



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 routing device in Cisco IOS Release 12.2.

For configuration tasks and examples, refer to the “Web Cache Services Using WCCP” document (available on Cisco.com).

[Table 131](#) lists those commands that have been replaced since Cisco IOS Release 12.0.

Table 131 Replaced WCCP Commands

Command in Cisco IOS Release 12.0:	Replaced by or Integrated into:
<code>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> (see the <code>ip wccp <service> redirect</code> command)
<code>show ip wccp web-caches</code>	<code>show ip wccp web-cache detail</code> (see the <code>show ip wccp</code> command)



Note

Cisco IOS Release 12.2 allows you to enable either WCCPv1 functionality or WCCPv2 functionality on your router using the `ip wccp version` command. However, you must use the commands introduced with WCCPv2 to configure WCCPv1. The original WCCPv1 configuration commands that have been replaced (see [Table 131](#)) 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 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 In the following example, all statistics associated with the web cache service are removed:

```
Router# 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 allocate space and to enable support of the specified Web Cache Communication Protocol (WCCP) service for participation in a service group, use the **ip wccp** command in global configuration mode. To disable the service group and deallocate space, use the **no** form of this command.

```
ip wccp { web-cache | service-number } [service-list service-access-list] [mode { open | closed }]
  [group-address multicast-address] [redirect-list access-list] [group-list access-list]
  [password [0-7] password]
```

```
no ip wccp { web-cache | service-number } [service-list service-access-list] [mode { open | closed }]
  [group-address multicast-address] [redirect-list access-list] [group-list access-list]
  [password [0-7] password]
```

Syntax Description

web-cache	Specifies the web-cache service (WCCP version 1 and version 2). Note Web cache counts as one service. The maximum number of services, including those assigned with the <i>service-number</i> argument, are 256.
<i>service-number</i>	Dynamic service identifier, which means the service definition is dictated by the cache. The dynamic service number can be from 0 to 254. The maximum number of services is 256, which includes the web-cache service specified with the web-cache keyword. Note If Cisco Cache Engines are being used in your service group, the reverse-proxy service is indicated by a value of 99.
service-list <i>service-access-list</i>	(Optional) Identifies a named extended IP access list that defines the packets that will match the service.
open	(Optional) Identifies the service as open. This is the default service mode.
closed	(Optional) Identifies the service as closed.
group-address <i>multicast-address</i>	(Optional) Multicast IP address that communicates with the WCCP service group. The multicast address is used by the router to determine which web cache should receive redirected messages.
redirect-list <i>access-list</i>	(Optional) Access list that controls traffic redirected to this service group. The <i>access-list</i> argument should consist of a string of no more than 64 characters (name or number) that specifies the access list.
group-list <i>access-list</i>	(Optional) Access list that determines which web caches are allowed to participate in the service group. The <i>access-list</i> argument should consist of a string of no more than 64 characters (name or number) that specifies the access list.
password [0-7] <i>password</i>	(Optional) Message digest algorithm 5 (MD5) authentication for messages received from the service group. Messages that are not accepted by the authentication are discarded. The encryption type can be any value between 0 and 7 (inclusive), with 0 specifying not yet encrypted and 7 for proprietary. The <i>password</i> argument can be up to eight characters in length.

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.
12.1	This command replaced the ip wccp enable , ip wccp redirect-list , and ip wccp group-list commands.
12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.
12.3(14)T	The maximum value for the <i>service-number</i> argument was increased to 254.
12.2(27)SBC	This command was integrated into Cisco IOS Release 12.2(27)SBC.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.4(11)T	The service-list <i>service-access-list</i> keyword and argument pair and the mode open and mode closed keywords were added.

Usage Guidelines

WCCP transparent caching bypasses Network Address Translation (NAT) when fast (Cisco Express Forwarding [CEF]) switching is enabled. To work around this situation, WCCP transparent caching should be configured in the outgoing direction, fast/CEF switching should be enabled on the Content Engine interface, and the **ip wccp web-cache redirect out** command should be specified. Configure WCCP in the incoming direction on the inside interface by specifying the **ip wccp redirect exclude in** command on the router interface facing the cache. This configuration prevents the redirection of any packets arriving on that interface.

You can also include a redirect list when configuring a service group and the specified redirect list will deny packets with a NAT (source) IP address and prevent redirection. Refer to the **ip wccp** command for configuration of the redirect list and service group.

This command instructs a router to enable or disable the support for the specified service number or the web-cache service name. A service number can be from 0 to 254. Once the service number or name is enabled, the router can participate in the establishment of a service group.

When the **no ip wccp** command is entered, the router terminates participation in the service group, deallocates space if none of the interfaces still has the service configured, and terminates the WCCP task if no other services are configured.

The keywords following the **web-cache** keyword and the *service-number* argument 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** *multicast-address*

A WCCP group address can be configured to set up a multicast address that cooperating routers and web caches can use to exchange WCCP protocol messages. If such an address is used, IP multicast routing must be enabled so that the messages that use the configured group (multicast) addresses are received correctly.

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 web caches of the service group specified by the service name given. The *access-list* argument 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 traffic is permitted to be redirected. The default is for no redirect list to be configured (all traffic is redirected).

WCCP requires that the following protocol and ports not be filtered by any access lists:

- User Datagram Protocol (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 web caches.
- Generic routing encapsulation (GRE) (protocol type 47 encapsulated frames). Blocking this type of traffic will prevent the web caches from ever seeing the packets that are intercepted.

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

This option instructs the router to use an access list to control the web caches allowed to participate in the specified service group. The *access-list* argument 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 web caches are permitted to participate in the service group. The default is for no group list to be configured, in which case all web caches 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. 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. Refer to the description of the **ip wccp group-listen** command in the [Cisco IOS IP Application Services Command Reference](#), Release 12.4T.

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 web cache. The password can be up to a maximum of eight 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 for authentication to be disabled.

ip wccp *service-number* **service-list** *service-access-list* **mode closed**

In applications where the interception and redirection of WCCP packet flows to external intermediate devices for the purpose of applying feature processing are not available within Cisco IOS software, it is necessary to block packet flows for the application when the intermediary device is not available. This blocking is called a closed service. By default, WCCP operates as an open service, wherein communication between clients and servers proceeds normally in the absence of an intermediary device. The **service-list** keyword can only be used for closed mode services. When a WCCP service is configured as closed, WCCP discards packets that do not have a client application registered to receive the traffic. Use the **service-list** keyword and *service-access-list* argument to register an application protocol type or port number.

When the definition of a service in a service list conflicts with the definition received via WCCP protocol, a warning message similar to the following is displayed:

