



WCCP Commands

This chapter provides detailed descriptions of the commands used to configure Web Cache Communication Protocol Version 1 (WCCPv1) and Version 2 (WCCPv2) on your router.

For configuration tasks and examples, refer to the “Network Management Using WCCP” chapter in the Release 12.1 *Cisco IOS Configuration Fundamentals Configuration Guide*.

Table 119 lists those commands that have been replaced since Cisco IOS Release 12.0.

Table 119 Replaced WCCP Commands

Command in IOS 12.0:	Replaced By or Integrated Into:
<code>ip wccp enable</code>	<code>ip wccp</code>
<code>ip wccp redirect-list</code>	<code>ip wccp</code>
<code>ip web-cache redirect</code>	<code>ip wccp web-cache redirect out</code>
<code>show ip wccp web-caches</code>	<code>show ip wccp web-cache detail</code>



Note

Cisco IOS 12.1 allows you to enable either WCCPv1 functionality or WCCPv2 functionality on your router using the `ip wcp version` command. However, you must use the new commands introduced with WCCPv2 to configure WCCPv1. The original WCCPv1 configuration commands that have been replaced in this release (see Table 119) will no longer function.

clear ip wccp

To remove Web Cache Communication Protocol (WCCP) statistics (counts) maintained on the router for a particular service, use the **clear ip wccp** EXEC command.

```
clear ip wccp {web-cache | service-number}
```

Syntax Description	web-cache	Directs the router to remove statistics for the web cache service.
	<i>service-number</i>	Directs the router to remove statistics for a specified cache service. The number can be from 0 to 99.

Defaults No default behavior or values.

Command Modes User EXEC, Privileged EXEC

Command History	Release	Modification
	11.1 CA	This command was introduced for Cisco 7200 and 7500 platforms.
	11.2 P	Support for this command was added to a variety of Cisco platforms.
	12.0(3)T	This command was expanded to be explicit about service using the web-cache keyword and the <i>service-number</i> argument.

Usage Guidelines Use the **show ip wccp** and **show ip wccp detail** commands to display WCCP statistics. If Cisco Cache Engines are used in your service group, the **reverse proxy** service is indicated by a value of 99.

Examples The following command removes all statistics associated with the web cache service:

```
clear ip wccp web-cache
```

Related Commands	Command	Description
	ip wccp	Directs a router to enable or disable the support for a cache engine service group.
	show ip wccp	Displays global statistics related to the WCCP.


ip wccp

To direct a router to enable or disable the support for a cache engine service group, use the **ip wccp** global configuration command. To remove the ability of a router to control support for a service group, use the **no** form of this command.

```
ip wccp { web-cache | service-number } [group-address groupaddress] [redirect-list access-list]
[group-list access-list] [password password [0–7]]
```

```
no ip wccp { web-cache | service-number } [group-address groupaddress] [redirect-list
access-list] [group-list access-list] [password password [0–7]]
```

Syntax Description

web-cache	Enables the web cache service.
<i>service-number</i>	Enables the specified WCCP service. Services are identified using a number from 0 to 99. If Cisco Cache Engines are being used in your service group, the reverse-proxy service is indicated by a value of 99 .
group-address <i>groupaddress</i>	(Optional) Directs the router to use a specified multicast IP address for communication with the WCCP service group. The <i>groupaddress</i> argument requires a multicast address used by the router to determine which cache engine should receive redirected messages.
redirect-list <i>access-list</i>	(Optional) Directs the router to use an access list to control traffic redirected to this service group. The <i>access-list</i> argument uses a string of 64 characters or less to specify the name of the previously configured access list to be used.
 Note	If you are using a redirect access list with dCEF on the Cisco 7500 Series, then you must use a numbered access list instead of a named access list.
group-list <i>access-list</i>	(Optional) Directs the router to use an access list to determine which cache engines are allowed to participate in the service group. The <i>access-list</i> argument uses a string of 64 characters or less to specify the name of the previously configured access list to be used.
password	(Optional) A string that directs the router to apply MD5 authentication to messages received from the service group specified by the service name given. Messages that are not accepted by the authentication are discarded. The password can be up to eight characters in length.
<i>password</i>	The password name that will be combined with the HMAC MD5 value to create security for the connection between the router and the cache engine.
0–7	(Optional) Indicates the HMAC MD5 algorithm that is used to encrypt the password. The value is generated when a n encrypted password is created for a cache engine.

