

White Paper

Configuration File Management on Polycom® SoundPoint® IP, SoundStation® IP, and VVX® Phones



This white paper provides a simple and effective way to manage configuration files and keep desired settings when configuration files are upgraded to new revisions.

This information applies to SoundPoint IP phones running BootROM version 3.1.0 or later and SIP software version 1.6 or later.

This information applies to SoundStation IP phones running BootROM version 4.1.3 or later and SIP software version 2.0 or later.

This information applies to VVX 1500 phones running BootROM version 4.1.4 or later and SIP software 3.2.2 or later.

Updates due to changes in BootROM 4.0 or later and SIP 2.2 or later are noted in August 2007.

This white paper applies to SoundPoint IP, SoundStation IP, and VVX 1500 phones running BootROM version 4.1.4 or earlier and SIP software 3.2.5 or earlier. For later software versions (those starting at BootROM 4.3.0 and Polycom® UC Software 3.3.0), see the *Polycom UC Software Provisioning Best Practices* available on the Polycom Support Web site at <http://www.polycom.com/global/forms/verify.html?retURL=http://www.polycom.com/global/documents/whitepapers/uc-software-provisioning-best-practices-whitepaper.pdf>.

Introduction

If customers modify the configuration files delivered with the SIP firmware for their organization's needs, those changes are lost or are difficult to recreate when it comes time to update the SIP firmware. The configuration files, supplied with each SIP release, must be used with that release or the software will behave unpredictably.

Distributed Configuration Files

The phone uses configuration files listed in the CONFIG_FILES field of the master configuration file, for example 000000000000.cfg or <Ethernet address>.cfg.

Note

As of BootROM 4.0 and SIP 2.2, the use of <Ethernet address>.cfg files is not recommended. The use of substitutions in 000000000000.cfg has been introduced. Refer to "Technical Bulletin 35361 - Overriding Parameters in Master Configuration File on SoundPoint IP Phones" in the Knowledge Base at www.polycom.com/support/voice.

A default configuration file, **000000000000.cfg**, is distributed as part of the SIP firmware release. This typically lists two configuration files, **phone1.cfg** and **sip.cfg**.

phone1.cfg contains parameters which are expected to be changed per phone, such as registration information. **sip.cfg** contains parameters which will apply to all phones in an installation such as the preferred voice codec.

These files are part of the SIP firmware release and must be upgraded if the application is upgraded. For example, using the configuration files that were distributed with SIP 1.4.0 with a new release such as SIP 1.5.3 would cause unexpected behavior and problems.

Note

Mismatched configuration files and SIP firmware are not supported.

Note

As of BootROM 4.0 and SIP 2.2, the **000000000000.cfg** file contains additional platform-specific parameters for the SoundPoint IP 300 and 500 phones. The latest SIP version supported on these phones is SIP 2.1.2. For more information, refer to “Technical Bulletin 35311 - Supporting SoundPoint IP 300 and IP 500 Phones with SIP 2.2.0 and later releases” in the Knowledge Base at www.polycom.com/support/voice.

Customer-Modified Configuration Files

Polycom recommends that new configuration files be created containing only those parameters that require changes.

The administrator of a phone installation creates new configuration files that contain only the parameter settings appropriate for that installation – site specific settings – and these new files are included in the list of CONFIG_FILES. The parameters in the new files would be used instead of the duplicate parameters in files later in the list. Creating new files for parameters or groups of parameters means that the standard configuration files are unchanged and can be easily replaced with new revisions when a new release of SIP firmware is installed.

The Release Notes, available for each SIP firmware release, would need to be reviewed for any mandatory configuration file changes (whether parameters in the locally created files need to be modified to work with a new release).

For more information, refer to the latest *Administrator’s Guide for SoundPoint IP, SoundStation IP, and VVX Phones* at <http://www.polycom.com/voicedocumentation/>.

Setting Up Phones The First Time

When setting up the SoundPoint IP phones for the first time, do the following:

1. Create a local phone file for each phone containing only the parameters that you want to change. For example, **0004f2000607_phone1.cfg**
2. Create a SIP configuration file for your organization containing only the parameters that you want to change. For example, **org1_sip.cfg**
3. Add the new files to the CONFIG_FILES list in the appropriate order.

Since the files are processed left to right, any parameter which appears in first file will override the same parameter in later files.

Caution

Do not use **<Ethernet address>-phone.cfg** for any new configuration files. This is the name of the configuration override file generated by the phone when the user changes a setting such as the preferred ring type.

Note

Use an XML editor to edit the configuration files.

