CHAPTER 16

Custom Phone Rings

This chapter describes how you can customize the phone ring types that are available at your site by creating your own PCM files and editing the Ringlist.xml file.

This chapter covers the following topics:

Introducing Custom Phone Rings

Cisco Unified IP Phones ship with two default ring types that are implemented in hardware: Chirp1 and Chirp2. Cisco Unified Communications Manager also provides a default set of additional phone ring sounds that are implemented in software as pulse code modulation (PCM) files. The PCM files, along with an XML file (named Ringlist.xml) that describes the ring list options that are available at your site, exist in the TFTP directory on each Cisco Unified Communications Manager server.

You can get a copy of the Ringlist.xml file from the system using the following admin cli “file” commands:

- admin:file
  - file list*
  - file view*
  - file search*
  - file get*
  - file dump*
  - file tail*
  - file delete*

Customizing and Modifying Configuration Files

You can modify configuration files (for example, edit the xml files) and add customized files (for example, custom ring tones, call back tones, phone backgrounds) to the TFTP directory. You can modify files and/or add customized files to the TFTP directory in Cisco Unified Communications Platform Administration, from the TFTP Server File Upload page. Refer to the *Cisco Unified Communications Operating System Administration Guide* for information on how to upload files to the TFTP folder on a Cisco Unified Communications Manager server.

Ringlist.xml File Format Requirements

The Ringlist.xml file defines an XML object that contains a list of phone ring types. Each ring type contains a pointer to the PCM file that is used for that ring type and the text that will display on the Ring Type menu on a Cisco Unified IP Phone for that ring.

The CiscoIPPhoneRinglist XML object uses the following simple tag set to describe the information:

```
<CiscoIPPhoneRinglist>
   <Ring>
      <DisplayName/>
      <FileName/>
   </Ring>
</CiscoIPPhoneRinglist>
```

The following characteristics apply to the definition names:

- DisplayName defines the name of the custom ring for the associated PCM file that will display on the Ring Type menu of the Cisco Unified IP Phone.
- FileName specifies the name of the PCM file for the custom ring to associate with DisplayName.

Tip The DisplayName and FileName fields must not exceed 25 characters.

The following example shows a Ringlist.xml file that defines two phone ring types:

```
<CiscoIPPhoneRinglist>
   <Ring>
      <DisplayName>Analog Synth 1</DisplayName>
      <FileName>Analog1.raw</FileName>
   </Ring>
   <Ring>
      <DisplayName>Analog Synth 2</DisplayName>
      <FileName>Analog2.raw</FileName>
   </Ring>
</CiscoIPPhoneRinglist>
```

Tip You must include the required DisplayName and FileName for each phone ring type. The Ringlist.xml file can include up to 50 ring types.

PCM File Requirements for Custom Ring Types

The PCM files for the rings must meet the following requirements for proper playback on Cisco Unified IP Phones:

- Raw PCM (no header)
- 8000 samples per second
- 8 bits per sample
- mu-law compression
- Maximum ring size—16080 samples
- Minimum ring size—240 samples
- Number of samples in the ring evenly divisible by 240
- Ring starts and ends at the zero crossing.
- To create PCM files for custom phone rings, you can use any standard audio editing packages that support these file format requirements.

Configuring a Custom Phone Ring

The following procedure applies to creating custom phone rings for only the Cisco Unified IP Phones 7940, 7960, and 7970.

Procedure

Step 1 Create a PCM file for each custom ring (one ring per file). Ensure that the PCM files comply with the format guidelines that are listed in the "PCM File Requirements for Custom Ring Types" section on page 16-3.

Step 2 Use an ASCII editor to edit the Ringlist.xml file. See the "Ringlist.xml File Format Requirements" section on page 16-2 for information on how to format this file, along with a sample Ringlist.xml file.

Step 3 Save your modifications and close the Ringlist.xml file.

Step 4 Upload the Ringlist.xml file by using the web page interface. Refer to the *Cisco Unified Communications Operating System Administration Guide*.

Step 5 To cache the new Ringlist.xml file, stop and start the TFTP service by using Cisco Unified Serviceability or disable and reenable the "Enable Caching of Constant and Bin Files at Startup" TFTP service parameter (located in the Advanced Service Parameters).

Additional Information

See the "Related Topics" section on page 16-3.

Related Topics

- Cisco TFTP, *Cisco Unified Communications Manager System Guide*
- Service Parameters Configuration, *Cisco Unified Communications Manager Administration Guide*

Additional Cisco Documentation

- Cisco Unified IP Phone Administration documentation for Cisco Unified IP Phones 7940, 7960, and 7970
- *Cisco Unified Communications Operating System Administration Guide*