



# Auto-Registration Configuration

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Use auto-registration if you want Cisco CallManager to assign directory numbers automatically to new phones as they connect to the IP telephony network.



## Note

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Cisco recommends you use auto-registration to add less than 100 phones to your network. To add more than 100 phones to your network, use the Bulk Administration Tool (BAT).

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After a phone has auto-registered, you can move it to a new location and assign it to a different device pool without affecting its directory number.

This section covers the following topics:

- [Enabling Auto-Registration, page 11-2](#)
- [Disabling Auto-Registration, page 11-3](#)
- [Auto-Registration Configuration Settings, page 11-5](#)
- [Reusing Auto-Registration Numbers, page 11-7](#)

# Enabling Auto-Registration

This section describes how to enable auto-registration for new devices.



## Caution

Cisco CallManager disables auto-registration by default. Enabling auto-registration carries a security risk in that “rogue” phones can automatically register with Cisco CallManager. You should enable auto-registration only for brief periods when you want to perform bulk phone adds.

Configuring mixed mode clusterwide security through the Cisco CTL Client automatically disables auto-registration. If you want to use auto-registration and you have configured security, you must change the clusterwide security mode to non-secure through the Cisco CTL Client.

## Procedure

- Step 1** Choose **System > Cisco CallManager**.
- Step 2** From the list of Cisco CallManagers, choose the Cisco CallManager that you want to enable for auto-registration.
- Step 3** Enter the appropriate Auto-registration Information, as described in [Table 11-1](#).
- Step 4** Click **Update** to save any changes in the database.
- Step 5** Repeat [Step 2](#) through [Step 4](#) for each Cisco CallManager that you want to enable for auto-registration. You can designate only one primary Cisco CallManager for auto-registration, but you can designate other Cisco Call Managers as backups for purposes of auto-registration. See the “[Redundancy](#)” section in the *Cisco CallManager System Guide*.
- Step 6** Choose **System > Cisco CallManager Group**.
- Step 7** From the list of Cisco CallManager groups, choose the group that is enabled for auto-registration. (In most systems, the name of this group is Default.) This group serves as the default Cisco CallManager group for devices that auto-register. Make sure that the Selected list for this group contains the Cisco CallManagers that you configured for auto-registration in [Step 2](#). The Cisco CallManagers get selected in the order that they are listed in the Cisco CallManager group.
- Step 8** If you made any changes to the group configuration, click **Update** to save the changes in the database.

- Step 9** Choose **System > Device Pool**.
- Step 10** From the list of device pools, choose one of the default device pools that are assigned in the Device Defaults (see the [“Device Defaults Configuration”](#) section on page 6-1). Cisco CallManager assigns each auto-registered device to a default device pool based on the device type.
- Step 11** From the drop-down list box for Cisco CallManager Group, choose the Cisco CallManager group that you configured for auto-registration in [Step 7](#). This step assigns the default device pool to the default Cisco CallManager group for auto-registration.
- Step 12** From the drop-down list box for Calling Search Space for Auto-Registration, choose the calling search space to assign to the devices in this device pool that auto-register with Cisco CallManager. The calling search space specifies the route partitions that are used by the devices in the pool.
- Step 13** Click **Update** to save the device pool changes in the database.
- Step 14** Repeat [Step 10](#) through [Step 13](#) for each device pool that is listed in the Device Defaults.
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#### Related Topics

- [Disabling Auto-Registration, page 11-3](#)
- [Auto-Registration Configuration Settings, page 11-5](#)
- [Reusing Auto-Registration Numbers, page 11-7](#)

## Disabling Auto-Registration

This section describes how to disable auto-registration.

#### Procedure

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- Step 1** Choose **System > Cisco CallManager**.
- Step 2** From the Cisco CallManager list, choose the Cisco CallManager where you want to disable auto-registration.

**Step 3** Click the Auto-registration Disabled option to disable auto-registration for this Cisco CallManager (when this box is checked, auto-registration is disabled).



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**Note** You can also disable auto-registration by setting the Starting Directory Number and Ending Directory Number to the same value.

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**Step 4** Click **Update** to save the changes in the database.

**Step 5** Repeat [Step 2](#) through [Step 4](#) for each Cisco CallManager where you want to disable auto-registration.

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### Related Topics

- [Enabling Auto-Registration, page 11-2](#)
- [Auto-Registration Configuration Settings, page 11-5](#)
- [Reusing Auto-Registration Numbers, page 11-7](#)

# Auto-Registration Configuration Settings

Table 11-1 describes the auto-registration configuration settings.