```
Sep 28 14:06:35.923: %WCCP-5-SERVICEMISMATCH: Service 90 mismatched on WCCP client
10.1.1.13
```

When there is a conflict in service list definitions, the configured definition takes precedence over the external definition received via WCCP protocol messages.

Examples

The following example shows how to configure a router to run WCCP reverse-proxy service, using the multicast address of 239.0.0.0:

```
ip multicast-routing
ip wccp 99 group-address 239.0.0.0
interface ethernet 0
 ip wccp 99 group-listen
```

The following example shows how to configure a router to redirect web-related packets without a destination of 10.168.196.51 to the web cache:

```
access-list 100 deny ip any host 10.168.196.51
access-list 100 permit ip any any
ip wccp web-cache redirect-list 100
interface ethernet 0
 ip wccp web-cache redirect out
```

The following example shows how to configure an access list to prevent traffic from network 10.0.0.0 leaving Fast Ethernet interface 0/0. Because the outbound ACL check is enabled, WCCP does not redirect that traffic. WCCP checks packets against the ACL before they are redirected.

```
ip wccp web-cache
ip wccp check acl outbound
interface fastethernet0/0
 ip access-group 10 out
 ip wccp web-cache redirect out
access-list 10 deny 10.0.0.0 0.255.255.255
access-list 10 permit any
```

If the outbound ACL check is disabled, HTTP packets from network 10.0.0.0 would be redirected to a cache and users with that network address could retrieve web pages when the network administrator wanted to prevent this from happening.

The following example shows how to configure a closed WCCP service:

```
ip wccp 99 service-list access1 mode closed
```

Related Commands

Command	Description
ip wccp check services all	Enables all WCCP services.
ip wccp version	Specifies which version of WCCP you wish to use on your router.
show ip wccp	Displays global statistics related to WCCP.

ip wccp enable

The **ip wccp enable** has been replaced by the **ip wccp** command. See the description of the [ip wccp](#) command in this chapter for more information.

ip wccp <service> 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 send 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:

- The IP multicast address for use by the WCCP Service Group must be configured.
- The interfaces on which the router wishes to receive the IP multicast address to be configured with the **ip wccp { web-cache | service-number } group-listen** interface configuration command.

Examples In the following example, a user enables the multicast packets for a web cache with a multicast address of 224.1.1.100.

