



# Cisco Unified SIP Proxy SIP Server Commands

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- [server-group sip element-retries](#)
- [server-group sip global-load-balance](#)
- [server-group sip global-ping](#)
- [server-group sip group](#)
  - [element ip-address \(SIP server group \)](#)
  - [element reference](#)
  - [failover-resp-code](#)
  - [lb-type](#)
  - [ping \(SIP server group\)](#)
- [server-group sip retry-after](#)
- [server-group sip ping-options](#)
  - [method \(SIP server group ping-options\)](#)
  - [ping-type](#)
  - [timeout](#)
- [show status server-group sip](#)

# 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	<b>tcp</b>	Specifies TCP as the transport protocol of the listener.
	<b>tls</b>	Specifies TLS as the transport protocol of the listener.
	<b>udp</b>	Specifies UDP as the transport protocol of the listener. This is the default value.
	<i>number-of-retries</i>	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 <b>failover-response</b> 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	<b>Cisco Unified SIP Proxy Version</b>	<b>Modification</b>
	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
	<b>server-group sip global-load-balance</b>	Configures the load balance value for all SIP server groups.
	<b>server-group sip global-ping</b>	Enables global ping for all SIP server groups.
	<b>server-group sip ping-options</b>	Configures the ping options for the SIP server group.
	<b>server-group sip retry-after</b>	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.



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 pingging 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
	<b>server-group sip element-retries</b>	Configures the number of retries for a SIP server group element.
	<b>server-group sip global-load-balance</b>	Configures the load balance value for all SIP server groups.
	<b>server-group sip ping-options</b>	Configures the ping options for the SIP server group.
	<b>server-group sip retry-after</b>	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	<i>server-group-name</i>	Specifies the SIP server group name.
	<b>Note</b>	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.
	<i>network</i>	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
	<b>commit</b>	Enables configuration changes for selected Cisco Unified SIP Proxy commands to take effect.
	<b>element ip-address (SIP server group)</b>	Creates an IP element for a SIP server group and determines its characteristics.
	<b>element reference</b>	Creates a reference element for a SIP server group and determines its characteristics.
	<b>failover-resp-code</b>	Configures a failover response code for a SIP server group.
	<b>lb-type</b>	Configures the load balancing type for a single SIP server group.
	<b>ping (SIP server group)</b>	Enables ping for the server group.
	<b>server-group sip element-retries</b>	Configures the number of retries for a SIP server group element.
	<b>server-group sip global-load-balance</b>	Configures the load balance value for all SIP server groups.
	<b>server-group sip global-ping</b>	Enables global ping for all SIP server groups.
	<b>server-group sip ping-options</b>	Configures the ping options for the SIP server group.
	<b>server-group sip retry-after</b>	Configures the failover response timeout value for the SIP server group.
	<b>show status server-group sip</b>	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*]

<b>Syntax Description</b>	<i>ipaddress</i>	Specifies the interface host name or IP address of the server group element.
	<i>port</i>	Specifies the port used by the server group element. Valid values are from 1024 to 65535. The default is 5060.
	<b>udp</b>	Specifies UDP as the transport type of the server group element. This is the default value.
	<b>tcp</b>	Specifies TCP as the transport type of the server group element.
	<b>tls</b>	Specifies TLS as the transport type of the server group element.
	<b>q-value</b> <i>q-value</i>	(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.
	<b>weight</b> <i>weight</i>	(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)

