Serverfarm Host Configuration Mode Commands

Serverfarm host configuration mode commands allow you to create and configure host server farms and associate host real servers with the server farm. Host server farms are clusters of real servers that provide web content or services in a data center. You must configure a real server using the **(config) rserver** command in configuration mode before you can associate it with a server farm.

To create a host server farm and access serverfarm configuration mode, use the **serverfarm** command. Note that host is the default server-farm type, so you do not have to enter the **host** option. The CLI prompt changes to (config-sfarm-host). For information about the commands in this mode, see the following commands.

Use the **no** form of this command to remove a server farm from the configuration.

serverfarm [**host**] *name*

no serverfarm *name*

Syntax Description

host	(Optional) Specifies a server farm of mirrored real servers that provide web content or services.
name	Unique identifier of the server farm. Enter an unquoted text string with no spaces and a maximum of 64 alphanumeric characters.

Command Modes

Configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

The commands in this mode require the server-farm feature in your user role. For details about role-based access control (RBAC) and user roles, see the *Cisco 4700 Series Application Control Engine Appliance Virtualization Configuration Guide*.

Examples

To create a host server farm named SFARM1, enter:

```
host1/Admin(config)# serverfarm SFARM1
host1/Admin(config-sfarm-host)#
```

To delete the server farm named SFARM1, enter:

```
host1/Admin(config)# no serverfarm SFARM1
```

Related Commands

show serverfarm
show running-config

(config-sfarm-host) description

To configure the description of a server farm, use the **description** command. Use the **no** form of this command to delete the description of a server farm.

description *text*

no description

Syntax Description

text	Text description of a server farm. Enter an unquoted text string with a maximum of 240 alphanumeric characters.

Command Modes

Serverfarm host configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

This command has no usage guidelines.

Examples

To configure a description of a server farm, enter:

```
host1/Admin(config-sfarm-host)# description CURRENT EVENTS ARCHIVE
```

To delete the description of a server farm, enter:

```
host1/Admin(config-sfarm-host)# no description
```

Related Commands

This command has no related commands.

(config-sfarm-host) failaction

To configure the action that the ACE takes if a real server goes down, use the **failaction** command. Use the **no** form of this command to reset the ACE to its default of taking no action when a server fails.

failaction purge

no failaction

Syntax Description

purge	Specifies that the ACE remove the connections to a real server if that real server in the server farm fails after you configure this command. The module sends a reset (RST) both to the client and to the server that failed.

Command Modes

Serverfarm host configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

If you do not configure this command, the ACE takes no action if a server in a server farm fails. This feature is required for stateful firewall load balancing (FWLB). For details about FWLB, see the *Cisco 4700 Series Application Control Engine Appliance Server Load-Balancing Configuration Guide*.

If you do not configure this command, the ACE takes no action when a server fails. To clear connections to servers that have failed prior to entering the **failaction** command, use the clear conn command.

Examples

To instruct the ACE to remove connections from a failed server in the server farm, enter:

```
host1/Admin(config-sfarm-host)# failaction purge
```

To reset the ACE to its default of taking no action if a real server fails, enter:

```
host1/Admin(config-sfarm-host)# no failaction
```

Related Commands

This command has no related commands.

(config-sfarm-host) predictor

To configure the load-balancing algorithm for the server farm, use the **predictor** command. To remove the load-balancing algorithm, use the **no** form of this command.

predictor roundrobin | {**leastconns** [**slowstart** *time*]} | {**hash** {**address** [**source** | **destination**] [*netmask*]} | {**cookie** *name1*} | {**header** *name2*} | {**url** [**begin-pattern** *text*] [**end-pattern** *text*]}}

no predictor

Syntax Description

roundrobin	Selects the next servers in the list of real servers.
leastconns	Selects the server with the least number of connections.
slowstart *time*	(Optional) Specifies that the connections to the real server are in a slow-start mode for the specified duration. For the *time* argument, enter an integer from 1 to 65535. where 1 is the fastest ramp-up value.
hash address	Selects the server using a hash value based on the source and destination IP addresses.
source	(Optional) Selects the server using a hash value based on the source IP address.
destination	(Optional) Selects the server using a hash value based on the destination IP address.
netmask	(Optional) Bits in the IP address to use for the hash. If not specified, the default is 255.255.255.255.
hash cookie *cookie-name*	Selects the server using a hash value based on the specified cookie name. For the *cookie-name* argument, enter a cookie name from 1 to 64 alphanumeric characters.

