Presence

The Presence feature allows a user to monitor the real-time status of another user at a directory number or SIP URI.

This section covers the following topics:

Introducing Presence

When you configure Presence in Cisco CallManager Administration, an interested party, known as a watcher, can monitor the real-time status of a directory number or SIP URI, a presence entity, from the device of the watcher.

Note A SIP URI comprises a call destination configured with a *user@host* format, such as **xten3@CompB.cisco.com** or **2085017328@10.21.91.156:5060**.

A watcher can monitor the status of the presence entity (also called presentity) with the following options:

- BLF/SpeedDial buttons
- Missed call, placed call, or received call lists in the directories window
- Shared directories, such as the corporate directory

Call lists and directories display the BLF status for existing entries.

Note You must configure BLF/SpeedDial buttons so the presence entity displays as a speed dial on the device of the watcher. For presence-supported SIP phones, you can configure directory numbers or SIP URIs as BLF/SpeedDial buttons. For presence-supported SCCP phones, you can only configure directory numbers as BLF/SpeedDial buttons. The BLF value does not have to be on the cluster.

Watchers initiate presence requests (SUBSCRIBE messages) to obtain the status of presence entities in the cluster or outside of the cluster. The entity that is subscribed to responds with a response message (NOTIFY message), which carries the presence status.

Tip Administrators configure the phone features associated with presence: BLF/SpeedDials, call lists, or both. After administrators configure presence features, real-time status icons display on the watcher device to indicate whether the presence entity is on the phone, not on the phone, status unknown, and so on.

For information on the Busy Lamp Field (BLF) status icons that display on the phone, refer to the Cisco IP Phone documentation that supports your phone model.

To identify whether your phone model supports presence, refer to the Cisco IP Phone documentation that supports your phone model and this version of Cisco CallManager.

Understanding How Presence Works with Phones and Trunks

Tip Use the information in this section with the "Understanding Presence Groups" section on page 20-4, the "Understanding Presence Authorization" section on page 20-7, the"Understanding How Presence Works with Route Lists" section on page 20-4, and the "Understanding How the SUBSCRIBE Calling Search Space Works" section on page 20-8. The following information assumes that the phones and trunks have permission to view the status of the presence entity, as configured through presence groups.

Cisco CallManager handles all presence requests for Cisco CallManager users, whether inside or outside the cluster.

For a Cisco CallManager watcher that sends a presence request through the phone, Cisco CallManager responds with the presence status directly if the phone and presence entity are colocated.

If the device exists outside of the cluster, Cisco CallManager queries the external device through the SIP trunk.If the watcher has permission to monitor the external device, the SIP trunk sends the presence request to the external device and returns presence status to the watcher.

For non-Cisco CallManager watchers that send presence requests through a Cisco CallManager trunk, Cisco CallManager responds with presence status if Cisco CallManager supports the presence entity. If Cisco CallManager does not support the presence entity, the request gets rejected.

The following examples demonstrate how presence works for phones and trunks when the phones and trunks have permission to send and receive presence requests.

A Cisco CallManager User Queries the BLF Status of Another Cisco CallManager User.

A Cisco CallManager user calls another Cisco CallManager user only to find that the called party is not available. When available, the called party checks the missed call list, and the phone contacts Cisco CallManager. Cisco CallManager validates that the called party is a valid watcher and determines that the caller represents a Cisco CallManager presence entity. The BLF status for the caller gets updated on the phone of the called party.

A Cisco CallManager User Queries the BLF Status of a NonCisco CallManager User.

A non-Cisco CallManager user calls a Cisco CallManager user only to find that the Cisco CallManager user is unavailable. When available, the Cisco CallManager user checks the missed call list, and the phone contacts Cisco CallManager. Cisco CallManager confirms that the Cisco CallManager user is a valid watcher and determines that the nonCisco CallManager user represents a presence entity. A SIP trunk interacts with the non-Cisco CallManager network and Cisco CallManager, and status for the nonCisco CallManager user gets updated on the phone of the Cisco CallManager user.

A NonCisco CallManager User Queries the Presence Status of a Cisco CallManager User.

A nonCisco CallManager user queries the state of a Cisco CallManager user. The request comes through a Cisco CallManager SIP trunk. Cisco CallManager verifies that the nonCisco CallManager user is a valid watcher and determines that the Cisco CallManager user represents a Cisco CallManager presence entity. Cisco CallManager sends the status to phone of the nonCisco CallManager user.

A Cisco CallManager Accesses the Corporate Directory to Get BLF Status.

A Cisco CallManager user accesses the corporate directory on the phone. For each directory entry, BLF status displays.

A Phone Monitors a BLF/SpeedDial.

After an administrator configures the presence feature and the BLF/SpeedDial buttons, a user can immediately begin to monitor the real-time status of a presence entity.

Understanding How Presence Works with Route Lists

Tip Use the information in this section with the "Understanding How Presence Works with Phones and Trunks" section on page 20-2, the "Understanding Presence Groups" section on page 20-4, the "Understanding Presence Authorization" section on page 20-7, and the "Understanding How the SUBSCRIBE Calling Search Space Works" section on page 20-8.

