Cisco Unified SIP Proxy SIP Server Commands

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server-group sip element-retries

To configure the number of retries for group elements in all SIP server groups, use the **server-group sip element retries** command in Cisco Unified SIP Proxy configuration mode. To restore the default value, use the **no** form of this command.

server-group sip element retries {**tcp** | **tls** | **udp**} *number-of-retries*

no server-group sip element retries {**tcp** | **tls** | **udp**}

Syntax Description

tcp	Specifies TCP as the transport protocol of the listener.
tls	Specifies TLS as the transport protocol of the listener.
udp	Specifies UDP as the transport protocol of the listener. This is the default value.
number-of-retries	Maximum number of consecutive failed attempts to send a request to a server group element via the specified protocol before the element is considered down. A failed attempt can occur because of a timeout, ICMP error, or receipt of a failure response (configured via the **failover-response** command). The valid range is from 0 to 65535. The default number of retries for the transport protocols is 1 for TCP, 1 for TLS, and 2 for UDP.

Command Default

UDP is the default transport, and the default number of retries for UDP is 2.

Command Modes

Cisco Unified SIP Proxy configuration (cusp-config)

Command History

Cisco Unified SIP Proxy Version	Modification
1.0	This command was introduced.

Usage Guidelines

Use this command to configure the maximum number of failed attempts to send a request to a server group element via the specified protocol before the element is considered down. A failed attempt can occur because of a timeout or network error.

This command is a global value, and applies to all SIP server group elements.

Examples

The following example sets the retry value for UDP to 5:

```
se-10-0-0-0(cusp-config)> server-group sip element-retries udp 5
```

The following example sets the retry value for UDP to the default value:

```
se-10-0-0-0(cusp-config)> no server-group sip element-retries udp
```

Related Commands

Command	Description
server-group sip global-load-balance	Configures the load balance value for all SIP server groups.
server-group sip global-ping	Enables global pinging for all SIP server groups.
server-group sip ping-options	Configures the ping options for the SIP server group.
server-group sip retry-after	Configures the failover response timeout value for the SIP server group.

server-group sip global-load-balance

To configure the load balancing algorithm for all SIP server groups, use the **server-group sip global-local-balance** command in Cisco Unified SIP Proxy configuration mode. To return the load balancing algorithm to the default value for all global SIP server groups, use the **no** form of this command.

server-group sip global-load-balance { **call-id** | **highest-q** | **request-uri** | **to-uri** | **weight** }

no server-group sip global-load-balance

Syntax Description

call-id	Specifies that a hash algorithm with Call-ID is performed to select an element. This is the default value.
highest-q	Specifies that the first element in the list of available elements with the same highest q-value is selected.
request-uri	Specifies that a hash algorithm with a request URI is performed to select an element.
to-uri	Specifies that a hash algorithm with a To header URI is performed to select an element.
weight	Specifies that the element is selected proportional to its weight relative to the weights of other elements of the same q-value. This value is only applicable if implementing weight-based routing.

Command Default

The call-id load balancing algorithm is used.

Command Modes

Cisco Unified SIP Proxy configuration (cusp-config)

Command History

Cisco Unified SIP Proxy Version	Modification
1.0	This command was introduced.

Usage Guidelines

When a message is forwarded to a server group, the available element with the highest q-value is selected to handle the request. If more than one available element shares the same highest q-value, the load balancing algorithm selected determines which of these elements is the next hop.

When multiple elements are assigned the same highest q-value, the first element must reach its maximum load capacity before the next element in the list is utilized. Because of this cascading load balancing behavior, we recommend that the highest-q algorithm only be used when all server group elements have a different q-values.

If you use one of the hash algorithms (**request-uri**, **call-id**, or **to-uri**), although the hash algorithm is deterministic, the load is distributed over these elements based on the value of the key. If the element selected by the hash algorithm is a reference to another server group, the selection procedure is also recursively applied to that server group.