```
router# configure terminal
router(config)# ip wccp web-cache group-address 224.1.1.100
router(config)# interface ethernet 0
router(config-if)# ip wccp web-cache group listen
```

Related Commands	Command	Description
	<code>ip wccp</code>	Directs a router to enable or disable the support for a WCCP cache engine service group.
	<code>ip wccp <service> redirect</code>	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** interface 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.

Examples

In the following example, packets arriving on Ethernet interface 0 are excluded from all WCCP redirection checks:

```
Router(config)# interface ethernet 0
Router(config-if)# ip wccp redirect exclude in
```

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

To enable packet redirection on an outbound or inbound interface using Web Cache Communication Protocol (WCCP), use the **ip wccp redirect** command in interface configuration mode. To disable WCCP redirection, use the **no** form of this command.

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

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

Syntax Description

web-cache	Enables the web-cache service.
<i>service-number</i>	Identification number of the cache engine service group controlled by a router; valid values are from 0 to 254. If Cisco cache engines are used in the cache cluster, the reverse proxy service is indicated by a value of 99.
in	Specifies packet redirection on an inbound interface.
out	Specifies packet redirection on an outbound interface.

Defaults

Redirection checking on the interface is disabled.

Command Modes

Interface configuration

Command History

Release	Modification
12.0(3)T	This command was introduced.
12.0(11)S	The in keyword was added.
12.1(3)T	The in keyword was added.
12.2(17d)SXB	Support for this command on the Cisco 7600 series router Supervisor Engine 2 was extended to Cisco IOS Release 12.2(17d)SXB.
12.2(18)SXD1	This command was enhanced to support the Cisco 7600 series router Supervisor Engine 720.
12.2(18)SXF	This command was enhanced to support the Cisco 7600 series router Supervisor Engine 32.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.

Usage Guidelines

WCCP transparent caching bypasses Network Address Translation (NAT) when fast (Cisco Express Forwarding [CEF]) switching is enabled. To work around this situation, WCCP transparent caching should be configured in the outgoing direction, fast/CEF switching enabled on the Content Engine interface, and the **ip wccp web-cache redirect out** command specified. Configure WCCP in the incoming direction on the inside interface by specifying the **ip wccp redirect exclude in** command on the router interface facing the cache. This prevents the redirection of any packets arriving on that interface.

You can also include a redirect list when configuring a service group and the specified redirect list will deny packets with a NAT (source) IP address and prevent redirection. Refer to the **ip wccp** command for configuration of the redirect list and service group.

The **ip wccp redirect in** command allows you to configure WCCP redirection on an interface receiving inbound network traffic. When the command is applied to an interface, all packets arriving at that interface will be compared against the criteria defined by the specified WCCP service. If the packets match the criteria, they will be redirected.

Likewise, the **ip wccp redirect out** command allows you to configure the WCCP redirection check at an outbound interface.

**Tips**

Be careful not to confuse the **ip wccp redirect {out | in}** interface configuration command with the **ip wccp redirect exclude in** interface configuration command.

**Note**

This command has the potential to affect the **ip wccp redirect exclude in** command. (These commands have opposite functions.) If you have **ip wccp redirect exclude in** set on an interface and you subsequently configure the **ip wccp redirect in** command, the “exclude in” command will be overridden. The opposite is also true: configuring the “exclude in” command will override the “redirect in” command.

Examples

In the following configuration, the multilink interface is configured to prevent the bypassing of NAT when fast/CEF switching is enabled:

```
Router(config)# interface multilink2
Router(config-if)# ip address 10.21.21.1 255.255.255.0
Router(config-if)# ip access-group IDS_Multilink2_in_1 in
Router(config-if)# ip wccp web-cache redirect out
Router(config-if)# ip nat outside
Router(config-if)# ip inspect FSB-WALL out
Router(config-if)# max-reserved-bandwidth 100
Router(config-if)# service-policy output fsb-policy
Router(config-if)# no ip route-cache
Router(config-if)# load-interval 30
Router(config-if)# tx-ring-limit 3
Router(config-if)# tx-queue-limit 3
Router(config-if)# ids-service-module monitoring
Router(config-if)# ppp multilink
Router(config-if)# ppp multilink group 2
Router(config-if)# crypto map abc1
```

The following example shows how to configure a session in which reverse proxy packets on Ethernet interface 0 are being checked for redirection and redirected to a Cisco Cache Engine:

