WCCP Configuration Mode Commands

To configure the Web Cache Coordination Protocol (WCCP) Version 2 TCP promiscuous mode service, use the **wccp tcp-promiscuous service-pair** global configuration command. To negate these actions, use the **no** form of this command.

> **wccp tcp-promiscuous** {**service-pair** *serviceID serviceID+1* | *serviceID*}

> **no wccp tcp-promiscuous** {**service-pair** *serviceID serviceID+1* | *serviceID*}

Syntax Description		
	service-pair *serviceID serviceID+1*	Specifies a pair of IDs for the WCCP service on devices configured as application accelerators. Valid values are two consecutive numbers from 1-100, inclusive.
	serviceID	Specifies one ID for the WCCP service. A valid value is from 1-100, inclusive.

Defaults   No default behavior or values.

Command Modes   global configuration

Device Modes   application-accelerator

Usage Guidelines   Use the **wccp tcp-promiscuous service-pair** command to configure and enable the WCCP interception method. This command initiates the WCCP configuration mode as indicated by the (config-wccp-service) prompt.

Within WCCP configuration mode, you can use the various commands (**egress-method**, **failure-detection**, and so on) to define WCCP settings. To return to global configuration mode, enter the **exit** command.

You must use the **enable** WCCP configuration command to enable the WCCP service.

You must configure two WCCP service IDs on WAEs operating in application-acceleration mode.

Configurable WCCP service IDs allows a router to support multiple WCCP farms because the WAEs in different farms can use different service IDs. In WAAS versions earlier than 5.0, the default WCCP service IDs were 61 and 62.

The router service priority varies inversely with the service ID. The service priority of the service IDs 61/62 is 34. If you specify a lower service ID, the service priority is higher than 34 and if you specify a higher service ID, the service priority is lower than 34.

Note   WCCP works only with IPv4 networks. WCCP commands are available only after the interception method is set to WCCP by the **interception-method** global configuration command.

Examples   The following example shows how to configure WCCP service IDs 61 and 62 and put a WAE into WCCP configuration mode:

```
WAE(config)# wccp tcp-promiscuous service-pair 61 62
WAE(config-wccp-service)#
```

Related Commands   **show wccp**

(config-wccp-service) assignment-method

(config-wccp-service) egress-method

(config-wccp-service) enable

(config-wccp-service) exit

(config-wccp-service) failure-detection

(config-wccp-service) password

(config-wccp-service) redirect-method

(config-wccp-service) router-list-num

(config-wccp-service) weight

(config-wccp-service) assignment-method

To configure the WCCP assignment method, hash type, or mask, use the **assignment-method** WCCP configuration command. To unconfigure the hash or mask setting, use the **no** form of this command.

> **assignment-method** {**hash** {**hash-destination-ip** | **hash-source-ip**} | **mask** {**dst-ip-mask** *mask* | **src-ip-mask** *mask*}}

> **no assignment-method** {**hash** {**hash-destination-ip** | **hash-source-ip**} | **mask** {**dst-ip-mask** *mask* | **src-ip-mask** *mask*}}

Syntax Description		
hash	Specifies that the load-balancing assignment method is hash. Not supported on ANCs.
hash-destination-ip	Specifies that the load-balancing hash method should make use of the destination IP address. You can specify both the **hash-destination-ip** option and **the hash-source-ip** option.
hash-source-ip	Specifies that the load-balancing hash method should make use of the source IP address.
mask	Specifies that the load-balancing assignment method is mask.
dst-ip-mask *mask*	Specifies the IP address mask defined by a hexadecimal number (for example, 0xFE000000) used to match the packet destination IP address. The range is 0x0000000–0xFE000000.
src-ip-mask *mask*	Specifies the IP address mask defined by a hexadecimal number (for example, 0xFE000000) used to match the packet source IP address. The range is 0x00000000–0xFE000000.

Defaults   The default load-balancing assignment method is mask. The default destination IP address mask is 0. The default source IP address mask for application accelerators is 0xF00 and for ANCs it is 0xF.

Command Modes   WCCP configuration

Device Modes   application-accelerator

Usage Guidelines   In a service farm where the WAEs have different masks, the first WAE to establish two-way communication with the router(s) determines the farm's mask. All other WAEs cannot join the farm unless they are configured with the same mask.