Note Use this command to determine the load-balancing algorithm for all SIP server groups. After you configure this command, you can change the load-balancing algorithm for a specific SIP server group using the **lb-type** command in SIP server group configuration mode.

Examples

The following example configures the load balancing algorithm for all global SIP server groups to be based on call-id:

```
se-10-0-0-0(cusp-config)> server-group sip global-load-balance call-id
```

The following example configures the load balancing algorithm for all global SIP server groups to be based on request URI:

```
se-10-0-0-0(cusp-config)> server-group sip global-load-balance request-uri
```

The following example configures the load balancing algorithm for all global SIP server groups to the default value (request URI):

```
se-10-0-0-0(cusp-config)> no server-group sip global-load-balance
```

Related Commands

Command	Description
server-group sip element-retries	Configures the number of retries for a SIP server group element.
server-group sip global-ping	Enables global pinging for all SIP server groups.
server-group sip ping-options	Configures the ping options for the SIP server group.
server-group sip retry-after	Configures the failover response timeout value for the SIP server group.

server-group sip global-ping

To enable global pinging for all SIP server groups, use the **server-group sip global-ping** command in Cisco Unified SIP Proxy configuration mode. To disable global pinging for all SIP server groups, use the **no** form of this command.

server-group sip global-ping

no server-group sip global-ping

Syntax Description

This command has no arguments or keywords.

Command Default

Global pinging for all SIP server groups is disabled.

Command Modes

Cisco Unified SIP Proxy configuration (cusp-config)

Command History

Cisco Unified SIP Proxy Version	Modification
1.0	This command was introduced.

Usage Guidelines

Use this command to enable and disable the monitoring of the server group element status globally through the ping mechanism. Configure the ping options using the **server-group sip ping-options** command.

Examples

The following example enables global pinging for a SIP server group:

```
se-10-0-0-0(cusp-config)> server-group sip global-ping
```

Related Commands

Command	Description
server-group sip element-retries	Configures the number of retries for a SIP server group element.
server-group sip global-load-balance	Configures the load balance value for all SIP server groups.
server-group sip ping-options	Configures the ping options for the SIP server group.
server-group sip retry-after	Configures the failover response timeout value for the SIP server group.

server-group sip group

To configure a SIP server group and enter SIP server group configuration mode, use the **server-group sip group** command in Cisco Unified SIP Proxy configuration mode. To remove the SIP server group, use the **no** form of this command.

server-group sip group *server-group-name network*

no server-group sip group *server-group-name network*

Syntax Description

server-group-name	Specifies the SIP server group name. **Note** The server-group-name that is used is inserted into the SIP URI of the outgoing request. Some devices, such as Cisco Unified CM, validate the URI of requests before processing, so care should be taken when configuring the server group name. The end device might need to be configured with a Fully Qualified Domain Name (FQDN) to allow for this functionality.
network	Specifies the previously configured network interface to use for the SIP server group.

Command Default

No SIP server group is configured.

Command Modes

Cisco Unified SIP Proxy configuration (cusp-config)

Command History

Cisco Unified SIP Proxy Version	Modification
1.0	This command was introduced.

Usage Guidelines

You must configure the network specified by the *network* argument before using this command.

Note This command requires that you use the **commit** command for the configuration changes to take effect. You must use the **commit** command after the server group elements have been configured before the server group can become active.

Examples

The following example creates SIP server group "sg1" that will use the network named "internal" and enters server-group SIP configuration mode:

```
se-10-0-0-0(cusp-config)> server-group sip group sg1 network internal
se-10-0-0-0(cusp-config-sg)>
```

Related Commands

Command	Description
commit	Enables configuration changes for selected Cisco Unified SIP Proxy commands to take effect.
element ip-address (SIP server group)	Creates an IP element for a SIP server group and determines its characteristics.
element reference	Creates a reference element for a SIP server group and determines its characteristics.
failover-resp-code	Configures a failover response code for a SIP server group.
lb-type	Configures the load balancing type for a single SIP server group.
ping (SIP server group)	Enables pinging for the server group.
server-group sip element-retries	Configures the number of retries for a SIP server group element.
server-group sip global-load-balance	Configures the load balance value for all SIP server groups.
server-group sip global-ping	Enables global pinging for all SIP server groups.
server-group sip ping-options	Configures the ping options for the SIP server group.
server-group sip retry-after	Configures the failover response timeout value for the SIP server group.
show status server-group sip	Displays the status of all SIP server groups or a single SIP server group.