```
Router(config)# ip wccp 99
Router(config)# interface ethernet 0
Router(config-if)# ip wccp 99 redirect out
```

The following example shows how to configure a session in which HTTP traffic arriving on Ethernet interface 0/1 is redirected to a Cisco Cache Engine:

```
Router(config)# ip wccp web-cache
Router(config)# interface ethernet 0/1
Router(config-if)# ip wccp web-cache redirect in
```

Related Commands

Command	Description
ip wccp redirect exclude in	Enables redirection exclusion on an interface.
show ip interface	Displays the usability status of interfaces that are configured for IP.
show ip wccp	Displays the WCCP statistics.

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 wccp <service> redirect

To enable packet redirection on an outbound or inbound interface using Web Cache Communication Protocol (WCCP), use the **ip wccp service redirect** interface configuration command. To disable WCCP redirection, use the **no** form of this command.

```
ip wccp service redirect {out | in}
```

```
no ip wccp service redirect {out | in}
```

Syntax Description

<i>service</i>	Specifies the service group. You can specify the web-cache keyword, or you can specify the identification number (from 0 to 99) of the service.
redirect	Enables packet redirection checking on an outbound or inbound interface.
out	Specifies packet redirection on an outbound interface.
in	Specifies packet redirection on an inbound interface.

Defaults

Redirection checking on the interface is disabled.

Command Modes

Interface configuration

Command History

Release	Modification
12.0(3)T	This command was introduced.
	The ip wccp web-cache redirect out form of this command replaced the ip web-cache redirect command.
12.0(11)S	The in keyword was added to the 12.0 S release train.
12.1(3)T	The in keyword was added to the 12.1 T release train.

Usage Guidelines

The **ip wccp service redirect in** command allows you to configure WCCP redirection on an interface receiving inbound network traffic. When the command is applied to an interface, all packets arriving at that interface will be compared against the criteria defined by the specified WCCP service. If the packets match the criteria, they will be redirected.

Likewise, the **ip wccp service redirect out** command allows you to configure the WCCP redirection check at an outbound interface.



Tips

Be careful not to confuse the **ip wccp service redirect {out | in}** interface configuration command with the **ip wccp redirect exclude in** interface configuration command.

**Note**

This command has the potential to effect the **ip wccp redirect exclude in** command. (These commands have opposite functions.) If you have **ip wccp redirect exclude in** set on an interface and you subsequently configure the **ip wccp service redirect in** command, the “exclude in” command will be overridden. The opposite is also true: configuring the “exclude in” command will override the “redirect in” command.

Examples

In the following example, the user configures a session in which reverse proxy packets on Ethernet interface 0 are being checked for redirection and redirected to a Cisco Cache Engine:

```
Router# configure terminal
Router(config)# ip wccp 99
Router(config)# interface ethernet 0
Router(config-if)# ip wccp 99 redirect ?
  in  Redirect to a Cache Engine appropriate inbound packets
  out Redirect to a Cache Engine appropriate outbound packets
Router(config-if)# ip wccp 99 redirect out
```

In the following example, the user configures a session in which HTTP traffic arriving on Ethernet interface 0/1 will be redirected to a Cisco Cache Engine:

```
Router# configure terminal
Router(config)# ip wccp web-cache
Router(config)# interface ethernet 0/1
Router(config-if)# ip wccp web-cache redirect in
```

Related Commands

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

ip wccp version

To specify which version of Web Cache Communication Protocol (WCCP) you wish to configure on your router, use the **ip wccp version** global configuration 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 as part of the WCCP version 2 (WCCPv2) feature.

Examples In the following example, the user changes 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
```

ip web-cache redirect

The `(config-if)# ip web-cache redirect` interface configuration command has been replaced by the `(config-if)# ip wccp web-cache redirect {in|out}` interface configuration mode command. The `(config-if)# ip web-cache redirect` command is no longer supported.

