



Cisco IP Phones

Cisco IP Phones are full-featured telephones that can be plugged directly into your IP network. Cisco CallManager supports the following Cisco IP Phones:

- Cisco IP Phone 7960
- Cisco IP Phone 30 VIP
- Cisco IP Phone 12 SP+

These sections provide information about working with and configuring Cisco IP Phones in Cisco CallManager:

- Understanding Cisco IP Phones, page 39-1
- Configuring Cisco IP Phones, page 39-3
- Finding a Phone, page 39-9
- Configuring Phone Features, page 39-11
- Configuring Directory Numbers, page 39-14

Understanding Cisco IP Phones

These sections provide information about understanding the Cisco IP Phones:

- Configuring Cisco IP Phones
- Cisco IP Phone 7960
- Cisco IP Phone 30 VIP

Cisco IP Phone 7960

The Cisco IP Phone 7960 includes an information (*i*) button, six programmable line or speed dial buttons, four on-screen mode buttons for accessing voice mail messages and adjusting phone settings, services, and directories, and four soft keys providing access to additional call detail and functionality. The Cisco IP Phone 7960 includes an LCD display, which is used to display call detail and soft key functions

Because of the complexity of these new features, Cisco CallManager does not directly control all phone features. Many features, such as the information button, soft keys, and the on-screen mode buttons cannot be configured, but you can access them locally from the phone. Refer to the *Getting Started — Cisco IP Phone 7960* and the *Cisco IP Phone 7960 Family Administration Guide* publications for assistance.

Use Cisco CallManager to add a Cisco IP Phone 7960 to the database, assign keypad templates, and configure directory lines.

Cisco IP Phone 12 SP+

The Cisco IP Phone model 12 SP+ offers many of the same features as PBX or plain old telephone service (POTS) telephones. This IP phone supports 12 programmable line and feature buttons, an internal two-way speakerphone, and microphone mute. The Cisco IP Phone 12 SP+ also features a two-line LCD display (20 characters per line) for call status and identification. Feature and line status are indicated by an LED associated with each of the 12 feature and line buttons.

Cisco IP Phone 30 VIP

The Cisco IP Phone 30 VIP offers many of the same features as PBX or plain old telephone service (POTS) telephones. This IP phone includes 30 programmable line and feature buttons, an internal two-way speakerphone with microphone mute, and a transfer feature button. The Cisco IP Phone 30 VIP also provides a large 40-character LCD display consisting of two lines of 20 characters each. The

display provides features such as date and time, calling party name, calling party number, and digits dialed. An LED associated with each of the 30 feature and line buttons provides feature and line status.

Configuring Cisco IP Phones

When connecting a Cisco IP Phone to your IP telephony network, you can choose to allow the phone to auto-register itself with the Cisco CallManager database. By enabling auto-registration, you can automatically add phones to the database.

However, in many cases, you might not want to use auto-registration. For example, auto-registration does not allow you to assign specific directory numbers to a phone. Instead, numbers are assigned sequentially based on the next available number designated in the device pool.

If you do not use auto-registration, you must manually add phones to the Cisco CallManager database. You can also delete, reset, update, and copy phones from Cisco CallManager.

Related Topics

- Adding a Phone, page 39-3
- Deleting a Phone, page 39-6
- Resetting a Phone, page 39-7
- Updating a Phone, page 39-8
- Copying an Existing Phone, page 39-8

Adding a Phone

Before a Cisco IP Phone can be used, you must add the phone to Cisco CallManager.

Before You Begin

You must reset the phone after making changes to apply the new settings. These settings are not available for all phone types. Only the settings appropriate to the model selected appear on screen.

Procedure

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- Step 1** Open Cisco CallManager.
- Step 2** Select **Devices > Add a Device**.
The Add Device page displays.
- Step 3** Select **Device Type > Phone**.
- Step 4** Select the appropriate model from the Model drop-down list.
- Step 5** Enter the appropriate settings as described in Table 39-1.
These settings are not available for all phone types. Only the settings appropriate to the model selected appear on screen.

Table 39-1 IP Phone Configuration Settings

| Field | Description | Usage Notes |
|------------------|--|---|
| Model | Identifies the type of Cisco IP Phone. | Once you select the model, you cannot modify it. |
| MAC Address | Identifies hardware-based telephones and device name. | Value must be 12 hexadecimal characters. |
| Device Name | Identifies software-based telephones. | <ul style="list-style-type: none"> Value can include 1-128 characters, including alphanumeric, dot, dash, or underscores. Only available for software-based phones. |
| Description | Clarifies the purpose of the device. | |
| Load Information | Specifies custom software for a Cisco IP Phone. | Values entered here override the default values for the current model. |
| Device Pool | Defines sets of common characteristics for devices, such as region, date/time group, Cisco CallManager group, and calling search space for auto-registration | |

