Directory Number Configuration

The following sections provide information about working with and configuring directory numbers (DNs) in Cisco Unified CallManager Administration:

Directory Number Configuration Overview

Using Cisco Unified CallManager Administration, configure and modify directory numbers (DNs) that are assigned to specific phones. These sections provide instructions for working with directory numbers.

Use the Directory Number Configuration window to perform the following tasks:

- Add or remove directory numbers.
- Configure call forward, call pickup, call waiting, and multilevel precedence and preemption (MLPP) options.
- Set the display text that appears on the called party phone when a call is placed from a line.
- Configure ring settings.
- Configure Cisco Unity or Cisco Unity Connection subscriber voice mailboxes.

Additional Topics

See the "Related Topics" section on page 48-22.

Finding a Directory Number

Use the following procedure to find a directory number (DN).

Procedure

Step 1 Choose **Call Routing > Directory Number**.

The Find and List Directory Numbers window displays.

Step 2 From the first Find Directory Number drop-down list box, choose the field that you want to use to search for directory numbers; for example, Directory Number, Route Partition, or Description.

Note To find all directory numbers that are registered in the database, do not enter any search text and click **Find**. A list of directory numbers that matches your search criteria displays.

Step 3 From the second Find Directory Number drop-down list box, choose a search pattern for your text search; for example, begins with, contains, or ends with.

Step 4 Specify the appropriate search text, if applicable, and click **Find**.

The records that match your search criteria display. You can change the number of items that display on each page by choosing a different value from the Rows per Page drop-down list box.

Tip To search for directory numbers within the search results, click the **Search Within Results** check box and enter your search criteria as described in this step.

Note You can delete multiple directory numbers by checking the check boxes next to the appropriate directory numbers and clicking **Delete Selected**. You can delete all the directory numbers in the window by clicking **Select All** and then clicking **Delete Selected**.

Step 5 From the list of records that match your search criteria, click the name of the directory number that you want to view.

The Directory Number Configuration window displays with the directory number that you choose.

Additional Topics

See the "Related Topics" section on page 48-22.

Configuring a Directory Number

Follow these instructions to add or update a directory number (DN). You can configure the call forward, call pickup, and MLPP phone features while you are adding the directory number.

Tip You can assign patterns to directory numbers; for example, 352XX. To avoid user confusion when you assign a pattern to a directory number, add text or digits to the DN configuration fields, Line Text Label, Display (Internal Caller ID), and External Phone Number Mask. (These fields display for a directory number only after you add the directory number *and* you associate the directory number with a phone.)

For example, add the user's name to the line text label and internal caller ID, but add the outside line number to the external number mask, so when the calling information displays, it says John Chan, not 352XX.

Procedure

Step 1 Choose **Call Routing > Directory Number**.

The Find and List Directory Numbers window displays.

Step 2 To locate a specific directory number, enter search criteria and click **Find**.

A list of directory numbers that match the search criteria displays.

Step 3 Perform one of the followings tasks:

- To add a directory number, click the **Add New** button to add a new directory number. The Directory Number Configuration window displays.

  Note The Phone Configuration window provides an alternate method for adding a directory number. Use the **Device > Phone** menu option and create a new phone or search for an existing phone. After you create the new phone or display the existing phone, click either the *Line [1] - Add a new DN* or *Line [2] - Add a new DN* link in the Association Information area on the left side of the Phone Configuration window. The Directory Number Configuration window displays, and you can continue with Step 4 of this procedure.

- To update a directory number, click the directory number that you want to update. The Directory Number Configuration window displays.

Step 4 Update the appropriate settings as described in Table 48-1.

Step 5 Click **Save**.

Step 6 Click **Reset Phone**. For more information, refer to the "Resetting a Phone" section on page 70-4.

Tip If you need more than two lines, you can increase the lines by modifying the phone button template for the phone type (such as Cisco IP Phone model 7960). Some phone types, however, only support one or two lines (such as Cisco IP Phone model 7902).

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

Additional Topics

See the "Related Topics" section on page 48-22.

Removing a Directory Number from a Phone

Perform the following procedure to remove a directory number (DN) from a specific phone.

Before You Begin

If you try to remove a directory number that is in use, Cisco Unified CallManager displays a message. To find out which line groups are using the directory number, click the **Dependency Records** link from the Directory Number Configuration window. If the dependency records are not enabled for the system, the dependency records summary window displays a message. For more information about dependency records, refer to the "Accessing Dependency Records" section on page A-2.

When you remove a directory number from a phone, the number still exists within Cisco Unified CallManager. To see a list of directory numbers that are not associated with phones, use the Route Plan Report menu option. For more information, refer to the "Deleting Unassigned Directory Numbers" section on page 50-3.

Procedure

Step 1 Choose **Device > Phone**.

The Find and List Phones window displays.

