

MAX Communication Server Release 8.5

Polycom IP Phone Configuration Guide

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This document provides configuration details for Polycom IP phones and lists the limitations of using Polycom IP phones with AltiGen's MAXCS 8.5 system. If you are looking for instructions on configuring Polycom phones for an earlier release of MAXCS, refer to the appropriate document in the AltiGen Knowledgebase.

Separate documents are provided for end-users who will be using the Polycom phones with the MAXCS system. Those documents explain phone features such as Do Not Disturb, call transfers, initiating conference calls, and other common actions. You can find these user guides, as well as all current MAXCS documentation, at www.altigen.com/support/maxcs-manuals/.

This document does not cover every aspect of each Polycom phone; refer to your Polycom product documentation as needed.

Note: Release 8.5 supports the Polycom D60 handset configured with a single VVX extension; refer to the separate guide, *MaxCS Polycom D60 Configuration Guide*, for details.

Introduction

With each release of MAXCS, AltiGen continues to closely integrate Polycom IP phones into the MAXCS system. Be aware, however, that Polycom phones will not operate exactly the same way that AltiGen IP phones operate.

You can configure BLF, Line Park, Digit Map, time display, time offset, SRTP, and so on. MAXCS Administrator will generate new configuration files for each extension. A reboot is required for the phones to read the updated configuration files.

Upgrading Phones from Earlier Releases of MAXCS

- Beginning with Release 8.0, MAXCS no longer supports the configuration of having Softswitch and HMCP on separate servers. If you currently have such a configuration, **contact your sales team before upgrading**. If you do not merge the servers before you upgrade, your Polycom phones may not be able to register.
- Phones provisioned for **Release 7.0 Update 1 or earlier** – These phones **must be reset the factory defaults and then re-provisioned for Release 8.5**. If you do not do this, the Polycom phones will not work correctly. This procedure is covered on page 8.
- Phones provisioned for **Release 7.5 or later** – These phones should work correctly without any additional configuration.

However, if you have existing VVX model phones that will be using the features *Directory Dialing* or *Record Button*, you must perform one step, *Step 4: Request the Certificate* on page 12, and enter an FQDN (fully qualified domain name) instead of an IP address.

Prerequisites and Requirements

Before you proceed, make sure that your environment meets the following requirements:

- Your MAXCS server must already be installed and configured; the Polycom codec must have also been configured in MaxAdministrator.
- You must have an AltiGen third-party SIP Device license for each extension that is using a Polycom IP phone.

- Your network must not block or filter port HTTP (80), HTTPS (443), 5061, or 10060 traffic. These ports must stay open as long as there are Polycom phones on the system.
- Optional: To offer users a set of advanced features for their Polycom IP phones, those users must have a *Polycom Advanced Feature* license assigned to the appropriate extension (see page 18).

Note: NAT traversal for a Polycom IP phone to a remote site behind NAT is supported.

Supported Polycom IP Phones

MAXCS 8.5 supports the following Polycom phone models with the appropriate firmware. Other versions of firmware are not supported.

Series	Models	Firmware Supported
VVX	300, 310, 400, 410, 500, 600 The VVX 1500 model phones are no longer supported, beginning with MaxCS Release 8.5.	5.4.2.6345 NOTE: As of July 2017, firmware version 5.5.1 Rev Q is supported . To upgrade VVX phones to version 5.5.1, refer to the separate guide, <i>MaxCS Polycom Firmware 5.5.1 Rev Q Update</i> , which can be found on the AltiGen website: http://www.altigen.com/support/maxcs-manuals/
SoundPoint	IP 331, 450, 550, 560, 650, 670	4.0.4.2906 (BootROM 5.0.4.x, 5.0.5.x, or later) – this is the ‘4.0.4 Split’ download from the Polycom download site http://downloads.polycom.com/voice/voip/sip_sw_releases_matrix.html
SoundStation	IP 6000, IP 7000	4.0.8.1972

Self-Signed Phones Are Not Recommended with MaxCS 8.5

Some older phones that were manufactured in 2009 or earlier may be self-signed phones. Self-signed phones are phones that do not have a factory-installed certificate.

Self-signed phones are **not** supported for use with Release MaxCS 8.5.

Unsupported Features

The following features are currently not supported on Polycom phones.

- Configuration of VLAN cannot be performed from MAXCS Administrator.
- Some feature codes are not supported for speed dial.
- The following feature codes are not supported: #12, #26, #27, #44, #45, #46, #81, and #82. The following features can only be configured from the phone: Speed dial, admin-defined numbers.
- When users park a call via the Line Park feature, they will not hear a confirmation announcement as they would on an AltiGen IP phone.
- The Distinctive Ring Tone feature is not supported.
- The Workgroup Status Display feature is not supported.

