BLF Presence

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BLF Presence Overview

The Busy Lamp Field (BLF) presence feature allows a user who is a watcher to monitor the real-time status of another user at a directory number or Session Initiation Protocol (SIP) uniform resource identifier (URI) from the device of the watcher.

A watcher can monitor the status of the user or BLF presence entity (also called presentity) by using the following options:

- BLF and 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. When you configure BLF and SpeedDial buttons, the BLF presence entity appears as a speed dial on the device of the watcher.

To view the status of a BLF presence entity, watchers send BLF presence requests to Cisco Unified Communications Manager. After administrators configure BLF presence features, real-time status icons appear on the watcher device to indicate whether the BLF presence entity is on the phone, is not on the phone, the status is unknown, and so on.

Extension mobility users can use BLF presence features on phones with extension mobility support.

BLF presence group authorization ensures that only authorized watchers can access the BLF presence status for a destination. Because the administrator ensures that the watcher is authorized to monitor the destination when a BLF or Speed Dial is configured, BLF presence group authorization does not apply to BLF or Speed Dials.

BLF Presence Prerequisites

- Configure the phones that you want to use with the BLF presence feature.

- Configure the SIP trunks that you want to use with the BLF presence feature.

BLF Presence Configuration Task Flow

Before you begin

- Review BLF Presence Prerequisites, on page 1

Procedure

	Command or Action	Purpose
Step 1	Configure and synchronize cluster-wide enterprise parameters for Busy Lamp Field (BLF). See Configure/Synchronize Cluster-Wide Enterprise Parameters for BLF, on page 3.	Configure BLF options that apply to all devices and services in the same cluster. You can synchronize enterprise-parameter configuration changes with the configured devices in the least-intrusive manner. For example, a reset or restart may not be required on some affected devices.
Step 2	Configure cluster-wide service parameters for BLF. See Configure Cluster-Wide Service Parameters for BLF, on page 4.	Configure presence service parameters to configure different services on selected servers in Cisco Unified Communications Manager Administration.
Step 3	Configure BLF presence groups. See Configure BLF Presence Groups, on page 4.	Configure BLF presence groups to control the destinations that watchers can monitor.
Step 4	To associate BLF presence group with devices and users, perform the following subtasks: • Associate BLF presence groups with phones. See Associate BLF Presence Groups with Phone, on page 6. • Associate BLF presence groups with SIP trunks. See Associate BLF Presence Groups with SIP Trunk, on page 7. • Associate BLF presence groups with an end user. See Associate BLF Presence Groups with End User, on page 8. • Associate BLF presence groups with an application user. See Associate BLF Presence Groups with Application User, on page 9.	Apply a BLF presence group to a directory number, SIP trunk, phone that is running SIP, phone that is running SCCP, application user (for application users that are sending presence requests over the SIP trunk), or end user.
Step 5	Accept BLF presence requests from external trunks and applications. See Accept BLF Presence Requests from External Trunks and Applications, on page 10.	To enable application-level authorization for a SIP trunk application in addition to trunk-level authorization.

	Command or Action	Purpose
Step 6	Configure Calling Search Space. See Configure a Calling Search Space for Presence Requests, on page 10.	Apply a SUBSCRIBE Calling Search Space to the SIP trunk, phone, or end user. The SUBSCRIBE Calling Search Space determines how Cisco Unified Communications Manager routes presence requests that come from the trunk or the phone. Calling search spaces determine the partitions that calling devices search when they are attempting to complete a call. If you do not select a different calling search space for presence requests, the SUBSCRIBE Calling Search Space selects the default option, which is **None**.
Step 7	Configure a phone button template for BLF and SpeedDial buttons. See Configure a Phone Button Template for BLF and SpeedDial Buttons, on page 11.	Configure a phone button template for BLF and SpeedDial buttons for a phone, or user device profile. **Note** If the template does not support BLF and SpeedDials, the **Add a new BLF SD** link appears in the Unassigned Associated Items pane.
Step 8	Associate button template with a device. See Associate Button Template with a Device, on page 12.	Use a button template with a configured device for the BLF presence.
Step 9	Configure user device profile. See Configure User Device Profile, on page 12.	Configure the user device profiles for BLF presence.

Configure/Synchronize Cluster-Wide Enterprise Parameters for BLF

Use enterprise parameters for default configuration that apply to all devices and services in the same cluster. A cluster consists of a set of Cisco Unified Communications Managers that share the same database. When you install a new Cisco Unified Communications Manager, it uses the enterprise parameters to set the initial values of its device defaults.