Step 2 To locate a specific phone, enter the search criteria and click **Find**.

A list of phones that match the search criteria displays.

Step 3 Choose the device name that contains the directory number that you want to remove.

The Phone Configuration window displays.

Step 4 In the Association Information area on the left, choose the line that you want to remove.

The Directory Number Configuration window displays.

Step 5 In the Associated Devices pane, choose the device name of the phone from which you want to remove this directory number.

Step 6 Click the down arrow below the Associated Devices pane.

The phone name moves to the Dissociate Devices pane.

Step 7 Click the **Save** button at the bottom of the Directory Number Configuration window.

The Phone Configuration window displays with the directory number removed. The change gets automatically applied to the phone; however, you can click **Reset Phone**. For more information, refer to the "Resetting a Phone" section on page 70-4.

Additional Topics

See the "Related Topics" section on page 48-22.

Creating a Cisco Unity or Cisco Unity Connection Voice Mailbox

The "Create Cisco Unity User" link on the Directory Number Configuration window allows administrators to create individual Cisco Unity and Cisco Unity Connection voice mailboxes from Cisco Unified CallManager Administration.

Before You Begin

- Ensure the Unity administrator installs the appropriate software, which includes installing the Voice Mailbox asp page on the Cisco Unified CallManager server. Refer to the *Cisco Unified CallManager 5.0 Integration Guide for Cisco Unity 4.0* or the *Cisco Unified CallManager 5.0 SCCP Integration Guide for Cisco Unity Connection 2.1*.
- You must configure Cisco Unified CallManager for voice-messaging service. Refer to Cisco Unity Configuration Checklist in the *Cisco Unified CallManager System Guide*.
- You must configure Cisco Unity or Cisco Unity Connection servers. Refer to the applicable Cisco Unity installation guide.
- Ensure the Cisco Unity or Cisco Unity Connection Cisco Unified CallManager Integrated Voice Mailbox Configuration is enabled on the Cisco Unity or Cisco Unity Connection server. Refer to the *Cisco Unified CallManager 5.0 Integration Guide for Cisco Unity 4.0* or the *Cisco Unified CallManager 5.0 SCCP Integration Guide for Cisco Unity Connection 2.1*.
- Ensure the Cisco RIS Data Collector service is activated. Refer to the *Cisco Unified CallManager Serviceability System Guide* and the *Cisco Unified CallManager Serviceability Administration Guide*.
- On the Directory Number configuration window, ensure the Voice Mail Profile setting is configured and contains a pilot number, or the Voice Mail Profile setting should be configured to *None*. If the Voice Mail Profile is set to No Voice Mail, the “Create Cisco Unity User” link does not display.

Note The End User Configuration window also includes the “Create Cisco Unity User” link.

Procedure

Step 1 Choose **Call Routing > Directory Number** and click **Add New**.

Step 2 Enter the appropriate settings in Table 48-1.

Step 3 From the Related Links drop-down list box, in the upper, right corner of the window, choose the “Create Cisco Unity User” link and click **Go**.

The Add Cisco Unity User dialog box displays.

Step 4 From the Application Server drop-down list box, choose the Cisco Unity or Cisco Unity Connection server on which you want to create a Cisco Unity user and click **Next**.

Step 5 From the Subscriber Template drop-down list box, choose the subscriber template that you want to use.

Step 6 Click **Save**.

The Cisco Unity or Cisco Unity Connection mailbox gets created. The link, in Related Links, changes to “Edit Cisco Unity User” in the Directory Number Configuration window.

From Cisco Unity Administration, you can now see the mailbox that you created. Refer to the Cisco Unity or Cisco Unity Connection documentation.

Note Cisco Unity monitors the syncing of data from Cisco Unified CallManager. You can configure the sync time in Cisco Unity Administration under Tools (Import CallManager Users, Sync CallManager). Refer to the Cisco Unity documentation.

Additional Topics

See the "Related Topics" section on page 48-22.

Directory Number Configuration Settings

Table 48-1 describes the fields that are available in the Directory Number Configuration window.

Table 48-1 Directory Number Configuration Settings

Field	Description
Directory Number Information	
Directory Number	Enter a dialable phone number. Values can include numeric characters and route pattern wildcards and special characters except for (.) and (@). **Note** 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. The directory number that you enter can appear in more than one partition. **Note** If a JTAPI or TAPI application controls or monitors a device, you should not configure multiple instances of the same DN (with different partitions) on that device.
Route Partition	Choose the partition to which the directory number belongs. Make sure that the directory number that you enter in the Directory Number field is unique within the partition that you choose. If you do not want to restrict access to the directory number, choose <None> for the partition. You can configure the number of partitions that display in this drop-down list box by using the Max List Box Items enterprise parameter. If more partitions exist than the Max List Box Items enterprise parameter specifies, the ellipsis button (**...**) displays next to the drop-down list box. Click the **...** button to display the Select Partition window. Enter a partial partition name in the **List items where Name contains** field. Click the desired partition name in the list of partitions that displays in the **Select item to use** box and click **OK**. **Note** To set the maximum list box items, choose **System > Enterprise Parameters** and choose **CCMAdmin Parameters**.
Description	Enter a description of the directory number and route partition.