Defaults

WCCP services are not enabled on the router.

Command Modes

Global configuration

Command History

Release	Modification
12.0(3)T	This command was introduced.

Usage Guidelines

This configuration command instructs a router to enable or disable the support for the Service Group specified by the service-name given. A service-name may be either one of the provided standard keyword definitions or a number representing a cache engine dynamically defined definition. Once the Service is enabled, the router can participate in the establishment of a Service Group.

Currently the only provided keyword definition to be used as a service name is **web-cache**. This keyword is used to describe the existing WCCP version 1 functionality.

When the **ip wccp** global configuration command is issued, it instructs the router to allocate space and enable support of the specified WCCP service for participation in a Service Group.

When the **no ip wccp** global configuration command is issued, it instructs the router to terminate participation in the Service Group, deallocate space if none of the interfaces still have the service configured, and terminate the WCCP task if no other services are configured.

**Note**

The **ip wccp** command has replaced the **ip wccp enable**, **ip wccp redirect-list**, and **ip wccp group-list** commands from the version 1 implementation of WCCP.

The keywords following the service-name are optional and may be specified in any order, but only may be specified once. The following sections outline the specific usage of each of the optional forms of this command:

ip wccp { web-cache | service-number } group-address groupaddress

This option instructs the router to use the specified multicast IP address to coalesce the I See You responses for the Here I Am messages that it has received on this group-address. The response is sent to the group-address as well. The default is for no **group-address** to be configured, in which case all Here I Am messages are responded to with a unicast reply.

ip wccp { web-cache | service-number } redirect-list access-list

This option instructs the router to use an access list to control the traffic that is redirected to the Cache Engines of the Service Group specified by the service-name given. The *access-list* parameter specifies either a number from 1 to 99 to represent a standard or extended access list number, or a name to represent a named standard or extended access list. The access list itself specifies what traffic is permitted to be redirected. The default is for no **redirect-list** to be configured (all traffic is redirected).

If you are using a redirect access list with dCEF on the Cisco 7500 Series, then you must use a numbered access list instead of a named access list.

**Note**

WCCP requires that the following protocol/ports are not filtered by any access-lists:

- UDP (protocol type 17) port 2048. This port is used for control signaling. Blocking this type of traffic will prevent WCCP from establishing a connection between the router and cache engines.
- GRE encapsulated (protocol type 47) frames. Blocking this type of traffic will prevent the cache engines from ever seeing the packets intercepted.

ip wccp { web-cache | service-number } group-list access-list

This option instructs the router to use an access list to control the Cache Engines allowed to participate in the specified Service Group. The *access-list* parameter specifies either a number from 1 to 99 to represent a standard access list number, or a name to represent a named standard access list. The access list itself specifies which Cache Engines are permitted to participate in the Service Group. The default is for no **group-list** to be configured, in which case all Cache Engines may participate in the Service Group.

**Note**

The **ip wccp { web-cache | service-number } group-list** command syntax resembles the **ip wccp { web-cache | service-number } group-listen** command, but these are entirely different commands. Please note the the **ip wccp group-listen** command is an interface configuration command, used to configure an interface to listen for multicast notifications from a cache cluster. See the description of the **ip wccp group-listen** command in this chapter for further information.

ip wccp { web-cache | service-number } password password

This option instructs the router to use MD5 authentication on the messages received from the Service Group specified by the service-name given. Use this form of the command to set the password on the router. You must also configure the same password separately on each cache engine. The password can be up to a maximum of seven characters. Messages that do not authenticate when authentication is enabled on the Router are discarded. The default is for no authentication password to be configured and authentication to be disabled.

