



Intercom

- [Intercom Overview, on page 1](#)
- [Intercom Prerequisites, on page 2](#)
- [Intercom Configuration Task Flow, on page 2](#)
- [Intercom Interactions and Restrictions, on page 21](#)
- [Intercom Troubleshooting, on page 23](#)

Intercom Overview

Intercom is a type of phone line that combines the functionality of a traditional line and a speed dial. With an intercom line, a user can call the intercom line of another user, which answers automatically to one-way audio whisper. The recipient can then acknowledge the whispered call and initiate a two-way intercom call.

You can use an intercom line to dial any other intercom line in the intercom partition, or you can preconfigure the line to target an intercom line outside the intercom partition.

Intercom allows a user to place a call to a predefined target. The called destination answers the call automatically in speakerphone mode with mute activated. This sets up a one-way voice path between the initiator and the destination, so the initiator can deliver a short message, regardless of whether the called party is busy or idle.

To ensure that the voice of the called party does not get sent back to the caller when the intercom call is automatically answered, Unified Communications Manager implements whisper intercom. Whisper intercom ensures that only one-way audio exists from the caller to the called party. The called party must manually press a key to talk to the caller.

An auto-answer tone indicates the beginning of the whisper intercom state for both the sender and the recipient.

Intercom and Default Devices

Each intercom line needs a default device. The intercom line is displayed only on the designated default device.

When the administrator assigns an intercom line to a device, the system sets the device as the default device for the intercom line if not set previously. The administrator can modify the default device for the intercom line. When the administrator changes the default device to a different device, the intercom line gets removed from the original device, even though the intercom line may still be assigned to the original device.

You can assign an intercom line to a device profile. Only when a user uses a device profile to log in to the default device that matches the default device of the intercom line does the intercom line become available. Otherwise, no intercom line is displayed when the user logs in.

Intercom Prerequisites

The intercom feature has the following system requirements:

- Cisco Unified IP Phones Firmware Release 8.3(1) or later

Intercom Configuration Task Flow

Before you begin

- Review [Intercom Prerequisites](#), on page 2.

Procedure

	Command or Action	Purpose
Step 1	Configure Intercom Partition , on page 2	To add a new Intercom partition or configure an existing partition.
Step 2	Configure an Intercom Calling Search Space , on page 4	To add a new Intercom Calling Search Space.
Step 3	Configure an Intercom Translation Pattern , on page 5	To add a new Intercom Translation Pattern or to configure an existing Intercom Translation Pattern .
Step 4	Configure an Intercom Directory Number , on page 12	To add or update an Intercom Directory Number.
Step 5	Intercom Line and Speed Dial Configuration , on page 20	Configure Intercom Line and Speed Dial.

Configure Intercom Partition

Before you begin

Ensure the phone model supports the Intercom feature for a particular release and device pack [Generate a Phone Feature List](#)

Procedure

-
- Step 1** From Cisco Unified CM Administration, choose **Call Routing > Intercom > Intercom Route Partition**. The **Find and List Intercom Partitions** window appears.

- Step 2** Click **Add New**.
- An **Add New Intercom Partition** window appears.
- Step 3** Under the **Intercom Partition Information** section, in the **Name** box, enter the name and description of the intercom partition that you want to add.
- Note** To enter multiple partitions, use one line for each partition entry. You can enter up to 75 partitions; the names and descriptions can have up to a total of 1475 characters. The partition name cannot exceed 50 characters. Use a comma (,) to separate the partition name and description on each line. If a description is not entered, Unified Communications Manager uses the partition name as the description.
- Step 4** Click **Save**.
- Step 5** Locate the partition that you want to configure.
Intercom Partition Configuration window is displayed
- Step 6** Configure the fields in the Intercom Partition Configuration field area. See the online help for more information about the fields and their configuration options.
- Step 7** Click **Save**.
- The **Intercom Partition Configuration** window appears.
- Step 8** Enter the appropriate settings. For detailed information about the Intercom Partition Configuration parameters, see online help.
- Step 9** Click **Save**.
- Step 10** Click **Apply Config**.