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
Alerting Name	Enter a name that you want to display on the phone of the caller. This setting, which supports the Identification Services for the QSIG protocol, applies to shared and nonshared directory numbers. If you configure an alerting name for a directory number with shared-line appearances, when the phone rings at the terminating PINX, the system performs the following tasks: • Forwards the name of the caller that is assigned to the directory number. • Applies the Connected Name Restrictions (CONR) that are configured for the translation pattern (if restrictions exist); the originating PINX may modify the CONR, depending on the route pattern configuration. If you do not configure an alerting name, "Name Not Available" may display on the caller phone. If you do not enter a name for the Display (Internal Caller ID) field, the information in the Alerting Name field displays in the Display (Internal Caller ID) field.
ASCII Alerting Name	This field provides the same information as the *Alerting Name* field, but you must limit input to ASCII characters. Devices that do not support Unicode (internationalized) characters display the content of the *Alerting Name ASCII* field.
Active	To view this check box on the Directory Number Configuration window, access an unassigned directory number from the Route Plan Report window. Checking this check box allows calls to this DN to be forwarded (if forwarding is configured). If check box is not checked, Cisco Unified CallManager ignores the DN.
Allow Control of Device from CTI	Check this check box to allow CTI to control and monitor a line on a device with which this directory number is associated If the directory number specifies a shared line, ensure the check box is enabled as long as at least one associated device specifies a combination of device type and protocol that CTI supports.
Line Group	From this drop-down list box, choose a line group with which to associate this DN. To edit or view the line group information for a line group, choose a line group from the drop-down list box and click the **Edit Line Group** button. See the "Line Group Configuration" section on page 35-1 for more information about configuring line groups.

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
Associated Devices	After you associate this DN with a phone(s), this pane displays the phones with which this DN is associated. To edit a phone with which this DN is associated, choose a device name in the Associated Devices pane and click the **Edit Device** button. The Phone Configuration window displays for the device that you choose. See the "Cisco Unified IP Phone Configuration" chapter for more information about configuring phones. To edit a line appearance that has been defined for this DN, choose a device name in the Associated Devices pane and click the **Edit Line Appearance** button. The Directory Number Configuration window refreshes to show the line appearance for this DN on the device that you choose.
Dissociate Devices	If you choose to dissociate a DN from a device, this pane displays the device(s) from which you dissociate this DN.
Directory Number Settings	
Voice Mail Profile	Choose from list of Voice Mail Profiles that the Voice Mail Profile Configuration defines. The first option specifies **<None>**, which represents the current default Voice Mail Profile that is configured in the Voice Mail Profile Configuration.

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
Calling Search Space	From the drop-down list box, choose the appropriate calling search space. A calling search space comprises a collection of partitions that are searched for numbers that are called from this directory number. The value that you choose applies to all devices that are using this directory number. For configuration information about calling search space for directory numbers, see the "Calling Search Space" section on page 48-22. Changes result in an update of the numbers that the Call Pickup Group field lists. You can configure calling search space for Forward All, Forward Busy, Forward No Answer, Forward No Coverage, and Forward on CTI Failure directory numbers. The value that you choose applies to all devices that are using this directory number. You must configure either primary Forward All Calling Search Space or Secondary Forward All Calling Search Space or both for Call Forward All to work properly. The system uses these concatenated fields (Primary CFA CSS + Secondary CFA CSS) to validate the CFA destination and forward the call to the CFA destination. **Note** If the system is using partitions and calling search spaces, Cisco recommends that you configure the other call forward calling search spaces as well. When a call is forwarded or redirected to the call forward destination, the configured call forward calling search space gets used to forward the call. If the forward calling search space is None, the forward operation may fail if the system is using partitions and calling search spaces. For example, if you configure the Forward Busy destination, you should also configure the Forward Busy Calling Search Space. If you do not configure the Forward Busy Calling Search Space and the Forward Busy destination is in a partition, the forward operation may fail. When you forward calls by using the CFwdAll softkey on the phone, the automatic combination of the line CSS and device CSS does not get used. Only the configured Primary CFA CSS and Secondary CFA CSS get used. If both of these fields are **None**, the combination results in two null partitions, which may cause the operation to fail. If you want to restrict users from forwarding calls on their phones, you must choose a restrictive calling search space from the Forward All Calling Search Space field. For more information, refer to Partitions and Calling Search Spaces, in the *Cisco Unified CallManager System Guide*.