Cisco CallManager receives presence requests from watchers and status responses from presence entities. Watchers and presence entities can exist inside the cluster or outside of the cluster.

Cisco CallManager supports external incoming and outgoing presence requests through the SIP trunk. SIP trunks can be members of route groups, which are members of route lists. When Cisco CallManager receives a presence request or notification status that is associated with an outbound SIP trunk or route group, Cisco forwards the request or status to a SIP trunk.

Note Presence requests and responses must route to SIP trunks or routes that are associated with SIP trunks. The system rejects presence requests routing to MGCP/H323 trunk devices.

When a request gets forwarded to a route group or list, any SIP trunk in the group or list can carry the request. Cisco CallManager forwards the request to the next available or idle outbound SIP trunk in the group or list. This process repeats until Cisco CallManager receives a successful response or the operation fails.

After the presence request to an external presentity is successful, the SIP trunk receives notification messages based on status changes for the presentity and sends the status to the route list/group to notify the watcher. When different watchers send presence requests to the same presentity that is reached through the route list/group and SIP trunk, Cisco CallManager sends the cached status for the presentity to the subscriber instead of creating another subscription.

The presentity can terminate the subscription at any time due to time-out or other reasons. When the SIP trunk receives a termination status, the termination status gets passed to the route list or group to notify the watcher.

Refer to the Route List Configuration chapter in the *Cisco CallManager Administration Guide* for more information about configuring route lists.

Understanding Presence Groups

Tip The Default Inter-Presence Group Subscription service parameter for the Cisco CallManager service sets the clusterwide permissions parameter for presence groups to *Allow Subscription* or *Disallow Subscription*. This enables administrators to set a system default and configure presence group relationships by using the default setting for the cluster. For information on configuring this service parameter, see the "Configuring Presence Service Parameters and Enterprise Parameters" section on page 20-12.

Cisco CallManager allows you to configure presence groups to control the destinations that watchers can monitor. To configure a presence group, create the group in Cisco CallManager Administration and assign one or more destinations and watchers to the same group.

> **Note** The system always allows presence requests within the same presence group.

You must also specify the relationships to other presence groups by using one of the following permissions from the drop-down list in the Presence Group Configuration window:

- **Use System Default**—To use the Default Inter-Presence Group Subscription service parameter (*Allow Subscription* or *Disallow Subscription*) setting for the permission setting, select the group(s) and configure the Subscription Permission to *Use System Default*.

- **Allow Subscription**—To allow a watcher in this group to monitor members in another group, select the group(s) and configure the Subscription Permission setting to *Allow Subscription*.

- **Disallow Subscription**—To block a watcher in this group from monitoring members in another group, select the group(s) and configure the Subscription Permission setting to *Disallow Subscription*.

> **Tip** Whenever you add a new presence group, Cisco CallManager defines all group relationships for the new group with the default cluster setting as the initial permission setting. To apply different permissions, you configure new permissions between the new group and existing groups and between existing groups and the new group for each permission that you want to change.

The permissions that are configured for a presence group display in the Presence Group Relationship pane. Permissions that use the system default permission setting for the group-to-group relationship do not display.

Example: Configuring Presence Group Permissions

Assume the clusterwide setting for Default Inter-Presence Group Subscriptions is set to Disallow. You create two presence groups: Group A (workers) and Group B (managers). If you want to allow Group B members to monitor Group A members but to block group A members from monitoring Group B members, you would configure *Allow* for Group B to Group A. (Because the system default is Disallow, Group A already disallows subscriptions to Group B, unless you change the Default Inter-Presence Group Subscriptions service setting.)

Cisco CallManager automatically creates the Standard Presence Group at installation, which serves as the default group for presence users. All presence users (except application user) initially get assigned to the Standard Presence group. You cannot delete this group.

> **Note** Because not all application users use the SIP trunk or initiate presence requests, the default setting for application user specifies *None*. To assign an application user to the Standard Presence Group, administrators must configure this option.

For each presence group that you create, you apply the presence group to one or more of following items in Cisco CallManager Administration (refer to Table 20-1).

Table 20-1   Applying Presence Groups

Apply Presence Groups to	Presence Entity or Watcher	Comments
Directory number	Presence entity	For SIP or SCCP phones
Trunk	Watcher and Presence Entity	For external presence servers that send presence requests via SIP trunk or a proxy server that is connected on SIP trunk (serving as watcher)
		For outgoing presence requests to the SIP trunk (serving as presence entity)
Phone	Watcher	For SIP or SCCP phones
Application User	Watcher	For external applications that send presence requests via SIP trunk or home on a proxy server that is connected on SIP trunk (for example Web Dial, IPPM, Meeting Place, conference servers, and presence servers)
End User	Watcher	For user directories and call lists and to configure extension mobility settings.
Autogenerated device profile	Watcher	For phones with extension mobility support only

Note 1: A phone serves as a watcher; a line on a phone cannot serve as a watcher.

Note 2: It is not necessary to provision presence groups for BLF/SpeedDials.

Tip   Refer to , for additional requirements for presence requests through the SIP trunk.