element ip-address (SIP server group)

To create an IP element for a SIP server group and determine its characteristics, use the **element ip-address** command in SIP server group configuration mode. To remove the IP element from a SIP server group, use the **no** form of this command.

element ip-address *ipaddress port* {**udp** | **tcp** | **tls**} [**q-value** *q-value*] [**weight** *weight*]

no element ip-address *ipaddress port* {**udp** | **tcp** | **tls**} [**q-value** *q-value*] [**weight** *weight*]

Syntax Description

ipaddress	Specifies the interface host name or IP address of the server group element.
port	Specifies the port used by the server group element. Valid values are from 1024 to 65535. The default is 5060.
udp	Specifies UDP as the transport type of the server group element. This is the default value.
tcp	Specifies TCP as the transport type of the server group element.
tls	Specifies TLS as the transport type of the server group element.
q-value *q-value*	(Optional) Specifies a real number that specifies the priority of the server group element with respect to others in the server group. Valid values are from 0.0 to 1.0. The default q-value is 1.0.
weight *weight*	(Optional) Specifies the percentage assigned to the IP element in the server group if implementing weight-based routing. The valid range is from 0 to 100. The default weight is 0.

Command Default

The SIP server group is not configured.

Command Modes

SIP server group configuration (cusp-config-sg)

Command History

Cisco Unified SIP Proxy Version	Modification
1.0	This command was introduced.

Usage Guidelines

Note This command requires that you use the **commit** command for the configuration changes to take effect.

Examples

The following example creates an element to the server group with a q-value of 1.0 and a weight of 0 (the default value):

```
se-10-0-0-0(cusp-config)> server-group sip sg1
se-10-0-0-0(cusp-config-sg)> element ip-address 10.1.2.3 5060 udp
```

The following example creates an element to the server group using TCP with a q-value of 0.5 and a weight of 0:

```
se-10-0-0-0(cusp-config)> server-group sip sg1
se-10-0-0-0(cusp-config-sg)> element ip-address 10.1.2.3 5060 tcp q-value 0.5
```

The following example removes the element from the server group:

```
se-10-0-0-0(cusp-config)> server-group sip sg1
se-10-0-0-0(cusp-config-sg)> no element ip-address 10.1.2.3 5060 tcp
```

Related Commands

Command	Description
commit	Enables configuration changes for selected Cisco Unified SIP Proxy commands to take effect.
element reference	Creates a reference element for a SIP server group and determines its characteristics.
server-group sip group	Configures a SIP server group.

element reference

To create a reference element for a SIP server group and determine its characteristics, use the **element reference** command in SIP server group configuration mode. To remove the reference element from a SIP server group, use the **no** form of this command.

element reference *reference* [**q-value** *q-value*] [**weight** *weight*]

no element reference *reference*

Syntax Description

reference	Specifies the name of an existing server group.
q-value *q-value*	(Optional) A real number that specifies the priority of the server group element with respect to others in the server group. Valid values are from 0.0 to 1.0. The default q-value is 1.0.
weight *weight*	(Optional) The percentage assigned to the reference element if implementing weight-based routing. The valid range is from 0 to 100. The default weight is 0.

Command Default

The reference element is not configured.

Command Modes

SIP server group configuration (cusp-config-sg)

Command History

Cisco Unified SIP Proxy Version	Modification
1.0	This command was introduced.

Usage Guidelines

Note This command requires that you use the **commit** command for the configuration changes to take effect.