Intercom Partition Configuration Fields

Table 1: Intercom Partition Configuration Fields

Field	Description
Name	The name of the intercom partition that you selected displays in this box.
Description	If you entered a description of the intercom partition that you selected, it is displayed here. If you did not enter a description when you added the Intercom partition, you can add it now.
Time Schedule	The drop-down list is populated with time schedules that you can add from Call Routing > Class of Control > Time Schedule .
Time Zone	<ul style="list-style-type: none"> If you want the time zone to be the same as the originating device, click the radio button next to Originating Device. If you want to set a specific time zone, click the Specific Time Zone radio button and select the correct time zone from the drop-down list.

Configure an Intercom Calling Search Space

Before you begin

[Configure Intercom Partition, on page 2](#)

Procedure

-
- Step 1** In the menu bar, choose **Call Routing > Intercom > Intercom Calling Search Space**.
- Step 2** Click the **Add New**.
- Step 3** Configure the fields in the Intercom Calling Search Space field area. For more information on the fields and their configuration options, see Online Help.
- Step 4** Click **Save**.
-

Intercom Calling Search Space Configuration Fields

Table 2: Intercom Calling Search Space Configuration Fields

Field	Description
Name	<p>Enter a name in the Intercom Calling Search Space Name field. The name can comprise up to 50 alphanumeric characters and can contain any combination of spaces, periods (.), hyphens (-), and underscore characters (_). Ensure each calling search space name is unique to the system.</p> <p>Note Use concise and descriptive names for your intercom calling search spaces. The CompanynameLocationCalltype format usually provides a sufficient level of detail and is short enough to enable you to quickly and easily identify a calling search space. For example, CiscoDallasMetroCS identifies a calling search space for toll-free, inter-local access and transport area (LATA) calls from the Cisco office in Dallas.</p>
Description	<p>Enter a description in the Description field. The description can include up to 50 characters in any language, and can contain any combination of spaces, periods (.), hyphens (-), and underscore characters (_), but it cannot include double-quotes ("), percentage sign (%), ampersand (&), or angle brackets (<>).</p>
Intercom Route Partitions for this Calling Search Space	

Field	Description
Available Intercom Partitions	<p>Choose an intercom partition in the Available Intercom Partitions list box and add it to the Selected Intercom Partitions list box by clicking the arrow button between the two list boxes.</p> <p>To add a range of intercom partitions at once, click the first intercom partition in the range; then, hold down the Shift key while clicking the last intercom partition in the range. Click the arrow button between the two list boxes to add the range of partitions.</p> <p>To add multiple intercom partitions that are not contiguous, hold down the Control (Ctrl) key while clicking multiple intercom partitions. Click the arrow button between the two list boxes to add the chosen intercom partitions.</p> <p>Note The length of the intercom partition names limits the maximum number of intercom partitions that can be added to an intercom calling search space. Configure Intercom Partition, on page 2 provides examples of the maximum number of partitions that can be added to an intercom calling search space if intercom partition names are of fixed length.</p>
Selected Intercom Partitions (Ordered by highest priority)	To change the priority of an intercom partition, choose an intercom partition name in the Selected Intercom Partitions list box. Move the intercom partition up or down in the list by clicking the arrows on the right side of the list.

Configure an Intercom Translation Pattern

Before you begin

[Configure an Intercom Calling Search Space, on page 4](#)

Procedure

-
- Step 1** Choose **Call Routing > Intercom > Intercom Translation Pattern**.
The **Find and List Intercom Translation Patterns** window appears.
- Step 2** Perform one of the followings tasks:
- To copy an existing intercom translation pattern, locate the partition to configure, click **Copy** beside the intercom translation pattern to copy.

b) To add a new intercom translation pattern, click the **Add New**.

Step 3 Configure the fields in the Intercom Translation Pattern Configuration field area. For more information on the fields and their configuration options, see Online Help.

Step 4 Click **Save**.

Ensure that the intercom translation pattern that uses the selected partition, route filter, and numbering plan combination is unique. If you receive an error that indicates duplicate entries, check the route pattern or hunt pilot, translation pattern, directory number, call park number, call pickup number, or meet-me number configuration windows.

The **Intercom Translation Pattern Configuration** window displays the newly configured intercom translation pattern.