Examples

The following example shows a router configured to run WCCP reverse proxy service, using the multicast address of 224.1.1.1:

```
Router# configure terminal
Router(config)# ip wccp 99 group-address 224.1.1.1
Router(config)# interface ethernet 0
Router(config-if)# ip wccp web-cache group-list
```

The following example configures a router to redirect web-related packets without a destination of 192.168.196.51 to the Cache Engine:

```
Router# configure terminal
Router(config)# access-list 100 deny ip any host 192.168.196.51
Router(config)# access-list 100 permit ip any any
Router(config)# ip wccp redirect-list 100
Router(config)# interface Ethernet 0
Router(config-if)# ip web-cache redirect-list
Router(config-if)# end
Router#
%SYS-5-CONFIG_I: Configured from console by console.
```

Related Commands

Command	Description
ip wccp version	Specifies which version of WCCP you wish to use on your router.

ip wccp enable

The **ip wccp** command replaces the **ip wccp enable** command. See the description of the **ip wccp** command in this chapter for more information.

ip wccp group-listen

To configure an interface on a router to enable or disable the reception of IP multicast packets for the Web Cache Communication Protocol (WCCP) feature, use the **ip wccp group-listen** interface configuration command. To remove control of the reception of IP multicast packets for the WCCP feature, use the **no** form of this command.

ip wccp {web-cache | service-number} group-listen

no ip wccp {web-cache | service-number} group-listen

Syntax Description	web-cache	Directs the router to transmit packets to the web cache service.
	<i>service-number</i>	The identification number of the cache engine service group being controlled by a router. The number can be from 0 to 99.

Defaults This command is disabled by default.

Command Modes Interface configuration

Command History	Release	Modification
	12.0(3)T	This command was introduced.

Usage Guidelines On routers that are to be members of a Service Group when IP multicast is used, the following configuration is required:

- Step 1** The IP multicast address for use by the WCCP Service Group must be configured.
- Step 2** The interface(s) that the router wishes to receive the IP multicast address on needs to be configured with the **ip wccp {web-cache | service-number} group-listen** interface configuration command.

Examples The following example shows that multicast packets have been enabled for a web cache with a multicast address of 224.1.1.100.

```
router#configure terminal
router(config)#ip wccp web-cache group-address 244.1.1.100
router(config)#interface ethernet 0
router(config-if)#ip wccp web-cache group listen
```

Related Commands	Command	Description
	ip wccp	Directs a router to enable or disable the support for a WCCP cache engine service group.
	ip wccp redirect out	Enables WCCP redirection on an interface.

ip wccp redirect exclude in

To configure an interface to exclude packets received on an interface from being checked for redirection, use the **ip wccp redirect exclude in** global configuration command. To disable the ability of a router to exclude packets from redirection checks, use the **no** form of this command.

ip wccp redirect exclude in

no ip wccp redirect exclude in

Syntax Description

This command has no arguments or keywords.

Defaults

Redirection exclusion is disabled.

Command Modes

Interface configuration

Command History

Release	Modification
12.0(3)T	This command was introduced.

Usage Guidelines

This configuration command instructs the interface to exclude inbound packets from any redirection check that may occur at the outbound interface. Note that the command is global to all the services and should be applied to any inbound interface that you wish to exclude from redirection.

This command is intended to be used to accelerate the flow of packets from a Cache Engine to the internet as well as allow for the use of the WCCPv2 Packet Return feature.