hash header *header-name*	Selects the server using a hash value based on the header name. Enter a header name from 1 to 64 alphanumeric characters or enter one of the following standard headers: • **Accept** • **Accept-Charset** • **Accept-Encoding** • **Accept-Language** • **Authorization** • **Cache-Control** • **Connection** • **Content-MD5** • **Expect** • **From** • **Host** • **If-Match** • **Pragma** • **Referrer** • **Transfer-Encoding** • **User-Agent** • **Via**
hash url	Selects the server using a hash value based on the requested URL. Use this predictor method to load balance cache servers. Cache servers perform better with the URL hash method because you can divide the contents of the caches evenly if the traffic is random enough. In a redundant configuration, the cache servers continue to work even if the active ACE switches over to the standby ACE. For information about configuring redundancy, see the *Cisco 4700 Series Application Control Engine Appliance Administration Guide*.
begin-pattern *text*	(Optional) Specifies the beginning pattern of the URL and the pattern string to parse. You cannot configure different beginning and ending patterns for different server farms that are part of the same traffic classification. Enter an unquoted text string with no spaces and a maximum of 255 alphanumeric characters for each pattern that you configure. If you want to match a URL that contains spaces, you must use \x20 for each space character.
end-pattern *text*	(Optional) Specifies the ending pattern of the URL and the pattern string to parse. You cannot configure different beginning and ending patterns for different server farms that are part of the same traffic classification. Enter an unquoted text string with no spaces and a maximum of 255 alphanumeric characters for each pattern that you configure. If you want to match a URL that contains spaces, you must use \x20 for each space character.

Command Modes

Server-farm host configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

Use this command to define the load-balancing algorithm used in choosing a real server in the server farm. If you do not specify the **predictor** command, the default algorithm is **roundrobin**. Using the **no** form of this command changes the configured predictor algorithm to the default algorithm.

Note The only time that the sequence of servers starts over at the beginning (with the first server) is when there is a configuration or server state change (for example, a probe failure).

If you configure the **leastconns** predictor, you can use a **slowstart** mechanism (ramp-up) to avoid sending a high rate of new connections to the servers that have just been put in service. The real server with the fewest number of active connections will get the next connection request for the server farm with the **leastconns** predictor. The ramp-up stops when the duration timer that you specify expires.

Server weights take effect only when there are open connections to the servers. When there are no sustained connections to any of the servers, the leastconns predictor method behaves like the roundrobin method.

Examples

To specify the **leastconns** load-balancing algorithm for the server farm, enter:

```
host1/Admin(config-sfarm-host)# predictor leastconns
```

To remove the load-balancing algorithm from the server farm, enter:

```
host1/Admin(config-sfarm-host)# no predictor
```

Related Commands

This command has no related commands.

(config-sfarm-host) probe

Use probes to monitor the health of real servers in a server farm. To associate a probe with a server farm, use the **probe** command. Use the **no** form of this command to dissociate a probe from a server farm.

probe *probe-name*

no probe *probe-name*

Syntax Description

probe-name	Identifier of an existing probe that you want to associate with a server farm. Enter an unquoted text string with no spaces and a maximum of 64 alphanumeric characters.

Command Modes

Serverfarm host configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

The probe must already exist. (To create a probe, see the (config) probe command.) You can associate multiple probes of the same or different protocols with each server farm.

Examples

To associate a probe with a server farm, enter:

```
host1/Admin(config-sfarm-host)# probe TCP1
```

To dissociate a probe from a server farm, enter:

```
host1/Admin(config-sfarm-host)# no probe TCP1
```

Related Commands

(config) probe

(config-sfarm-host) retcode

To associate a return code map for HTTP return error code checking with a server farm, use the **retcode** command. Use the **no** form of this command to dissociate a return code.

retcode *number1 number2* **check count**

no retcode *number1 number2* **check count**

Syntax Description

number1	Minimum value for an HTTP return error code. Enter an integer from 100 to 599. The minimum value must be less than or equal to the maximum value.
number2	Maximum value for an HTTP return error code. Enter an integer from 100 to 599. The maximum value must be greater than or equal to the minimum value.
check	Associates actions for HTTP return-code checking with the server farm.
count	Increments the number of return error codes received.