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
Presence Group	Configure this field with the Presence feature. From the drop-down list box, choose a Presence group for this directory number. The selected group specifies the devices, end users, and application users that can monitor this directory number. The default value for Presence Group specifies Standard Presence group, configured with installation. Presence groups that are configured in Cisco Unified CallManager Administration also appear in the drop-down list box. Presence authorization works with presence groups to allow or block presence requests between groups. Refer to the "Presence" chapter in the *Cisco Unified CallManager Features and Services Guide* for information about configuring permissions between groups
AAR Group	Choose the automated alternate routing (AAR) group for this device. The AAR group provides the prefix digits that are used to route calls that are otherwise blocked due to insufficient bandwidth. An AAR group setting of None specifies that no rerouting of blocked calls will be attempted.
User Hold Audio Source	Choose the audio source that plays when a user initiates a hold action.
Network Hold Audio Source	Choose the audio source that plays when the network initiates a hold action.
Auto Answer	Choose one of the following options to activate the Auto Answer feature for this directory number: • Auto Answer Off <Default> • Auto Answer with Headset • Auto Answer with Speakerphone **Note** Make sure that the headset or speakerphone is not disabled when you choose Auto Answer with headset or Auto Answer with speakerphone. **Note** Do not configure Auto Answer for devices that have shared lines.

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
Call Forward and Call Pickup Settings	
Forward All	The settings in this row of fields specify the forwarding treatment for calls to this directory number if the directory number is set to forward all calls. The Calling Search Space field gets used to validate the Forward All destination that is entered when the user activates Call Forward All from the phone. This field also gets used to redirect the call to the Call Forward All destination. Specify the following values: • Voice Mail—Check this check box to use settings in the Voice Mail Profile Configuration window. **Note** When this check box is checked, Cisco Unified CallManager ignores the settings in the Destination box and Calling Search Space. • Destination—This setting indicates the directory number to which all calls are forwarded. Use any dialable phone number, including an outside destination. • Calling Search Space—This setting applies to all devices that are using this directory number.
Secondary Calling Search Space for Forward All	Because call forwarding is a line-based feature, in cases where the device calling search space is unknown, the system uses only the line calling search space to forward the call. If the line calling search space is restrictive and not routable, the forward attempt fails. Addition of a secondary calling search space for Call Forward All provides a solution to enable forwarding. The primary calling search space for Call Forward All and secondary calling search space for Call Forward All get concatenated (Primary CFA CSS + Secondary CFA CSS). Cisco Unified CallManager uses this combination to validate the CFA destination and to forward the call. See the description for the field, Calling Search Space, page 48-9, for information about how the combination of Primary and Secondary CFA CSSs works

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
Forward Busy Internal	The settings in this row of fields specify the forwarding treatment for internal calls to this directory number if the directory number is busy. See Busy Trigger, page 48-22 for information on when a line is considered busy. The call forward destination and Calling Search Space field get used to redirect the call to the forward destination. See Specify the following values: • Voice Mail—Check this check box to use settings in the Voice Mail Profile Configuration window for internal calls. **Note** When this check box is checked, the calling search space of the voice mail pilot gets used. Cisco Unified CallManager ignores the settings in the Destination box and Calling Search Space. I **Note** When this check box is checked for internal calls, the system automatically checks the Voice Mail check box for external calls. If you do not want external calls to forward to the voice-messaging system, you must uncheck the Voice Mail check box for external calls. • Destination—This setting indicates the call forward busy destination for internal calls. Use any dialable phone number, including an outside destination. **Note** When you enter a destination value for internal calls, the system automatically copies this value to the Destination field for external calls. If you want external calls to forward to a different destination, you must enter a different value in the Destination field for external calls. • Calling Search Space—The Forward Busy internal Calling Search Space is used to forward the call to the Forward Busy Internal destination. It applies to all devices that are using this directory number. **Note** If the system is using partitions and calling search spaces, Cisco recommends that you configure the forward calling search spaces. When a call is forwarded or redirected to the call forward destination, the configured call forward calling search space gets used to forward the call. If the forward calling search space is **None**, the forward operation may fail if the system is using partitions and calling search spaces. For example, if you configure the Forward Busy Destination, you should also configure the Forward Busy Calling Search Space. If you do not configure the Forward Busy Calling Search Space and the Forward Busy destination is in a partition, the forward operation may fail. **Note** When you choose a Calling Search Space for internal calls, the system automatically copies this setting to the Calling Search Space setting for external calls. If you want external calls to forward to a different calling search space, you must choose a different setting in the Calling Search Space drop-down list box for external calls.