The following examples describe how a phone or trunk obtains the destination status by using different presence groups and permissions.

A Phone Wants Status About a Directory Number Assigned to BLF/SpeedDial.

Phone A has directory number 1111 (Phone B) configured as a BLF/SpeedDial button to monitor presence status for Phone B. Phone A and Phone B are colocated. Phone A receives real-time status for directory number 1111 and displays the status icon next to the BLF/SpeedDial button. The system does not invoke presence group authorization.

A Phone Wants Status About a Directory Number in a Call List.

Phone A, which has the presence group, User Group, configured for it, has directory number 1111 in the Missed Calls call list. Directory number 1111, which exists for Phone B, has the presence group, Executive Group, configured for it. The Presence Group Configuration window indicates that the

relationship between the User Group and Executive Group is Disallowed, as specified in the Presence Group Relationship pane. Phone A cannot receive real-time status for directory number 1111, and Phone A does not display the real-status icon next to the Missed Call list entry.

A SIP Proxy Server That Is Connected to a SIP Trunk Wants Status About a Cisco CallManager Directory Number.

The following example describes how a SIP trunk obtains the status of a directory number when different presence groups are configured for the SIP trunk and directory number. SIP proxy server D uses SIP trunk C to contact Cisco CallManager for the status of directory number 5555 because directory number 5555 exists as a BLF/SpeedDial button on SIP phone E, which connects to the proxy server. The SIP trunk indicates that it has presence group, Administrator Group, configured for it, and directory number 5555 is assigned to the Engineering Group. The Presence Group Configuration window indicates that the relationship between the Administrator Group and Engineering Group is allowed, as specified in the Presence Group Relationship pane. Cisco CallManager sends the status of the directory number to the trunk, which passes the status to the SIP proxy server D. SIP phone E receives real-time status for directory number 5555, and the phone displays the real-time status icon next to the BLF/SpeedDial button.

Understanding Presence Authorization

Tip Use the information in this section with the "Understanding How Presence Works with Phones and Trunks" section on page 20-2, the "Understanding Presence Groups" section on page 20-4, and the "Understanding How the SUBSCRIBE Calling Search Space Works" section on page 20-8.

To view the status of a presence entity, watchers send presence requests to Cisco CallManager. The system requires watchers to be authorized to initiate status requests for a presence entity by using these mechanisms:

- The watcher presence group must have authorization to obtain the status for the presence entity presence group, whether inside or outside of the cluster.
- Cisco CallManager must have authorization to accept presence requests from an external presence server or application.

Note The authorization process remains independent of calling search space routing for presence requests.

To initiate presence group authorization, you must configure one or more presence groups and assign the appropriate permissions. Administrators configure permission settings for presence groups, which specify when a watcher's presence group can monitor the status of members in other groups. To validate a presence request, Cisco CallManager performs a database lookup by using the permissions that are assigned to the presence groups that are configured.

If you choose not to use presence group authorization, leave all presence users assigned to the default presence group and do not configure additional groups or permissions. You will still need to configure authorization for a SIP trunk or application if you want to authorize Cisco CallManager to accept incoming presence requests from an external presence server or application.

Tip When an administrator decides to add or change a BLF/SpeedDial button, the administrator ensures that the watcher is authorized to monitor that destination.

Administrators configure the Cisco CallManager system to accept presence requests that come via the SIP trunk by configuring parameters for the SIP trunk and application user.

To authorize the Cisco CallManager system to accept incoming presence requests from the SIP trunk, check the Accept Presence Subscription check box in the SIP Trunk Security Profile window. (To block incoming presence requests on a SIP trunk, uncheck the check box.) When SIP trunk presence requests are allowed, Cisco CallManager accepts requests from the SIP user agent (SIP proxy server or external presence server) that connects to the trunk. Consider digest authentication as optional when Cisco CallManager is configured to accept presence requests from a SIP trunk.

Ω

Tip   To use presence group authorization with incoming presence requests on a SIP trunk, configure a presence group for the trunk, such External_Presence_Serv_Group1, and configure the appropriate permissions to other groups inside the cluster.

To authorize the Cisco CallManager system to accept presence requests from an external application that connects on the SIP trunk, check the Enable Application Level Authorization check box in the SIP Trunk Security Profile GUI and the Accept Presence Subscription check box in the Applications User Configuration window for the application. When you configure the Cisco CallManager system to accept presence requests from an application user, Cisco CallManager validates each presence request that is received on the SIP trunk before accepting it.

Ω

Tip   To use presence group authorization with incoming presence requests from a SIP trunk application, configure a presence group for the application, such as Presence_User, and configure the appropriate permissions to other groups inside the cluster.

If you configure both levels of authorization for SIP trunk presence requests, the presence group for the SIP trunk gets used only when no presence group is identified in the incoming request for the application.

Before application authorization can occur, Cisco CallManager must first authenticate the external application by using digest authentication. Enable Application Level Authorization cannot be checked unless Enable Digest Authentication is checked.

Note   The authorization could pass for the trunk but fail for the application. Refer to for additional considerations when configuring presence authorization.

Refer to the *Cisco CallManager Security Guide* for more information about authentication and authorization.