Intercom Translation Pattern Configuration Fields

Table 3: Translation Pattern Configuration Field Settings

Field	Description
Pattern Definition	
Intercom Translation Pattern	<p>Enter the Intercom Translation Pattern, including numbers and wildcards (do not use spaces), in the Intercom Translation Pattern field. For example, for the NANP, enter 9.@ for typical local access or 8XXX for a typical private network numbering plan. Valid characters include the uppercase characters A, B, C, and D and \+, which represents the international escape character +. If you leave this field blank, you must select a partition from the Partition drop-down list box.</p> <p>Note Ensure that the Intercom Translation Pattern, which uses the chosen intercom partition, route filter, and numbering plan combination, is unique.</p> <p>Check the route pattern/hunt pilot, translation pattern, directory number, call park number, call pickup number, or meet-me number if you receive a message that indicates duplicate entries. Alternatively, check the route plan report if you receive a message that indicates duplicate entries.</p>

Field	Description
Partition	<p>Choose an intercom partition. If you do not want to assign an intercom partition, choose <None>. If you choose <None>, you must enter a value in the Intercom Translation Pattern field.</p> <p>You can configure the number of intercom partitions that display in this drop-down list by using the Max List Box Items enterprise parameter. If more intercom partitions exist than the Max List Box Items enterprise parameter specifies, the Find button displays next to the drop-down list. Click the Find button to display the Find and List Partitions window. Find and choose an intercom partition name.</p> <p>Note To set the maximum list items, choose System > Enterprise Parameters and choose CCMAdmin Parameters.</p> <p>Note Make sure that the combination of intercom translation pattern, route filter, and intercom partition is unique within the Cisco Unified Communications Manager cluster.</p>
Description	<p>Enter a description for the Intercom Translation Pattern. The description can include up to 50 characters in any language, but it cannot include double-quotes (“), percentage sign (%), ampersand (&), or angle brackets (<>).</p>
Numbering Plan	<p>Choose a numbering plan.</p> <p>If your Intercom Translation Pattern includes the @ wildcard, you may choose a numbering plan. The optional act of choosing a numbering plan restricts certain number patterns.</p>

Field	Description
Route Filter	<p>Choosing an optional route filter restricts certain number patterns. See topics related to wildcards and special characters in route patterns and hunt pilots.</p> <p>The route filters that display depend on the numbering plan that you choose from the Numbering Plan drop-down list.</p> <p>If more than 250 route filters exist, the Find button displays next to the drop-down list box. Click the Find button to display the Select Route Filters window. Enter a partial route filter name in the List items where Name contains field. Click the desired route filter name in the list of route filters that displays in the Select item to use box and click Add Selected.</p> <p>Note To set the maximum list box items, choose System > Enterprise Parameters and choose CCAdmin Parameters.</p>
MLPP Precedence	<p>Choose an MLPP precedence setting for this intercom translation pattern from the drop-down list:</p> <ul style="list-style-type: none"> • Executive Override - Highest precedence setting for MLPP calls. • Flash Override - Second highest precedence setting for MLPP calls. • Flash - Third highest precedence setting for MLPP calls. • Immediate - Fourth highest precedence setting for MLPP calls. • Priority - Fifth highest precedence setting for MLPP calls. • Routine - Lowest precedence setting for MLPP calls. • Default - Does not override the incoming precedence level but rather lets it pass unchanged.
Calling Search Space	<p>From the drop-down list, choose the Intercom Calling Search Space for which you are adding an Intercom Translation Pattern, if necessary.</p> <p>You can configure the number of Intercom Calling Search Spaces that display in this drop-down list by using the Max List Box Items enterprise parameter. If more Intercom Calling Search Spaces exist than the Max List Box Items enterprise parameter specifies, the Find button displays next to the drop-down list. Click the Find button to display the Find and List Calling Search Space window.</p>

