 Mar 2000 00:00:10 GMT
Notice: Waiting for Web traffic on port 80
cepro#
```

show file-descriptors

To display information about the Content Router file descriptors, use the **show file-descriptors** EXEC command.

show file-descriptors

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Examples

```

Console# show file-descriptors
fd name                drv
 4 /tyCo/0              1 in out err
 9 (socket)             6
10 (socket)            6
11 (socket)            6
12 (socket)            6
15 (socket)            6
18 /pipe/ring          2
19 /pipe/log            2
20 /c0t0d0s1/_uv_acl_.db 3
21 /raw0                5
22 /raw1                5
23 /raw2                5
24 /raw3                5
25 /raw4                5
26 /raw5                5
27 /raw6                5
28 /raw7                5
29 /null                0
36 (socket)            6
37 (socket)            6
38 /local/events.dat   4
39 /local/radius.dat   4
50 (socket)            6

```

show flash

To display the Flash memory content, such as file code names, version numbers, and sizes, use the **show flash EXEC** command.

show flash

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Examples

```
Console# show flash
System flash directory:
File Length Name/status
  1  1198448 system image
[655360 read only, 1460592 bytes used, 5944976 available, 8388608 total]
```

show hardware

To display system hardware status, use the **show hardware** EXEC command.

show hardware

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Examples

```
Console# show hardware
Cisco Content Router 4430
Copyright (c) 1986-2000 by Cisco Systems, Inc.
Image text-base 0x108000, data_base 0x425a5c

System restarted by Power Up
The system has been up for 19 hours, 43 minutes, 21 seconds.
System booted from fei

Cisco Content Router 4430 CR4430 with CPU AMD-K6 (model 7) (rev. 0) AuthenticAMD
2 Ethernet/IEEE 802.3 interfaces
1 Console interface.
134213632 bytes of Physical Memory
131072 bytes of ROM memory.
8388608 bytes of flash memory.
```

Related Commands **show version**

show hosts

To view the hosts on your Content Router, use the **show hosts** EXEC command.

show hosts

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Examples

```
Console# show hosts
Domain name = cisco.com

Name Servers:
-----
10.2.2.3
172.31.2.111

Host Table:
hostname      inet address      aliases
-----
localhost     172.17.1.5
Console       172.31.117.254
```

show inetd

To display TCP/IP services that include echo, discard, chargen, FTP, RCP, Telnet, and TFTP, use the **show inetd EXEC** command.

show inetd

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Examples

```

Console# show inetd
Inetd task ID: 7fbc400
Inetd running configuration:
Service Port    Proto  Func    Max    Live    Total  Acpt   Rej    Stck  Lock
echo           7      tcp     1d863c 0       0       0      0      0     2048 0
discard       7      udp     1d86dc 0       0       0      0      0     2048 0
discard       9      tcp     1d875c 0       0       0      0      0     2048 0
discard       9      udp     1d87cc 0       0       0      0      0     2048 0
chargen       19     tcp     1d884c 0       0       0      0      0     2048 0
chargen       19     udp     1d88fc 0       0       0      0      0     2048 0
ftp           21     tcp     2b9df0 10      0       0      0      0     4096 0
rcp           514    tcp     1ec45c 5       0       0      0      0     4096 0
tftp          69     udp     2bdf2c 5       0       0      0      0     12288 0
telnet        23     tcp     2b81f0 3       0       0      0      0     4096 0

```

Related Commands **inetd**

show interface

To display hardware interfaces, use the **show interface EXEC** command.

show interface { *ethernet number* | *scsi number* }

Syntax Description		
ethernet		Ethernet interface device.
<i>number</i>		Ethernet interface number.
scsi		SCSI interface device.
<i>number</i>		SCSI interface number.

Defaults No default behavior or values

Command Modes EXEC

Examples

```

Console# show interface scsi 0
Max Transfer Size: 16777215
Sync: yes
Disconnect: yes
Wide: yes
Console# show interface ethernet 0
fei (unit number 0):
  Flags: (0x8063) UP BROADCAST MULTICAST ARP RUNNING
  Type: ETHERNET_CSMACD
  Internet address: 172.33.211.222
  Broadcast address: 172.33.227.225
  Netmask 0xffff0000 Subnetmask 0xfffff80
  Ethernet address is 00:50:0f:0d:23:06
  Maximum Transfer Unit size: 1500
  Address Length: 6
  Header Length: 14
  Metric: 0
  Baudrate: 0
  Packets Received: 800
  Input Errors: 0
  Packets Sent: 567
  Output Errors: 0
  Collisions: 0
  Bytes Received: 52754
  Bytes Sent: 46678
  Multicast Packets Received: 217
  Multicast Packets Sent: 0
  Received Packets Dropped: 0
  Packets with Unknown Protocol: 0
  Last Input/Output (ticks): 92746

Line speed: 100Mbit per sec. Duplex: full (AutoSensed)

```

■ show interface

Hardware statistical counters:

	Current	Total
	-----	-----
Tx good frames:	60	570
Tx MAXCOL errors:	0	0
Tx LATECOL errors:	0	0
Tx underrun errors:	0	0
Tx lost CRS errors:	0	0
Tx deferred:	0	0
Tx single collisions:	0	0
Tx multiple collisions:	0	0
Tx total collisions:	0	0
Rx good frames:	135	1725
Rx CRC errors:	0	0
Rx alignment errors:	0	0
Rx resource errors:	0	0
Rx overrun errors:	0	0
Rx collision detect errors:	0	0
Rx short frame errors:	0	0

(current values are polled and cleared for each display)

Related Commands **interface**

show ip routes

To display the IP routing table, use the **show ip routes** EXEC command.

show ip routes

Syntax Description	routes	Displays routing table.
--------------------	--------	-------------------------

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

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

Examples

```

Console# show ip routes
Destination      Mask      TOS      Gateway      Flags  RefCnt  Use  IntFace  Proto
-----
10.0.0.0         0.0.0.0   0        172.31.27.12  3      2       983  fei0     1
172.16.0.1       0.0.0.0   0        172.17.0.1   5      0        0    lo 0     0
172.31.2.1       255.255.255.1 172.30.27.200 101     0        0    fei0     0
-----

```

Related Commands	ip route no ip route
------------------	---------------------------------------

show logging

To display the system message log configuration, use the **show logging** EXEC command.

show logging

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Examples

```
Console# show logging
Syslog logging: enabled
  Console logging: level warning
  Trap logging: disabled
  Disk logging: level debug
    Logging to /local/var/log/syslog.txt, recycle size 5000000
  Event export:
    Critical events are exported to syslog
```

show memory

To display memory blocks and statistics, use the **show memory EXEC** command.

show memory [free]

Syntax Description	free	(Optional.) Shows free blocks of memory.
--------------------	------	--

Defaults No default behavior or values

Command Modes EXEC

Examples

```

Console# show memory free
SUMMARY:
  status      bytes      blocks  avg block  max block
  -----  -
current
  free      4374032      12      364502    4359952
  alloc    125199608     514     243579      -
cumulative
  alloc    125341720    1336     93818      -

Page Freelist Summary:
  status  pagesz  pages  avg contig pages  max contig pages
  -----  -
free     4096   15346    3069              15300

```

show ntp

To display the Network Time Protocol (NTP) parameters, use the **show ntp** EXEC command.

show ntp status

Syntax Description	status NTP status.
Defaults	No default behavior or values
Command Modes	EXEC
Examples	<pre>Console# show ntp status NTP subsystem ----- servers:</pre>
Related Commands	<p>ntp</p> <p>clock set</p> <p>clock timezone</p>

show processes

To display CPU or memory processes, use the **show processes EXEC** command.

show processes [cpu | memory]

Syntax Description	cpu	(Optional.) CPU utilization.
	memory	(Optional.) Memory allocation of information.

Defaults No default behavior or values

Command Modes EXEC

Examples