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
Forward Busy External	The settings in this row of fields specify the forwarding treatment for external calls to this directory number if the directory number is busy. See Busy Trigger, page 48-22 for information on when a line is considered busy. The call forward destination and Calling Search Space field get used to redirect the call to the forward destination. Specify the following values: • Voice Mail—Check this check box to use settings in the Voice Mail Profile Configuration window for external calls. **Note** When this check box is checked, the calling search space of the voice mail pilot gets used. Cisco Unified CallManager ignores the settings in the Destination box and Calling Search Space. **Note** When the Voice Mail check box is checked for internal calls, the system automatically checks the Voice Mail check box for external calls. If you do not want external calls to forward to the voice-messaging system, you must uncheck the Voice Mail check box for external calls. • Destination—This setting indicates the call forward busy destination for external calls. Use any dialable phone number, including an outside destination. **Note** When you enter a destination value for internal calls, the system automatically copies this value to the Destination field for external calls. If you want external calls to forward to a different destination, you must enter a different value in the Destination field for external calls. • Calling Search Space—The Forward Busy external Calling Search Space is used to forward the call to the Forward Busy External destination. It applies to all devices that are using this directory number. **Note** If the system is using partitions and calling search spaces, Cisco recommends that you configure the forward calling search spaces. When a call is forwarded or redirected to the call forward destination, the configured call forward calling search space gets used to forward the call. If the forward calling search space is **None**, the forward operation may fail if the system is using partitions and calling search spaces. For example, if you configure the Forward Busy Destination, you should also configure the Forward Busy Calling Search Space. If you do not configure the Forward Busy Calling Search Space and the Forward Busy destination is in a partition, the forward operation may fail. **Note** When you choose a Calling Search Space for internal calls, the system automatically copies this setting to the Calling Search Space setting for external calls. If you want external calls to forward to a different calling search space, you must choose a different setting in the Calling Search Space drop-down list box for external calls.

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
Forward No Answer Internal	The settings in this row of fields specify the forwarding treatment for internal calls to this directory number if the directory number does not answer. The call forward destination and Calling Search Space field get used to redirect the call to the forward destination. Specify the following values: • Voice Mail—Check this check box to use settings in the Voice Mail Profile Configuration window. **Note** When this check box is checked, the calling search space of the voice mail pilot gets used. Cisco Unified CallManager ignores the settings in the Destination box and Calling Search Space. **Note** When this check box is checked for internal calls, the system automatically checks the Voice Mail check box for external calls. If you do not want external calls to forward to the voice-messaging system, you must uncheck the Voice Mail check box for external calls. • Destination—This setting indicates the directory number to which an internal call is forwarded when the call is not answered. Use any dialable phone number, including an outside destination. **Note** When you enter a destination value for internal calls, the system automatically copies this value to the Destination field for external calls. If you want external calls to forward to a different destination, you must enter a different value in the Destination field for external calls. • Calling Search Space—The Forward No Answer internal Calling Search Space is used to forward the call to the Forward No Answer internal destination. It applies to all devices that are using this directory number. **Note** If the system is using partitions and calling search spaces, Cisco recommends that you configure the forward calling search spaces. When a call is forwarded or redirected to the call forward destination, the configured call forward calling search space gets used to forward the call. If the forward calling search space is **None**, the forward operation may fail if the system is using partitions and calling search spaces. For example, if you configure the Forward No Answer destination, you should also configure the Forward No Answer Calling Search Space. If you do not configure the Forward No Answer Calling Search Space, and the Forward No Answer destination is in a partition, the forward operation may fail. **Note** When you choose a Calling Search Space for internal calls, the system automatically copies this setting to the Calling Search Space setting for external calls. If you want external calls to forward to a different calling search space, you must choose a different setting in the Calling Search Space drop-down list box for external calls.

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
Forward No Answer External	The settings in this row of fields specify the forwarding treatment for external calls to this directory number if the directory number does not answer. The call forward destination and Calling Search Space field get used to redirect the call to the forward destination. Specify the following values: • Voice Mail—Check this check box to use settings in the Voice Mail Profile Configuration window. **Note** When this check box is checked, the calling search space of the voice mail pilot gets used. Cisco Unified CallManager ignores the settings in the Destination box and Calling Search Space. **Note** When this check box is checked for internal calls, the system automatically checks the Voice Mail check box for external calls. If you do not want external calls to forward to the voice-messaging system, you must uncheck the Voice Mail check box for external calls. • Destination—This setting indicates the directory number to which an external call is forwarded when the call is not answered. Use any dialable phone number, including an outside destination. **Note** When you enter a destination value for internal calls, the system automatically copies this value to the Destination field for external calls. If you want external calls to forward to a different destination, you must enter a different value in the Destination field for external calls. • Calling Search Space—The Forward No Answer external Calling Search Space is used to forward the call to the Forward No Answer external destination. It applies to all devices that are using this directory number. **Note** If the system is using partitions and calling search spaces, Cisco recommends that you configure the forward calling search spaces. When a call is forwarded or redirected to the call forward destination, the configured call forward calling search space gets used to forward the call. If the forward calling search space is **None**, the forward operation may fail if the system is using partitions and calling search spaces. For example, if you configure the Forward No Answer destination, you should also configure the Forward No Answer Calling Search Space. If you do not configure the Forward No Answer Calling Search Space, and the Forward No Answer destination is in a partition, the forward operation may fail. **Note** When you choose a Calling Search Space for internal calls, the system automatically copies this setting to the Calling Search Space setting for external calls. If you want external calls to forward to a different calling search space, you must choose a different setting in the Calling Search Space drop-down list box for external calls.

