



Autoregistration

Autoregistration automatically assigns directory numbers to new devices as they connect to the IP telephony network. This section covers the following topics:

- [Understanding Autoregistration, page 12-1](#)
- [Autoregistration Configuration Checklist, page 12-3](#)
- [Autoregistration with Multiple Protocol Support, page 12-2](#)
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Understanding Autoregistration

Use autoregistration if you want Cisco CallManager automatically to assign directory numbers to new phones when you plug these phones in to your network. Cisco recommends you use autoregistration to add less than 100 phones to your network.

Cisco CallManager disables autoregistration by default to prevent unauthorized connections to your network. Do not enable autoregistration unless you know what your dial plan looks like, including calling search spaces and partitions.



Caution

Enabling autoregistration carries a security risk in that “rogue” phones can automatically register with Cisco 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 nonsecure through the Cisco CTL client.

Another strategy for preventing unauthorized phones from connecting to your network entails creating a Rogue device pool that allows only 911 (emergency) and 0 (operator) calls. This device pool allows phones to register but limits them to emergency and operator calls. This device pool prevents unauthorized access to phones that continuously boot in an attempt to register in your network.

When you enable autoregistration, you specify a range of directory numbers that Cisco CallManager can assign to new phones as they connect to your network. As new phones connect to the network, Cisco CallManager assigns the next available directory number in the specified range. After a directory number is assigned to an autoregistered phone, you can move the phone to a new location, and its directory number remains the same. If all the autoregistration directory numbers are consumed, no additional phones can autoregister with Cisco CallManager.

The Cisco CallManager Group that has the Auto-registration Cisco CallManager Group check box checked, specifies the list of Cisco CallManagers that the phone will use to attempt to auto register. At least one Cisco CallManager must be selected in the group. The first Cisco CallManager in the selected list must also have the Auto-registration Disabled on this Cisco CallManager check box unchecked in the Cisco CallManager Configuration window. This ensures that the Cisco CallManager allows the autoregistration request from the phone.

New phones auto-register with the primary Cisco CallManager in the Cisco CallManager group that has enabled the Auto-Registration Cisco CallManager Group setting. That Cisco CallManager automatically assigns each auto-registered phone to a default device pool based on the device type (refer to the “[Device Defaults Configuration](#)” chapter in the *Cisco CallManager Administration Guide*). After a phone auto-registers, you can update its configuration and assign it to a different device pool and a different Cisco CallManager (see the “[Device Pools](#)” section on page 5-10).

Autoregistration with Multiple Protocol Support

Autoregistration means that unknown phones will be coming into the network. Because the phones are unknown, Cisco CallManager does not know whether the new phones should be registered as SIP phones or as SCCP phones. Therefore, the system administrator uses Cisco CallManager Administration to specify the default protocol that new phones should use for autoregistration.

Cisco devices that support both SIP and SCCP protocols (IP phone models 7905, 7911, 7912, 7940, 7941, 7960, 7961, 7970, and 7971) will auto register with the protocol that is specified in the Auto Registration Phone Protocol Enterprise Parameter. Cisco devices that only support a single protocol will auto register with that protocol regardless of the Auto Registration Phone Protocol setting. For example, the Cisco IP Phone 7902 only supports SCCP. If a Cisco IP Phone 7902 auto registers, it will use the SCCP protocol regardless of whether the Auto Registration Phone Protocol is set to SIP.

**Note**

To ensure that autoregistration works correctly, the Device Defaults Configuration window must have the correct phone image names specified for SIP and SCCP protocols.

To deploy phones in a mixed-protocol environment, you must perform additional steps when autoregistering a new mixed batch of phones. The first step requires that the administrator set the Cisco CallManager Auto Registration Protocol parameter in the Enterprise Parameters Configuration window to SCCP and install all the SCCP phones. The second step requires that the administrator change the Auto Registration Protocol parameter to SIP and autoregister all the SIP phones.

Autoregistration Configuration Checklist

Table 12-1 lists general steps and guidelines for using autoregistration.

Table 12-1 Autoregistration Configuration Checklist

Configuration Steps		Procedures and related topics
Step 1	In the Enterprise Parameters Configuration window, set the Auto Registration Phone Protocol to SIP or SCCP. SCCP acts as the default, so change this setting when auto registering SIP phones.	Enterprise Parameters Configuration , <i>Cisco CallManager Administration Guide</i>
Step 2	Configure only one Cisco CallManager in the cluster to use for autoregistration. Always enable or disable autoregistration on this Cisco CallManager only. If you want to shift the autoregistration function to another Cisco CallManager in the cluster, you must reconfigure the appropriate Cisco CallManagers, the Default Cisco CallManager Group, and, possibly, the default device pools.	Cisco CallManager Configuration , <i>Cisco CallManager Administration Guide</i>
Step 3	Configure the Default Cisco CallManager Group, or another Cisco CallManager Group, as the autoregistration group. Choose the autoregistration Cisco CallManager from Step 1 as the primary Cisco CallManager in this group.	Cisco CallManager Groups , page 5-3 Cisco CallManager Group Configuration , <i>Cisco CallManager Administration Guide</i>
Step 4	Configure a calling search space specifically for auto-registration. For example, you can use the auto-registration calling search space to limit auto-registered phones to internal calls only.	Partitions and Calling Search Spaces , page 15-1 Calling Search Space Configuration , <i>Cisco CallManager Administration Guide</i>
Step 5	Configure the Default device pool for autoregistration by assigning the Default Cisco CallManager Group and autoregistration calling search space to it. If you are configuring a separate default device pool for each device type, assign the default device pools to the device by using the Device Defaults Configuration window.	System-Level Configuration Settings , page 5-1. Device Pool Configuration , <i>Cisco CallManager Administration Guide</i> Device Defaults Configuration , <i>Cisco CallManager Administration Guide</i>
Step 6	Enable auto-registration 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 auto-registration off to prevent unauthorized devices from registering with Cisco CallManager.	Enabling Autoregistration , <i>Cisco CallManager Administration Guide</i> Disabling Autoregistration , <i>Cisco CallManager Administration Guide</i>
Step 7	Install the devices that you want to autoregister.	Refer to the installation instructions that come with your IP phones and gateways.
Step 8	Reconfigure the autoregistered devices and assign them to their permanent device pools.	Cisco IP Phone Configuration , <i>Cisco CallManager Administration Guide</i> Gateway Configuration , <i>Cisco CallManager Administration Guide</i>
Step 9	In the Enterprise Parameters Configuration window, set the Auto Registration Phone Protocol setting to SIP or SCCP, whichever is needed. If auto registering more phones with a different protocol is required, repeat the preceding steps.	Enterprise Parameters Configuration , <i>Cisco CallManager Administration Guide</i>

Where to Find More Information

Related Topics

- [System-Level Configuration Settings](#), page 5-1
- [Redundancy](#), page 7-1
- [SIP Line Side Overview](#), page 41-14
- [Cisco CallManager Configuration](#), *Cisco CallManager Administration Guide*
- [Cisco CallManager Group Configuration](#), *Cisco CallManager Administration Guide*
- [Device Pool Configuration](#), *Cisco CallManager Administration Guide*
- [Enterprise Parameters Configuration](#), *Cisco CallManager Administration Guide*