```
Console# show processes cpu
Current CPU Percentage = 0
Peak CPU Percentage = 22
```

```
Console# show processes memory
Pages:
page size pages free hiwat lowat total
-----
4096 17720 14839 25103 2091 29535
```

```
Type:
      bytes blocks sizes max byt tot blk pagw
-----
unknown      1600   100  0x10   1616   104   0
fcache bufhdr 12800   100  0x80  12800   100   0
fcache buffer 614400  100 0x3000 614400   100   0
fcache IO      0      0  0x80    256    46   0
fcache phys  409984   14 0x12040 409984    14   0
confval       192     3  0x350    960   402   0
task          71280  270 0x210   71808   500   0
stack        1257472 135 0x1f800 1323008  250   0
DB misc       2048     2  0x400   2048     2   0
DB hashtab    1024     1  0x400   1024     1   0
DB open       128     1  0x80    128     1   0
DB bufhead    64     2  0x20    64     2   0
DB cache      8192     2 0x1000   8192     2   0
DB databuf    0      0  0xb0    160   244   0
DB api        32     1  0x60    96    123   0
--More--
```

```
Console# show processes
NAME      ENTRY      TID  PRI  STATUS  PC      SP      ERRNO  DELAY
-----
tExcTask  3ca048     3a71aec  0  PEND   3fa981  3a71a5c  3006b  0
tLogTask  39a21c     3a6f1d4  0  PEND   3fa981  3a6ed3c  0      0
tWdbTask  3c46d4     161a18c  3  PEND   3c5a19  1619878  0      0
tScsiTask 3f5920     15ec514  5  PEND   3c5a19  15ec4b4  0      0
tF2000a   1260e8     7df1c00  25  PEND   3c5a19  7ddaf84  0      0
tF2000b   1260e8     7df1e00  25  PEND   3c5a19  7dc9f84  0      0
tF2001a   1260e8     7dc8e00  25  PEND   3c5a19  7507f84  0      0
```

show processes

```

tF2001b    1260e8    74f5000 25 PEND    3c5a19 74f6f84    0    0
tNetTask   3b201c    162a578 50 PEND    3c5a19 162a52c    41    0
tWCCP2     34e978    74eb200 60 PEND+T  3c5a19 74e8734 3d0004 27
tHotSpot   34b9b0    749a400 60 DELAY  39b996 74b1fa4    0    64
tDtimer    1214d8    7fb1000 75 DELAY  39b996 7f73fa8    0    7
tTtyUtil   264a18    74f5800 75 PEND    3fa981 74eef80    0    0
tOvrldDaemo281120 74a2400 75 PEND    3c5a19 749cfb0    0    0
tHealSrv   336340    74df000 75 PEND+T  3c5a19 74a870c 3d0004 2224
tCfsC000   244ed4    7dc8c00 98 PEND+T  3c5a19 7d93f58 3d0004 210
tCfsC001   244ed4    74f5400 98 PEND+T  3c5a19 74f3f58 3d0004 266
tCfsV000   224a4c    7dc8200 99 PEND+T  3c5a19 7d82f74 3d0004 150
tCfsT000   224d1c    7dc8400 99 PEND    3c5a19 794cfa4    0    0
--More--

```


show running-config

To display the current running configuration information on the terminal, use the **show running-config EXEC** command. This command is equivalent to the **write terminal** command.

show running-config [**boomerang** { **client-list** *list-name* | **domain** *domain-name* }]

Syntax Description		
boomerang	(Optional.)	Displays boomerang-specific configuration information.
client-list		Displays configuration information for specified client list.
<i>list-name</i>		Name assigned to a list of agents with the boomerang client-list command.
domain		Displays configuration information for specified domain.
domain-name		Name of domain (for example, www.foo.com).

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines Use this command in conjunction with the **show startup-config** command to compare the information in running memory to the startup configuration used during bootup.

Examples

```
Console# show running-config
Building configuration...
Current configuration:
!
!
!
user add admin uid 0 capability admin-access
!
!
!
hostname CR4430
!
interface ethernet 0
 ip address 10.2.2.8 255.255.255.0
 ip broadcast-address 10.2.2.255
 exit
!
interface ethernet 1
 exit
!
ip default-gateway 10.2.2.1
ip name-server 10.2.2.6
ip route 0.0.0.0 0.0.0.0 10.2.2.1
cron file /local/etc/crontab
!
!
!
```

show running-config

```
boomerang dns enable direct-mode
!
boomerang dns domain www.boomexample.com
key 7 15060e1f10
origin-server 10.2.2.6 boomexample.com
client-group list1
!
boomerang client-list list1
client 10.2.3.4
client 10.2.4.4
client 10.2.5.4
client 10.2.6.4
client 10.2.7.4
client 10.2.8.6
!
boomerang client-list list2
client 10.2.8.7
client 10.2.8.8
client 10.2.8.9
client 10.2.8.10
!
!
!
end
```

Related Commands

configure
copy running-config
copy startup-config
write terminal

show snmp

To check the status of SNMP communications, use the **show snmp** EXEC command.

show snmp

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines This command provides counter information for SNMP operations.

Examples

```

Console# show snmp
Contact: Mary Brown, system admin, mbrown@acme.com 555-1111
Location: Building 2, 1st floor, Lab 1
37 SNMP packets input
  0 Bad SNMP version errors
  4 Unknown community name
  0 Illegal operation for community name supplied
  0 Encoding errors
  24 Number of requested variables
  0 Number of altered variables
  0 Get-request PDUs
  28 Get-next PDUs
  0 Set-request PDUs
78 SNMP packets output
  0 Too big errors
  8192 Maximum packet size
  0 No such name errors
  0 Bad values errors
  0 General errors
  24 Response PDUs
  13 Trap PDUs

```

[Table C-2](#) describes the fields shown in the display.

Table C-2 *show snmp* Field Descriptions

Field	Description
SNMP packets input:	Total number of SNMP packets input.
Bad SNMP version errors	Number of packets with an invalid SNMP version.
Unknown community name	Number of SNMP packets with an unknown community name.

Table C-2 show snmp Field Descriptions (continued)

Field	Description
Illegal operation for community name supplied	Number of packets requesting an operation not allowed for that community.
Encoding errors	Number of SNMP packets that were improperly encoded.
Number of requested variables	Number of variables requested by SNMP managers.
Number of altered variables	Number of variables altered by SNMP managers.
Get-request PDUs	Number of GET requests received.
Get-next PDUs	Number of GET-NEXT requests received.
Set-request PDUs	Number of SET requests received.
SNMP packets output:	Total number of SNMP packets sent by the router.
Too big errors	Number of SNMP packets that were larger than the maximum packet size.
Maximum packet size	Maximum size of SNMP packets.
No such name errors	Number of SNMP requests that specified a MIB object that does not exist.
Bad values errors	Number of SNMP SET requests that specified an invalid value for a MIB object.
General errors	Number of SNMP SET requests that failed because of some other error. (It was not a No such name error, Bad values error, or any of the other specific errors.)
Response PDUs	Number of responses sent in reply to requests.
Trap PDUs	Number of SNMP traps sent.

Related Commands **snmp-server**

show stacktrace

To get stack trace information from your Content Router, use the **show stacktrace** EXEC command.

show stacktrace {*task-ID* | **exception**}

Syntax Description	<i>task-ID</i>	Hexadecimal number without a 0x prefix (0 to FFFFFFFF).
	exception	Stack trace on previous exception.

Defaults No default behavior or values

Command Modes EXEC

Examples Console# **show stacktrace exception**

show startup-config

To show the startup configuration, use the **show startup-config** EXEC command.

show startup-config

Syntax Description	This command has no keywords or arguments.
Defaults	No default behavior or values
Command Modes	EXEC
Usage Guidelines	Use this command to display the configuration used during an initial bootup, stored in NVRAM.

Examples