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
Forward No Coverage Internal	For complete information about Call Coverage, see Call Coverage in the *Cisco Unified CallManager System Guide*. The call forward destination and Calling Search Space field get used to redirect the call to the forward destination. Specify the following values: • Voice Mail—Check this check box to use settings in the Voice Mail Profile Configuration window. **Note** When this check box is checked, Cisco Unified CallManager ignores the settings in the Destination box and Calling Search Space. When this check box is checked for internal calls, the system automatically checks the Voice Mail check box for external calls. If you do not want external calls to forward to the voice-messaging system, you must uncheck the Voice Mail check box for external calls. • Destination—This setting specifies the directory number to which an internal nonconnected call is forwarded when an application that controls that directory number fails. Use any dialable phone number, including an outside destination. **Note** When you enter a destination value for internal calls, the system automatically copies this value to the Destination field for external calls. If you want external calls to forward to a different destination, you must enter a different value in the Destination field for external calls. • Calling Search Space—The Forward No Coverage internal Calling Search Space is used to forward the call to the Forward No Coverage internal destination. This setting applies to all devices that are using this directory number. **Note** If the system is using partitions and calling search spaces, Cisco recommends that you configure the forward calling search spaces. When a call is forwarded or redirected to the call forward destination, the configured call forward calling search space gets used to forward the call. If the forward calling search space is **None**, the forward operation may fail if the system is using partitions and calling search spaces. For example, if you configure the Forward No Coverage destination, you should also configure the Forward No Coverage Calling Search Space. If you do not configure the Forward No Coverage Calling Search Space, and the Forward No Coverage destination is in a partition, the forward operation may fail. **Note** When you choose a Calling Search Space for internal calls, the system automatically copies this setting to the Calling Search Space setting for external calls. If you want external calls to forward to a different calling search space, choose a different setting in the Calling Search Space for external calls.

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
Forward No Coverage External	For complete information about Call Coverage, see Call Coverage in the *Cisco Unified CallManager System Guide.* The call forward destination and Calling Search Space field get used to redirect the call to the forward destination. Specify the following values: • Voice Mail—Check this check box to use settings in the Voice Mail Profile Configuration window. **Note** When this check box is checked, Cisco Unified CallManager ignores the settings in the Destination box and Calling Search Space. When this check box is checked for internal calls, the system automatically checks the Voice Mail check box for external calls. If you do not want external calls to forward to the voice-messaging system, you must uncheck the Voice Mail check box for external calls. • Destination—This setting specifies the directory number to which an internal nonconnected call is forwarded when an application that controls that directory number fails. Use any dialable phone number, including an outside destination. **Note** When you enter a destination value for internal calls, the system automatically copies this value to the Destination field for external calls. If you want external calls to forward to a different destination, you must enter a different value in the Destination field for external calls. • Calling Search Space—The Forward No Coverage external Calling Search Space is used to forward the call to the Forward No Coverage external destination. This setting applies to all devices that are using this directory number. **Note** If the system is using partitions and calling search spaces, Cisco recommends that you configure the forward calling search spaces. When a call is forwarded or redirected to the call forward destination, the configured call forward calling search space gets used to forward the call. If the forward calling search space is **None**, the forward operation may fail if the system is using partitions and calling search spaces. For example, if you configure the Forward No Coverage destination, you should also configure the Forward No Coverage Calling Search Space. If you do not configure the Forward No Coverage Calling Search Space, and the Forward No Coverage destination is in a partition, the forward operation may fail. **Note** When you choose a Calling Search Space for internal calls, the system automatically copies this setting to the Calling Search Space setting for external calls. If you want external calls to forward to a different calling search space, choose a different setting in the Calling Search Space for external calls.