Understanding How the SUBSCRIBE Calling Search Space Works

The SUBSCRIBE Calling Search Space determines how Cisco CallManager routes presence requests that come from the trunk or the phone. The SUBSCRIBE calling search space, associated with a watcher, specifies the list of partitions to search for routing information to a presence entity for presence requests.

To configure a calling search space specifically for this purpose, you configure a calling search space as you do all calling search spaces (Call Routing > Class Control > Calling Search Space). For information on how to configure a calling search space, refer to the "Calling Search Space Configuration" chapter in the *Cisco CallManager Administration Guide*.

The SUBSCRIBE Calling Search space option allows you to apply a calling search space separate from the call-processing Calling Search Space for presence requests. If you do not select a different calling search space for presence requests, the SUBSCRIBE Calling Search Space defaults to None.

You apply the SUBSCRIBE Calling Search Space to the SIP trunk, phone, end user, or autogenerated device profile (for phones with extension mobility support only). The SUBSCRIBE Calling Search Space associated with an end user gets used for extension mobility calls.

Understanding How Presence Works with Extension Mobility

Tip   Use the information in this section in conjunction with the "Understanding Presence Groups" section on page 20-4, the "Understanding Presence Authorization" section on page 20-7, and the "Understanding How the SUBSCRIBE Calling Search Space Works" section on page 20-8.

When you configure BLF/SpeedDial buttons in a user device profile in Cisco CallManager Administration, a phone that supports Cisco CallManager Extension Mobility can display presence status on the BLF/SpeedDial buttons after you log in to the device. The SUBSCRIBE calling search space and presence group that are configured for the user apply.

When the extension mobility user logs out, a phone that supports Cisco CallManager Extension Mobility displays presence status on the BLF/SpeedDial buttons for the log-out profile that is configured:

- When a user device profile is configured for the logout profile, the SUBSCRIBE calling search space and presence group that are configured for the user apply.
- When an autogenerated device profile is generated for the logout profile, the SUBSCRIBE calling search space and presence group that are defined in the autogenerated profile apply.

Tip   Refer to "Device Profile Configuration" in the *Cisco CallManager Administration Guide* for more information about configuring device profiles and updating autogenerated profiles.

Presence Feature Interactions/Restrictions

The following interactions and restrictions apply to the Presence feature:

- Cisco IP Manager Assistant does not support SIP presence.
- Cisco CallManager supports an inbound presence request to a directory number that is associated with a hunt list.
- Cisco CallManager rejects presence requests to a directory number that is associated with a hunt pilot.
- Because the administrator ensures that the watcher is authorized to monitor the destination when configuring a BLF/SpeedDial, presence group authorization does not apply to BLF/SpeedDials.

- For Cisco IP Phones with multiple lines, the phone uses the cached information that is associated with the line directory number for missed and placed calls to determine presence authorization. If this call information is not present, the phone uses the primary line as the subscriber for presence authorization. For BLF/SpeedDial buttons on Cisco IP Phones with multiple lines, the phone uses the first available line as the subscriber.

- When a user monitors a directory number configured for Cisco IP SIP Phone models 7960, 7940, 7905, and 7912, the system displays a status icon for 'not on the phone' on the watcher device when the presentity is off-hook (but not in a call connected state). These phones do not detect an off-hook status. For all other phone types, the system displays the status icon for 'on the phone' on the watcher device for an off-hook condition at the presentity.

The following restrictions apply to Presence BLF interaction with DNs on H.323 phones when the H.323 phone device serves as presentity:

- When the H.323 phone is in the RING IN state, the BLF status gets reported as Busy. (For SCCP and SIP phone presentities in the RING IN state, the BLF status gets reported as Idle.)

- When the H.323 phone is not connected to Cisco CallManager for any reason, such as the Ethernet cable is unplugged from the phone, the BLF status gets reported as Idle all the time. (For SCCP and SIP phone presentities that are not connected to Cisco CallManager, the BLF status gets reported as Unknown.)

Presence Configuration Checklist

Tip The following information assumes that the phones and SIP trunks exist in the Cisco CallManager database. For information on how to add a phone or SIP trunk, refer to the *Cisco CallManager Administration Guide*.

Table 20-2 provides tasks that you must perform to configure presence features:

- To configure the call list phone feature for presence, perform Step 1 through Step 6.
- To configure the BLF/SpeedDial phone feature for presence, performStep 2 and Step 5 through Step 9.

Note It is not necessary to configure presence groups or the Default Inter-Presence Group Subscription parameter for BLF/SpeedDials.

- To configure both features, perform all the steps in the checklist.