Command Modes

Server-farm host configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

You can configure one return code or one return code range for each server farm. If a server farm already has a return code associated with it, specifying a new return code overwrites the existing association.

Examples

To associate a return code range from 100 to 400 with a server farm, enter:

```
host1/Admin(config-sfarm-host)# retcode 100 400 check count
```

To dissociate a return code range from a server farm, enter:

```
host1/Admin(config-sfarm-host)# no retcode
```

Related Commands

This command has no related commands.

(config-sfarm-host) rserver

To associate one or more existing host real servers with a server farm and access serverfarm host real server configuration mode, use the **rserver** command. The CLI prompt changes to (config-sfarm-host-rs). For information on commands in serverfarm host real server configuration mode, see the "Serverfarm Host Real Server Configuration Mode Commands" section. Use the **no** form of this command to dissociate the real server from the server farm.

rserver *name* [*port*]

no rserver *name* [*port*]

Syntax Description

name	Unique identifier of the real server. Enter an unquoted text string with no spaces and a maximum of 64 alphanumeric characters.
port	(Optional) Port number used for the real server Port Address Translation (PAT). Enter an integer from 1 to 65535.

Command Modes

Serverfarm host configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

The real server must already exist. To create a real server, see the **(config) rserver** command. You can associate a maximum of 16,384 real servers with a server farm.

If you choose not to assign a port number for the real server association with the server farm, the default behavior by the ACE is to automatically assign the same destination port that was used by the inbound connection to the outbound server connection. For example, if the incoming connection to the ACE is a secure client HTTPS connection, the connection is typically made on port 443. If you do not assign a port number to the real server, the ACE will automatically use port 443 to connect to the server, which results in the ACE making a clear-text HTTP connection over port 443. In this case, you would typically define an outbound destination port of 80, 81, or 8080 for the backend server connection.

Examples

To associate a real server with a server farm, enter:

```
host1/Admin(config-sfarm-host)# rserver server1 80
```

To dissociate a real server from a server farm, enter:

```
host1/Admin(config-sfarm-host)# no rserver server1 80
```

Related Commands

(config) rserver

(config-sfarm-host) transparent

To prevent the Network Address Translation (NAT) of the ACE VIP address to the server IP address, use the **transparent** command. Use the **no** form of this command to reset the ACE to its default of using NAT to translate the VIP address to the server IP address.

transparent

no transparent

Syntax Description

This command has no keywords or arguments.

Command Modes

Serverfarm host configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

Use this command in firewall load balancing (FWLB) when you configure the insecure and secure sides of the firewall as a server farm. For details about FWLB, see the *Cisco 4700 Series Application Control Engine Appliance Server Load-Balancing Configuration Guide*.

Examples

To prevent the NAT of the ACE VIP address to the server IP address, enter:

```
host1/Admin(config-sfarm-host)# transparent
```

To reset the ACE to its default of using NAT to translate the VIP address to the server IP address, enter:

```
host1/Admin(config-sfarm-host)# no transparent
```

Related Commands

This command has no related commands.

Serverfarm Host Real Server Configuration Mode Commands

Serverfarm host real server configuration mode commands allow you to associate a host real server with a host server farm and configure the real server attributes.

To associate one or more existing host real servers with a host server farm and access serverfarm host real server configuration mode, use the **rserver** command in serverfarm host configuration mode. The CLI prompt changes to (config-sfarm-host-rs). For information about the commands in this mode, see the following commands. Use the **no** form of this command to remove the real server from the server farm.

rserver *name* [*port*]

no rserver *name*

Syntax Description

name	Unique identifier of the real server. Enter an unquoted text string with no spaces and a maximum of 64 alphanumeric characters.
port	(Optional) Port number used for the real server Port Address Translation (PAT). Enter an integer from 1 to 65535.

Command Modes

Serverfarm host configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

The commands in this mode require the server-farm feature in your user role. For details about role-based access control (RBAC) and user roles, see the *Cisco 4700 Series Application Control Engine Appliance Virtualization Configuration Guide*.

