IP Phone Presence Setup

Static Route Configuration on IM and Presence Service

If you configure a static route for SIP proxy server traffic, consider the following:

- A dynamic route represents a path through the network that is automatically calculated according to routing protocols and routing update messages.

- A static route represents a fixed path that you explicitly configure through the network.

- Static routes take precedence over dynamic routes.

Route Embed Templates

You must define a route embed template for any static route pattern that contains embedded wildcards. The route embed template contains information about the leading digits, the digit length, and location of the embedded wildcards. Before you define a route embed template, consider the sample templates we provide below.

When you define a route embed template, the characters that follow the "." must match actual telephony digits in the static route. In the sample route embed templates below, we represent these characters with "x".

Sample Route Embed Template A

Route embed template: **74..78xxxxx***

With this template, IM and Presence Service will enable this set of static routes with embedded wildcards:

Table 1: Static Routes Set with Embedded Wildcards - Template A

Destination Pattern	Next Hop Destination
74..7812345*	1.2.3.4:5060

Destination Pattern	Next Hop Destination
74..7867890*	5.6.7.8.9:5060
74..7811993*	10.10.11.37:5060

With this template, IM and Presence Service will not enable these static route entries:

- 73..7812345* (The initial string is not '74' as the template defines)

- 74..781* (The destination pattern digit length does not match the template)

- 74…7812345* (The number of wildcards does not match the template)

Sample Route Embed Template B

Route embed template: **471….xx***

With this template, IM and Presence Service will enable this set of static routes with embedded wildcards:

Table 2: Static Routes Set with Embedded Wildcards - Template B

Destination Pattern	Next Hop Destination
471….34*	20.20.21.22
471…55*	21.21.55.79

With this template, IM and Presence Service will not enable these static route entries:

- 47…344* (The initial string is not '471' as the template defines)

- 471…4* (The string length does not match template)

- 471.450* (The number of wildcards does not match template)

Configure Route Embed Templates on IM and Presence Service

You can define up to five route embed templates. However, there is no limit to the number of static routes that you can define for any route embed template.

A static route that contains an embedded wildcard must match at least one of the route embed templates.

Procedure

Step 1   Choose **Cisco Unified CM IM and Presence Administration** > **System** > **Service Parameters**.

Step 2   Choose an IM and Presence Service node.

Step 3   Choose the Cisco SIP Proxy service.

Step 4   Define a route embed templates in the RouteEmbedTemplate field in the Routing Parameters (Clusterwide) section. You can define up to five route embed templates.

Step 5   Choose **Save**.

What to do next

Proceed to configure static routes on IM and Presence Service.

Configure Static Routes on IM and Presence Service

The following table lists the static route parameter settings that you can configure for IM and Presence Service.

Table 3: Static Route Parameters Settings for IM and Presence Service

Field	Description
Destination Pattern	This field specifies the pattern of the incoming number, up to a maximum of 255 characters.
	The SIP proxy allows only 100 static routes to have an identical route pattern. If you exceed this limit, IM and Presence Service logs an error.
	Wildcard Usage
	You can use "." as a wildcard for a single character and "*" as a wildcard for multiple characters.
	IM and Presence Service supports embedded '.' wildcard characters in static routes. However, you must define route embed templates for static routes that contain embedded wildcards. Any static route that contains an embedded wildcard must match at least one route embed template. See the route embed template topic (referenced in the Related Topics section below) for information about defining route embed templates.
	For phones:
	• A dot can exist at the end of the pattern, or embedded in a pattern. If you embed the dot in a pattern, you must create a route embed template to match the pattern. • An asterisk can only exist at the end of the pattern.
	For IP addresses and host names:
	• You can use an asterisk as part of the a host name. • The dot acts as a literal value in a host name.
	An escaped asterisk sequence, *, matches a literal * and can exist anywhere.

Field	Description
Description	Specifies the description of a particular static route, up to a maximum of 255 characters.
Next Hop	Specifies the domain name or IP address of the destination (next hop) and can be either a Fully Qualified Domain Name (FQDN) or dotted IP address.
	IM and Presence Service supports DNS SRV-based call routing. To specify DNS SRV as the next hop for a static route, set this parameter to the DNS SRV name.
Next Hop Port	Specifies the port number of the destination (next hop). The default port is 5060.
	IM and Presence Service supports DNS SRV-based call routing. To specify DNS SRV as the next hop for a static route, set the next hop port parameter to 0.
Route Type	Specifies the route type: User or Domain. The default value is user.
	For example, in the SIP URI "sip:19194762030@myhost.com" request, the user part is "19194762030", and the host part is "myhost.com". If you choose User as the route type, IM and Presence Service uses the user-part value "19194762030" for routing SIP traffic. If you choose the Domain as the route type, IM and Presence Service uses "myhost.com" for routing SIP traffic.
Protocol Type	Specifies the protocol type for this route, TCP, UDP, or TLS. The default value is TCP.
Priority	Specifies the route priority level. Lower values indicate higher priority. The default value is 1.
	Value range: 1-65535

