



Phone Features and Setup

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Phone Features and Setup Overview

After you install Cisco IP Phones in your network, configure their network settings, and add them to Third-Party Call Control System, you must use the Third-Party Call Control System to configure telephony features, optionally modify phone templates, set up services, and assign users.

You can modify additional settings for the Cisco IP Phone from Third-Party Call Control Configuration Utility. Use this web-based application to set up phone registration criteria and calling search spaces, to configure corporate directories and services, and to modify phone button templates, among other tasks.

Cisco IP Phone User Support

If you are a system administrator, you are likely the primary source of information for Cisco IP Phone users in your network or company. It is important to provide current and thorough information to end users.

To successfully use some of the features on the Cisco IP Phone (including Services and voice message system options), users must receive information from you or from your network team or must be able to contact you for assistance. Make sure to provide users with the names of people to contact for assistance and with instructions for contacting those people.

We recommend that you create a web page on your internal support site that provides end users with important information about their Cisco IP Phones.

Consider including the following types of information on this site:

- User guides for all Cisco IP Phone models that you support
- Information on how to access the Cisco Unified Communications Self Care Portal
- List of features supported
- User guide or quick reference for your voicemail system

Telephony Features

After you add Cisco IP Phones to Third-Party Call Control system, you can add functionality to the phones. The following table includes a list of supported telephony features, many of which you can configure by using Third-Party Call Control system.



Note The Third-Party Call Control system also provides several service parameters that you can use to configure various telephony functions.

Feature	Description and More Information
AES 256 Encryption Support for Phones	Enhances security by supporting TLS 1.2 and new ciphers.
Alphanumeric Dialing	Allows users to place a call with alphanumeric characters. You can use these characters for alphanumeric dialing: a-z, A-Z, 0-9, -, _, ., and +.
Any Call Pickup	Allows users to pick up a call on any line in their call pickup group, regardless of how the call was routed to the phone.
Audio Settings	Configures audio settings for the phone speaker, the handset, and the headsets that are connected to the phone.
Auto Answer	Connects incoming calls automatically after a ring or two. Auto Answer works with either the speakerphone or the headset.
Blind Transfer	Blind Transfer: This transfer joins two established calls (call is in hold or in connected state) into one call and drops the feature initiator from the call. Blind Transfer does not initiate a consultation call and does not put the active call on hold. Some JTAPI/TAPI applications are not compatible with the Join and Blind Transfer feature implementation on the Cisco IP Phone and you may need to configure the Join and Direct Transfer Policy to disable join and direct transfer on the same line or possibly across lines.

Feature	Description and More Information
Busy Lamp Field (BLF)	Allows user to monitor call state of a directory number.
Busy Lamp Field (BLF) Pickup	Allows user to pick up incoming calls to the directory number monitored through BLF.
Call Back	Provides users with an audio and visual alert on the phone when a busy or unavailable party becomes available.
Call Display Restrictions	Determines the information that will display for calling or connected lines, depending on the parties who are involved in the call. RPID and PAID caller id handling are supported.
Call Forward	Allows users to redirect incoming calls to another number. Call Forward services include Call Forward All, Call Forward Busy, Call Forward No Answer.
Call Forward Notification	Allows you to configure the information that the user sees when receiving a forwarded call.
Call History for Shared Line	<p>Allows you to view shared line activity in the phone Call History. This feature:</p> <ul style="list-style-type: none"> • Logs missed calls for a shared line. • Logs all answered and placed calls for a shared line.
Call Park	Allows users to park (temporarily store) a call and then retrieve the call by using another phone.
Call Pickup	<p>Allows users to redirect a call that is ringing on another phone within their pickup group to their phone.</p> <p>You can configure an audio and visual alert for the primary line on the phone. This alert notifies the users that a call is ringing in their pickup group.</p>
Call Waiting	Indicates (and allows users to answer) an incoming call that rings while on another call. Incoming call information appears on the phone display.
Caller ID	Caller identification such as a phone number, name, or other descriptive text appear on the phone display.
Caller ID Blocking	Allows a user to block their phone number or name from phones that have caller identification enabled.
Calling Party Normalization	Calling party normalization presents phone calls to the user with a dialable phone number. Any escape codes are added to the number so that the user can easily connect to the caller again. The dialable number is saved in the call history and can be saved in the Personal Address Book.
Cisco Unified Video Advantage (CUVA)	<p>Allows users to make video calls by using a Cisco IP Phone, a personal computer, and an external video camera.</p> <p>Note Configure the Video Capabilities parameter in the Product Specific Configuration Layout section in Phone Configuration.</p> <p>See the Cisco Unified Video Advantage documentation.</p>

Feature	Description and More Information
Conference	<p>Allows a user to talk simultaneously with multiple parties by calling each participant individually.</p> <p>Allows a noninitiator in a standard (ad hoc) conference to add or remove participants; also allows any conference participant to join together two standard conferences on the same line.</p> <p>Note Be sure to inform your users whether these features are activated.</p>
Configurable RTP/sRTP Port Range	<p>Provides a configurable port range (Port Min to Port Max) for Real-Time Transport Protocol (RTP) and secure Real-Time Transport Protocol (sRTP).</p> <p>The value range for the Port Min and Port Max is 2048 to 49151.</p> <p>The default RTP and sRTP port range is 16384 to 16482.</p> <p>Note If the value range (Port Max - Port Min) is less than 16 or you use an incorrect port range, the port range (16382 to 32766) is used instead.</p> <p>You configure the RTP and sRTP port range in the SIP Profile.</p>
Contacts Management of the BroadSoft Personal Directory on the Phone	<p>Provides the user with the ability to add, edit, and delete in the BroadSoft Personal directory. Allows the user to add contacts from recent calls or any types of directories (if enabled).</p> <p>In addition administrator can set the BroadSoft Personal directory as the target directory to store new contacts.</p>
Directed Call Pickup	<p>Allows a user to pick up a ringing call on a DN directly by pressing the GPickUp softkey and entering the directory number of the device that is ringing.</p>
Divert	<p>Allows a user to transfer a ringing, connected, or held call directly to a voice-messaging system. When a call is diverted, the line becomes available to make or receive new calls.</p>
Do Not Disturb (DND)	<p>When DND is turned on, either no audible rings occur during the ringing-in state of a call, or no audible or visual notifications of any type occur.</p>
DND and Call Forward Indication on Non-selected Line Key	<p>Displays the DND and call forward icons next to the line key label. The line key should be enabled with feature key sync. The line key should also be enabled with DND or call forward.</p>
Emergency Calls	<p>Enables users to make emergency calls. The emergency services receive the phone's location and a call-back number, to use when the emergency call unexpectedly disconnects.</p>
Executive-Assistant (Cisco IP Phone 6871 Multiplatform Phones only)	<p>Indicates shared call control for executives and their assistants.</p>
Executive-Assistant Setting Enhancements (Cisco IP Phone 6871 Multiplatform Phones only)	<p>Allows you to show or hide the Call filter menu item on the phone for the users of the assistant role.</p> <p>Enables the executive to set the call filtering criteria and view the associated assistants.</p> <p>Enables the assistant to view the associated executives and choose to opt in to or opt out of the executive's assistants pool. Allows the assistant to activate or deactivate call diversion and call filtering.</p>

Feature	Description and More Information
Feature Activation Code	Allows a user to enable, disable, or configure the Call Forward All service.
Headset Sidetone Control	Allows an administrator to set the sidetone level of a wired headset.
Group Call Pickup	Allows a user to answer a call that is ringing on a directory number in another group.
Hold Status	Enables phones with a shared line to distinguish between the local and remote lines that placed a call on hold.
Hold/Resume	Allows the user to move a connected call from an active state to a held state. <ul style="list-style-type: none"> • No configurations are required unless you want to use Music On Hold. See “Music On Hold” in this table. • See “Hold Reversion” in this table.
HTTP Download	Enhances the file download process to the phone to use HTTP by default. If the HTTP download fails, the phone reverts to using the TFTP download.
HTTP Proxy	Allows you to set up a proxy server for the phone.
HTTPS for Phone Services	Increases security by requiring communication using HTTPS. <p>Note When the web is in HTTPS mode, the phone is an HTTPS server.</p>
Improve Caller Name and Number Display	Improves the display of caller names and numbers. If the Caller Name is known, then the Caller Number is displayed instead of Unknown.
Jitter Buffer	The Jitter Buffer feature handles jitter from 10 milliseconds (ms) to 1000 ms for both audio and video streams.
Join Across Lines	Allows users to combine calls that are on multiple phone lines to create a conference call. Some JTAPI/TAPI applications are not compatible with the Join and Direct Transfer feature implementation on the Cisco IP Phone and you may need to configure the Join and Direct Transfer Policy to disable join and direct transfer on the same line or possibly across lines.
Join	Allows users to combine two calls that are on one line to create a conference call and remain on the call.
Message Waiting	Defines directory numbers for message waiting on and off indicators. A directly-connected voice-message system uses the specified directory number to set or to clear a message waiting indication for a particular Cisco IP Phone.
Message Waiting Indicator	A light on the handset that indicates that a user has one or more new voice messages. A line key LED or a KEM key LED that indicates that a monitored voicemail user or group has one or more new voice messages.
Minimum Ring Volume	Sets a minimum ringer volume level for an IP phone.
Missed Call Logging	Allows a user to specify whether missed calls will be logged in the missed calls directory for a given line appearance.

Feature	Description and More Information
Multicasting Paging	Enables users to page some or all phones. If the phone is on an active call while a group page starts, the incoming page is ignored.
Multiple Calls Per Line Appearance	<p>Each line can support multiple calls. By default, the phone supports two active calls per line, and a maximum of ten active calls per line. Only one call can be connected at any time; other calls are automatically placed on hold.</p> <p>The system allows you to configure maximum calls/busy trigger not more than 10/6. Any configuration more than 10/6 is not officially supported.</p>
Music On Hold	Plays music while callers are on hold.
Mute	Mutes the handset or headset microphone.
No Alert Name	Makes it easier for end users to identify transferred calls by displaying the original caller's phone number. The call appears as an Alert Call followed by the caller's telephone number.
Noise Removal	Allows a user to filter out background noises (such as, keyboard typing, dog barking, clapping, and so on) in a call or meeting.
Pause in Speed Dial	Users can set up the speed-dial feature to reach destinations that require Forced Authorization Code (FAC) or Client Matter Code (CMC), dialing pauses, and additional digits (such as a user extension, a meeting access code, or a voicemail PIN) without manual intervention. When the user presses the speed dial, the phone establishes the call to the specified DN and sends the specified FAC, CMC, and DTMF digits to the destination and inserts the necessary dialing pauses.
Peer Firmware Sharing (PFS)	<p>Allows IP Phones located at remote sites to share the firmware files amongst them, which saves bandwidth when the upgrade process takes place. This feature uses Cisco Peer-to-Peer-Distribution Protocol (CPPDP) which is a Cisco proprietary protocol used to form a peer-to-peer hierarchy of devices. CPPDP is also used to copy firmware or other files from peer devices to the neighbouring devices.</p> <p>PFS aids in firmware upgrades in branch/remote office deployment scenarios that run over bandwidth-limited WAN links.</p> <p>Provides the following advantages over the traditional upgrade method:</p> <ul style="list-style-type: none"> • Limits congestion on TFTP transfers to centralized remote TFTP servers • Eliminates the need to manually control firmware upgrades • Reduces phone downtime during upgrades when large numbers of devices are reset simultaneously <p>The more the number of IP phones, the better it's performance compared to the traditional firmware upgrade method.</p>
Plus Dialing	<p>Allows the user to dial E.164 numbers prefixed with a plus (+) sign.</p> <p>To dial the + sign, the user needs to press and hold the star (*) key for at least 1 second. This applies to dialing the first digit for an on-hook (including edit mode) or off-hook call.</p>

Feature	Description and More Information
Power Negotiation over LLDP	Allows the phone to negotiate power using Link Level Endpoint Discovery Protocol (LLDP) and Cisco Discovery Protocol (CDP).
Problem Reporting Tool	Submits phone logs or reports problems to an administrator.
Programmable Feature Buttons	You can assign features, such as New Call, Call Back, and Call Forward All to line buttons.
Redial	Allows users to call the most recently dialed phone number by pressing a button or the Redial softkey.
Remote Customization (RC)	Allows a service provider to customize the phone remotely. There is no need for either the service provider to physically touch the phone or a user to configure the phone. The service provider can work with a sales engineer at the time of ordering to set this up.
Ringtone Setting	Identifies ring type used for a line when a phone has another active call.
Reverse Name Lookup	Identifies the caller name using the incoming or outgoing call number. You must configure either the LDAP Directory or the XML directory. You can enable or disable the reverse name lookup using the phone administration web page.
RTCP Hold For SIP	Ensures that held calls are not dropped by the gateway. The gateway checks the status of the RTCP port to determine if a call is active or not. By keeping the phone port open, the gateway will not end held calls.
Serviceability for SIP Endpoints	Enables administrators to quickly and easily gather debug information from phones.
Shared Line	Allows a user with multiple phones to share the same phone number or allows a user to share a phone number with a coworker.
Show Caller Name and Caller Number	<p>The phones can display both the caller name and caller number for incoming calls. The phone screen size limits the length of the caller name and the caller number that display.</p> <p>If boxes are displayed in the caller name, follow the procedure in Display Caller Number Instead of Unresolved Caller Name, on page 117.</p> <p>This feature applies to the incoming call alert only and doesn't change the Call Forward and Hunt Group features.</p> <p>See "Caller ID" in this table.</p>
Show Product Configuration Version	Allows you to customize the product configuration version that shows on the phone screen Product information.
Show Duration for Call History	<p>Displays the time duration of placed and received calls in the Call History details.</p> <p>If the duration is greater than or equal to one hour, the time is displayed in the Hour, Minute, Second (HH:MM:SS) format.</p> <p>If the duration is less than one hour, the time is displayed in the Minute, Second (MM:SS) format.</p> <p>If the duration is less than one minute, the time is displayed in the Second (SS) format.</p>

Feature	Description and More Information
Silence Incoming Call	Allows you to silence an incoming call by pressing Ignore softkey or by pressing the volume button down.
SIP Transport Auto-Selection	Configures the phone to select the appropriate SIP transport protocol automatically, based on the NAPTR records on the DNS server. See Configure the SIP Transport, on page 63 .
Speed Dial	Dials a specified number that has been previously stored.
Support Executive and Assistant Roles for a User (Cisco IP Phone 6871 Multiplatform Phones only)	Allows you to set the preference for the executive-assistant role. The phone can select the role when it retrieves both roles from the BroadWorks server.
Synchronization of Call Waiting and Anonymous Call Rejection	Allows you to enable or disable synchronization of the Call Waiting and Anonymous Call Rejection functions between a specific line and a BroadSoft XSI server.
Time Zone Update	Updates the Cisco IP Phone with time zone changes.
Transfer	Allows users to redirect connected calls from their phones to another number. Some JTAPI/TAPI applications are not compatible with the Join and Direct Transfer feature implementation on the Cisco IP Phone and you may need to configure the Join and Direct Transfer Policy to disable join and direct transfer on the same line or possibly across lines.
Voice/Video data priorities	Enables you to prioritise voice or video data in limited bandwidth conditions, by specifying different ToS field values for voice and video packets.
Voice Message System	Enables callers to leave messages if calls are unanswered.
VPN Connection	Allows you to set up a VPN connection for the phone.
Web Access Enable by Default	Web services are enabled by default.
XSI call logs display	Allows you to configure a phone to display recent call logs from either the BroadWorks server or the local phone. After you enable the feature, the Recents screen has a Display recents from menu and the user can choose the XSI call logs or the local call logs.

Feature Buttons and Softkeys

The following table provides information about features that are available on softkeys, features that are available on dedicated feature buttons, and features that you need to configure as programmable feature buttons. A “Supported” entry in the table indicates that the feature is supported for the corresponding button type or softkey. Of the two button types and softkeys, only programmable feature buttons require configuration in Cisco IP Phone administration.

Table 1: Features with Corresponding Buttons and Softkeys

Feature Name	Dedicated Feature Button	Programmable Feature Button	Softkey
Answer		Supported	Supported
Call Back		Supported	Supported
Call Forward All		Supported	Supported
Call Forward Busy		Supported	Supported
Call Forward No Answer		Supported	Supported
Call Park		Supported	Supported
Call Park Line Status		Supported	
Call Pickup (Pick Up)		Supported	Supported
Call Pickup Line Status		Supported	
Category		Not supported	Supported
Conference	Supported		Supported (only displayed during connected call conference scenario)
Divert			Supported
Do Not Disturb		Supported	Supported
Executive - Join ongoing call		Supported	Supported
Executive - Call filtering activation and deactivation			Supported
Executive - Call filtering status		Supported	
Executive - Call transfer to self		Supported	Supported
Executive - Access to Settings > Executive menu		Supported	
Executive Assistant - Call diversion activation and deactivation			Supported
Executive Assistant - Call filtering activation and deactivation			Supported
Executive Assistant - Call initiation on behalf of executive		Supported	Supported

Feature Name	Dedicated Feature Button	Programmable Feature Button	Softkey
Executive Assistant - Call transfer to executive		Supported	Supported
Executive Assistant - Access to Settings > Assistant menu		Supported	
Group Pickup (Group Pick Up)		Supported	Supported
Hold	Supported		Supported
Hunt Groups		Supported	Supported
Intercom		Supported	
Malicious Call Identification (MCID)		Supported	Supported
Meet Me		Supported	Supported
Mobile Connect (Mobility)		Supported	Supported
Mute	Supported		
Other Pickup		Supported	Supported
Privacy		Supported	
Queue Status		Supported	
Quality Reporting Tool (QRT)		Supported	Supported
Record	Not supported	Not supported	Supported
Redial		Supported	Supported
Speed Dial		Supported	Supported
Speed Dial Line Status		Supported	
Transfer	Supported		Supported (only displayed during connected call transfer scenario)

Enable the User to Configure Features on Line Keys

You can enable the user to configure features on line keys. The user can then add any of the configured features to the dedicated line keys. For the supported features, see [Configurable Features on Line Keys, on page 123](#).

For the phones with a key expansion module, the user can configure the features on the key expansion module keys. For more information, see [Enable the User to Configure Features on Key Expansion Module Line Keys](#).

Before you begin

- Access the phone administration web page. See [Access the Phone Web Interface](#).
- Ensure that the line keys are not in the Inert mode.

Procedure

Step 1 (Optional) Disable the extension of a line key on which you allow users to configure the features.

Note If the Direct PLK Configuration feature is disabled, you must disable the extension to allow users to configure the features on the line key. If the feature is enabled, you can skip this step. For details, see [Enable Direct PLK Configuration](#).

- Select **Voice > Phone**.
- Select a line key.
- Set the **Extension** to **Disabled**.

You can also disable the line key in the configuration file (cfg.xml):

```
<Extension_n_ ua="na">Disabled</Extension_n_>
```

where *n* is the extension number.

Step 2 Select **Voice > Att Console**.

Step 3 In the **General** section, configure the **Customizable PLK Options** parameter with the codes of your desired features, as defined in [Configurable Features on Line Keys](#), on page 123.

Example: You configure this parameter with `blf;sd;mwi;shortcut;dnd;`. The user does a long-press on an unassigned line key to see the feature list. The feature list looks like:

1 None

2 Speed dial

3 BLF presence

4 BLF + Speed dial

5 MWI

6 MWI + Speed dial

7 Menu shortcut

8 Do not disturb

The user can then select a feature or a menu shortcut to add to the line key.

If you don't enter any value in the **Customizable PLK Options** parameter, that is when the parameter is empty, the **Select** softkey doesn't appear on the **Select feature** screen of the phone.

You can also configure this parameter in the configuration file (cfg.xml) with a string in this format:

```
<Customizable_PLK_Options ua="na">mwi;sd;blf;shortcut;dnd;</Customizable_PLK_Options>
```

Step 4 Click **Submit All Changes**.

Parameters for Features on Line Keys

The following table defines the function and usage of the speed dial parameters in the **Line Key (n)** sections under the **Voice > Phone** tab in the phone web interface. It also defines the syntax of the string that is added in the phone configuration file (cfg.xml) with XML code to configure a parameter.

Table 2: Parameters for Features on Line Keys

Parameter	Description and default value
Extension	<p>Assigns an extension number to a line key or disables the extension function on a line key.</p> <p>The number of line keys varies with phone models. When assigned with an extension number, you can configure the line key as a telephony extension. You can assign the line key with extended functions, for example, speed dial, Busy Lamp Field, and call pickup.</p> <p>By default, you don't need to disable the extension to assign the line key with extended functions. However, if the Direct PLK Configuration feature is disabled, you must disable the extension to achieve the assignment. For more information about how to enable the feature, see Enable Direct PLK Configuration.</p> <ul style="list-style-type: none"> • In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre data-bbox="673 955 1242 1123"><Extension_1_ ua="na">1</Extension_1_> <Extension_2_ ua="na">2</Extension_2_> <Extension_3_ ua="na">3</Extension_3_> <Extension_4_ ua="na">Disabled</Extension_4_></pre> • On the phone web interface, select a number or Disabled from the options. <p>Allowed values: Disabled 1 2 3 4, the allowed values vary with phones.</p> <p>Default: n, where n is the line key number.</p>

Parameter	Description and default value
Extended Function	<p>Used to assign extended functions to a line key on the phone. The supported functions are:</p> <ul style="list-style-type: none"> • Busy Lamp Field (BLF) Example: <code>fnc=blf;sub=BLF_List_URI@\$PROXY;usr=user_ID@\$PROXY</code> • BLF with Call Pickup Example: <code>fnc=blf+cp;sub=BLF_List_URI@\$PROXY;usr=user_ID@\$PROXY</code> • Speed Dial Example: <code>fnc=sd;usr=user_ID@\$PROXY</code> • BLF with Speed Dial Example: <code>fnc=blf+sd;sub=BLF_List_URI@\$PROXY;usr=user_ID@\$PROXY</code> • BLF with Speed Dial and Call Pickup Example: <code>fnc=blf+sd+cp;sub=BLF_List_URI@\$PROXY;usr=user_ID@\$PROXY</code> <p>Note If the Direct PLK Configuration feature is disabled, the parameter is available only when the Extension of the line key is set to Disabled.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> • In the phone configuration file with XML(cfg.xml), enter a string in this format: <code><Extended_Function_1>fnc=sd;ext=user_ID@\$PROXY</Extended_Function_1></code> • On the phone web interface, specify the functions that apply to the line key. <p>Default: Empty</p>

Configure Speed Dial on a Line Key

You can configure speed dial on an idle line of a user phone. The user can then use that line key to speed-dial a number. When you enable the speed dial on the line key, the user sees the speed-dial icon, a name, and an extension number for the speed dial line key. The user presses the line key to dial the assigned extension.

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

-
- Step 1** Select **Voice > Phone**.
 - Step 2** Select a line key on which to configure speed-dial.
 - Step 3** (Optional) Set the **Extension** parameter to **Disabled** to disable the extension.

Note If the Direct PLK Configuration feature is disabled, you must disable the extension to configure speed dial on the line key. If the feature is enabled, you can skip this step. For details, see [Enable Direct PLK Configuration](#).

You can also configure this parameter in the phone configuration file (cfg.xml). The parameter is line-specific. Enter a string in this format:

```
<Extension_2_ ua="na">Disabled</Extension_2_>
```

Step 4 In the **Extended Function** parameter, enter a string in this format:

```
fnc=sd;ext=9999@$PROXY;nme=xxxx
```

If you configure a phone with alphanumeric dialing feature in which the phone can place a call with alphanumeric characters instead of the traditional digits, you can enter a string in this format:

```
fnc=sd;ext=xxxx.yyyy@$PROXY;vid=n;nme=xxxx
```

where:

- fnc= sd means function=speed dial
- ext= 9999 is the phone that the line key calls. Replace 9999 with appropriate phone number.
ext= xxxx.yyyy is the phone that the line key calls. Replace xxxx.yyyy with alphanumeric characters. You can use these characters for alphanumeric dialing: a-z, A-Z, 0-9, -, _, ., and +.
- vid=n is the line index of the phone.
- nme= XXXX is the name displayed on the phone for the speed-dial line key. Replace XXXX with a name.

You can also configure this parameter in the phone configuration file (cfg.xml). The parameter is line-specific. Enter a string in this format:

```
<Extended_Function_2_ ua="na">fnc=sd;ext=9999@$PROXY;nme=xxxx</Extended_Function_2_>
```

Step 5 Click **Submit All Changes**.

DTMF Wait and Pause Parameters

Speed dial, directory, extended function, and other strings configured in the phone can include *wait* (X) and *pause* (,) characters. These characters that allow manual and automatic DTMF (Dual-Tone Multi-Frequency) signal transmission.

You can add the wait and pause character with speed-dial, extended function, or directory strings in the format:

```
{Dial_String}[ ][,|X][DTMF_string][,|X][DTMF_string]
```

where:

- Dial_String —is the number that the user is trying to reach. For example, 8537777 or 14088537777.
- [](space)—is a dial termination character that defines or delimits the end of the dial string. The space is mandatory. If the phone encounters an X or a comma (,) before the space, the characters are treated as part of dial string.

- , (comma)—is a 2-second pause that is inserted for each comma in the string.
- X (wait)—indicates that the phone is waits for user input and acknowledgement.

When the user manually enters the DTMF signal with the key pad, the user sees a message to acknowledge that the transmission of the manual entry is complete. On confirmation, the phone sends any DTMF signals defined by the *DTMF_string*. The phone executes the next parameter. If there are no more parameters in the dial string to execute, the phone exits to the main screen.

The wait prompt window does not disappear until the user confirms the wait prompt or the call is ended either by the user or ended by the remote device.

- *DTMF_string*—is the DTMF signals that a user sends to a remote device after the call is connected. The phone cannot send signals other than valid DTMF signals.

Example:

18887225555,,5552X2222

A speed dial entry triggers the phone to dial 18887225555. The space indicates the end of the dial string. The phone waits 4 seconds (2 commas), and then sends the DTMF signals 5552.

A message is displayed, prompting the user to manually enter digits. When the user finishes dialing the digits, the user presses **OK** to confirm the manual input is complete. The phone sends the DTMF signals 2222.

Usage Guidelines

A user can transmit digits any time, as long as the call is connected.

The maximum length of the string, including the Xs or commas (,), is limited to the length of a speed-dial entry, dial screen entry, directory entry, and other dialed strings.

When a wait is initiated, the phone displays the home screen and prompts the user to input more digits with the key pad. If this action occurs while the user is editing an entry, the edits might be lost.

If only the first part of a dial string matches a dial plan when the call is dialed, the portion of the dial string that does not match the dial string is ignored. For example:

85377776666,,1,23

If 8537777 matches a dial plan, the characters 6666 are ignored. The phone waits 4 seconds before sending DTMF 1. It then wait 2 seconds and sends DTMF 23.

When logging the call, the phone only logs the dial string; the DTMF strings are not logged.

Valid DTMF signals are 0-9, *, or #. All other characters are ignored.

Limitations

When the call is connected and immediately transferred, the phone might not be able to process the DTMF signals. This depends on the length of time that the call is connected before it is transferred.

