



Set Up Cisco Unified Communications Manager for Click-to-Call

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Overview

Cisco's call-processing software, telephones, and endpoint devices allows your company or organization to efficiently run voice, data, and video communications over a single, converged network.

Cisco provides call-processing solutions for organizations of all sizes and types. These industry-leading IP private-branch-exchange (PBX) solutions manage voice, video, mobility, and presence services between IP phones, media processing devices, voice-over-IP (VoIP) gateways, mobile devices, and multimedia applications. Cisco call-processing solutions include the Cisco Unified Communications Manager.

The Cisco Unified Communications Manager Click-to-Call service is an optional feature and not available in Cisco WebEx by default. Click-to-Call is offered as a free service. However, your Organization Administrator needs to enable it. Contact your Cisco sales representative for more information.

Cisco Unified Communications Manager

This enterprise IP telephony call-processing system is the core of Cisco Unified Communications. It provides voice, video, mobility, and presence services to IP phones, media-processing devices, VoIP gateways, mobile devices, and multimedia applications. This powerful call processing solution can help:

- **Build productivity** with feature-rich unified communications that help workers spend less time chasing people, and more time being productive.
- **Enable mobility** with software that has embedded unified mobility capabilities so mobile workers can remain productive wherever they are.

Cisco Unified Communications Manager creates a unified workspace that supports a full range of communications features and applications with a solution that is highly:

- **Scalable:** Each Cisco Unified Communications Manager cluster can support up to 30,000 users and scale to support up to 1 million users at up to 1000 sites.
- **Distributable:** For scalability, redundancy, and load balancing.
- **Available:** Support business continuity and improve collaboration with high availability that provides a foundation for multiple levels of server redundancy and survivability.

Configure Click to Call Task Flow

Procedure

	Command or Action	Purpose
Step 1	Configure Cisco Unified IP Phones, on page 2	Use to add and configure an IP Phone to Cisco Unified Communications Manager.
Step 2	Add a Directory Number to the Phone, on page 3	Use to add a directory number to the IP Phone.
Step 3	Activate Cisco WebDialer on Cisco Unified Communications Manager, on page 3	Use to activate Cisco WebDialer on Cisco Unified Communications Manager.
Step 4	Verify the CTI Manager is Running on Cisco Unified Communications Manager, on page 4	Use to verify the CTI Manager is Running on Cisco Unified Communications Manager.
Step 5	Verify the CCMCIP Service is Running on Cisco Unified Communications Manager, on page 4	Use to verify the CCMCIP Service is Running on Cisco Unified Communications Manager.
Step 6	Verify the Correct Phone Devices are Associated with the User, on page 5	Use to verify the Correct Phone Devices are Associated with the User.

Configure Cisco Unified IP Phones

Before a Cisco Unified IP Phone can be used, you must use this procedure to add the phone to Cisco Unified Communications Manager. You can also configure third-party phones that are running SIP, H.323 clients, CTI ports, the Cisco ATA 186 Telephone Adaptor, or the Cisco IP Communicator.

Procedure

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- Step 1** Select **Device > Phone > Add New**.
- Step 2** From the **Phone Type** list, select the appropriate phone type or device and select **Next**. After you select a phone type, you cannot modify it.
- Step 3** If the **Select the device protocol** list is displayed, choose the appropriate protocol of the device and select **Next**.

The **Find and List Phones** window is displayed.

- Step 4** Enter the appropriate settings. For more information see, *Cisco Unified Communications Administration Guide*.
- Step 5** Select **Save**.
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What to Do Next

[Add a Directory Number to the Phone, on page 3](#)

Add a Directory Number to the Phone

When a pattern is used as a directory number, the display on the phone and the caller ID that displays on the dialed phone will both contain characters other than digits. To avoid this, Cisco recommends that you provide a value for Display (Internal Caller ID), Line text label, and External phone number mask.

