Cisco Call Back

This chapter provides information on the following topics:

Introducing Cisco Call Back

The Cisco Call Back feature allows you to receive call-back notification on your Cisco Unified IP Phone when a called party line becomes available. You can activate call back for a destination phone that is within the same Cisco Unified CallManager cluster as your phone or on a remote PINX over QSIG trunks or QSIG-enabled intercluster trunks.

To receive call-back notification, a user presses the CallBack softkey while receiving a busy or ringback tone. A user can also activate call back during reorder tone, which is triggered when the no answer timer expires.

The following sections provide information on the Cisco Call Back feature:

Understanding How Cisco Call Back Works

The following examples describe how Cisco Call Back works after an unavailable phone becomes available:

- Example: User A calls user B, who is not available, page 4-2
- Example: User A calls user B, who configured Call Forward No Answer (CFNA) to user C before call back activation occurs, page 4-3
- Example: User A calls user B, who configures call forwarding to user C after user A activates call back, page 4-3
- Example: User A and user C call user B at the same time, page 4-3

Note The calling phone only supports one active call back request. The called phone can support multiple call back requests.

Cisco Call Back only supports spaces and digits 0 through 9 for the name or number of the calling or called party. To work with Cisco Call Back, the name or number of the calling or called party cannot contain # or * (pound sign or asterisk).

Note If the originating side (User A) gets reset after Cisco Call Back has been activated, then Call Back gets automatically cancelled. User A does not receive an audio alert and the Callback notification screen does not display. If the terminating side (User B) gets reset, Call Back does not get cancelled. User A will receive an audio alert and the Callback notification screen displays after User B becomes available.

Example: User A calls user B, who is not available

User A calls user B, who exists either in the same Cisco Unified CallManager cluster as user A or in a different cluster. Because user B is busy or does not reply, user A activates the Call Back feature by using the Callback softkey. The following call back activation message displays on the phone of user A:

```
CallBack is activated on <DN of User B>
Press Cancel to deactivate
Press Exit to quit this screen
```

User A presses the Exit softkey.

After user B becomes available (phone becomes on hook after busy or completes an off-hook and on-hook cycle from idle), user A receives an audio alert, and the following message displays on the phone of User A:

```
<DN of User B> has become available
Time HH:MM MM/DD/YYYY
Press Dial to call
Press Cancel to deactivate
Press Exit to quit this screen
```

User A presses the Exit softkey and then goes off hook and dials the DN of User B. User B answers the call. User A and User B go on hook.

When User A presses the Callback softkey, the following message displays on the phone of User A:

```
<DN of User B> has become available
Time HH:MM MM/DD/YYYY
Press Dial to call
Press Cancel to deactivate
Press Exit to quit this screen
```

Note Manually dialing a DN that has been activated with Cisco Call Back notification has no effect on the Cisco Call Back status.

Example: User A calls user B, who configured Call Forward No Answer (CFNA) to user C before call back activation occurs

The following scenario applies to Call Forward No Answer.

The call from user A gets forwarded to user C because Call Forward No Answer is configured for user B. User A uses call back to contact user C if user C is not busy; if user C is busy, user A contacts user B.

When user B or user C becomes available (on hook), user A receives an audio alert, and a message displays on user A phone that states that the user is available.

Example: User A calls user B, who configures call forwarding to user C after user A activates call back

The following scenarios support Call Forward All, Call Forward Busy, and Call Forward No Answer.

- User A calls user B, who exists in the same Cisco Unified CallManager cluster as user A. Use A activates call back because user B is not available. Before user B becomes available to user A, user B sets up call forwarding to user C. User A may call back user B or user C, depending on the call forwarding settings for user B.
- User A calls user B, who exists in a different cluster. The call connects by using a QSIG trunk. User A activates call back because user B is not available. Before user B becomes available to user A, user B sets up call forwarding to user C. One of the following events occurs:
  - If the Callback Recall Timer (T3) has not expired, user A always calls back User B.
  - After the Callback Recall Timer (T3) expires, user A may call back user B or user C, depending on the call forwarding settings of user B.

Tip The timer starts when the system notifies user A that user B is available. If user A does not complete the call back call during the allotted time, the system cancels call back. On the phone of user A, a message states that user B is available, even after the call back cancellation. User A can dial user B.

Example: User A and user C call user B at the same time

User A and user C call user B at the same time, and user A and user C activate call back because user B is unavailable. A call back activation message displays on the phones of user A and user C.

When user B becomes available, both user A and user C receive an audio alert, and a message displays on both phones that states that user B is available. The user, that is, user A or user C, that presses the Dial softkey first connects to user B.

Suspend/Resume Functionality for Call Back

Cisco Call Back provides the ability of the system to suspend the call completion service if the user, who originated Cisco Call Back, is currently busy and receives call-back notification when the called party becomes available. When the originating user then becomes available, the call completion service resumes for that user.