Phone Configuration for Monitoring Other Phones

You can configure the phone to monitor the status of lines on other phones. This feature is useful if users routinely handle calls for colleagues and need to see if they are available to answer calls. The phone monitors each line on a separate line key. The monitoring line keys function as Busy Lamp Field (BLF) keys. A BLF is an LED that changes color to indicate the status of the monitored line:

Table 3: BLF Key LED Status

LED Color	Meaning
Green	The monitored line is available.
Red	The monitored line is busy.
Blinking red	The monitored line is ringing.
Amber	Error in BLF key configuration.

If the phone is registered to a BroadSoft server, you can set up the phone to monitor multiple users, with a single set of configurations.

Configure the Phone to Monitor Multiple Users' Lines

If the phone is registered to a BroadSoft server, you can configure the phone to monitor the entire BLF list. The phone assigns available line keys in sequence to monitor the BLF list entries, and starts showing the status of the monitored lines on the BLF keys.

You can also configure the parameters in the phone configuration file with XML (cfg.xml) code. To configure each parameter, see the syntax of the string in [Parameters for Monitoring Multiple Users' Lines, on page 17](#).

Before you begin

- Ensure that the phone is registered to a BroadSoft server.
- You set up a BLF list for a user of the phone on the BroadSoft server.
- Access the administration web interface. See [Access the Phone Web Interface](#).
- Ensure that the monitored lines on the BLF keys are not in the Inert mode.

Procedure

-
- Step 1** Select **Voice > Att Console**.
- Step 2** Configure **BLF List URI**, **Use Line Keys For BLF List**, **BLF List**, and **BLF Label Display Mode** as described in [Parameters for Monitoring Multiple Users' Lines, on page 17](#).
If you allow users to configure individual BLF keys (see [Enable the User to Configure Features on Line Keys, on page 11](#)), we recommend setting **BLF List** to **Hide**.
- Step 3** Click **Submit All Changes**.
-

Parameters for Monitoring Multiple Users' Lines

The following table defines the function and usage of the BLF parameters in the **General** section under the **Voice > Att Console** tab in the phone web interface. It also defines the syntax of the string that is added in the phone configuration file (cfg.xml) with XML code to configure a parameter.

Table 4: Parameters for Monitoring Multiple Users' Lines

Parameter	Description and default value
BLF List URI	<p>The Uniform Resource Identifier (URI) of the Busy Lamp Field (BLF) list that you have set up for a user of the phone, on the BroadSoft server.</p> <p>This field is only applicable if the phone is registered to a BroadSoft server. The BLF list is the list of users whose lines the phone is allowed to monitor. See Phone Configuration for Monitoring Other Phones, on page 16 for details.</p> <p>The BLF List URI must be specified in the format <code><URI_name>@<server></code>. The BLF List URI specified must be the same as the value configured for the List URI: sip parameter on the BroadSoft server.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><BLF_List_URI ua="na">MonitoredUsersList@sipurash22.com</BLF_List_URI></pre> On the phone web interface, specify the BLF list that is defined on the BroadSoft server. <p>Default: Blank</p>
Use Line Keys For BLF List	<p>Controls whether the phone uses its line keys to monitor the BLF list, when monitoring of the BLF list is active.</p> <p>When set to No, the phone uses only the Key Expansion Module keys to monitor the BLF list.</p> <p>This setting only has significance when BLF List is set to Show.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Use_Line_Keys_For_BLF_List ua="na">Yes</Use_Line_Keys_For_BLF_List></pre> On the phone web interface, set this field to Yes to use the unregistered line keys to monitor the BLF list entries. Set it to No to prevent the line keys from being used for monitoring the BLF list entries. <p>Default: No</p>

Parameter	Description and default value
BLF List	<p>Activates or deactivates monitoring of the BLF list.</p> <p>When set to Show, the phone assigns available line keys or the Key Expansion Module keys in sequence, to monitor the BLF list entries. The labels of the BLF list keys show the names of the monitored users and the status of the monitored lines.</p> <p>This setting only has significance when BLF List URI is configured.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><BLF_List ua="rw">Show</BLF_List></pre> On the phone web interface, set this field to Show or Hide to activate or deactivate the BLF monitoring feature. <p>Allowed values: Show Hide Default: Show</p>
BLF Label Display Mode	<p>Specifies how the BLF entries are displayed on the line keys or on the Key Expansion Module keys. The options are: Name, Ext (extension number), and Both.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><BLF_Label_Display_Mode ua="na">Name</BLF_Label_Display_Mode></pre> On the phone web interface, select an option from the list. <p>Allowed values: Name Ext Both Default: Name</p>

Configure a Line Key on the Phone to Monitor a Single User's Line

You can configure busy lamp field on a phone line when a user needs to monitor a coworker's availability to handle calls.

You can configure the busy lamp field to work with any combination of speed dial or call pickup. For example, busy lamp field alone, busy lamp field and speed dial, busy lamp field and call pickup, or busy lamp field, speed dial, and call pickup can all be configured to work together. But speed dial alone requires a different configuration.

You can also configure the parameters in the phone configuration file with XML (cfg.xml) code. To configure each parameter, see the syntax of the string in [Parameters for Monitoring a Single Line, on page 20](#).

Before you begin

- Access the phone administration web page. See [Access the Phone Web Interface](#).
- Ensure that the line key on which to configure a busy lamp field is not in the Inert mode.

Procedure

-
- Step 1** Select **Voice > Phone**.
- Step 2** Select a line key on which to configure a busy lamp field.
- Step 3** Configure the **Extension**, **Extended Function**, fields as defined in [Parameters for Monitoring a Single Line, on page 20](#).
- Step 4** Click **Submit All Changes**.
-

Parameters for Monitoring a Single Line

The following table defines the function and usage of the Busy Lamp Field (BLF) parameters in the **Line Key (n)** sections under the **Voice > Phone** tab in the phone web interface. It also defines the syntax of the string that is added in the phone configuration file (cfg.xml) with XML code to configure a parameter.

Table 5: Parameters for Monitoring a Single Line

Parameter	Description and default value
Extension	<p>Assigns an extension number to a line key or disables the extension function on a line key.</p> <p>The number of line keys varies with phone models. When assigned with an extension number, you can configure the line key as a telephony extension. You can assign the line key with extended functions, for example, speed dial, Busy Lamp Field, and call pickup.</p> <p>By default, you don't need to disable the extension to assign the line key with extended functions. However, if the Direct PLK Configuration feature is disabled, you must disable the extension to achieve the assignment. For more information about how to enable the feature, see Enable Direct PLK Configuration.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Extension_1_ ua="na">1</Extension_1_> <Extension_2_ ua="na">Disabled</Extension_2_> <Extension_3_ ua="na">Disabled</Extension_3_> <Extension_4_ ua="na">Disabled</Extension_4_></pre> On the phone web interface, set the parameter to Disabled to monitor another line on the line key. <p>Allowed values: Disabled 1 2 3 4, the allowed values vary with phones.</p> <p>Default: n, where n is the line key number.</p>

Parameter	Description and default value
Extended Function	<p>Used to assign extended functions to a line key on the phone. The supported functions are:</p> <ul style="list-style-type: none"> • Busy Lamp Field (BLF) Example: <code>fnc=blf;sub=BLF_List_URI@\$PROXY;ext=user_ID@\$PROXY</code> • BLF with Call Pickup Example: <code>fnc=blf+cp;sub=BLF_List_URI@\$PROXY;ext=user_ID@\$PROXY</code> • BLF with Speed Dial Example: <code>fnc=blf+sd;sub=BLF_List_URI@\$PROXY;ext=user_ID@\$PROXY</code> • BLF with Speed Dial and Call Pickup Example: <code>fnc=blf+sd+cp;sub=BLF_List_URI@\$PROXY;ext=user_ID@\$PROXY</code> <p>Note If the Direct PLK Configuration feature is disabled, the parameter is available only when the Extension of the line key is set to Disabled.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> • In the phone configuration file with XML(cfg.xml), enter a string in this format: <code><Extended_Function_1>fnc=blf;sub=BLF_List_URI@\$PROXY;ext=user_ID@\$PROXY</Extended_Function_1></code> • In the phone web interface, configure the parameter with a valid syntax to enable monitoring another user or extension using the line key. <p>Default: Empty</p>

Enable Conference Button with a Star Code

You can add a star code to the Conference button so that your user can press the button only once to add many active calls to a conference. You can enable this feature from the phone web page.

Before you begin

- The phone server must support this feature.
- Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

- Step 1** Select **Voice > Ext(n)**, where n is an extension number.
- Step 2** In the **Call Features Settings** section, configure the **Conference Single Hardkey** and **Conference Bridge URL** fields as defined in [Conference Button Parameters, on page 22](#).

You can also enable the conference button with a xml file. Enter a string in this format:

```
<Conference_Bridge_URL_1_ ua="na">*55</Conference_Bridge_URL_1_>
<Conference_Single_Hardkey_1_ ua="na">Yes</Conference_Single_Hardkey_1_>
```

Step 3 Click **Submit All Changes**.

Conference Button Parameters

The following table defines the function and usage of the conference button parameters in the **Call Features Settings** section under the **Voice > Ext (n)** tab in the phone web interface. It also defines the syntax of the string that is added in the phone configuration file (cfg.xml) with XML code to configure a parameter.

Table 6: Conference Button Parameters

Parameter	Description and default value
Conference Single Hardkey	<p>You can use this field to specify whether to use only the Conferenc button on the key to initiate a conference call. When set to Yes, the user can use only the Conference button to initiate a conference call. The Conf softkey is deactivated. When set to No, the user can use both the Conference button and the Conf softkey.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Conference_Single_Hardkey_1_ ua="na">Yes</Conference_Single_Hardkey_1_></pre> In the phone web interface, set this field to Yes or No to enable or disable this feature. <p>Allowed values: Yes No</p> <p>Default: No</p>
Conference Bridge URL	<p>URL used to join a conference call, generally in the form of a dialable number or a URI in this format <code>user@IPaddress:port</code>.</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Conference_Bridge_URL_1_ ua="na">*55</Conference_Bridge_URL_1_></pre> in the phone web interface, specify the URI or a number as the conference bridge. <p>Default: Empty</p>

Enable Dial Assistance (8800 and 6871)

You can configure dial assistance so that your users can place calls more quickly. As a user dials, the phone displays a list of closely-matched phone numbers on the screen.

Before you begin

Access the phone administration web interface. See [Access the Phone Web Interface](#).

Procedure

- Step 1** Select **Voice > User**.
- Step 2** In the **Supplementary Services** section, set **Dial Assistance** field to **Yes**.
You can also enable Dial Assistance in the phone configuration file (cfg.xml).

```
<Dial_Assistance ua="rw">No</Dial_Assistance>
```
- Step 3** Click **Submit All Changes**.
-

Configure Alphanumeric Dialing

You can configure a phone so that the user of the phone can make a call by dialing alphanumeric characters instead of dialing only digits. In the phone web page, you can configure alphanumeric dialing with speed-dial, blf, and call pickup.

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

- Step 1** Select **Voice > Ext (n)**.
- Step 2** In the **Dial Plan** section, set **Enable URI Dialing** to **Yes** to enable alphanumeric dialing.
You can also configure the parameter in the configuration file (cfg.xml). The parameter is line-specific.

```
<Enable_URI_Dialing_1_ ua="na">Yes</Enable_URI_Dialing_1_>
```
- Step 3** Select **Voice > Phone**, you can add a string on a line key in this format to enable speed dial with alphanumeric dialing capability:

```
fnc=sd;ext=xxxx.yyyy@$PROXY;nme=yyy,xxxx
```


For example:

```
fnc=sd;ext=first.last@$PROXY;nme=Last,First
```


The above example will enable the user to dial "first.last" to make a call.
- Note** The supported characters that you can use for alphanumeric dialing are a-z, A-Z, 0-9, -, _, ., and +.
- Step 4** Click **Submit All Changes**.
-

Call Park

With call park, a call can be parked and then retrieved either from your phone or from another phone. The following LED colors display on the line key when this feature is configured:

- Green LED—Call park is successfully configured.
- Amber LED—Call park is not configured.
- Red slow blinking LED—A call is parked.

Configure Call Park with Star Codes

You can configure call park so that the user can put a call on hold and then retrieve the call from either the user's phone or another phone.

When configuring call park, the Call Park Code and the Call Unpark Code must match the Feature Access Code configured on the server.

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

Step 1 Select **Voice > Regional**.

Step 2 Enter ***68** in the **Call Park Code** field.

You can also configure the parameter in the configuration file (cfg.xml) by entering a string in the following format:

```
<Call_Park_Code ua="na">*68</Call_Park_Code>
```

Step 3 Enter ***88** in the **Call Unpark Code** field.

You can also configure the parameter in the configuration file (cfg.xml) by entering a string in the following format:

```
<Call_Unpark_Code ua="na">*88</Call_Unpark_Code>
```

Step 4 Click **Submit All Changes**.

Configure One-Button Call Park

With One-Button Call Park, there is no need to enter a combination of key strokes for parking and unparking a call.

You can also configure parking calls in a dedicated call park extension

Before you begin

Access the [Phone Web Interface](#), and [Configure the Phone to Monitor Multiple Users' Lines](#), on page 17

Procedure

Step 1 Go to **Voice > Att Console**.

Step 2 In the **BLF List URI** field, enter **uri_name@server**.

The **BLF List URI** field must have the same value as that configured for the **List URI:sip** parameter on the BroadSoft server.

You can also configure this parameter in the configuration file (cfg.xml) by entering a string in this format:

```
<BLF_List_URI ua="na">uri_name@server</BLF_List_URI>
```

Step 3 From the **BLF List Feature Options** drop down list, select **prk**.

You can also configure this parameter in the configuration file (cfg.xml) by entering a string in this format:

```
<BLF_List_Feature_Options ua="na">prk</BLF_List_Feature_Options>
```

The allowed values are blf+sd+cp|prk. The default value is blf+sd+cp.

Example:

- When the **BLF List Feature Options** field is set to **blf+sd+cp**, the auto-assigned keys can be used for blf+sd+cp function or a call park function. If **type="park"** is included in the resource element, then the auto-assigned keys are used for call park function, else it is used for blf+sd+cp function when the type is not included.

In the server, there are three resource elements in NOTIFY requests. Enter the strings in the resource elements in the format and add new attribute **type="park"** in the call park extension resource URI:

```
<resource uri="sip:test01@aslbsoft.sipurash.com"><name>test 01</name><instance id="cROdMctbQE" state="active" cid="BQQ7uR@broadworks"/></resource>

<resource uri="sip:2345@aslbsoft.sipurash.com" type="park"><name>Park Location1</name><instance id="cROdMctbQE" state="active" cid="BQQ8uR@broadworks"/></resource>

<resource uri="sip:test02@aslbsoft.sipurash.com"><name>test 02</name><instance id="cROdMctbQE" state="active" cid="BQQ9uR@broadworks"/></resource>
```

After successful configuration, the phone monitors test 01, Park Location1, and test 02. If call park extensions and users are subscribed successfully, linekeys will be assigned for callpark or blf function respectively, and get the monitored extension and user status.

- When the **BLF List Feature Options** field is set to **prk**, the BLF List URI monitors call park extensions and users.

In the server, there are three resource elements in NOTIFY requests. Enter the strings in the resource elements in the format and add new attribute **type="park"** in the call park extension resource URI:

```
<resource uri="sip:test01@aslbsoft.sipurash.com"><name>test 01</name><instance id="cROdMctbQE" state="active" cid="BQQ7uR@broadworks"/></resource>

<resource uri="sip:2345@aslbsoft.sipurash.com" type="park"><name>Park Location1</name><instance id="cROdMctbQE" state="active" cid="BQQ8uR@broadworks"/></resource>

<resource uri="sip:test02@aslbsoft.sipurash.com"><name>test 02</name><instance id="cROdMctbQE" state="active" cid="BQQ9uR@broadworks"/></resource>
```

After successful configuration, the phone monitors test 01, Park Location1, and test 02. If call park extensions and users are subscribed successfully, linekeys will be assigned for call park function and get the monitored extension and user status.

Step 4 Click **Submit All Changes**.

Add Call Park to a Line Key

You can add call park to a line key to enable the user to temporarily store and retrieve calls. Call park is supported on private lines and shared lines.

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

Step 1 Select **Voice > Phone**.

Step 2 Select a line key.

Step 3 (Optional) Set the **Extension** parameter to **Disabled** to disable the extension.

Note If the Direct PLK Configuration feature is disabled, you must disable the extension to add call park to the line key. If the feature is enabled, you can skip this step. For details, see [Enable Direct PLK Configuration](#).

You can also configure this parameter in the phone configuration file (cfg.xml). The parameter is line-specific. Enter a string in this format:

```
<Extension_2_ ua="na">Disabled</Extension_2_>
```

Step 4 In the **Extended Function** parameter, enter a string in this format:

For a private line, enter

```
fnc=prk;sub=$USER@$PROXY;nme=CallPark-Slot1;vid=1
```

For a shared line, enter

```
fnc=prk;sub=$USER@$PROXY;nme=CallPark-Slot1;orbit=<DN of shared line>;vid=1
```

where:

- fnc=prk means function=call park
- sub is the SIP URI of the monitored park slot.
- nme is the name displayed on the phone for the call park line key.
- orbit is the DN of the shared line.
- vid is the extension ID. The values of \$USER and \$PROXY are retrieved from the specified extension. If vid is missing in the function string, the values of \$USER and \$PROXY are retrieved from extension 1.

You can also configure the line-specific parameter in the configuration file (cfg.xml). Enter a string in the following format:

```
<Extended_Function_2_
ua="na">fnc=prk;sub=$USER@$PROXY;nme=CallPark-Slot1;vid=1;</Extended_Function_2_>
```

Step 5 Click **Submit All Changes**.

Set the Optional Network Configuration

Optional network servers provide resources such as DNS lookup, network time, logging, and device discovery. It also enables you to add PC port mirroring on the user phone. Your user can also enable or disable this service from the phone.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code. To configure each parameter, see the syntax of the string in [Parameters for Optional Network Configuration, on page 27](#).

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

- Step 1** Select **Voice > System**.
- Step 2** In the **Optional Network Configuration** section, set up the fields as described in [Parameters for Optional Network Configuration, on page 27](#).
- Step 3** Click **Submit All Changes**.

Parameters for Optional Network Configuration

The following table defines the function and usage of the access control parameters in the **Optional Network Configuration** section under the **Voice > System** tab in the phone web interface. It also defines the syntax of the string that is added in the phone configuration file (cfg.xml) with XML code to configure a parameter.

Table 7: Parameters for Optional Network Configuration

Parameter	Description and Default Value
Host Name	<p>The hostname of the server that the phone uses.</p> <ul style="list-style-type: none"> • In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Host_Name ua="rw">serverhost.com</Host_Name></pre> • On the phone web interface, enter the host name of the server to use. <p>Default: Empty</p>

Parameter	Description and Default Value
Domain	<p>The network domain of the Phone.</p> <p>If you're using LDAP, see LDAP Configuration.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Domain ua="rw">domainexample.com</Domain></pre> In the phone web interface, enter the domain of the phone. <p>Default: Empty</p>
DNS Server Order	<p>Specifies the sequence for selecting the DNS server.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> Manual, DHCP Manual DHCP, Manual In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><DNS_Server_Order ua="na">Manual,DHCP</DNS_Server_Order></pre> In the phone web interface, specify the order that the phone follows to select the DNS server. <p>Allowed values: Manual,DHCP Manual DHCP,Manual</p> <p>Default: Manual, DHCP</p>
Enable PC Port Mirror	<p>Enables or disables PC Port mirroring on the phone. When set to Yes, you can see the packets on the phone.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Enable_PC_Port_Mirror ua="na">No</Enable_PC_Port_Mirror></pre> In the phone web interface, set this field to Yes or No to enable or disable PC port mirroring on the phone. <p>Allowed values: Yes No</p> <p>Default: No</p>
Syslog Server	See System Log Parameters .
Syslog identifier	See System Log Parameters .

Parameter	Description and Default Value
Primary NTP Server	<p>IP address or name of the primary NTP server used to synchronize its time.</p> <p>You can set primary NTP server for both IPv4 and IPv6.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Primary_NTP_Server ua="rw">192.168.1.10</Primary_NTP_Server></pre> In the phone web interface, specify the IP address or host name of the NTP server. <p>Default: Blank</p>
Secondary NTP Server	<p>IP address or name of the secondary NTP server used to synchronize its time.</p> <p>You can set primary NTP server for both IPv4 and IPv6.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Secondary_NTP_Server ua="rw">192.168.1.11</Secondary_NTP_Server></pre> In the phone web interface, specify the IP address or host name of the NTP server. <p>Default: Blank</p>
Use Config TOS	<p>This field controls whether the phone uses the Time of Service (TOS) parameters on the Ext (n) tab. Set this field to Yes when you want the phones to use the TOS configuration specified on the Ext (n) tab. Otherwise, set this field to No.</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Use_Config_TOS ua="na">No</Use_Config_TOS></pre> In the phone web interface, select Yes or No as needed. <p>Allowed values: Yes No</p> <p>Default: No</p>

Enable LLDP X-SWITCH-INFO Support for E911

You can enable LLDP X-SWITCH-INFO support feature by adding an extra header (named "X-SWITCH-INFO") to the REGISTER sip message which contains the following switch information as advertised in LLDP data unit:

Before you begin

- Access the phone administration web page. See [Access the Phone Web Interface](#).
- Make sure you have configured the SIP registration in Ext n, and the Ext n can register successfully to the server.

Procedure

Step 1 Select **Voice > System > Optional Network Configuration**.

Step 2 Select **Yes** for the parameter **X-SWITCH-INFO Support**.

To disable the feature, select **No**.

