



Configuring Server Groups

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Viewing a List of Server Groups

Server groups define the elements with which the Cisco Unified SIP Proxy system interacts for each network.

Procedure

- Step 1** Choose **Configure > Server Groups > Groups**.
- The system displays the Server Groups page with the Groups tab highlighted, containing the fields described in [Server Groups \(Group Tab\) Fields, on page 2](#).
- Step 2** To delete a server group, do the following:
- a) Check the check box next to the server group to delete.
 - b) Click **Remove**.
 - c) In the Cisco Unified SIP Proxy header, click **Commit Candidate Configuration** to commit this change.
- Step 3** To revert any changes you have made back to the state they were in at the time of the last commit, do the following:
- a) Check the check box next to the name of the server group that has the changes to which you want to revert.
 - b) Click **Revert**.

c) In the Cisco Unified SIP Proxy header, click **Commit Candidate Configuration** to commit this change.

Related Topics

[Managing the System Configuration](#)

[Server Groups \(Group Tab\) Fields](#), on page 2

Server Groups (Group Tab) Fields

Table 1: Server Groups (Groups Tab) Fields

Parameter	Description
State	<p>Can be one of the following:</p> <ul style="list-style-type: none"> • New—New record. Will be added to the active configuration when it is committed. • Modified—Modified record. Will become the active configuration when it is committed. • Deleted—Deleted record. Will be removed from the active configuration when it is committed. • Active—Active record and active configuration.
Name	<p>Name of this server group.</p> <p>Note The system inserts the server group name into the SIP URI of the outgoing request. Some devices, such as Cisco Unified Communications Manager, validate the URI of requests before processing, so you may need to configure the end device with a Fully Qualified Domain Name (FQDN) to allow for this functionality.</p>

Parameter	Description
Load Balancing Scheme	<p>Configures the load-balancing algorithm for all SIP server groups.</p> <p>Can be one of the following:</p> <ul style="list-style-type: none"> • global (default) • call-id—Specifies that a hash algorithm with call-id is performed to select an element. • 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. • highest-q—Specifies that the first element in the list of available elements with the same highest q-value is selected.
Network	Name of the network associated with this server group.
Elements	Elements associated with this server group.
Pinging Allowed	Whether pinging is allowed. Can be either true or false.
Failover Response Codes	<p>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.</p> <p>To add 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.</p>

Adding a Server Group

Before you begin

You must create and configure at least one network before you can add a server group. See [Configuring Networks](#).

Procedure

- Step 1** Choose **Configure > Server Groups > Groups**.
The system displays the Server Groups page with the Groups tab highlighted.
- Step 2** Click **Add**.
The system displays the Server Group (New) page.
- Step 3** Enter information. See [Server Groups \(Group Tab\) Fields, on page 2](#).
- Step 4** Click **Add**.
- Step 5** In the Cisco Unified SIP Proxy header, click **Commit Candidate Configuration** to commit this change.
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Related Topics

- [Managing the System Configuration](#)
- [Configuring Server Groups, on page 1](#)
- [Server Groups \(Group Tab\) Fields, on page 2](#)

Editing a Server Group

Procedure

- Step 1** Choose **Configure > Server Groups > Groups**.
The system displays the Server Groups page with the Groups tab highlighted.
- Step 2** Click the underlined name of the server group to edit.
The system displays the Server Group ‘<name of server group>’ page with the Group Settings tab highlighted.
- Step 3** Edit the information. See [Server Groups \(Group Tab\) Fields, on page 2](#).
- Step 4** Click **Update**.
- Step 5** In the Cisco Unified SIP Proxy header, click **Commit Candidate Configuration** to commit this change.
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Related Topics

- [Managing the System Configuration](#)
- [Server Groups \(Group Tab\) Fields, on page 2](#)

Viewing and Editing the General Settings for All Server Groups

Follow this procedure to view and edit the general settings that affect all server groups.

Procedure

- Step 1** Choose **Configure > Server Groups > General Settings**.
- The system displays the Server Groups page with the General Settings tab highlighted, containing the fields described in [Server Groups \(General Settings Tab\) Fields, on page 5](#).
- Step 2** To edit the settings, change the values.
- Step 3** Click **Update**.
- Step 4** In the Cisco Unified SIP Proxy header, click **Commit Candidate Configuration** to commit this change.