Related Commands

Command	Description
ip wccp	Directs a router to enable or disable the support for a cache engine service group.
ip wccp redirect out	Configures an interface to enable the ability of a router to verify that appropriate packets are being redirected to a cache engine.

ip wccp redirect out

To enable packet redirection on an outbound interface using WCCP, use the **ip wccp redirect out** interface configuration command. To disable the ability of a router to verify that appropriate packets are being redirected, use the **no** form of this command.

ip wccp {web-cache | service-number} redirect out

no ip wccp {web-cache | service-number} redirect out

Syntax Description

web-cache	Enables the web cache service.
<i>service-number</i>	The identification number of the cache engine service group being controlled by a router. The number can be from 0 to 99. If Cisco Cache Engines are used in the cache cluster, the reverse proxy service is indicated by a value of 99 .

Defaults

Redirection checking on the interface is disabled.

Command Modes

Interface configuration

Command History

Release	Modification
12.0(3)T	This command was introduced.

Examples

The following example shows that reverse proxy packets on Ethernet interface 0 are being checked for redirection and redirected to Cisco Cache Engines, beginning in global configuration mode:

```
router#configure terminal
router(config)#ip wccp 99
router(config)#interface ethernet 0
router(config-if)#ip wccp 99 redirect out
```

Related Commands

Command	Description
ip wccp redirect exclude in	Enables redirection exclusion on an interface.

ip wccp redirect-list

This command is now documented as part of the **ip wccp** {**web-cache** | *service-number*} command. See the description of the **ip wccp** command in this chapter for more information.

ip web-cache redirect

The **ip wccp redirect out** command replaces the **ip web-cache redirect** command. See the description of the **ip wccp redirect out** command in this chapter for more information.

ip wccp version

To specify which version of WCCP you wish to configure on your router, use the **ip wccp version** command.

ip wccp version {1 | 2}

Syntax	Description
1	Web Cache Communication Protocol Version 1 (WCCPv1).
2	Web Cache Communication Protocol Version 2 (WCCPv2).

Defaults WCCPv2

Command Modes Global configuration

Command History	Release	Modification
	12.0(5)T	This command was introduced.

Examples

The following example shows the process of changing the WCCP version from the default of WCCPv2 to WCCPv1, starting in privileged EXEC mode:

```
router#show ip wccp
% WCCP version 2 is not enabled
router#configure terminal
router(config)#ip wccp version 1
router(config)#end
router#show ip wccp
% WCCP version 1 is not enabled
```

show ip wccp

To display global statistics related to the Web Cache Communication Protocol (WCCP) feature, use the **show ip wccp EXEC** command.

```
show ip wccp {web-cache | service-number} [view | detail]
```

Syntax Description	web-cache	Directs the router to display statistics for the web cache service.
	<i>service-number</i>	The identification number of the cache engine service group being controlled by a router. The number can be from 0 to 99. For cache engine clusters using Cisco Cache Engines, the reverse proxy service is indicated by a value of 99 .
	view	(Optional) Displays which other members of a particular service group have or have not been detected.
	detail	(Optional) Displays information for the router and all cache engines in the currently configured cluster.

Defaults No default behavior or values.

Command Modes EXEC

Command History	Release	Modification
	11.1 CA	This command was introduced for Cisco 7200 and 7500 platforms.
	11.2 P	Support for this command was added to a variety of Cisco platforms.
	12.0(3)T	The following keywords were added: <ul style="list-style-type: none"> • view • detail

Usage Guidelines Use the **clear ip wccp** command to reset the counter for the “Packets Redirected” information.

Examples This section contains examples and field descriptions for the three forms of this command:

- **show ip wccp**
- **show ip wccp view**
- **show ip wccp detail**

show ip wccp

The following example is sample output from the **show ip wccp** command:

```
show ip wccp

Global WCCP Information:
Service Name: web-cache:
Number of Cache Engines:1
Number of Routers:1
Total Packets Redirected:213
Redirect access-list:no_linux
Total Packets Denied Redirect:88
Total Packets Unassigned:-none-
Group access-list:0
Total Messages Denied to Group:0
Total Authentication failures:0

Service Name: 1
Number of Cache Engines:1
Number of Routers:2
Total Packets Redirected:198
Redirect access-list:-none-
Total Packets Denied Redirect:0
Total Packets Unassigned:0
Group access-list:11
Total Messages Denied to Group:0
Total Authentication failures:0
```

Table 120 describes the fields shown in the example.

