



CHAPTER 24

Autoregistration Configuration

This section covers the following topics on autoregistration configuration:

- [Autoregistration Configuration Settings, page 24-1](#)
- [Enabling Autoregistration, page 24-3](#)
- [Disabling Autoregistration, page 24-5](#)
- [Reusing Autoregistration Numbers, page 24-5](#)
- [Related Topics, page 24-6](#)

Autoregistration Configuration Settings

Use autoregistration if you want Cisco Unified Communications Manager to assign directory numbers automatically to new phones as they connect to the Cisco Unified Communications IP telephony network.



Note

Cisco recommends that you use autoregistration to add fewer than 100 phones to your network. To add more than 100 phones to your network, use the Bulk Administration Tool (BAT).

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

Using the GUI

For instructions on how to use the Cisco Unified Communications Manager Administration Graphical User Interface (GUI) to find, delete, configure, or copy records, see the [“Navigating the Cisco Unified Communications Manager Administration Application”](#) section on [page 1-13](#) and its subsections, which explain how to use the GUI and detail the functions of the buttons and icons.

Configuration Settings Table

Table 24-1 describes the autoregistration configuration settings. For more information about related procedures, see the “Related Topics” section on page 24-6.

Table 24-1 Autoregistration Configuration Settings

Field Name	Description
Starting Directory Number	<p>Enter the first directory number to use for autoregistration of devices.</p> <p>Specifying a range of directory numbers in the Starting Directory Number and Ending Directory Number fields automatically enables autoregistration.</p> <p>Setting the starting and ending directory numbers to the same value disables autoregistration.</p>
Ending Directory Number	<p>Enter the last directory number to use for autoregistration of devices.</p> <p>Specifying a range of directory numbers in the Starting Directory Number and Ending Directory Number fields automatically enables autoregistration.</p> <p>Setting the starting and ending directory numbers to the same value disables autoregistration.</p>
Partition	<p>Choose the partition to which autoregistered directory numbers belong. If you are not using partitions, choose <None>.</p> <p>You must choose a valid directory number range for autoregistration before you can choose a partition and external phone number mask.</p> <p>The partition field resets if you disable autoregistration.</p> <p>If a large number of partitions exist, the Find button displays next to the drop-down list box. Click the Find button to display the Find and List Partitions window. In the Find partition where field, choose search criteria and enter a partial partition name. In the list of partitions that displays, click the desired partition name and click OK.</p>
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 autoregistered 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 autoregistered 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 autoregistered device.</p>

Table 24-1 Autoregistration Configuration Settings (continued)

Field Name	Description
Auto-registration Disabled on this Cisco Unified Communications Manager	<p>Cisco Unified Communications Manager disables autoregistration by default to prevent unauthorized connections to the network. When autoregistration 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 autoregistration for this Cisco Unified Communications Manager. • Check the Auto-registration Disabled option to disable autoregistration for this Cisco Unified Communications Manager. <p>You can disable autoregistration 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 autoregistration by checking this option, Cisco Unified Communications Manager 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 autoregistration.</p>

Additional Information

See the [“Related Topics”](#) section on page 24-6.

Enabling Autoregistration

This section describes how to enable autoregistration for new devices.

**Caution**

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

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

Before You Begin

Check the following points before you begin to enable autoregistration:

- Ensure that the TFTP server is up and running. Ensure that the DHCP option for TFTP specifies the correct server.
- Check that the Device Defaults Configuration window specifies the correct phone image names for SIP and SCCP. Ensure that these files are available on the TFTP server.
- Ensure that directory numbers are available in the autoregistration range.
- Ensure enough license points are available to register new phones.

Procedure**Step 1** Choose **System > Enterprise Parameters**.

The Enterprise Parameters Configuration window displays.

Step 2 In the Auto Registration Phone Protocol drop-down list box, choose either SCCP or SIP.**Step 3** Choose **System > Cisco Unified CM**.

The Find and List Cisco Unified Communications Managers window displays. Click **Find**.

Step 4 From the list of Cisco Unified Communications Managers, choose the Cisco Unified Communications Manager, in the cluster, that you want to enable for autoregistration.

Note Always enable or disable autoregistration only on this Cisco Unified Communications Manager. If you shift the autoregistration function to another Cisco Unified Communications Manager in the cluster, you must reconfigure the appropriate Cisco Unified Communications Managers, the Default Cisco Unified Communications Manager Group, and, possibly, the default device pools.