<b>Command History</b>	<b>Cisco Unified SIP Proxy Version</b>	<b>Modification</b>
	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 sgl
se-10-0-0-0(cusp-config-sg)> element ip-address 10.1.2.3 5060 udp
```

■ **element ip-address (SIP server group)**

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
	<b>commit</b>	Enables configuration changes for selected Cisco Unified SIP Proxy commands to take effect.
	<b>element reference</b>	Creates a reference element for a SIP server group and determines its characteristics.
	<b>server-group sip group</b>	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	<i>reference</i>	Specifies the name of an existing server group.
	<b>q-value</b> <i>q-value</i>	(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.
	<b>weight</b> <i>weight</i>	(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
	<b>commit</b>	Enables configuration changes for selected Cisco Unified SIP Proxy commands to take effect.
	<b>element ip-address (SIP server group)</b>	Creates an IP element for a SIP server group and determines its characteristics.
	<b>server-group sip group</b>	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	<i>response-codes</i>	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.
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Command Default	There is no response code which will trigger failover.
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Command Modes	SIP server group configuration (cusp-config-sg)
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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.
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Note	This command requires that you use the <b>commit</b> command for the configuration changes to take effect.

Examples	<p>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:</p> <pre>se-10-0-0-0(cusp-config)&gt; sip server-group sgl se-10-0-0-0(cusp-config-sg)&gt; failover-resp-code 503 , 505 - 507 , 580</pre> <p>The following example configures the failover response code so that only 500 and 503 responses trigger failover to the next server group element:</p> <pre>se-10-0-0-0(cusp-config)&gt; sip server-group sgl se-10-0-0-0(cusp-config-sg)&gt; failover-resp-code 500, 503</pre> <p>The following example configures the failover response code so that no response codes trigger failover to the next server group element:</p> <pre>se-10-0-0-0(cusp-config)&gt; sip server-group sgl se-10-0-0-0(cusp-config-sg)&gt; no failover-resp-code</pre>
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Related Commands	Command	Description
	<b>commit</b>	Enables configuration changes for selected Cisco Unified SIP Proxy commands to take effect.
	<b>element ip-address (SIP server group)</b>	Creates an IP element for a SIP server group and determines its characteristics.
	<b>element reference</b>	Creates a reference element for a SIP server group and determines its characteristics.
	<b>lb-type</b>	Configures the load balancing type for a single SIP server group.
	<b>ping (SIP server group)</b>	Enables pinging for the server group.
	<b>server-group sip group</b>	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	<b>global</b>	Applies the load balancing type set for all SIP server groups using the <b>server-group sip global-load-balance</b> command. This is the default value.
	<b>highest-q</b>	Specifies that the first element in the list of available elements with the same highest q-value is selected.
	<b>request-uri</b>	Specifies that the load balancing algorithm is based on the Request-URI header of the outgoing request.
	<b>call-id</b>	Specifies that the load balancing algorithm is based on the Call-ID of the outgoing request.
	<b>to-uri</b>	Specifies that the load balancing algorithm is based on the To-URI header of the outgoing request.
	<b>weight</b>	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
<b>commit</b>	Enables configuration changes for selected Cisco Unified SIP Proxy commands to take effect.
<b>element ip-address (SIP server group)</b>	Creates an IP element for a SIP server group and determines its characteristics.
<b>element reference</b>	Creates a reference element for a SIP server group and determines its characteristics.
<b>failover-resp-code</b>	Configures a failover response code for a SIP server group.
<b>ping (SIP server group)</b>	Enables ping for the server group.
<b>server-group sip group</b>	Configures a SIP server group.
<b>server-group sip global-load-balance</b>	Configures the load balance value for all SIP server groups.



## ping (SIP server group)

To enable ping for the server group, use the **ping** command in SIP server group configuration mode. To disable ping 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** Ping 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 ping is enabled for a specific server group, the ping 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 ping on a server group:

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

The following example disables ping on a server group:

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

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

<b>Syntax Description</b>	<i>retry-after-time</i>	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.
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<b>Command Default</b>	The default is 0, meaning that a retry takes place without a timeout.
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<b>Command Modes</b>	Cisco Unified SIP Proxy configuration (cusp-config)
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<b>Command History</b>	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
```