Field	Description
Route Option	<p>The Route Option designation indicates whether you want this intercom translation pattern to be used for routing calls (such as 9.@ or 8[2-9]XX) or for blocking calls. Choose the Route this pattern or Block this pattern radio button.</p> <p>If you choose the Block this pattern radio button, you must choose the reason for which you want this intercom translation pattern to block calls. Choose a value from the drop-down list:</p> <ul style="list-style-type: none"> • No Error • Unallocated Number • Call Rejected • Number Changed • Invalid Number Format • Precedence Level Exceeded
Provide Outside Dial Tone	<p>Outside dial tone indicates that Cisco Unified Communications Manager routes the calls off the local network. Check this check box for each Intercom Translation Pattern that you consider to be off network.</p>
Urgent Priority	<p>If the dial plan contains overlapping patterns, Cisco Unified Communications Manager does not route the call until the interdigit timer expires (even if it is possible to dial a sequence of digits to choose a current match). Check this check box to interrupt interdigit timing when Cisco Unified Communications Manager must route a call immediately.</p> <p>By default, the Urgent Priority check box displays as checked. Unless your dial plan contains overlapping patterns or variable length patterns that contain!, Cisco recommends that you do not uncheck the check box.</p>
Calling Party Transformations	
Use Calling Party's External Phone Number Mask	<p>Check the check box if you want the full, external phone number to be used for calling line identification (CLID) on outgoing calls.</p>
Calling Party Transform Mask	<p>Enter a transformation mask value. Valid entries include the digits 0 through 9, the wildcard characters asterisk (*) and octothorpe (#), the international escape character + and blank. If this field is blank and the preceding field is not checked, no calling party transformation takes place.</p>

Field	Description
Prefix Digits (Outgoing Calls)	<p>Enter prefix digits. Valid entries include the digits 0 through 9, the wildcard characters asterisk (*) and octothorpe (#), and the international escape character +.</p> <p>Note The appended prefix digit does not affect which directory numbers route to the assigned device.</p>
Calling Line ID Presentation	<p>Cisco Unified Communications Manager uses calling line ID presentation (CLIP/CLIR) as a supplementary service to allow or restrict the originating caller phone number on a call-by-call basis.</p> <p>Choose whether you want the Cisco Unified Communications Manager to allow or restrict the display of the calling party phone number on the called party phone display for this intercom translation pattern.</p> <p>Choose Default if you do not want to change calling line ID presentation. Choose Allowed if you want Cisco Unified Communications Manager to allow the display of the calling number. Choose Restricted if you want Cisco Unified Communications Manager to block the display of the calling number.</p> <p>Note Use this parameter and the Connected Line ID Presentation parameter, in combination with the Ignore Presentation Indicators (internal calls only) device-level parameter, to configure call display restrictions. Together, these settings allow you to selectively present or restrict calling and/or connected line display information for each call. See the Cisco Unified Communications Manager Administration Guide for information about the Ignore Presentation Indicators (internal calls only) field.</p>

Field	Description
Calling Name Presentation	<p>Cisco Unified Communications Manager uses calling name presentation (CNIP/CNIR) as a supplementary service to allow or restrict the originating caller name on a call-by-call basis.</p> <p>Choose whether you want the Cisco Unified Communications Manager to allow or restrict the display of the calling party name on the called party phone display for this Intercom Translation Pattern.</p> <p>Choose Default if you do not want to change calling name presentation. Choose Allowed if you want Cisco Unified Communications Manager to display the calling name information. Choose Restricted if you want Cisco Unified Communications Manager to block the display of the calling name information.</p>
Connected Party Transformations	
Connected Line ID Presentation	<p>Cisco Unified Communications Manager uses connected line ID presentation (COLP/COLR) as a supplementary service to allow or restrict the called party phone number on a call-by-call basis.</p> <p>Choose whether you want Cisco Unified Communications Manager to allow or restrict the display of the connected party phone number on the calling party phone display for this Intercom Translation Pattern.</p> <p>Choose Default if you do not want to change the connected line ID presentation. Choose Allowed if you want to display the connected party phone number. Choose Restricted if you want Cisco Unified Communications Manager to block the display of the connected party phone number.</p>

Field	Description
Connected Name Presentation	<p>Cisco Unified Communications Manager uses connected name presentation (CONP/CONR) as a supplementary service to allow or restrict the called party name on a call-by-call basis.</p> <p>Choose whether you want Cisco Unified Communications Manager to allow or restrict the display of the connected party name on the calling party phone display for this Intercom Translation Pattern.</p> <p>Choose Default if you do not want to change the connected name presentation. Choose Allowed if you want to display the connected party name. Choose Restricted if you want Cisco Unified Communications Manager to block the display of the connected party name.</p>
Called Party Transformations	
Discard Digits	<p>Choose the discard digits instructions that you want to be associated with this intercom translation pattern. See the Cisco Unified Communications Manager System Guide for more information.</p> <p>Note The discard digits that display depend on the numbering plan that you choose from the Numbering Plan drop-down list.</p>
Called Party Transform Mask	<p>Enter a transformation mask value. Valid entries include the digits 0 through 9, the wildcard characters asterisk (*) and octothorpe (#), the international escape character + and blank. If the field is blank, no transformation takes place. The dialed digits get sent exactly as dialed.</p>
Prefix Digits (Outgoing Calls)	<p>Enter prefix digits. Valid entries include the digits 0 through 9, the wildcard characters asterisk (*) and octothorpe (#), the international escape character + and blank.</p> <p>Note The appended prefix digit does not affect which directory numbers route to the assigned device.</p>

