



Understanding Auto-Registration

Use auto-registration if you want Cisco CallManager to assign directory numbers automatically to new devices when you plug these devices into your network.



Caution

Auto-registration is disabled by default. Enabling auto-registration carries a security risk in that “rogue” phones can automatically register to the Cisco CallManager. Auto-registration should only be enabled for brief periods when bulk phone adds are required.

Auto-registration is disabled by default to prevent unauthorized connections to your network. Use the following procedures to enable or disable auto-registration and to reuse the auto-registration directory numbers:

- Enabling Auto-Registration, page 4-2
- Disabling Auto-Registration, page 4-6
- Reusing Auto-Registration Numbers, page 4-7

When you enable auto-registration, you specify a range of directory numbers for Cisco CallManager to assign to new devices connected to your network. As new devices are connected to the network, Cisco CallManager assigns the next available directory number in the specified range. Once a directory number is assigned to an auto-registered device, you can move the device to a new location and its directory number remains the same. If all of the auto-registration directory numbers are consumed, no additional devices can auto-register with Cisco CallManager.

**Note**

New devices auto-register with the primary Cisco CallManager in the Auto-Registration Cisco CallManager Group (see the “Configuring Cisco CallManager Groups” section on page 13-1). That Cisco CallManager automatically assigns each auto-registered device to a default device pool based on the device type (see the “Setting Device Defaults” section on page 15-1). After a device has auto-registered, you can update its configuration and assign it to a different device pool and a different Cisco CallManager (see the “Configuring Device Pools” section on page 17-1).

Related Topics

- Enabling Auto-Registration, page 4-2
- Disabling Auto-Registration, page 4-6
- Reusing Auto-Registration Numbers, page 4-7

Enabling Auto-Registration

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

Procedure

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- Step 1** Open Cisco CallManager Administration.
- Step 2** Select **System > Cisco CallManager**.
- Step 3** From the list of Cisco CallManagers, select the Cisco CallManager where you want to enable auto-registration.

Step 4 Enter the following information in the section for Auto-registration Information.

Field Name	Description
Starting Directory Number	<p>Enter the first directory number to use for auto-registration of devices.</p> <p>If you specify a range of directory numbers in the Starting Directory Number and Ending Directory Number fields, auto-registration is automatically enabled.</p> <p>If you set the starting and ending directory numbers to the same value, auto-registration is disabled.</p>
Ending Directory Number	<p>Enter the last directory number to use for auto-registration of devices.</p> <p>If you specify a range of directory numbers in the Starting Directory Number and Ending Directory Number fields, auto-registration is automatically enabled.</p> <p>If you set the starting and ending directory numbers to the same value, auto-registration is disabled.</p>
Partition	<p>Select the partition to which auto-registered directory numbers belong. If you are not using partitions, select None.</p> <p>You must select a valid range for auto-registration before you can select a partition and external phone number mask.</p> <p>The partition field is reset when auto-registration is disabled.</p>

Field Name	Description
External Phone Number Mask	<p>Specify the mask used to format caller ID information for external (outbound) calls 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, an external call from extension 1234 displays a caller ID number of 9728131234 if the Use External Phone Number Mask option is checked on the route pattern used to make the external call. If you specify a mask of all literal digits such as 9728135000 to represent a main attendant number, then that literal number is the caller ID displayed for an external call from any auto-registered device.</p>
Auto-registration Disabled on this Cisco CallManager	<p>Auto-registration is disabled 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"> • Uncheck the auto-registration Disabled option to enable auto-registration for this Cisco CallManager. • Check the Auto-registration Disabled option to disable auto-registration for this Cisco CallManager. <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 currently 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 are also reset when auto-registration is disabled.</p>

Step 5 Click **Update** to save any changes in the database.

- Step 6** Repeat Steps 3 through 5 for each Cisco CallManager where you want to enable auto-registration. There can be 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 “Understanding Redundancy” section on page 3-1.
- Step 7** Select **System > Cisco CallManager Group**.
- Step 8** From the list of Cisco CallManager groups, select the group that is enabled for auto-registration. (In most systems, the name of this group is Default.) This is the default Cisco CallManager group for devices that auto-register. Make sure the *Selected* list for this group contains the Cisco CallManagers you configured for auto-registration in Step 3.
- Step 9** If you made any changes to the group configuration, click **Update** to save the changes in the database.
- Step 10** Select **System > Device Pool**.
- Step 11** From the list of device pools, select one of the default device pools assigned in the Device Defaults (see the “Setting Device Defaults” section on page 15-1). Cisco CallManager assigns each auto-registered device to a default device pool based on the device type.
- Step 12** From the drop-down list box for Cisco CallManager Group, select the Cisco CallManager group you configured for auto-registration in Step 8. This step assigns the default device pool to the default Cisco CallManager group for auto-registration.
- Step 13** From the drop-down list box for Calling Search Space for Auto-Registration, select 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 used by the devices in the pool.
- Step 14** Click **Update** to save the device pool changes in the database.
- Step 15** Repeat Step 11 through Step 14 for each device pool listed in the Device Defaults.
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Related Topics

- Understanding Auto-Registration, page 4-1
- Disabling Auto-Registration, page 4-6
- Reusing Auto-Registration Numbers, page 4-7

Disabling Auto-Registration

This section describes how to disable auto-registration for devices.

Procedure

- Step 1** Open Cisco CallManager Administration.
- Step 2** Select **System > Cisco CallManager**.
- Step 3** From the Cisco CallManager list, select the Cisco CallManager where you want to disable auto-registration.
- Step 4** Click the Auto-registration Disabled option to disable auto-registration for this Cisco CallManager (when this box is checked, auto-registration is disabled).



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

- Step 5** Click **Update** to save the changes in the database.
- Step 6** Repeat Steps 3 through 5 for each Cisco CallManager where you want to disable auto-registration.
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Related Topics

- Understanding Auto-Registration, page 4-1
- Enabling Auto-Registration, page 4-2
- Reusing Auto-Registration Numbers, page 4-7

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 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 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

- Step 1** Open Cisco CallManager Administration.
- Step 2** Select **System > Cisco CallManager**.
- Step 3** Select the Cisco CallManager where you want to reset auto-registration.
- Step 4** Write down the current settings for Starting Directory Number and Ending Directory Number.
- Step 5** Click **Auto-registration Disabled on this Cisco CallManager**.



Caution New devices cannot auto-register while auto-registration is disabled.

- Step 6** Click **Update**.
 - Step 7** Set the Starting Directory Number and Ending Directory Number to their previous values (or to new values if desired).
 - Step 8** Click **Update**.
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Related Topics

- Understanding Auto-Registration, page 4-1
- Enabling Auto-Registration, page 4-2
- Disabling Auto-Registration, page 4-6