You can also configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<X-SWITCH-INFO_Support ua="na">Yes</X-SWITCH-INFO_Support>
```

Default: **No**.

Step 3 For wired phone, do the following:

a) Select **Voice > System > VLAN Settings > Enable LLDP-MED**.

Step 4 Click **Submit All Changes**.

XML Services

The phones provide support for XML services, such as an XML Directory Service or other XML applications. For XML services, only HTTP and HTTPS support is available.

The following Cisco XML objects are supported:

- CiscoIPPhoneMenu
- CiscoIPPhoneText
- CiscoIPPhoneInput
- CiscoIPPhoneDirectory
- CiscoIPPhoneIconMenu
- CiscoIPPhoneStatus
- CiscoIPPhoneExecute
- CiscoIPPhoneImage
- CiscoIPPhoneImageFile
- CiscoIPPhoneGraphicMenu
- CiscoIPPhoneFileMenu
- CiscoIPPhoneStatusFile
- CiscoIPPhoneResponse
- CiscoIPPhoneError
- CiscoIPPhoneGraphicFileMenu

- Init:CallHistory
- Key:Headset
- EditDial:n

The full list of supported URIs is contained in *Cisco Unified IP Phone Services Application Development Notes for Cisco Unified Communications Manager and Multiplatform Phones*, located here:

<https://www.cisco.com/c/en/us/support/collaboration-endpoints/ip-phone-6800-series-multiplatform-firmware/products-programming-reference-guides-list.html>

<https://www.cisco.com/c/en/us/support/collaboration-endpoints/unified-ip-phone-7800-series/products-programming-reference-guides-list.html>

<https://www.cisco.com/c/en/us/support/collaboration-endpoints/ip-phone-8800-series-multiplatform-firmware/products-programming-reference-guides-list.html>

XML Directory Service

When an XML URL requires authentication, use the parameters **XML UserName** and **XML Password**.

The parameter **XML UserName** in XML URL is replaced by \$XML UserName.

For example:

The parameter XML UserName is **cisco**. The XML Directory Service URL is **http://www.sipurash.com/path?username=\$XML_User_Name**.

This results in the request URL: <http://www.sipurash.com/path?username=cisco>.

Configure a Phone to Connect to an XML Application

You can also configure the parameters in the configuration file (cfg.xml) as defined in [Parameters for XML Applications, on page 32](#).

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

-
- Step 1** Select **Voice > Phone**.
 - Step 2** In the **XML Service** section, configure the **XML Application Service Name** and **XML Application Service URL** fields as defined in [Parameters for XML Applications, on page 32](#).
 - Step 3** (Optional) Specify the username and password to authenticate XML service in the **XML User Name** and **XML Password** fields as defined in [Parameters for XML Applications, on page 32](#).
 - Step 4** (Optional) Enable and configure authentication for CGI/Execute URL via Post from an external application (for example, a web application) to the phones.

Configure the **CISCO XML EXE Enable** and **CISCO XML EXE Auth Mode** fields as defined in [Parameters for XML Applications, on page 32](#).

Step 5 Click **Submit All Changes**.

Parameters for XML Applications

The following table defines the function and usage of the XML application parameters in the **XML Service** section under the **Voice > Phone** tab in the phone web interface. It also defines the syntax of the string that is added in the phone configuration file (cfg.xml) with XML code to configure a parameter.

Table 8: Parameters for XML Applications

Parameter	Description
XML Application Service Name	<p>Name of the XML application. The name displays on the phone as a web application choice.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><XML_Application_Service_Name ua="na">XML_APP</XML_Application_Service_Name></pre> In the phone web interface, enter a name for the XML application. <p>Default: Empty</p>
XML Application Service URL	<p>The URL where the XML application is located.</p> <p>Macro variables are supported in XML URLs. For the valid macro variables, see Macro Variables, on page 33.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><XML_Application_Service_URL ua="na">XML_APP</XML_Application_Service_URL></pre> In the phone web interface, enter the URL for the XML application. <p>Phone doesn't display the XML application in the Information and settings screen.</p> <p>Default: Empty</p>
XML User Name	<p>XML service username for authentication purposes.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><XML_User_Name ua="na">username</XML_User_Name></pre> In the phone web interface, enter the username used for authenticating XML service. <p>Default: Empty</p>

Parameter	Description
XML Password	<p>XML service password for the specified XML User Name. The password you entered in this field shows in the configuration file (cfg.xml) as</p> <pre><!-- <XML_Password ua="na">*****</XML_Password> --></pre> <p>Default: Empty</p>
CISCO XML EXE Enable	<p>Specifies whether authentication is required to access the XML application server. Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><CISCO_XML_EXE_Enable ua="na">Yes</CISCO_XML_EXE_Enable></pre> In the phone web interface, set it to Yes or No to enable or disable authentication. <p>Allowed values: No Default: No</p>
CISCO XML EXE Auth Mode	<p>Specifies the authentication mode for Cisco XML EXE. The available options are:</p> <ul style="list-style-type: none"> Trusted—No authentication is performed regardless of the local credential. Local Credential—Authentication is based on the digest authentication using the local credential, if set. If the local credential is not set, then no authentication is performed. Remote Credential—Authentication is based on the digest authentication using the remote credential as set in the XML application on the web page (to access an XML application server). <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><CISCO_XML_EXE_Auth_Mode ua="na">Local Credential</CISCO_XML_EXE_Auth_Mode></pre> In the phone web interface, select an authentication mode. <p>Allowed values: Trusted Local Credential Remote Credential Default: Local Credential</p>

Macro Variables

You can use macro variables in XML URLs. The following macro variables are supported:

- User ID—UID1, UID2 to UIDn
- Display name—DISPLAYNAME1, DISPLAYNAME2 to DISPLAYNAMEn
- Auth ID—AUTHID1, AUTHID2 to AUTHIDn

- Proxy—PROXY1, PROXY2 to PROXYn
- MAC Address using lowercase hex digits—MA
- Product Name—PN
- Product Series Number—PSN
- Serial Number—SERIAL_NUMBER

The following table shows the list of macros supported on the phones:

Macro Name	Macro Expansion
\$	The form \$\$ expands to a single \$ character.
A through P	Replaced by general-purpose parameters GPP_A through GPP_P.
SA through SD	Replaced by special purpose parameters GPP_SA through GPP_SD. These parameters hold keys or passwords used in provisioning. Note SSA through \$SD are recognized as arguments to the optional resync URL qualifier, --key.
MA	MAC address using lowercase hex digits (000e08aabbcc).
MAU	MAC address using uppercase hex digits (000E08AABBCC).
MAC	MAC address using lowercase hex digits with a colon to separate hex digit pairs (00:0e:08:aa:bb:cc).
PN	Product Name; for example, IP Phone 8861. Product Name; for example, IP Phone 7861. Product Name; for example, IP Phone 6841.
PSN	Product Series Number; for example, 8861. Product Series Number; for example, 7861. Product Series Number; for example, 6841.
SN	Serial Number string; for example, 88012BA01234.
CCERT	SSL Client Certificate status, installed or not installed.
IP	IP address of the phone within its local subnet; for example, 192.168.1.100.
EXTIP	External IP of the phone, as seen on the internet; for example, 66.43.16.52.

Macro Name	Macro Expansion
SWVER	<p>Software version string. Use the software version string to compare against the current phone's firmware load.</p> <p>Follow the format below:</p> <ul style="list-style-type: none"> For Firmware Release 11.3(1)SR1 and previous: <code>siyyyyy.11-0-1MPP-376</code> where <i>yyyy</i> indicates the phone model or phone series; <i>11</i> is the major version; <i>0</i> is the minor version; <i>1MPP</i> is the micro version; and <i>376</i> is the build number. For Firmware Release 11.3(2) and later: <code>siyyyyy.11-3-2MPP0001-609</code> where <i>yyyy</i> indicates the phone model or phone series; <i>11</i> is the major version; <i>3</i> is the minor version; <i>2MPP0001</i> is the micro version; and <i>609</i> is the build number. <p>There are two methods to compare firmware loads:</p> <ul style="list-style-type: none"> With quotes, "\$SWVER"—Variable acts as a string in firmware load name comparisons. For "<code>\$SWVER</code>" eq "<code>siyyyyy.11-2-1MPP-312.loads</code>" or "<code>\$SWVER</code>" eq "<code>siyyyyy.11-3-2MPP0001-609.loads</code>", the phone model number and the version numbers in the load name are part of the comparison. Without quotes, \$SWVER—Variable is parsed to determine a build number, plus major, minor, and micro revision numbers. For example, when the <code>sip88xx.11-3-2MPP0001-598.loads</code> and <code>sip8845_65.11-3-2MPP0001-598.loads</code> firmware names are parsed, the result ignores the model number and load number. The result for both firmware names yields a major revision=11, minor revision=3, micro revision=2MPP0001, and build number=598. <p>See more information about firmware version comparison, see Macro Expansion Variables.</p>
HWVER	Hardware version string; for example, 1.88.1.
PRVST	<p>Provisioning State (a numeric string):</p> <ul style="list-style-type: none"> -1 = explicit resync request 0 = power-up resync 1 = periodic resync 2 = resync failed, retry attempted
UPGST	<p>Upgrade State (a numeric string):</p> <ul style="list-style-type: none"> 1 = first upgrade attempt 2 = upgrade failed, retry attempt
UPGERR	Result message (ERR) of previous upgrade attempt; for example, http_get failed.

Macro Name	Macro Expansion
PRVTMR	Seconds since last resync attempt.
UPGTMR	Seconds since last upgrade attempt.
REGTMR1	Seconds since Line 1 lost registration with SIP server.
REGTMR2	Seconds since Line 2 lost registration with SIP server.
UPGCOND	Legacy macro name.
SCHEME	File access scheme (TFTP, HTTP, or HTTPS, obtained after parsing resync or upgrade URL).
METH	Deprecated alias for SCHEME, do not use.
SERV	Request target server hostname.
SERVIP	Request target server IP address (following DNS lookup).
PORT	Request target UDP/TCP port.
PATH	Request target file path.
ERR	Result message of resync or upgrade attempt.
UIDn	The contents of the Line n UserID configuration parameter.
ISCUST	If unit is customized, value=1, otherwise 0. Note Customization status viewable on Web UI Info page.
INCOMINGNAME	Name associated with first connected, ringing, or inbound call.
RE MOTENUMBER	Phone number of first connected, ringing, or inbound call. If there are multiple calls, the data associated with the first call found is provided.
DISPLAYNAME _n	The contents of the Line N Display Name configuration parameter.
AUTHID _n	The contents of the Line N auth ID configuration parameter.

Shared Lines

A shared line is a directory number that appears on more than one phone. You can create a shared line by assigning the same directory number to various phones.

Incoming calls display on all phones that share a line, and anyone can answer the call. Only one call remains active at a time on a phone.

Call information displays on all phones that are sharing a line. If somebody turns on the privacy feature, you do not see the outbound calls made from the phone. However, you see inbound calls to the shared line.

All phones with a shared line ring when a call is made to the line. If you place the shared call on hold, anyone shared with the line can resume the call by pressing  or the **Resume** softkey.

The following shared line features are supported:

- Line Seizure
- Public Hold
- Private Hold
- Silent Barge (only through enabled programmable softkey)

The following features are supported as for a private line

- Transfer
- Conference
- Call Park / Call Retrieve
- Call Pickup
- Do Not Disturb
- Call Forward

You can configure each phone independently. Account information is usually the same for all IP phones, but settings such as the dial plan or preferred codec information can vary.

Configure a Shared Line

You can create a shared line by assigning the same directory number to more than one phone on the phone web page.

You can also configure the parameters in the phone configuration file with XML (cfg.xml) code. To configure each parameter, see the syntax of the string in [Parameters for Configuring a Shared Line, on page 38](#).

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

-
- Step 1** Select **Voice > Ext(n)**, where **(n)** is the number of an extension to share.
 - Step 2** In the **General** section, set the **Line Enable** parameter as described in the [Parameters for Configuring a Shared Line, on page 38](#) table.
 - Step 3** In the **Share Line Appearance** section, set **Share Ext**, **Shared User ID field**, **Subscription Expires**, and **Restrict MWI** parameters as described in the [Parameters for Configuring a Shared Line, on page 38](#) table.
 - Step 4** In the **Proxy and Registration** section, enter the IP address of the proxy server in the **Proxy** field.

You can also configure this parameter in the configuration file (cfg.xml) by entering a string in this format:

```
<Proxy_1_ ua="na">aslbsoft.sipurash.com</Proxy_1_>
```

Example for proxy server address: aslbsoft.sipurash.com

Step 5 In the **Subscriber Information** section, enter the **Display Name** and **User ID** (extension number) for the shared extension.

You can also configure this parameter in the configuration file (cfg.xml) by entering a string in this format:

```
<Display_Name_1_ ua="na">name</Display_Name_1_>
<User_ID_1_ ua="na">4085273251</User_ID_1_>
```

Step 6 In the **Miscellaneous Line Key Settings** section, set **SCA Barge-In Enable** parameter as described in the [Parameters for Configuring a Shared Line, on page 38](#) table.

Step 7 Click **Submit All Changes**.

Parameters for Configuring a Shared Line

The following table describes the parameters in the **Voice > Ext(n)** tab of the phone web page.

The following table defines the function and usage of Shared Line parameters in the General and Share Line Appearance sections under the Ext(n) tab in the phone web interface. It also defines the syntax of the string that is added in the phone configuration file with XML(cfg.xml) code to configure a parameter.

Table 9: Parameters for Shared Lines

Parameter	Description
Line Enable	<p>Enables a line for the service.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone web interface, select yes to enable. Otherwise, select No. In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Line_Enable_1_ ua="na">Yes</Line_Enable_1_></pre> <p>Valid values: Yes No</p> <p>Default: Yes</p>
Share Ext	<p>Indicates whether other Cisco IP phones share this extension is, or the extension is private.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone web interface, select yes to enable. Otherwise, select No. In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Share_Ext_1_ ua="na">No</Share_Ext_1_></pre> <p>If you set Share Ext to No, this extension is private and doesn't share calls, regardless of the Share Line Appearance setting. If you set this extension to Yes, calls follow the Share Line Appearance setting.</p> <p>Valid values: Yes No</p> <p>Default: Yes</p>

Parameter	Description
Shared User ID	<p>The user identified assigned to the shared line appearance.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone web interface, enter the user ID. In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Shared_User_ID_1_ ua="na">Shared UserID</Shared_User_ID_1_></pre>
Subscription Expires	<p>Number of seconds before the SIP subscription expires. Before the subscription expiration, the phone gets NOTIFY messages from the SIP server on the status of the shared phone extension.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone web interface, enter the value in seconds. In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Subscription_Expires_1_ ua="na">3600</Subscription_Expires_1_></pre> <p>Valid values: An integer from 10 through 65535</p> <p>Default: 3600 seconds</p>
Restrict MWI (Message Waiting Indicator)	<p>Indicates the message waiting indicator lights only for messages on private.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone web interface, select Yes to enable. When enabled the message waiting indicator lights only for messages on private. Otherwise, select No. In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Restrict_MWI_1_ ua="na">No</Restrict_MWI_1_></pre> <p>Valid values: Yes No</p> <p>Default: No</p>

The following table describes the parameters in the **Voice > Phone** tab of the phone web page.

Table 10: Miscellaneous Line Key Settings

Parameter	Description

SCA Barge-In Enable	<p>Enables the SCA Barge-In.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> • In the phone web interface, select Yes to enable. Otherwise, select No. • In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><SCA_Barge-In-Enable ua="na">No</SCA_Barge-In-Enable></pre> <p>Valid values: Yes No</p> <p>Default: No</p>
---------------------	--

Add Dialog-Based Shared Line Appearance

You can now enable dialog-based shared line, so that the phones in the shared line can subscribe to the dialog event package.

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

-
- Step 1** Select **Voice > SIP**.
- Step 2** In the **SIP Parameters** section, set the **Share Line Event Package Type** parameter to **Dialog** to subscribe the phone to the dialog event package.
- You can also set the parameter to **Call-Info** and the phone retains the legacy behavior.
- Default value: **Call-Info**
- You can also configure this parameter in the configuration file (cfg.xml) by entering a string in this format:
- ```
<Share_Line_Event_Package_Type ua="na">Dialog</Share_Line_Event_Package_Type>
```
- Step 3** Click **Submit All Changes**.
- 

## Assign a Ringtone to an Extension

You can also configure the parameters in the phone configuration file with XML (cfg.xml) code. To configure each parameter, see the syntax of the string in [Parameters for Ringtone, on page 41](#).

### Before you begin

[Access the Phone Web Interface](#).



## Procedure

- Step 1** Select **Voice > Ext(n)**, where **(n)** is the number of a phone extension.
- Step 2** In the **Call Feature Settings** section, select the **Default Ring** parameter from the list or select no ring. You can also configure this parameter in the configuration file (cfg.xml) by entering a string in this format:  
`<Default_Ring_3_ ua="rw">1</Default_Ring_3_>`
- Step 3** Select **Voice > Phone**.
- Step 4** In the **Ringtone** section, set the **Ring(n)** and **Silent Ring Duration** parameters as described in the [Parameters for Ringtone, on page 41](#) table.
- Step 5** Click **Submit All Changes**.

## Parameters for Ringtone

The following table describes the parameters for **Ringtone**.

**Table 11: Parameters for Ringtone**

| Parameter            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ring1 to Ring12      | <p>Ring tone scripts for various ringtones.</p> <p>In the phone configuration XML file (cfg.xml), enter a string</p> <pre>&lt;!-- Ringtone --&gt; &lt;Ring1 ua="na"&gt;n=Sunrise;w=file://Sunrise.rwb;c=1&lt;/R &lt;Ring2 ua="na"&gt;n=Chirp 1;w=file://chirp1.raw;c=1&lt;/R &lt;Ring3 ua="na"&gt;n=Chirp 2;w=file://chirp2.raw;c=1&lt;/R &lt;Ring4 ua="na"&gt;n=Delight;w=file://Delight.rwb;c=1&lt;/R &lt;Ring5 ua="na"&gt;n=Evolve;w=file://Evolve.rwb;c=1&lt;/R &lt;Ring6 ua="na"&gt;n=Mellow;w=file://Mellow.rwb;c=1&lt;/R &lt;Ring7 ua="na"&gt;n=Mischief;w=file://Mischief.rwb;c= &lt;Ring8 ua="na"&gt;n=Reflections;w=file://Reflections. &lt;Ring9 ua="na"&gt;n=Ringer;w=file://Ringer.rwb;c=1&lt;/R &lt;Ring10 ua="na"&gt;n=Ascent;w=file://Ascent.rwb;c=1&lt;/R &lt;Ring11 ua="na"&gt;n=Are you there;w=file://AreYouThe &lt;Ring12 ua="na"&gt;n=Chime;w=file://Chime.raw;c=1&lt;/Rin &lt;Silent_Ring_Duration ua="na"&gt;60&lt;/Silent_Ring_Durat</pre> |
| Silent Ring Duration | <p>Controls the duration of the silent ring. For example, if the p the phone plays the silent ring for 20 seconds then sends 480 m</p> <p>In the phone configuration XML file (cfg.xml), enter a string</p> <pre>ua="na"&gt;n=Sunrise;w=file://Sunrise.rwb;c= &lt;Silent_Ring_Duration ua="na"&gt;60&lt;/Silent_</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Add Distinctive Ringtone

You can configure the characteristics of each ring tone using a ring tone script. When the phone receives SIP Alert-INFO message and the message format is correct, then the phone plays the specified ringtone. Otherwise, the phone plays the default ringtone.

### Procedure

In a ring tone script, assign a name for the ring tone and add the script to configure a distinctive ringtone in the format:

```
n=ring-tone-name;h=hint;w=waveform-id-or-path;c=cadence-id;b=break-time;t=total-time
```

where:

**n** = ring-tone-name that identifies this ring tone. This name appears on the Ring Tone menu of the phone. The same name can be used in a SIP Alert-Info header in an inbound INVITE request to tell the phone to play the corresponding ring tone. The name should contain the same characters allowed in a URL only.

**h** = hint used to SIP Alert-INFO rule.

**w** = waveform-id-or-path which is the index of the desired waveform to use in this ring tone. The built-in waveforms are:

- 1 = Classic phone with mechanical bell
- 2 = Typical phone ring
- 3 = Classic ring tone
- 4 = Wide-band frequency sweep signal

**c** = is the index of the desired cadence to play the given waveform. 8 cadences (1–8) as defined in <Cadence 1> through <Cadence 8>. Cadence-id can be 0 If w=3,4. Setting c=0 implies the on-time is the natural length of the ring tone file.

**b** = break-time that specifies the number of seconds to break between two bursts of ring tone, such as b=2.5.

**t** = total-time that specifies the total number of seconds to play the ring tone before it times out.

In the phone configuration XML file (cfg.xml), enter a string in this format:

```
<!-- Ringtone -->
<Ring1 ua="na">n=Sunrise;w=file://Sunrise.rwb;c=1</Ring1>
<Ring2 ua="na">n=Chirp 1;w=file://chirp1.raw;c=1</Ring2>
<Ring3 ua="na">n=Chirp 2;w=file://chirp2.raw;c=1</Ring3>
<Ring4 ua="na">n=Delight;w=file://Delight.rwb;c=1</Ring4>
<Ring5 ua="na">n=Evolve;w=file://Evolve.rwb;c=1</Ring5>
<Ring6 ua="na">n=Mellow;w=file://Mellow.rwb;c=1</Ring6>
<Ring7 ua="na">n=Mischief;w=file://Mischief.rwb;c=1</Ring7>
<Ring8 ua="na">n=Reflections;w=file://Reflections.rwb;c=1</Ring8>
<Ring9 ua="na">n=Ringer;w=file://Ringer.rwb;c=1</Ring9>
<Ring10 ua="na">n=Ascent;w=file://Ascent.rwb;c=1</Ring10>
<Ring11 ua="na">n=Are you there;w=file://AreYouThereF.raw;c=1</Ring11>
<Ring12 ua="na">n=Chime;w=file://Chime.raw;c=1</Ring12>
<Silent_Ring_Duration ua="na">60</Silent_Ring_Duration>
```

## Restrict User from Controlling the Ringer Volume

Some users tend to lower the ringer volume when they don't want to answer a call. Hence, they miss important calls. To avoid such problem, you can disable the ability of the users to control the ringer volume.



**Note** When you configure the restriction on the ringing volume control, this configuration doesn't restrict the user's ability of controlling other volumes, such as speaker volume and headset volume.

### Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

### Procedure

**Step 1** Select **Voice > User**.

**Step 2** In the **Audio Volume** section, set the **Ringer Volume Control** parameter to **No**.

The default value is **Yes**.

You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<Ringer_Volume_Control ua="na">No</Ringer_Volume_Control>
```

**Step 3** Select **Submit All Changes**

When you set the parameter to **No** you see the following results:

- The user presses the volume button on the phone, a message appears indicating that the user has no permission to change the ringer volume.
- On the phone administration web page, under the **User Login > Advanced** access level, the **Ringer Volume** parameter doesn't appear under the **Audio Volume** section. Hence, the user doesn't get any option to change the ringer volume.

## Enable Hoteling on a Phone

When you enable the hoteling feature of BroadSoft on the phone, the user can sign in to the phone as a guest. After the guest sign out of the phone, the user will switch back to the host user.

You can also configure the parameters in the phone configuration file with XML (cfg.xml) code.

### Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

## Procedure

---

- Step 1** Select **Voice > Ext [n]** (where [n] is the extension number).
- Step 2** In the **Call Feature Settings** section, set **Enable Broadsoft Hoteling** parameter to **Yes**.  
You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:  

```
<Enable_Broadsoft_Hoteling_1_ua="na">Yes</Enable_Broadsoft_Hoteling_1>
```

Options: Yes and No  
Default: No
- Step 3** Set the amount of time (in seconds) that the user can be signed in as a guest on the phone in **Hoteling Subscription Expires**.  
You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:  

```
<Hoteling_Subscription_Expires_1_ua="na">3600</Hoteling_Subscription_Expires_1>
```

Valid values: An integer from 10 through 86400  
Default: 3600
- Step 4** Click **Submit All Changes**.
- 

# Enable Flexible Seating on a Phone

With the Flexible Seating feature of BroadSoft, the phone downloads and is reconfigured with Flexible Seating Guest's device files when the guest is associated with the host. The phone is treated as an alternate device of the guest. The call originations from guest's primary device are also allowed. The guest's primary device is also alerted on incoming calls to the guest. For more information, see the BroadSoft documentation.

In addition, with the feature enabled on the phone, the phone can cache the user credentials for the LDAP directory. If the cache contains the user credentials, the guest user can bypass the sign-in procedure to access the LDAP directory. The cache can store up to 50 user credentials. The phone removes the least-used credentials when the cache size limit is reached.

## Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

## Procedure

---

- Step 1** Select **Voice > Ext [n]** (where [n] is the extension number).
- Step 2** In the **Call Feature Settings** section, set **Enable Broadsoft Hoteling** parameter to **Yes**.  
You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<Enable_Broadsoft_Hoteling_1_ua="na">Yes</Enable_Broadsoft_Hoteling_1>
```

Options: Yes and No

Default: No

**Step 3** Click **Submit All Changes**.

---

## Enable Extension Mobility on a Phone

With the Extension Mobility (EM) feature enabled on the phone, any user can sign in to the phone other than their own in the same network. In this scenario, the phone can be shared with other users. After the users sign in, they can see their own line number displayed on the phone screen, and their contacts in the personal address directory.

In addition, the phone can cache the user credentials for the LDAP directory when the user signs into the phone with the feature. If the cache contains the user credentials, the user can bypass the sign-in procedure to access the LDAP directory. The cache can store up to 50 user credentials. The phone removes the least-used credentials when the cache size limit is reached.

You can also configure the parameters in the phone configuration file with XML (cfg.xml) code.

### Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

### Procedure

---

**Step 1** Select **Voice > Phone**.

**Step 2** In the **Extension Mobility** section, set **EM Enable** to **Yes**.

You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<EM_Enable ua="na">Yes</EM_Enable>
```

Options: Yes and No

Default: No

**Step 3** Set the amount of time (in minutes) that the user can be signed in on the phone in **Session Timer(m)**.

You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<Session_Timer_m_ ua="na">480</Session_Timer_m_>
```

Default: 480

**Step 4** Click **Submit All Changes**.

---

# Set the User Password

Configure a password so the phone is protected and secured. Both administrators and users can configure a password and control access to the phone.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code.

## Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

## Procedure

---

- Step 1** Select **Voice > System**.
- Step 2** Under the section **System Configuration**, locate the parameter **User Password**, and click **Change Password** next to the parameter.
- Step 3** Enter the current user password in the **Old Password** field.  
If you don't have a password, keep the field empty.
- Step 4** Enter a new password in the **New Password** field.
- Step 5** Click **Submit**.

The message `Password has been changed successfully.` will display in the web page. The web page will refresh in several seconds.

After you set the user password, this parameter displays the following in the phone configuration XML file (cfg.xml):

```
<!--
<User_Password ua="rw">*****</User_Password>
-->
```

---

# Download Problem Reporting Tool Logs

Users submit problem reports to you with the Problem Reporting Tool.

If you are working with Cisco TAC to troubleshoot a problem, they typically require the logs from the Problem Reporting Tool to help resolve the issue.

To issue a problem report, users access the Problem Reporting Tool and provide the date and time that the problem occurred, and a description of the problem. You need to download the problem report from the Configuration Utility page.

## Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

## Procedure

- 
- Step 1** Select **Info > Debug Info > Device Logs**.
- Step 2** In the **Problem Reports** area, click the problem report file to download.
- Step 3** Save the file to your local system and open the file to access the problem reporting logs.
- 

# Configure Problem Report Tool

You must use a server with an upload script to receive the problem reports that the user sends from the phone.

- If the URL specified in the **PRT Upload Rule** field is valid, users get a notification alert on the phone UI saying that they have successfully submitted the problem report.
- If the **PRT Upload Rule** field is empty or has an invalid URL, users get a notification alert on the phone UI saying that the data upload failed.

The phone uses an HTTP/HTTPS POST mechanism, with parameters similar to an HTTP form-based upload. The following parameters are included in the upload (utilizing multipart MIME encoding):

- devicename (example: "SEP001122334455")
- serialno (example: "FCH12345ABC")
- username (The user name is either the **Station Display Name** or the **User ID** of the extension. The **Station Display Name** is first considered. If this field is empty, then the **User ID** is chosen.)
- prt\_file (example: "probrep-20141021-162840.tar.gz")

You can generate PRT automatically at specific intervals and can define the PRT file name.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code. To configure each parameter, see the syntax of the string in the [Parameters for Configure Problem Report Tool, on page 48](#) table.

A sample script is shown below. This script is provided for reference only. Cisco does not provide support for the upload script installed on a customer's server.