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
Forward on CTI Failure	This field applies only to CTI route points and CTI ports. The settings in this row specify the forwarding treatment for external calls to this CTI route point or CTI port if the CTI route point or CTI port fails. Specify the following values: • Voice Mail—Check this check box to use settings in the Voice Mail Profile Configuration window. **Note** When this check box is checked, Cisco Unified CallManager ignores the settings in the Destination box and Calling Search Space. • Destination—This setting specifies the directory number to which an internal nonconnected call is forwarded when an application that controls that directory number fails. Use any dialable phone number, including an outside destination. • Calling Search Space—This setting applies to all devices that are using this directory number.
No Answer Ring Duration (seconds)	Used in conjunction with Call Forward No Answer Destination, this field sets the timer for how long the phone will ring before it gets forwarded. Leave this setting blank to use the value that is set in the Cisco CallManager service parameter, Forward No Answer Timer. **Caution** By default, Cisco Unified CallManager makes the time for the T301 timer longer than the No Answer Ring Duration time; if the set time for the T301 timer expires before the set time for the No Answer Ring Duration expires, the call ends, and no call forwarding can occur. If you choose to do so, you can configure the time for the No Answer Ring Duration to be greater than the time for the T301 timer. For information on the T301 timer, choose **System > Service Parameters**; choose the server, the Cisco CallManager service, and then the parameter in the window that displays.
Call Pickup Group	Choose the number that can be dialed to answer calls to this directory number (in the specified partition).
MLPP Alternate Party Settings	
Target (Destination)	Enter the number to which MLPP precedence calls should be diverted if this directory number receives a precedence call and neither this number nor its call forward destination answers the precedence call. Values can include numeric characters, octothorpe (#), and asterisk (*).
MLPP Calling Search Space	From the drop-down list box, choose the calling search space to associate with the MLPP alternate party target (destination) number. For configuration information about calling search space for directory numbers, see the "Calling Search Space" section on page 48-22.

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
MLPP No Answer Ring Duration (seconds)	Enter the number of seconds (between 4 and 60) after which an MLPP precedence call will be directed to this directory number's alternate party if this directory number and its call-forwarding destination have not answered the precedence call. Leave this setting blank to use the value that is set in the Cisco Unified CallManager enterprise parameter, Precedence Alternate Party Timeout.
Line [number] on Device [device name] **Note** These fields display only after you associate this directory number with a device.	
Display (Internal Caller ID)	Leave this field blank to have the system display the extension. Use a maximum of 30 alphanumeric characters. Typically, use the user name or the directory number (if using the directory number, the person receiving the call may not see the proper identity of the caller). Setting applies only to the current device unless you check the check box at right (Update Shared Device Settings) and click the **Propagate Selected** button. (The check box at right displays only if other devices share this directory number.)
ASCII Display (Internal Caller ID)	This field provides the same information as the *Display (Internal Caller ID)* field, but you must limit input to ASCII characters. Devices that do not support Unicode (internationalized) characters display the content of the *ASCII Display (Internal Caller ID)* field. Setting applies only to the current device unless you check the check box at right (Update Shared Device Settings) and click the **Propagate Selected** button. (The check box at right displays only if other devices share this directory number.)
Line Text Label	Use this field only if you do not want the directory number to show on the line appearance. Enter text that identifies this directory number for a line/phone combination. Suggested entries include boss's name, department's name, or other appropriate information to identify multiple directory numbers to secretary/assistant who monitors multiple directory numbers. Setting applies only to the current device unless you check the check box at right (Update Shared Device Settings) and click the **Propagate Selected** button. (The check box at right displays only if other devices share this directory number.)
ASCII Line Text Label	This field provides the same information as the *Line Text Label* field, but you must limit input to ASCII characters. Devices that do not support Unicode (internationalized) characters display the content of the *ASCII Line Text Label* field. Setting applies only to the current device unless you check the check box at right (Update Shared Device Settings) and click the **Propagate Selected** button. (The check box at right displays only if other devices share this directory number.)

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
External Phone Number Mask	Indicate phone number (or mask) that is used to send Caller ID information when a call is placed from this line. You can enter a maximum of 24 number and "X" characters. The Xs represent the directory number and must appear at the end of the pattern. For example, if you specify a mask of 972813XXXX, an external call from extension 1234 displays a caller ID number of 9728131234. Setting applies only to the current device unless you check the check box at right (Update Shared Device Settings) and click the **Propagate Selected** button. (The check box at right displays only if other devices share this directory number.)
Message Waiting Lamp Policy	Use this field to configure the handset lamp illumination policy. Choose one of the following options: • Use System Policy (The directory number refers to the service parameter "Message Waiting Lamp Policy" setting.) • Light and Prompt • Prompt Only • Light Only • None Setting applies only to the current device unless you check the check box at right (Update Shared Device Settings) and click the **Propagate Selected** button. (The check box at right displays only if other devices share this directory number.)
Ring Setting (Phone Idle)	Use this field to configure the ring setting for the line appearance when an incoming call is received and no other active calls exist on that device. Choose one of the following options: • Use system default • Disable • Flash only • Ring once • Ring Setting applies only to the current device unless you check the check box at right (Update Shared Device Settings) and click the **Propagate Selected** button. (The check box at right displays only if other devices share this directory number.) **Note** Turning on MLPP Indication (at the enterprise parameter, device pool, or device level) disables normal Ring Setting behavior for the lines on a device, unless MLPP Indication is turned off (overridden) for the device.