Examples

The following example adds the server group element to the group with a q-value of 1.0 and a weight of 0 (the default):

```
se-10-0-0-0(cusp-config)> server-group sip sg1
se-10-0-0-0(cusp-config-sg)> element reference sg2
```

The following example adds the server group element to the group with a q-value of 0.5 and a weight of 0:

```
se-10-0-0-0(cusp-config)> server-group sip sg1
se-10-0-0-0(cusp-config-sg)> element reference sg3 q-value 0.5
```

The following example removes the element from the server group:

```
se-10-0-0-0(cusp-config)> server-group sip sg1
se-10-0-0-0(cusp-config-sg)> no element reference sg2
```

Related Commands

Command	Description
commit	Enables configuration changes for selected Cisco Unified SIP Proxy commands to take effect.
element ip-address (SIP server group)	Creates an IP element for a SIP server group and determines its characteristics.
server-group sip group	Configures a SIP server group.

failover-resp-code

To configure a failover response code for a SIP server group, use the **failover-resp-code** command in SIP server group configuration mode. To remove the failover response code, use the **no** form of this command.

failover-resp-code *response-codes* [**-** *response-codes*] [**,** *response-codes*]

no failover-resp-code

Syntax Description

response-codes	The response code(s) that indicates the next-hop server is unable to process the request. The valid values are numbers between 500 and 599.

Command Default

There is no response code which will trigger failover.

Command Modes

SIP server group configuration (cusp-config-sg)

Command History

Cisco Unified SIP Proxy Version	Modification
1.0	This command was introduced.

Usage Guidelines

To configure multiple failover response codes, separate the individual codes by a comma and indicate ranges with a dash. Commas and dashes must be followed by a space.

Note This command requires that you use the **commit** command for the configuration changes to take effect.

Examples

The following example configures the failover response code so that any of the response codes 503, 505, 506, 507, 580 trigger failover to the next server group element:

```
se-10-0-0-0(cusp-config)> sip server-group sg1
se-10-0-0-0(cusp-config-sg)> failover-resp-code 503 , 505 - 507 , 580
```

The following example configures the failover response code so that only 500 and 503 responses trigger failover to the next server group element:

```
se-10-0-0-0(cusp-config)> sip server-group sg1
se-10-0-0-0(cusp-config-sg)> failover-resp-code 500, 503
```

The following example configures the failover response code so that no response codes trigger failover to the next server group element:

```
se-10-0-0-0(cusp-config)> sip server-group sg1
se-10-0-0-0(cusp-config-sg)> no failover-resp-code
```

Related Commands

Command	Description
commit	Enables configuration changes for selected Cisco Unified SIP Proxy commands to take effect.
element ip-address (SIP server group)	Creates an IP element for a SIP server group and determines its characteristics.
element reference	Creates a reference element for a SIP server group and determines its characteristics.
lb-type	Configures the load balancing type for a single SIP server group.
ping (SIP server group)	Enables pinging for the server group.
server-group sip group	Configures a SIP server group.

lb-type

To configure the load balancing algorithm for the SIP server group, use the **lb-type** command in SIP server group configuration mode. To remove the load balancing algorithm from the SIP server group and restore the default value, use the **no** form of this command.

lb-type {global | highest-q | request-uri | call-id | to-uri | weight }

no lb-type {global | highest-q | request-uri | call-id | to-uri | weight }

Syntax Description

global	Applies the load balancing type set for all SIP server groups using the **server-group sip global-load-balance** command. This is the default value.
highest-q	Specifies that the first element in the list of available elements with the same highest q-value is selected.
request-uri	Specifies that the load balancing algorithm is based on the Request-URI header of the outgoing request.
call-id	Specifies that the load balancing algorithm is based on the Call-ID of the outgoing request.
to-uri	Specifies that the load balancing algorithm is based on the To-URI header of the outgoing request.
weight	Specifies that the element will be selected proportional to its weight relative to the weights of other elements of the same q-value. This value is only applicable if implementing weight-based routing.

Command Default

The **global** keyword is the default.

Command Modes

SIP server group configuration (cusp-config-sg)

Command History

Cisco Unified SIP Proxy Version	Modification
1.0	This command was introduced.