```

Console# show startup-config
Configuration Size 734 bytes
!
!
!
group add admin gid 0
group add everyone gid 1000
!
user add admin uid 0 password 1 "ceSzbyeb" capability admin-access
user add des uid 5001 password 1 "bbdze9eSbS" capability telnet-access
!
hostname CR4430
!
interface ethernet 0
 ip address 10.1.1.34 255.255.255.0
 ip broadcast-address 10.1.1.255
exit
!
interface ethernet 1
exit
!
ip default-gateway 10.1.1.2
ip domain-name cisco.com
cron file /local/etc/crontab
ntp server 10.6.14.7
!
boomerang dns enable direct-mode
!

```

```
boomerang dns domain www.download.cisco.com
alias www.download.cisco.net
key 7 01370317
origin-server 172.29.249.205 cr.cisco.com
client-group listA
!
boomerang client-list listA
client 10.2.3.4
client 10.2.4.4
client 10.2.5.4
client 10.2.6.4
client 10.2.7.4
client 10.2.8.6
!
boomerang client-list listB
client 10.2.8.7
client 10.2.8.8
client 10.2.8.9
client 10.2.8.10
!
!
!
transaction-logs export interval 3600
!
end!
```

Related Commands

configure
copy running-config
show running-config
write terminal

show statistics

To display Content Router statistics, use the **show statistics** EXEC command.

```
show statistics {icmp | ip | mbuf | netstat | transaction-logs | udp}
```

Syntax Description		
	icmp	Displays Internet Control Message Protocol (ICMP) statistics.
	ip	Displays IP statistics.
	mbuf	Displays memory buffer statistics.
	netstat	Displays Internet socket connections.
	routing	Displays routing statistics.
	transaction-logs	Displays transaction-log export statistics.
	udp	Displays User Datagram Protocol (UDP) statistics.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines Use this command to display Content Router statistics.

Examples

```
Console# show statistics icmp
ICMP:
    0 call to icmp_error
    0 error not generated because old message was icmp
Output histogram:
    echo reply: 37
    0 message with bad code fields
    0 message < minimum length
    0 bad checksum
    0 message with bad length
Input histogram:
    destination unreachable: 1091
    echo: 37
    37 message responses generated
```

Related Commands **clear statistics**

show tcp

To display TCP configuration information, use the **show tcp** EXEC command.

show tcp

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Examples

```
Console# show tcp
==TCP Configuration==
TCP keepalive timeout 300 sec
TCP keepalive probe count 4
TCP keepalive probe interval 75 sec
TCP server R/W timeout 120 sec
TCP client R/W timeout 120 sec
TCP server send buffer 8 k
TCP server receive buffer 32 k
TCP client send buffer 32 k
TCP client receive buffer 8 k
TCP Listen Queue 200
TCP init ssthresh 65536
TCP cwnd base 2
TCP server max segment size 1432
TCP server satellite (RFC1323) disabled
TCP client max segment size 1432
TCP client satellite (RFC1323) disabled
TCP retransmit drop threshold 1
```

show tech-support

To view information necessary for the Cisco Technical Assistance Center (TAC) to assist you, use the **show tech-support EXEC** command.

show tech-support [page]

Syntax Description	page	(Optional.) Pages through output.
--------------------	------	-----------------------------------

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

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

Usage Guidelines	Use this command to view system information necessary for TAC to assist you with the Content Router. This is a long display. You can manage the output using the terminal length command.
------------------	--

Examples	Console# show tech-support
----------	-----------------------------------

```

-----show hardware-----
Cisco Content Router 4430
Copyright (c) 1986-2001 by Cisco Systems, Inc.
Software Release: CR ver 2.09 (Build: #17 03/02/01)
Compiled: 06:19:45 Mar  2 2001 by morlee
Image text-base 0x108000, data_base 0x392064

System restarted by Reload
The system has been up for 3 hours, 12 minutes, 23 seconds.
System booted from "flash"

Cisco Content Router 4430 CR4430 with CPU AMD-K6 (model 7) (rev. 0) AuthenticAMD
2 Ethernet/IEEE 802.3 interfaces
1 Console interface.
134213632 bytes of Physical Memory
131072 bytes of ROM memory.
8388608 bytes of flash memory.
---More---
```

show tftp-server

To display configured TFTP directories, use the **show tftp-server** EXEC command.

show tftp-server

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Examples

```
Console#show tftp-server
      == TFTP Directory List ==
      /local/public
```

show transaction-logging

To show the transaction log summaries or to show transaction log settings, use the **show transaction-logging** EXEC command.

show transaction-logging [*entries number*]

Syntax Description	entries	(Optional.) Displays the last number of entries to the working log file.
	<i>number</i>	Number of most recent entries to display (1 to 256).

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines Use the **show transaction-logging** command to display the current settings for the transaction logging feature.

Use the **show transaction-logging entries number** command to display the last entries to the working log files. Transaction logging must be enabled in order for the **show transaction-logging entries** command to work.

Examples

```

Console# show transaction-logging
Transaction Logs:
  Logging is enabled.
  End user identity is hidden. (sanitized)
  File markers are disabled
  Archive interval: every-day at 12:00

Maximum Number of Archived Files: 5
Exporting files to servers is enabled.
Export interval: every-day every 1 hour

Working Log file - size: 0
                  age: 18449
Archive Log file - celog_171.69.227.250_20000802_120000.txt  size: 0

```

show trusted-hosts

To display the name of the Content Router trusted hosts, use the **show trusted-hosts** EXEC command.

show trusted-hosts

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Examples

```
Console# show trusted-hosts
Trusted Host checking: ON
172.16.0.2/C_Medici
172.18.0.1/Procrustes
```

show user

To display user information for a particular user, use the **show user** EXEC command.

```
show user { uid number | username name }
```

Syntax Description	uid	User ID keyword.
	<i>number</i>	User ID number (0 to 2147483647).
	username	Displays information for a user.
	<i>name</i>	Username.

Defaults No default behavior or values

Command Modes EXEC

Examples

```
Console#show user username bwhidney
Username           : bwhidney
Uid                : 5013
Number of Groups   : 1
Primary Group      : everyone (1000)
Password           : bSzyydQbSb
Comment            :
HomeDir            : /local
Capability         : admin-access
```

Related Commands

- show groups**
- show users**

show users

To display all users, use the **show users** EXEC command.

show users

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Examples

```
Console# show users
There are 2 user(s)
      UID  USERNAME
      0    admin
      5013  bwhidney
```

Related Commands **show groups**
show user

show version

To display the current software on your Content Router, use the **show version** EXEC command.

show version

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Examples

```
Console# show version
Cisco Content Router 4430
Copyright (c) 1986-2001 by Cisco Systems, Inc.
Software Release: CR ver 1.1 (Build: #2 02/05/01)
Compiled: 04:10:16 Feb 14 2000 by
Image text-base 0x108000, data_base 0x43dbb4

System restarted by Reload
The system has been up for 6 days, 1 hour, 55 minutes, 16 seconds.
System booted from "flash"
```


show wccp

To display WCCP information, use the **show wccp EXEC** command.

show wccp {router | status}

Syntax Description	router	Shows the WCCP home router.
	status	Shows which version of WCCP is enabled and running.

Defaults No default behavior or values

Command Modes EXEC

Examples