The real server must already exist. To create a real server, see the **(config) rserver** command. You can associate a maximum of 16,384 real servers with a server farm.

Examples

To associate a real server with a server farm, enter:

```
host1/Admin(config-sfarm-host)# rserver SERVER1
```

To dissociate a real server from a server farm, enter:

```
host1/Admin(config-sfarm-host)# no rserver SERVER1
```

Related Commands

This command has no related commands.

(config-sfarm-host-rs) backup-rserver

To configure a backup real server for a real server in a server farm, use the **backup-rserver** command. If a real server associated with a server farm becomes unavailable, the Application Control Engine Service Module directs flows to the configured backup real server. Use the **no** form of this command to remove a backup real server from the configuration.

backup-rserver *name* [*port*]

no backup-rserver

Syntax Description

name	Unique identifier of an existing real server that you want to configure as a backup server in a server farm. Enter an unquoted text string with no spaces and a maximum of 64 alphanumeric characters.
port	(Optional) Port number used for the backup real server Port Address Translation (PAT). Enter an integer from 0 to 65535.

Command Modes

Serverfarm host real server configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

The real server used as a backup server must already exist. To create a real server, see the **(config) rserver** command.

Examples

To associate a backup real server with a server farm, enter:

```
host1/Admin(config-sfarm-host-rs)# backup-rserver BACKUP_SERVER1 3500
```

To dissociate a backup real server from a server farm, enter:

```
host1/Admin(config-sfarm-host-rs)# no backup-rserver
```

Related Commands

(config) rserver
(config-sfarm-host-rs) inservice

(config-sfarm-host-rs) conn-limit

To configure the maximum and minimum number of connections that you want to allow for a host real server in a server farm, use the **conn-limit** command. Use the **no** form of this command to reset the limits for the real server maximum connections and minimum connections to the default of 4294967295.

conn-limit max *max-conns* **min** *min-conns*

no conn-limit

Syntax Description

max *maxconns*	Specifies the maximum number of connections allowed for this real server. Enter an integer from 2 to 4294967295. The default is 4294967295.
min *minconns*	Specifies the connection threshold below which the real server will start accepting connections again after the number of connections exceeds the configured maximum number of connections. Enter an integer from 2 to 4294967295. The default is *minconns* equal to *maxconns*.

Command Modes

Serverfarm host real server configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

Use this command to specify the maximum number of connections and the minimum connection threshold for a host real server in a server farm. The *minconns* value must be less than or equal to the *maxconns* value. The ACE uses the *minconns* value as a threshold to start accepting connections again after the *maxconns* limit is exceeded.

Examples

To configure the maximum number of connections and the minimum connection threshold for a host real server, enter:

```
host1/Admin(config-sfarm-host-rs)# conn-limit max 65535 min 40000
```

To reset the maximum number of connections and the minimum connection threshold for a host real server to the default of 4294967295, enter:

```
host1/Admin(config-sfarm-host-rs)# no conn-limit
```

Related Commands

This command has no related commands.

(config-sfarm-host-rs) inservice

To place a real server associated with a server farm in service, use the **inservice** command. Use the **no** form of this command to take a real server out of service.

inservice [**standby**]

no inservice

Syntax Description

standby	(Optional) Used with backup real servers, specifies that a backup real server remain inactive unless the primary real server fails. If the primary fails, the backup server becomes active and starts accepting connections.

Command Modes

Serverfarm host real server configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

To start load balancing connections to a real server in a server farm, you must place the real server in service by using the **inservice** command.

You can modify the attributes of a real server in a server farm without taking the server out of service.

Use the **inservice standby** command on a primary real server to provide graceful shutdown when you have sticky configured. This command instructs the ACE to perform the following actions:

- Tear down existing non-TCP connections to the server.
- Allow current TCP connections to complete.
- Allow new sticky connections for existing server connections that match entries in the sticky database.
- Load balance all new connections (other than the matching sticky connections in this list) to the other servers in the server farm.
- Eventually take the server out of service.

Examples

To place a real server in service, enter:

```
host1/Admin(config-sfarm-host-rs)# inservice
```

To take a real server out of service, enter:

```
host1/Admin(config-sfarm-host-rs)# no inservice
```

Related Commands

This command has no related commands.