**Table 11-1 Auto-Registration Configuration Settings**

Field Name	Description
Starting Directory Number	<p>Enter the first directory number to use for auto-registration of devices.</p> <p>Specifying a range of directory numbers in the Starting Directory Number and Ending Directory Number fields automatically enables auto-registration.</p> <p>Setting the starting and ending directory numbers to the same value disables auto-registration.</p>
Ending Directory Number	<p>Enter the last directory number to use for auto-registration of devices.</p> <p>Specifying a range of directory numbers in the Starting Directory Number and Ending Directory Number fields automatically enables auto-registration.</p> <p>Setting the starting and ending directory numbers to the same value disables auto-registration.</p>
Partition	<p>Choose the partition to which auto-registered directory numbers belong. If you are not using partitions, choose &lt;None&gt;.</p> <p>You must choose a valid directory number range for auto-registration before you can choose a partition and external phone number mask.</p> <p>The partition field resets if you disable auto-registration.</p> <p>If a large number of partitions exist, 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 <b>List items where Name contains</b> field. Click the desired partition name in the list of partitions that displays in the <b>Select item to use</b> box, and click <b>OK</b>.</p>

**Table 11-1 Auto-Registration Configuration Settings (continued)**

Field Name	Description
External Phone Number Mask	<p>Specify the mask that is used to format caller ID information for external (outbound) calls that are made from the auto-registered devices. The mask can contain up to 50 characters. Enter the literal digits that you want to appear in the caller ID information and use Xs to represent the directory number of the auto-registered device.</p> <p>For example, if you specify a mask of 972813XXXX and enable the Use External Phone Number Mask option on the route pattern that is used to make the external call, an external call from extension 1234 displays a caller ID number of 9728131234. If you specify a mask of all literal digits (such as 9728135000) to represent a main attendant number, that literal number becomes the caller ID that displays for an external call from any auto-registered device.</p>
Auto-registration Disabled on this Cisco CallManager	<p>Cisco CallManager disables auto-registration by default to prevent unauthorized connections to the network. When auto-registration is disabled, you must configure the directory numbers manually whenever you add new devices to your network.</p> <ul style="list-style-type: none"> <li>• Uncheck the auto-registration Disabled option to enable auto-registration for this Cisco CallManager.</li> <li>• Check the Auto-registration Disabled option to disable auto-registration for this Cisco CallManager.</li> </ul> <p>You can disable auto-registration by setting the Starting Directory Number and Ending Directory Number to the same value.</p> <p>If starting and ending directory numbers are specified when you disable auto-registration by checking this option, Cisco CallManager sets the starting and ending directory numbers to the same value.</p> <p>The partition and external phone mask information fields also reset when you disable auto-registration.</p>

**Related Topics**

- [Enabling Auto-Registration, page 11-2](#)
- [Disabling Auto-Registration, page 11-3](#)
- [Reusing Auto-Registration Numbers, page 11-7](#)

## Reusing Auto-Registration Numbers

When you connect a new device to the network, Cisco CallManager assigns the next available (unused) auto-registration directory number to that device. If you manually change the directory number of an auto-registered device, or if you delete that device from the database, Cisco CallManager can reuse the auto-registration directory number of that device.

When a device attempts to auto-register, Cisco CallManager searches the range of auto-registration numbers that you specified and tries to find the next available directory number to assign to the device. It begins the search with the next directory number in sequence after the last one that was assigned. If it reaches the ending directory number in the range, Cisco CallManager continues to search from the starting directory number in the range.

You can use the following procedure to reset the range of auto-registration directory numbers and force Cisco CallManager to search from the starting number in the range.

**Procedure**

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- Step 1** Choose **System > Cisco CallManager**.
  - Step 2** Choose the Cisco CallManager where you want to reset auto-registration.
  - Step 3** Write down the current settings for Starting Directory Number and Ending Directory Number.
  - Step 4** Click **Auto-registration Disabled on this Cisco CallManager**.



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**Caution** New phones cannot auto-register while auto-registration is disabled.

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- Step 5** Click **Update**.

- Step 6** Set the Starting Directory Number and Ending Directory Number to their previous values (or to new values, if desired).
- Step 7** Click **Update**.
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**Related Topics**

- [Enabling Auto-Registration, page 11-2](#)
- [Disabling Auto-Registration, page 11-3](#)
- [Auto-Registration Configuration Settings, page 11-5](#)