After the originating user (User A) activates the Cisco Call Back feature, and then becomes busy when the called party (User B) becomes available, the originating PINX sends out a Suspend Callback APDU message indicating to the peer to suspend monitoring of User B until User A becomes available again. When User A becomes available, the originating PINX sends the Resume APDU message for the terminating side to start monitoring User B again.

Note Cisco Call Back supports the originating Suspend/Resume call-back notification for both intracluster and intercluster QSIG trunks or QSIG-enabled intercluster trunks. It also supports Suspend/Resume notification for QSIG-enabled H.225 trunks, and H.323 gateways.

The following example describes how the Suspend/Resume feature works:

Example: User A is busy when User B becomes available

User A calls user B, who exists either in the same Cisco Unified CallManager cluster as user A or in a different cluster. Because user B is busy or does not reply, user A activates the Call Back feature by using the Callback softkey. The following call back activation message displays on the phone of user A:

```
CallBack is activated on <DN of User B>
Press Cancel to deactivate
Press Exit to quit this screen
```

User A presses the Exit softkey.

User A has a busy trigger set to 1.

User A becomes busy. User B then becomes available.

User A does not receive an audio alert and does not receive a call-back notification screen on the display.

The originating side (User A) sends a Suspend Callback APDU message to the terminating side (User B).

User A becomes available. The originating side sends a Resume Callback APDU message to the terminating side. This causes monitoring of User B to resume.

When User B becomes available, User A receives an audio alert and a Callback notification screen displays.

System Requirements for Cisco Call Back

Cisco Call Back requires the following software components:

- Cisco Unified CallManager 5.0 or later
- Cisco CallManager service running on at least one server in the cluster
- Cisco Database Layer Monitor service running on the same server as the Cisco CallManager service
- Cisco RIS Data Collector service running on the same server as the Cisco CallManager service

- Cisco Unified CallManager Locale Installer, that is, if you want to use non-English phone locales or country-specific tones
- Microsoft Internet Explorer or Netscape Navigator

Interactions and Restrictions

Note If users want the Cisco Call Back softkeys and messages on the phone to display in any language other than English, or if you want the user to receive country-specific tones for calls, install the locale installer, as described in the Cisco Unified CallManager Locale Installer documentation.

Cisco Unified IP Phone models 7970, 7960, 7940, 7912, 7905 and Cisco Communicator support Cisco Call Back with the CallBack softkey (can be calling and called phone). You can use call back with some Cisco-provided applications, such as Cisco Unified CallManager Assistant.

Note The only Session Initiation Protocol (SIP) phone that support Cisco Call Back are the Cisco Unified IP Phone model s7970, 7971, 7961, and 7941.

You can call the following devices and can have call back activated on them:

- Cisco IP Phone 30 SP+, Cisco IP Phone 12 SP+, Cisco IP Phone 12 SP, Cisco IP Phone 12 S, Cisco IP Phone 30 VIP
- Cisco Unified IP Phone 7902, Cisco Unified IP Phone 7910, Cisco Unified IP Phone 7935, Cisco Unified IP Phone 7936
- Cisco VGC Phone (uses the Cisco VG248 Gateway)
- Cisco Skinny Client Control Protocol (SCCP) Phone models 7971, 7970, 7961, and 7941
- Cisco Session Initiation Protocol (SIP) Phone models 7970, 7971, 7961, and 7941
- Cisco Analog Telephone Adapter (ATA) 186 and 188
- CTI route point forwarding calls to above phones

Tip When a Cisco Extension Mobility user logs in or logs out, any active call completion that is associated with call back automatically gets canceled. If a called phone is removed from the system after call back is activated on the phone, the caller receives reorder tone after pressing the Dial softkey. The user may cancel or reactivate call back.

If you forward all calls to voice-messaging system, you cannot activate call back.

Additional Information on Cisco Call Back Notification with SIP Phones

The way that call back notification works on the SIP 7960 and 7940 phones differs from the SCCP phone models. The Cisco SIP Phone models 7960 and 7940 do not support call back notification for on-hook/off-hook states. The only way that Cisco Unified CallManager would know when a line on a SIP 7960 or 7940 phone becomes available is by monitoring an incoming SIP INVITE message that

Cisco Unified CallManager receives from the phone. After the phone sends SIP INVITE to Cisco Unified CallManager and the phone goes on hook, Cisco Unified CallManager will be able to send an audio and call back notification screen the SIP 7960/7940 user.

Feature Interactions with Call Forward, iDivert, and Voice-Messaging System Features

The following call states describe the expected behaviors, for the calling party, that occur when Cisco Unified CallManager Call Back interacts with the Call Forward, iDivert, and voice-messaging system features.