Example 1

Note

This example applies to configurations of SoundPoint IP phones running BootROM versions pre-4.0.0 and SIP versions pre-2.2.0.

An installation of Polycom SIP phones is done at a new site. The administrator chooses a registration configuration file naming scheme based on the Ethernet address of the phone. For example, the file for the phone with Ethernet address of 0004f2000607 is called **0004f2000607-user.cfg**. This file looks like this:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<!-- Registration info -->
<userinfo>
  <reg reg.1.displayName="Jane Doe" reg.1.address="3002"
reg.1.type="private"/>
</userinfo>
```

For all phones, the administrator needs to specify a SIP server address and the appropriate digit map. A new file is created called **local-settings.cfg**. This file looks like this:

```
<?xml version="1.0" standalone="yes"?>
<localcfg>
  <server voIpProt.server.1.address="test.example.com"/>
```

```
<digitmap
dialplan.digitmap="[2-9]11|0T|011xxx.T|[0-1][2-9]xxxxxxxxxx|604xxxxxxxx|
778xxxxxxxx|[2-4]xxx"/>
</localcfg>
```

All phones need to use these files so they must be listed in the CONFIG_FILES list. For example, the master configuration file for the phone with Ethernet address of 0004f2000607 is called **0004f2000607.cfg** and looks like this:

```
<?xml version="1.0" standalone="yes"?>
<!-- $Revision: 1.14 $ $Date: 2005/07/27 18:43:30 $ -->
<APPLICATION APP_FILE_PATH="sip.ld"
CONFIG_FILES="0004f2000607-user.cfg, local-settings.cfg, phone1.cfg,
sip.cfg"
MISC_FILES="" LOG_FILE_DIRECTORY="" OVERRIDES_DIRECTORY=""
CONTACTS_DIRECTORY="" />
```

Since the files are processed left to right, any parameter which appears in **0004f2000607-user.cfg** will override the same parameter in **phone1.cfg**. Similarly any parameter in **local-settings.cfg** will override the same parameter in **sip.cfg**.

Example 2

Note

This example applies to configurations of SoundPoint IP phones running BootROM versions 4.0.0 or later and SIP versions 2.2.0 or later.

An installation of new Polycom SIP phones is done at an existing site. The administrator chooses a configuration file naming scheme based on the phone's model. For example, the organization currently uses SoundPoint IP 501 phones, but will be introducing SoundPoint IP 550 phones over time. The administrator wants to use the same boot server, but different application loads on different phones when each phone reboots.

The administrator downloads the appropriate SIP application files to the boot server:

- For the SoundPoint IP 501, use **2345-11500-040.sip.ld**.
- For the SoundPoint IP 550, use **2345-12500-001.sip.ld**.

Note

The second example also deploys SoundPoint IP 300 and 500 phones running SIP 2.1.2 and using renamed configuration files from SIP 2.1.2 .

The master configuration file looks like this:

```
<?xml version="1.0" standalone="yes"?>
<!-- Default Master SIP Configuration File-->
```

```
<!-- Edit and rename this file to <Ethernet-address>.cfg for each
phone.-->
<!-- $RCSfile: 000000000000.cfg,v $ $Revision: 1.14.22.4 $ -->
<APPLICATION APP_FILE_PATH="sip[PHONE_MODEL].ld"
CONFIG_FILES="phone1[PHONE_MODEL].cfg, sip[PHONE_MODEL].cfg"
MISC_FILES="" LOG_FILE_DIRECTORY="" OVERRIDES_DIRECTORY=""
CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="">
<APPLICATION_SPIP300 APP_FILE_PATH_SPIP300="sip_212.ld"
CONFIG_FILES_SPIP300="phone1_212.cfg, sip_212.cfg"/>
<APPLICATION_SPIP500 APP_FILE_PATH_SPIP500="sip_212.ld"
CONFIG_FILES_SPIP500="phone1_212.cfg, sip_212.cfg"/>
</APPLICATION>
```

Upgrading the Firmware

When the SIP firmware version is updated, the files created locally (such as **0004f2000607-user.cfg** and **local-settings.cfg** in Example 1 above) are kept. The distributed files (**phone1.cfg** and **sip.cfg**) are replaced by the newer versions.

The Release Notes must be reviewed for any changes to parameters that have copied to the local files (such as **0004f2000607-user.cfg** and **local-settings.cfg**). Any parameters would need to be modified to work with a new release.

Note

Do not modify the **sip.cfg** and **phone1.cfg** configuration files distributed with the software release. Follow the instructions in this white paper to create configuration files for your organization. Making modifications to the original configuration files will make future software upgrades difficult.

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