Table 20-2   Presence Configuration Checklist

Configuration Steps		Procedures and Related Topics
Step 1	Enable the BLF for Call Lists enterprise parameter.	Configuring Presence Service Parameters and Enterprise Parameters, page 20-12
Step 2	Configure the clusterwide service parameters for presence in Cisco CallManager Administration.	Configuring Presence Service Parameters and Enterprise Parameters, page 20-12

Table 20-2   Presence Configuration Checklist (continued)

Configuration Steps		Procedures and Related Topics
Step 3	To use presence group authorization, configure presence groups and permissions.	• Understanding Presence Groups, page 20-4 • Finding Presence Groups, page 20-14 • Configuring Presence Groups, page 20-15 • Presence Group Configuration Settings, page 20-15 • Presence Group and Presence Authorization Tips, page 20-18
Step 4	Apply a presence group to the directory number, SIP trunk, SIP phone, SCCP phone, end user, and application user (for application users that are sending presence requests over the SIP trunk) in Cisco CallManager Administration. If the phone supports extension mobility and uses an autogenerated logout profile, update the autogenerated profile for the presence group.	• Understanding Presence Groups, page 20-4 • Applying a Presence Group, page 20-17 • Presence Group and Presence Authorization Tips, page 20-18 • Understanding How Presence Works with Extension Mobility, page 20-9
Step 5	To allow presence requests from a SIP trunk, check the Accept Presence Subscription check box in the SIP Trunk Security Profile Configuration window. To enable application-level authorization for a SIP trunk application in addition to trunk-level authorization, check the following check boxes in the SIP Trunk Security Profile Configuration window: • Enable Digest Authentication • Enable Application Level Authorization **Note** You cannot check Enable Application Level Authorization unless Enable Digest Authentication is checked. Apply the profile to the trunk. Reset the trunk for the changes to take effect. If you checked Enable Application Level Authorization, check the Accept Presence Subscription check box in the Application User Configuration window for the application.	• Understanding Presence Authorization, page 20-7 • Presence Group and Presence Authorization Tips, page 20-18 • "Configuring the SIP Trunk Security Profile" in the *Cisco CallManager Security Guide* • Application User Configuration, *Cisco CallManager Administration Guide*

Table 20-2   Presence Configuration Checklist (continued)

Configuration Steps		Procedures and Related Topics
Step 6	Configure the SUBSCRIBE Calling Search Space and apply the calling search space to the phone, trunk, or end user, if required. If the phone supports extension mobility and uses an autogenerated logout profile, update the autogenerated profile for the SUBSCRIBE Calling Search Space, if required.	• Understanding How the SUBSCRIBE Calling Search Space Works, page 20-8 • Configuring and Applying the SUBSCRIBE Calling Search Space, page 20-13 • Calling Search Space Configuration, *Cisco CallManager Administration Guide* • Understanding How Presence Works with Route Lists, page 20-4
Step 7	Customize phone button templates for the BLF/SpeedDial buttons.	Configuring a Customized Phone Button Template for BLF/SpeedDial Buttons, page 20-18
Step 8	If you have not already done so, configure the phone where you want to add the BLF/SpeedDial buttons; make sure that you choose the phone button template that you configured for the BLF/SpeedDial lines.	Cisco IP Phone Configuration, *Cisco CallManager Administration Guide*
Step 9	Configure BLF/SpeedDial buttons for the phone, user device profile, or autogenerated device profile (for phones that support extension mobility).	• Introducing Presence, page 20-2 • Understanding How Presence Works with Phones and Trunks, page 20-2 • Configuring BLF/SpeedDial Buttons, page 20-19 • BLF/SpeedDial Configuration Settings, page 20-20

Configuring Presence Service Parameters and Enterprise Parameters

To configure presence enterprise parameters, for example, the BLF for Call List parameter, in Cisco CallManager Administration, choose **System > Enterprise Parameters**. For information on the parameter, click the question mark that displays in the Enterprise Parameter Configuration window or click the link for the parameter name.

To configure presence service parameters, for example, the Default Inter-Presence Group Subscription parameter, perform the following procedure:

🔎
Tip   The Default Inter-Presence Group Subscription parameter does not apply to BLF/SpeedDials.

Procedure

Step 1   In Cisco CallManager Administration, choose **System > Service Parameters**.

Step 2   From the Server drop-down list box, choose the server where you want to configure the parameter.

Step 3   From the Service drop-down list box, choose the Cisco CallManager (Active) service.

If the service does not display as active, ensure that the service is activated in Cisco CallManager Serviceability.

Step 4   Locate the clusterwide service parameters for the Presence feature.

Tip   For information on the parameters, click the parameter name or click the question mark that displays in the Service Parameter Configuration window.

Step 5   Update the parameter values.

Step 6   Click **Save**.

Additional Information

See the "Related Topics" section on page 20-21.

Configuring and Applying the SUBSCRIBE Calling Search Space

All calling search spaces that you configure in Cisco CallManager Administration display in the SUBSCRIBE Calling Search Space drop-down list box in the Trunk Configuration or Phone Configuration window.

The SUBSCRIBE Calling Search Space determines how Cisco CallManager routes presence requests that come from the trunk or the phone. If you do not select a different calling search space for presence requests, the SUBSCRIBE Calling Search Space defaults to None.

To configure a calling search space specifically for this purpose, you configure a calling search space as you do all calling search spaces (**Call Routing > Class of Control > Calling Search Space**). For information on how to configure a calling search space, refer to the "Calling Search Space Configuration" chapter in the *Cisco CallManager Administration Guide*.