```
<?php
// NOTE: you may need to edit your php.ini file to allow larger
// size file uploads to work.
// Modify the setting for upload_max_filesize
// I used: upload_max_filesize = 20M

// Retrieve the name of the uploaded file
$filename = basename($_FILES['prt_file']['name']);

// Get rid of quotes around the device name, serial number and username if they exist
$devicename = $_POST['devicename'];
$devicename = trim($devicename, "\"");

$serialno = $_POST['serialno'];
$serialno = trim($serialno, "\"");
```

```

$username = $_POST['username'];
$username = trim($username, "'\"");

// where to put the file
$fullfilename = "/var/prtuploads/".$filename;

// If the file upload is unsuccessful, return a 500 error and
// inform the user to try again

if(!move_uploaded_file($_FILES['prt_file']['tmp_name'], $fullfilename)) {
 header("HTTP/1.0 500 Internal Server Error");
 die("Error: You must select a file to upload.");
}

?>

```

**Before you begin**

Access the phone administration web page. See [Access the Phone Web Interface](#).

**Procedure**

- 
- Step 1** Select **Voice > Provisioning**.
  - Step 2** In the **Problem Report Tool** section, set the fields as described in the [Parameters for Configure Problem Report Tool, on page 48](#) table.
  - Step 3** Click **Submit All Changes**.
- 

## Parameters for Configure Problem Report Tool

The following table defines the function and usage of Configure Problem Report Tool parameters in the Problem Report Tool section under the Voice > Provisioning tab in the phone web interface. It also defines



the syntax of the string that is added in the phone configuration file with XML(cfg.xml) code to configure a parameter.

**Table 12: Parameters for Configure Problem Report Tool**

| Parameter         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRT Upload Rule   | <p>Specifies the path to the PRT upload script.</p> <p>If the <b>PRT Max Timer</b> and <b>PRT Upload Rule</b> fields are empty, the phone doesn't generate the problem reports automatically unless user manually performs the generation.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>• In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre data-bbox="824 722 1528 772">&lt;PRT_Upload_Rule ua="na"&gt;https://proxy.example.com/prt_upload.php&lt;/PRT_Upload_Rule&gt;</pre> </li> <li>• In the phone web page, enter the path in the format: <pre data-bbox="824 842 1333 863">https://proxy.example.com/prt_upload.php</pre> <p>or</p> <pre data-bbox="824 932 1321 953">http://proxy.example.com/prt_upload.php</pre> </li> </ul> <p>Default: Empty</p> |
| PRT Upload Method | <p>Determines the method used to upload PRT logs to the remote server.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>• In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre data-bbox="824 1226 1474 1247">&lt;PRT_Upload_Method ua="na"&gt;POST&lt;/PRT_Upload_Method&gt;</pre> </li> <li>• In the phone web page, select <b>POST</b> or <b>PUT</b> methods to upload the logs to the remote server.</li> </ul> <p>Valid values: POST and PUT</p> <p>Default: POST</p>                                                                                                                                                                                                                                                                                          |

| Parameter       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRT Max Timer   | <p>Determines at what interval (minutes) the phone starts generating problem report automatically.</p> <p>If the <b>PRT Max Timer</b> and <b>PRT Upload Rule</b> fields are empty, the phone doesn't generate the problem reports automatically unless user manually performs the generation.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format:<br/> <pre>&lt;PRT_Max_Timer ua="na"&gt;30&lt;/PRT_Max_Timer&gt;</pre> </li> <li>In the phone web page, enter the interval duration in minutes.</li> </ul> <p>Valid value range: 15 minutes to 1440 minutes<br/> Default: Empty</p>                                           |
| PRT Name        | <p>Defines a name for the generated PRT file.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format:<br/> <pre>&lt;PRT_Name ua="na"&gt;prt-string1-\$MACRO&lt;/PRT_Name&gt;</pre> <p>Enter the name in the format:<br/> <pre>prt-string1-\$MACRO</pre> </p></li> <li>In the phone web page, enter the name in the format:<br/> <pre>prt-string1-\$MACRO</pre> </li> </ul> <p>Default: Empty</p>                                                                                                                                                                                                                                   |
| PRT HTTP Header | <p>Specifies the HTTP header for the URL in <b>PRT Upload Rule</b>.</p> <p>The parameter value is associated with <b>PRT HTTP Header Value</b>.</p> <p>Only when both parameters are configured, the HTTP header is included in the HTTP request.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format:<br/> <pre>&lt;PRT_HTTP_Header ua="na"&gt;x-cisco-spark-canary-opts&lt;/PRT_HTTP_Header&gt;</pre> </li> <li>In the phone web page, enter the HTTP header in the format:<br/> <pre>x-cisco-spark-canary-opts</pre> </li> </ul> <p>Valid value range: a-z, A-Z, 0-9, underscore (_), and hyphen (-)<br/> Default: Empty</p> |

| Parameter             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRT HTTP Header Value | <p>Sets the value of the specified HTTP header.</p> <p>The parameter value is associated with <b>PRT HTTP Header</b>.</p> <p>Only when both parameters are configured, the HTTP header is included in the HTTP request.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre>&lt;PRT_HTTP_Header_Value ua="na"&gt;always&lt;/PRT_HTTP_Header_Value&gt;</pre> </li> <li>In the phone web page, enter the value in the format: <pre>always</pre> </li> </ul> <p>Valid value range: a-z, A-Z, 0-9, underscore (_), comma (,), semicolon (;), equal (=), and hyphen (-)</p> <p><b>Note</b> Except for the underscore (_), the first character must not be a special character.</p> <p>Default: Empty</p> |

## Server-Configured Paging

You can configure a paging group on a server so that users can page a group of phones. For more details, refer to your server documentation.

## Configure Multicast Paging

You can set up Multicast paging to allow users to page to phones. The page can go to all phones or a group of phones in the same network. Any phone in the group can initiate a multicast paging session. The page is received only by the phones that are set to listen for the paging group.

You can add a phone to up to 10 paging groups. Each paging group has a unique multicast port and number. The phones within a paging group must subscribe to the same multicast IP address, port, and multicast number.

You configure the priority for the incoming page from a specific group. When a phone is active and an important page must be played, the user hears the page on the active audio path.

When multiple paging sessions occur, they are answered in chronological order. After the active page ends, the next page is automatically answered. When do not disturb (DND) is enabled, the phone ignores any incoming paging.

You can specify a codec for the paging to use. The supported codecs are G711a, G711u, G722, and G729. If you don't specify the codec, paging uses G711u by default.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code. To configure each parameter, see the syntax of the string in [Parameters for Multiple Paging Group, on page 52](#).

**Before you begin**

- Make sure that your network supports multicast so that all devices in the same paging group are able to receive paging.
- For Wi-Fi networks, enable and properly configure the access point for multicast.
- Make sure that all the phones in a paging group are in the same network.
- Access the phone administration web page. See [Access the Phone Web Interface](#).

**Procedure**

---

- Step 1** Select **Voice > Phone**.
- Step 2** Go to the **Multiple Paging Group Parameters** section.
- Step 3** Enter multicast paging scripts as defined in [Parameters for Multiple Paging Group, on page 52](#).
- Step 4** Click **Submit All Changes**.
- 

## Parameters for Multiple Paging Group

The following table defines the function and usage of the multiple paging group parameters in the **Voice > Phone** tab in the phone web interface. It also defines the syntax of the string that is added in the phone configuration file (cfg.xml) with XML code to configure a parameter.

*Table 13: Multiple Paging Group Parameters*

| Feature                                              | Description |
|------------------------------------------------------|-------------|
| Group 1 Paging Script<br>—<br>Group 10 Paging Script |             |

| Feature | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         | <p>Enter a string to configure the phone to listen for and initiate multicast paging. You can add a phone to up to 10 paging groups. Enter the script in this format:</p> <pre>pggrp=&lt;multicast-address&gt;:&lt;port&gt;;&lt;name=group_name&gt;;&lt;num=multicast_number&gt;;&lt;listen=boolean_value&gt;;&lt;pri=priority_level&gt;;&lt;codec=codec_name&gt;;</pre> <p><b>Example script:</b></p> <pre>pggrp=224.168.168.168:34560;name=GroupA;num=500;listen=yes;pri=1;codec=g711a;</pre> <ul style="list-style-type: none"> <li>• <b>Multicast IP address (multicast-address) and port (port)</b>—Enter the multicast IP address and the port specified on your paging server. The port number must be unique for each group and an even number within 1000 and 65534.</li> </ul> <p>Make sure that you set the same multicast IP address and port for all the phones within a paging group. Otherwise, the phones can't receive paging.</p> <ul style="list-style-type: none"> <li>• <b>Paging group name (name)</b>—Optionally enter the name of the paging group. The name helps you identify the paging group the phone is in when you have multiple paging groups.</li> <li>• <b>Multicast number (num)</b>—Specify the number for the phone to listen for multicast paging and initiate a multicast paging session. Assign the same multicast number to all the phones within the group. The number must comply to the dial plan specified for the line to initiate a multicast.</li> <li>• <b>Listen status (listen)</b>—Specify whether the phone listens for paging from this group. Set this parameter to <b>yes</b> to make the phone listen for the paging. Otherwise, set it to <b>no</b>, or don't include this parameter in the script.</li> <li>• <b>Priority (pri)</b>—Specify priority between paging and phone call. If you don't specify the priority or don't include this parameter in the script, the phone uses priority <b>1</b>. The four priority levels are: <ul style="list-style-type: none"> <li>• <b>0:</b> Paging takes precedent over phone call. When the phone is on an active call, an incoming paging places the active call on hold. The call resumes when the paging ends.</li> <li>• <b>1:</b> When the phone receives an incoming paging on an active call, the user hears the mix of the paging and the call.</li> <li>• <b>2:</b> The user is alerted with the paging tone when receiving an incoming paging on an active line. The incoming paging isn't answered unless the active call is put on hold or ends.</li> <li>• <b>3:</b> The phone ignores the incoming paging without any alert when the phone is on an active call.</li> </ul> </li> <li>• <b>Audio codec (codec)</b>—Optionally specify the audio codec for the multicast paging to use. The supported codecs are G711a, G711u, G722, and G729. If you don't specify the codec or don't include the codec parameter in the script, the phone uses G711u codec.</li> </ul> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>• In the phone configuration file with XML(cfg.xml), enter a string in this format:</li> </ul> |

| Feature | Description                                                                                                                                                                                                                                                                                               |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         | <pre>&lt;Group_1_Paging_Script ua="na"&gt;pggrp=224.168.168.168:34560;name=Group_1; num=800;listen=yes;pri=1;codec=g722&lt;/Group_1_Paging_Script&gt;</pre> <ul style="list-style-type: none"> <li>In the phone web interface, configure this field with a valid string.</li> </ul> <p>Default: Empty</p> |

## Configure a Phone to Accept Pages Automatically

The Single Paging or Intercom feature enables a user to directly contact another user by phone. If the phone of the person being paged has been configured to accept pages automatically, the phone does not ring. Instead, a direct connection between the two phones is automatically established when paging is initiated.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code.

### Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

### Procedure

**Step 1** Select **Voice > User**.

**Step 2** In the **Supplementary Services** section, choose **Yes** for the **Auto Answer Page** parameter.

You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<Auto_Answer_Page ua="na">Yes</Auto_Answer_Page>
```

Options: Yes and No

Default: Yes

**Step 3** Click **Submit All Changes**.

## Manage Phones with TR-069

You can use the protocols and standards defined in Technical Report 069 (TR-069) to manage phones. TR-069 explains the common platform for management of all phones and other customer-premises equipment (CPE) in large-scale deployments. The platform is independent of phone types and manufacturers.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code. To configure each parameter, see the syntax of the string in the [Parameters for TR-069 Configuration, on page 57](#) table.

As a bidirectional SOAP/HTTP-based protocol, TR-069 provides the communication between CPEs and Auto Configuration Servers (ACS).

For TR-069 Enhancements, see [TR-069 Parameter Comparison](#).

**Before you begin**

Access the phone administration web page. See [Access the Phone Web Interface](#).

**Procedure**

---

- Step 1** Select **Voice > TR-069**.
- Step 2** Set up the fields as described in [Parameters for TR-069 Configuration, on page 57](#) table.
- Step 3** Click **Submit All Changes**.
- 

## View TR-069 Status

When you enable TR-069 on a user phone, you can view status of TR-069 parameters on the phone web interface.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code. To configure each parameter, see the syntax of the string in the [Parameters for TR-069 Configuration, on page 57](#) table.

**Before you begin**

Access the phone administration web page. See [Access the Phone Web Interface](#).

**Procedure**

---

Select **Info > Status > TR-069 Status**.

You can view status of TR-069 parameters in [Parameters for TR-069 Configuration, on page 57](#) table.

---



## Parameters for TR-069 Configuration

The following table defines the function and usage of Call Center Agent Setup parameters in the ACD Settings section under the Ext(n) tab in the phone web interface. It also defines the syntax of the string that is added in the phone configuration file with XML(cfg.xml) code to configure a parameter.

**Table 14: Parameters for TR-069 Configuration**

| Parameter     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Enable TR-069 | <p>Settings that enables or disables the TR-069 function.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format:<br/> <pre>&lt;Enable_TR-069 ua="na"&gt;No&lt;/Enable_TR-069&gt;</pre> </li> <li>In the phone web page, select <b>Yes</b> to enable this feature and select <b>No</b> to disable it.</li> </ul> <p>Valid values: Yes No<br/>Default: No</p>                                                                                                                            |
| ACS URL       | <p>URL of the ACS that uses the CPE WAN Management Protocol. This parameter must be in the form of a valid HTTP or HTTPS URL. The host portion of this URL is used by the CPE to validate the ACS certificate when it uses SSL or TLS.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format:<br/> <pre>&lt;ACS_URL ua="na"&gt;https://acs.url.com&lt;/ACS_URL&gt;</pre> </li> <li>In the phone web page, enter a valid HTTP or HTTPS URL of the ACS.</li> </ul> <p>Default: Blank</p> |
| ACS Username  | <p>Username that authenticates the CPE to the ACS when ACS uses the CPE WAN Management Protocol. This username is used only for HTTP-based authentication of the CPE.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format:<br/> <pre>&lt;ACS_Username ua="na"&gt;acs username&lt;/ACS_Username&gt;</pre> </li> <li>In the phone web page, enter a valid username for HTTPS-based authentication of the CPE.</li> </ul> <p>Default: admin</p>                                         |

| Parameter                   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACS Password                | <p>Password to access to the ACS for a specific user. This password is used only for HTTP-based authentication of the CPE.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format:<br/> <pre>&lt;ACS_Password ua="na"/&gt;</pre> </li> <li>In the phone web page, enter a valid password for HTTPS-based authentication of the CPE.</li> </ul> <p>Default: Blank</p> |
| ACS URL In Use              | URL of the ACS that is currently in use. This is a read-only field.                                                                                                                                                                                                                                                                                                                                                                                                            |
| Connection Request URL      | This is read-only field showing the URL of the ACS that makes the connection request to the CPE.                                                                                                                                                                                                                                                                                                                                                                               |
| Connection Request Username | <p>Username that authenticates the ACS that makes the connection request to the CPE.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format:<br/> <pre>&lt;Connection_Request_Password ua="na"/&gt;</pre> </li> <li>In the phone web page, enter a valid username that authenticates the ACS.</li> </ul>                                                             |
| Connection Request Password | <p>Password used to authenticate the ACS that makes a connection request to the CPE.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format:<br/> <pre>&lt;Connection_Request_Password ua="na"/&gt;</pre> </li> <li>In the phone web page, enter a valid password that authenticates the ACS.</li> </ul> <p>Default: Blank</p>                                       |

| Parameter                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Periodic Inform Interval | <p>Duration in seconds of the interval between CPE attempts to connect to the ACS when Periodic Inform Enable is set to yes.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre data-bbox="824 506 1295 558">&lt;Periodic_Inform_Interval ua="na"&gt;20&lt;/Periodic_Inform_Interval&gt;</pre> </li> <li>In the phone web page, enter a valid duration in seconds.</li> </ul> <p>Default: 20</p>          |
| Periodic Inform Enable   | <p>Settings that enables or disables the CPE connection requests.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre data-bbox="824 869 1284 921">&lt;Periodic_Inform_Enable ua="na"&gt;Yes&lt;/Periodic_Inform_Enable&gt;</pre> </li> <li>In the phone web page, select <b>Yes</b> to enable this feature and select <b>No</b> to disable it.</li> </ul> <p>Valid values: Yes No</p> <p>Default: Yes</p> |
| TR-069 Traceability      | <p>Settings that enables or disables TR-069 transaction logs.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre data-bbox="824 1310 1511 1335">&lt;TR-069_Traceability ua="na"&gt;Yes&lt;/TR-069_Traceability&gt;</pre> </li> <li>In the phone web page, select <b>Yes</b> to enable this feature and select <b>No</b> to disable it.</li> </ul> <p>Valid values: Yes No</p> <p>Default: No</p>          |

| Parameter               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CWMP V1.2 Support       | <p>Settings that enables or disables CPE WAN Management Protocol (CWMP) support. If set to disable, the phone does not send any Inform messages to the ACS nor accept any connection requests from the ACS.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format:<br/><br/> <pre>&lt;CWMP_V1.2_Support ua="na"&gt;Yes&lt;/CWMP_V1.2_Support&gt;</pre> </li> <li>In the phone web page, select <b>Yes</b> to enable this feature and select <b>No</b> to disable it.</li> </ul> <p>Valid values: Yes No<br/>Default: Yes</p> |
| TR-069 VoiceObject Init | <p>Settings to modify voice objects.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format:<br/><br/> <pre>&lt;TR-069_VoiceObject_Init ua="na"&gt;Yes&lt;/TR-069_VoiceObject_Init&gt;</pre> </li> <li>In the phone web page, select <b>Yes</b> to initialize all voice objects to factory default values or select <b>No</b> to retain the current values.</li> </ul> <p>Valid values: Yes No<br/>Default: Yes</p>                                                                                                           |
| TR-069 DHCPOption Init  | <p>Settings to modify DHCP settings.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format:<br/><br/> <pre>&lt;TR-069_DHCPOption_Init ua="na"&gt;Yes&lt;/TR-069_DHCPOption_Init&gt;</pre> </li> <li>In the phone web page, select <b>Yes</b> to initialize the DHCP settings from the ACS or select <b>No</b> to retain the current DHCP settings.</li> </ul> <p>Valid values: Yes No<br/>Default: Yes</p>                                                                                                                   |

| Parameter           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BACKUP ACS URL      | <p>Backup URL of the ACS that uses the CPE WAN Management Protocol. This parameter must be in the form of a valid HTTP or HTTPS URL. The host portion of this URL is used by the CPE to validate the ACS certificate when it uses SSL or TLS.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre data-bbox="824 569 1386 625">&lt;BACKUP_ACS_URL ua="na"&gt;https://acs.url.com&lt;/BACKUP_ACS_URL&gt;</pre> </li> <li>In the phone web page, enter a valid URL that uses the CPE WAN Management Protocol.</li> </ul> <p>Default: Blank</p> |
| BACKUP ACS User     | <p>Backup username that authenticates the CPE to the ACS when ACS uses the CPE WAN Management Protocol. This username is used only for HTTP-based authentication of the CPE.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre data-bbox="824 1026 1219 1083">&lt;BACKUP_ACS_User ua="na"&gt;backup username&lt;/BACKUP_ACS_User&gt;</pre> </li> <li>In the phone web page, enter a valid username that authenticates the CPE to the ACS when ACS uses the CPE WAN Management Protocol.</li> </ul> <p>Default: Blank</p>                   |
| BACKUP ACS Password | <p>Backup password to access to the ACS for a specific user. This password is used only for HTTP-based authentication of the CPE.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre data-bbox="824 1486 1208 1509">&lt;BACKUP_ACS_Password ua="na"/&gt;</pre> </li> <li>In the phone web page, enter a valid password that authenticates the CPE to the ACS when ACS uses the CPE WAN Management Protocol.</li> </ul> <p>Default: Blank</p>                                                                                                |
| <b>Note</b>         | <p>If you do not configure the above parameters, you can also fetch them through DHCP options 60,43, and 125.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

# Enable Electronic HookSwitch

The Electronic HookSwitch (EHS) feature enables users to use headsets that electronically connect a wireless headset to a phone. Typically, the headset requires a base that plugs into the phone and communicates with the headset. Here are the supported headsets:

- Plantronics Savi 740
- Jabra PRO920
- Jabra PRO9400
- Sennheiser DW Pro1

The following multiplatform phones support Electronic HookSwitch:

- Cisco IP Phone 6871 Multiplatform Phones
- Cisco IP Multiplatform Phone 8800 Series (8811, 8841, 8845, 8851, 8861, and 8865)



---

**Note** The following multiplatform phones do not support the Electronic HookSwitch feature:

- Cisco IP Multiplatform Phone 7800 Series (7811, 7821, 7841, 7861)
  - Cisco IP Phone 6821 Multiplatform Phones
  - Cisco IP Phone 6841 Multiplatform Phones
- 

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code.

## Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

## Procedure

---

**Step 1** Select **Voice > User**.

**Step 2** In the **Audio Volume** section, set the **Electronic HookSwitch Control** parameter to **Yes** to enable the feature.

You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<Ehook_Enable ua="na">Yes</Ehook_Enable>
```

Options: Yes and No

Default: No

**Step 3** Click **Submit All Changes**.

---

# Set up a Secure Extension

You can configure an extension to only accept secure calls. If the extension is configured to only accept secure calls then any calls the extension makes will be secure.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code.

## Before you begin

- Make sure that **Secure Call Serv** is enabled (set to **Yes**) in the **Supplementary Services** area on the **Voice > Phone** tab.

You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<Secure_Call_Serv ua="na">Yes</Secure_Call_Serv>
```

- SIP transport with TLS can be set statically on the phone web page or automatically with information in the DNS NAPTR records. If the SIP transport parameter is set for the phone extension as TLS, the phone only allows SRTP. If the SIP transport parameter is set to AUTO, the phone performs a DNS query to get the transport method.
- Access the phone administration web page. See [Access the Phone Web Interface](#).

## Procedure

- 
- Step 1** Select **Voice > Ext(n)**.
- Step 2** In the **Call Feature Settings** section, in the **Secure Call Option** field, choose **Optional**, **Required**, or **Strict**.  
You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:
- ```
<Secure_Call_Option_1_ ua="na">Optional</Secure_Call_Option_1_>
```
- Options: Optional, Required, and Strict
- Optional - Retains the current secure call option for the phone.
 - Required - Rejects nonsecure calls from other phones.
 - Strict - Allows SRTP only when SIP transport is set to **TLS**. Allows RTP only when SIP transport is **UDP/TCP**.
- Default: Optional
- Step 3** Click **Submit All Changes**.
-

Configure the SIP Transport

For SIP messages, you can configure each extension to use:

- a specific protocol
- the protocol automatically selected by the phone

When you set up automatic selection, the phone determines the transport protocol based on the Name Authority Pointer (NAPTR) records on the DNS server. The phone uses the protocol with the highest priority in the records.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code.

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

-
- Step 1** Select **Voice > Ext(n)**, where n is an extension number.
- Step 2** In the **SIP Settings** section, set the **SIP Transport** parameter to select a transport protocol for SIP messages. You can configure this parameter in the phone configuration XML file (cfg.xml) with a string in this format:
- ```
<SIP_Transport_n_ ua="na">UDP</SIP_Transport_n_>
```
- where *n* is the extension number.
- Options: UDP, TCP, TLS, and Auto
- AUTO allows the phone to select the appropriate protocol automatically, based on the NAPTR records on the DNS server.
- Default: UDP
- Step 3** Click **Submit All Changes**.
- 

## Block Non-Proxy SIP Messages to a Phone

You can disable the ability of the phone to receive incoming SIP messages from a non-proxy server. When you enable this feature, the phone only accepts SIP messages from:

- proxy server
- outbound proxy server
- alternative proxy server
- alternative outbound proxy server
- IN-Dialog message from proxy server and non-proxy server. For example: Call Session dialog and Subscribe dialog

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code.



**Before you begin**

Access the phone administration web page. See [Access the Phone Web Interface](#).

**Procedure**

- 
- Step 1** Select **Voice > System**.
- Step 2** In the **System Configuration** section, set the **Block Nonproxy SIP** parameter to **Yes** to block any incoming non-proxy SIP messages except IN-dialog message. If you choose **No**, the phone does not block any incoming non-proxy SIP messages.
- Set **Block Nonproxy SIP** to **No** for phones that use TCP or TLS to transport SIP messages. Nonproxy SIP messages transported over TCP or TLS are blocked by default.
- You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:
- ```
<Auto_Answer_Page ua="na">Yes</Auto_Answer_Page>
```
- Options: Yes and No
- Default: No
- Step 3** Click **Submit All Changes**.
-

Configure a Privacy Header

A user privacy header in the SIP message sets user privacy needs from the trusted network.

You can set the user privacy header value for each line extension.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code.

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

-
- Step 1** Select **Voice > Extension**.
- Step 2** In the **SIP Settings** section, set the **Privacy Header** parameter to set user privacy in the SIP message in the trusted network.
- You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:
- ```
<Privacy_Header_2_ ua="na">header</Privacy_Header_2_>
```
- Options:
- Disabled (default)
  - none—The user requests that a privacy service applies no privacy functions to this SIP message.

- header—The user needs a privacy service to obscure headers which cannot be purged of identifying information.
- session—The user requests that a privacy service provide anonymity for the sessions.
- user—The user requests a privacy level only by intermediaries.
- id—The user requests that the system substitute an id that doesn't reveal the IP address or host name.

Default: Disabled

**Step 3** Click **Submit All Changes**.

---

## Enable P-Early-Media Support

You can determine whether to include the P-Early-Media header in the SIP message of outgoing calls. The P-Early-Media header contains the status of the early media stream. If the status indicates that the network is blocking the early media stream, the phone plays the local ringback tone. Otherwise, the phone plays the early media while waiting for the call to be connected.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code.

### Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

### Procedure

---

**Step 1** Select **Voice > Ext (n)**.

**Step 2** In the **SIP Settings** section, set the **P-Early-Media Support** to **Yes** to control whether the P-Early-Media header is included in the SIP message for an outgoing call.

You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<P-Early-Media_Support_1_ ua="na">No</P-Early-Media_Support_1_>
```

Options: Yes and No

Default: No

**Step 3** Click **Submit All Changes**.

---

## Enable Peer Firmware Sharing

Peer Firmware Sharing (PFS) is a firmware distribution model which allows a Cisco IP phone to find other phones of the same model or series on the subnet and share updated firmware files when you need to upgrade multiple phones all at the same time. PFS uses Cisco Peer-to-Peer-Distribution Protocol (CPPDP) which is a

Cisco proprietary protocol. With CPPDP, all the devices in the subnet form a peer-to-peer hierarchy, and then copy the firmware or the other files from peer devices to the neighboring devices. To optimize firmware upgrades, a root phone downloads the firmware image from the load server and then transfers the firmware to other phones on the subnet using TCP connections.

Peer firmware sharing:

- Limits congestion on TFTP transfers to centralized remote load servers.
- Eliminates the need to manually control firmware upgrades.
- Reduces phone downtime during upgrades when large numbers of phones are reset simultaneously.

**Note**

- Peer firmware sharing does not function unless multiple phones are set to upgrade at the same time. When a NOTIFY is sent with Event:resync, it initiates a resync on the phone. Example of an xml that can contain the configurations to initiate the upgrade:  

```
"Event:resync;profile="http://10.77.10.141/profile.xml
```
- When you set the Peer Firmware Sharing Log server to an IP address and port, the PFS specific logs are sent to that server as UDP messages. This setting must be done on each phone. You can then use the log messages when troubleshooting issues related to PFS.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code.

**Before you begin**

Access the phone administration web page. See [Access the Phone Web Interface](#).

**Procedure**

**Step 1** Select **Voice > Provisioning**.

**Step 2** In the **Firmware Upgrade** section, set the parameters:

- a) Set the **Peer Firmware Sharing** parameter.

You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<Peer_Firmware_Sharing ua="na">Yes</Peer_Firmware_Sharing>
```

Options: Yes and No

Default: Yes

- b) Set the **Peer Firmware Sharing Log Server** parameter to indicate the IP address and the port to which the UDP message is sent.

For example: 10.98.76.123:514 where, 10.98.76.123 is the IP address and 514 is the port number.

You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<Peer_Firmware_Sharing_Log_Server>192.168.5.5</ Peer_Firmware_Sharing_Log_Server>
```

Peer\_Firmware\_Sharing\_Log\_Server specifies UDP Remote syslog server hostname and the port. The port defaults to the default syslog 514.

**Step 3** Click **Submit All Changes**.

---

## Specify the Profile Authentication Type

Profile Authentication allows phone users to resynchronize the provisioning profile onto the phone. Authentication information is required while the phone tries to resynchronize and download configuration file for the first time and gets an HTTP or HTTPS 401 authentication error. When you enable this feature, the **Profile account setup** screen is displayed on the phone for the following situations:

- When the HTTP or HTTPS 401 authentication error occurs during first-time provisioning after the phone reboots
- When the profile account username and password are empty
- When there are no username and password in the Profile Rule

If the **Profile account setup** screen is missed or ignored, the user can also access the setup screen through the phone screen menu, or the **Setup** softkey, which displays only when no line on the phone is registered.

When you disable the feature, the **Profile account setup** screen doesn't display on the phone.

The username and password in the **Profile Rule** field have a higher priority than the profile account.

- When you provide a correct URL in the **Profile Rule** field without a username and password, the phone requires authentication or digest to resynchronize the profile. With the correct profile account, authentication passes. With an incorrect profile account, authentication fails.
- When you provide a correct URL in the **Profile Rule** field with a correct username and password, the phone requires authentication or digest to resynchronize the profile. The profile account is not used for phone resynchronization. Sign-in is successful.
- When you provide a correct URL in the **Profile Rule** field with an incorrect username and password, the phone requires authentication or digest to resynchronize the profile. The profile account isn't used for phone resynchronization. Sign-in always fails.
- When you provide an incorrect URL in the **Profile Rule** field, sign-in always fails.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code.

You can specify the profile authentication type from the phone administration web page.

### Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

### Procedure

---

**Step 1** Select **Voice > Provisioning**.

**Step 2** In the **Configuration Profile** section, set the **Profile Authentication Type** parameter to specify the credentials to use for profile account authentication.

You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<Profile_Authentication_Type ua="na">Disabled</Profile_Authentication_Type>
```

Options:

- **Disabled:** Disables the profile account feature. When this feature is disabled, the **Profile account setup** menu doesn't display on the phone screen.
- **Basic HTTP Authentication:** The HTTP login credentials are used to authenticate the profile account.
- **XSI Authentication:** XSI login credentials or XSI SIP credentials are used to authenticate the profile account. The authentication credentials depend on the XSI Authentication Type for the phone:

When the XSI Authentication Type for the phone is set to Login Credentials, the XSI login credentials are used.