The hash assignment method is not supported on ANCs.

Examples   The following example shows how to set a TCP promiscuous mode service mask on the source IP address:

```
WAE(config)# wccp tcp-promiscuous service-pair 61 62
WAE(config-wccp-service)# assignment-method mask src-ip-mask 0xFC0
```

■   **(config-wccp-service) assignment-method**

Related Commands   show wccp

(config-wccp-service) egress-method

(config-wccp-service) enable

(config-wccp-service) exit

(config-wccp-service) failure-detection

(config-wccp-service) password

(config-wccp-service) redirect-method

(config-wccp-service) router-list-num

(config-wccp-service) weight

(config-wccp-service) egress-method

To configure the WCCP egress method, use the **egress-method** WCCP configuration command. To unconfigure the egress method setting, use the **no** form of this command.

> **egress-method** {**ip-forwarding** | **generic-gre** | **L2** | **wccp-gre**}

> **no egress-method** {**ip-forwarding** | **generic-gre** | **L2** | **wccp-gre**}

Syntax Description		
ip-forwarding	Configures the IP forwarding egress method.
generic-gre	Configures the generic GRE egress method.
L2	Configures the L2 egress method.
wccp-gre	Configures the WCCP GRE egress method.

Defaults   The default egress method is L2.

Command Modes   WCCP configuration

Device Modes   application-accelerator

Usage Guidelines The egress methods available on an application accelerator depend on the configured redirect method. If the redirect method is L2, the available egress methods include ip-forwarding and L2. If the redirect method is GRE, the available egress methods include ip-forwarding, generic-gre, and wccp-gre.

If you choose the L2 egress method, the WAE must be connected to a router or switch to which it has a Layer 2 connection and the router or switch must be configured for Layer 2 redirection.

On ANCs the egress method is not configurable and is set to match the redirect method.

Examples   The following example shows how to configure the egress method for WCCP GRE packet return:

```
WAE(config)# wccp tcp-promiscuous service-pair 61 62
WAE(config-wccp-service)# egress-method wccp-gre
```

The following example shows how to configure the egress method for IP forwarding:

```
WAE(config)# wccp tcp-promiscuous service-pair 61 62
WAE(config-wccp-service)# egress-method ip-forwarding
```

The following example shows how to configure the egress method for generic GRE by configuring an intercepting router list, and then configuring the generic GRE egress method:

```
WAE(config)# wccp router-list 1 192.168.68.98
WAE(config)# wccp tcp-promiscuous service-pair 61 62
WAE(config-wccp-service)# router-list-num 1
WAE(config-wccp-service)# egress-method generic-gre
```

■ **(config-wccp-service) egress-method**

The router list must contain the IP address of each intercepting router. Multicast addresses are not supported. Additionally, you must configure a GRE tunnel interface on each router.

To view the egress method that is configured and that is being used on a particular WAE, use the **show wccp egress** EXEC command or the **show statistics connection egress-methods** EXEC command.

To view information about the generic GRE egress method, use the **show statistics generic-gre** EXEC command. To clear statistics information for the generic GRE egress method, use the **clear statistics generic-gre** EXEC command.

Related Commands   show wccp

(config-wccp-service) assignment-method

(config-wccp-service) enable

(config-wccp-service) exit

(config-wccp-service) failure-detection

(config-wccp-service) password

(config-wccp-service) redirect-method

(config-wccp-service) router-list-num

(config-wccp-service) weight

(config-wccp-service) enable

To enable the WCCP service, use the **enable** WCCP configuration command. To disable the WCCP service, use the **no** form of this command.

> **enable**

> **no enable**

Syntax Description   This command has no arguments or keywords.

Defaults   No default behavior or values.

Command Modes   WCCP configuration

Device Modes   application-accelerator

Examples   The following example shows how to configure and enable WCCP:

```
WAE(config)# wccp tcp-promiscuous service-pair 61 62
WAE(config-wccp-service)# enable
WCCP configuration for TCP Promiscuous service 61 and 62 succeeded. Please remember to
configure WCCP service 61 and 62 on the corresponding router.
```

Related Commands   show wccp

(config-wccp-service) assignment-method

(config-wccp-service) egress-method

(config-wccp-service) exit

(config-wccp-service) failure-detection

(config-wccp-service) password

(config-wccp-service) redirect-method

(config-wccp-service) router-list-num

(config-wccp-service) weight

(config-wccp-service) exit

To terminate WCCP configuration mode and return to the global configuration mode, use the **exit** WCCP configuration command.

exit

Syntax Description   This command has no arguments or keywords.