Configure an Intercom Directory Number

You can assign patterns to intercom directory numbers; for example, 352XX. To avoid user confusion, when you assign a pattern to an intercom directory number, add text or digits to these intercom DN configuration fields, Line Text Label, Display (Internal Caller ID), and External Phone Number Mask. These fields are

displayed for an intercom directory number only after you add the intercom directory number and you associate the intercom directory number with a phone.

For example, add the username to the line text label and internal caller ID, and add the outside line number to the external number mask, when the calling information is displayed, it says John Chan, not 352XX.

Procedure

-
- Step 1** Choose **Call Routing > Intercom > Intercom Directory Number**.
The **Find and List Intercom Directory Numbers** window is displayed.
- Step 2** To locate a specific intercom directory number, enter search criteria and click **Find**.
A list of intercom directory numbers that match the search criteria displayed.
- Step 3** Perform one of the followings tasks:
- To add an intercom directory number, click **Add New**.
 - To update an intercom directory number, click the intercom directory number to update.
- The **Intercom Directory Number Configuration** window displayed.
- Step 4** Configure the fields in the Intercom Directory Number Configuration field area. For more information on the fields and their configuration options, see Online Help.
- Step 5** Click **Save**.
- Step 6** Click **Apply Config**.
- Step 7** Click **Reset Phone**.
- Step 8** Restart devices.
During the restart, the system may drop calls on gateways.
-

Intercom Directory Number Configuration Fields

The following table describes the fields that are available in the Intercom Directory Number Configuration window.

Table 4: Intercom Directory Number Configuration Settings

Field	Description
Intercom Directory Number Information	
Intercom Directory Number	<p>Enter a dialable phone number. Values can include numeric characters and route pattern wildcards and special characters except for (.) and (@).</p> <p>The intercom directory number that you enter can appear in more than one intercom partition.</p> <p>At the beginning of the intercom directory number, enter \+ if you want to use the international escape character +. For this field, \+ does not represent a wildcard; instead, entering \+ represents a dialed digit.</p>

Field	Description
Route Partition	<p>Choose the intercom partition to which the intercom directory number belongs. Make sure that the intercom directory number that you enter in the Intercom Directory Number field is unique within the intercom partition that you choose.</p> <p>You can configure the number of intercom partitions that display in this drop-down list by using the Max List Items enterprise parameter. If more intercom partitions exist than the Max List Items enterprise parameter specifies, the Find button displays next to the drop-down list. Click the Find button to display the Find and List Partition window. Enter a partial intercom partition name in the List items where Name contains field. Click the desired intercom partition name in the list of intercom partitions that displays in the Select item to use box and click Add Selected.</p> <p>Note To set the maximum list box items, choose System > Enterprise ParametersCCMAdmin Parameters.</p>
Description	<p>Enter a description of the intercom directory number and intercom route partition. The description can include up to 50 characters in any language, but it cannot include double-quotes (“), percentage sign (%), ampersand (&), or angle brackets (<>).</p>

Field	Description
Alerting Name	<p>Enter a name that you want to display on the phone of the caller.</p> <p>This setting, which supports the Identification Services for the QSIG protocol, applies to shared and nonshared directory numbers. If you configure an alerting name for a directory number with shared-line appearances, when the phone rings at the terminating PINX, the system performs the following tasks:</p> <ul style="list-style-type: none"> • Forwards the name of the caller that is assigned to the directory number. • Applies the Connected Name Restrictions (CONR) that are configured for the translation pattern (if restrictions exist); the originating PINX may modify the CONR, depending on the route pattern configuration. <p>If you do not configure an alerting name, “Name Not Available” may display on the caller phone. If you do not enter a name for the Display (Internal Caller ID) field, the information in the Alerting Name field displays in the Display (Internal Caller ID) field.</p> <p>If you set the Always Display Original Dialed Number service parameter to True, the alerting name does not display on the calling phone; only the original dialed number displays.</p>
ASCII Alerting Name	<p>This field provides the same information as the Alerting Name field, but you must limit input to ASCII characters. Devices that do not support Unicode (internationalized) characters display the content of the Alerting Name ASCII field.</p>
Allow Control of Device from CTI	<p>Check this check box to allow CTI to control and monitor a line on a device with which this intercom directory number is associated</p>