Usage Guidelines

When multiple elements are assigned the same highest q-value, the first element must reach its maximum load capacity before the next element in the list is utilized. Because of this cascading load balancing behavior, we recommend that the highest-q algorithm only be used when all server group elements have different q-values.

This command applies a load balance type to a single SIP server group only. To apply a load balance type to all SIP server groups, use the **server-group sip global-load-balance** command.

Note This command requires that you use the **commit** command for the configuration changes to take effect.

Examples

The following example configures the load balancing type for a SIP server group to global:

```
se-10-0-0-0(cusp-config)> server-group sip sg1
se-10-0-0-0(cusp-config-sg)> lb-type global
```

The following example configures the load balancing algorithm for a SIP server group to request URI:

```
se-10-0-0-0(cusp-config)> server-group sip sg2
se-10-0-0-0(cusp-config-sg)> lb-type request-uri
```

The following example configures the load balancing type for a SIP server group to weight-based routing:

```
se-10-0-0-0(cusp-config)> server-group sip sg3
se-10-0-0-0(cusp-config-sg)> lb-type weight
```

The following example restores the load balancing type to the default value (global):

```
se-10-0-0-0(cusp-config)> server-group sip sg1
se-10-0-0-0(cusp-config-sg)> no lb-type weight
```

Related Commands

Command	Description
commit	Enables configuration changes for selected Cisco Unified SIP Proxy commands to take effect.
element ip-address (SIP server group)	Creates an IP element for a SIP server group and determines its characteristics.
element reference	Creates a reference element for a SIP server group and determines its characteristics.
failover-resp-code	Configures a failover response code for a SIP server group.
ping (SIP server group)	Enables pinging for the server group.
server-group sip group	Configures a SIP server group.
server-group sip global-load-balance	Configures the load balance value for all SIP server groups.

ping (SIP server group)

To enable pinging for the server group, use the **ping** command in SIP server group configuration mode. To disable pinging for the server group, use the **no** form of this command.

ping

no ping

Syntax Description

This command has no arguments or keywords.

Command Default

Pinging is enabled for the server group.

Command Modes

SIP server group configuration (cusp-config-sg)

Command History

Cisco Unified SIP Proxy Version	Modification
1.0	This command was introduced.

Usage Guidelines

Even when pinging is enabled for a specific server group, the pinging will not start until the **server-group sip global-ping command** is enabled.

Note This command requires that you use the **commit** command for the configuration changes to take effect.

Examples

The following example enables pinging on a server group:

```
se-10-0-0-0(cusp-config)> server-group sip sg1
se-10-0-0-0(cusp-config-sg)> ping
```

The following example disables pinging on a server group:

```
se-10-0-0-0(cusp-config)> server-group sip sg1
se-10-0-0-0(cusp-config-sg)> no ping
```

Related Commands

Command	Description
commit	Enables configuration changes for selected Cisco Unified SIP Proxy commands to take effect.
element ip-address (SIP server group)	Creates an IP element for a SIP server group and determines its characteristics.
failover-resp-code	Configures a failover response code for a SIP server group.
lb-type	Configures the load balancing type for a single SIP server group.
server-group sip group	Configures a SIP server group.

server-group sip retry-after

To configure the failover response timeout value for all SIP server groups, use the **server-group sip retry-after** command in Cisco Unified SIP Proxy configuration mode. To return the failover response timeout value for all SIP server groups to the default value, use the **no** form of this command.

server-group sip retry-after *retry-after-time*

no server-group sip retry-after

Syntax Description

retry-after-time	Specifies the number of milliseconds from the time a failover response is received to the time the overloaded server group element can be used again when the response does not contain a Retry-After header field. If the response contains a Retry-After header field, the header field value is used. The minimum value is 0. The default is 0.

Command Default

The default is 0, meaning that a retry takes place without a timeout.

Command Modes

Cisco Unified SIP Proxy configuration (cusp-config)

Command History

Cisco Unified SIP Proxy Version	Modification
1.0	This command was introduced.