When the XSI Authentication Type for the phone is set to SIP Credentials, the XSI SIP credentials are used.

Default: Basic HTTP Authentication

**Step 3** Click **Submit All Changes**.

## Control the Authentication Requirement to Access the Phone Menus

You can control if authentication is required to access phone menus.

### Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

### Procedure

**Step 1** Select **Voice > Phone**.

**Step 2** Set the **LCD Authentication** and **LCD Authentication Customization** sections as described in the [Parameters for User Authentication Control, on page 69](#) table.

## Parameters for User Authentication Control

The following table defines the function and usage of the parameters for user authentication control feature in the **LCD Authentication** and **LCD Authentication Customization** section under the **Voice > Phone** tab

in the phone web interface. It also defines the syntax of the string that is added in the phone configuration file (cfg.xml) with XML code to configure a parameter.

**Table 15: Parameters for User Authentication Control**

| Parameter                                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Require Authentication for LCD Menu Access | <p>Controls whether the user requires authentication to access phone menus.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre>&lt;Require_Authentication_for_LCD_Menu_Access ua="na"&gt;Default&lt;/Require_Authentication_for_LCD_Menu_Access&gt;</pre> </li> <li>On the phone web interface, select the required value.</li> </ul> <p>Allowed values: Default Customized No</p> <ul style="list-style-type: none"> <li><b>Default</b>—When selected, user needs to provide password and then sign in to access the phone menus that requires authentication. Phone continues to support all the functionalities that are supported in the releases prior to 11.3(2). Phone displays lock screen icon. <p>To access any phone menus that require authentication, user needs to provide the password and press <b>Sign in</b>. The lock icon remains locked. After the user signs in, the lock icon is unlocked.</p> </li> <li><b>Customized</b>—When selected, user requires authentication only to access <b>Profile rule</b> and <b>Factory reset</b> menus on the phone. Authentication control of these two menus also depends on the settings of the <b>Factory Reset Menu</b> menu and the <b>Profile Rule Menu</b> menu. User will not require any authentication to access other phone menus.</li> <li><b>No</b>—When selected, the <b>Sign in</b> menu, the <b>Sign out</b> menu, the lock icon, and the <b>Set password</b> menus are not available on the phone. User can access phone menus without any authentication.</li> </ul> <p>Default value: Default</p> |
| Factory Reset Menu                         | <p>Specifies if the user requires authentication to access <b>Factory reset</b> menu on the phone. You can customize this parameter to <b>Yes</b> or <b>No</b> only when you set the <b>Require Authentication for LCD Menu Access</b> parameter to <b>Customized</b>.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre>&lt;Factory_Reset_Menu ua="na"&gt;Yes&lt;/Factory_Reset_Menu&gt;</pre> </li> <li>On the phone web interface, set this parameter to <b>Yes</b> or <b>No</b> as needed.</li> </ul> <p>Allowed values: Yes No</p> <p>Default value: Yes</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| Parameter         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Profile Rule Menu | <p>Specifies if the user requires authentication to access <b>Profile rule</b> menu on the phone.</p> <p>You can customize this parameter to <b>Yes</b> or <b>No</b> only when you set the <b>Require Authentication for LCD Menu Access</b> parameter to <b>Customized</b>.</p> <p>Perform one of the following:</p> <pre>&lt;Profile_Rule_Menu ua="na"&gt;Yes&lt;/Profile_Rule_Menu&gt;</pre> <ul style="list-style-type: none"> <li>On the phone web interface, set this parameter to <b>Yes</b> or <b>No</b> as needed.</li> </ul> <p>Allowed values: Yes No</p> <p>Default value: Yes</p> |

## Silence an Incoming Call with Ignore Soft Key

You can add the **Ignore** softkey on the phone. User can press this softkey to silence an incoming call when busy and don't want to be disturbed. When the user presses the softkey, the phone stops ringing, but the user gets a visual alert, and, can answer the phone call.

### Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

### Procedure

- 
- Step 1** Select **Voice > Phone**.
- Step 2** In the **Programmable Softkeys** section, set the **Programmable Softkey Enable** to **Yes**.
- Step 3** Enter the following values in the **Ringling Key List** field:
- ```
answer|1;ignore|2;ignoresilent|3;
```
- Step 4** Click **Submit All Changes**.
-

Move an Active Call from a Phone to Other Phones (Locations)

You can configure a phone to allow a call to seamlessly be moved from one desk phone(location) to another mobile phone or desk phone(location).

When you enable this feature, the **Anywhere** menu is added into the phone screen. The user can use this menu to add multiple phones as locations to the extension. When there is an incoming call in that extension, all the added phones will ring and the user can answer the incoming call from any location. The locations list also gets saved to the BroadWorks XSI server.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code. To configure each parameter, see the syntax of the string in the [Parameters for Moving Active Call to Other Locations, on page 73](#) table.

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

- Step 1** Select **Voice > Ext(n)**.
- Step 2** In the **XSI Line Service** section, set the **XSI Host Server**, **XSI Authentication Type**, **Login User ID**, **Login Password**, and **Anywhere Enable** parameters as described in the [Parameters for Moving Active Call to Other Locations, on page 73](#) table.
- If you select **SIP Credentials** for **XSI Authentication Type**, you need to enter subscriber **Auth ID** and **Password** in the **Subscriber Information** section.
- Step 3** Click **Submit All Changes**.
-

Parameters for Moving Active Call to Other Locations

The following table defines the function and usage of Moving Active Call to Locations parameters in the XSI Line Service section under the Ext(n) tab in the phone web interface. It also defines the syntax of the string that is added in the phone configuration file with XML(cfg.xml) code to configure a parameter.

Table 16: Parameters for Moving Active Call to Locations

Parameter	Description
XSI Host Server	<p>Enter the name of the server. For example:</p> <pre>xsi.iopl.broadworks.net</pre> <p>Note XSI Host Server uses http protocol by default. To enable XSI over HTTPS, you can specify https:// in the server.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><XSI_Host_Server ua="na">https://xsi.iopl.broadworks.net</XSI_Host_Server></pre> <ul style="list-style-type: none"> In the phone web page, enter the server. <p>For example:</p> <pre>https://xsi.iopl.broadworks.net</pre> <p>You can also specify a port for the server. For example:</p> <pre>https://xsi.iopl.broadworks.net:5061</pre> <p>If you don't specify a port. The default port for the specified protocol is used.</p> <p>Default: Blank</p>

Parameter	Description
XSI Authentication Type	<p>Determines the XSI authentication type.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><XSI_Authentication_Type ua="na">SIP Credentials</XSI_Authentication_Type></pre> In the phone web page, select an authentication type. <p>Options:</p> <p>Login Credentials - authenticates access with Login User ID and Login Password.</p> <p>SIP Credentials - authenticates access with the register Auth ID and Password of the SIP account registered on the phone.</p> <p>If you select SIP Credentials for XSI Authentication Type, you need to enter subscriber Auth ID and Password in the Subscriber Information section.</p> <p>Default: Login Credentials</p>
Login User ID	<p>BroadSoft User ID of the phone user.</p> <p>For example:</p> <pre>john.doe@xdp.broadsoft.com.</pre> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Login_User_ID ua="na">4081005300@as1bsoft22.sipurash.com</Login_User_ID></pre> In the phone web page, enter a valid user ID. <p>For any XSI Authentication Type, you must enter Login User ID. The BroadWorks Anywhere feature does not work without this parameter.</p> <p>Default: admin</p>
Login Password	<p>Alphanumeric password associated with the Login User ID.</p> <p>Enter Login Password, when you select Login Credentials for XSI authentication type.</p> <p>After you enter the password, this parameter shows the following in the configuration file (cfg.xml):</p> <pre><ACS_Password ua="na">*****</ACS_Password></pre> <p>Default: Blank</p>

Parameter	Description
Anywhere Enable	<p>Enables BroadWorks Anywhere feature on an extension.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Anywhere_Enable_1_ ua="na">Yes</Anywhere_Enable_1_></pre> In the phone web page, select Yes, Anywhere is enabled on this line, and the user can use the phone menu to add multiple locations to this specific line. <p>Valid values: Yes No Default: Yes</p>

Sync the Block Caller ID Feature with the Phone and the BroadWorks XSI Server

You can sync the **Block caller id** status on the phone and the **Line ID Blocking** status on the BroadWorks XSI server. When you enable the synchronization, the changes that the user makes in the **Block caller id** settings also changes the BroadWorks server settings.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code.

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

Step 1 Select **Voice > Ext(n)**.

Step 2 In the **XSI Line Service** section, set the **Block CID Enable** parameter. Choose **Yes** to enable the synchronization of blocking caller id status with the server using XSI interface. Choose **No** to use the phone's local blocking caller id settings.

You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<Block_CID_Enable_1_ ua="na">No</Block_CID_Enable_1_>
```

- Note**
- When **Feature Key Sync** is set to **Yes**, FKS takes precedent over XSI synchronization.
 - If XSI host server and credentials are not entered and the **CFWD Enable** field is set to **Yes**, the phone user can't forward calls on the phone.

Options: Yes and No

Default: No

Step 3 Click **Submit All Changes**.

Enable Viewing BroadWorks XSI Call Logs on a Line

You can configure a phone to display recent call logs from either the BroadWorks server or the local phone. After you enable the feature, the Recents screen has a **Display recents from** menu and the user can choose the XSI call logs or the local call logs.

You can set up a feature to do a reverse name lookup against local contacts for BroadWorks server call logs. For example, on server you set up a user 3280 (4085273280) with name "cx400 liu" and another user 3281(4085273281) with name "cx401 liu". User 3280 is registered on phone A and user 3281 is registered on phone B. From phone A you make a missed call, a received call, or a placed call on phone B. The display of the broadsoft call logs on phone B appears as follows:

- If the personal directory doesn't have a contact that matches with the caller name, the BroadWorks call logs on phone B displays the original name "cx400 liu" saved in the server as the caller name.
- If the personal directory has a contact with "Name" = "B3280" and "Work" = "3280" that matches with the calling number, the BroadWorks call logs on phone B displays the contact name "B3280" as the caller name.
- If the personal directory has a contact with "Name" = "C3280" and "Work" = "03280", and the user configures a caller id map rule (<3:03>x.), the BroadWorks call logs on the phone B displays "C3280" using the mapped phone number 03280. If there is a matched contact of the unmapped phone number, the mapped phone number will not be used for reverse name lookup.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code. To configure each parameter, see the syntax of the string in the [Parameters for BroadWorks XSI Call Logs on a Line, on page 77](#) table.

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

CallLog Enable field is enabled.

Procedure

Step 1 Select **Voice > Phone**.

Step 2 In the **XSI Phone Service** section, set the **XSI Host Server**, **XSI Authentication Type**, **Login User ID**, **Login Password**, and **Directory Enable** fields as described in [Parameters for BroadWorks XSI Call Logs on a Line, on page 77](#).

If you select **SIP Credentials** for **XSI Authentication Type**, you need to enter **SIP Auth ID** and **SIP Password** in this section.

Step 3 Set the **CallLog Associated Line** and **Display Recents From** fields as described in [Parameters for BroadWorks XSI Call Logs on a Line, on page 77](#).

Note The **Display recents from** menu doesn't appear in the **Recents** phone screen when you set the value of the **CallLog Enable** field to **No**,

Step 4 Click **Submit All Changes**.

Parameters for BroadWorks XSI Call Logs on a Line

The following table defines the function and usage of XSI Call Logs on a Line parameters in the XSI Phone Service section under the Phone tab in the phone web interface. It also defines the syntax of the string that is added in the phone configuration file with XML(cfg.xml) code to configure a parameter.

Table 17: Parameters for XSI Call Logs on a Line

Parameter	Description
XSI Host Server	<p>Enter the name of the server; for example,</p> <pre>xsi.iopl.broadworks.net</pre> <p>.</p> <p>Note XSI Host Server uses http protocol by default. To enable XSI over HTTPS, you can specify <code>https://</code> in the server.</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><XSI_Host_Server ua="na">https://xsi.iopl.broadworks.net</XSI_Host_Server></pre> In the phone web interface, enter the XSI server to use. <p>Default: Empty</p>
XSI Authentication Type	<p>Determines the XSI authentication type. Select Login Credentials to authenticate access with XSI id and password. Select SIP Credentials to authenticate access with the register user ID and password of the SIP account registered on the phone.</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><XSI_Authentication_Type ua="na">SIP Credentials</XSI_Authentication_Type></pre> In the phone web interface, specify the authentication type for XSI service. <p>Options: SIP Credentials and Login Credentials</p> <p>Default: Login Credentials</p>

Parameter	Description
Login User ID	<p>BroadSoft User ID of the phone user; for example, johndoe@xdp.broadsoft.com.</p> <p>Enter SIP Auth ID when you select Login Credentials or SIP Credentials for XSI authentication type.</p> <p>When you choose SIP Auth ID as SIP Credentials, you must enter Login User ID. Without Login User ID, the BroadSoft directory will not appear under the phone Directory list.</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Login_User_ID ua="na">username</Login_User_ID></pre> In the phone web interface, enter the username used to authenticate the access to the XSI server. <p>Default: Empty</p>
Login Password	<p>Alphanumeric password associated with the User ID.</p> <p>Enter login password, when you select Login Credentials for XSI authentication type.</p> <p>Default: Empty</p>
Directory Enable	<p>Enables BroadSoft directory for the phone user. Select Yes to enable the directory and select No to disable it.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Directory_Enable ua="na">Yes</Directory_Enable></pre> In the phone web interface, set this field to Yes to enable the BroadSoft directory. <p>Option: Yes and No</p> <p>Default: No</p>

Parameter	Description
CallLog Associated Line	<p>Allows you to select a phone line for which you want to display the recent call logs.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><CallLog_Associated_Line ua="na">1</CallLog_Associated_Line></pre> In the phone web interface, Select a phone line. <p>Valid values: 1 to 10</p> <p>Default: 1</p>
Display Recents From	<p>Allows you to set which type of recent call logs the phone will display.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Display_Recents_From ua="na">Phone</Display_Recents_From></pre> In the phone web interface, Choose Server to display BroadSoft XSI recent call logs and select Phone to display local recent call logs. <p>Option: Phone and Server</p> <p>Default: Phone</p> <p>Note The Display recents from is added to the Recents screen of the phone only when you set CallLog Enable to Yes and Display Recents From type to Server.</p>

Enable Feature Key Sync

When you enable the Feature Key Synchronization (FKS), the settings of call forward and do not disturb (DND) on the server are synchronized to the phone. The changes in DND and call forward settings made on the phone will also be synchronized to the server.

When you enable the Feature Key Synchronization (FKS), the settings of call forward and do not disturb (DND) on the server are synchronized to the phone. The changes in DND and call forward settings made on the phone will also be synchronized to the server. If configured, executives can access the **Settings > Executive** menu on the phone. Similarly, assistants can access the **Settings > Assistant** menu.

When you enable the Feature Key Synchronization (FKS), the settings of call forward and do not disturb (DND) on the server are synchronized to the phone. The changes in DND and call forward settings made on the phone will also be synchronized to the server.

For the Cisco IP Phone 6871 Multiplatform Phones, if the FKS is enabled, executives can access the **Settings** > **Executive** menu on the phone. Similarly, assistants can access the **Settings** > **Assistant** menu.



Note Feature Key Sync must be enabled for all the executive and assistant users.



Note For the Cisco IP Phone 6871 Multiplatform Phones that supports the executive-assistant feature, make sure that the Feature Key Sync is enabled for the executive and assistant users.

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

-
- Step 1** Select **Voice** > **Ext [n]** (where [n] is the extension number).
 - Step 2** In the **Call Feature Settings** section, set the **Feature Key Sync** field to **Yes**.
 - Step 3** Click **Submit All Changes**.
-

Related Topics

- [DND and Call Forward Status Sync](#), on page 80
- [Enable Call Forward Status Sync via XSI Service](#), on page 81
- [Enable DND Status Sync via XSI Service](#), on page 82

DND and Call Forward Status Sync

You can configure the settings on the phone administration web page to enable status synchronization of do not disturb (DND) and call forward between the phone and the server.

There are two ways to synchronize the feature status:

- Feature Key Synchronization (FKS)
- XSI Synchronization



Note Feature Key Sync must be enabled for all the executive and assistant users.





Note For the Cisco IP Phone 6871 Multiplatform Phones, make sure that Feature Key Sync is enabled for all the executive and assistant users. Only the Cisco IP Phone 6871 Multiplatform Phones supports the executive-assistant feature.

FKS uses SIP messages to communicate the feature status. XSI Synchronization uses HTTP messages. If both FKS and XSI synchronization are enabled, FKS takes precedent over XSI synchronization. See the table below for how FKS interacts with XSI synchronization.

Table 18: Interaction Between FKS and XSI Synchronization

Feature Key Sync	DND Enabled	CFWD Enabled	DND Sync	CFWD Sync
Yes	Yes	Yes	Yes (SIP)	Yes (SIP)
Yes	No	No	Yes (SIP)	Yes (SIP)
Yes	No	Yes	Yes (SIP)	Yes (SIP)
Yes	No	No	Yes (SIP)	Yes (SIP)
No	Yes	Yes	Yes (HTTP)	Yes (HTTP)
No	No	Yes	No	Yes (HTTP)
No	Yes	No	Yes (HTTP)	No
No	No	No	No	No

If a line key is configured with FKS or XSI synchronization and is also enabled with DND or call forward, the respective DND  icon or the call forward  icon is displayed next to the line key label. If the line key has a missed call, a voice message, or an urgent voicemail alert, the DND icon or the call forward icon is also displayed with the alert notification.

Related Topics

[Enable Feature Key Sync](#), on page 79

[Enable Call Forward Status Sync via XSI Service](#), on page 81

[Enable DND Status Sync via XSI Service](#), on page 82

Enable Call Forward Status Sync via XSI Service

When call forward sync is enabled, the settings related to call forward on the server are synchronized to the phone. The changes in call forward settings made on the phone will also be synchronized to the server.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code.

Before you begin

- Access the phone administration web page. See [Access the Phone Web Interface](#).
- Configure the XSI host server and the corresponding credentials on the **Voice > Ext (n)** tab.
 - When using **Login Credentials** for XSI server authentication, enter **XSI Host Server**, **Login User ID**, and **Login Password** in the **XSI Line Service** section.
 - When using **SIP Credentials** for XSI server authentication, enter **XSI Host Server** and **Login User ID** in the **XSI Line Service** section, and **Auth ID** and **Password** in the **Subscriber Information** section.

- Disable Feature Key Sync (FKS) in **Call Feature Settings** section from **Voice > Ext (n)**.

Procedure

Step 1 Select **Voice > Ext [n]** (where [n] is the extension number).

Step 2 In the **XSI Line Service** section, set the **CFWD Enable** parameter to **Yes**.

You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<CFWD_Enable_1_ ua="na">Yes</CFWD_Enable_1_>
```

Options: Yes and No

Default: Yes

Note If XSI sync for call forward is enabled but the XSI host server or XSI account isn't configured correctly, the **Forward** softkey isn't available (doesn't appear). The user can't forward calls on the phone until the XSI account is configured correctly.

Step 3 Click **Submit All Changes**.

Related Topics

[DND and Call Forward Status Sync](#), on page 80

[Enable Feature Key Sync](#), on page 79

Enable DND Status Sync via XSI Service

When do not disturb (DND) sync is enabled, the DND setting on the server is synchronized to the phone. The changes in DND setting made on the phone will also be synchronized to the server.



Note If XSI sync for DND is enabled but the XSI host server or XSI account is not configured correctly, the **DND** softkey isn't not available (doesn't appear) on the phone. The user can't see the softkey and turn on DND mode on the phone until the XSI account is configured correctly.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code.

Before you begin

- Access the phone administration web page. See [Access the Phone Web Interface](#).
- Configure the XSI host server and the corresponding credentials on the **Voice > Ext (n)** tab.
 - When using **Login Credentials** for XSI server authentication, enter **XSI Host Server**, **Login User ID**, and **Login Password** in the **XSI Line Service** section.
 - When using **SIP Credentials** for XSI server authentication, enter **XSI Host Server** and **Login User ID** in the **XSI Line Service** section, and **Auth ID** and **Password** in the **Subscriber Information** section.

- Disable Feature Key Synchronization (FKS) in **Call Feature Settings** section from **Voice > Ext (n)**.

Procedure

- Step 1** Select **Voice > Ext [n]** (where [n] is the extension number).
- Step 2** In the **XSI Line Service** section, set the **DND Enable** parameter to **Yes**.
- You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:
- ```
<DND_Enable_1_ ua="na">Yes</DND_Enable_1_>
```
- Options: Yes and No
- Default: Yes
- Step 3** Click **Submit All Changes**.
- 

### Related Topics

- [DND and Call Forward Status Sync](#), on page 80
- [Enable Feature Key Sync](#), on page 79

## Enable Synchronization of Anonymous Call Rejection via XSI Service

You can enable synchronization of Anonymous Call Rejection for each line via the XSI service. The function can be used to reject calls from callers who have blocked the display of their number.

Except for the setting for each line, you can also use the **Block ANC Setting** field under the **Supplementary Services** section from **Voice > User** to directly enable or disable the function for all lines.

The priority of the setting: **Block Anonymous Call Enable > Block ANC Setting**.

For example, if you set **Block Anonymous Call Enable** to **Yes** for a specific line, the setting in the **Block ANC Setting** doesn't take effect for the line, it takes effect for other lines on which **Block Anonymous Call Enable** is **No**.

### Before you begin

- Access the phone administration web page. See [Access the Phone Web Interface](#).
- Configure the XSI host server and the corresponding credentials on the **Voice > Ext (n)** tab.
  - When using **Login Credentials** for XSI server authentication, enter **XSI Host Server**, **Login User ID**, and **Login Password** in the **XSI Line Service** section.
  - When using **SIP Credentials** for XSI server authentication, enter **XSI Host Server** and **Login User ID** in the **XSI Line Service** section, and **Auth ID** and **Password** in the **Subscriber Information** section.

- Ensure that Anonymous Call Rejection is enabled on the line or in the XSI service. Otherwise, your user still receives anonymous calls.

### Procedure

---

**Step 1** Select **Voice > Ext [n]** (where [n] is the extension number).

**Step 2** In the **XSI Line Service** section, set the **Block Anonymous Call Enable** parameter to **Yes**.

You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<Block_Anonymous_Call_Enable_n_ ua="na">Yes</Block_Anonymous_Call_Enable_n_>
```

Where *n* is the extension number.

Options: Yes and No

Default: No

**Step 3** Click **Submit All Changes**.

After the change takes effect, the XSI service takes over the phone to provide the function. The function doesn't work in the following scenarios even though **Block Anonymous Call Enable** is set to **Yes**:

- The function is disabled in the XSI service.
- The function is disabled on the line.

Because the function status is synchronized between the XSI service and the line.

---

## Set Feature Activation Code for Anonymous Call Rejection

You can set activation code to block or remove blocking of anonymous calls for all lines on which synchronization of Anonymous Call Rejection is disabled.

### Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

### Procedure

---

**Step 1** Select **Voice > Regional**.

**Step 2** In the **Vertical Service Activation Codes** section, ensure that the **Block ANC Act Code** field is set to the value defined by the server. The default value is \*77.

In the phone configuration file with XML(cfg.xml), enter a string in this format:

```
<Block_ANC_Act_Code ua="na">*77</Block_ANC_Act_Code>
```

**Step 3** In the **Vertical Service Activation Codes** section, ensure that the **Block ANC Deact Code** field is set to the value defined by the server. The default value is \*87.

In the phone configuration file with XML(cfg.xml), enter a string in this format:

```
<Block_ANC_Deact_Code ua="na">*87</Block_ANC_Deact_Code>
```

**Step 4** Click **Submit All Changes**.

Your user can dial \*77 or \*87 and press the **Call** softkey to block all anonymous calls or remove the blocking.

This operation is identical to the setting on the **Block ANC Setting** field under the **Supplementary Services** section from **Voice > User**. It takes effect for the lines on which the **Block Anonymous Call Enable** (under the **XSI Line Service** section from **Voice > Ext**) is set to **No**.

## Enable Synchronization of Call Waiting via XSI Service

You can enable synchronization of Call Waiting for each line via the XSI service. The function allows the user to receive incoming calls while on another call.

Except for the setting, you can also use the **CW Setting** field under the **Supplementary Services** section from **Voice > User** to directly enable or disable the function for all lines.

The priority of the setting: **Call Waiting Enable > CW Setting**.

For example, if you set **Call Waiting Enable** to **Yes** for a specific line, the setting in the **CW Setting** doesn't take effect for the line, it only takes effect for other lines on which **Call Waiting Enable** is set to **No**.

### Before you begin

- Access the phone administration web page. See [Access the Phone Web Interface](#).
- Configure the XSI host server and the corresponding credentials on the **Voice > Ext (n)** tab.
  - When using **Login Credentials** for XSI server authentication, enter **XSI Host Server**, **Login User ID**, and **Login Password** in the **XSI Line Service** section.
  - When using **SIP Credentials** for XSI server authentication, enter **XSI Host Server** and **Login User ID** in the **XSI Line Service** section, and **Auth ID** and **Password** in the **Subscriber Information** section.
- Ensure that Call Waiting is enabled on the line or in the XSI service. Otherwise, your user doesn't receive any incoming calls while on a call.

### Procedure

**Step 1** Select **Voice > Ext [n]** (where [n] is the extension number).

**Step 2** In the **XSI Line Service** section, set the **Call Waiting Enable** parameter to **Yes**.

You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<Call_Waiting_Enable_n_ ua="na">Yes</Call_Waiting_Enable_n_>
```

Where *n* is the extension number.

Options: Yes and No

Default: No

**Step 3** Click **Submit All Changes**.

After the change takes effect, the XSI service takes over the phone to provide the function. The function doesn't work in the following scenarios even though **Call Waiting Enable** is set to **Yes**:

- The function is disabled in the XSI service.
- The function is disabled on the line.

Because the function status is synchronized between the XSI service and the line.

## Set Feature Activation Code for Call Waiting

You can set activation code (star code) that can be used to activate or deactivate Call Waiting for all lines.

### Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

### Procedure

**Step 1** Select **Voice > Regional**.

**Step 2** In the **Vertical Service Activation Codes** section, ensure that the **CW Act Code** field is set to the value defined by the server. The default value is \*56.

In the phone configuration file with XML(cfg.xml), enter a string in this format:

```
<CW_Act_Code ua="na">*56</CW_Act_Code>
```

**Step 3** In the **Vertical Service Activation Codes** section, ensure that the **CW\_Deact\_Code** field is set to the value defined by the server. The default value is \*57.

In the phone configuration file with XML(cfg.xml), enter a string in this format:

```
<CW_Deact_Code ua="na">*57</CW_Deact_Code>
```

**Step 4** In the **Vertical Service Activation Codes** section, ensure that the **CW\_Per\_Call\_Act\_Code** field is set to the value defined by the server. The default value is \*71.

In the phone configuration file with XML(cfg.xml), enter a string in this format:

```
<CW_Per_Call_Act_Code ua="na">*71</CW_Per_Call_Act_Code>
```

**Step 5** In the **Vertical Service Activation Codes** section, ensure that the **CW\_Per\_Call\_Deact\_Code** field is set to the value defined by the server. The default value is \*70.