Field	Description
Associated Devices	<p>After you associate this intercom directory number with a device, this pane displays the device with which this intercom directory number is associated.</p> <p>Note An intercom directory number can be associated with at most one device.</p> <p>To edit a device with which this intercom directory number is associated, choose a device name in the Associated Devices pane and click the Edit Device button. The Phone Configuration window or Device Profile Configuration window displays for the device that you choose.</p> <p>To edit a line appearance that has been defined for this intercom directory number, choose a device name in the Associated Devices pane and click the Edit Line Appearance button. The Directory Number Configuration window or Device Profile Configuration window refreshes to show the line appearance for this DN on the device that you choose.</p> <p>To associate a device to this intercom directory number from the list of devices in the Dissociate Devices pane, choose a device in the Dissociate Devices pane and add it to the Associated Devices pane by clicking the up arrow between the two panes.</p>
Dissociate Devices	<p>If you choose to dissociate an intercom directory number from a device, this pane displays the device(s) from which you dissociate this intercom directory number.</p> <p>Choose a device in the Associated Devices pane and add it to the Dissociate Devices pane by clicking the down arrow between the two panes.</p>
Intercom Directory Number Settings	

Field	Description
Calling Search Space	

Field	Description
	<p>From the drop-down list, choose the appropriate intercom calling search space. An intercom calling search space comprises a collection of intercom partitions that are searched for numbers that are called from this intercom directory number. The value that you choose applies to all devices that are using this intercom directory number.</p> <p>Changes result in an update of the numbers that the Call Pickup Group field lists.</p> <p>You can configure calling search space for forward all, forward busy, forward no answer, forward no coverage, and forward on CTI failure directory numbers. The value that you choose applies to all devices that are using this directory number.</p> <p>You must configure either primary forward all calling search space or secondary forward all calling search space or both for call forward all to work properly. The system uses these concatenated fields (Primary CFA CSS + Secondary CFA CSS) to validate the CFA destination and forward the call to the CFA destination.</p> <p>Note If the system is using partitions and calling search spaces, Cisco recommends that you configure the other call forward calling search spaces as well. When a call is forwarded or redirected to the call forward destination, the configured call forward calling search space gets used to forward the call. If the forward calling search space is None, the forward operation may fail if the system is using partitions and calling search spaces. For example, if you configure the forward busy destination, you should also configure the forward busy calling search space. If you do not configure the forward busy calling search space and the forward busy destination is in a partition, the forward operation may fail.</p> <p>When you forward calls by using the CFwdAll softkey on the phone, the automatic combination of the line CSS and device CSS does not get used. Only the configured Primary CFA CSS and Secondary CFA CSS get used. If both of these fields are None, the combination results in two null partitions, which may cause the operation to fail.</p>

Field	Description
	<p>If you want to restrict users from forwarding calls on their phones, you must choose a restrictive calling search space from the Forward All Calling Search Space field.</p>
BLF Presence Group	<p>Configure this field with the BLF presence group feature.</p> <p>From the drop-down list box, choose a BLF Presence Group for this intercom directory number. The selected group specifies the devices, end users, and application users that can monitor this intercom directory number.</p> <p>The default value for BLF Presence Group specifies Standard Presence group, configured with installation. BLF Presence groups that are configured in Cisco Unified Communications Manager Administration also appear in the drop-down list.</p> <p>Presence authorization works with BLF presence groups to allow or block presence requests between groups.</p>
Auto Answer	<p>Choose one of the following options to activate the auto answer feature for this intercom directory number:</p> <ul style="list-style-type: none"> • Auto Answer with Headset • Auto Answer with Speakerphone <p>Note Make sure that the headset or speakerphone is not disabled when you choose Auto Answer with headset or Auto Answer with speakerphone.</p> <p>Note Do not configure auto answer for devices that have shared lines.</p> <p>Note For an intercom line on a CTIPort device, autoanswer-speakerphone and autoanswer-headset means that the autoanswer is on. The speakerphone or headset options do not apply to CTIPort devices; instead, it just indicates that the line is capable of auto-answering. Applications have responsibility for terminating the media on CTIPort devices and can terminate the media on either type of output device.</p>