Table 39-1 IP Phone Configuration Settings (continued)

| Field | Description | Usage Notes |
|----------------------------------|--|--|
| Location | Specifies the remote location accessed using restricted bandwidth connections. | |
| Calling Search Space | Specifies the collection of Route Partitions searched to determine how a dialed number should be routed. | |
| Button Template | Determines the configuration of buttons on a phone and identifies which feature (line, speed dial, and so on) is used for each button. | Not available for software-based phones. |
| Directory | Specifies the primary and secondary servers from which the phone obtains directory information. | Used for Cisco IP Phone 79x0 only. |
| Information | Specifies the help text for the information (<i>i</i>) button. | Used for Cisco IP Phone 79x0 only |
| Services | | Used for Cisco IP Phone 79x0 only |
| Messages | Specifies the primary and secondary servers from which the phone obtains directory information. | Used for Cisco IP Phone 79x0 only. |
| Outgoing Caller ID Pattern | Specifies the number to send as Caller ID for outgoing calls. | Used for H.323 clients only. |
| Calling Party Selection | Determines what to display if a call to this device is forwarded or transferred. | Used for H.323 clients only. |
| Caller ID Presentation | | Used for H.323 clients only. |
| Media Termination Point Required | Determines whether or not a Media Termination Point is used to implement features that H.323 does not support (such as hold and transfer). | Used for H.323 clients only. |

Step 6 Click **Insert**.

- Step 7** Add a directory number to this phone. See “Adding a Directory Number” section on page 39-14
- Step 8** Reset the phone. See “Resetting a Phone” section on page 39-7
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Related Topics

- Resetting a Phone, page 39-7
- Adding a Directory Number, page 39-14
- Deleting a Phone, page 39-6
- Updating a Phone, page 39-8

Deleting a Phone

Perform the following procedure to delete a Cisco IP Phone from Cisco CallManager.

Procedure

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- Step 1** Open Cisco CallManager
- Step 2** Select **Devices > Phone**.
The Phone Search page displays.
- Step 3** Enter search criteria to locate a specific phone.
A list of discovered devices appears.
- Step 4** Click the **Delete** icon next to the phone you want to delete.
A message appears verifying that you want to delete the phone.
- Step 5** Click **OK**.
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Related Topics

- Finding a Phone, page 39-9
- Adding a Phone, page 39-3

Resetting a Phone

Perform the following procedure to reset a Cisco IP Phone using Cisco CallManager.

Before You Begin

If a call is in progress, the phone does not reset until the call is finished.

Procedure

- Step 1** Open Cisco CallManager.
- Step 2** Select **Devices > Phone**.
The Phone Search page displays.
- Step 3** Enter search criteria to locate a specific phone.
A list of discovered devices appears.
- Step 4** Click the **Reset** button next to the phone you want to reset.
The Reset Device page displays.
- Step 5** Click one of the following:
- **Restart Device**—restarts a device without shutting it down
 - **Reset Device**—shuts down a device and bring it back up.
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Related Topics

- Finding a Phone, page 39-9
- Adding a Phone, page 39-3

Updating a Phone

Perform the following procedure to update a Cisco IP Phone from Cisco CallManager.

Procedure

- Step 1** Open Cisco CallManager.
- Step 2** Select **Devices > Phone**.
The Phone Search page displays.
- Step 3** Enter search criteria to locate a specific phone.
A list of discovered devices appears.
- Step 4** Click **Device Name**.
The Phone Configuration page displays.
- Step 5** Enter desired changes.
- Step 6** Click **Update**.
-

Related Topics

- Finding a Phone, page 39-9
- Adding a Phone, page 39-3

Copying an Existing Phone

If you want to manually add several similar phones to the Cisco CallManager database, you can add one and then copy its basic settings to apply to another phone. You must change at least the Media Access Control (MAC) address before inserting the new phone into the database.

Perform the following procedure to copy a phone's settings.

Procedure

- Step 1** Open Cisco CallManager.
- Step 2** Select **Devices > Phone**.
The Phone Search page displays.
- Step 3** Enter search criteria to locate a specific phone.
A list of discovered devices appears.
- Step 4** Click **Device Name**.
The Phone Configuration page displays.
- Step 5** Enter desired changes.
- Step 6** Click **Copy**.
- Step 7** Enter the MAC address of the new phone.
- Step 8** Click **Insert**.
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Related Topics

- Finding a Phone, page 39-9
- Adding a Phone, page 39-3

Finding a Phone

Because you might have thousands of Cisco IP Phones in your network, Cisco CallManager enables you to locate specific phones based on specified criteria.

Related Topics

- Searching for Specific Phones, page 39-100
- Tips for Finding a Phone, page 39-11

Searching for Specific Phones

Follow these steps to search for a specific phone in the Cisco CallManager database.