- Polycom phones can send pages to AltiGen IP phone paging groups, but they cannot **receive** pages from AltiGen paging groups. They can receive pages *only* from assigned Polycom paging groups. See the section [Polycom Paging Groups](#) beginning on page 31 for details on paging groups.

Initial Configuration

The steps in this section apply only to the following scenarios:

- You are installing MAXCS for the first time
- You are upgrading phones that were provisioned for **MAXCS 7.0 Update 1 or earlier**

The steps in this section do not apply to Polycom phones that were provisioned for Release 7.5 or 7.5 Patch 1, except for *Step 4: Request the Certificate*.

Before you begin, confirm that your system meets the prerequisites listed on page 5, and check that the required ports are open.

Step 1: Reset Phones to Factory Default Settings

If any of your phones have been previously provisioned for another system, or had been provisioned for MAXCS Release 7.0 Update 1 or earlier, you must reset those phones to the factory default settings to ensure that they will provision correctly for Release 8.5.

New phones, as well as Polycom phones that have been previously provisioned for MAXCS 7.5 or later, **do not need to be reset** to the factory defaults.

Log into the Phone's Web Configuration Utility

To reset a phone to the factory settings, you must log into the Polycom Web Configuration Utility.

Important

It is important that you use the Polycom web configuration utility **only** to configure the settings that are detailed within this document. AltiGen does not support any additional configurations from the web utility.

If you or the user changes additional settings via this web utility, the phone will not be able to register with MAXCS and therefore the phone **will not work**. If this occurs, you will need to reset the phone to the factory defaults and then reconfigure it. Do this before contacting AltiGen Technical Support.

1. Connect the phone to a power supply or POE switch and connect the cable.
2. Once the phone is in Idle mode, find the phone's IP address by pressing the **Menu** key and navigating to **Settings > Status > Network > TCP/IP Parameters**. Jot this IP address down. (In this example, we use 10.40.0.89 as the IP address.)
3. Open a web browser and navigate to **http://[phone IP address]** to launch the Polycom Web Configuration Utility. In our example, this is *http://10.40.0.89*. (In some cases, you may need to use *https*: instead of *http*:).
4. Enter the default password *456* (if you have changed the default password in MAXCS, use the new password instead.) The configuration utility will open.

Reset the Phone to Factory Settings

1. Within the configuration utility, select **Utilities > Phone Backup & Restore > Global Settings**.
2. Click **Restore** to restore the phone to its factory settings.

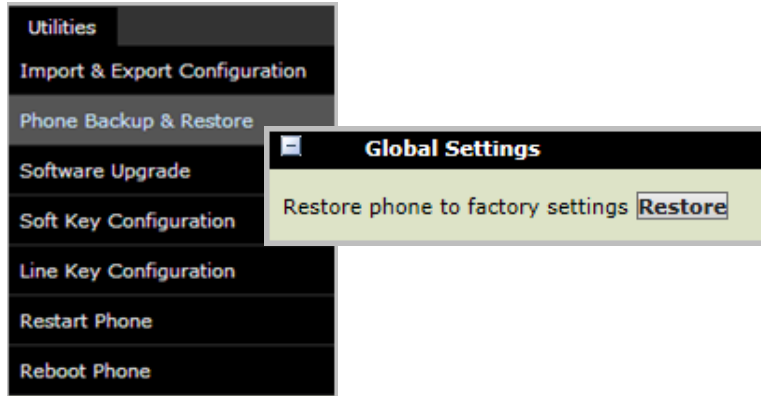


Figure 1: The Polycom configuration tool Utilities menu

Step 2: Configure DHCP for Auto-Provisioning

This step is optional; if you have many phones, we recommend that you configure DHCP in order to streamline the provisioning process. If you have ten or fewer phones, it may be quicker to skip this step and complete the steps in section *Step 9: Manually Configure Each Phone* when you reach that section.

Administrators can now configure an option in the DHCP (Dynamic Host Configuration Protocol) server. The DHCP service, in conjunction with the AltiGen Polycom phone configuration service, will deploy configurations to Polycom phones automatically.

AltiGen uses DHCP to configure the Polycom phones' "Provisioning Server Type" as "HTTP" and the "Provisioning Server Name" as the AltiGen Polycom phone configuration service IP or HostName.

The following example illustrates how to use the DHCP service in Windows 2008 R2 server to configure the DHCP to pass the provisioning server within the IP address assignment. The example uses the Standard Provisioning Factory Default Settings and would utilize these with HTTP as the protocol and with 192.168.1.233 as the Server IP or Hostname of the AltiGen Polycom configuration service.