To apply a SUBSCRIBE Calling Search Space to the SIP trunk, phone, end user, or autogenerated device profile (for phones with extension mobility support), perform the following procedure:

Procedure

Step 1   Perform one of the following tasks:

- Find a phone, as described in the "Cisco IP Phone Configuration" chapter in the *Cisco CallManager Administration Guide*.

- Find a SIP trunk, as described in the "Trunk Configuration" chapter in the *Cisco CallManager Administration Guide*.

- Find an end user, as described in the "End User Configuration" chapter in the *Cisco CallManager Administration Guide*.

- Find an autogenerated device profile, as described in the "Device Profile Configuration" chapter in the *Cisco CallManager Administration Guide*.

Step 2   After the configuration window displays, choose the calling search space from the SUBSCRIBE Calling Search Space drop-down list box.

Step 3   Click **Save**.

Step 4   Click **Reset**.

Additional Information

See the "Related Topics" section on page 20-21.

Finding Presence Groups

To find a presence group, perform the following procedure:

Procedure

Step 1   In Cisco CallManager Administration, choose **System > Presence Group**.

The Find and List window displays.

Step 2   From the drop-down list boxes, choose your search criteria for the presence groups that you want to list and click **Find**.

> **Note**   To find all presence groups that exist in the database, click **Find** without specifying any search criteria.

The window refreshes and displays the presence groups that match your search criteria.

Step 3   Click the **Name** link for the presence group that you want to view.

> **Tip**   To search for the Name or Description within the search results, check the Search Within Results check box, enter your search criteria as described in this procedure, and click **Find**.

Additional Information

See the "Related Topics" section on page 20-21.

Configuring Presence Groups

To add, update, or copy presence groups, perform the following procedure:

Procedure

Step 1 In Cisco CallManager Administration, choose **System > Presence Group**.

Step 2 Perform one of the following tasks:

- To add a new presence group, click the **Add New** button and continue with Step 3.

- To copy an existing presence group, locate the appropriate group as described in "Finding Presence Groups" section on page 20-14, click the **Copy** button next to the presence group that you want to copy, and continue with Step 3.

- To update an existing presence group, locate the appropriate group as described in "Finding Presence Groups" section on page 20-14 and continue with Step 3.

- To rename a presence group, locate the group as described in "Finding Presence Groups" section on page 20-14, click the Name link for group on the list, enter the new name when the window displays, and continue with Step 4.

Step 3 Enter the appropriate settings as described in Table 20-3.

Step 4 Click **Save**.

Additional Steps

After you configure the presence groups, apply the presence group configuration to the SIP or SCCP phone, SIP trunk, directory number, application user (for application users sending presence requests over the SIP trunk), end user, or autogenerated device profile (for phones with extension mobility support) in Cisco CallManager Administration. See the "Applying a Presence Group" section on page 20-17.

Additional Information

See the "Related Topics" section on page 20-21.

Presence Group Configuration Settings

Table 20-3 describes the presence group configuration settings. For related procedures, see the "Related Topics" section on page 20-21.

Table 20-3   Presence Group Configuration Settings

Field	Description
Name	Enter the name of the presence group that you want to configure; for example, Executive_Group.
Description	Enter a description for the presence group that you are configuring.
Modify Relationship to Other Presence Groups	Select one or more presence groups to configure the permission settings for the named group to the selected group(s).

Table 20-3   Presence Group Configuration Settings (continued)

Field	Description
Subscription Permission	For the selected presence group(s), choose one of the following options from the drop-down list box: • **Use System Default**—Set the permissions setting to the Default Inter-Presence Group Subscription clusterwide service parameter setting (Allow Subscription or Disallow Subscription). • **Allow Subscription**—Allow members in the named group to view the real-time status of members in the selected group(s). • **Disallow Subscription**—Block members in the named group from viewing the real-time status of members in the selected group(s). The permissions that you configure display in the Presence Group relationship pane when you click **Save**. All groups that use system default permission setting do not display.

Deleting a Presence Group

This section describes how to delete a presence group from the Cisco CallManager database.

Before You Begin

Before you can delete a presence group from Cisco CallManager Administration, you must apply another group to the devices/user or delete all devices/users that use the presence group.

To find out which devices/users use the presence group, click the Name link for the presence group in the Find and List window; then, choose **Dependency Records** from the Related Links drop-down list box when the Presence Group Configuration window displays; click **Go**.

If the dependency records feature is not enabled for the system, enable dependency records in the System > Enterprise Parameters window. For more information about dependency records, refer to the *Cisco CallManager System Guide*.

Procedure

Step 1   Find the presence group by using the procedure in the .

Step 2   To delete multiple presence groups, check the check boxes next to the appropriate check box in the Find and List window; then, click the **Delete Selected** icon or the **Delete Selected** button.

Step 3   To delete a single presence group, perform one of the following tasks:

• In the Find and List window, check the check box next to the appropriate presence group; then, click the **Delete Selected** icon or the **Delete Selected** button.

• In the Find and List window, click the Name link for the presence group. After the specific Security Profile Configuration window displays, click the **Delete Selected** icon or the **Delete Selected** button.

Step 4   When prompted to confirm the delete operation, click **OK** to delete or **Cancel** to cancel the delete operation.