When a called party (Phone B) either forwards an incoming call using Forward All, Forward Busy, or Forward No Answer; or diverts a call using iDivert; to a voice-messaging system, the calling party (Phone A) can enter one of the following states with respect to the call back feature:

- VM-Connected state: The call gets connected to voice-messaging system. The Call Back softkey remains inactive on the calling party's (Phone A) phone.
- Ring-Out state with the original called party: The voice-mail profile of the called party does not have a voice-mail pilot. The called party (Phone B) will see "Key Is Not Active" after pressing the iDivert softkey. The calling party (Phone A) should be able to activate call back against the original called party (Phone B).
- Ring-Out state with voice-messaging system feature and voice-mail pilot number as the new called party: The call encounters either voice-messaging system failure or network failure. The called party (Phone B) will see "Temp Failure" after pressing iDivert softkey. The calling party (Phone A) cannot activate call back against the original called party (Phone B) because the call context has the voice mail pilot number as the "new" called party.
- Ring-Out state with busy voice-mail port and voice-mail pilot number as the new called party: The call encounters busy voice-mail port. The called party (Phone B) will see "Busy" after pressing iDivert softkey. The calling party (Phone A) cannot activate call back against the original called party (Phone B) because the call context has the voice mail pilot number as the "new" called party.

For more information refer to the following sections:

- Phone Features, *Cisco Unified CallManager System Guide*
- Immediate Divert, page 11-1

Installing and Configuring Cisco Call Back

Cisco Call Back automatically installs when you install Cisco Unified CallManager. After you install Cisco Unified CallManager, you must configure Cisco Call Back in Cisco Unified CallManager Administration, so phone users can use the Cisco Call Back feature.

For successful configuration of the Cisco Call Back feature, review the steps in the configuration checklist, perform the configuration requirements, and activate the Cisco CallManager service. The following sections provide detailed configuration information:

- Configuration Checklist for Cisco Call Back, page 4-7
- Creating a Softkey Template for the CallBack Softkey, page 4-8
- Configuring CallBack Softkey Template in Device Pool, page 4-9

Configuration Checklist for Cisco Call Back

Table 4-1 shows the steps for configuring the Cisco Call Back feature.

Table 4-1 Cisco Call Back Configuration Checklist

Configuration Steps		Related Procedures and Topics
Step 1	If phone users want the softkeys and messages to display in a language other than English, or if you want the user to receive country-specific tones for calls, verify that you installed the locale installer.	Cisco Unified CallManager Locale Installer documentation
Step 2	In Cisco Unified CallManager Administration, create a copy of the Standard User softkey template and add the CallBack softkey to the following states: • On Hook call state • Ring Out call state • Connected Transfer call state	Creating a Softkey Template for the CallBack Softkey, page 4-8
Step 3	In Cisco Unified CallManager Administration, add the new softkey template to the device pool.	Configuring CallBack Softkey Template in Device Pool, page 4-9
Step 4	In the Phone Configuration window, perform one of the following tasks: • Choose the device pool that contains the new softkey template. • Choose the new softkey template from the Softkey Template drop-down list box.	Adding CallBack Softkey Template in Phone Configuration, page 4-9
Step 5	In the Phone Configuration window, verify that the correct user locale is configured for the Cisco Unified IP Phone(s).	End User Configuration Settings, *Cisco Unified CallManager Administration Guide* Phone Configuration Settings, *Cisco Unified CallManager Administration Guide* Cisco Unified CallManager Locale Installer documentation
Step 6	If you do not want to use the default settings, configure the Cisco Call Back service parameters.	Setting Cisco Call Back Service Parameters, page 4-9
Step 7	Verify that the Cisco CallManager service is activated in Cisco Unified CallManager Serviceability.	*Cisco Unified CallManager Serviceability Administration Guide*

Creating a Softkey Template for the CallBack Softkey

Perform the following procedure to create a new softkey template with the CallBack softkey.

Procedure

Step 1 From Cisco Unified CallManager Administration, choose **Device > Device Settings > Softkey Template**.

The Softkey Template Configuration window displays.

Step 2 From the Find and List Softkey Template window, choose the Standard User softkey template.

Step 3 Click the **Copy** icon.

The Softkey Template Configuration window displays with new information.

Step 4 In the Softkey Template Name field, enter a new name for the template; for example, Standard User for Call Back.

Step 5 Click the **Save** button.

The Softkey Template Configuration redisplays with new information.

Step 6 To add the CallBack softkey to the template, choose **Configure Softkey Layout** from the Related Links drop-down list box in the upper, right corner and click **Go**.

The Softkey Layout Configuration window displays. You must add the CallBack softkey to the On Hook, Ring Out, and Connected Transfer call states.

Step 7 To add the CallBack softkey to the On Hook call state, choose **On Hook** from the Select a Call State to Configure drop-down list box.