Examples

The following example configures the retry timeout value for all SIP server groups to 6,000 milliseconds:

```
se-10-0-0-0(cusp-config)> server-group sip retry-after 6000
```

The following example returns the retry timeout value to 0 (the default):

```
se-10-0-0-0(cusp-config)> no server-group sip retry-after
```

Related Commands

Command	Description
server-group sip element-retries	Configures the number of retries for a SIP server group element.
server-group sip global-load-balance	Configures the load balance value for all SIP server groups.
server-group sip global-ping	Enables global pinging for all SIP server groups.
server-group sip ping-options	Configures the ping options for the SIP server group.

server-group sip ping-503

To enable the use of ping-503 option to check whether the SIP application service in the remote server element is running or not, use the **server-group sip ping-503** command in Cisco Unified SIP Proxy configuration mode. Cisco Unified SIP Proxy can identify the type of response from the remote server element and decrement the retry count if the response is 503. To restore the SIP ping 503 option to the default value, use the **no** form of this command.

server-group sip ping-503

no server-group sip ping-503

Syntax Description

This command has no arguments or keywords.

Command Default

Response 503 from any elements is treated as a successful response.

Command Modes

Cisco Unified SIP Proxy configuration (cusp-config)

Command History

Cisco Unified SIP Proxy Version	Modification
9.1.5	This command was introduced.

Usage Guidelines

Use this command to identify whether the sip element is down or not. If the **server-group sip ping-503** command is not configured, the 503 response is treated as successful response. If this command is configured, Cisco Unified SIP Proxy considers the 503 response as remote element down. Ping 503 mode must first exist before you can use the **no** command.

Examples

The following example enables the server group sip ping 503 command:

```
se-10-0-0-0(cusp-config)> server-group sip ping-503
```

Related Commands

Command	Description
server-group sip element-retries	Configures the number of retries for a SIP server group element.
server-group sip global-load-balance	Configures the load balance value for all SIP server groups.
server-group sip global-ping	Enables global pinging for all SIP server groups.
server-group sip ping-options	Configures the ping options for the SIP server group.
server-group sip retry-after	Configures the failover response timeout value for the SIP server group.

server-group sip ping-options

To configure the ping options for the SIP server group and enter SIP server group ping-options configuration mode, use the **server-group sip ping-options** command in Cisco Unified SIP Proxy configuration mode. To restore the ping options for the commands in the submode to the default values, use the **no** or **default** form of this command.

server-group sip ping-options *network ip-address port*

no server-group sip ping-options *network*

default server-group sip ping-options *network*

Syntax Description

network	Specifies the name of the network interface for this ping option.
ip-address	Specifies the interface host name or IP address that listens for responses to the SIP pings. **Note** When a hostname is specified, the server performs a DNS lookup to confirm that the host can be resolved. It then uses the IP address when the configuration is saved. If a hostname cannot be resolved, an "IP Address validation failed" error is displayed.
port	The UDP port that listens for responses to the SIP pings. The valid range is from 1024 to 65535. The default value is 4000. **Caution** Be sure this port number is different from the port number specified for the server's listener.

Command Default

The ping options are not configured for a SIP network.

Command Modes

Cisco Unified SIP Proxy configuration (cusp-config)

Command History

Cisco Unified SIP Proxy Version	Modification
1.0	This command was introduced.

Usage Guidelines

This command is only relevant for server group elements with a transport type of UDP. Ping options must first exist before you can use the **no** command.