Additional Information

See the "Related Topics" section on page 20-21.

Applying a Presence Group

For information on configuring presence groups in Cisco CallManager Administration, see the "Understanding Presence Groups" section on page 20-4. For information about configuring permission settings for presence authorization, see the "Understanding Presence Authorization" section on page 20-7. The system always allows presence requests between members in the same presence group.

To apply a presence group to the directory number, SIP trunk, SIP phone, SCCP phone, application user (for application users that are sending presence requests over the SIP trunk), end user, or autogenerated device profile (for phones with extension mobility support only), perform the following procedure:

Procedure

Step 1   Perform one of the following tasks:

- Find a SIP trunk, as described in the "Trunk Configuration" chapter in the *Cisco CallManager Administration Guide*.

- Find an application user, as described in the "Application User Configuration" chapter in the *Cisco CallManager Administration Guide*.

- Find an end user, as described in the "End User Configuration" chapter in the *Cisco CallManager Administration Guide.*

- Find an autogenerated device profile (phones with extension mobility support only), as described in the "Device Profile Configuration" chapter in the *Cisco CallManager Administration Guide*.

- Find a SIP or SCCP phone, as described in the "Cisco IP Phone Configuration" chapter in the *Cisco CallManager Administration Guide*.

Tip   After the Phone Configuration window displays, you can access the Directory Number Configuration window by clicking the Line link in the Association Information pane. In the Directory Number Configuration window, you specify the presence group for the directory number.

When an administrator decides to add or change a BLF/SpeedDial button, the administrator ensures that the watcher is authorized to monitor that destination.

Step 2   After the configuration page displays, choose the group from the Presence Group drop-down list box. Refer to "Presence Group and Presence Authorization Tips" section on page 20-18 for provisioning tips.

Step 3   Click **Save**.

Step 4   For devices, you must click **Reset**.

Step 5   Repeat the procedure for all items that are listed in Step 1.

Additional Information

See the "Related Topics" section on page 20-21.

Presence Group and Presence Authorization Tips

Presence authorization works with presence groups. This section lists tips that you can use when you are configuring presence groups for presence authorization.

- To allow a watcher to monitor a destination, make sure that the presence group that is applied to the watcher that is originating the request, including application users, has permission to monitor the group that is applied to the presence entity. End users for supported applications, for example, IPMA end users, also serve as watchers because the user requests status about a presence entity that is configured on the application.

- To allow Cisco CallManager to receive and route presence requests from the SIP trunk application, make sure that the Accept Presence Subscription check box is checked in the Application User window to authorize incoming SUBSCRIBE requests. If no presence group is applied to the application user, Cisco CallManager uses the presence group that is applied to the trunk.

- If you check the Accept Presence Subscription check box for an application user, but do not check the Accept Presence Subscription check box in the SIP Trunk Security Profile that is applied to the trunk, a 403 error message gets sent to the SIP user agent that is connected to the trunk.

- If you check the Accept Presence Subscription check box for an application user, but do not check the Enable Application Level Authorization check box in the SIP Trunk Security Profile that is applied to the trunk, a 403 error message gets sent to the SIP user agent that is connected to the trunk.

- If digest authentication is not configured for the SIP trunk, you can configure the trunk to accept incoming subscriptions, but application-level authorization cannot be initiated, and Cisco CallManager will accept all incoming requests before performing group authorization.

- If the SIP trunk uses digest authentication, as configured in the SIP Trunk Security Profile, incoming presence requests require authentication of the credentials from the sending device. When digest authentication is used with application-level authorization, Cisco CallManager also authenticates the credentials of the application that is sending the presence requests.

- After authorization and authentication is successful for a SIP trunk application, Cisco CallManager performs group authorization to verify the group permissions that are associated with the SUBSCRIBE request before accepting the request.

- When an administrator decides to add or change a BLF/SpeedDial button for a SIP URI, the administrator ensures that the watcher is authorized to monitor that destination. If the system uses a SIP trunk to reach a SIP URI BLF target, the presence group associated with the SIP trunk applies.

- When configuring a SIP URI as BLF/SpeedDial button, make sure the routing patterns are appropriately configured. Refer to SIP Route Pattern Configuration in the *Cisco CallManager Administration Guide* for more information.

Configuring a Customized Phone Button Template for BLF/SpeedDial Buttons

Administrators can configure BLF/SpeedDial buttons for a phone, user device profile, or autogenerated device profile. The Add a new BLF SD link does not display in the Association Information pane unless you configure a customized phone button template for BLF/SpeedDial buttons and apply the template to the phone or user device profile. After you apply the template to the phone or device profile (and save the phone or device profile configuration), the Add a new BLF SD link displays in the Association Information pane.

Tip   If the template does not support BLF/SpeedDials, the Add a new BLF SD link displays in the Unassigned Associated Items pane.

To configure a customized phone button template for BLF/SpeedDial buttons, perform the following procedure:

Procedure

Step 1   Find the phone button template for the device, as described in the "Phone Button Template Configuration" chapter in the *Cisco CallManager Administration Guide*.

Step 2   After the Find/List window displays, click the **Copy** button for the phone button template.