Procedure

Step 1 From Cisco Unified CM Administration, choose **System** > **Enterprise Parameters**.

Step 2 Configure the fields in the **Enterprise Parameters Configuration** window. For more information on the fields and their configuration options, see Online Help.

Tip
For details about an enterprise parameter, click the parameter name or the question mark that appears in the **Enterprise Parameter Configuration** window.

Step 3 Click **Save**.

Step 4 (Optional) Click **Apply Config** to synchronize cluster-wide parameters.
The Apply Configuration Information dialog box appears.

Step 5 Click **OK**.

Configure Cluster-Wide Service Parameters for BLF

You can configure one or multiple services available in the **Service Parameter Configuration** window for BLF.

Before you begin

Configure/Synchronize Cluster-Wide Enterprise Parameters for BLF, on page 3

Procedure

Step 1 From Cisco Unified CM Administration, choose **System** > **Service Parameters**.

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

Step 3 Configure the fields in the **Service Parameters Configuration** window. For more information on the fields and their configuration options, see Online Help.

Tip
For details about the service parameters, click the parameter name or the question mark that appears in the **Service Parameter Configuration** window.

Step 4 Click **Save**.

Note
The Default Inter-Presence Group Subscription parameter does not apply to BLF and SpeedDials.

Configure BLF Presence Groups

You can use BLF presence groups to control the destinations that watchers can monitor. To configure a BLF presence group, create the group in Cisco Unified Communications Manager Administration and assign one or more destinations and watchers to the same group.

When you add a new BLF presence group, Unified Communications Manager defines all group relationships for the new group with the default cluster field as the initial permission fields. To apply different permissions, configure new permissions between the new group and existing groups for each permission that you want to change.

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

To view the status of a presence entity, watchers send presence requests to Unified Communications Manager. The system requires watchers to be authorized to initiate status requests for a presence entity with these requirements:

- The watcher BLF presence group be authorized to obtain the status for the presence entity presence group, whether inside or outside of the cluster.
- Unified CM must be authorized to accept BLF presence requests from an external presence server or application.

Before you begin

Configure Cluster-Wide Service Parameters for BLF, on page 4

Procedure

Step 1 From Cisco Unified CM Administration, choose **System** > **BLF Presence Group**.

Step 2 Configure the fields in the **BLF Presence Group Configuration** window. See BLF Presence Group Fields for BLF, on page 5 for details about the fields and their configuration options.

Note
Use the **Default Inter-Presence Group Subscription** service parameter for the Cisco CallManager service. It sets the clusterwide permissions parameter for BLF presence groups to allow subscription or disallow subscription. This field enables administrators to set a system default and configure BLF presence group relationships by using the default field for the cluster.

Step 3 Click **Save**.

Note
The permissions that you configure for a BLF presence group appear in the **BLF Presence Group Relationship** pane. Permissions that use the system default permission field for the group-to-group relationship do not appear.

What to do next

Associate BLF presence group with devices and users by performing the following subtasks:

- Associate BLF Presence Groups with Phone, on page 6
- Associate BLF Presence Groups with SIP Trunk, on page 7
- Associate BLF Presence Groups with End User, on page 8
- Associate BLF Presence Groups with Application User, on page 9

BLF Presence Group Fields for BLF

Presence authorization works with BLF presence groups. The following table describes the BLF presence group configuration fields.

Field	Description
Name	Enter the name of the BLF presence group that you want to configure. For example, Executive_Group.
Description	Enter a description for the BLF presence group that you are configuring.
Modify Relationship to Other Presence Groups	Select one or more BLF presence groups to configure the permission fields for the named group to the selected groups.
Subscription Permission	For the selected BLF presence groups, choose one of the following options from the drop-down list: • **Use System Default**—Set the permissions field to the Default Inter-Presence Group Subscription clusterwide service parameter field (Allow Subscription or Disallow Subscription). • **Allow Subscription**—Allow members in the named group to view the real-time status of members in the selected groups. • **Disallow Subscription**—Block members in the named group from viewing the real-time status of members in the selected groups. The permissions that you configure appear in the BLF Presence Group relationship pane when you click **Save**. All groups that use system default permission field do not appear.

BLF Presence Group Association with Devices and Users

Perform the following procedures to apply a BLF presence group to the phone, SIP trunk, phone that is running SIP, phone that is running SCCP, directory number, application user (for application users that are sending presence requests over the SIP trunk), and end user.

Note The system allows presence requests between members in the same BLF presence group.