Field	Description
Default Activated Device	<p>From the drop-down list, choose a default activated device for this intercom directory number. The selected device specifies the phone on which this intercom directory number is activated by default. The drop-down list lists only devices that support intercom.</p> <p>Note You must specify a default activated device for this intercom directory number to be active as an intercom line.</p> <p>Note If an intercom directory number is specified in a device profile that is configured for Cisco Extension Mobility, that intercom directory number will display as an intercom line only when a user logs in to the specified default activated device by using that device profile, as long as the device supports the intercom feature.</p>

Intercom Line and Speed Dial Configuration

Before you begin

[Configure an Intercom Directory Number, on page 12](#)

Procedure

Step 1 Choose **Device > Device Settings > Phone Button Template** and add the intercom line to an existing phone button template or create a new template.

Note The intercom line cannot be configured as the primary line.

Step 2 From the **Button Information** area, from **Feature** drop-down list, choose **Intercom**.

Step 3 From the **Button Information** area, from **Feature** drop-down list, choose **Speed Dial**.

Note You can configure the intercom line with a predefined destination (speed dial) to allow fast access.

Step 4 Click **Save**.

Step 5 Click **Apply Config**.

Intercom Interactions and Restrictions

Intercom Interactions

Feature	Interaction
Bulk Administration Tool	The Unified Communications Manager administrator can use the Bulk Administration Tool to add many intercom users at once instead of adding users individually. For more information, see Bulk Administration Guide for Cisco Unified Communications Manager .
Barge	When the intercom destination is a barge target, the Cisco Unified IP Phone can still support whisper intercom. When the destination caller chooses to talk to the intercom caller by pressing the intercom button, the original call is put on hold, and the barge initiator is released.
Do Not Disturb (DND)	The intercom call will override DND on the destination phone.
Call Preservation	When a call is preserved, the end user must hang up before the phone can reregister with Unified Communications Manager. When the intercom call is in whisper mode, it represents a one-way medium, and the terminating side might have no user at all; therefore, only the intercom call in talkback mode will get preserved. (Whisper intercom will not get preserved.)
Cisco Unified Survivable Remote Site Telephony (SRST)	When Cisco Unified IP Phones register with SRST, the phones do not register intercom lines; therefore, the feature will not be available when the phones are registered with SRST.
Cisco Unified Communications Manager Assistant	With the Unified Communications Manager Assistant Configuration Wizard, Cisco Unified Communications Manager Assistant configuration takes less time and eliminates errors. The partitions, calling search spaces, route point, and translation pattern automatically get created when the administrator successfully runs and completes the configuration wizard.
CTI	You can use CTI/JTAPI/TSP to set or modify the preconfigured target directory number for an intercom line. You will receive notification if the target directory number is updated or reconfigured through Cisco Unified Communications Manager Administration. Be aware that CTI/JTAPI/TSP is backward compatible if the intercom line is not configured to be controlled by the application. If the intercom line is configured in the application user list, you may have to make changes and test the compatibility.
Cisco Extension Mobility	The intercom feature interacts with Cisco Extension Mobility. The system presents an intercom line to a user who uses Cisco Extension Mobility to log in to a phone that supports the feature if the device profile that the user uses to log in has an intercom line that is provisioned. The phone must be the default device for that intercom line.

Feature	Interaction
Internet Protocol Version 6 (IPv6)	Intercom can support phones with an IP Addressing Mode of IPv4 Only or IPv4 and IPv6. During an intercom call, the talkback mode establishes media streams with the same IP version as the media stream that is used when the caller initiates intercom.
Intercom directory numbers (lines)	Intercom directory numbers (lines) are restricted to one device per intercom line. Cisco Extension Mobility is widely used; mobile users need the intercom feature but need it to be available only on a single device. You can assign intercom lines to either a regular device or to an extension mobility profile, but the system needs to enforce that an intercom line gets associated to either a regular device or to an extension mobility profile.
Extension mobility profile	An extension mobility profile can be used on more than one phone simultaneously, use the Default Activated Device field in the Intercom Directory Number Configuration window (Cisco Unified CM Administration > Call Routing > Intercom > Intercom Directory Number Configuration) to specify which device can display this intercom line. Intercom lines that are not used for Extension Mobility also require configuration of the Default Activated Device field.