Defaults   No default behavior or values.

Command Modes   WCCP configuration

Device Modes   application-accelerator

Examples   The following example shows how to terminate WCCP configuration mode:

```
WAE(config)# wccp tcp-promiscuous service-pair 61 62
WAE(config-wccp-service)# enable
WCCP configuration for TCP Promiscuous service 61 and 62 succeeded. Please remember to
configure WCCP service 61 and 62 on the corresponding router.
WAE(config-wccp-service)# exit
WAE(config)#
```

Related Commands   **show wccp**

(config-wccp-service) assignment-method

(config-wccp-service) egress-method

(config-wccp-service) enable

(config-wccp-service) failure-detection

(config-wccp-service) password

(config-wccp-service) redirect-method

(config-wccp-service) router-list-num

(config-wccp-service) weight

(config-wccp-service) failure-detection

To configure the WCCP failure detection timeout, use the **failure-detection** WCCP configuration command. To unconfigure the failure detection setting, use the **no** form of this command.

failure-detection {**3** | **6** | **9** | **15** | **30**}

no failure-detection {**3** | **6** | **9** | **15** | **30**}

Syntax Description

{**3**	**6**	**9**	**15**	**30**}	Specifies the failure detection timeout in seconds. The 3 and 6 second values are valid only on ANCs .

Defaults

The default failure detection timeout is 30 seconds.

Command Modes

WCCP configuration

Device Modes

application-accelerator

Usage Guidelines

The failure detection timeout value is negotiated with the router and takes effect only if the router also has the variable timeout capability. If the router has a fixed timeout of 30 seconds and you have configured a failure detection value on the WAE other than the default 30 seconds, the WAE is not able to join the farm and an alarm is raised ("Router unusable" with a reason of "Timer interval mismatch with router").

Examples

The following example shows how to configure the failure detection timeout for 9 seconds:

```
WAE(config)# wccp tcp-promiscuous service-pair 61 62
WAE(config-wccp-service)# failure-detection 9
```

Related Commands

show wccp

(config-wccp-service) assignment-method

(config-wccp-service) egress-method

(config-wccp-service) enable

(config-wccp-service) exit

(config-wccp-service) password

(config-wccp-service) redirect-method

(config-wccp-service) router-list-num

(config-wccp-service) weight

(config-wccp-service) password

To configure the WCCP service password, use the **password** WCCP configuration command. To unconfigure the password, use the **no** form of this command.

password *password*

no password *password*

Syntax Description

password	Specifies the WCCP service password to be used for secure traffic between the WAEs within a cluster and the router for a specified service. Be sure to enable all other WAEs and routers within the cluster with the same password. You can use a maximum of 8 characters.

Defaults   No default behavior or values.

Command Modes   WCCP configuration

Device Modes   application-accelerator

Examples   The following example shows how to configure a WCCP service password:

```
WAE(config)# wccp tcp-promiscuous service-pair 61 62
WAE(config-wccp-service)# password mypass
```

Related Commands   **show wccp**

(config-wccp-service) assignment-method

(config-wccp-service) egress-method

(config-wccp-service) enable

(config-wccp-service) exit

(config-wccp-service) failure-detection

(config-wccp-service) redirect-method

(config-wccp-service) router-list-num

(config-wccp-service) weight

(config-wccp-service) redirect-method

To configure the WCCP redirect method, use the **redirect-method** WCCP configuration command. To unconfigure the redirect method setting, use the **no** form of this command.

redirect-method {**gre** | **L2**}

no redirect-method {**gre** | **L2**}

Syntax Description	gre	Configures the WAE to use Layer 3 GRE packet redirection.
	L2	Configures the WAE to receive transparently redirected traffic from a WCCP Version 2-enabled switch or router if the WAE has a Layer 2 connection with the device and the device is configured for Layer 2 redirection.

Defaults   The default redirect method is L2.