Examples

The following example configures ping options for the SIP server group named "internal" with IP address 10.2.3.4:

```
se-10-0-0-0(cusp-config)> server-group sip ping-options internal 10.2.3.4 4000
```

The following example sets all the ping options for the SIP server group named “internal” to the default values:

```
se-10-0-0-0(cusp-config)> no server-group sip ping-options internal
```

Related Commands

Command	Description
server-group sip element-retries	Configures the number of retries for a SIP server group element.
server-group sip global-load-balance	Configures the load balance value for all SIP server groups.
server-group sip global-ping	Enables global pinging for all SIP server groups.
server-group sip retry-after	Configures the failover response timeout value for the SIP server group.

method (SIP server group ping-options)

To configure the request method for the SIP server group pings, use the **method** command in SIP server group ping-options configuration mode. To remove the request method for the SIP server group pings, use the **no** or **default** form of this command.

method *ping-request-method*

no method

default method

Syntax Description

ping-request-method-name	The request method for the SIP pings. The default value is OPTIONS.

Command Default

The default ping request method name is OPTIONS.

Command Modes

SIP server group ping-options configuration (cusp-config-ping)

Command History

Cisco Unified SIP Proxy Version	Modification
1.0	This command was introduced.

Usage Guidelines

This command only applies the ping option method for a single SIP server group. To apply global ping options for all SIP server groups, use the **server-group sip global-ping-options** command.

Examples

The following example configures the SIP server group ping option method to OPTIONS (the default):

```
se-10-0-0-0(cusp-config)> server-group sip ping-options internal 10.2.3.4
se-10-0-0-0(cusp-config-ping)> method OPTIONS
```

The following example configures the SIP server group ping option method to PING:

```
se-10-0-0-0(cusp-config)> server-group sip ping-options internal 10.2.3.4
se-10-0-0-0(cusp-config-ping)> method PING
```

The following example restores the SIP server group ping option method to the default value:

```
se-10-0-0-0(cusp-config)> server-group sip ping-options internal 10.2.3.4
se-10-0-0-0(cusp-config-ping)> no method
```

Related Commands

Command	Description
ping-type	Configures the ping type and interval for a SIP server group.
server-group sip ping-options	Configures the ping options for the SIP server group.
timeout	Configures the ping timeout interval for a SIP server group.

ping-type

To configure the ping type and interval for a SIP server group, use the **ping-type** command in SIP server group ping-options configuration mode. To restore the default values, use the **no** or **default** forms of this command.

ping-type {**proactive** | **reactive** | **adaptive**} *interval_1 interval_2*

no ping-type

default ping-type

Syntax Description

proactive	Specifies that pinging is performed to both up and down elements, and both are pinged at the same interval.
reactive	Specifies that pinging is performed to only down elements. This is the default value.
adaptive	Specifies that pinging is performed to both up and down elements, and both are pinged at different intervals.
interval_1	Specifies the consecutive ping interval in milliseconds. For adaptive pinging, this value configures the down element ping interval. The default value is 1,000 milliseconds.
interval_2	(Required for adaptive pinging only) Specifies the consecutive ping interval for up elements.

Command Default

Reactive pinging is performed at intervals of 5,000 milliseconds.

Command Modes

SIP server group ping-options configuration (cusp-config-ping)

Command History

Cisco Unified SIP Proxy Version	Modification
1.0	This command was introduced.

Usage Guidelines

To prevent pings from being sent out in bursts, elements are not pinged simultaneously; they are pinged at a specified interval. For example, suppose the ping interval is set to 50 milliseconds and there are three elements configured for a server group. A ping is sent to the first element. After 50 milliseconds, a ping is sent to the second element. Finally, after an additional 50 milliseconds, a ping is sent to the third element.

Examples

The following example configures reactive pinging for the server group with a ping interval of 1,000 milliseconds:

```
se-10-0-0-0(cusp-config)> server-group sip ping-options internal 10.2.3.4
se-10-0-0-0(cusp-config-ping)> ping-type reactive 1000
```

The following example configures proactive pinging for the server group with a ping interval of 2,000 milliseconds:

```
se-10-0-0-0(cusp-config)> server-group sip ping-options internal 10.2.3.4
se-10-0-0-0(cusp-config-ping)> ping-type proactive 2000
```

The following example configures adaptive pinging for the server group with a ping interval of 2,000 milliseconds for down elements and 1,000 milliseconds for up elements:

```
se-10-0-0-0(cusp-config)> server-group sip ping-options internal 10.2.3.4
se-10-0-0-0(cusp-config-ping)> ping-type adaptive 1000 2000
```