(config-sfarm-host-rs) probe

To configure a probe to monitor the health of a host real server in a host server farm, use the **probe** command. Use the **no** form of this command to remove the probe from the real server.

probe *probe-name*

no probe *probe-name*

Syntax Description

probe-name	Identifier of an existing probe that you want to assign to a real server to monitor its health. Enter an unquoted text string with no spaces and a maximum of 64 alphanumeric characters.

Command Modes

Serverfarm host real server configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

You can associate multiple probes with each real server.

Examples

To configure a probe for a host real server, enter:

```
host1/Admin(config-sfarm-host-rs)# probe SERVER1_PROBE
```

To remove a probe from a host real server, enter:

```
host1/Admin(config-sfarm-host-rs)# no probe SERVER1_PROBE
```

Related Commands

This command has no related commands.

(config-sfarm-host-rs) weight

To configure the capacity of a real server in relation to other servers in a server farm, use the **weight** command. The weight value that you specify for a server is used in the weighted round-robin and least-connections predictor load-balancing methods. Use the **no** form of this command to reset the real server weight to the default.

weight *number*

no weight

Syntax Description

number	Weight value assigned to a real server in a server farm. This value is used in the weighted round-robin and least-connections predictor load-balancing algorithms. Enter an integer from 0 to 100. The default is 8.

Command Modes

Serverfarm host real server configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

Servers with a higher configured weight value have a higher priority with respect to connections than servers with a lower weight. For example, a server with a weight of 5 would receive five connections for every one connection received by a server with a weight of 1.

To specify different weight values for a real server in a server farm, you can assign multiple IP addresses to the server. You can also use the same IP address of a real server with different port numbers.

Server weights take effect only when there are open connections to the servers. When there are no sustained connections to any of the servers, the leastconns predictor method behaves like the roundrobin method.

Examples

To configure a weight value for a real server, enter:

```
host1/Admin(config-sfarm-host-rs)# weight 50
```

To reset the weight of a real server to the default of 8, enter:

```
host1/Admin(config-sfarm-host-rs)# no weight
```

Related Commands

This command has no related commands.

Serverfarm Redirect Configuration Mode Commands

Serverfarm redirect configuration mode commands allow you to create and configure redirect server farms and associate redirect real servers with the server farm. Redirect server farms are clusters of real servers that redirect users to alternative URLs where content has been moved, either temporarily or permanently. The server farm consists only of real servers that redirect client requests to alternative locations specified by the relocation string or port number in the real server configuration. You must configure a redirect real server using the **(config) rserver redirect** command in configuration mode before you can associate it with a server farm.

To create a redirect server farm and access serverfarm redirect configuration mode, use the **serverfarm redirect** command. The CLI prompt changes to (config-sfarm-redirect). For information about the commands in this mode, see the following commands.

Use the **no** form of this command to remove a server farm from the configuration.

serverfarm redirect *name*

no serverfarm redirect *name*

Syntax Description

name	Unique identifier of the server farm. Enter an unquoted text string with no spaces and a maximum of 64 alphanumeric characters.

Command Modes

Configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

The commands in this mode require the server-farm feature in your user role. For details about role-based access control (RBAC) and user roles, see the *Cisco 4700 Series Application Control Engine Appliance Virtualization Configuration Guide*.

Examples

To create a redirect server farm named SFARM2, enter:

```
host1/Admin(config)# serverfarm redirect SFARM2
host1/Admin(config-sfarm-redirect)#
```

To delete the redirect server farm named SFARM2, enter:

```
host1/Admin(config)# no serverfarm redirect SFARM2
```

Related Commands

show serverfarm
show running-config
(config) rserver

(config-sfarm-redirect) description

To configure the text description of a server farm, use the **description** command. Use the **no** form of this command to delete the description of a server farm.

description *text*

no description

Syntax Description

text	Text description of a server farm. Enter an unquoted text string with a maximum of 240 alphanumeric characters.

Command Modes

Serverfarm redirect configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

This command has no usage guidelines.

Examples

To configure a description of a server farm, enter:

```
host1/Admin(config-sfarm-redirect)# description REDIRECT_NEW_SITE
```

To delete the description of a server farm, enter:

```
host1/Admin(config-sfarm-redirect)# no description
```

Related Commands

This command has no related commands.