Step 5 Enter the appropriate Autoregistration Information, as described in [Table 24-1](#).**Step 6** To save the changes in the database, click **Save**.**Step 7** Choose **System > Cisco Unified CM Group**.

The Find and List Cisco Unified Communications Manager Groups window displays.

Step 8 Click **Find**.**Step 9** From the list of Cisco Unified Communications Manager groups, choose the group that is enabled for autoregistration. (In most systems, the name of this group specifies *Default*. You can, however, choose a different Cisco Unified Communications Manager group.)

This group serves as the default Cisco Unified Communications Manager group for devices that autoregister. Ensure that the Selected Cisco Unified Communications Managers list for this group contains the Cisco Unified Communications Manager that you configured for autoregistration in [Step 4](#). The Cisco Unified Communications Managers get selected in the order in which they are listed in the Cisco Unified Communications Manager group.

Step 10 If you made any changes to the group configuration, click **Save** to save the changes in the database.**Step 11** Configure a calling search space specifically for autoregistration. For example, you can use the autoregistration calling search space to limit autoregistered phones to internal calls only.**Step 12** Configure the Default device pool for autoregistration by assigning the Default Cisco Unified Communications Manager Group and autoregistration calling search space to the Default device pool. If you are configuring a separate default device pool for each device type, use the Device Defaults Configuration window to assign the default device pools to the device.**Step 13** Enable autoregistration only during brief periods when you want to install and autoregister new devices (preferably when overall system usage is at a minimum). During other periods, turn autoregistration off to prevent unauthorized devices from registering with Cisco Unified Communications Manager.**Step 14** Install the devices that you want to autoregister.**Step 15** Reconfigure the autoregistered devices and assign them to their permanent device pools.

- Step 16** In the Enterprise Parameters Configuration window, set the Auto Registration Phone Protocol setting to SIP or SCCP, whichever is needed.
- Step 17** If you autoregister more phones with a different protocol, repeat [Step 1](#) through [Step 16](#).
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Additional Information

See the [“Related Topics” section on page 24-6](#).

Disabling Autoregistration

This section describes how to disable autoregistration.

Procedure

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- Step 1** Choose **System > Cisco Unified CM**.
- Step 2** From the Cisco Unified Communications Manager list, choose the Cisco Unified Communications Manager where you want to disable autoregistration.
- Step 3** To disable autoregistration for this Cisco Unified Communications Manager, click the Auto-registration Disabled on this Cisco Unified Communications Manager check box. (When this box is checked, autoregistration specifies disabled.)
-  **Note** You can also disable autoregistration by setting the Starting Directory Number and Ending Directory Number to the same value.
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- Step 4** To save the changes in the database, click **Save**.
- Step 5** Repeat [Step 2](#) through [Step 4](#) for each Cisco Unified Communications Manager where you want to disable autoregistration.
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Additional Information

See the [“Related Topics” section on page 24-6](#).

Reusing Autoregistration Numbers

When you connect a new device to the network, Cisco Unified Communications Manager assigns the next available (unused) autoregistration directory number to that device. If you manually change the directory number of an autoregistered device, or if you delete that device from the database, Cisco Unified Communications Manager can reuse the autoregistration directory number of that device.

When a device attempts to autoregister, Cisco Unified Communications Manager searches the range of autoregistration 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 Unified Communications Manager continues to search from the starting directory number in the range.

You can use the following procedure to reset the range of autoregistration directory numbers and force Cisco Unified Communications Manager to search from the starting number in the range.

Procedure

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



Caution New phones cannot autoregister while autoregistration is disabled.

- Step 5** Click **Save**.
 - Step 6** Set the Starting Directory Number and Ending Directory Number to their previous values (or to new values, if desired).
 - Step 7** Click **Save**.
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Additional Information

See the [“Related Topics”](#) section on page 24-6.

Related Topics

- [Autoregistration Configuration, page 24-1](#)
- [Autoregistration Configuration Settings, page 24-1](#)
- [Enabling Autoregistration, page 24-3](#)
- [Disabling Autoregistration, page 24-5](#)
- [Reusing Autoregistration Numbers, page 24-5](#)