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
Ring Setting (Phone Active)	From the drop-down list box, choose the ring setting that is used when this phone has another active call on a different line. Choose one of the following options: • Use system default • Disable • Flash only • Ring once • Ring • Beep only Setting applies only to the current device unless you check the check box at right (Update Shared Device Settings) and click the **Propagate Selected** button. (The check box at right displays only if other devices share this directory number.) **Note** Turning on MLPP Indication (at the enterprise parameter, device pool, or device level) disables normal Ring Setting behavior for the lines on a device, unless MLPP Indication is turned off (overridden) for the device.
Multiple Call/Call Waiting Settings on Device [device name] **Note** These fields display only after you associate this directory number with a device.	
Maximum Number of Calls	You can configure up to 200 calls for a line on a device, with the limiting factor being the total number of calls that are configured on the device. As you configure the number of calls for one line, the calls that are available for another line decrease. The default specifies 4. If the phone does not allow multiple calls for each line, the default specifies 2. For CTI route points, you can configure up to 10,000 calls for each port. The default specifies 5000 calls. Use this field in conjunction with the Busy Trigger field. **Note** Although the default specifies 5000 calls for maximum number of active calls that can be configured on a CTI route point, Cisco recommends that you set the maximum number of calls to no more than 200 per route point. This will prevent system performance degradation. If the CTI application needs more than 200 calls, Cisco recommends that you configure multiple CTI route points. **Tip** To review how this setting works for devices with shared line appearances, refer to "Shared Line Appearance" in the *Cisco Unified CallManager System Guide*.

Table 48-1 Directory Number Configuration Settings (continued)

Field	Description
Busy Trigger	This setting, which works in conjunction with Maximum Number of Calls and Call Forward Busy, determines the maximum number of calls to be presented at the line. If maximum number of calls is set for 50 and the busy trigger is set to 40, incoming call 41 gets rejected with a busy cause (and will get forwarded if Call Forward Busy is set). If this line is shared, all the lines must be busy before incoming calls get rejected. Use this field in conjunction with Maximum Number of Calls for CTI route points. The default specifies 4500 calls. **Tip** To review how this setting works for devices with shared line appearances, refer to "Shared Line Appearance" in the *Cisco Unified CallManager System Guide*.
Forwarded Call Information Display on Device [device name] **Note** These fields display only after you associate this directory number with a device.	
Caller Name	Checking this check box will cause the caller name to display upon call forward.
Caller Number	Checking this check box will cause the caller number to display upon call forward.
Redirected Number	Checking this check box will cause the number that was redirected to display upon call forward.
Dialed Number	Checking this check box will cause the original dialed number to display upon call forward.

Calling Search Space

You can configure the number of calling search spaces that display in this drop-down list box by using the Max List Box Items enterprise parameter. If more calling search spaces exist than the Max List Box Items enterprise parameter specifies, the ellipsis button (**...**) displays next to the drop-down list box. Click the **...** button to display the Select Calling Search Space window. Enter a partial calling search space name in the **List items where Name contains** field. Click the desired calling search space name in the list of calling search spaces that displays in the **Select item to use** box and click **OK**.

Note To set the maximum list box items, choose **System > Enterprise Parameters** and choose **CCMAdmin Parameters**.

Additional Topic

See the "Related Topics" section on page 48-22.

Related Topics

- Directory Number Configuration Overview, page 48-1
- Finding a Directory Number, page 48-2
- Configuring a Directory Number, page 48-2

- Removing a Directory Number from a Phone, page 48-4
- Creating a Cisco Unity or Cisco Unity Connection Voice Mailbox, page 48-4
- Directory Number Configuration Settings, page 48-6
- Understanding Directory Numbers, *Cisco Unified CallManager System Guide*
- Directory Number Configuration Checklist, *Cisco Unified CallManager System Guide*
- Line Group Configuration, page 35-1
- Deleting Unassigned Directory Numbers, page 50-3
- Gateway Configuration, page 69-1
- Resetting a Phone, page 70-4
- Finding a Phone, page 70-29
- Configuring Cisco Unified IP Phones, page 70-2
- Cisco Unified IP Phones, *Cisco Unified CallManager System Guide*
- Phone Features, *Cisco Unified CallManager System Guide*
- Phone Configuration Checklist, *Cisco Unified CallManager System Guide*
- Cisco Unity Cisco Unified CallManager Integrated Mailbox Configuration, *Cisco Unified CallManager System Guide*
- Cisco Unity Configuration Checklist, *Cisco Unified CallManager System Guide*
- Presence, *Cisco Unified CallManager Features and Services Guide*