(config-sfarm-redirect) failaction

To configure the action that the ACE takes if a real server goes down, use the **failaction** command. Use the **no** form of this command to reset the ACE to its default of taking no action when a server fails.

failaction purge

no failaction

Syntax Description

purge	Specifies that the ACE remove the connections to a real server if that real server in the server farm fails. The appliance sends a reset (RST) both to the client and to the server that failed.

Command Modes

Serverfarm redirect configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

If you do not configure this command, the ACE takes no action if a server in a server farm fails. This feature is required for stateful firewall load balancing (FWLB). For details about FWLB, see the *Cisco 4700 Series Application Control Engine Appliance Server Load-Balancing Configuration Guide*.

Examples

To instruct the ACE to remove connections from a failed server in the server farm, enter:

```
host1/Admin(config-sfarm-redirect)# failaction purge
```

To reset the ACE to its default of taking no action if a real server fails, enter:

```
host1/Admin(config-sfarm-redirect)# no failaction
```

Related Commands

This command has no related commands.

(config-sfarm-redirect) predictor

To configure the load-balancing algorithm for the server farm, use the **predictor** command. Use the **no** form of this command to remove the load-balancing algorithm.

predictor roundrobin | {**leastconns** [**slowstart** *time*]} | {**hash** {**address** [**source** | **destination**] [*netmask*]} | {**cookie** *name1*} | {**header** *name2*} | {**url** [**begin-pattern** *text*] [**end-pattern** *text*]}}

no predictor

Syntax Description

roundrobin	Selects the next servers in the list of real servers based on server weight.
leastconns	Selects the server with the least number of connections.
slowstart *time*	(Optional) Used with the **leastconns** predictor. Specifies that the connections to the real server be in a slow-start mode for the duration indicated by the *time* value. Enter an integer from 1 to 65535.
hash address	Selects the server using a hash value based on the source and destination IP addresses.
source	(Optional) Selects the server using a hash value based on the source IP address.
destination	(Optional) Selects the server using a hash value based on the destination IP address.
netmask	(Optional) Bits in the IP address to use for the hash. If not specified, the default is 255.255.255.255.
hash cookie *name*	Selects the server using a hash value based on the cookie name. Enter a cookie name from 1 to 64 alphanumeric characters.

hash header *name*	Selects the server using a hash value based on the header name. Enter a header name from 1 to 64 alphanumeric characters or enter one of the following standard headers: • **Accept** • **Accept-Charset** • **Accept-Encoding** • **Accept-Language** • **Authorization** • **Cache-Control** • **Connection** • **Content-MD5** • **Expect** • **From** • **Host** • **If-Match** • **Pragma** • **Referrer** • **Transfer-Encoding** • **User-Agent** • **Via**
hash url	Selects the server using a hash value based on the requested URL. Use this predictor method to load balance cache servers. Cache servers perform better with the URL hash method because you can divide the contents of the caches evenly if the traffic is random enough. In a redundant configuration, the cache servers continue to work even if the active ACE switches over to the standby ACE. For information about configuring redundancy, see the *Cisco 4700 Series Application Control Engine Appliance Administration Guide*.
begin-pattern *text*	(Optional) Specifies the beginning pattern of the URL and the pattern string to parse. You cannot configure different beginning and ending patterns for different server farms that are part of the same traffic classification. Enter an unquoted text string with no spaces and a maximum of 255 alphanumeric characters for each pattern that you configure. If you want to match a URL that contains spaces, you must use \x20 for each space character.
end-pattern *text*	(Optional) Specifies the ending pattern of the URL and the pattern string to parse. You cannot configure different beginning and ending patterns for different server farms that are part of the same traffic classification. Enter an unquoted text string with no spaces and a maximum of 255 alphanumeric characters for each pattern that you configure. If you want to match a URL that contains spaces, you must use \x20 for each space character.

Command Modes

Server-farm redirect configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

Use this command to define the load-balancing algorithm used in choosing a real server in the server farm. If you do not specify the **predictor** command, the default algorithm is **roundrobin**. Using the **no** form of this command changes the configured predictor algorithm to the default algorithm.