The Softkey Layout Configuration window redisplays with the Unselected Softkeys and Selected Softkeys lists.

Step 8 From the Unselected Softkeys list, choose the CallBack softkey and click the right arrow to move the softkey to the Selected Softkeys list.

Step 9 To save and continue, click the **Save** button.

Step 10 To add the CallBack softkey to the Ring Out call state, choose **Ring Out** from the Select a Call State to Configure drop-down list box.

The Softkey Layout Configuration window redisplays with the Unselected Softkeys and Selected Softkeys lists.

Step 11 From the Unselected Softkeys list, choose the CallBack softkey and click the right arrow to move the softkey to the Selected Softkeys list.

Step 12 To save and continue, click the **Save** button.

Step 13 To add the Call Back softkey to the **Connected Transfer** call state, choose Connected Transfer from the Select a Call State to Configure drop-down list box.

Step 14 The Softkey Layout Configuration window redisplays with the Unselected Softkeys and Selected Softkeys lists.

Step 15 From the Unselected Softkeys list, choose the Call Back softkey and click the right arrow to move the softkey to the Selected Softkeys list.

Step 16 Click the **Save** button.

Configuring CallBack Softkey Template in Device Pool

Perform the following procedure to add the Call Back softkey template to the device pool. You can add the template to the default device pool if you want all users to have access to the CallBack softkey, or you can create a customized device pool for Call Back feature users.

Procedure

Step 1 From Cisco Unified CallManager Administration, choose **System > Device Pool**.

The Find and List Device Pool window displays.

Step 2 Choose the Default device pool or any previously created device pool that is in the Device Pools list.

Step 3 In the Softkey Template field, choose the softkey template that contains the CallBack softkey from the drop-down list box. (If you have not created this template, see the "Creating a Softkey Template for the CallBack Softkey" section on page 4-8.)

Step 4 Click the **Save** button.

A dialog box displays with a message to press Reset to update the device pool settings.

Adding CallBack Softkey Template in Phone Configuration

Perform the following procedure to add the Call Back softkey template to each user phone.

Procedure

Step 1 From Cisco Unified CallManager Administration, choose **Device > Phone**.

The Find and List Phones window displays.

Step 2 Find the phone to which you want to add the softkey template. See Finding a Phone in the *Cisco Unified CallManager Administration Guide*.

Step 3 Perform one of the following tasks:

- From the Device Pool drop-down list box, choose the device pool that contains the new softkey template.
- In the Softkey Template drop-down list box, choose the new softkey template that contains the CallBack softkey.

Step 4 Click the **Save** button.

A dialog box displays with a message to press Reset to update the phone settings.

Setting Cisco Call Back Service Parameters

You configure Cisco Call Back service parameters by accessing **Service > Service Parameters** in Cisco Unified CallManager Administration; choose the server where the Cisco CallManager service runs and then choose the Cisco CallManager service.

Unless instructed otherwise by the Cisco Technical Assistance Center, Cisco recommends that you use the default service parameters settings. Cisco Call Back includes service parameters such as Callback Enabled Flag, Callback Audio Notification File Name, Connection Proposal Type, Connection Response Type, Call Back Request Protection T1 Timer, Callback Recall T3 Timer, Callback Calling Search Space, No Path Preservation, and Set Private Numbering Plan for Callback. For information on these parameters, click the question mark button that displays in the upper corner of the Service Parameter window.

Providing Cisco Call Back Information to Users

The *Cisco Unified IP Phone Models 7960 and 7940 User Guide* provides procedures for how to use the Call Back feature on the Cisco Unified IP Phone. Use this guide in conjunction with the question mark button help that displays on the phone.

Troubleshooting Cisco Call Back

Use the Cisco Unified CallManager Serviceability Trace Configuration and Real-Time Monitoring Tool to help troubleshoot call back problems. Refer to the *Cisco Unified CallManager Serviceability Administration Guide*.

Additional Information

See the "Related Topics" section on page 4-10.

Related Topics

- Softkey Template Configuration, *Cisco Unified CallManager Administration Guide*
- Device Defaults Configuration, *Cisco Unified CallManager Administration Guide*
- Service Parameters Configuration, *Cisco Unified CallManager Administration Guide*
- Cisco Unified IP Phone Configuration, *Cisco Unified CallManager Administration Guide*
- *Cisco Unified CallManager Administration Guide*
- *Cisco Unified CallManager System Guide*
- *Cisco Unified CallManager Serviceability Administration Guide*
- *Cisco Unified CallManager Serviceability System Guide*
- *Troubleshooting Guide for Cisco Unified CallManager*
- *Cisco Unified IP Phones Model 7960 and 7940 User Guide*
- *Cisco Unified IP Phone Administration Guide for Cisco Unified CallManager*
- Cisco Unified CallManager Installer documentation