Associate BLF Presence Groups with Phone

You can use BLF presence for phones and trunks when the phones and trunks have permission to send and receive presence requests.

Cisco Unified Communications Manager handles the BLF presence requests for Cisco Unified Communications Manager users, whether inside or outside the cluster. For a Cisco Unified Communications Manager watcher that sends a BLF presence request through the phone, Cisco Unified Communications Manager responds with the BLF presence status if the phone and BLF presence entity are colocated

Before you begin

Configure BLF Presence Groups, on page 4

Procedure

Step 1 In the Cisco Unified CM Administration, choose **Device** > **Phone**, and click **Add New**.
The **Add a New Phone** window appears.

Step 2 From the **Phone Type** drop-down list, select the type of phone that you want to associate BLF presence group to.

Step 3 Click **Next**.

Step 4 Configure the fields in the **Phone Configuration** window. See the online help for information about the fields and their configuration options.

Note
From the **SUBSCRIBE Calling Search Space** drop-down list, select a SUBSCRIBE calling search space to use for presence requests for the phone. All calling search spaces that you configure in Cisco Unified Communications Manager Administration appear in the **SUBSCRIBE Calling Search Space** drop-down list. If you do not select a different calling search space for the end user from the drop-down list, the value of this field applies the default value as **None**. To configure a SUBSCRIBE calling search space specifically for this purpose, configure a calling search space as you configure all calling search spaces.

Step 5 Click **Save**.

What to do next

Associate BLF presence group with devices and users by performing the following subtasks:

- Associate BLF Presence Groups with SIP Trunk, on page 7
- Associate BLF Presence Groups with End User, on page 8
- Associate BLF Presence Groups with Application User, on page 9

Associate BLF Presence Groups with SIP 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 Unified CM accepts all incoming requests before performing group authorization. When digest authentication is used with application-level authorization, Unified CM also authenticates the credentials of the application that is sending the BLF presence requests.

When there is a BLF presence request for a device that exists outside of the cluster, Unified Communications Manager queries the external device through the SIP trunk. If the watcher has permission to monitor the external device, the SIP trunk sends the BLF presence request to the external device, and returns BLF presence status to the watcher.

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

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

Before you begin

Configure BLF Presence Groups, on page 4

Procedure

Step 1 From Cisco Unified CM Administration, choose **Device** > **Trunk**, and click **Add New**.

Step 2 From the **Trunk Type** drop-down list, select the type of phone that you want to associate BLF presence group. The value in the **Device Protocol** drop-down list populates automatically.

Step 3 Click **Next**.

Step 4 Configure the fields in the **Trunk Configuration** window. See the online help for information about the fields and their configuration options.

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

Step 5 Click **Save**.

What to do next

Associate BLF presence group with devices and users by performing the following subtasks:

- Associate BLF Presence Groups with Phone, on page 6
- Associate BLF Presence Groups with End User, on page 8
- Associate BLF Presence Groups with Application User, on page 9

Associate BLF Presence Groups with End User

An administrator associates BLF presence groups with end user for user directories and call lists and to configure extension mobility settings.

Before you begin

Configure BLF Presence Groups, on page 4

Procedure

Step 1 In the Cisco Unified CM Administration, choose **User Management** > **End User**, and click **Add New**. The **End User Configuration** window appears.

Step 2 Configure the fields in the **End User Configuration** window. See the online help for information about the fields and their configuration options.

Step 3 Click **Save**.

What to do next

Associate BLF presence group with devices and users by performing the following subtasks:

- Associate BLF Presence Groups with Phone, on page 6
- Associate BLF Presence Groups with SIP Trunk, on page 7
- Associate BLF Presence Groups with Application User, on page 9

Associate BLF Presence Groups with Application User

An administrator associates BLF Presence groups with an application user for external applications. These external applications send BLF presence requests that is SIP trunk or home on a proxy server which is connected on SIP trunk. For example, Web Dial, Meeting Place, conference servers, and presence servers.

Before you begin

Configure BLF Presence Groups, on page 4

Procedure

Step 1 In the Cisco Unified CM Administration, choose **User Management** > **Application User**, and click **Add New**.
The **Application User Configuration** window appears.

Step 2 Configure the fields in the **Application User Configuration** window. See the online help for information about the fields and their configuration options.

Step 3 Click **Save**.