The hash methods do not recognize the weight for the real servers. The weight assigned to the real servers is used only in the **roundrobin** and **leastconns** predictor methods. To create different weights for real servers, you can list multiple IP addresses of the cache server in the server farm. You can also use the same IP address with a different port number.

The only time that the sequence of servers starts over at the beginning (with the first server) is when there is a configuration or server state change (for example, a probe failure).

If you configure the **leastconns** predictor, you can use a **slowstart** mechanism (ramp-up) to avoid sending a high rate of new connections to the servers that have just been put in service. The real server with the fewest number of active connections will get the next connection request for the server farm with the **leastconns** predictor. The ramp-up stops when the duration timer that you specify expires.

Examples

To specify the **leastconns** load-balancing algorithm for the server farm, enter:

```
host1/Admin(config-sfarm-redirect)# predictor leastconns slowstart 300
```

To remove the load-balancing algorithm from the server farm, enter:

```
host1/Admin(config-sfarm-redirect)# no predictor
```

Related Commands

This command has no related commands.

(config-sfarm-redirect) rserver

To associate one or more existing redirect real servers with a server farm and access serverfarm redirect real server configuration mode, use the **rserver** command. The CLI prompt changes to (config-sfarm-redirect-rs). For information on commands in serverfarm redirect real server configuration mode, see the "Serverfarm Redirect Real Server Configuration Mode Commands" section. Use the **no** form of this command to dissociate the real server from the server farm.

rserver *name* [*port*]

no rserver *name* [*port*]

Syntax Description

name	Unique identifier of the real server. Enter an unquoted text string with no spaces and a maximum of 64 alphanumeric characters.
port	(Optional) Port number used for the real server Port Address Translation (PAT). Enter an integer from 1 to 65535.

Command Modes

Serverfarm redirect configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

The real server must already exist. To create a real server, see the **(config) rserver** command. You can associate a maximum of 16,384 real servers with a server farm.

Examples

To associate a real server with a server farm, enter:

```
host1/Admin(config-sfarm-redirect)# rserver server1 4000
```

To dissociate a real server from a server farm, enter:

```
host1/Admin(config-sfarm-redirect)# no rserver server1
```

Related Commands

(config) rserver

Serverfarm Redirect Real Server Configuration Mode Commands

Serverfarm redirect real server configuration mode commands allow you to associate a redirect real server with a redirect server farm and configure the real server attributes.

To associate one or more existing redirect real servers with a redirect server farm and access serverfarm redirect real server configuration mode, use the **rserver** command in serverfarm redirect configuration mode. The CLI prompt changes to (config-sfarm-redirect-rs). For information about the commands in this mode, see the following commands. Use the **no** form of this command to remove the real server from the server farm.

rserver *name*

no rserver *name*

Syntax Description

name	Unique identifier of the real server. Enter an unquoted text string with no spaces and a maximum of 64 alphanumeric characters.

Command Modes

Serverfarm redirect configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

The commands in this mode require the server-farm feature in your user role. For details about role-based access control (RBAC) and user roles, see the *Cisco 4700 Series Application Control Engine Appliance Virtualization Configuration Guide*.

The redirect real server must already exist. To create a real server, see the **(config) rserver redirect** command. You can associate a maximum of 16,384 real servers with a server farm.

Examples

To associate a real server with a server farm, enter:

```
host1/Admin(config-sfarm-redirect)# rserver server1
```

To dissociate a real server from a server farm, enter:

```
host1/Admin(config-sfarm-redirect)# no rserver server1
```

Related Commands

This command has no related commands.

(config-sfarm-redirect-rs) backup-rserver

To configure a backup real server for a real server in a server farm, use the **backup-rserver** command. If a real server associated with a server farm becomes unavailable, the ACE directs flows to the configured backup real server. Use the **no** form of this command to remove a backup real server from the configuration.

backup-rserver *name*

no backup-rserver

Syntax Description

name	Unique identifier of an existing real server that you want to configure as a backup server in a server farm. Enter an unquoted text string with no spaces and a maximum of 64 alphanumeric characters.

Command Modes

Serverfarm redirect real server configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

The real server used as a backup server must already exist. To create a redirect real server, see the **(config) rserver redirect** command.