As an example, this change affects WCCP (version 1) configurations as follows:

In releases prior to 12.0T:

```
ip wccp enable
ip wccp redirect-list 101
!
interface <interface-id>
  ip web-cache redirect
!
```

In releases 12.1 and later:

```
ip wccp version 1
ip wccp web-cache redirect-list 101
!
interface <interface-id>
  ip wccp web-cache redirect out
!
```

These changes reflect the fact that:

- Cisco IOS software now supports both WCCPv1 and WCCPv2
- '**web-cache**' is just one (static) service—there can be up to 100 'dynamic' services with WCCPv2.
- Prior to the introduction of the 'in' keyword, redirection of web-cache traffic was on outbound interfaces only.

See the description of the `ip wccp <service> redirect` command in this chapter for more information.

Command History

Release	Modification
11.3	This command was introduced.
12.0(5)T	This command was replaced by the <code>ip wccp <service> redirect</code> command.

show ip wccp

To display global statistics related to Web Cache Communication Protocol (WCCP), use the **show ip wccp** command in privileged Exec mode.

show ip wccp [*service-number* | **web-cache**] [**detail** | **view**]

Syntax Description

service-number	(Optional) Identification number of the web-cache service group being controlled by the cache. The number can be from 0 to 256. For web caches using Cisco Cache Engines, the reverse proxy service is indicated by a value of 99.
web-cache	(Optional) Statistics for the web-cache service.
detail	(Optional) Information about the router and all web caches.
view	(Optional) Other members of a particular service group have or have not been detected.

Command Modes

Privileged Exec

Command History

Release	Modification
11.1CA	This command was introduced for Cisco 7200 and 7500 platforms.
11.2P	Support for this command was added to a variety of Cisco platforms.
12.0(3)T	The detail and view keywords were added, and support for multiple services was added as part of the WCCPv2 feature.
12.3(7)T	The output was enhanced to display the bypass counters (process, fast, and Cisco Express Forwarding) when WCCP is enabled.
12.2(14)SX	Support for this command was introduced on the Supervisor Engine 720.
12.2(17d)SXB	Support for this command on the Supervisor Engine 2 was extended to Cisco IOS Release 12.2(17d)SXB.
12.2(25)S	This command was integrated into Cisco IOS Release 12.2 S.
12.3(14)T	The output was enhanced to display the maximum number of service groups.
12.2(27)SBC	This command was integrated into Cisco IOS Release 12.2 SB.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2 SR.

Usage Guidelines

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

Use the **show ip wccp service-number** command to provide the “Total Packets Redirected” count. The “Total Packets Redirected” count is the number of flows, or sessions, that are redirected.

Use the **show ip wccp service-number detail** command to provide the “Packets Redirected” count. The “Packets Redirected” count is the number of flows, or sessions, that are redirected.

Use the **show ip wccp web-cache detail** command to provide an indication of how many flows, rather than packets, are using Layer 2 redirection.

For cache-engine clusters using Cisco cache engines, the reverse proxy service is specified using the value **99** as the *service-number*.

For additional information on other IP WCCP commands, refer to the “Configuring Web Cache Services Using WCCP” document, available on Cisco.com.

Examples

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

- **show ip wccp web-cache**
- **show ip wccp *service-number* view**
- **show ip wccp *service-number* detail**
- **show ip wccp web-cache detail**
- **show ip wccp web-cache detail** (bypass counters displayed)

show ip wccp web-cache

The following is sample output from the **show ip wccp web-cache** command:

```
Router# show ip wccp web-cache

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
```

[Table 132](#) describes the significant fields shown in the display.

Table 132 *show ip wccp web-cache* 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.

Table 132 *show ip wccp web-cache Field Descriptions (continued)*

Field	Description
Total Messages Denied to Group	Indicates the number of packets denied by the <i>group-list</i> access list.
Total Authentication failures	The number of instances where a password did not match.

show ip wccp service-number view

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

```
Router# show ip wccp 1 view
```

```
WCCP Router Informed of:
```

```
 10.168.88.10
 10.168.88.20
```

```
WCCP Cache Engines Visible
```

```
 10.168.88.11
 10.168.88.12
```

```
WCCP Cache Engines Not Visible:
```

```
-none-
```

**Note**

The number of maximum service groups that can be configured is 256.

If any web cache is displayed under the WCCP Cache Engines Not Visible field, the router needs to be reconfigured to map the web cache that is not visible to it.

[Table 133](#) describes the significant fields shown in the display.