```

Console# show wccp router
Routers Seeing this Content Router
      Router Id      Sent To
      10.0.0.0      10.1.1.1
Routers not Seeing this Content Router
      10.1.1.1
Routers Notified of but not Configured
-NONE-
Multicast Addresses Configured
-NONE-

Router Information for Service: Reverse-Proxy
Routers Seeing this Content Router
      Router Id      Sent To
      10.0.0.0      10.1.1.1
Routers not Seeing this Content Router
      10.1.1.1
Routers Notified of but not Configured
-NONE-
Multicast Addresses Configured
-NONE-

```

snmp-server community

To set up the community access string to permit access to the SNMP protocol, use the **snmp-server community** global configuration command. Use the **no** form of this command to remove the previously configured community string.

snmp-server community *string*

no snmp-server community

Syntax Description	<i>string</i>	Community string that acts like a password and permits access to the SNMP protocol.
---------------------------	---------------	---

Defaults	By default, an SNMP community string permits read-only access to all objects.
-----------------	---

Command Modes	Global configuration
----------------------	----------------------

Examples	The following example assigns the string comaccess to SNMP:
-----------------	---

```
Console(config)# snmp-server community comaccess
```

The following example removes the previously defined community string:

```
Console(config)# no snmp-server community
```

The following example disables SNMP without removing a previously defined community string:

```
Console(config)# no snmp-server
```

Related Commands	show snmp
-------------------------	------------------

snmp-server contact

To set the system contact (sysContact) string, use the **snmp-server contact** global configuration command. Use the **no** form of this command to remove the system contact information.

snmp-server contact *line*

no snmp-server contact

Syntax Description	contact	Text for MIB object sysContact.
	<i>line</i>	Identification of the contact person for this managed node.

Defaults No system contact string is set.

Command Modes Global configuration

Usage Guidelines The system contact string is the value stored in the MIB-II system group sysContact object.

Examples The following is an example of a system contact string:

```
Console# snmp-server contact Dial System Operator at beeper # 27345

Console# no snmp-server contact
```

Related Commands **snmp-server location**
show snmp

snmp-server enable traps

To enable the Content Router to send SNMP traps, use the **snmp-server enable traps** global configuration command. Use the **no** form of this command to disable SNMP notifications.

snmp-server enable traps

no snmp-server enable traps

Syntax Description This command has no arguments or keywords.

Defaults This command is disabled by default. No traps are enabled.

Command Modes Global configuration

Usage Guidelines If you do not enter an **snmp-server enable traps** command, no traps are sent. In order to configure traps, you must enter the **snmp-server enable traps** command.

The **snmp-server enable traps** command is used in conjunction with the **snmp-server host** command. Use the **snmp-server host** command to specify which host or hosts receive SNMP traps. To send traps, you must configure at least one **snmp-server host** command.

For a host to receive a trap, both the **snmp-server enable traps** command and the **snmp-server host** command for that host must be enabled.

In addition, SNMP must be enabled with the **snmp-server community** command.

Examples The following example enables the router to send all traps to the host 172.31.2.160 using the community string public:

```
Console(config)# snmp-server enable traps
Console(config)# snmp-server host 172.31.2.160 public
```

```
Console(config)# no snmp-server enable traps
```

Related Commands **snmp-server host**
snmp-server community

snmp-server host

To specify the recipient of an SNMP trap operation, use the **snmp-server host** global configuration command. Use the **no** form of this command to remove the specified host.

snmp-server host {*hostname* | *ip-address*} *communitystring*

no snmp-server host {*hostname* | *ip-address*} *communitystring*

Syntax Description		
	<i>hostname</i>	Host name of SNMP trap host.
	<i>ip-address</i>	IP address of SNMP trap host.
	<i>communitystring</i>	Passwordlike community string sent with the trap operation.

Defaults This command is disabled by default. No traps are sent. The version of the SNMP protocol used to send the traps is SNMPv1.

Command Modes Global configuration

Usage Guidelines If you do not enter an **snmp-server host** command, no traps are sent. To configure the Content Router to send SNMP traps, you must enter at least one **snmp-server host** command. To enable multiple hosts, you must issue a separate **snmp-server host** command for each host. The maximum number of **snmp-server host** commands is four.

When multiple **snmp-server host** commands are given for the same host, the community string in the last command is used.

The **snmp-server host** command is used in conjunction with the **snmp-server enable traps** command to enable SNMP traps.

In addition, SNMP must be enabled with the **snmp-server community** command.

The MIB is located in the /local/lib/gui/snmp directory of the Content Router as the file CISCO-CACHEENGINE-MIB.my.

Examples The following example sends the SNMP traps defined in RFC 1157 to the host specified by the IP address 172.16.2.160. The community string is comaccess.

```
Console(config)# snmp-server enable traps
Console(config)# snmp-server host 172.16.2.160 comaccess
```

```
Console(config)# no snmp-server host 172.16.2.160
```

Related Commands **snmp-server enable traps**
snmp-server community

snmp-server location

To set the SNMP system location string, use the **snmp-server location** global configuration command. Use the **no** form of this command to remove the location string.

snmp-server location *line*

no snmp-server location

Syntax Description	<i>line</i> String that describes the physical location of this node.
---------------------------	---

Defaults	No system location string is set.
-----------------	-----------------------------------

Command Modes	Global configuration
----------------------	----------------------

Usage Guidelines	The system location string is the value stored in the MIB-II system group system location object. You can see the system location string with the show snmp EXEC command.
-------------------------	--

Examples	The following is an example of a system location string: <pre>Console(config)# snmp-server location Building 3/Room 214</pre>
-----------------	--

Related Commands	show snmp snmp-server contact
-------------------------	--

tclsh

The **tclsh** command is for Cisco Systems internal use only.

tcp

To configure TCP parameters, use the **tcp** global configuration command. To disable TCP parameters, use the **no** form of this command.

```
tcp { client-mss maxsegment | client-receive-buffer kbytes | client-rw-timeout seconds |
client-satellite | client-send-buffer kbytes | cwnd-base factor | init-ssthresh value |
keepalive-probe-cnt count | keepalive-probe-interval seconds | keepalive-timeout seconds |
listen-queue length | server-mss maxsegment | server-receive-buffer kbytes |
server-rw-timeout seconds | server-satellite | server-send-buffer kbytes }
```