Procedure

- Step 1** Open Cisco CallManager.
- Step 2** Select **Devices > Phone**.
The Find and List Phones page displays.
- Step 3** Select one of the following options from the **Device Name** menu:
- Device Name
 - Description
 - Directory Number
 - Calling Search Space
 - Device Pool
- Step 4** Select one of the following options from the **begins with** menu:
- begins with
 - contains
 - ends with
 - is exactly
 - exists
 - is empty
- Step 5** Enter the item to search for in the **Find** field.
- Step 6** Click **Find**.

A list of the first 20 discovered devices appears displaying the following:

- Device icon
- Device Name
- Description
- Device Pool

- Copy
- Delete
- Reset

The total number of devices and pages are also listed on this page.

Step 7 To view the next set of discovered devices, click **Next**.

Related Topics

- Tips for Finding a Phone, page 39-11
- Configuring Cisco IP Phones, page 39-3

Tips for Finding a Phone

Searching by Calling Search Space or Device Pool

If you select calling search space or device pool, the options available in the database display. You can select one of these options from the drop-down list box below the Find button.

Finding All Phones in the Database

To find all phones registered in the database, select these search criteria:

Device Name is not empty

Related Topics

- Searching for Specific Phones, page 39-10

Configuring Phone Features

Cisco CallManager enables you to configure these phone features on Cisco IP Phones: call waiting, call forward, call park, and call pickup.

Related Topics

- Configuring Call Waiting, page 39-12

- Configuring Call Forward, page 39-12
- Configuring Call Park, page 39-13
- Configuring Call Pickup, page 39-13

Configuring Call Waiting

Call waiting lets you receive a second incoming call on the same line without disconnecting the first call. When the second call arrives, you hear a brief call waiting indicator tone.

You configure call waiting when adding or updating directory numbers. See the “Adding a Directory Number” section on page 39-14 for details.

Related Topics

- Adding a Directory Number, page 39-14

Configuring Call Forward

Call forward allows a user to configure a Cisco IP Phone so that all calls destined for it ring another phone. There are three types of call forward:

- Call forward all—Forwards all calls.
- Call forward busy—Forwards calls only when the line is in use.
- Call forward no answer—Forwards calls when the phone is not answered after four rings.

You configure call forward when adding or updating directory numbers. See the “Adding a Directory Number” section on page 39-14 for details.

Related Topics

- Adding a Directory Number, page 39-14

Configuring Call Park

Call park allows you to place a call on hold so that anyone connected to the Cisco CallManager system can retrieve it.

For example, if you are on an active call at extension 1000, you can park the call to a call park extension such as 1234. Anyone connected to the system can then dial 1234 to retrieve the call.

To use call park, you must add the call park extension (in this case, 1234) in Cisco CallManager Administration. You add the call park extension when configuring phone features in Cisco CallManager. Refer to the “Call Park” section on page 35-1 for details.

Related Topics

- Call Park, page 35-1

Configuring Call Pickup

Call pickup allows you to use your phone to answer another ringing phone in your designated call pickup group.

You configure call pickup when configuring phone features in Cisco CallManager. Refer to the “Call Pickup” section on page 36-1 for details.

However, when adding a directory line, you can indicate the call pickup group. The call pick up group indicates a number that can be dialed to answer calls to this directory number (in the specified partition). See the “Adding a Directory Number” section on page 39-14 for details.

Related Topics

- Adding a Directory Number, page 39-14
- Call Pickup, page 36-1

Configuring Directory Numbers

Using Cisco CallManager, you can configure and modify directory lines assigned to specific phones. These sections provide instructions for working with directory lines.

Related Topics

- Adding a Directory Number, page 39-14
- Deleting a Directory Number, page 39-18
- Updating a Directory Number, page 39-19

Adding a Directory Number

Follow these instructions to add a directory line to a specific phone.

Before You Begin

You must add a Cisco IP Phone to Cisco CallManager before adding a directory line. See the “Adding a Phone” section on page 39-3 for details.

Procedure

- Step 1** Open Cisco CallManager.
- Step 2** Select **Devices > Phone**.
The Phone Search page displays.
- Step 3** Enter search criteria to locate a specific phone.
A list of discovered devices appears.
- Step 4** Click **Device Name**.
The Phone Configuration page displays, with the lines listed on the left side.
- Step 5** Click an unassigned line (Line 1, Line 2, and so on).
The Directory Number Configuration page displays.
- Step 6** Enter the appropriate settings as described in Table 39-2.

