CHAPTER 10

Autoregistration

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

- Autoregistration Configuration Checklist, page 10-1
- Understanding Autoregistration, page 10-3
- Autoregistration with Multiple Protocol Support, page 10-4
- Where to Find More Information, page 10-4

Autoregistration Configuration Checklist

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

Cisco Unified Communications Manager 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 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 nonsecure through the Cisco CTL client.

Table 10-1 lists general steps and guidelines for using autoregistration. For more information on autoregistration, see the "Understanding Autoregistration" section on page 10-3 and the "Where to Find More Information" section on page 10-4.

Table 10-1 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 you are auto registering phones that are running SIP.	Enterprise Parameter Configuration, *Cisco Unified Communications Manager Administration Guide*
Step 2	Configure a calling search space specifically for autoregistration. For example, you can use the autoregistration calling search space to limit auto-registered phones to internal calls only.	Partitions and Calling Search Spaces, page 12-1 Calling Search Space Configuration, *Cisco Unified Communications Manager Administration Guide*
Step 3	Configure the default device pool for autoregistration by assigning the Default Cisco Unified Communications Manager 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, *Cisco Unified Communications Manager Administration Guide* Device Defaults Configuration, *Cisco Unified Communications Manager Administration Guide*
Step 4	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.	Enabling Autoregistration, *Cisco Unified Communications Manager Administration Guide* Disabling Autoregistration, *Cisco Unified Communications Manager Administration Guide*
Step 5	Install the devices that you want to autoregister.	See the installation instructions that come with your IP phones and gateways.
Step 6	Reconfigure the autoregistered devices and assign them to their permanent device pools.	Cisco Unified IP Phone Configuration, *Cisco Unified Communications Manager Administration Guide* Gateway Configuration, *Cisco Unified Communications Manager Administration Guide*
Step 7	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 Parameter Configuration, *Cisco Unified Communications Manager Administration Guide*

Understanding Autoregistration

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Caution 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 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 Unified Communications Manager can assign to new phones as they connect to your network. As new phones connect to the network, Cisco Unified Communications Manager 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 Unified Communications Manager.

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

New phones autoregister with the primary Cisco Unified Communications Manager in the Cisco Unified Communications Manager group that has enabled the Auto-Registration Cisco Unified Communications Manager Group setting. That Cisco Unified Communications Manager automatically assigns each auto-registered phone to a default device pool based on the device type (see the "Device Defaults Configuration" chapter in the *Cisco Unified Communications Manager Administration Guide*). After a phone auto-registers, you can update its configuration and assign it to a different device pool and a different Cisco Unified Communications Manager (see the "Device Pools" section on page 5-14).

Autoregistration with Multiple Protocol Support

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

Cisco devices that support both SIP and SCCP (Cisco Unified IP Phone 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 Unified IP Phone 7902 only supports SCCP. If a Cisco Unified IP Phone 7902 auto registers, it will use the SCCP regardless of whether the Auto Registration Phone Protocol is set to SIP.

Note To ensure that autoregistration works correctly, ensure the Device Defaults Configuration window specifies the correct phone image names for SIP and SCCP.

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 Unified Communications Manager Auto Registration Phone Protocol parameter in the Enterprise Parameters Configuration window to SCCP and install all the phones that are running SCCP. The second step requires that the administrator change the Auto Registration Phone Protocol parameter to SIP and autoregister all the phones that are running SIP.

Where to Find More Information

Related Topics

- Autoregistration Configuration Checklist, page 10-1
- Understanding Autoregistration, page 10-3
- Autoregistration with Multiple Protocol Support, page 10-4
- System-Level Configuration Settings, page 5-1
- SIP Line Side Overview, page 34-40
- Cisco Unified Communications Manager Configuration, *Cisco Unified Communications Manager Administration Guide*
- Device Pool Configuration, *Cisco Unified Communications Manager Administration Guide*
- Enterprise Parameter Configuration, *Cisco Unified Communications Manager Administration Guide*