```
no tcp { client-mss maxsegment | client-receive-buffer kbytes | client-rw-timeout seconds |
client-satellite | client-send-buffer kbytes | cwnd-base factor | init-ssthresh value |
keepalive-probe-cnt count | keepalive-probe-interval seconds | keepalive-timeout seconds |
listen-queue length | server-mss maxsegment | server-receive-buffer kbytes |
server-rw-timeout seconds | server-satellite | server-send-buffer kbytes }
```

Syntax Description

client-mss	Sets client TCP maximum segment size.
<i>maxsegment</i>	Maximum client TCP segment size in bytes (512 to 1460).
client-receive-buffer	Sets client receive buffer size.
<i>kbytes</i>	Receive buffer size in kilobytes (1 to 1024).
client-rw-timeout	Sets client connection's read/write timeout.
<i>seconds</i>	Timeout in seconds (1 to 3600).
client-satellite	Client TCP compliance to RFC 1323 standard.
client-send-buffer	Client connection's send buffer size.
<i>kbytes</i>	Send buffer size in kilobytes (8 to 1024).
cwnd-base	Sets TCP congestion window (cwnd) base factor.
<i>factor</i>	Factor value (1 to 16).
init-ssthresh	Sets TCP initial smooth threshold.
<i>value</i>	Threshold value (2920 to 1073741824).
keepalive-probe-cnt	Sets TCP keepalive probe counts.
<i>count</i>	Number of probe counts (1 to 10).
keepalive-probe-interval	Sets TCP keepalive probe interval.
<i>seconds</i>	Keepalive probe interval in seconds (1 to 300).
keepalive-timeout	Sets TCP keepalive timeout.
<i>seconds</i>	Keepalive timeout in seconds (1 to 3600).
listen-queue	Sets maximum size of TCP listen queue.
<i>length</i>	Listen queue length in kilobytes (1 to 000).
server-mss	Sets server TCP maximum segment size.
<i>maxsegment</i>	Maximum server TCP segment size in bytes (512 to 1460).
server-receive-buffer	Sets server connection receive buffer size.
<i>kbytes</i>	Receive buffer size in kilobytes (1 to 1024).
server-rw-timeout	Sets server connection read/write timeout.
<i>seconds</i>	Read/write timeout in seconds (1 to 3600).

server-satellite	Server TCP compliance to RFC 1323 standard.
server-send-buffer	Server connection send buffer size.
<i>kbytes</i>	Buffer size in kilobytes (1 to 1024).

Defaults

tcp client-receive-buffer: 8 kilobytes
tcp client-rw-timeout: 30 seconds
tcp client-send-buffer: 8 kilobytes
tcp keepalive-probe-cnt: 4
tcp keepalive-probe-interval: 75 seconds
tcp keepalive-timeout: 300 seconds
tcp server-receive-buffer: 8 kilobytes
tcp server-rw-timeout: 120 seconds
tcp server-send-buffer: 8 kilobytes

Usage Guidelines

In nearly all environments, the default TCP setting is adequate. If you modify the **listen-queue** setting, reboot the Content Router to effect the changes.

Command Modes

Global configuration

Examples

```

Console(config)# tcp client-receive-buffer 100

Console(config)# no tcp client-receive-buffer 100
  
```

Related Commands

show tcp

terminal

To display the current terminal commands, use the **terminal EXEC** command.

terminal monitor

Syntax Description	monitor Monitors debug commands.
Defaults	No default behavior or values
Command Modes	EXEC
Usage Guidelines	This command makes a Telnet session the terminal. This causes all software output to go to this session. Since there is only one active terminal in the system, this session redirects all software output from all other Telnet sessions to this session.
Examples	<pre>Console# terminal monitor Console is always monitored</pre>

terminal

To set the number of lines displayed in the console window, use the **terminal** global configuration command. To disable this function, use the **no** form of the command.

terminal length *lines*

no terminal length *lines*

Syntax Description	length	Sets the number of lines displayed by the terminal screen.
	<i>lines</i>	Number of lines on the screen (0 to 512). The default is 24 lines. Enter 0 for no pausing.
Defaults	Default is 24 lines.	
Command Modes	Global configuration	
Usage Guidelines	When 0 is entered as the <i>lines</i> parameter, output to the screen does not pause. For all nonzero values of <i>lines</i> , the -More- prompt is displayed when the number of output lines matches the specified <i>lines</i> number. The -More- prompt is considered a line of output. To view the next screen, press the Spacebar . To view one line at a time, press the Enter key. To exit the show command output, press the Esc key or any other keystroke.	
Examples	<pre>Console(config)# terminal length 0 Console(config)# no terminal length 0</pre>	
Related Commands	All show commands	

tftp-server

To set the TFTP server directory, use the **tftp-server** global configuration command.

tftp-server dir *directory*

no tftp-server dir *directory*

Syntax Description

dir	Sets the TFTP server directory
<i>directory</i>	Specifies the path name of the TFTP server.

Defaults

No default behavior or values

Command Modes

Global configuration

Examples

Console(config)# **tftp-server dir /mypath**

transaction-log force

To force the immediate creation of a transaction log, use the **transaction-log force** EXEC command.

transaction-log force {archive | export}

Syntax Description	archive	Forces the archive of the <i>working.log</i> file.
	export	Forces the archived files to be exported to a server.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines The **transaction-log force archive** command causes the transaction log to be archived immediately to the Content Router hard disk. This command has the same effect as the **clear transaction-log** command. The **transaction-log force export** command causes the transaction log to be exported immediately to an FTP server designated by the **transaction-logs export ftp-server** command.

The force commands do not change the configured schedule for archive or export of transaction log files. If a scheduled archive or export job is in progress when a corresponding force command is entered, an error message is displayed. If a force command is in progress when an archive or export job is scheduled to run, the scheduled job runs when the force command is complete.

Examples

```
Console# transaction-log force archive
Starting transaction-log force archive command
Completed transaction-log force archive command
```

Related Commands

- transaction-logs**
- clear statistics transaction-logs**
- clear transaction-log**
- show statistics transaction-logs**
- show transaction-logging**

transaction-logs

To enable transaction logs, use the **transaction-logs** global configuration command. To disable transaction logs, use the **no** form of this command.

```
transaction-logs {archive {files maxnumfiles | interval {seconds / every-day {at time | every hour} | every-hour {at minute | every interval} | every-week [on days [at time]]} | enable | export {enable | ftp-server {hostname | servipaddr} login passwd directory} | interval {minutes / every-day {at time | every hour} | every-hour {at minute | every interval} | every-week [on days [at time]]} | file-marker | sanitize}
```