Before You Begin

[Configure Cisco Unified IP Phones, on page 2](#)

Procedure

- Step 1** To add a directory number to the phone, select one of the line links, such as **Line [1] - Add a new DN**, in the **Association Information** section that displays on the left side of the window.
- Step 2** Enter a valid phone number. The directory number that you enter can appear in more than one partition.
- Step 3** Select **Save**.
- Step 4** Select **Reset Phone**.

Note Restart devices as soon as possible. During this process, the system may drop calls on gateways.

For more information, see the *Cisco Unified Communications Administration Guide*.

What to Do Next

[Activate Cisco WebDialer on Cisco Unified Communications Manager, on page 3](#)

Activate Cisco WebDialer on Cisco Unified Communications Manager

Cisco Unified Communications Integration (Click-to-Call) uses the SOAP interface to interact with the WebDialer servlet on Cisco Unified Communications Manager. Because Click-to-Call does not use the HTTP interface, the application does not interact with the Redirector servlet.

Before You Begin

[Add a Directory Number to the Phone, on page 3](#)

Procedure

- Step 1** Select **Cisco Unified Communications Manager Serviceability > Tools > Service Activation**.
 - Step 2** Select the **Cisco Unified Communications Manager** server from the server drop-down list.
 - Step 3** In CTI Services, check **Cisco WebDialer Web Service**.
 - Step 4** Select **Save**.
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What to Do Next

[Verify the CTI Manager is Running on Cisco Unified Communications Manager, on page 4](#)

Verify the CTI Manager is Running on Cisco Unified Communications Manager

The CTI Manager must be running on Cisco Unified Communications Manager for Cisco Unified Communications Integration (Click-to-Call) to function properly.

Before You Begin

[Activate Cisco WebDialer on Cisco Unified Communications Manager, on page 3](#)

Procedure

- Step 1** Select **Cisco Unified Communications Manager Serviceability > Tools > Control Center > Feature Services**.
 - Step 2** Select the Cisco Unified Communications Manager server from the server drop-down list.
 - Step 3** In Call Manager Services, verify **Cisco CTIManager** is running.
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What to Do Next

[Verify the CCMCIP Service is Running on Cisco Unified Communications Manager, on page 4](#)

Verify the CCMCIP Service is Running on Cisco Unified Communications Manager

Cisco Unified Communications Integration (Click-to-Call) retrieves the phone type for the user from the CCMCIP (Cisco CallManager Cisco IP Phone Services) service, and displays the phone type on the **Phone Preferences** screen in Click-to-Call. Because the CCMCIP service only runs on Cisco Unified Communications Manager release 6.x or later, this procedure is only applicable if you are running this Cisco Unified Communications Manager release.

Before You Begin

[Verify the CTI Manager is Running on Cisco Unified Communications Manager, on page 4](#)

Procedure

- Step 1** Select **Cisco Unified Communications Manager Serviceability > Tools > Control Center - Network Services**.
 - Step 2** Select the Cisco Unified Communications Manager server from the server drop-down list.
 - Step 3** In CM Services, verify **Cisco CallManager Cisco IP Phone Services** is running.
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What to Do Next

[Verify the Correct Phone Devices are Associated with the User](#), on page 5

Verify the Correct Phone Devices are Associated with the User

You need to verify that the correct phone devices are associated with the user on Cisco Unified Communications Manager. If not, the phone is not listed on the **Phone Preferences** screen in Click-to-Call.

Before You Begin

[Verify the CCMCIP Service is Running on Cisco Unified Communications Manager](#), on page 4

Procedure

- Step 1** Select **Cisco Unified Communications Manager Administration > User Management > End User**.
 - Step 2** Select **Find**.
 - Step 3** Select the appropriate user ID.
 - Step 4** In the **Device Association** section, verify the correct devices are listed in the **Controlled Devices** window.
- Note** If you need to associate a phone device with the user, select Device Association. Consult the Cisco Unified Communications Manager Online Help for further information.
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Configure Application Dial Rules

You can configure dial rules for applications that automatically strip numbers from, or add numbers to, a telephone number that a user dials. For example, you can use dial rules to automatically prefix a digit to a telephone number to provide access to an outside line.