<b>Related Commands</b>	Command	Description
	<b>server-group sip element-retries</b>	Configures the number of retries for a SIP server group element.
	<b>server-group sip global-load-balance</b>	Configures the load balance value for all SIP server groups.
	<b>server-group sip global-ping</b>	Enables global ping for all SIP server groups.
	<b>server-group sip ping-options</b>	Configures the ping options 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	<i>network</i>	Specifies the name of the network interface for this ping option.
	<i>ip-address</i>	Specifies the interface host name or IP address that listens for responses to the SIP pings.
		<div>Note</div> 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.
	<i>port</i>	The UDP port that listens for responses to the SIP pings. The valid range is from from 1024 to 65535. The default value is 4000.
		<div>Caution</div> <div>Be sure this port number is different from the port number specified for the server’s listener.</div>

**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
<b>server-group sip element-retries</b>	Configures the number of retries for a SIP server group element.
<b>server-group sip global-load-balance</b>	Configures the load balance value for all SIP server groups.
<b>server-group sip global-ping</b>	Enables global pinging for all SIP server groups.
<b>server-group sip retry-after</b>	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**

<b>Syntax Description</b>	<i>ping-request-method-name</i>	The request method for the SIP pings. The default value is OPTIONS.
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<b>Command Default</b>	The default ping request method name is OPTIONS.
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<b>Command Modes</b>	SIP server group ping-options configuration (cusp-config-ping)
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<b>Command History</b>	Cisco Unified SIP Proxy Version	Modification
	1.0	This command was introduced.

<b>Usage Guidelines</b>	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 <b>server-group sip global-ping-options</b> command.
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<b>Examples</b>	<p>The following example configures the SIP server group ping option method to OPTIONS (the default):</p> <pre>se-10-0-0-0(cusp-config)&gt; <b>server-group sip ping-options internal 10.2.3.4</b> se-10-0-0-0(cusp-config-ping)&gt; <b>method OPTIONS</b></pre>
-----------------	--

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
```

<b>Related Commands</b>	Command	Description
	<b>ping-type</b>	Configures the ping type and interval for a SIP server group.
	<b>server-group sip ping-options</b>	Configures the ping options for the SIP server group.
	<b>timeout</b>	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**

<b>Syntax Description</b>	<b>proactive</b>	Specifies that pinging is performed to both up and down elements, and both are pinged at the same interval.
	<b>reactive</b>	Specifies that pinging is performed to only down elements. This is the default value.
	<b>adaptive</b>	Specifies that pinging is performed to both up and down elements, and both are pinged at different intervals.
	<i>interval_1</i>	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.
	<i>interval_2</i>	(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)

<b>Command History</b>	<b>Cisco Unified SIP Proxy Version</b>	<b>Modification</b>
	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 ping 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 ping 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
<b>element ip-address (SIP server group)</b>	Creates an IP element for a SIP server group and determines its characteristics.
<b>failover-resp-code</b>	Configures a failover response code for a SIP server group.
<b>lb-type</b>	Configures the load balancing type for a single SIP server group.
<b>ping (SIP server group)</b>	Enables ping for the server group.
<b>server-group sip group</b>	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

<b>Syntax Description</b>	<i>ping-timeout</i>	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.
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<b>Command Default</b>	500 milliseconds
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<b>Command Modes</b>	Cisco Unified SIP Proxy SIP server group ping-options configuration (cusp-config-ping)
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<b>Command History</b>	<b>Cisco Unified SIP Proxy Version</b>	<b>Modification</b>
	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
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>method (SIP server group ping-options)</b>	Configures the request method for the SIP server group pings.
	<b>ping-type</b>	Configures the ping type and interval for a SIP server group.
	<b>server-group sip ping-options</b>	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*]

<b>Syntax Description</b>	<i>server-group-name</i> (Optional) Displays the status of a single SIP server group.
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<b>Command Modes</b>	Cisco Unified SIP Proxy EXEC (cusp)
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<b>Command History</b>	<b>Cisco Unified SIP Proxy Version</b>	<b>Modification</b>
	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 7-1](#) describes the significant fields shown in the display.

**Table 7-1** *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.

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show status serverg-roup radius</b>	Displays the status of all RADIUS server groups or a single RADIUS server group.

■ show status server-group sip

■ show status server-group sip

■ `show status server-group sip`

■ show status server-group sip

■ show status server-group sip