```
no transaction-logs {archive {files maxnumfiles | interval {seconds / every-day {at time | every hour} | every-hour {at minute | every interval} | every-week [on days [at time]]} | enable | export {enable | ftp-server {hostname | servipaddr} login passwd directory} | interval {minutes / every-day {at time | every hour} | every-hour {at minute | every interval} | every-week [on days [at time]]} | file-marker | sanitize}
```

Syntax Description

archive	Configures archive parameters.
files	Saves archive log files to disk.
<i>maxnumfiles</i>	Maximum number of archive files to save on disk (1 to 10). The default is 1.
interval	Determines how frequently the archive file is to be saved.
<i>seconds</i>	Time interval in seconds (120 to 86400). The default is 86,400 seconds (1 day).
every-day	Archives using frequencies of 1 day or less.
at time	Specifies the time of day at which to archive in hours and minutes (hh:mm).
every hour	Interval in hours (1, 2, 3, 4, 6, 8, 12, or 24).
every-hour	Archives using frequencies of 1 hour or less.
at minute	Specifies the minute alignment for the hourly archive (0 to 59).
every interval	Interval in minutes (2, 10, 15, 20, 30).
every-week	Archives one or more times a week.
on days	(Optional). Archives one or more days of the week (mon, tue, wed, thu, fri, sat, sun).
at time	(Optional). Specifies the time of day at which to archive in hours and minutes (hh:mm).
enable	Enables transaction log feature.
export	Configures file export parameters.
enable	Enables the exporting of log files at the specified interval.
ftp-server	Sets FTP server to receive exported archived files.
<i>hostname</i>	Host name of target FTP server.
<i>servipaddr</i>	IP address of target FTP server.
<i>login</i>	User login to target FTP server.
<i>passwd</i>	User password to target FTP server.
<i>directory</i>	Target directory for exported files on FTP server.
interval	Transfers files to the FTP server after this interval.

<i>minutes</i>	Export time interval in minutes (1–10,080). The default is 60 minutes.
every-day	Exports using frequencies of 1 day or less.
at time	Specifies the time at which to export each day in hours and minutes (hh.mm).
every hour	Interval in hours (1, 2, 3, 4, 6, 8, 12, or 24).
every-hour	Exports using frequencies of 1 hour or less.
at minute	Specifies the minute alignment for the hourly archive (0 to 59).
every interval	Interval in minutes (2, 10, 15, 20, or 30).
every-week	Exports one or more times a week.
on days	(Optional.) Exports on one or more days of the week (mon, tue, wed, thu, fri, sat, sun).
at time	(Optional.) Specifies the time of day at which to export in hours and minutes (hh:mm).
file-marker	Adds statements to transaction log, indicating the file beginning and ending.
sanitize	Writes user IP addresses in log file as 0.0.0.0.

Defaults

The default for maximum number of archive files is 1. The default frequency for archiving files is 1 day. The default export time interval is 60 minutes.

Command Modes

Global configuration

Usage Guidelines

Enable transaction log recording with the **transaction-logs enable** command. When enabled, daemons create a *working.log* file in the */local/var/log/translog/dosfs* directory.

After an interval specified by the **transaction-logs archive interval** command, the *working.log* file is renamed and copied as an archive file to the *dosfs* directory with the path */local/var/log/translog/archive/data*. A new *working.log* file is then created and the process repeats. The Content Router default archive interval is 86,400 seconds, or one day.

Use the **transaction-logs archive files** command to specify how many archive files to store on disk. When the maximum number of files has been created, the next archive file overwrites the oldest stored file.

The transaction log archive and export functions are configured with the following commands:

- The **transaction-logs archive interval** global configuration command allows the user to specify when the *working.log* file is saved.
- The **transaction-logs export interval** global configuration command determines when the previously archived transaction log files are transferred to the FTP server.
- The **transaction-log force EXEC** command can force the archiving of a *working.log* file or the export of the transaction logs to an FTP server.

The following limitations apply:

- When the interval is scheduled in units of hours, the value must divide evenly into 24. For example, the interval can be every 4 hours, but not every 5 hours.
- When the interval is scheduled in units of minutes, the value must divide evenly into 60.
- Only the more common choices of minutes are supported. For example, the interval can be 5 minutes or 10 minutes, but not 6.
- The selection of interval alignment is limited. If an interval is configured for every 4 hours, it will align with midnight. It cannot align with 12:30 or with 7 a.m.
- The feature does not support archiving or exporting at different times on different days. For example, it does not support an interval of “Monday at noon and Wednesday at midnight.”
- The feature does not support different intervals within the day. For example, it does not support an interval that is hourly during regular business hours, and then every 4 hours during the night.
- No coordination exists between the archive and export scheduling functionalities. Even if they are scheduled at the same interval, there is no guarantee that the archive function will run before the export function.

If the **transaction-logs export interval** is configured to a larger value than the archive interval, the administrator must ensure that there are enough archive files.

Transaction Log Archive File-Naming Convention

The archive transaction log file is named as follows:

```
celog_10.1.118.5_20001028_235959.txt
```

Table C-3 describes the name elements.

Table C-3 Archive Transaction Log File Name Elements

Name Element	Description
celog_10.1.118.5	IP address of the Content Router creating the archive file.
19991228	Date archive file was created (yyyy/mm/dd).
235959	Time archive file was created (hh/mm/ss).

The transaction logs export feature does not create the legacy archive files named *archive.log*. Legacy archive files must be manually deleted or copied from the Content Router hard disk.

Exporting Transaction Logs to External FTP Servers

The **transaction-logs export ftp-server** option can support up to four FTP servers. To export transaction logs, you must first enable the feature and configure the export interval. The following information is required for each target server:

- Server IP address or the host name
The Content Router translates the host name with a DNS lookup and then stores the IP address.
- FTP user login and user password
- Path of the directory where transferred files are written
Use a fully qualified path or a relative path for the user login. The user must have write permission to the directory.

Use the **no** form of the **transaction-logs export enable** command to disable the entire transaction logs feature while retaining the rest of the configuration.

Restarting Export After Receiving a Permanent Error from the External FTP Server

When an FTP server returns a permanent error to the Content Router, the archive transaction logs are no longer exported to that server. You must reenter the Content Router transaction log export parameters to clear the error condition. The **show statistics transaction-logs** command displays the current state of transaction log export readiness.

A permanent error (Permanent Negative Completion Reply, RFC 959) occurs when the FTP command to the server cannot be accepted, and the action did not take place. Permanent errors can be caused by invalid user logins, invalid user passwords, and attempts to access directories with insufficient permissions.

In the following example, an invalid user login parameter was included in the **transaction-logs export ftp-server** command. The **show statistics transaction-logs** command shows that the Content Router failed to export archive files.

```
Console# show statistics transaction-logs
Server:172.31.23.12
Export stopped due to permanent error received from FTP.
Attempts:1
Successes:0
Open Failures:0
Put Failures:0
Other Transport Errors:
Authentication Failures:1
Permanent Directory Failures:0
Permanent Put Failures:0
Previous Permanent Ftp Errors:0
```

To restart the export of archive transaction logs, the **transaction-logs export ftp-server** parameters must be reentered:

```
Console(config)# transaction-logs export ftp-server 10.1.1.1 goodlogin pass /etc/webcache
```

Use the **sanitize** option to disguise the IP address and usernames of clients in the transaction log file. The default is not sanitized. A sanitized transaction log disguises the network identity of a client by changing the IP address in the transaction logs to 0.0.0.0. The **no** form disables the sanitize feature.

Examples

In this example, an FTP server is configured.

```
Console(config)# transaction-logs export ftp-server 10.1.1.1 mylogin mypasswd
/tmp/local/webcache
```

```
Console(config)# transaction-logs export ftp-server myhostname mylogin mypasswd
/tmp/local/webcache
```

To delete an FTP server, use the **no** form of the command.

```
Console(config)# no transaction-logs export ftp-server myhostname
Console(config)# no transaction-logs export ftp-server 10.1.1.1
```

Use the **no** form of the command to disable the entire transaction log export feature while retaining the rest of the configuration.

```
Console(config)# no transaction-logs export enable
```



Note The default is export disabled; the interval default is 1 hour. There are no defaults for the FTP server configuration.

To change a username, password, or directory, reenter the entire line.

```
Console(config)# transaction-logs export ftp-server 10.1.1.1 mynewname mynewpass
/tmp/local/webcache
```

The **show transaction-logging** command displays information on exported log files.

```
Console# show transaction-logging
Transaction Logs:
Logging is enabled
End user identity is visible.
Current Archive Interval: 86400 sec.
Maximum Number of Archived Files: 6
Exporting files to servers is enabled.
Current export retry interval: 100 minutes.

Working Log file - size: 8650
age: 4885
Archive Log file:
celog_10.1.118.5_19991228_235959.txt - size: 10340
File export feature is enabled
ftp-server      username      directory
10.1.1.1        mynewname    /tmp/local/webcache
10.2.2.2        erasmus      /tmp/translogfiles
```



Note For security reasons, passwords are never displayed.

The **export** option has been added to the **show statistics transaction-logs** command to display the status of logging attempts to export servers.

```
Console# show statistics transaction-logs
Transaction Logs:
Logging is enabled.
End user identity is visible.
Current Archive Interval: 120 seconds.
Maximum Number of Archived Files: 10
Exporting files to servers is enabled.
Export retry interval:1 minutes.

Working Log file - size:0
age:45
No Archive Log file found

ftp-server      username      directory
172.16.21.110   zpajanos     ~zp/201/translog/logfiles
172.16.33.33    zpajanos     ~zp/outputfiles
10.10.1.1       my           my
```

Configuring Intervals Between 1 Day and 1 Hour

The interval can be set for once a day with a specific timestamp. It can also be set for frequencies of hours; these frequencies align with midnight. For example, every 4 hours means archiving occurs at 0000, 0400, 0800, 1200, 1600, and the like. It is not possible to archive at 0030, 0430, 0830, and so forth.