Field	Description
Weight	Specifies the route weight. Use this parameter only if two or more routes have the same priority. Higher values indicate which route has the higher priority.
	Value range: 1-65535
	Example: Consider these three routes with associated priorities and weights:
	1, 20 1, 10 2, 50
	In this example, the static routes are listed in the correct order. The priority route is based on the lowest value priority, that is 1. Given that two routes share the same priority, the weight parameter with the highest value decides the priority route. In this example, IM and Presence Service directs SIP traffic to both routes configured with a priority value of 1, and distributes the traffic according to weight; The route with a weight of 20 receives twice as much traffic as the route with a weight of 10. Note that in this example, IM and Presence Service will only attempt to use the route with priority 2, if it has tried both priority 1 routes and both failed.
Allow Less-Specific Route	Specifies that the route can be less specific. The default setting is On.
In Service	Specifies whether this route has been taken out of service.
	This parameter allows the administrator to effectively take a route out of service (versus removing it completely and re-adding it).
Block Route Check Box	Check to block the static route. The default setting is Unblocked.

Procedure

Step 1 Choose **Cisco Unified CM IM and Presence Administration** > **Routing** > **Static Routes**.

Step 2 Click **Add New**.

Step 3 Configure the static route settings.

Step 4 Click **Save**.

Presence Gateway Configuration on IM and Presence Service

Presence Gateway Configuration Option

You must configure Cisco Unified Communications Manager as a Presence Gateway on IM and Presence Service to enable the SIP connection that handles the availability information exchange between Cisco Unified Communications Manager and IM and Presence Service.

When configuring the Presence Gateway, specify the FQDN (Fully Qualified Domain Name) or the IP address of the associated Cisco Unified Communications Manager node. Depending on your network this value can be one of the following:

- the FQDN address of the Cisco Unified Communications Manager database publisher node

- a DNS SRV FQDN that resolves to the Cisco Unified Communications Manager subscriber nodes

- the IP address of the Cisco Unified Communications Manager database publisher node

If DNS SRV is an option in your network, configure the following:

1. Configure the Presence Gateway on the IM and Presence Service node with a DNS SRV FQDN of the Cisco Unified Communications Manager subscriber nodes (equally weighted). This will enable IM and Presence Service to share availability messages equally among all the nodes used for availability information exchange.

2. On Cisco Unified Communications Manager, configure the SIP trunk for the IM and Presence Service node with a DNS SRV FQDN of the IM and Presence Service database publisher and subscriber nodes.

If DNS SRV is not an option in your network, and you are using the IP address of the associated Cisco Unified Communications Manager node, you cannot share presence messaging traffic equally across multiple subscriber nodes because the IP address points to a single subscriber node.

Related Topics

SIP Trunk Configuration on Cisco Unified Communications Manager

Configure Presence Gateway

Before you begin

- Read the Presence Gateway configuration options topic.
- Depending on your configuration requirements, obtain the FQDN, DNS SRV FQDN, or the IP address of the associated Cisco Unified Communications Manager node.

Procedure

Step 1 Choose **Cisco Unified CM IM and Presence Administration** > **Presence** > **Gateways**.

Step 2 Click **Add New**.

Step 3 Choose **CUCM** for the Presence Gateway Type.

Step 4 Enter a description of the presence gateway in the Description field.

Step 5   Specify the FQDN, DNS SRV FQDN, or the IP address of the associated Cisco Unified Communications Manager node in the Presence Gateway field.

Step 6   Click **Save**.

What to do next

Proceed to configure the authorization policy on IM and Presence Service.

Related Topics

Configure Authorization Policy on IM and Presence Service

Presence Gateway Configuration Option, on page 6

Configure SIP Publish Trunk on IM and Presence Service

When you turn on this setting, Cisco Unified Communications Manager publishes phone presence for all line appearances that are associated with users licensed on Cisco Unified Communications Manager for IM and Presence Service.

This procedure is the same operation as assigning a SIP trunk as the CUP PUBLISH trunk in Cisco Unified Communications Manager service parameters.

Procedure

Step 1   Choose **Cisco Unified CM IM and Presence Administration** > **Presence** > **Settings** > **Standard Configuration**.

Step 2   Choose a SIP Trunk from the **CUCM SIP Publish Trunk** drop-down list.

Step 3   Click **Save**.

Configure Cluster-Wide DNS SRV Name for SIP Publish Trunk

When you configure the cluster-wide IM and Presence Service address on the IM and Presence database publisher node, IM and Presence Service replicates the address on all nodes in the cluster.

Set the SRV port value to 5060 when you configure a cluster-wide IM and Presence Service address.

Note   Do not use this procedure to change the SRV Cluster Name value if the IM and Presence Service default domain is used in the cluster-wide DNS SRV record. No further action is needed.

Before you begin

Read the cluster-wide DNS SRV topic.

Procedure

Step 1	Choose **Cisco Unified CM IM and Presence Administration** > **System** > **Service Parameters.**
Step 2	Choose the IM and Presence Service node from the **Server** menu.
Step 3	Choose **Cisco SIP Proxy** from the Service menu.
Step 4	Edit the **SRV Cluster Name** field in the General Proxy Parameters (Clusterwide) section.
	By default this parameter is empty.
Step 5	Click **Save**.

Related Topics

Cluster-Wide DNS SRV

Scalability Options for Deployment