You configure application dial rules on Cisco Unified Communications Manager from **Cisco Unified Communications Manager Administration > Call Routing > Dial Rules > Application Dial Rules**.

This section provides a brief description of application dial rules. For detailed information on configuring the application dial rules on Cisco Unified Communications Manager, refer to the following:

- The Application Dial Rules Configuration section in the *Cisco Unified Communications Manager Administration Guide*

- The Dial Plans section in the *Cisco Unified Communications Manager Administration Guide*
- [Sample Application Dial Plan](#), on page 6
- [Configure Cisco WebDialer to Automatically Use Application Dial Rules on Cisco Unified Communications Manager](#), on page 7

Sample Application Dial Plan

Name/Description	Number Begins With	Number of Digits	Total Digits to be Removed	Prefix with Pattern
International 12 Digit	+	12	1	9011
International 13 Digit	+	13	1	9011
International 14 Digit	+	14	1	9011
International 15 Digit	+	15	1	9011
Local 7 Digit XXX-XXXX		7		9
Local 10 Digit (510) XXX-XXXX	510	10	3	9
National 10 Digit (XXX) XXX-XXXX		10		91
National 11 Digit 1(XXX) XXX-XXXX		11		9

In the sample application dial plan above, 9 represents the off-net access code for outside dialing. For domestic calls, you append the appropriate quantity of digits to the off-net access code to call either a local number or a national (long-distance) number. In each international dial rule, you replace the "+" with the off-net access code and the appropriate international dialing access code.

These application dial rules are configured in the sample dial plan above:

- Any international number, the application dial rule removes "+" from the number, and prepends the off-net access code 9 and the international dialing access code 011 to the remaining digits.
- Any local seven digit number, the application dial rule prepends the off-net access code 9.
- Any local ten digit number that begins with 510, the application dial rule removes 510 from the number and prepends the off-net access code 9 to the remaining digits.

- Any national ten digit number, the application dial rule prepends the digits 91.
- Any national eleven digit number beginning with 1, the application dial rule prepends the off-net access code 9.

If the **Number Begins With** field is blank, you leave the number of initial digits open that you wish to apply to the dial rule. For example, the initial digits 1, 1408, or 1408526 will each match the dialed number 14085264000.

You must configure the application dial rule list in order of priority.

Cisco Unified Communications Manager applies the *first* dial rule match that it finds for the dialed number in the dial rule list; it does not attempt to find the best match in the list. For example, if you configure the dial rule conditions listed below, on receipt of the dialed number 14085264000, Cisco Unified Communications Manager ignores dial rule 1, and applies dial rule 2 as it is the first match. Although dial rule 3 is the best match, Cisco Unified Communications Manager ignores any subsequent rules in the list after finding the first match.

- 1 Begins with 9 and is 8 digits long, then do X.
- 2 Begins with 1 and is 11 digits long, then do Y.
- 3 Begins with 1408 and is 11 digits long, then do Z.

**Note**

You can also configure directory lookup rules on Cisco Unified Communications Manager. Directory lookup rules transform the number the user dials into a directory number. For further information, refer to the Directory Lookup dial Rules Configuration in the *Cisco Unified Communications Manager Administration Guide*.

Configure Cisco WebDialer to Automatically Use Application Dial Rules on Cisco Unified Communications Manager

Procedure

- Step 1** Select **Cisco Unified Communications Manager Administration > System > Service Parameters**.
- Step 2** Select the Cisco Unified Communications Manager server from the **Server** menu.
- Step 3** Select **Cisco WebDialer Web Service** from the **Service** menu.
- Step 4** Select **True** for the **Apply Application Dial Rules on Dial** parameter.
- Step 5** If you are running Cisco Unified Communications Manager release 6.x or 7.x, select **True** for the **Apply Application Dial Rules on SOAP Dial** parameter.
- Step 6** Restart the Cisco WebDialer service.