What to do next

Associate BLF presence group with devices and users by performing the following subtasks:

- Associate BLF Presence Groups with Phone, on page 6
- Associate BLF Presence Groups with SIP Trunk, on page 7
- Associate BLF Presence Groups with End User, on page 8

Accept BLF Presence Requests from External Trunks and Applications

To allow BLF presence requests from outside the cluster, configure the system to accept BLF presence requests from the external trunk or application. You can assign BLF presence groups to trunks and applications outside the cluster to invoke BLF presence group authorization.

Before you begin

Associate BLF presence group with devices and users by performing the following subtasks:

- Associate BLF Presence Groups with Phone, on page 6
- Associate BLF Presence Groups with SIP Trunk, on page 7
- Associate BLF Presence Groups with End User, on page 8
- Associate BLF Presence Groups with Application User, on page 9

Procedure

Step 1 From Cisco Unified CM Administration, choose **Device** > **Trunk**, and click **Add New**.
The **Trunk Configuration** window appears.

Step 2 To allow BLF presence requests from a SIP trunk, check the **Accept Presence Subscription** check box in the **SIP Trunk Security Profile Configuration** window.

Step 3 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.

Step 4 Apply the profile to the trunk. Click **Reset** so that the changes to the trunk can take effect.

Note
If you checked **Enable Application Level Authorization**, check the **Accept Presence Subscription** check box in the **Application User Configuration** window for the application.

Configure a Calling Search Space for Presence Requests

The SUBSCRIBE Calling Search space option allows you to apply a calling search space separate from the call-processing Calling Search Space for BLF presence requests. Select a different calling search space for presence requests, else the SUBSCRIBE Calling Search Space selects the **None** default option. The SUBSCRIBE Calling Search Space that is associated with an end user is used for extension mobility calls.

You apply the SUBSCRIBE Calling Search Space to the SIP trunk, phone, or end user. The SUBSCRIBE Calling Search Space that is associated with an end user is used for extension mobility calls.

Before you begin

Accept BLF Presence Requests from External Trunks and Applications, on page 10

Procedure

Step 1 From Cisco Unified CM Administration, choose **Call Routing** > **Class of Control** > **Calling Search Space**.

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

Step 3 Click **Add New**.

Step 4 In the **Name** field, enter a name.

Step 5 (Optional) In the **Description** field, enter a description to identify the calling search space.

Step 6 From the **Available Partitions** list, select one or multiple partitions, and click the arrow keys.
The selected partitions appear in the **Selected Partitions** list.

Step 7 (Optional) To add or remove a partition from the **Selected Partitions** list, click the arrow keys next to the list box.

Step 8 Click **Save**.

All calling search spaces that you configure in Cisco Unified Communications Manager Administration appear in the **SUBSCRIBE Calling Search Space** drop-down list in the **Trunk Configuration** or **Phone Configuration** window.

Configure a Phone Button Template for BLF and SpeedDial Buttons

You can configure BLF and SpeedDial buttons for a 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 appears in the **Association Information** pane in Cisco Unified Communications Administration.

Note If the template does not support BLF and SpeedDials, the Add a new BLF SD link appears in the **Unassigned Associated Items** pane.

When an administrator decides to add or change a BLF and 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 BLF presence group associated with the SIP trunk applies.

Note You do not need to configure BLF presence groups or the Default Inter-Presence Group Subscription parameter for BLF and SpeedDials.

Before you begin

Configure a Calling Search Space for Presence Requests, on page 10

Procedure

Step 1 From Cisco Unified CM Administration, choose **Device** > **Device Settings** > **Phone Button Template**.

Step 2 Click the **Add New** button.
The **Phone Button Template Configuration** window appears.

Step 3 In the **Button Template Name** field, enter a name for the template.

Step 4 From the **Phone Button Template** drop-down list, select a template of phone button.

Step 5 Click **Copy** to create a new button template based on the layout of the selected button template.

Step 6 Click **Save**.

Associate Button Template with a Device

You configure BLF and SpeedDial buttons for a phone or user device profile. The BLF value does not have to be on the cluster. For information on the Busy Lamp Field (BLF) status icons that display on the phone, see the Cisco Unified IP Phone documentation that supports your phone. To identify whether your phone supports BLF presence, see the Cisco Unified IP Phone documentation that supports your phone and this version of Unified Communications Manager.

Before you begin

Configure a Phone Button Template for BLF and SpeedDial Buttons, on page 11

Procedure

Step 1 From Cisco Unified CM Administration, choose **Device** > **Device Settings** > **Device Profile**.

Step 2 Enter the search parameters to find the configured phone button templates, and click **Find**.
The records matching all the search criteria appear.