Table 120 *show ip wccp Field Descriptions*

Field	Description
Service Name	Indicates which service is detailed.
Number of Cache Engines	Number of Cisco cache engines using the router as their home router.
Number of Routers	The number of routers in the service group.
Total Packets Redirected	Total number of packets redirected by the router.
Redirect access-list	The name or number of the access list that determines which packets will be redirected.
Total Packets Denied Redirect	Total number of packets that were not redirected because they did not match the access list.
Total Packets Unassigned	Number of packets that were not redirected because they were not assigned to any cache engine. Packets may not be assigned during initial discovery of cache engines or when a cache is dropped from a cluster.
Group access-list	Indicates which cache engine is allowed to connect to the router.
Total Messages Denied to Group	Indicates the number of messages disallowed by the router because they did not meet all the requirements of the service group.
Total Authentication failures	The number of instances where a password did not match

show ip wccp view

The following sample shows output from the **show ip wccp service 1 view** command:

```
show ip wccp service 1 view
```

```
WCCP Router Informed of:
192.168.88.10
192.168.88.20
```

```
WCCP Cache Engines Visible
192.168.88.11
192.168.88.12
```

```
WCCP Cache Engines Not Visible:
-none-
```

If any cache engine is displayed under the WCCP Cache Engines Not Visible field, the router needs to be reconfigured to map the cache engine that is not visible to it. Table 121 describes the fields shown in the example.

Table 121 *show ip wccp view Field Descriptions*

Field	Description
WCCP Routers Informed of	A list of routers detected by the current router.
WCCP Cache Engines Visible	A list of cache engines that are visible to the router and other cache engines in the service group.
WCCP Cache Engines Not Visible	A list cache engines in the service group that are not visible to the router and other cache engines in the service group.

show ip wccp detail

The following example displays cache engine and WCCP router statistics for a particular service group:

```
show ip wccp web-cache detail
```

```
WCCP Router information:
IP Address:192.168.88.10
Protocol Version:2.0

WCCP Cache-Engine Information
IP Address:192.168.88.11
Protocol Version:2.0
State:Usable
Initial Hash Info:AAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAA
Assigned Hash Info:FFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFF
Hash Allotment:256 (100.00%)
Packets Redirected:21345
Connect Time:00:13:46
```

Table 122 describes the fields shown in the example.

Table 122 *show ip wccp detail Field Descriptions*

Field	Description
WCCP Router information	The header for the area that contains fields for the IP address and version of WCCP associated with the router connected to the cache engine in the service group.
IP Address	The IP address of the router connected to the cache engine in the service group.
Protocol Version	The version of WCCP being used by the router in the service group.
WCCP Cache-Engine information	Contains fields for information on cache engines.
IP Address	The IP address of the cache engine in the service group.
Protocol Version	The version of WCCP being used by the cache engine in the service group.
State	Indicates whether the cache engine is operating properly and can be contacted by a router and other cache engines in the service group.
Initial Hash Info	The initial state of the hash bucket assignment.
Assigned Hash Info	The current state of the hash bucket assignment.
Hash Allotment	The percent of buckets assigned to the current cache engine. Both a value and a percent figure are displayed.
Packets Redirected	The number of packets that have been redirected to the cache engine.
Connect Time	The amount of time it took for the cache engine to connect to the router.

Related Commands

Command	Description
clear ip wccp	Clears the counter for packets redirected using WCCP.
ip wccp	Enables WCCP on a router and specifies the type of services to be used.
show ip interface	Lists a summary of the IP information and status of an interface.

show ip wccp web-caches

The **show ip wccp web-cache detail** command replaces the **show ip wccp web-caches** command. See the description of the **show ip wccp** command for more information.