Troubleshooting

The following topics provide troubleshooting information when you encounter problems when using Cisco Unified Communications Manager:

- Click-to-Call log files and configuration files
- Click-to-Call Log Files
- [Error Messages, on page 8](#)

Error Messages

This table provides a list of error messages that can appear in the Cisco Unified Communications Integration (Click-to-Call) application and describes a recommended action for each error message.

Error message	Problem and recommended action
A connection error occurred. Verify Click-to-Call is running	<ul style="list-style-type: none"> • A call was attempted using the Click-to-Call functionality when the Click-to-Call application is not running. • Ask the end user to restart the Click-to-Call application.
A directory error occurred. Contact your phone administrator	<ul style="list-style-type: none"> • The Cisco Unified Communications Manager directory service may be down. • Allow a short time lapse and retry your connection. If the error occurs again, contact your Cisco Unified Communications Manager system administrator.
A service error occurred. Retry the call. If the problem persists, contact your phone administrator	<ul style="list-style-type: none"> • An internal error occurred in the WebDialer application. • Contact your Cisco Unified Communications Manager system administrator.
Cannot make call. Verify Click-to-Call is running	<ul style="list-style-type: none"> • Ask the end user to restart the Click-to-Call application.
Click-to-Call cannot find Cisco IP Communicator. Verify it is running or select another phone	<ul style="list-style-type: none"> • Ask the end user to verify that their Cisco IP Communicator soft phone is running properly or to select a phone to use with the Click-to-Call application.

Error message	Problem and recommended action
Click-to-Call is not fully configured	<ul style="list-style-type: none"> • One or more mandatory fields in the sign in screen have been left blank. • Ask the end user to enter the missing information on the sign in screen and retry.
Destination cannot be reached	<ul style="list-style-type: none"> • The end user dialed the wrong number or you have not applied the correct dial rules. • Check that the Cisco WebDialer service is configured to use the application dial rules on Cisco Unified Communications Manager.
Login failed. Verify your user name and password are correct	<ul style="list-style-type: none"> • Provide the end user with the correct username and password for the Cisco Unified Communications Manager server. • Ask the end user to enter the username and password at the sign in screen and retry.
No phone is available. Verify contact your phone administrator	<ul style="list-style-type: none"> • Ask the end user to verify and refresh the phone preferences in the Phones screen of the Click-to-Call Preferences.
No phone has been selected for use with Click-to-Call. Select a phone	<ul style="list-style-type: none"> • The end user has no phone selected to use with the Click-to-Call application. • Ask the end user to select a phone to use with the application from the Click-to-Call application.
Proxy authentication rights could not be found. Contact your phone administrator	<ul style="list-style-type: none"> • Cisco WebDialer service sends this error. Contact your Cisco Unified Communications Manager system administrator.
Service is temporarily unavailable. Retry the call. If the problem persists, contact your phone administrator	<ul style="list-style-type: none"> • The Cisco Unified Communications Manager service is overloaded. It has reached its limit of two concurrent sessions. • Allow a short time lapse and retry your connection. If the error occurs again, contact your Cisco Unified Communications Manager system administrator.