Table 133 *show ip wccp service-number view Field Descriptions*

Field	Description
WCCP Router Informed of	A list of routers detected by the current router.
WCCP Clients Visible	A list of clients that are visible to the router and other clients in the service group.
WCCP Clients Not Visible	A list of clients in the service group that are not visible to the router and other clients in the service group.

show ip wccp service-number detail

The following example displays WCCP client information and WCCP router statistics that include the type of services:

```
Router# show ip wccp 91 detail
```

```
WCCP Client information:
```

```
WCCP Client ID: 10.1.1.14
```

```
Protocol Version: 2.0
```

```
State: Usable
```

```
Redirection: GRE
```

```
Packet Return: GRE
```

```
Assignment: HASH
```

```
Initial Hash Info: 0000000000000000000000000000000000000000000000000000000000000000
```

```
Assigned Hash Info: FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
```

```
Hash Allotment: 256 (100.00%)
```

```

Packets Redirected: 0
Connect Time: 00:01:56
Bypassed Packets
Process: 0
CEF: 0

```

show ip wccp web-cache detail

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

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

```

WCCP Router information:
  IP Address                10.168.88.10
  Protocol Version:         2.0

WCCP Client Information
  IP Address:               10.168.88.11
  Protocol Version:         2.0
  State:                    Usable
  Initial Hash Info:        AAAAAAAAAAAAAAAAAAAAAAAAAAAAA
  Assigned Hash Info:       FFFFFFFFFFFFFFFFFFFFFFFFFFFFF
  Hash Allotment:           256 (100.00%)
  Packets Redirected:       21345
  Connect Time:             00:13:46

```

Table 134 describes the significant fields shown in the display.

Table 134 *show ip wccp web-cache 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 Client Information	The header for the area that contains fields for information on clients.
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. The values show the state of each of the 256 hash buckets. Hexadecimal digits are used as shorthand for binary numbers with F representing 1111, four bits set to one. If a set of four bits is F, then that hash bucket is allocated to the client with the displayed ID. If a set of bits is 0, then it is not allocated to the client with the displayed ID.

Table 134 *show ip wccp web-cache detail Field Descriptions (continued)*

Field	Description
Assigned Hash Info	The current state of the hash bucket assignment. The values show the state of each of the 256 hash buckets. If F is displayed, then that hash bucket is allocated to the client with the displayed ID. If a bit is 0 then it is not allocated to the client with the displayed ID. In this output all the bits in the assigned field are F, indicating that all traffic goes to that client. All 1's in the assigned field indicates there is only one client in the service group. If there were two clients in the group, half of the bits would have a value of F and the other half would have a value of 0 for each client, indicating that redirected traffic is divided equally between the two clients.
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 the cache engine has been connected to the router.

show ip wccp web-cache detail (Bypass Counters)

The following example displays web-cache engine information and WCCP router statistics that include the bypass counters:

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

```
WCCP Router information:
  IP Address:10.168.88.10
  Protocol Version:2.0
```

```
WCCP Client Information
  IP Address:10.168.88.11
  Protocol Version:2.0
```

```
State:Usable
Initial Hash Info:AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
Assigned Hash Info:FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
Hash Allotment:256 (100.00%)
Packets Redirected:21345
Connect Time:00:13:46
```

```
Bypassed Packets
Process:          0
Fast:            0
CEF:             250
```

[Table 135](#) describes the significant fields shown in the display.

Table 135 *show ip wccp web-cache detail Field Descriptions*

Field	Description
WCCP Router information	The header for the area that contains fields for the IP address and the 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 that is being used by the router in the service group.
WCCP Client Information	The header for the area that contains fields for information on clients.
IP Address	The IP address of the cache engine in the service group.
Protocol Version	The version of WCCP that is 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 the cache engine has been connected to the router.
Bypassed Packets	The number of packets that have been bypassed. Process, fast, and Cisco Express Forwarding (CEF) are switching paths within Cisco IOS software.

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.
ip wccp redirect	Enables packet redirection on an outbound or inbound interface using WCCP.
ip wccp web-cache accelerated	Enables the hardware acceleration for WCCP version 1.
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-caches** command has been replaced by the **show ip wccp web-cache detail** command. See the description of the [show ip wccp](#) command in this chapter for more information.

Command History

Release	Modification
11.2P, 11.1CA, 12.0	This command was introduced.
12.1	This command was replaced by the show ip wccp command.

■ `show ip wccp web-caches`