Table 39-2 Directory Line Configuration Settings

| Field | Description | Usage Notes |
|---|---|---|
| Directory Number | | |
| Directory Number | Indicates a dialable phone number. | <ul style="list-style-type: none"> • Values can include a maximum of 50 alphanumeric characters except for (.) and (@). • Unique in combination with partition. |
| Partition | Indicates the route partition to which the directory number belongs. | <ul style="list-style-type: none"> • Can appear in more than one partition. • Unique in combination with the Directory Number. • Appears only if configured in the system. |
| Directory Number Settings | | |
| Calling Search Space | Collection of partitions that are searched for numbers called from this directory number. | <ul style="list-style-type: none"> • Changes cause update of the numbers listed in the Call Pickup Group field. • Applies to all devices using this directory number. |
| Call Waiting | Specifies whether this directory number uses call waiting when a line is busy (On), responds with a busy signal (Off), or uses the system-wide default setting (Default). | Applies to all devices using this directory number. |
| Call Forward and Pickup Settings | | |
| Call Pickup Group | Indicates a number that can be dialed to answer calls to this directory number (in the specified partition). | |

Table 39-2 Directory Line Configuration Settings (continued)

| Field | Description | Usage Notes |
|-------------------------------------|--|---|
| Forward All | Indicates the directory number to which all calls are forwarded. | <ul style="list-style-type: none"> Any dialable phone number, including an outside destination. Applies to all devices using this directory number. |
| Calling Search Space | Indicates the Calling Search Space to use when forwarding to the specified destination. | Applies to all devices using this directory number. |
| Forward Busy | Indicates the directory number that a call is forwarded to when the line is in use. | <ul style="list-style-type: none"> Any dialable phone number, including an outside destination. Applies to all devices using this directory number. |
| Calling Search Space | Indicates the Calling Search Space to use when forwarding to the specified destination. | Applies to all devices using this directory number. |
| Forward No Answer | Indicates the directory number that a call is forwarded to when no one answers after four rings. | <ul style="list-style-type: none"> Any dialable phone number, including an outside destination. Applies to all devices using this directory number. |
| Calling Search Space | Indicates the Calling Search Space to use when forwarding to the specified destination. | <ul style="list-style-type: none"> Applies to all devices using this directory number. Appears only if configured in the system. |
| Line Settings for this Phone | | |
| Display | Indicates text that appears on the called party's phone when a call is placed from this line. | <ul style="list-style-type: none"> Maximum of 30 alphanumeric characters. Typically use the user's name or the directory number. Applies only to the current device. |

Table 39-2 Directory Line Configuration Settings (continued)

| Field | Description | Usage Notes |
|----------------------------|--|--|
| Label | Indicates the text for the line button on this phone. <ul style="list-style-type: none"> • Cisco IP Phone 7960—displayed on the LCD. • Other Cisco IP Phones—not displayed but could be used when printing button templates. | Applies only to the current device. |
| Disable ring on this line | Stops the phone from ringing to indicate incoming calls. | Applies only to the current device. |
| External Phone Number Mask | Indicates phone number (or mask) used to send Caller ID information when placing a call from this line. | Maximum of 30 number and “X” characters. The X characters must appear at the end of the pattern. |

Step 7 Click **Update**.

Step 8 Click **Reset Devices**.

Related Topics

- Finding a Phone, page 39-9
- Adding a Phone, page 39-3
- Deleting a Directory Number, page 39-18
- Updating a Directory Number, page 39-19

Deleting a Directory Number

Perform the following procedure to delete a directory number from a specific phone.

Procedure

- Step 1** Open Cisco CallManager.
- Step 2** Select **Devices > Phone**.
The Phone Search page displays.
- Step 3** Enter search criteria to locate a specific phone.
A list of discovered devices appears.
- Step 4** Click **Device Name**.
The Phone Configuration page displays, with the lines listed on the left side.
- Step 5** Click the line you want to delete.
The Directory Number configuration page displays.
- Step 6** Click **Delete**.
A message appears verifying that you want to delete the line.
- Step 7** Click **OK**.
The Phone Configuration page displays with the Line deleted.
- Step 8** Click **Reset**.
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Related Topics

- Finding a Phone, page 39-9
- Adding a Directory Number, page 39-14
- Updating a Directory Number, page 39-19

Updating a Directory Number

Follow these instructions to update a directory number assigned to a specific phone.

Procedure

- Step 1** Open Cisco CallManager
- Step 2** Select **Devices > Phone**.
The Phone Search page displays.
- Step 3** Enter search criteria to locate a specific phone.
A list of discovered devices appears.
- Step 4** Click **Device Name**.
The Phone Configuration page displays, with the lines listed on the left side.
- Step 5** Click the line you want to update.
The Directory Number Configuration page displays.
- Step 6** Enter desired changes.
- Step 7** Click **Update**.
- Step 8** Click **Reset**.
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Related Topics

- Finding a Phone, page 39-9
- Adding a Phone, page 39-3
- Adding a Directory Number, page 39-14
- Deleting a Directory Number, page 39-18