```
cepro(config)# transaction-logs archive interval every-day ?
  at          Specify the time at which to archive each day
  every       Specify the interval in hours. It will align with midnight

cepro(config)# transaction-logs archive interval every-day at ?
hh:mm       Time of day at which to archive (hh:mm)

cepro(config)# transaction-logs archive interval every-day every ?
<1-24>      Interval in hours: {1, 2, 3, 4, 6, 8, 12 or 24}
```

Scheduling Intervals of 1 Hour or Less

The interval can be set for once an hour with a minute alignment. It can also be set for frequencies of less than an hour; these frequencies will align with the top of the hour. That is, every five minutes means archiving will occur at 1700, 1705, and 1710.

```
cepro(config)# transaction-logs archive interval every-hour ?
  at          Specify the time at which to archive each day
  every       Specify interval in minutes. It will align with top of the hour

cepro(config)# transaction-logs archive interval every-hour at ?
<0-59>       Specify the minute alignment for the hourly archive
```

Scheduling Weekly Intervals

The interval can be set for once a week or multiple times within the week. For example, it is possible to archive “every Sunday at 0630” or “every Monday, Wednesday, and Friday at 1900.” Administrators can select as many days as they wish, including all seven days. Note that it is not possible to schedule the interval for different times on different days.

```
cepro(config)# transaction-logs archive interval every-week ?
  on          Day of the week
  <cr>

cepro(config)# transaction-logs archive interval every-week on ?
DAY          Day of week to archive

cepro(config)# transaction-logs archive interval every-week on Monday ?
DAY          Day of week to archive
at          Specify the time of day at which to archive
<cr>

cepro(config)# transaction-logs archive interval every-week on Monday Friday at ?
hh:mm       Time of day at which to archive (hh:mm)
```

Related Commands

```
clear transaction-log
show transaction-logging
show statistics transaction-logs
transaction-log force
```

trusted-host

To enable trusted hosts on your Content Router, use the **trusted-host** global configuration command. To disable trusted hosts, use the **no** form of this command.

```
trusted-host {hostname | ip-address | domain-lookup}
```

```
no trusted-host {domain-lookup}
```

Syntax Description

<i>hostname</i>	Host name of trusted host.
<i>ip-address</i>	IP address of trusted host.
domain-lookup	Trusted host checking.

Defaults

No trusted hosts is the default.

Command Modes

Global configuration

Usage Guidelines

To allow reception of files (for example, rcp) from specified hosts, these hosts must be identified using the **trusted-host** *hostname* command. You must first enable this feature with the **trusted-host** *domain-lookup* command.

Examples

```
Console(config)# trusted-host domain-lookup
Console(config)# trusted-host 172.31.90.33
Console(config)# no trusted-host domain-lookup
```

Related Commands

show trusted-hosts

type

To display a file, use the **type** EXEC command.

type *filename*

Syntax Description	<i>filename</i>	Name of file.
---------------------------	-----------------	---------------

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

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

Usage Guidelines	Use this command to display the contents of a file within any Content Router file directory. This command may be used to monitor features such as transaction logging or system logging (syslog), or to manage files such as badurl.lst for URL filtering.
-------------------------	--

Examples	<pre> Console# type ftp.mime.config #This file is used to configure your mime-type file processing. # Put your file's suffix in first column and mime-type string # in the second column. The third column contains a number indicates # which icon is applies to this kind of file, put 0 if you do not know. # The transfer mode in the fourth column. # # 'b' indicates binary 'a' indicates 'ASC'. # # The comments begin with '#' ... </pre>
-----------------	--

Related Commands	<p>cpfile</p> <p>dir</p> <p>lls</p> <p>ls</p> <p>mkfile</p>
-------------------------	--

undebug

To disable debugging functions, use the **undebug** EXEC command. Also see the **debug** EXEC command.

Command Modes

EXEC

Defaults

No default behavior or values

Usage Guidelines

We recommend that debug commands be used only at the direction of Cisco Systems technical support personnel.

Related Commands**debug****no debug****show debug**

user

To configure user accounts on the Content Router, use the **user** global configuration command.

user {**add** | **delete** | **modify**}

user add *username* [**password** [**0** | **1**] *password*] [**capability** [**admin-access** | **ftp-access** | **http-access** | **telnet-access**]] [**uid** *userid*]

user delete {**username** *username* | **uid** *userid*}

user modify {**uid** *number* | **username** *name*} { [**add-capability** [**admin-access** | **ftp-access** | **http-access** | **telnet-access**]] | [**del-capability** [**admin-access** | **ftp-access** | **http-access** | **telnet-access**]] | [**password** [**0** | **1**] *password*] }

Syntax Description

add	Creates a new user account on the Content Router.
delete	Removes the specified user account from the Content Router.
modify	Changes the user information.
<i>username</i>	Content Router login name for the user.
password	(Optional.) See password options.
capability	(Optional.) See capability options. Adds capability to a new user. Use with add keyword.
add-capability	(Optional.) See capability options.
uid	Assigns a user ID.
<i>userid</i>	Range of administrator-assigned user ID numbers (2001 to 2147483647).
add-capability	(Optional.) Adds capability to an existing user. Use with modify keyword. See capability options.
del-capability	(Optional.) Deletes capability of an existing user. Use with modify keyword. See capability options.

Password Options

password	Sets a password for the specified user.
0	Specifies that a clear-text password will follow (default).
1	Specifies that a type 1 encrypted password will follow.
<i>password</i>	Password for the specified user. For no password, omit this option. Password must be a string of 4 to 128 characters in length. Passwords of one to three characters are rejected.

Capability Options

admin-access	Grants all possible access to the Content Router.
ftp-access	Grants FTP access to the Content Router. FTP access includes HTTP access.
http-access	Grants HTTP access to the Content Router.
telnet-access	Grants Telnet access to the Content Router. Telnet access includes FTP and HTTP access.

Command Modes Global configuration

Defaults The default users are admin and anonymous. The default **password** option is 0.

Usage Guidelines The **user** command creates, modifies, and deletes Content Router user accounts. Up to 50 user accounts can be added to the Content Router. Only administrator access capability permits a user to write to the Content Router. The admin user account is included by default.

The user identification number (UID) 0 is reserved for the user “admin” and cannot be assigned to another user. The user ID numbers 2001 to 2147483647 can be assigned manually by the administrator. The Content Router assigns a UID number from 1 through 2000 if a UID is not assigned by the administrator.

In summary, ID numbers 1 to 2000 are assigned by the Content Router; 2001 to 2147483647 can be assigned by the administrator. User accounts with ID numbers 1 to 2147483647 can be modified or deleted, and the **show users** command displays ID numbers 0 through 2147483647.

Examples

```
Console(config)# user add dilbert
Operation successful
```

```
Console(config)# user add bwhidney password 0 dzgchenpa capability ftp
Operation successful
```

```
Console(config)# user modify user bwhidney add admin-access
Operation successful
```

```
Console(config)# show users
There are 4 user(s)
      UID  USERNAME
      0    admin
    1002   anonymous
    5013   bwhidney
    5014   dilbert
```

```
Console(config)# user delete uid 5014
Operation successful
```

Related Commands **show user**
show users

wccp dns-boomerang router-list-num

To configure a router list for a Content Router in WCCP mode, use the **wccp dns-boomerang** global configuration command.