Step 3   In the Button Template Name field, enter a new name for the template; for example, BLF SIP 7970.

Step 4   Click **Save**.

Step 5   After the Phone Button Template Configuration window displays, choose Speed Dial BLF from the Feature drop-down list box(es); that is, if you want the line to be configured as a BLF/SpeedDial button.

Step 6   Click **Save**.

Step 7   If you are updating an existing customized phone button template that you already applied to phones, click **Reset**.

Configuring BLF/SpeedDial Buttons

To configure BLF/SpeedDial buttons, perform the following procedure:

Procedure

Step 1   To configure the BLF/SpeedDial button in the Phone Configuration window, find a phone, as described in the "Cisco IP Phone Configuration" chapter in the *Cisco CallManager Administration Guide*.

Step 2   To configure the BLF/SpeedDial button for user or autogenerated device profiles, find the user device profile or autogenerated device profile (for phones with extension mobility support), as described in the "Device Profile Configuration" chapter in the *Cisco CallManager Administration Guide*.

Step 3   After the configuration window displays, click the Add a New BLF SD link in the Associated Information pane.

Tip   The link does not display in the Associated Information pane if the phone button template that you applied to the phone or device profile does not support BLF/SpeedDials. The link displays in the Unassigned Associated Items pane if the phone button template does not support BLF/SpeedDials.

Step 4   Configure the settings, as described in Table 20-4. Administrators must ensure that the watcher is authorized to monitor a destination that is configured as a BLF/SpeedDial button.

Step 5   After you complete the configuration, click **Save** and close the window.

The destination(s) and/or directory number(s) display in the pane.

Additional Information

See the "Related Topics" section on page 20-21.

BLF/SpeedDial Configuration Settings

Table 20-4 describes the settings that you configure for BLF/SpeedDial buttons.

Table 20-4   BLF/SpeedDial Button Configuration Settings

Field	Description

Destination	Perform one of the following tasks to configure a SIP URI or a directory number as a BLF/SpeedDial button:
	
	 • For SIP phones only, enter the SIP URI.
	
	  For SCCP phones, you cannot configure SIP URI as BLF/SpeedDial buttons.
	
	 • For SIP or SCCP phones, enter a directory number in this field or go to the Directory Number drop-down list box.
	
	  If you want to configure nonCisco CallManager directory numbers as BLF/SpeedDial buttons, enter the directory number in this field.
	
	 For this field, enter only numerals, asterisks (*), and pound signs (#).
	
	 If you configure the Destination field, do not choose an option from the Directory Number drop-down list box. If you choose an option from the Directory Number drop-down list box after you configure the Destination, Cisco CallManager deletes the Destination configuration.

Directory Number	The Directory Number drop-down list box displays a list of directory numbers that exist in the Cisco CallManager database. Configure this setting only if you did not configure the Destination field. For SCCP or SIP phones, choose the number (and corresponding partition, if it displays) that you want the system to dial when the user presses the speed-dial button; for example, 6002-Partition 3. Directory numbers that display without specific partitions belong to the default partition.
Label	Enter the text that you want to display for the BLF/SpeedDial button. This field supports internationalization. If your phone does not support internationalization, the system uses the text that displays in the Label ASCII field.

Table 20-4   BLF/SpeedDial Button Configuration Settings (continued)

Field	Description
Label ASCII	Enter the text that you want to display for the speed-dial button. The ASCII label represents the noninternationalized version of the text that you enter in the Label field. If the phone does not support internationalization, the system uses the text that displays in this field. **Tip** If you enter text in the Label ASCII field that differs from the text in the Label field, Cisco CallManager Administration accepts the configuration for both fields, even though the text differs.

Where to Find More Information

Related Topics

- Introducing Presence, page 20-2
- Understanding How Presence Works with Phones and Trunks, page 20-2
- Understanding How Presence Works with Route Lists, page 20-4
- Understanding Presence Groups, page 20-4
- Understanding Presence Authorization, page 20-7
- Understanding How the SUBSCRIBE Calling Search Space Works, page 20-8
- Presence Feature Interactions/Restrictions, page 20-9
- Presence Configuration Checklist, page 20-10
- Configuring Presence Service Parameters and Enterprise Parameters, page 20-12
- Configuring and Applying the SUBSCRIBE Calling Search Space, page 20-13
- Finding Presence Groups, page 20-14
- Configuring Presence Groups, page 20-15
- Presence Group Configuration Settings, page 20-15
- Deleting a Presence Group, page 20-16
- Applying a Presence Group, page 20-17
- Presence Group and Presence Authorization Tips, page 20-18
- Configuring a Customized Phone Button Template for BLF/SpeedDial Buttons, page 20-18
- Configuring BLF/SpeedDial Buttons, page 20-19
- BLF/SpeedDial Configuration Settings, page 20-20

Additional Documentation

- Digest Authentication, *Cisco CallManager Security Guide*
- Authorization, *Cisco CallManager Security Guide*
- Phone administration documentation that supports your phone model and this version of Cisco CallManager

- Cisco IP Phone or Cisco SIP IP Phone user documentation
- Firmware release notes for your phone model