Intercom Restrictions

The following restrictions apply to the Intercom feature:

Feature	Restrictions
Hold	The system does not allow intercom calls to be placed on hold.
Call Forwarding	Intercom calls cannot be forwarded.
Transfer	The system does not allow an intercom call to be transferred.
iDivert	The system does not allow an intercom call to be diverted.
Call Pickup/Directed Call Pickup	The call pickup groups do not include intercom calls.
DND	Intercom overrides Do Not Disturb (DND).
Bandwidth	If sufficient bandwidth does not exist, the intercom call fails.
Call Target	If two intercom calls are directed to a target, the first one goes through; the second fails with a busy tone.
Barge and cBarge	Intercom does not work with Barge and cBarge.
Conferencing	The system does not allow intercom calls to be in conference.
Monitoring and Recording	When an active call is being monitored or recorded, the user cannot receive nor place intercom calls.
Video	Video is not supported with intercom.

Feature	Restrictions
Intercom Partition	An intercom partition assigned to an item such as calling search space or to a route pattern cannot be deleted.
Intercom Calling Search Spaces	Intercom calling search spaces that devices, lines (DNs), translation patterns, or other items are using cannot be deleted.

Intercom Troubleshooting

Busy Tone When Dialing Out of Intercom Line

Problem

Phone plays busy tone when user is dialing out of intercom line.

Possible Cause

The DN is not in the same intercom partition as the calling number.

Solution

- Ensure that the DN is in the same intercom partition as the calling number.
- If it is, ensure that the dialed-out DN is configured on another phone and that the phone is registered with the same Unified Communications Manager cluster.

Intercom Calls cannot use Talkback with Speaker, Handset or Headset

Problem

User cannot go into talkback mode for intercom calls by using headset, handset, or speaker.

Possible Cause

This situation exists by design. The only way to go into the connected state for intercom calls is by pressing the corresponding line button.

Solution

User can end call by using speaker, handset, or headset.

Troubleshooting SCCP

Intercom Lines Not Showing Up on Phone

Problem

Intercom lines do not display on the phone.

Possible Cause

The phone version may be earlier than 8.3(1), or the button template may not be assigned to the phone.

Solution

- Check the phone version. Ensure that it is 8.3(1) or later.
- Determine whether the button template is assigned to the phone.
- Capture the sniffer trace between Cisco Unified Communications Manager and the phone. In the button template response, see whether intercom lines get sent to the phone (button definition = 0x17).

Intercom Lines Not Showing Up When Phone Falls Back to SRST

Problem

A phone that was configured with Unified Communications Manager Release 6.0(x) or later, includes two intercom lines. Unified Communications Manager stops and falls back to SRST. The intercom lines do not display.

Possible Cause

The SCCP version of SRST does not support SCCP Version 12.

Solution

- Check the SCCP Version of SRST. If SRST supports SCCP Version 12, it will support intercom lines.
- If SRST supports SCCP Version 12, capture a sniffer trace and ensure that the button template that the phone sent includes intercom lines.

Troubleshooting SIP

Debug Phones That Are Running SIP

Use this debug command: **Debug sip-messages sip-task gsmfsmIsm sip-adapter.**

Configuration of Phones That Are Running SIP

Show config —The command on the phone is displayed if intercom lines are configured as regular lines with featureid-->23.

Cisco Extension Mobility User Is Logged In But Intercom Line Does Not Display

Problem

The Cisco Extension Mobility user is logged in to a phone, but the user intercom line does not display.

Possible Cause

Default Activated Device is configured incorrectly.

Solution

- Check that the **Default Activated Device** is configured on the intercom directory number.
- Check that the **Default Activated Device** matches the device to which the user is logged in.

Intercom Line Fails to Display on Phone

Problem

An intercom line has been configured and assigned to a phone but fails to display on the phone.

Possible Cause

Default Activated Device value is set to the intercom line of this device.

Solution

If the configuration has been done, reset the phone.