Examples

To associate a backup real server with a server farm, enter:

```
host1/Admin(config-sfarm-redirect-rs)# backup-rserver BACKUP_SERVER1
```

To dissociate a backup real server from a server farm, enter:

```
host1/Admin(config-sfarm-redirect-rs)# no backup-rserver
```

Related Commands

(config) rserver

(config-sfarm-redirect-rs) conn-limit

To configure the maximum and minimum number of connections that you want to allow for a redirect real server in a server farm, use the **conn-limit** command. Use the **no** form of this command to reset the real server maximum connections and minimum connections threshold to the default of 4294967295.

conn-limit max *max-conns* **min** *min-conns*

no conn-limit

Syntax Description

max *maxconns*	Specifies the maximum number of connections allowed for this real server. Enter an integer from 2 to 4294967295. The default is 4294967295.
min *minconns*	Specifies the connection threshold below which the real server will start accepting connections again after the number of connections exceeds the configured maximum number of connections. Enter an integer from 2 to 4294967295. The default is *minconns* equal to *maxconns*.

Command Modes

Serverfarm redirect real server configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

Use this command to specify the maximum number of connections and the minimum connection threshold for a redirect real server in a server farm. The *minconns* value must be less than or equal to the *maxconns* value. The ACE uses the *minconns* value as a threshold to start accepting connections again after the *maxconns* limit is exceeded.

Examples

To configure the maximum number of connections and the minimum connection threshold for a redirect real server, enter:

```
host1/Admin(config-sfarm-redirect-rs)# conn-limit max 65535 min 40000
```

To reset the maximum number of connections and the minimum connection threshold for a redirect real server to the default of 4294967295, enter:

```
host1/Admin(config-sfarm-redirect-rs)# no conn-limit
```

Related Commands

This command has no related commands.

(config-sfarm-redirect-rs) inservice

To place a real server associated with a server farm in service, use the **inservice** command. Use the **no** form of this command to take a real server out of service.

inservice [**standby**]

no inservice

Syntax Description

standby	(Optional) Used with backup real servers, specifies that a backup real server remain inactive unless the primary real server fails. If the primary fails, the backup server becomes active and starts accepting connections.

Command Modes

Serverfarm redirect real server configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

To start load-balancing connections to a real server in a server farm, you must place the real server in service by using the **inservice** command.

You can modify the attributes of a real server in a server farm without taking the server out of service.

Use the **inservice standby** command on a primary real server to provide graceful shutdown when you have sticky configured. This command instructs the ACE to perform the following actions:

- Tear down existing non-TCP connections to the server.
- Allow current TCP connections to complete.
- Allow new sticky connections for existing server connections that match entries in the sticky database.
- Load balance all new connections (other than the matching sticky connections in this list) to the other servers in the server farm.
- Eventually take the server out of service.

Examples

To place a real server in service, enter:

```
host1/Admin(config-sfarm-redirect-rs)# inservice
```

To take a real server out of service, enter:

```
host1/Admin(config-sfarm-redirect-rs)# no inservice
```

Related Commands

This command has no related commands.

(config-sfarm-redirect-rs) weight

To configure the capacity of a real server in relation to other servers in a server farm, use the **weight** command. The weight value that you specify for a server is used in the weighted round-robin and least-connections predictor load-balancing methods. Use the **no** form of this command to reset the real server weight to the default.

weight *number*

no weight

Syntax Description

number	Weight value assigned to a real server in a server farm. This value is used in the weighted round-robin and least-connections predictor load-balancing algorithms. Enter an integer from 0 to 100. The default is 8.

Command Modes

Serverfarm redirect real server configuration mode

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

Servers with a higher configured weight value have a higher priority with respect to connections than servers with a lower weight. For example, a server with a weight of 5 would receive five connections for every one connection received by a server with a weight of 1.

To specify different weight values for a real server in a server farm, you can assign multiple IP addresses to the server. You can also use the same IP address of a real server with different port numbers.

Server weights take effect only when there are open connections to the servers. When there are no sustained connections to any of the servers, the leastconns predictor method behaves like the roundrobin

Examples

To configure a weight value for a real server, enter:

```
host1/Admin(config-sfarm-redirect-rs)# weight 50
```

To reset the weight of a real server to the default of 8, enter:

```
host1/Admin(config-sfarm-redirect-rs)# no weight
```

Related Commands

This command has no related commands.