Related Topics

- [Managing the System Configuration](#)
- [Server Groups \(General Settings Tab\) Fields, on page 5](#)

Server Groups (General Settings Tab) Fields

Table 2: Server Groups (General Settings Tab) Fields

Parameter	Description
Server Group Element Retries	
UDP	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. The valid range is from 0 to 65535.
TCP	
TLS	
Global Load Balancing Scheme	

Parameter	Description
Load Balancing Scheme	<p>Configures the load-balancing algorithm for all SIP server groups.</p> <p>Can be one of the following:</p> <ul style="list-style-type: none"> • call-id (default)—Specifies that a hash algorithm with call-id is performed to select an element. • 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. • highest-q—Specifies that the first element in the list of available elements with the same highest q-value is selected.
Global Ping	
Pinging Allowed	Whether pinging is allowed. Can be either enable or disable.
Ping 503	
Verifies the 503 response code	Checks whether the SIP application service in the remote server element is up or down by monitoring the response. It treats the element as down for the 503 response to the PING request.
Default Failed Element Retry After Duration (in milliseconds)	
Failover Response Codes	<p>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.</p> <p>To add 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.</p>

Viewing and Deleting Server Group Elements

There can be multiple elements in each server group.

Procedure

- Step 1** Choose **Configure > Server Groups > Groups**.
- The system displays the Server Groups page with the Groups tab highlighted.
- Step 2** To see the elements associated with this server group, click **click here** under the Elements header.
- The system displays the Server Group '<name of server group>' page with the Elements tab highlighted. The page contains the fields described in [Server Group \(Elements Tab\) Fields, on page 7](#).
- Step 3** To delete a server group element, do the following:
- Check the check box next to the name of the element.
 - Click **Remove**.
 - In the Cisco Unified SIP Proxy header, click **Commit Candidate Configuration** to commit this change.
- Step 4** To revert any changes you have made back to the state they were in at the time of the last commit, do the following:
- Check the check box next to the name of the server group element that has the changes to which you want to revert.
 - Click **Revert**.
 - In the Cisco Unified SIP Proxy header, click **Commit Candidate Configuration** to commit this change.

Related Topics

- [Managing the System Configuration](#)
- [Server Group \(Elements Tab\) Fields, on page 7](#)

Server Group (Elements Tab) Fields

Table 3. Server Group (Elements Tab) Fields

Parameter	Description
State	<p>Can be one of the following:</p> <ul style="list-style-type: none"> • New—New record. Will be added to the active configuration when it is committed. • Modified—Modified record. Will become the active configuration when it is committed. • Deleted—Deleted record. Will be removed from the active configuration when it is committed. • Active—Active record and active configuration.
IP Address	Specifies the interface host name or IP address of the server group element.

Parameter	Description
Port	Specifies the port used by the server group element. Valid values are from 1024 to 65535. The default is 5060.
Transport	Specifies the transport type of the server group element. Can be one of the following: <ul style="list-style-type: none"> • UDP (default) • TCP • TLS
Nested Server Group	Whether or not this server group can contain another server group.
Q-Value	Specifies a real number that indicates the priority of the server group element with respect to others in the server group. The Q-value provides the priority of each member (element) which varies from 0.0 to 1.0, where 1.0 is the highest priority.
Weight	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.

Adding and Editing a Server Group Element

Procedure

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- Step 1** Choose **Configure > Server Groups > Groups**.
- The system displays the Server Groups page with the Groups tab highlighted.
- Step 2** Click **click here** under the Elements header that corresponds with the server group to which you want to add an element.
- The system displays the Server Group ‘<name of server group>’ page with the Elements tab highlighted.
- Step 3** To add an element, do the following:
- Click **Add**. The system displays the Server Group ‘<name of server group>’ Element (New) page.
 - Choose whether this element will be for an endpoint or server group.
 - Enter information about the element as described in [Server Group \(Elements Tab\) Fields, on page 7](#).
 - Click **Add**.

- Step 4** To edit an element, do the following:
- Click the underlined IP address for the element to edit. The system displays the Server Group '<name of server group>' Element page.
 - Make changes to the values.
 - Click **Update**.
- Step 5** In the Cisco Unified SIP Proxy header, click **Commit Candidate Configuration** to commit this change.

Related Topics

[Managing the System Configuration Server Group \(Elements Tab\) Fields](#), on page 7

Viewing a List of SIP Ping Network Connections

Before you begin

You must have already created at least one network. See [Configuring Networks](#).