In the phone configuration file with XML(cfg.xml), enter a string in this format:

```
<CW_Per_Call_Deact_Code ua="na">*70</CW_Per_Call_Deact_Code>
```

**Step 6** Click **Submit All Changes**.

Your user can dial \*56 or \*57 and press the **Call** softkey to activate or deactivate Call Waiting for all incoming calls. This operation is identical to the setting on the **CW Setting** field under the **Supplementary Services** section from **Voice > User**. These activation codes don't take effect for the lines where synchronization of Call Waiting via the XSI service is enabled.

Your user can dial \*71 or \*70 and press the **Call** softkey to temporarily activate or deactivate Call Waiting for the next incoming call on an active call. These activation codes still take effect for the lines where synchronization of Call Waiting via the XSI service is enabled. If Call Waiting is disabled in the XSI service, the server blocks all incoming calls, therefore these activation codes don't take effect.

---

## Executives and Assistants (8800 series and 6871)



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**Note** Only the Cisco IP Phone 6871 Multiplatform Phones support the executive-assistant features.

---

You can set up executives and their assistants to share control of calls.

You configure users as executives and assistants in BroadWorks. The BroadWorks configuration also sets up the relationships between the executives and assistants. For more information, see the BroadWorks documentation.

After the BroadWorks configuration, you configure the following phone settings.

- Enable the synchronization of executive-assistant settings between the phone and the server.
- Update the dial plan to enable users to dial service activation codes.
- Configure a line key for the **Executive / Assistant** menu access if necessary.
- Change the service activation codes if necessary.
- Change the programmable softkeys if necessary.
- Set up preference of the executive-assistant role for the phone.



---

**Important**

- Executives and assistants cannot share phones. Do not configure extensions on the same phone for an executive and an assistant.
  - The executive-assistant feature is recommended for private lines.
  - The number of calls that an assistant can initiate in parallel is limited to the **Call Appearances Per Line** setting under **Miscellaneous Line Key Settings** on the phone web page > **Voice > Phone** tab.
- 

## Set Up Preference for the Executive-Assistant Role

Perform this task if you want to set the preference for the executive-assistant role that an extension selects. The preference setting can't directly determine the executive-assistant role of the phone. The preference setting

on the phone and the role relationship setting on the BroadWorks can finally determine the actual role for the phone. For more information about the logic of the role selections, see [Selection Logic of the Executive-Assistant Role, on page 88](#).

### Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Make sure that the Feature Key Synchronization (FKS) is enabled. See [Enable Feature Key Sync, on page 79](#).

### Procedure

- 
- Step 1** Select **Voice > Phone**.
- Step 2** In the **Executive Assistant** section, set the **Executive Assistant Role** field to **Default**, **Executive**, or **Assistant**. You can also configure this parameter in the phone configuration file (cfg.xml). The parameter is phone-specific. Enter a string in this format:
- ```
<Executive_Assistant_Role ua="na">Default</Executive_Assistant_Role>
```
- Step 3** Click **Submit All Changes**.
-

Selection Logic of the Executive-Assistant Role

This section describes the selection logic of the executive-assistant role for an extension and a phone respectively.

Selection Logic of the Executive-Assistant Role for an Extension

The executive-assistant role for an extension is determined by the following criteria:

- The preferred role (“Default”, “Executive”, or “Assistant”) that is set up on the phone web page or by the phone configuration file (cfg.xml)
- The relationship setting between executives and assistants from the BroadWorks server

The following information shows the selection logic of the different preferred executive-assistant role:

- **First priority:** If an assistant doesn't have an executive list, this means that the assistant has no relationship with any executive. In this case, none of the phone's extension acts as the assistant role.
- If **Executive Assistant Role** is set to **Default**:
 - An extension that has only the assistant role acts as the assistant role.
 - If the assistant role of the extension doesn't have an executive list, then the extension doesn't act as any role.
 - An extension that has only the executive role acts as the executive role.
 - An extension that has both the assistant and the executive roles acts as the assistant role.



Note An extension's assistant role has higher priority than its executive role. If the assistant role of the extension doesn't have an executive list, according to the **First priority**, the extension will act as the executive role.

- If **Executive Assistant Role** is set to **Executive**:

An extension acts as the executive role after it retrieves the role from the BroadWorks server. Before that, it doesn't act as any role.

When the BroadWorks server assigns both roles to an extension, the extension acts as the executive role according to the setting on the phone.

- If **Executive Assistant Role** is set to **Assistant**:

An extension acts as the assistant role after it retrieves the role from the BroadWorks server. Before that, it doesn't act as any role.

When the BroadWorks server assigns both roles to an extension, the extension acts as the assistant role according to the setting on the phone.

If the assistant role doesn't have an executive list, the extension will not act as any role.

Selection Logic of the Executive-Assistant Role for a Phone

The executive-assistant role for a phone is determined by the first available executive or assistant extension:

1. The phone searches all its extensions from the first one (extension 1).
2. The phone selects the first extension that acts as the executive or assistant role as the *executive-assistant extension* of the phone.
3. The phone acts as the same role of the selected extension.

The following table shows the examples of which role a phone will act as in different scenarios:

Examples of Role Selection for a Phone

Executive-Assistant Role	Extension 1			Extension 2			Role of the Phone	Executive-Assistant Extension
	Get Executive Role	Get Assistant Role	Assistant Has Executive List	Get Executive Role	Get Assistant Role	Assistant Has Executive List		
Default	No	Yes	No	No	Yes	No	None	N/A
Default	No	Yes	No	No	Yes	Yes	Assistant	Ext 2
Default	Yes	No	No	Yes	Yes	Yes	Executive	Ext 1
Assistant	Yes	No	No	No	Yes	No	None	N/A
Assistant	No	No	No	Yes	Yes	Yes	Assistant	Ext 2

Executive-Assistant Role	Extension 1			Extension 2			Role of the Phone	Executive-Assistant Extension
	Get Executive Role	Get Assistant Role	Assistant Has Executive List	Get Executive Role	Get Assistant Role	Assistant Has Executive List		
Executive	No	Yes	Yes	No	Yes	Yes	None	N/A
Executive	Yes	No	No	Yes	Yes	Yes	Executive	Ext 1

Executive-Assistant Setting Synchronization

Executive and assistant functions require settings to be synchronized between the phones and the server via Feature Key Synchronization (FKS). Once you enable FKS, executives can access the **Settings > Executive** menu on the phone. Similarly, assistants can access the **Settings > Assistant** menu.

To enable FKS, see [Enable Feature Key Sync, on page 79](#).

Dial Plan for Executives and Assistants

The dial plan for executives and assistants must include the following digit sequences:

- #xx or a variant that includes the expression, to enable users to dial # codes.
- *xx or a variant that includes the expression, to enable users to dial * codes.
- #xx+xxxxxxxxxxxx*xxxxxxxxxx to enable users to dial # codes followed by numbers.

See [Dial Plan Overview](#) for information on the dial plan.

See [Edit the Dial Plan on the IP Phone](#) for details on how to add entries to the dial plan.

Enable Alphanumeric Dialing for Executives

The executives can directly make calls to their assistants when they check the assistant list.

The target phone number might include alphanumeric characters. To achieve this function, you must set **Enable URI Dialing** to **Yes** in the phone web page. For more information, see [Configure Alphanumeric Dialing, on page 23](#).

Configure Executive and Assistant Menu Access on a Line Key

You can configure a line key for access to the **Settings > Executive** menu on an executive's phone, and the **Settings > Assistant** menu on an assistant's phone.

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

Step 1 Select **Voice > Phone**.

Step 2 Select an available Line Key on which to access the executive or assistant menu.

Step 3 (Optional) Set the **Extension** parameter to **Disabled** to disable the extension.

Note If the Direct PLK Configuration feature is disabled, you must disable the extension to configure the executive and assistant menu access on the line key. If the feature is enabled, you can skip this step. For details, see [Enable Direct PLK Configuration](#).

You can also configure this parameter in the phone configuration file (cfg.xml). The parameter is line-specific. Enter a string in this format:

```
<Extension_2_ ua="na">Disabled</Extension_2_>
```

Step 4 Set the **Share Call Appearance** parameter to **Private**.

You can also configure this parameter in the phone configuration file (cfg.xml). The parameter is line-specific. Enter a string in this format:

```
<Share_Call_Appearance_2_ ua="na">private</Share_Call_Appearance_2_>
```

Step 5 In the **Extended Function** parameter, enter a string in this format:

```
fnc=bw-exec-assist
```

You can also configure this parameter in the phone configuration file (cfg.xml). The parameter is line-specific. Enter a string in this format:

```
<Extended_Function_2_ ua="na">fnc=bw-exec-assist</Extended_Function_2_>
```

Step 6 Click **Submit All Changes**.

Service Activation Codes for Executives and Assistants

Executives and assistants can access most functions through a service activation code or a programmable softkey.

- For executives:
 - Activating call filtering
 - Deactivating call filtering
 - Joining ongoing calls
 - Transferring ongoing calls to themselves
- For assistants:
 - Joining ongoing calls
 - Transferring ongoing calls to themselves

The following functions can be accessed only through service activation codes.



Important You will need to inform the users of the service activation codes for these functions in order to enable them to perform these actions.

All service activation codes for the feature are set up by default.

You can change the service activation codes for specific functions according to your organization's requirement. See [Vertical Service Activation Codes](#) for details.



Important If you change a service activation code through the phone website, make sure to update the corresponding setting in the BroadWorks server, and vice versa.

Executive-Assistant Service Activation Codes in the XML Configuration File



Important If you change a service activation code in the XML Configuration file, make sure to update the corresponding setting in the BroadWorks server.

The following sample XML Configuration file section shows the parameters (XML tags) and values for the executive-assistant feature service activation codes.

```
<!-- Vertical Service Activation Codes -->
<Exec_Assistant_Call_Initiate_Code ua="na">#64</Exec_Assistant_Call_Initiate_Code>
<Exec_Call_Filter_Act_Code ua="na">#61</Exec_Call_Filter_Act_Code>
<Exec_Call_Filter_Deact_Code ua="na">#62</Exec_Call_Filter_Deact_Code>
<Exec_Assistant_Call_Push_Code ua="na">#63</Exec_Assistant_Call_Push_Code>
<Exec_Call_Retrieve_Code ua="na">*11</Exec_Call_Retrieve_Code>
<Exec_Call_Bridge_Code ua="na">*15</Exec_Call_Bridge_Code>
```

The following table describes these parameters and values.

Parameter	Value	Description
Exec_Assistant_Call_Initiate_Code	The # or * code that you want to be used for the function	For assistants to initiate calls on behalf of executives
Exec_Call_Filter_Act_Code	The # or * code that you want to be used for the function	For executives to activate call filtering
Exec_Call_Filter_Deact_Code	The # or * code that you want to be used for the function	For executives to deactivate call filtering
Exec_Assistant_Call_Push_Code	The # or * code that you want to be used for the function	For assistants to transfer an ongoing call to an executive
Exec_Call_Bridge_Code	The # or * code that you want to be used for the function	For executives or assistants to join an ongoing call
Exec_Call_Retrieve_Code	The # or * code that you want to be used for the function	For executives or assistants to transfer an ongoing call to themselves

Programmable Softkeys for Executives and Assistants

All programmable softkeys for executives and assistants are set up by default.

See [Programmable Softkeys](#) for details on programmable softkeys.

Executive-Assistant Programmable Softkeys in the XML Configuration File

The following sample XML Configuration file section shows the parameters (XML tags) and values for the programmable softkeys for executives and assistants.

```
<!-- Programmable Softkeys -->
<Programmable_Softkey_Enable ua="na">No</Programmable_Softkey_Enable>
<Idle_Key_List ua="na">em_login;acd_login;acd_logout;astate;avail;unavail;redial;
recents;cfwd;dnd;lcr;pickup;gpickup;unpark;em_logout;gustin;gustout;callretrieve;
bridgein;</Idle_Key_List>
<Hold_Key_List ua="na">resume|1;endcall|2;newcall|3;redial;dir;cfwd;dnd;
callpush;</Hold_Key_List>
<Shared_Active_Key_List ua="na">newcall|1;barge|2;bargesilent|3;cfwd|4;dnd|5;
callretrieve;bridgein</Shared_Active_Key_List>
<Shared_Held_Key_List ua="na">resume|1;barge|2;cfwd|3;dnd|4;</Shared_Held_Key_List>
<Exec_Assistant_Key_List ua="na">proxycall|2;divert|3;</Exec_Assistant_Key_List>
```

The following table describes these parameters and values.

Parameters	Value	Description
Idle_Key_List, Shared_Active_Key_List	bridgein	Enables executives to join an ongoing call
Idle_Key_List, Shared_Active_Key_List	callretrieve	Enables executives to transfer an ongoing call to themselves
Hold_Key_List	callpush	Enables assistants to transfer an ongoing call to an executive, after putting the call on hold
Exec_Assistant_Key_List	proxycall	Enables assistants to initiate calls on behalf of executives, from the Settings > Assistant menu
Exec_Assistant_Key_List	divert	Enables assistants to activate or deactivate call diversion, from the Settings > Assistant menu

Configure Priorities for Voice and Video Data (8800 and 6800 Video phones only)

You can prioritize voice or video data in limited bandwidth conditions.

You will need to configure the priorities individually on each line of a phone.

You can configure different priorities for different areas of traffic. For example, you can configure different priorities for internal and external traffic by setting up different configurations on internal and external lines. For effective traffic management, specify the same settings on all the phone lines in a group.

The Type of Service (ToS) field of a data packet determines the packet's priority in data traffic. You can configure the desired priorities by specifying appropriate values for the ToS fields of voice and video packets, for each phone line.

For voice data, the phone applies the ToS value that it receives by LLDP. When there is no ToS value available by LLDP, the phone applies the value that you specify for voice packets.

For video data, the phone always applies the ToS value that you specify for video packets.

The default values prioritize voice over video.

You can also configure the parameters in the phone configuration file with XML(cfg.xml) code. To configure each parameter, see the syntax of the string in the [Parameters for Configure Priorities for Voice and Video Data, on page 95](#) table.

Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

Procedure

- Step 1** Select **Voice > Ext(n)**, where n is an extension number.
 - Step 2** In the **Network Settings** section, set the parameter values as described in [Parameters for Configure Priorities for Voice and Video Data, on page 95](#).
 - Step 3** Click **Submit All Changes**.
-

Parameters for Configure Priorities for Voice and Video Data

The following table defines the function and usage of Configure Priorities for Voice and Video Data parameters in the Network Settings section under the Ext(n) tab in the phone web interface. It also defines the syntax of the string that is added in the phone configuration file with XML(cfg.xml) code to configure a parameter.

Table 19: Parameters for Moving Active Call to Locations

Parameter	Description
SIP TOS/DiffServ Value	<p>Time of service (ToS)/differentiated services (DiffServ) field value in UDP IP packets carrying a SIP message.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><SIP_TOS_DiffServ_Value_1_ ua="na">0x68</SIP_TOS_DiffServ_Value_1_></pre> In the phone web page, enter the field value in UDP IP packets carrying a SIP message. <p>Default: 0x68</p>
RTP ToS/DiffServ Value	<p>Value for the ToS field of voice data packets.</p> <p>Sets the priority for voice packets in data traffic.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><RTP_TOS_DiffServ_Value_1_ ua="na">0xb8</RTP_TOS_DiffServ_Value_1_></pre> In the phone web page, enter the value for the ToS field. <p>Default: 0xb8</p>
Video RTP ToS/DiffServ Value	<p>Value for the ToS field of video data packets.</p> <p>Sets the priority for video packets in data traffic.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre><Video_RTP_TOS_DiffServ_Value_1_ ua="na">0x80</Video_RTP_TOS_DiffServ_Value_1_></pre> In the phone web page, enter a valid value for the ToS field of video data packets. . <p>Default:</p>

Enable End-of-Call Statistics Reports in SIP Messages

You can enable the phone to send end-of-call statistics in Session Initiation Protocol (SIP) messages (BYE and re-INVITE messages). The phone sends call statistics to the other party of the call when the call terminates or when the call is on hold. The statistics include:

- Real-time Transport Protocol (RTP) packets sent or received
- Total bytes sent or received
- Total number of lost packets
- Delay jitter
- Round-trip delay
- Call duration

The call statistics are sent as headers in SIP BYE messages and SIP BYE response messages (200 OK and re-INVITE during hold). For audio sessions, the headers are `RTP-RxStat` and `RTP-TxStat`. For video sessions, the headers are `RTP-VideoRxStat` and `RTP-VideoTxStat`.

Example of call statistics in a SIP BYE message:

```
Rtp-Rxstat: Dur=13,Pkt=408,Oct=97680,LatePkt=8,LostPkt=0,AvgJit=0,VQMetrics="CCR=0.0017;
ICR=0.0000;ICRmx=0.0077;CS=2;SCS=0;VoRxCodec=PCMU;CID=4;VoPktSizeMs=30;VoPktLost=0;
VoPktDis=1;VoOneWayDelayMs=281;maxJitter=12;MOScq=4.21;MOSlq=3.52;network=ethernet;
hwType=CP-8865;rtpBitrate=60110;rtcpBitrate=0"
```

```
Rtp-Txstat: Dur=13,Pkt=417,Oct=100080,tvqMetrics="TxCodec=PCMU;rtpbitrate=61587;rtcpbitrate=0"
```

```
Rtp-VideoRxstat: Dur=12;pkt=5172;oct=3476480;lostpkt=5;avgjit=17;rtt=0;
ciscorxvm="RxCodec=H264 BP0;RxBw=2339;RxReso=1280x720;RxFrameRate=31;
RxFramesLost=5;rtpBitRate=2317653;rtcpBitrate=0"
```

```
Rtp-VideoTxstat: Dur=12;pkt=5303;oct=3567031;ciscotxvm="TxCodec=H264 BP0;TxBw=2331;
TxReso=1280x720;TxFrameRate=31;rtpBitrate=2378020;rtcpBitrate=0"
```

For description of the attributes in call statistics, see [Attributes for Call Statistics in SIP Messages, on page 97](#).

You can also use the `Call_Statistics` parameter in the phone configuration file to enable this feature.

```
<Call_Statistics ua="na">Yes</Call_Statistics>
```

Before you begin

Access the phone administration web page, see [Access the Phone Web Interface](#).

Procedure

-
- Step 1** Select **Voice > SIP**.
 - Step 2** In the **RTP Parameters** section, set the **Call Statistics** field to **Yes** to enable the phone to send call statistics in SIP BYE and re-INVITE messages.

You can also configure this parameter in the configuration file (cfg.xml) by entering a string in this format:

```
<Call_Statistics ua="na">Yes</Call_Statistics>
```

The allowed values are Yes|No. The default value is No.

Step 3 Click **Submit All Changes**.

Attributes for Call Statistics in SIP Messages

Table 20: Audio: RTP-RxStat Payload

Attribute	Description	Mandatory
Dur	Duration of media session/call	Yes
Pkt	Number of RTP packets received	Yes
Oct	Number of RTP packets octets received	No
LatePkt	Number of RTP packets received and discarded as late due to outside of buffer window	Yes
LostPkt	Number of RTP packets lost	Yes
AvgJit	Average Jitter over session duration	Yes
VoRxCCodec	Stream/session codec negotiated	Yes
VoPktSizeMs	Packet size in milliseconds	Yes
maxJitter	Max Jitter detected	Yes
VoOneWayDelayMs	Latency/one way delay	Yes
MOScq	Mean opinion score conversational quality for the session, per RFC https://tools.ietf.org/html/rfc3611	Yes
maxBurstPktLost	Maximum number of sequential packets lost	No
avgBurstPktLost	Average number of sequential packets lost in a burst. The number can be used in conjunction with overall loss to compare the impact of loss on the call quality.	No
networkType	Type of network the device is on (if possible).	Yes
hwType	Hardware client that the session/media is running on. More relevant for soft clients but still useful for hard phones. For example, Model number CP-8865.	Yes

Table 21: Audio: RTP-TxStat Payload

Attribute	Description	Mandatory
Dur	Duration of session	Yes
Pkt	Number of RTP packets transmitted	Yes
Oct	Number of RTP packets octets transmitted	Yes
TxCodec	Transmit codec	Yes
rtpBitRate	Total RTP transmit bit rate (bits/sec)	Yes
rctpBitRate	Total RCTP transmit bit rate (bits/sec)	Yes

Table 22: Video: RTP-VideoRxStat Payload

Attribute	Description	Mandatory
Dur	Duration of session in seconds	Yes
Pkt	Number of packets received	Yes
Oct	Number of octets received	Yes
LostPkt	Number of packets lost	Yes
AvgJit	Average Jitter over session duration	Yes
RTT	End-to-end round trip time	Yes
CiscoRxVm.RxCodec	Video codec used for received video stream	Yes
CiscoRxVm.RxBw	Negotiated bandwidth for the received video stream	No
CiscoRxVm.RxReso	Resolution of the received video stream	Yes
CiscoRxVm.RxFrameRate	Frame rate for the received video stream	Yes
CiscoRxVm.RxFrameLost	Frames lost for the received video stream	Yes
CiscoRxVm.rtpBitRate	RTP bit rate in seconds (including any FEC, retransmits etc.). Used to estimate bandwidth usage (bits/sec).	Yes
CiscoRxVm.rtcpBitRate	RTCP bit rate in seconds (including any FEC, retransmits etc.). Used to estimate bandwidth usage (bits/sec).	Yes

Table 23: Video: RTP-VideoTxStat Payload

Attribute	Description	Mandatory
Dur	Duration of session in seconds	Yes
Pkt	Number of packets transmitted	Yes

Attribute	Description	Mandatory
Oct	Number of octets transmitted	Yes
CiscoTxVm.TxCodec	Video codec used for the transmitted video stream	Yes
CiscoTxVm.TxBw	Negotiated bandwidth for the transmitted video stream	No
CiscoTxVm.TxReso	Resolution of the transmitted video stream	Yes
CiscoTxVm.TxFrameRate	Frame rate for the transmitted video stream	Yes
CiscoRxVm.rtpBitRate	RTP bit rate in seconds (including any FEC, retransmits etc.). Used to estimate bandwidth usage (bits/sec).	Yes
CiscoTxVm.rtcpBitRate	RTCP bit rate in seconds (including any FEC, retransmits etc.). Used to estimate bandwidth usage (bits/sec).	Yes

SIP Session ID

The Multiplatform phones now support “Session Identifier”. This feature helps to overcome the limitations with the existing call-identifiers and allows end-to-end tracking of a SIP session in IP-based multimedia communication systems in compliance with RFC 7989. To support session identifier, “Session-ID” header is added in the SIP request and response messages.

"Session Identifier" refers to the value of the identifier, whereas "Session-ID" refers to the header field used to convey the identifier.

- When a user initiates the call, the phone while sending SIP INVITE message, generates the local-UUID.
- When the UAS receives the SIP-INVITE, the phone picks up the local UUIDs with the incoming messages and appends it to the received Session-ID header and sends the header in responses.
- The same UUIDs are maintained in all the SIP messages of a particular session.
- The phone maintains the same local-UUID during other features, such as conference or transfer.
- This header is implemented in REGISTER method, the local-UUID remains same for all the REGISTER messages till the phone fails to REGISTER.

The Session-ID comprises of Universally Unique Identifier (UUID) for each user agent participating in a call. Each call consists of two UUID known as local UUID and remote UUID. Local UUID is the UUID generated from the originating user agent and remote UUID is generated from the terminating user agent. The UUID values are presented as strings of lower-case hexadecimal characters, with the most significant octet of the UUID appearing first. Session Identifier comprises of 32 characters and remains same for the entire session.

Session ID format

Components will implement Session-ID which is global session ID ready.

A sample current session ID passed in http header by phones (dashes are just included for clarity) is 00000000-0000-0000-0000-5ca48a65079a.

A session-ID format: UUUUUUUSSSS5000y000DDDDDDDDDDDD where,

UUUUUUUU - A randomly generated unique ID[0-9a-f] for the session. Examples of new session IDs generated are:

- Phone going off hook
- Entry of the activation code through to first SIP first registration (the onboarding flow)

SSSS - The source that generates the session. For example, if the source type is "Cisco MPP" the source value (SSSS) can be "0100".

Y - Any of the values of 8, 9, A, or B and should be compliant with UUID v5 RFC.

DDDDDDDDDDDD - MAC address of the phone.

SessionID Example in SIP Messages

This header is supported in the in-call dialog messages like INVITE/ACK/CANCEL/BYE/UPDATE/INFO/REFER and their responses as well as out-of-call messages essentially the REGISTER.

```
Request-Line: INVITE sip:901@10.89.107.37:5060 SIP/2.0
                Session-ID: 298da61300105000a00000ebd5cbd5c1;remote=00000000000000000000000000000000
Status-Line: SIP/2.0 100 Trying
Session-ID: fb8a810a00105000a00000ebd5cc118b;remote=298da61300105000a00000ebd5cbd5c1
Status-Line: SIP/2.0 180 Ringing
                Session-ID: fb8a810a00105000a00000ebd5cc118b;remote=298da61300105000a00000ebd5cbd5c1
Status-Line: SIP/2.0 200 OK
                Session-ID: fb8a810a00105000a00000ebd5cc118b;remote=298da61300105000a00000ebd5cbd5c1
Request-Line: ACK sip:901@10.89.107.37:5060 SIP/2.0
                Session-ID: 298da61300105000a00000ebd5cbd5c1;remote=fb8a810a00105000a00000ebd5cc118b
Request-Line: BYE sip:901@10.89.107.37:5060 SIP/2.0
                Session-ID: 298da61300105000a00000ebd5cbd5c1;remote=fb8a810a00105000a00000ebd5cc118b
Status-Line: SIP/2.0 200 OK
                Session-ID: fb8a810a00105000a00000ebd5cc118b;remote=298da61300105000a00000ebd5cbd5c1
```

Enable SIP Session ID

You can enable SIP session ID to overcome the limitations with the existing call-identifiers and to allow end-to-end tracking of a SIP session.

Before you begin

[Access the Phone Web Interface](#)

Procedure

-
- Step 1** Select **Voice > Ext(n)**.
 - Step 2** Go to the **SIP Settings** section.
 - Step 3** Set the **SIP SessionID Support** field as described in the [Session ID Parameters, on page 101](#) table.
 - Step 4** Click **Submit All Changes**.
-

Session ID Parameters

The following table defines the function and usage of each parameter in the **SIP Settings** section in the **Voice > Ext(n)** tab of the phone web page. It also defines the syntax of the string that is added in the phone configuration file with XML (cfg.xml) code to configure a parameter.

Parameter Name	Description and Default Value
SIP SessioID Support	<p>Controls the SIP session ID support.</p> <p>Perform one of the following</p> <ul style="list-style-type: none"> In the phone configuration file with XML (cfg.xml) enter a string in this format. <pre><SIP_SessionID_Support_1_ua="na">Yes</SIP_SessionID_Support_1_></pre> In the phone web page select Yes to enable the feature. <p>Allowed values: Yes/No</p> <p>Default: No</p>

Select the Line Key LED Behavior

You can choose the Line Key LED Behavior in your multiplatform phone.