The following example restores the default ping type values to the server group (reactive with an interval of 5,000 milliseconds:

```
se-10-0-0-0(cusp-config)> server-group sip ping-options internal 10.2.3.4
se-10-0-0-0(cusp-config-ping)> no ping-type
```

Related Commands

Command	Description
element ip-address (SIP server group)	Creates an IP element for a SIP server group and determines its characteristics.
failover-resp-code	Configures a failover response code for a SIP server group.
lb-type	Configures the load balancing type for a single SIP server group.
ping (SIP server group)	Enables pinging for the server group.
server-group sip group	Configures a SIP server group.

timeout

To configure the ping timeout interval for a SIP server group, use the **timeout** command in Cisco Unified SIP Proxy SIP server group ping-options configuration mode. To remove the ping timeout interval from the SIP server group and return to the default value, use the **no** or **default** form of this command.

timeout *ping-timeout*

no timeout

default timeout

Syntax Description

ping-timeout	Specifies the maximum number of milliseconds between a ping and a response before the ping is considered unsuccessful. The minimum allowed value is 0. The default value is 500.

Command Default

500 milliseconds

Command Modes

Cisco Unified SIP Proxy SIP server group ping-options configuration (cusp-config-ping)

Command History

Cisco Unified SIP Proxy Version	Modification
1.0	This command was introduced.

Examples

The following example configures the ping timeout interval for a SIP server group to 500 milliseconds:

```
se-10-0-0-0(cusp-config)> server-group sip ping-options internal 10.2.3.4
se-10-0-0-0(cusp-config-ping)> timeout 500
```

The following example configures the ping timeout interval for a SIP server group to 1000 milliseconds:

```
se-10-0-0-0(cusp-config)> server-group sip ping-options internal 10.2.3.4
se-10-0-0-0(cusp-config-ping)> timeout 1000
```

The following example restores the ping timeout interval for a SIP server to the default value:

```
se-10-0-0-0(cusp-config)> server-group sip ping-options internal 10.2.3.4
se-10-0-0-0(cusp-config-ping)> no timeout
```

Related Commands

Command	Description
method (SIP server group ping-options)	Configures the request method for the SIP server group pings.
ping-type	Configures the ping type and interval for a SIP server group.
server-group sip ping-options	Configures the ping options for the SIP server group.

show status server-group sip

To display the status of all SIP server groups or a single SIP server group, use the **show status server-group sip** command in Cisco Unified SIP Proxy EXEC mode.

show status server-group sip [*server-group-name*]

Syntax Description

server-group-name	(Optional) Displays the status of a single SIP server group.

Command Modes

Cisco Unified SIP Proxy EXEC (cusp)

Command History

Cisco Unified SIP Proxy Version	Modification
1.0	This command was introduced.

Examples

The following example shows sample output from the **show status server-group sip** command:

```
se-192-168-20-42(cusp)> show status server-group sip
Server-group: sg2.cisco.com
Address                 Transport  Q-Value  Weight  Status
192.168.20.6:5061       udp        0.7      0       up
192.168.20.6:5062       udp        0.5      0       up

Server-group: sg1.cisco.com
Address                 Transport  Q-Value  Weight  Status
192.1.1.47:5060         udp        0.5      0       up
192.168.20.6:31000      udp        1.0      0       up

se-192-168-20-42(cusp)>
```

Table 1 describes the significant fields shown in the display.

Table 1 show status server-group sip Field Descriptions

Field	Description
Servergroup	Displays the name of the SIP server group.
Q-Value	Displays a real number that specifies the priority of the server group element with respect to others in the server group.
Weight	Displays the percentage assigned to the request-URI or route-URI element in the route group if implementing weight-based routing.
Status	Displays the operational status of the SIP server group.

Related Commands

Command	Description
show status serverg-roup radius	Displays the status of all RADIUS server groups or a single RADIUS server group.