Step 3 Click one of the records.
The **Device Profile Configuration** window appears.

Step 4 From the **Phone Button Template** list, select a configured phone button template.

Step 5 (Optional) Modify the values of the configured device.

Step 6 Click **Save**.

Configure User Device Profile

See the “BLF Presence with Extension Mobility” section of BLF Presence Interactions, on page 13 for details.

Before you begin

Associate Button Template with a Device, on page 12

Procedure

Step 1 In the Cisco Unified CM Administration, choose **Device** > **Device Settings** > **Device Profile**.

Step 2 Click **Add New**.
The **Device Profile Configuration** window appears.

Step 3 Configure the fields in **Device Profile Configuration** window. See the online help for information about the fields and their configuration options.

Note
If the phone button template that you applied to the phone or device profile does not support BLF and SpeedDials, the link does not appear in the **Association Information** pane, but appears in the **Unassigned Associated Items** pane.

Step 4 Click **Save**.

BLF Presence Interactions

Feature	Interaction
Presence BLF with DNs on H.323 phones when the H.323 phone device serves as presence entity	When the H.323 phone is in the RING IN state, the BLF status gets reported as Busy. For the presence entities of phones that are running either SCCP or SIP and that are in the RING IN state, the BLF status gets reported as Idle.
Presence BLF with DNs on H.323 phones when the H.323 phone device serves as presence entity	When the H.323 phone is not connected to Cisco Unified Communications Manager for any reason, such as the Ethernet cable is unplugged from the phone, the BLF status gets reported as Idle all the time. For presence entities of phones that are running either SCCP or SIP and that are not connected to Cisco Unified Communications Manager, the BLF status gets reported as Unknown.
BLF Presence with Extension Mobility	When you configure BLF and SpeedDial buttons in a user device profile in Cisco Unified Communications Manager Administration, a phone that supports Cisco Extension Mobility displays BLF presence status on the BLF and SpeedDial buttons after you log in to the device. When the extension mobility user logs out, a phone that supports Cisco Extension Mobility displays BLF presence status on the BLF and SpeedDial buttons for the logout profile that is configured.

BLF Presence Restrictions

Restriction	Description
SIP Presence	Cisco Unified Communications Manager Assistant does not support SIP presence.

Restriction	Description
BLF Presence Requests	Cisco Unified Communications Manager Administration rejects BLF presence requests to a directory number that is associated with a hunt pilot.
BLF on Call List Feature	The BLF on call list feature is not supported on the Cisco Unified IP Phone 7940 and Cisco Unified IP Phone 7960.
BLF and SpeedDials	The administrator ensures that the watcher is authorized to monitor the destination when configuring a BLF and SpeedDial. BLF presence group authorization does not apply to BLF and SpeedDials. **Note** BLF presence group authorization does not apply to any directory number or SIP URI that is configured as a BLF and Speed Dial that appears in a call list for phones that are running SIP. If there is an overlapping DN, where there is the same extension in different partitions, the presence notifications are selected based on the order of the partitions configured within the SUBSCRIBE CSS assigned to the device. For example, two BLF speed dials are configured on a phone. • Extension 1234 in the "internal" partition • Extension 1234 in the "external" partition Whichever partition is listed first within the SUBSCRIBE CSS is the one that will provide BLF presence to the subscribed devices.
BLF Presence Authorization	For Cisco Unified 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 BLF presence authorization. If this call information is not present, the phone uses the primary line as the subscriber for BLF presence authorization. For BLF and SpeedDial buttons on Cisco Unified IP Phones with multiple lines, the phone uses the first available line as the subscriber.
Cisco Unified IP Phone	When a user monitors a directory number that is configured for Cisco Unified IP Phones 7960 and 7940 that are running SIP, the system displays a status icon for ‘not on the phone’ on the watcher device when the presence entity 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 presence entity.
SIP Trunks	BLF presence requests and responses must route to SIP trunks or routes that are associated with SIP trunks. The system rejects BLF presence requests routing to MGCP and H323 trunk devices.
BLF Presence-supported Phones that are running SIP	For BLF presence-supported phones that are running SIP, you can configure directory numbers or SIP URIs as BLF and SpeedDial buttons. For BLF presence-supported phones that are running SCCP, you can only configure directory numbers as BLF and SpeedDial buttons.

Restriction	Description
Phones that are running SIP	For phones that are running SIP, BLF presence group authorization also does not apply to any directory number or SIP URI that is configured as a BLF and Speed Dial that appears in a call list.