In the phone web page, you can choose one of the following options:

- **Default**
- **Preset 1**
- **Custom**

Before you begin

- Access the administration web interface. See [Access the Phone Web Interface](#).
- Ensure that the line keys are not in the Inert mode.

Procedure

-
- Step 1** Select **Voice > Phone**.
- Step 2** In the **Line Key LED Pattern** section, choose an option from the **Custom LED Type** drop down list.
- You can also configure this parameter in the configuration file (cfg.xml) by entering a string in this format:
- ```
<Custom_LED_Type ua="na">Default</Custom_LED_Type>
```
- The allowed values are Default|Preset 1|Custom. The default value is Default.
- Step 3** Click **Submit All Changes**.

When you submit your selection in the **Custom LED Type** drop down list, changes also occur in the **Att Console** tab. This only happens when you configure simultaneous LED behavior for phone line keys and key expansion module line keys.

To view the key expansion module LED behavior:

- a. Select **Voice > Att Console**.
- b. View the **Att Console Key LED Pattern** section.
- c. Change the LED pattern and color from the fields **MWI None LED**, **MWI New LED**, and **MWI Urgent LED**.

## Line Key LED Behaviour Customization

The line key LED behaviour in your multiplatform phones has three optional settings. In the phone web page, you can choose one of the following options:

- **Default**
- **Preset 1**
- **Custom**

The following table compares the basic **Default** and **Preset 1** line key LED behaviour settings.

**Table 24: Basic LED Behaviour on Line Keys**

| Field and Description                                        | Default Pattern and Color | Preset 1 Pattern and Color |
|--------------------------------------------------------------|---------------------------|----------------------------|
| Idle—Line is idle.                                           | Solid green               | Off                        |
| Registration Failed—Line failed to register with the server. | Solid amber               | Off                        |
| Registering—Line is trying to register with the server.      | Slow blinking amber       | Off                        |
| Disabled—Line is disabled or not in use.                     | Off                       | Off                        |

**Table 25: Basic LED Behaviour on the Voicemail PLK**

| State                                                        | Default Pattern and Color | Preset 1 Pattern and Color |
|--------------------------------------------------------------|---------------------------|----------------------------|
| New Message                                                  | Solid red                 | Solid red                  |
| Registration Failed—Line failed to register with the server. | Solid amber               | Off                        |
| No new messages                                              | Solid green               | Off                        |
| Urgent messages                                              | Solid red                 | Solid red                  |

For the **Custom** option, use the following color-pattern key:

- COLOR (c)
  - g = GREEN
  - r = RED
  - a = AMBER
  - o = OFF

When you set COLOR to OFF, PATTERN is ignored even if you set it.

- PATTERN (p)
  - b = Blink with a Color  
This is equivalent to the system default of Slow Blink.
  - n = No Blink, Solid Color



**Note** If you misconfigure any field, the system applies the system Default settings to that field.

The table below contains three sample custom LED behaviour settings.

**Table 26: Sample LED Configurations**

| LED            | User Input                     |
|----------------|--------------------------------|
| Solid Red      | <b>c=r ; p=n</b><br><b>c=r</b> |
| Blinking Amber | <b>c=a ; p=b</b>               |
| OFF            | <b>c=o</b>                     |

Each of the following features has LED behaviour settings. The tables that follow describe the LED behaviour for each feature.

- Basic Line and Bluetooth Hands-Free Line
- Shared Line

The following table describes the LED behaviour for both the Basic Line and Bluetooth Hands-Free features. The table compares the Default and Preset 1 settings.

**Table 27: Basic Line Key and Bluetooth Hands-Free**

| Field and Description                                                              | Default Pattern and Color | Preset 1 Pattern and Color |
|------------------------------------------------------------------------------------|---------------------------|----------------------------|
| Local Progressing LED—Line is sending outgoing call and the remote end is ringing. | Solid red                 | Solid green                |

| Field and Description                               | Default Pattern and Color | Preset 1 Pattern and Color |
|-----------------------------------------------------|---------------------------|----------------------------|
| Local Held LED—Local user put the line on hold.     | Slow blinking red         | Blinking green             |
| Local Active LED—Line is in a connected call.       | Solid red                 | Solid green                |
| Local Seized LED—Line is going off-hook.            | Solid red                 | Solid green                |
| Local Ringing LED—Line is ringing on incoming call. | Fast blinking red         | Blinking amber             |

The following table describes the LED behaviour for the Shared Line feature. The table compares the Default and Preset 1 settings.

**Table 28: Shared Line**

| Field and Description                                                                                                    | Default Pattern and Color     | Preset 1 Pattern and Color |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------|
| Remote Active LED—Shared line on the local device is receiving status that another device is in a connected call.        | Pulsing (double blinking) red | Solid red                  |
| Remote Held LED—Shared line on the local device is receiving status that another device has put a call on hold.          | Slow blinking red             | Blinking red               |
| Remote Progressing LED—Shared line on the local device is receiving status that another device is sending outgoing call. | Pulsing (double blinking) red | Solid red                  |
| Remote Ringing LED—Shared line on the local device is receiving status that another device is ringing on incoming call.  | Pulsing (double blinking) red | Blinking amber             |
| Remote Seized LED—Shared line on the local device is receiving status that another device is going off-hook.             | Pulsing (double blinking) red | Solid red                  |
| Remote Undefined LED—Shared line on the local device is not in operational state.                                        | Solid red                     | Off                        |

You can configure the LED behaviour that applies to both phone line keys and key expansion module buttons.

For the key expansion modules, the custom LED settings apply only to the phone line keys. If you configure custom LED behaviour on the phone line keys, the expansion module buttons take the expansion module default behaviour, instead.

- Cisco IP Phone 8851/8861 Key Expansion Module
- Cisco IP Phone 8865 Key Expansion Module

You can configure the LED behaviour that applies to both phone line keys and key expansion module buttons.

For the Cisco 6800 Key Expansion Module, the custom LED settings apply only to the phone line keys. If you configure custom LED behaviour on the phone line keys, the expansion module buttons take the expansion module default behaviour, instead.

The following table describes the basic subscription line key LED behaviour for the simultaneous settings of the phone and key expansion module buttons. The table compares the Default and Preset 1 settings.



**Table 29: Basic Line Key and Key Expansion Module Buttons Settings**

| Field and Description                                        | Default Pattern and Color | Preset 1 Pattern and Color |
|--------------------------------------------------------------|---------------------------|----------------------------|
| Serv Subscribe Failed LED—The service subscription failed.   | Solid amber               | Off                        |
| Serv Subscribing LED—The service subscription is proceeding. | Slow blinking amber       | Off                        |

The following table describes the LED behaviour settings for the Speed Dial, XML Applications, and the PLK part of the Executive-Assistant feature. The table compares the Default and Preset 1 settings.

The following table describes the LED behaviour settings for the Speed Dial, XML Applications, and the PLK part of the Executive-Assistant feature (only for the Cisco IP Phone 6871 Multiplatform Phones). The table compares the Default and Preset 1 settings.

The following table describes the LED behaviour settings for the Speed Dial and XML Applications. The table compares the Default and Preset 1 settings.

**Table 30: Speed Dial and XML Application Feature Settings**

| Field and Description                                        | Default Pattern and Color | Preset 1 Pattern and Color |
|--------------------------------------------------------------|---------------------------|----------------------------|
| Application LED—Extended service application is operational. | Solid green               | Off                        |

The following table describes the LED behaviour for the Call Park feature. The table compares the Default and Preset 1 settings.

**Table 31: Call Park Feature Settings**

| Field and Description                                       | Default Pattern and Color | Preset 1 Pattern and Color |
|-------------------------------------------------------------|---------------------------|----------------------------|
| Parking Lot Idle LED—The monitored line has no parked call. | Solid green               | Off                        |
| Parking Lot Busy LED—The monitored line has a parked call.  | Slower blinking red       | Blinking red               |

The following table describes the LED behaviour for the Busy Lamp Field (BLF) feature. The table compares the Default and Preset 1 settings.

**Table 32: BLF Feature Settings**

| Field and Description                    | Default Pattern and Color | Preset 1 Pattern and Color |
|------------------------------------------|---------------------------|----------------------------|
| BLF Idle LED—The monitored line is idle. | Solid green               | Off                        |

| Field and Description                                                                                                                                         | Default Pattern and Color                                                                                                                                                                                              | Preset 1 Pattern and Color |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| BLF Ringing LED—The monitored line is ringing.                                                                                                                | Fast blinking red<br>For the key expansion module, it is Slow blinking red because the key expansion module is limited to: <ul style="list-style-type: none"> <li>• ON</li> <li>• OFF</li> <li>• Slow Blink</li> </ul> | Blinking amber             |
| BLF Busy LED—The monitored line is busy in a call.                                                                                                            | Solid red                                                                                                                                                                                                              | Solid red                  |
| BLF Held LED—The monitored line has put a call on hold.<br><br>Applies to phone line keys, only:<br><br>BLF Busy LED applies to key expansion module buttons. | Slow blinking red                                                                                                                                                                                                      | Solid red                  |

After you configure a phone with custom LED behaviour, and you downgrade it to an older Firmware version, the custom LED settings remain. If you wish to remove the custom LED settings, then set the LED behaviour to the system **default** before you perform the downgrade.

## Set Up a Phone for Remote SDK

You can configure remote SDK for a multiplatform phone. The remote SDK provides a WebSocket based protocol through which the phone can be controlled.

### Before you begin

- [Access the Phone Web Interface](#)
- A WebSocket server must be running with an address and port reachable from the phone.

### Procedure

- 
- Step 1** Select **Voice > Phone**.
  - Step 2** Go to the **WebSocket API** section.
  - Step 3** Set the **Control Server URL** and the **Allowed APIs** fields as described in the [WebSocket API Parameters, on page 107](#) table.
  - Step 4** Click **Submit All Changes**.
-

## WebSocket API Parameters

The following table defines the function and usage of each parameter in the **WebSocket API** section in the **Voice > Phone** tab of the phone web page. It also defines the syntax of the string that is added in the phone configuration file with XML (cfg.xml) code to configure a parameter.

| Parameter Name     | Description and Default Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Control Server URL | <p>The URL of a WebSocket server to which the phone attempts to stay connected.</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML (cfg.xml) enter a string in this format.</li> </ul> <pre data-bbox="824 638 1192 659">&lt;Control_Server_URL ua="na"/&gt;</pre> <ul style="list-style-type: none"> <li>In the phone web page enter the URL of a WebSocket server.</li> </ul> <p>For example:</p> <pre data-bbox="824 764 1321 814">&lt;Control_Server_URL&gt;wss://my-server.com<br/>/ws-server-path&lt;/Control_Server_URL&gt;</pre> <p>The URL should be in one of the following formats:</p> <ul style="list-style-type: none"> <li>For a nonsecure HTTP connection:</li> </ul> <pre data-bbox="824 947 1240 968"><b>ws://your-server-name/path</b></pre> <ul style="list-style-type: none"> <li>For a secure HTTPS connection:</li> </ul> <pre data-bbox="824 1045 1338 1066"><b>wss://your-server-name/some-path</b></pre> <p>We recommend a secure connection.</p> <p>Default: Empty.</p> |

| Parameter Name | Description and Default Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Allowed APIs   | <p>A regular expression that can be used to limit the API calls that are allowed from the controlling server.</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml) enter a string in this format.<br/> <pre>&lt;Allowed_APIS ua="na"&gt;.*&lt;/Allowed_APIS&gt;</pre> </li> <li>In the phone web page enter an appropriate regular expression.</li> </ul> <p>The regular expression provided is matched with the Request-URI path provided in the API request from the controlling server. If the entire path is not matched by the given regular expression, the API call is rejected.</p> <p>Allowed values are:</p> <ul style="list-style-type: none"> <li>.*: All APIs are allowed</li> <li>/api/Call/v1/.*: All v1 <b>Call</b> interface calls are allowed.</li> <li>/api/Call/v1/(Dial Hangup): Only the v1 Call interface calls <b>Dial</b> and <b>Hangup</b> are allowed.</li> </ul> <p>Default: .*</p> |

## Voice Feedback Feature

Voice Feedback helps people who have trouble seeing use their Cisco IP phone. When enabled, a voice prompt helps you navigate your phone buttons, and to use and configure phone features. The voice feedback also reads incoming caller IDs, displayed screens and settings, and button functions.

- Voice Feedback is enabled and disabled with the **Select** button that is located in the center of the Navigation cluster. When the phone is idle, quickly tap Select three times to turn this feature on or off. A voice prompt alerts you to the feature status.  
 Push a softkey once, and Voice Feedback reads the feature that is associated with the key. Quickly push the softkey twice to execute the feature.
- Hardkeys such as the Contacts, Applications, and Messages buttons are treated differently. Push a hardkey once, and a voice reads the screen name followed by the application or setting that is displayed on the phone.

You may not hear Voice Feedback if you select the Headset button, but don't have a connected headset. Select Speakerphone and you hear Voice Feedback again. When on a call, only you hear Voice Feedback so your privacy is assured.

Voice Feedback is only available for English language users. If this feature is not available to you, then it is disabled on your phone.

## Enable Voice Feedback

Follow this procedure to enable the Voice Feedback feature on the phone web page.

### Before you begin

Access the phone web page.

### Procedure

- 
- Step 1** Select **Voice > User**.
- Step 2** In the **Voice Feedback (English only)** section, set the fields as described in the [Parameters for Voice Feedback, on page 109](#) table.
- Step 3** Click **Submit All Changes**.
- 

## Parameters for Voice Feedback

The following table defines the function and usage of the Voice Feedback parameters in the Voice Feedback (English only) section under the Voice > User tab in the phone web interface. It also defines the syntax of the string that is added in the phone configuration file with XML(cfg.xml) code to configure a parameter.

**Table 33: Parameters for Voice Feedback**

| Parameter             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Voice Feedback Enable | <p>Enables the Voice Feedback feature for the user.</p> <p>Select <b>Yes</b> to enable the feature and select <b>No</b> to disable it.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format:           <pre>&lt;Voice_Feedback_Enable ua="rw"&gt;Yes&lt;/Voice_Feedback_Enable&gt;</pre> </li> <li>In the phone web interface, set this field to <b>Yes</b> to enable the Voice Feedback feature.</li> </ul> <p>Valid values: Yes and No</p> <p>Default: No</p> |

| Parameter             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Voice Feedback Speed  | <p>Selects a desired voice speed for the feature:</p> <ul style="list-style-type: none"> <li>• Slowest</li> <li>• Slower</li> <li>• Normal</li> <li>• Faster</li> <li>• Fastest</li> </ul> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>• In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre data-bbox="784 743 1256 800">&lt;Voice_Feedback_Speed ua="rw"&gt;Normal&lt;/Voice_Feedback_Speed&gt;</pre> </li> <li>• In the phone web page, select a desired voice speed in the field.</li> </ul> <p>Valid values: Slowest, Slower, Normal, Faster, and Fastest.<br/>Default: Normal</p> |
| Key Again Reset Time  | <p>Sets the reset time required for performing a key double or triple press again.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>• In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre data-bbox="784 1184 1484 1209">&lt;Key_Again_Reset_Time ua="rw"&gt;1200&lt;/Key_Again_Reset_Time&gt;</pre> </li> <li>• In the phone web page, enter an integer in the field.</li> </ul> <p>Allowed values: An integer ranging between 100 and 2000<br/>Default: 1200</p>                                                                                                                       |
| Key Double Press Time | <p>Sets the maximum delay time (in milliseconds) for a key double press to perform a named function on the phone.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>• In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre data-bbox="784 1598 1232 1654">&lt;Key_Double_Press_Time ua="rw"&gt;600&lt;/Key_Double_Press_Time&gt;</pre> </li> <li>• In the phone web page, enter an integer in the field.</li> </ul> <p>Allowed values: An integer ranging between 100 and 2000<br/>Default: 600</p>                                                                                        |

| Parameter             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Key Triple Press Time | <p>Sets the maximum delay time (in milliseconds) for a key triple press to enable or disable the Voice Feedback feature on the phone.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre>&lt;Key_Triple_Press_Time ua="rw"&gt;1000&lt;/Key_Triple_Press_Time&gt;</pre> </li> <li>In the phone web page, enter an integer in the field.</li> </ul> <p>Allowed values: An integer ranging between 100 and 2000<br/>Default: 1000</p>                                                           |
| Voice Feedback Volume | <p>Selects a desired volume of the Voice Feedback:</p> <ul style="list-style-type: none"> <li>Lowest</li> <li>Low</li> <li>Normal</li> <li>High</li> <li>Highest</li> </ul> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file with XML(cfg.xml), enter a string in this format: <pre>&lt;Voice_Feedback_Volume ua="rw"&gt;Normal&lt;/Voice_Feedback_Volume&gt;</pre> </li> <li>In the phone web page, select a desired Voice Feedback volume in the field.</li> </ul> <p>Valid values: Lowest, Low, Normal, High, and Highest.<br/>Default: Normal</p> |

## Hide a Menu Item from Being Displayed on the Phone Screen

By default, all the menu items on the phone screen **Information and settings** are visible to users. You can configure the phone to hide or show specific menu items. When hidden, the items don't display on the phone screen.

You can hide any of the following menu items as needed:

- Accessibility
- Speed dials

- Executive assistant
- Executive assistant (Cisco IP Phone 6871 Multiplatform Phones only)
- Assistant call filter (Cisco IP Phone 6871 Multiplatform Phones only)
- User preferences
- Bluetooth
- Network configuration
- Device administration
- Video
- Status
- Report problem

You can also configure the visibility of the menu items in the configuration file (cfg.xml) with strings in this format:

```
<Device_Administration ua="na">No</Device_Administration>
```

See the parameter syntax and valid values in [Parameters for Menu Visibility, on page 112](#).

### Procedure

- 
- Step 1** Select **Voice > Phone**.
  - Step 2** In the **Menu Visibility** section, set the menu items that you want to hide to **No**.
  - Step 3** Click **Submit All Changes**.
- 

## Parameters for Menu Visibility

The following table defines the function and usage of each parameter in the **Menu Visibility** section of the **Voice > Phone** tab.



Table 34: Parameters for Menu Visibility

| Parameter Name      | Description and Default Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Accessibility       | <p>This field is only available on the Cisco IP Phone 8800 Series Multiplatform Phones.</p> <p>Controls whether to show the <b>Accessibility</b> menu on the phone screen. Set this field to <b>Yes</b> to show the menu. Otherwise, set it to <b>No</b>.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file (cfg.xml) with XML, enter a string in this format:<br/> <pre>&lt;Accessibility ua="na"&gt;Yes&lt;/Accessibility&gt;</pre> </li> <li>In the phone web interface, select <b>Yes</b> or <b>No</b> to show or hide the menu.</li> </ul> <p>Valid values: Yes and No<br/>Default: Yes</p>                                                                     |
| Speed Dials         | <p>Controls whether to show the <b>Speed dials</b> menu on the phone screen. Set this field to <b>Yes</b> to show the menu. Otherwise, set it to <b>No</b>.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file (cfg.xml) with XML, enter a string in this format:<br/> <pre>&lt;Speed_Dials ua="na"&gt;Yes&lt;/Speed_Dials&gt;</pre> </li> <li>In the phone web interface, select <b>Yes</b> or <b>No</b> to show or hide the menu.</li> </ul> <p>Valid values: Yes and No<br/>Default: Yes</p>                                                                                                                                                                       |
| Executive Assistant | <p>This field is only available on the Cisco IP Phone 8800 Series Multiplatform Phones.</p> <p>Controls whether to show the <b>Executive</b> menu on the executive's phone and the <b>Assistant</b> menu on the assistant's phone. Set this field to <b>Yes</b> to show the menu. Otherwise, set it to <b>No</b>.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file (cfg.xml) with XML, enter a string in this format:<br/> <pre>&lt;Executive_Assistant ua="na"&gt;Yes&lt;/Executive_Assistant&gt;</pre> </li> <li>In the phone web interface, select <b>Yes</b> or <b>No</b> to show or hide the menu.</li> </ul> <p>Valid values: Yes and No<br/>Default: Yes</p> |

| Parameter Name        | Description and Default Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Executive Assistant   | <p>This field is only available on the Cisco IP Phone 6871 Multiplatform Phones.</p> <p>Controls whether to show the <b>Executive</b> menu on the executive's phone and the <b>Assistant</b> menu on the assistant's phone. Set this field to <b>Yes</b> to show the menu. Otherwise, set it to <b>No</b>.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file (cfg.xml) with XML, enter a string in this format:<br/> <pre>&lt;Executive_Assistant ua="na"&gt;Yes&lt;/Executive_Assistant&gt;</pre> </li> <li>In the phone web interface, select <b>Yes</b> or <b>No</b> to show or hide the menu.</li> </ul> <p>Valid values: Yes and No<br/>Default: Yes</p>                                                              |
| Assistant Call Filter | <p>This field is only available on the Cisco IP Phone 8800 Series Multiplatform Phones.</p> <p>This field is only available on the Cisco IP Phone 6871 Multiplatform Phones.</p> <p>Controls whether to show the <b>Call filter</b> menu on the phone screen for the assistant role. Set this field to <b>Yes</b> to show the menu. Otherwise, set it to <b>No</b>.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file (cfg.xml) with XML, enter a string in this format:<br/> <pre>&lt;Assistant_Call_Filter ua="na"&gt;Yes&lt;/Assistant_Call_Filter&gt;</pre> </li> <li>In the phone web interface, select <b>Yes</b> or <b>No</b> to show or hide the menu.</li> </ul> <p>Valid values: Yes and No<br/>Default: Yes</p> |
| User Preferences      | <p>Controls whether to show the <b>User preferences</b> menu on the phone screen. Set this field to <b>Yes</b> to show the menu. Otherwise, set it to <b>No</b>.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file (cfg.xml) with XML, enter a string in this format:<br/> <pre>&lt;User_Preferences ua="na"&gt;Yes&lt;/User_Preferences&gt;</pre> </li> <li>In the phone web interface, select <b>Yes</b> or <b>No</b> to show or hide the menu.</li> </ul> <p>Valid values: Yes and No<br/>Default: Yes</p>                                                                                                                                                                                                              |

| Parameter Name        | Description and Default Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bluetooth             | <p>This field is only available on the Cisco IP Phone 8851, 8861, 8845, and 8865 Multiplatform Phones.</p> <p>Controls whether to show the <b>Bluetooth</b> menu on the phone screen. Set this field to <b>Yes</b> to show the menu. Otherwise, set it to <b>No</b>.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file (cfg.xml) with XML, enter a string in this format:<br/> <pre>&lt;Bluetooth ua="na"&gt;Yes&lt;/Bluetooth&gt;</pre> </li> <li>In the phone web interface, select <b>Yes</b> or <b>No</b> to show or hide the menu.</li> </ul> <p>Valid values: Yes and No<br/>Default: Yes</p> |
| Network Configuration | <p>Controls whether to show the <b>Network configuration</b> menu on the phone screen. Set this field to <b>Yes</b> to show the menu. Otherwise, set it to <b>No</b>.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file (cfg.xml) with XML, enter a string in this format:<br/> <pre>&lt;Network_Configuration ua="na"&gt;Yes&lt;/Network_Configuration&gt;</pre> </li> <li>In the phone web interface, select <b>Yes</b> or <b>No</b> to show or hide the menu.</li> </ul> <p>Valid values: Yes and No<br/>Default: Yes</p>                                                                        |
| Device Administration | <p>Controls whether to show the <b>Device administration</b> menu on the phone screen. Set this field to <b>Yes</b> to show the menu. Otherwise, set it to <b>No</b>.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file (cfg.xml) with XML, enter a string in this format:<br/> <pre>&lt;Device_Administration ua="na"&gt;Yes&lt;/Device_Administration&gt;</pre> </li> <li>In the phone web interface, select <b>Yes</b> or <b>No</b> to show or hide the menu.</li> </ul> <p>Valid values: Yes and No<br/>Default: Yes</p>                                                                        |

| Parameter Name | Description and Default Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video          | <p>This field is only available on the Cisco IP Phone 8845 and 8865 Multiplatform Phones.</p> <p>Controls whether to show the <b>Video</b> menu on the phone screen. Set this field to <b>Yes</b> to show the menu. Otherwise, set it to <b>No</b>.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file (cfg.xml) with XML, enter a string in this format:<br/> <pre>&lt;Video_Menu ua="na"&gt;Yes&lt;/Video_Menu&gt;</pre> </li> <li>In the phone web interface, select <b>Yes</b> or <b>No</b> to show or hide the menu.</li> </ul> <p>Valid values: Yes and No<br/>Default: Yes</p>                                                                 |
| Status         | <p>Controls whether to show the <b>Status</b> menu on the phone screen. Set this field to <b>Yes</b> to show the menu. Otherwise, set it to <b>No</b>.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file (cfg.xml) with XML, enter a string in this format:<br/> <pre>&lt;Status ua="na"&gt;Yes&lt;/Status&gt;</pre> </li> <li>In the phone web interface, select <b>Yes</b> or <b>No</b> to show or hide the menu.</li> </ul> <p>Valid values: Yes and No<br/>Default: Yes</p>                                                                                                                                                                      |
| Report Problem | <p>Controls whether to show the <b>Report problem</b> menu under the <b>Status</b> menu on the phone screen. Set this field to <b>Yes</b> to show the menu. Otherwise, set it to <b>No</b>.</p> <p>When the <b>Status</b> menu is invisible, the <b>Report problem</b> menu is invisible as well.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>In the phone configuration file (cfg.xml) with XML, enter a string in this format:<br/> <pre>&lt;Report_Problem_Menu ua="na"&gt;Yes&lt;/Report_Problem_Menu&gt;</pre> </li> <li>In the phone web interface, select <b>Yes</b> or <b>No</b> to show or hide the menu.</li> </ul> <p>Valid values: Yes and No<br/>Default: Yes</p> |

# Display Caller Number Instead of Unresolved Caller Name

By default, the phone displays both the caller name and the caller number in an incoming call alert. When the phone can't resolve the characters in caller name, the user sees boxes instead of the caller name. You can configure the phone to display only the number when any unresolved characters are detected in the caller name.

## Procedure

---

**Step 1** Select **Voice > Regional**.

**Step 2** In the **Language** section, set the **Replace Unresolved Caller Name with Number** field to **Yes**.

You can also configure this parameter in the configuration file (cfg.xml) with a string in this format:

```
<Replace_Unresolved_Caller_Name_with_Number
ua="na">Yes</Replace_Unresolved_Caller_Name_with_Number>
```

The valid values are Yes and No. The default setting is No.

**Step 3** Click **Submit All Changes**.

---

# Add a Menu Shortcut to a Line Key

You can configure a line key as a phone menu shortcut

## Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

## Procedure

---

**Step 1** Select **Voice > Phone**.

**Step 2** Select a line key.

**Step 3** (Optional) Set the **Extension** parameter to **Disabled** to disable the extension.

**Note** If the Direct PLK Configuration feature is disabled, you must disable the extension to add a menu shortcut to the line key. If the feature is enabled, you can skip this step. For details, see [Enable Direct PLK Configuration](#).