Procedure

- Step 1** Choose **Configure > Server Groups > SIP Ping**.
- The system displays the SIP Ping page with the SIP Ping tab highlighted, containing the fields described in [SIP Ping Fields, on page 9](#).
- Step 2** To delete a SIP ping network connection, do the following:
- Check the check box next to the SIP ping network connection to delete.
 - Click **Remove**.
 - In the Cisco Unified SIP Proxy header, click **Commit Candidate Configuration** to commit this change.

Related Topics

[Managing the System Configuration Configuring Server Groups](#), on page 1
[SIP Ping Fields](#), on page 9

SIP Ping Fields

Table 4: SIP Ping Fields

Parameter	Description
Network	Name of this SIP ping network connection.

Parameter	Description
IP Address	<p>Specifies the interface host name or IP address that listens for responses to the SIP pings.</p> <p>Note When you specify a hostname, 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 the system cannot resolve the hostname, it displays an “IP Address validation failed” error.</p>
Port	<p>The UDP port that listens for responses to the SIP pings. The valid range is from 1024 to 65535. The default value is 4000.</p> <p>Note Be sure this port number is different from the port number specified for the server’s SIP listen point.</p>
SIP Method	<p>The request method for the SIP pings. Can be one of the following:</p> <ul style="list-style-type: none"> • OPTIONS (default) • PING • INFO
Ping Type	<p>The ping type for the SIP ping. Can be one of the following:</p> <ul style="list-style-type: none"> • 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.
Up Interval	<p>(Optional; only available if you choose Adaptive or Proactive for Ping Type) Specifies the consecutive ping interval for up elements. The default value is 5000 milliseconds.</p>
Down Interval	<p>(Optional; only available if you choose Adaptive or Reactive for Ping Type) Specifies the consecutive ping interval in milliseconds. For Adaptive pinging, this value configures the down element ping interval. The default value is 5000 milliseconds.</p>

Parameter	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.

Adding a SIP Ping Configuration



Restriction

- You can only define one SIP ping configuration for each network. To create multiple SIP ping configurations, you must create and configure multiple networks.
- You can only add a SIP ping for server group elements with a transport type of UDP.

Before you begin

You must create and configure at least one network before you can add a SIP ping configuration. See [Configuring Networks](#).

Procedure

- Step 1** Choose **Configure > Server Groups > SIP Ping**.
The system displays the SIP Ping page with the SIP Ping tab highlighted.
- Step 2** Click **Add**.
The system displays the SIP Ping Configuration (New) page.
- Step 3** Enter information. See [SIP Ping Fields, on page 9](#).
- Step 4** Click **Add**.
- Step 5** In the Cisco Unified SIP Proxy header, click **Commit Candidate Configuration** to commit this change.

Related Topics

- [Managing the System Configuration](#)
- [SIP Ping Fields, on page 9](#)
- [Configuring Server Groups, on page 1](#)

Editing a SIP Ping Configuration

Procedure

- Step 1** Choose **Configure > Server Groups > SIP Ping**.
The system displays the SIP Ping page with the SIP Ping tab highlighted.
- Step 2** Check the check box next to the SIP ping network configuration to edit.
- Step 3** Click **Edit**.
The system displays the SIP Ping Configuration '<name of network>' page.
- Step 4** Edit information. See [SIP Ping Fields, on page 9](#).
- Step 5** Click **Update**.
- Step 6** In the Cisco Unified SIP Proxy header, click **Commit Candidate Configuration** to commit this change.
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Related Topics

- [Managing the System Configuration](#)
- [SIP Ping Fields, on page 9](#)

Viewing a List of Call Admission Control Endpoints

The system automatically adds call admission control endpoints when you add a server group and elements and then commit the configuration.

Procedure

Choose **Configure > Server Groups > Call Admission Control**.

The system displays the Server Groups page with the Call Admission Control tab highlighted.

For each call admission control endpoint, the system lists the IP address, port, transport, network and call admission control limit.

Related Topics

- [Managing the System Configuration](#)

Changing the Limit of a Call Admission Control Endpoint

Procedure

- Step 1** Choose **Configure > Server Groups > Call Admission Control**.
The system displays the Server Groups page with the Call Admission Control tab highlighted.
- Step 2** Click the underlined limit to change.
The system displays the CAC Endpoint page.
- Step 3** Check the **unlimited** check box to make the limit unlimited, or enter a value in the field.
- Step 4** Click **Update**.
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Related Topics

[Configuring Call Admission Control](#)

