



Autoregistration Configuration

Use autoregistration if you want Cisco Unified CallManager 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.

This section covers the following topics:

- [Enabling Autoregistration, page 26-1](#)
- [Disabling Autoregistration, page 26-3](#)
- [Autoregistration Configuration Settings, page 26-3](#)
- [Reusing Autoregistration Numbers, page 26-5](#)

Enabling Autoregistration

This section describes how to enable autoregistration for new devices.



Caution

Cisco Unified CallManager disables autoregistration by default. Enabling autoregistration carries a security risk in that “rogue” phones can automatically register with Cisco Unified CallManager. 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 protocols. 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 the SCCP or SIP phone protocol.

Step 3 Choose **System > Cisco Unified CallManager**.

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



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

Step 5 Enter the appropriate Autoregistration Information, as described in [Table 26-1](#).

Step 6 To save the changes in the database, click **Save**.

Step 7 Choose **System > Cisco Unified CallManager Group**.

Step 8 From the list of Cisco Unified CallManager 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 CallManager group.)

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

Step 9 If you made any changes to the group configuration, click **Save** to save the changes in the database.

Step 10 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 11 Configure the Default device pool for autoregistration by assigning the Default Cisco CallManager 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 12 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 CallManager.

Step 13 Install the devices that you want to autoregister.

Step 14 Reconfigure the autoregistered devices and assign them to their permanent device pools.

Step 15 In the Enterprise Parameters Configuration window, set the Auto Registration Phone Protocol setting to SIP or SCCP, whichever is needed.

Step 16 If you autoregister more phones with a different protocol, repeat [Step 1](#) through [Step 15](#).

Additional Information

See the [“Related Topics” section on page 26-5](#).

Disabling Autoregistration

This section describes how to disable autoregistration.

Procedure

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- Step 1** Choose **System > Cisco Unified CallManager**.
- Step 2** From the Cisco Unified CallManager list, choose the Cisco Unified CallManager where you want to disable autoregistration.
- Step 3** To disable autoregistration for this Cisco Unified CallManager, click the Auto-registration Disabled on this Cisco Unified CallManager 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.

- Step 4** To save the changes in the database, click **Save**.
- Step 5** Repeat [Step 2](#) through [Step 4](#) for each Cisco Unified CallManager where you want to disable autoregistration.
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Additional Information

See the [“Related Topics” section on page 26-5](#).

Autoregistration Configuration Settings

[Table 26-1](#) describes the autoregistration configuration settings. For more information about related procedures, see the [“Related Topics” section on page 26-5](#).

Table 26-1 Autoregistration Configuration Settings

Field Name	Description
Starting Directory Number	Enter the first directory number to use for autoregistration of devices. Specifying a range of directory numbers in the Starting Directory Number and Ending Directory Number fields automatically enables autoregistration. Setting the starting and ending directory numbers to the same value disables autoregistration.

Table 26-1 **Autoregistration Configuration Settings (continued)**

Field Name	Description
Ending Directory Number	Enter the last directory number to use for autoregistration of devices. Specifying a range of directory numbers in the Starting Directory Number and Ending Directory Number fields automatically enables autoregistration. Setting the starting and ending directory numbers to the same value disables autoregistration.
Partition	Choose the partition to which autoregistered directory numbers belong. If you are not using partitions, choose <None>. You must choose a valid directory number range for autoregistration before you can choose a partition and external phone number mask. The partition field resets if you disable autoregistration. 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 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.
External Phone Number Mask	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. 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.
Auto-registration Disabled on this Cisco Unified CallManager	Cisco Unified CallManager 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. • Uncheck the Auto-registration Disabled option to enable autoregistration for this Cisco Unified CallManager. • Check the Auto-registration Disabled option to disable autoregistration for this Cisco Unified CallManager. You can disable autoregistration by setting the Starting Directory Number and Ending Directory Number to the same value. If starting and ending directory numbers are specified when you disable autoregistration by checking this option, Cisco Unified CallManager sets the starting and ending directory numbers to the same value. The partition and external phone mask information fields also reset when you disable autoregistration.

Reusing Autoregistration Numbers

When you connect a new device to the network, Cisco Unified CallManager 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 CallManager can reuse the autoregistration directory number of that device.

When a device attempts to autoregister, Cisco Unified CallManager 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 CallManager 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 CallManager to search from the starting number in the range.

Procedure

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| Step 1 | Choose System > Cisco Unified CallManager . |
| Step 2 | Choose the Cisco Unified CallManager 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 CallManager . |



Caution	New phones cannot autoregister while autoregistration is disabled.
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| 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 26-5](#).

Related Topics

- [Enabling Autoregistration, page 26-1](#)
- [Disabling Autoregistration, page 26-3](#)
- [Autoregistration Configuration Settings, page 26-3](#)
- [Reusing Autoregistration Numbers, page 26-5](#)