You can also configure this parameter in the phone configuration file (cfg.xml). The parameter is line-specific. Enter a string in this format:

```
<Extension_n_ ua="na">Disabled</Extension_n_>
```

where *n* is the extension number.

**Step 4** In the **Extended Function** parameter, enter a string in this format:

```
fnc=shortcut;url=userpref;nme=User Preferences
```

where:

- `fnc= shortcut` means function=phone menu shortcut.
- `url= userpref` is the menu to open with this line key. It's the **User preferences** menu in this example. For more shortcut mappings, see [Menu Shortcuts Mapping on PLK and PSK, on page 118](#).
- `nme= XXXX` is the menu shortcut name displayed on the phone. If you don't specify a display name, the line key displays the target menu item. In the example, the line key displays **User preferences**.

You can also configure this parameter in the configuration file (`cfg.xml`). Enter a string in this format:

```
<Extended_Function_n_ ua="na">fnc=shortcut;url=userpref;nme=User Preferences</Extended_Function_n_>
```

where *n* is the extension number.

**Step 5** Click **Submit All Changes**.

## Menu Shortcuts Mapping on PLK and PSK

*Table 35: Menu Shortcuts Mapping*

| Function<br>(fnc=)                      | URL String<br>(url=) | Target Menu                                      |
|-----------------------------------------|----------------------|--------------------------------------------------|
| shortcut                                | settings             | <b>Settings</b>                                  |
| shortcut                                | accessibility        | <b>Settings &gt; Accessibility</b>               |
| shortcut                                | recents              | <b>Settings &gt; Recents</b>                     |
| shortcut                                | allcalls             | <b>Settings &gt; Recents &gt; All calls</b>      |
| shortcut                                | missedcalls          | <b>Settings &gt; Recents &gt; Missed calls</b>   |
| shortcut                                | receivedcalls        | <b>Settings &gt; Recents &gt; Received calls</b> |
| shortcut                                | placedcalls          | <b>Settings &gt; Recents &gt; Placed calls</b>   |
| shortcut                                | speeddials           | <b>Settings &gt; Speed dials</b>                 |
| shortcut<br>Cisco IP Phone 6871<br>only | executive            | <b>Settings &gt; Executive</b>                   |
| shortcut<br>Cisco IP Phone 6871<br>only | assistant            | <b>Settings &gt; Assistant</b>                   |

| <b>Function<br/>(fnc=)</b>              | <b>URL String<br/>(url=)</b> | <b>Target Menu</b>                                                                     |
|-----------------------------------------|------------------------------|----------------------------------------------------------------------------------------|
| shortcut                                | userpref                     | <b>Settings &gt; User preferences</b>                                                  |
| shortcut                                | callpref                     | <b>Settings &gt; User preferences &gt; Call preferences</b>                            |
| shortcut                                | cfwsetting                   | <b>Settings &gt; User preferences &gt; Call preferences &gt; Call forwarding</b>       |
| shortcut                                | anywhere                     | <b>Settings &gt; User preferences &gt; Call preferences &gt; Anywhere</b>              |
| shortcut                                | audiopref                    | <b>Settings &gt; User preferences &gt; Audio preferences</b>                           |
| shortcut                                | screenpref                   | <b>Settings &gt; User preferences &gt; Screen preferences</b>                          |
| shortcut                                | screensaver                  | <b>Settings &gt; User preferences &gt; Screen preferences &gt; Screen saver</b>        |
| shortcut                                | attconsole                   | <b>Settings &gt; User preferences &gt; Attendant console preferences</b>               |
| shortcut                                | ringtone                     | <b>Settings &gt; User preferences &gt; Ringtone</b>                                    |
| shortcut                                | bluetooth                    | <b>Settings &gt; Bluetooth</b>                                                         |
| shortcut                                | networkconf                  | <b>Settings &gt; Network configuration</b>                                             |
| shortcut                                | ethernetconf                 | <b>Settings &gt; Network configuration &gt; Ethernet configuration</b>                 |
| shortcut<br>Cisco IP Phone 6861<br>only | wificonf                     | <b>Settings &gt; Network configuration &gt; Wi-Fi configuration</b>                    |
| shortcut<br>Cisco IP Phone 6861<br>only | wifiprofile                  | <b>Settings &gt; Network configuration &gt; Wi-Fi configuration &gt; Wi-Fi profile</b> |
| shortcut<br>Cisco IP Phone 6861<br>only | wpspbcb                      | Allows the phone to connect to a wireless router with WPS button.                      |
| shortcut<br>Cisco IP Phone 6861<br>only | wpspin                       | Allows the phone to connect to a wireless router with a WPS PIN code.                  |
| shortcut<br>Cisco IP Phone 6861<br>only | wifistatus                   | <b>Settings &gt; Network configuration &gt; Wi-Fi configuration &gt; Wi-Fi status</b>  |
| shortcut                                | ipv4setting                  | <b>Settings &gt; Network configuration &gt; IPv4 address settings</b>                  |
| shortcut                                | ipv6setting                  | <b>Settings &gt; Network configuration &gt; IPv6 address settings</b>                  |

| <b>Function<br/>(fnc=)</b> | <b>URL String<br/>(url=)</b> | <b>Target Menu</b>                                                    |
|----------------------------|------------------------------|-----------------------------------------------------------------------|
| shortcut                   | adminsetting                 | <b>Settings &gt; Device administration</b>                            |
| shortcut                   | setpassword                  | <b>Settings &gt; Device administration &gt; Set password</b>          |
| shortcut                   | usersignin                   | <b>Settings &gt; Device administration &gt; Sign in</b>               |
| shortcut                   | usersignout                  | <b>Settings &gt; Device administration &gt; Sign out</b>              |
| shortcut                   | datetime                     | <b>Settings &gt; Device administration &gt; Date/Time</b>             |
| shortcut                   | language                     | <b>Settings &gt; Device administration &gt; Language</b>              |
| shortcut                   | restart                      | <b>Settings &gt; Device administration &gt; Restart</b>               |
| shortcut                   | powersave                    | <b>Settings &gt; Device administration &gt; Power save</b>            |
| shortcut                   | factoryreset                 | <b>Settings &gt; Device administration &gt; Factory reset</b>         |
| shortcut                   | profilerule                  | <b>Settings &gt; Device administration &gt; Profile rule</b>          |
| shortcut                   | profileaccount               | <b>Settings &gt; Device administration &gt; Profile account setup</b> |
| shortcut                   | videosetting                 | <b>Settings &gt; Video</b>                                            |
| shortcut                   | status                       | <b>Settings &gt; Status</b>                                           |
| shortcut                   | productinfo                  | <b>Settings &gt; Status &gt; Product information</b>                  |
| shortcut                   | networkstatus                | <b>Settings &gt; Status &gt; Network status</b>                       |
| shortcut                   | ipv4status                   | <b>Settings &gt; Status &gt; Network status &gt; IPv4 status</b>      |
| shortcut                   | ipv6status                   | <b>Settings &gt; Status &gt; Network status &gt; IPv6 status</b>      |
| shortcut                   | phonestatus                  | <b>Settings &gt; Status &gt; Phone status</b>                         |
| shortcut                   | phonestat                    | <b>Settings &gt; Status &gt; Phone status &gt; Phone status</b>       |
| shortcut                   | linestatus                   | <b>Settings &gt; Status &gt; Phone status &gt; Line status</b>        |
| shortcut                   | provstatus                   | <b>Settings &gt; Status &gt; Phone status &gt; Provisioning</b>       |
| shortcut                   | callstat                     | <b>Settings &gt; Status &gt; Phone status &gt; Call statistics</b>    |
| shortcut                   | reportproblem                | <b>Settings &gt; Status &gt; Report problem</b>                       |
| shortcut                   | reboothistory                | <b>Settings &gt; Status &gt; Reboot history</b>                       |
| shortcut                   | accessories                  | <b>Settings &gt; Status &gt; Accessories</b>                          |
| shortcut                   | statusmessage                | <b>Settings &gt; Status &gt; Status messages</b>                      |



| <b>Function<br/>(fnc=)</b>              | <b>URL String<br/>(url=)</b> | <b>Target Menu</b>                                                                                                  |
|-----------------------------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------|
| shortcut<br>Cisco IP Phone 6861<br>only | wifimessage                  | <b>Settings &gt; Status &gt; Wi-Fi messages</b>                                                                     |
| shortcut                                | directories                  | <b>Directories</b>                                                                                                  |
| shortcut                                | personaldir                  | <b>Directories &gt; Personal address book</b>                                                                       |
| shortcut                                | alldir                       | <b>Directories &gt; All</b>                                                                                         |
| shortcut                                | ldapdir                      | <b>Directories &gt; Corporate directory (LDAP)</b><br>The LDAP directory name is customizable.                      |
| shortcut                                | broadsoftdir                 | <b>Directories &gt; BroadSoft directory</b><br>The BroadSoft directory name is customizable.                        |
| shortcut                                | bsdirpers                    | <b>Directories &gt; BroadSoft directory &gt; Personal</b><br>The BroadSoft directory name is customizable.          |
| shortcut                                | bsdirgrp                     | <b>Directories &gt; BroadSoft directory &gt; Group</b><br>The BroadSoft directory name is customizable.             |
| shortcut                                | bsdirent                     | <b>Directories &gt; BroadSoft directory &gt; Enterprise</b><br>The BroadSoft directory name is customizable.        |
| shortcut                                | bsdirgrpcom                  | <b>Directories &gt; BroadSoft directory &gt; Group common</b><br>The BroadSoft directory name is customizable.      |
| shortcut                                | bsdirentcom                  | <b>Directories &gt; BroadSoft directory &gt; Enterprise common</b><br>The BroadSoft directory name is customizable. |
| shortcut                                | bluetoothdir                 | <b>Directories &gt; Bluetooth directory</b><br>The Bluetooth directory name is customizable.                        |
| shortcut                                | xmppdir                      | <b>Directories &gt; IM&amp;P contacts</b><br>The XMPP directory name is customizable.                               |
| shortcut                                | xmlapp                       | <b>Settings &gt; Cisco XML services</b><br>The XML application name is customizable.                                |
| shortcut                                | xmldir                       | <b>Directories &gt; Corporate directory (XML)</b><br>The XML directory name is customizable.                        |

| Function<br>(fnc=) | URL String<br>(url=) | Target Menu                                                                                                                                                    |
|--------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| shortcut           | webexdir             | <b>Directories &gt; Webex directory</b><br>The Webex directory name is customizable. By default, the softkey displays the directory name as <b>Webex Dir</b> . |
| shortcut           | proxysset            | <b>Settings &gt; Network configuration &gt; HTTP proxy settings</b>                                                                                            |
| shortcut           | vpnstatus            | <b>Settings &gt; Status &gt; VPN status</b>                                                                                                                    |
| shortcut           | vpnsetting           | <b>Settings &gt; Network configuration &gt; VPN settings</b>                                                                                                   |

## Add an Extended Feature to a Line Key

You can add a feature to a line key. Then, the user can press the configured line key to access the feature. For the supported features, see [Configurable Features on Line Keys, on page 123](#).

### Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

### Procedure

**Step 1** Select **Voice > Phone**.

**Step 2** Select a line key.

**Step 3** (Optional) Set the **Extension** parameter to **Disabled** to disable the extension.

**Note** If the Direct PLK Configuration feature is disabled, you must disable the extension to add an extended function to the line key. If the feature is enabled, you can skip this step. For details, see [Enable Direct PLK Configuration](#).

You can also configure this parameter in the phone configuration file (cfg.xml). The parameter is line-specific. Enter a string in this format:

```
<Extension_n_ ua="na">Disabled</Extension_n_>
```

where *n* is the extension number.

**Step 4** In the **Extended Function** parameter, enter a string in this format:

```
fnc=cfwd
```

where fnc= cfwd means function=Call forward.

You can also configure this parameter in the configuration file (cfg.xml). Enter a string in this format:

```
<Extended_Function_n_ ua="na">fnc=cfwd</Extended_Function_n_>
```

where *n* is the extension number.

**Step 5** Click **Submit All Changes**.

## Configurable Features on Line Keys

The following table lists the supported features on the line keys.

**Table 36: Configurable Features on Line Keys**

| Feature                               | Configuration Code (fnc=) | Description and String Syntax                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Agent Sign-in and Sign-out            | acd                       | Signs the user into or out of Automatic Call Distribution (ACD).<br>The ACD status can be Available automatically when the user signs into ACD.<br>For more information, see the description for <b>Auto Available After Sign-In</b> in <a href="#">Parameters for Call Center Agent Setup</a> .<br>String Syntax:<br><code>fnc=acd[;nme=&lt;softkey_display_name&gt;]</code> |
| Bridge in<br>Cisco IP Phone 6871 only | bridgein                  | Joins the user (executive) to an ongoing call with an assistant.<br>Only available to executives who have assistants.<br>String Syntax:<br><code>fnc=bridgein[;nme=&lt;softkey_display_name&gt;]</code>                                                                                                                                                                       |
| Busy lamp field                       | blf                       | Monitors a coworker's line status.<br>String Syntax:<br><code>fnc=blf[;nme=&lt;softkey_display_name&gt;]</code>                                                                                                                                                                                                                                                               |
| Call pickup                           | blf;cp                    | Answers incoming calls for the monitored line.<br>String Syntax:<br><code>fnc=blf;cp[;nme=&lt;softkey_display_name&gt;]</code>                                                                                                                                                                                                                                                |
| BLF, Call pickup, and Speed dial      | blf;cp;sd                 | Calls the monitored line or answers incoming calls for the monitored line.<br>String Syntax:<br><code>fnc=blf;cp;sd[;nme=&lt;softkey_display_name&gt;]</code>                                                                                                                                                                                                                 |
| Call information                      | callinfo                  | Shows the information of the ongoing call.<br>String Syntax:<br><code>fnc=callinfo[;nme=&lt;softkey_display_name&gt;]</code>                                                                                                                                                                                                                                                  |

| Feature                                            | Configuration Code<br>(fnc=) | Description and String Syntax                                                                                                                                                                                                                                                               |
|----------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Call list                                          | calllist                     | Provides access to the call list while on a connected video call.<br>String Syntax:<br><code>fnc=calllist[;nme=&lt;softkey_display_name&gt;]</code>                                                                                                                                         |
| Call push<br>Cisco IP Phone<br>6871 only           | callpush                     | Only available to assistant lines.<br>Transfers an ongoing call from the user (assistant) to the executive.<br>String Syntax:<br><code>fnc=callpush[;nme=&lt;softkey_display_name&gt;]</code>                                                                                               |
| Call retrieve<br>Cisco IP Phone<br>6871 only       | callretrieve                 | Only available to executive lines.<br>Transfers an ongoing call from the assistant to the user (executive).<br>String Syntax:<br><code>fnc=callretrieve[;nme=&lt;softkey_display_name&gt;]</code>                                                                                           |
| Call forward                                       | cfwd                         | Turns off call forward or opens the <b>Call forward settings</b> screen.<br>String Syntax:<br><code>fnc=cfwd[;nme=&lt;softkey_display_name&gt;]</code>                                                                                                                                      |
| Call return                                        | lcr                          | Redials the last missed call or the last received call (if there's no missed calls). If there's no missed or received calls in the history, it opens the dialing screen.<br>String Syntax:<br><code>fnc=lcr[;nme=&lt;softkey_display_name&gt;]</code>                                       |
| Divert<br>Cisco IP Phone<br>6871 only              | divert                       | Only available to executive assistants.<br>Activates call diversion for the user (assistant).<br>String Syntax:<br><code>fnc=divert[;nme=&lt;softkey_display_name&gt;]</code>                                                                                                               |
| Do not disturb                                     | dnd                          | Turn do not disturb (DND) on or off.<br>String Syntax:<br><code>fnc=dnd[;nme=&lt;softkey_display_name&gt;]</code>                                                                                                                                                                           |
| Executive-assistant<br>Cisco IP Phone<br>6871 only | bw-exec-assist               | For executives, show the call filtering status, and open the <b>Executive</b> phone screen.<br>For assistants, show if the call diversion is activated, and open the <b>Assistant</b> phone screen.<br>String Syntax:<br><code>fnc=bw-exec-assist[;nme=&lt;softkey_display_name&gt;]</code> |

| Feature                   | Configuration Code (fnc=) | Description and String Syntax                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Menu shortcut             | shortcut                  | <p>Opens the specified menu item.</p> <p>String Syntax:</p> <pre>fnc=shortcut;url=&lt;menu_shortcut_code&gt;[;nme=&lt;softkey_display_name&gt;]</pre> <p>where,</p> <ul style="list-style-type: none"> <li>• fnc=shortcut means function=phone menu shortcut.</li> <li>• url is the menu to open with this line key. For more shortcut mappings, see <a href="#">Menu Shortcuts Mapping on PLK and PSK, on page 118</a>.</li> <li>• nme is the menu shortcut name displayed on the phone. If you don't specify a display name, the line key displays the target menu item.</li> </ul>                                                                    |
| Message Waiting Indicator | mwi                       | <p>Monitors the voicemail of a user or group.</p> <p>String syntax:</p> <pre>fnc=mwi;sub=&lt;group_vm&gt;@&lt;domain&gt;[;vid=&lt;n&gt;][;nme=&lt;softkey_display_name&gt;]</pre> <ul style="list-style-type: none"> <li>• fnc=mwi means function=Message Waiting Indicator</li> <li>• sub=group_vm@domain is the SIP URI of a voicemail account that MWI monitors.</li> <li>• vid is the extension ID with which the MWI associates. It's an optional string.</li> <li>• nme is the name displayed on the phone for MWI line key. It's an optional string.</li> </ul> <p>For more information, see <a href="#">String Syntax for Voicemail PLK</a>.</p> |

| Feature                                | Configuration Code (fnc=) | Description and String Syntax                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Message Waiting Indicator + Speed dial | mwi+sd                    | <p>Monitors and enables speed dial for voicemail of a user or group.</p> <p>String syntax:</p> <pre>fnc=mwi+sd;ext=&lt;number&gt; ,&lt;id&gt;#,&lt;pin&gt;#@&lt;domain&gt;; sub=&lt;group_vm&gt;@&lt;domain&gt;[;vid=&lt;n&gt;] [;nme=&lt;softkey_display_name&gt;]</pre> <ul style="list-style-type: none"> <li>• fnc=mwi+sd means function=Message Waiting Indicator and speed dial</li> <li>• ext is made up of: <ul style="list-style-type: none"> <li>• ext is the speed dial number.</li> </ul> <p>If the SIP proxy requires a domain, add a domain for the speed dial number. For example, 8000@domain.</p> <ul style="list-style-type: none"> <li>• , <b>id#</b>, <b>pin#</b> consists of DTMF characters, where id and pin are the voicemail account ID and PIN respectively. You need a space between the speed dial number and the voicemail ID. This part of string is optional. We don't recommend that you add the PIN in the string.</li> </ul> <p>For more information about the speed dial string, see <a href="#">DTMF Wait and Pause Parameters, on page 15</a>.</p> <ul style="list-style-type: none"> <li>• sub=group_vm@domain is the SIP URI of a voicemail account that MWI monitors.</li> <li>• vid is the extension ID with which the PLK associates. It's an optional string.</li> <li>• nme is the name displayed on the phone for MWI+speed dial line key. It's an optional string.</li> </ul> <p>For more information, see <a href="#">String Syntax for Voicemail PLK</a>.</p> </li> </ul> |

| Feature                                | Configuration Code (fnc=) | Description and String Syntax                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Proxy call<br>Cisco IP Phone 6871 only | proxycall                 | <p>Only available to assistant lines.</p> <p>Initiates a call on behalf of the selected executive.</p> <p>String Syntax:</p> <pre>fnc=proxycall;ext=&lt;number&gt;[;vid=&lt;n&gt;][;nme=&lt;softkey_display_name&gt;]</pre> <p>where,</p> <ul style="list-style-type: none"> <li>• fnc=proxycall means function = proxy call.</li> <li>• ext is the executive's phone number or extension number for which the line serves as the proxy.</li> <li>• vid is the line index associated with the executive's extension number. It's an optional string.</li> <li>• nme is the display name of the proxy line. It's an optional string.</li> </ul> |
| Speed dial                             | sd                        | <p>Dials the specified speed dial number.</p> <p>String syntax:</p> <pre>fnc=sd;ext=&lt;number&gt;@\${PROXY}[;vid=&lt;n&gt;][;nme=&lt;softkey_display_name&gt;]</pre> <p>where,</p> <ul style="list-style-type: none"> <li>• fnc=sd means function=speed dial</li> <li>• ext is the phone that the line key calls.</li> <li>• vid is the line index of the phone. It's an optional string.</li> <li>• nme is the name displayed on the phone for the speed-dial line key. It's an optional string.</li> </ul>                                                                                                                                  |
| Inert                                  | inert                     | <p>Shuts down the line key to completely disable it. The line key is unavailable when it is in the Inert mode.</p> <p>String syntax:</p> <pre>fnc=inert;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## Add a Menu Shortcut to a Programmable Softkey

You can configure a softkey as a phone menu shortcut.

### Before you begin

Access the phone administration web page. See [Access the Phone Web Interface](#).

## Procedure

---

**Step 1** Select **Voice > Phone**.

**Step 2** In the **Programmable Softkeys** section, set the **Programmable Softkey Enable** field to **Yes**.

You can also configure the parameter in the configuration file (cfg.xml) with a string in this format:

```
<Programmable_Softkey_Enable ua="rw">Yes</Programmable_Softkey_Enable>
```

**Step 3** Configure a PSK field from PSK 1 through PSK 16 with a string in this format:

```
fnc=shortcut;url=userpref;nme=User preferences
```

where:

- fnc= shortcut means function=phone menu shortcut.
- url= userpref is the menu to open with this line key. It's the **User preferences** menu in this example. For more shortcut mapping, see [Menu Shortcuts Mapping on PLK and PSK, on page 118](#).
- nme= XXXX is the menu shortcut name displayed on the phone. In the example, the softkey displays **User preferences**.

You can also configure this parameter in the configuration file (cfg.xml). Enter a string in this format:

```
<PSK_n ua="rw">fnc=shortcut;url=userpref;nme=User preferences</PSK_n>
```

where *n* is the PSK number.

**Step 4** Add the configured PSK to the desired key list.

**Example:** Add the configured **PSK 2** to **Idle Key List**. Do any of these actions:

- Add `psk2` to the **Idle Key List** field.

```
psk2;em_login;acd_login;acd_logout;astate;redial;cfwd;dnd;lcr;
```

- In the configuration file (cfg.xml), enter a string in this format:

```
<Idle_Key_List
ua="rw">psk2;em_login;acd_login;acd_logout;astate;redial;cfwd;dnd;lcr;</Idle_Key_List>
```

**Step 5** Click **Submit All Changes**.

---

## Enable LDAP Unified Search

You can enable the unified search in the LDAP directory. The search allows you to enter any value as filters. For example, first name, last name, extension, or phone number. The phone transfers the request as a single search request.

### Before you begin

- Access the phone administration web page. See [Access the Phone Web Interface](#).
- **Browse Mode Enable** parameter set to **Yes** or **No**.



## Procedure

---

- Step 1** Select **Voice > Phone**.
- Step 2** In the **LDAP** section, set the parameter **Unified Search Enable** to **Yes** to enable the LDAP unified search. If the parameter is set to **Yes**, the phone transfers requests with OR filter.
- If you set the value to **No**, the phone uses simple or advanced search and transfers requests with AND filter. Default value is **No**.
- You can configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:
- ```
<LDAP_Unified_Search_Enable>Yes</LDAP_Unified_Search_Enable>
```
- Conditions based on **Browse Mode Enable** and **Unified Search Enable** parameter values:
- **Browse Mode Enable** parameter is **No** and **Unified Search Enable** parameter is **No** - when the user chooses the LDAP directory on the phone, the **Query LDAP server** screen displays **Simple search** and **Advanced search** menus.
 - **Browse Mode Enable** parameter is **No** and **Unified Search Enable** parameter is **Yes** - when the user chooses the LDAP directory, the phone navigates to the **LDAP query form** (unified search screen) directly. If there is no value in the search box, the search displays all contacts in the directory.
 - **Browse Mode Enable** parameter is **Yes** and **Unified Search Enable** parameter is **No** - when the user navigates to the LDAP directory and clicks the **Option** softkey, the phone displays the **Simple search** and the **Advanced search** menus.
 - **Browse Mode Enable** parameter is **Yes** and **Unified Search Enable** parameter is **Yes** - when the user navigates to the LDAP directory and clicks the **Option** softkey, the phone displays only one **Search** menu. After clicking the **Search** menu, the unified search screen **LDAP query form** appears.
- Step 3** Click **Submit All Changes**.
-

Shut Down a Line Key

You can shut down a line key by setting the Inert mode for it from the phone web page. When the line key is in the Inert mode, it is disabled thoroughly. For example, the line key LED is disabled, no icon or text displays next to the line key, and the line key button is not responsive. In a word, it is completely unavailable.

Before you begin

Access the phone administration web interface. See [Access the Phone Web Interface](#)

Procedure

- Step 1** Disable the line key that will use the Inert mode. Do any of the following actions on the phone web page:
- Set **Extension** to **Disabled** for the specific line key on the **Voice > Phone** tab.

You can also disable the line key in the configuration file (cfg.xml):

```
<Extension_n_ua="na">Disabled</Extension_n_>
```

where *n* is the extension number.

- Set **Line Enable** to **No** for the specific line key on the **Voice > Ext(n)** tab.

You can also disable the line key in the configuration file (cfg.xml):

```
<Line_Enable_n_ua="na">No</Line_Enable_n_>
```

where *n* is the extension number.

Step 2 (Optional) If you don't want to manually disable the line key as described in [Step 1](#), you can enable the Direct PLK Configuration feature. For more information, see [Enable Direct PLK Configuration](#).

Step 3 Set the Inert mode for the specific line key.

- Select **Voice > Phone**.
- Select the target line key.
- In the **Extended Function** parameter, enter a string in this format:

```
fnc=inert;
```

where fnc=inert means function=inert.

You can also configure this parameter in the phone configuration file (cfg.xml). The parameter is line-specific. Enter a string in this format:

```
<Extended_Function_n_ua="na">fnc=inert;</Extended_Function_n_>
```

where *n* is the extension number.

- Click **Submit All Changes**.

Enable LLDP X-SWITCH-INFO Support for E911

You can enable LLDP X-SWITCH-INFO support feature by adding an extra header (named "X-SWITCH-INFO") to the REGISTER sip message which contains the following switch information as advertised in LLDP data unit:

Before you begin

- Access the phone administration web page. See [Access the Phone Web Interface](#).
- Make sure you have configured the SIP registration in Ext n, and the Ext n can register successfully to the server.

Procedure

Step 1 Select **Voice > System > Optional Network Configuration**.

Step 2 Select **Yes** for the parameter **X-SWITCH-INFO Support**.

To disable the feature, select **No**.

You can also configure this parameter in the phone configuration XML file (cfg.xml) by entering a string in this format:

```
<X-SWITCH-INFO_Support ua="na">Yes</X-SWITCH-INFO_Support>
```

Default: **No**.

Step 3 For wired phone, do the following:

a) Select **Voice > System > VLAN Settings > Enable LLDP-MED**.

Step 4 Click **Submit All Changes**.