Error message	Problem and recommended action
<p>The service is overloaded. Retry the call. If the problem persists, contact your phone administrator</p>	<ul style="list-style-type: none"> • The Cisco Unified Communications Manager service is overloaded. It has reached its limit of two concurrent sessions. • Allow a short time lapse and retry your connection. If the error occurs again, contact your Cisco Unified Communications Manager system administrator.
<p>The URL you requested is not available. Contact your phone administrator</p>	<ul style="list-style-type: none"> • Provide the end user with the correct Cisco Web Dialer and/or Device Query service IP address. • Ask the end users to enter this information in the sign in screen and retry.
<p>The XML command is not available in the request. Contact your phone administrator</p>	<ul style="list-style-type: none"> • This is an error sent from the Cisco WebDialer service. Contact your Cisco Unified Communications Manager system administrator.
<p><Number> cannot be converted to a valid phone number</p>	<ul style="list-style-type: none"> • The phone number the end user has entered is invalid. • Ask the end user to edit the phone number and retry the call.
<p>The maximum phone number length is 32 digits</p>	<ul style="list-style-type: none"> • The phone number the end user has entered is too long. • Ask the end user to edit the phone number and retry the call.
<p>Invalid XML command. Contact your phone administrator</p>	<ul style="list-style-type: none"> • Cisco WebDialer service sends this error. Contact your Cisco Unified Communications Manager system administrator.
<p>Cisco WebDialer service cannot be found. Verify the address</p>	<ul style="list-style-type: none"> • Provide the end user with the correct Webdialer server address. • Ask the end user to enter this server address on the sign in screen and retry.

Error message	Problem and recommended action
<p>The call failed. Verify you are logged into your Extension Mobility device. If the problem persists contact your phone administrator</p>	<ul style="list-style-type: none"> • A call request is already in progress or the Cisco WebDialer service could not get a line on the phone device from the CTI. • Wait a few moments and then retry your connection. If the error occurs again, contact your Cisco Unified Communications Manager system administrator.

This table provides a list of error messages that can appear in the Phone tab (Cisco Unified Communications Manager integration) of the Cisco Jabber application and describes a recommended action for each error message.

Error message	Problem and recommended action
<p>If you still have problems, contact your system administrator.</p>	<ul style="list-style-type: none"> • An error was encountered when retrieving account or device information. • If the end user has an account, a retry button is displayed.
<p>Client tried to register with invalid credentials.</p>	<ul style="list-style-type: none"> • The end user has entered an invalid username or password. • Ask the end user to register again using a valid username and password.
<p>Unable to connect to backend server; your call cannot be completed. Please try again.</p>	<ul style="list-style-type: none"> • The connection to the backend Cisco Unified Communications Manager server failed. • The Cisco Unified Communications Manager address may be invalid. Check the address and retry the connection.
<p>The requested feature/capability is not currently available.</p>	<ul style="list-style-type: none"> • The deskphone service was shut down by the server. • Contact your Cisco Unified Communications Manager system administrator.
<p>Could not connect to CCMCIP.</p>	<ul style="list-style-type: none"> • The softphone service was disconnected by the server. • Contact your Cisco Unified Communications Manager system administrator.

Error message	Problem and recommended action
Unable to select this device. Please choose a different device and try again.	<ul style="list-style-type: none"> • The selected device is unknown or has been removed. • Select a different device and try to connect again.
Failed to hold a call.	<ul style="list-style-type: none"> • An error was encountered when a call hold was requested. • Try to hold the call again by pressing the Hold button. If the problem persists, restart the client application.
Failed to merge calls.	<ul style="list-style-type: none"> • An error was encountered when a call merge was requested. • Try to merge the calls again. If the problem persists, restart the client application.
Max Call Limit exceeded.	<ul style="list-style-type: none"> • The maximum number of lines allowed has been reached. No more calls can be made.
No device selected. Please select the device you want to use and try again.	<ul style="list-style-type: none"> • The timeout for selecting a device has been reached. • Select the device and try connecting again.
Unable to access the default line. Please contact your administrator.	<ul style="list-style-type: none"> • The timeout for selecting the default line has been reached. • Contact your Cisco Unified Communications Manager system administrator.
Due to temporary restrictions, you cannot make calls now. Please wait a few moments and try again.	<ul style="list-style-type: none"> • Calls cannot be made. This may be due to service failover or fallback. • Allow a short time lapse and then try to make the call again.