```
wccp dns-boomerang router-list-num number [l2-redirect] [password passw] [weight
percentage]
```

Syntax Description		
	<i>number</i>	Router list number (1 to 8).
	l2-redirect	(Optional.) Sets WCCP Version 2 forwarding encapsulation method.
	password	(Optional.) Specifies the WCCP service password (key).
	<i>passw</i>	Password.
	weight	(Optional.) Sets weight percentage for this list.
	<i>percentage</i>	Weight percentage (0 to 100).

Command Modes Global configuration

Defaults Disabled by default.

Usage Guidelines Use this command to configure various router lists for use with WCCP Version 2 and the Content Routing software. For example, you can specify one router list for WCCP Version 2 web cache service and another list for reverse proxy at the same time, without having to reconfigure groups of routers or caches. You can add up to eight router lists and up to six IP addresses per list.

Examples `Console(config)# wccp dns-boomerang router-list-num 7 weight 90`

wccp flow-redirect

To enable WCCP flow redirection, use the **flow-redirect enable** global configuration command. To disable flow redirection, use the **no** form of the command.

wccp flow-redirect enable

no wccp flow-redirect enable

Syntax Description	enable Enables flow redirection.
Defaults	No default behavior or values
Command Modes	Global configuration
Usage Guidelines	This command works with WCCP Version 2 only. The flow protection feature is designed to keep the TCP flow intact as well as to not overwhelm Content Routers when they come up or are reassigned new traffic. This feature also has a slow start mechanism whereby the Content Routers try to take a load appropriate for their capacity.
Examples	Console# wccp flow-redirect enable
Related Commands	wccp slow-start enable

wccp port-list

To associate ports with specific WCCP dynamic services, use the **wccp port-list** global configuration command.

wccp port-list *listnum portnum*

no wccp port-list *listnum portnum*

Syntax Description	<i>listnum</i>	Port list number (1 to 8).
	<i>portnum</i>	Port number. Up to eight ports per list number are allowed (1 to 65535).

Defaults No default behavior or values

Command Modes Global configuration

Usage Guidelines Up to eight port numbers can be included in a single port list.

Examples In the following example, ports 10, 200, 3000, 110, 220, 330, 440, and 40000 are included in port list 3.

```
Console(config)# wccp port-list 3 10 200 3000 110 220 330 440 40000
```

wccp router-list

To configure a router list for WCCP Version 2, use the **wccp router-list** global configuration command. To disable this function, use the **no** form of this command.

wccp router-list *number ip-address*

no wccp router-list *number ip-address*

Syntax Description	<i>number</i>	Router list number (1 to 8).
	<i>ip-address</i>	IP address of router to add to list.

Command Modes Global configuration

Defaults Disabled.

Usage Guidelines Use this command to configure various router lists for use with WCCP Version 2 services. For example, you can specify one router list for WCCP Version 2 web cache service and another list for reverse proxy at the same time without having to reconfigure groups of routers or Content Engines. You can add up to eight router lists and up to six IP addresses per list.

Examples

```
Console(config)# wccp router-list 7 172.31.68.98

Console(config)# no wccp router-list 7 172.31.68.98
```

wccp shutdown

To set the maximum time interval over which the Content Router will perform a clean shutdown, use the **wccp shutdown** global configuration command.

wccp shutdown max-wait *seconds*

Syntax Description	max-wait	Sets the clean shutdown time interval.
	<i>seconds</i>	Time in seconds (0 to 86400). The default is 120 seconds.

Defaults 120 seconds

Command Modes Global configuration

Usage Guidelines To prevent broken TCP connections, the Content Router performs a clean shutdown of WCCP after a **reload** or **wccp version** command is issued. The Content Router does not reboot until either all connections have been serviced or the configured **max-wait** interval has elapsed.

During a clean shutdown, the Content Router continues to service the flows it is handling but starts to bypass new flows. When the number of flows goes down to zero, the Content Router takes itself out of the cluster by having its buckets reassigned to other Content Routers by the lead Content Router. TCP connections can still be broken if the Content Router crashes or is rebooted without WCCP being cleanly shut down. The clean shutdown can be aborted while in progress.

Examples Console(config)# **wccp shutdown max-wait 4999**

Related Commands **wccp slow-start**
wccp flow-redirect

wccp slow-start

To enable the Content Router slow start capability, use the **wccp slow-start enable** global configuration command. To disable slow start capability, use the **no** form of this command.

wccp slow-start enable

no wccp slow-start enable

Syntax Description	<code>enable</code> Enable WCCP slow start.
---------------------------	---

Defaults	The default is slow start enabled.
-----------------	------------------------------------

Command Modes	Global configuration
----------------------	----------------------

Usage Guidelines	<p>Within a cluster of Content Routers, TCP connections are redirected to other Content Routers as units are added or removed. A Content Router can be overloaded if it is too quickly reassigned new traffic or introduced abruptly into a fat pipe.</p>
-------------------------	---

WCCP slow start performs the following tasks to prevent a Content Router from being overwhelmed when it comes online or is reassigned new traffic:

- TCP flow protection when WCCP 2 is enabled and a Content Router is introduced into the cluster
- TCP flow protection when WCCP 2 is disabled and a Content Router is leaving the cluster
- Load assignment to the Content Router in slow increments rather than a full load at bootup

Slow start is applicable only in the following cases:

- Initial bootup when there is no Content Router yet present in the server farm
- When a new Content Router is added to a cluster that is not handling the full load; for example, when there are some buckets that are being shed by the cluster

In all other cases slow start is not necessary and all of the Content Routers can be assigned their share of the buckets right away.

Examples	<pre>Console# wccp slow-start enable Console# no wccp slow-start enable</pre>
-----------------	---

Related Commands	<p>wccp flow-redirect</p> <p>wccp shutdown</p>
-------------------------	--

wccp version

To specify the version of WCCP that the Content Router should use, enter the **wccp version** global configuration command. Use the **no** form of the command to disable the currently running version.

wccp version 2

no wccp version 2

Syntax Description	2 WCCP Version 2.
Defaults	No default behavior or values
Command Modes	Global configuration
Usage Guidelines	<p>WCCP allows transparent caching of web content. For a detailed description, see Appendix A, “Web Cache Communication Protocol Version 2.” Be sure the routers used in the WCCP environment are running a software version that supports the WCCP version configured on the Content Router.</p> <p>To prevent broken TCP connections, the Content Router performs a clean shutdown of WCCP after a reload or wccp version command is executed. See the wccp shutdown global configuration command for an explanation of clean shutdown.</p>
Examples	<pre>Console(config)# wccp version 2 Console(config)# no wccp version 2</pre>
Related Commands	<p>wccp home-router</p> <p>wccp shutdown</p>

whoami

To display the current user's name, use the **whoami** EXEC command.

whoami

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Usage Guidelines Use this command to display the current user's username and user identification number.

Examples

```
Console# whoami
admin
```

Related Commands **pwd**

write

To write running configurations to memory or to a terminal session, use the **write EXEC** command.

write [**erase** | **memory** | **terminal**]

Syntax Description	
erase	(Optional.) Erases startup configuration from NVRAM.
memory	(Optional.) Writes the configuration to NVRAM. This is the default.
terminal	(Optional.) Writes the configuration to a terminal session.

Defaults No default behavior or values

Command Modes EXEC

Defaults The configuration is written to NVRAM by default.

Usage Guidelines Use this command either to save running configurations to NVRAM or to erase memory configurations. Following a **write erase** command, no configuration is held in memory, and a prompt for configuration specifics occurs after you reboot the Content Router.

Use the **write terminal** command to display the current running configuration in the terminal session window. The equivalent command is **show running-config**.

Examples Console# **write**

Related Commands **copy running-config startup-config**
show running-config

■ write