Command Modes   WCCP configuration

Device Modes   application-accelerator

Usage Guidelines   The redirect method configures how the WAE is to receive packets redirected by the switch or router.

The return method used to return nonoptimized (bypassed) packets to the router is automatically set the same as the configured redirect method.

The L2 redirect method is supported only if the WAE has a Layer 2 connection with the switch or router and the switch or router is configured for Layer 2 redirection. Because L2 redirection is implemented in hardware, it is more efficient and faster than GRE redirection.

Examples   The following example shows how to configure the redirect method for GRE:

```
WAE(config)# wccp tcp-promiscuous service-pair 61 62
WAE(config-wccp-service)# redirect-method gre
```

Related Commands   show wccp

(config-wccp-service) assignment-method

(config-wccp-service) egress-method

(config-wccp-service) enable

(config-wccp-service) exit

(config-wccp-service) failure-detection

■ **(config-wccp-service) redirect-method**

(config-wccp-service) password

(config-wccp-service) router-list-num

(config-wccp-service) weight

(config-wccp-service) router-list-num

To associate a configured router list with the WCCP service on a WAE, use the **router-list-num** WCCP configuration command. To unassociate the router list, use the **no** form of this command.

> **router-list-num** *number*

> **no router-list-num** *number*

Syntax Description

number	Number of the WCCP router list (1–7) that should be associated with the TCP promiscuous mode service. (These WCCP Version 2-enabled routers will transparently redirect TCP traffic to the WAE.)

Defaults

No default behavior or values.

Command Modes

WCCP configuration

Device Modes

application-accelerator

Usage Guidelines

A WCCP router list must be configured on a WAE for WCCP traffic redirection to operate.

Using the **no router-list-num** WCCP configuration command removes the WAE from the cache farm of the routers in the list.

Examples

The following example shows how to configure a WCCP router list:

```
WAE(config)# wccp router-list 1 10.10.10.2
WAE(config)# wccp tcp-promiscuous service-pair 61 62
WAE(config-wccp-service)# router-list-num 1
```

Related Commands

show wccp

(config-wccp-service) assignment-method

(config-wccp-service) egress-method

(config-wccp-service) enable

(config-wccp-service) exit

(config-wccp-service) failure-detection

(config-wccp-service) password

(config-wccp-service) redirect-method

(config-wccp-service) weight

(config-wccp-service) weight

To configure the weight assigned to a WAE, use the **weight** WCCP configuration command. To unconfigure the weight, use the **no** form of this command.

weight *number*

no weight *number*

Syntax Description

weight	A weight value from 1-10000. The way this number is interpreted depends on the total of the weight values of all WAEs in the service group. See the Usage Guidelines section for details.

Defaults

Weights are not assigned and the traffic load is distributed evenly between the WAEs in a service group.

Command Modes

WCCP configuration

Device Modes

application-accelerator

Usage Guidelines

This command specifies the weight value that is used for load balancing. The weight value ranges from 0 to 10000. If the total of all the weight values of the WAEs in a service group is less than or equal to 100, then the weight value represents a literal percentage of the total load redirected to the device for load-balancing purposes. For example, a WAE with a weight of 10 receives 10 percent of the total load in a service group where the total of all weight values is 50. If a WAE in such a service group fails, the other WAEs still receive the same load percentages as before the failure; they will not receive the load allocated to the failed WAE.

If the total of all the weight values of the WAEs in a service group is between 101 and 10000, then the weight value is treated as a fraction of the total weight of all the active WAEs in the service group. For example, a WAE with a weight of 200 receives 25 percent of the total load in a service group where the total of all the weight values is 800. If a WAE in such a service group fails, the other WAEs will receive the load previously allocated to the failed WAE. The failover handling is different than if the total weights are less than or equal to 100.

Examples

The following example shows how to configure the weight for WCCP load balancing:

```
WAE(config)# wccp tcp-promiscuous service-pair 61 62
WAE(config-wccp-service)# weight 250
```

Related Commands   **show wccp**

(config-wccp-service) assignment-method

(config-wccp-service) egress-method

(config-wccp-service) enable

(config-wccp-service) exit

(config-wccp-service) failure-detection

(config-wccp-service) password

(config-wccp-service) redirect-method

(config-wccp-service) router-list-num

■   **(config-wccp-service) weight**