

IP Phone Load Conversion from SIP to MGCP

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Introduction

Cisco 7940/7960 IP phones can support the Skinny Call Control Protocol (SCCP) to run with Cisco CallManager, the Session Initiation Protocol (SIP) (refer to RFC 2543), or the Media Gateway Control Protocol (MGCP), but not more than one simultaneously. This is possible because the 7940/7960 IP phones load different firmware versions on bootup that support the different control protocols. This functionality is transparent to the end user, and you enable it through changes to the basic text-based configuration files that the phones download from a Trivial File Transfer Protocol (TFTP) server. This document explains how to convert an IP phone with SIP load to MGCP. Refer to *Converting a Cisco 7940/7960 CallManager Phone to a SIP Phone* and the *Reverse Process* for information on how to change between SCCP phone loads and SIP phone loads.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- SIP
- MGCP

Components Used

The information in this document is based on the Cisco 7940 or 7960 IP phone, but is also applicable to other phone models.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Convert IP Phone Load from SIP to MGCP

If you use configuration files, the OS79XX.TXT file no longer controls the image used by the phone. Image version and upgrading is done through the `image_version` configuration parameter in the configuration files. In the startup, each SIP IP phone attempts to download the SIPDefault.cnf configuration file. This file contains the `image_version` parameter that tells the phone which image to run. Therefore, if you attempt to load the SIP version 7.1 software, SIPDefault.cnf must contain `image_version: POS3-07-1-00`. If the image load differs from the one that is currently loaded on the phone, the phone contacts the TFTP server to convert to the new image.

Step by Step Procedure

Complete these steps in order to convert the existing SIP IP phone load to MGCP:

1. Download the desired MGCP binary image from Software Download: MGCP IP Phone 7940/7960 (registered customers only) and copy it to the root directory of the TFTP server.
2. Copy the SIPDefault.cnf file to the root directory of the TFTP server.

The SIPDefault.cnf file can be downloaded from Software Download: SIP IP Telephone 7940/7960 Software (registered customers only).

3. Use an ASCII text editor, such as vi or notepad, to open the SIPDefault.cnf file located in the root directory of your TFTP server. Find the configuration value **image_version:** and replace it with the MGCP firmware file name without the extension.

For example, POM3-06-4-00.

4. Change the TFTP server IP address in the IP Phone Network Configuration that points to the new TFTP server where the MGCP firmware is copied.

Note: You need to use the Unlock Configuration mode in order to change the TFTP server IP address.

In releases 4.2 and later, an **Unlock Config** item displays in the phone settings menu. When the user selects Unlock Config, the user is prompted to enter a phone password using the alphanumeric entry function of the keypad. Use the `phone_password` configuration parameter in order to set the phone password. When the correct password is entered, the configuration is unlocked and the settings can be changed. When the Network Configuration or SIP Configuration menus display, the lock icon in the upper-right corner of your LCD indicates an unlocked state. The unlocked symbol indicates that you can modify the network and SIP configuration settings. When the Settings menu is exited, the phone automatically relocks the configuration.

In releases before 4.2, press `**#` in order to unlock the SIP IP phone configuration menu.

5. Reboot the IP phone.

During the reboot, the phone sees the changed **image_version:** value and copies the MGCP image to the flash. Then, the phone reboots again with the new MGCP firmware with these states:

- ◆ Requesting Configuration
- ◆ Upgrading Software
- ◆ Resetting

Refer to Cisco MGCP IP Phone Administrator Guide for more information on Cisco MGCP IP phone configuration.

Verify

Press **Setting > Status > Firmware version** in order to check the version of the newly load image. Look for the **Application Load ID**. This should be the same as the edited image name in the SIPDefault.cnf file.

Troubleshoot

Complete these steps in order to troubleshoot the firmware conversion:

1. Ping the IP phone from the TFTP server in order to check the IP connectivity of TFTP server to IP phone.
2. Ensure the file names specified do not have a typo error, because it is case sensitive too.
3. Check the TFTP log for the success and failure in copying the image.
4. Ensure that the IP phone firmware files are on all the TFTP servers within the cluster. If one or more IP phones do not pick up the new phone load/firmware, you need to check if the "XXXXXXXXXXXXX.load" and "XXX.snbn" files are available at the TFTP location.

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Voice & Video: General

Related Information

- [Cisco 7940 and 7960 IP Phones Firmware Upgrade Matrix](#)
- [Release Notes for Cisco MGCP IP Phone 7940/7960 Release 6.4](#)
- [Converting a Cisco 7940/7960 CallManager Phone to a SIP Phone and the Reverse Process](#)
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