1. In the DHCP configuration tool, add a new option, *Polycom Provisioning Server*, and assign code 160 (or option 66).

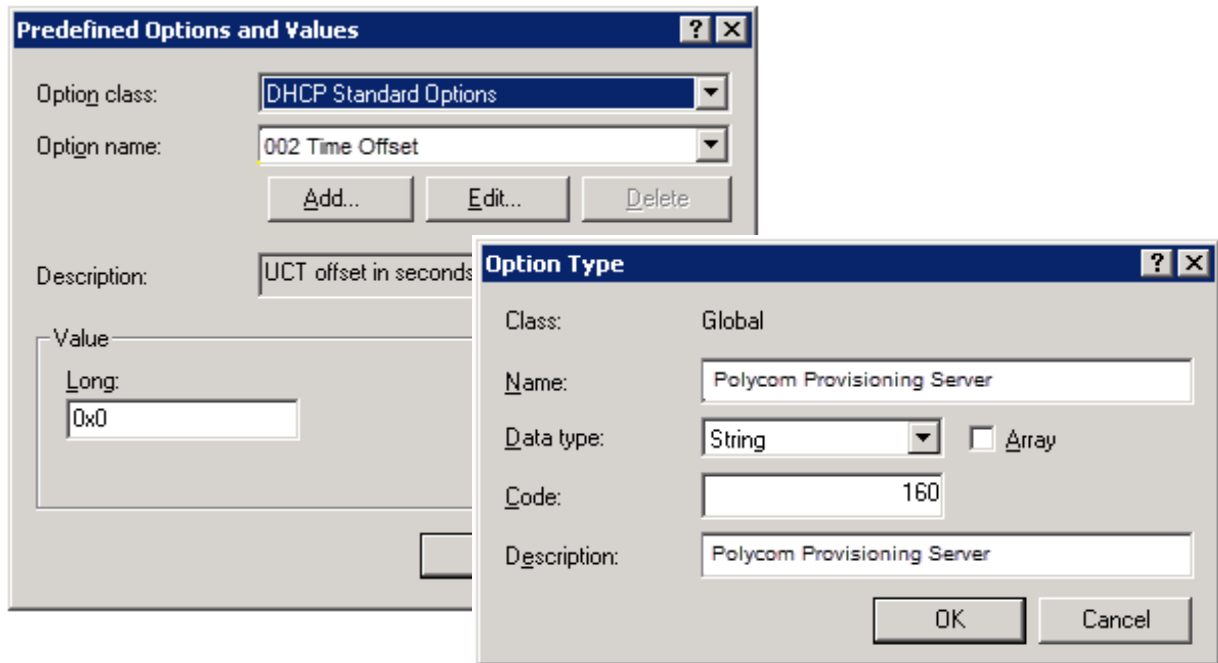


Figure 2: In the DHCP configuration tool, add a new option

- In the DHCP menu tree, under **IPv4**, right-click **Server Options** and select **Configure Options**.

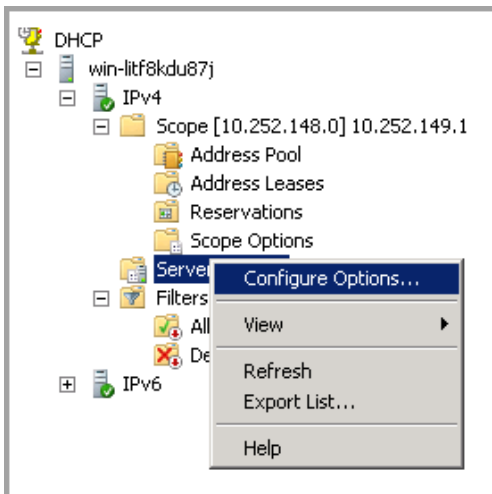


Figure 3: The DHCP menu tree

- On the *General* tab, check **160 Polycom Provisioning Server**.

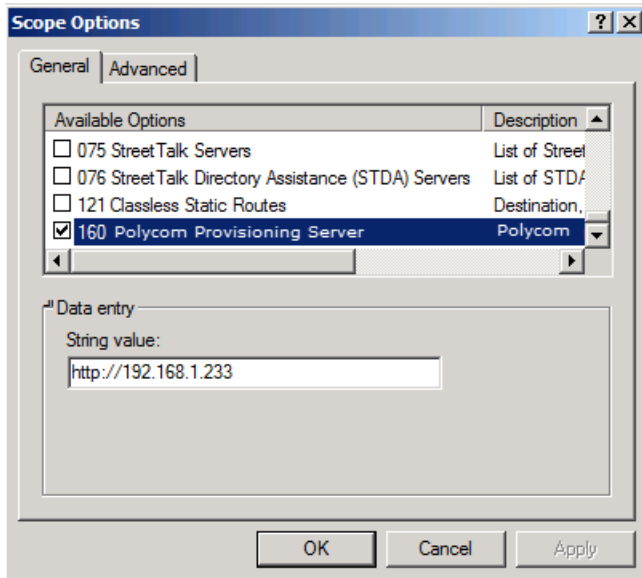


Figure 4: Select the new option Provisioning Server

Note: If a Polycom phone is used in a non-supported environment, then the Administrator is responsible for setting up a local provisioning server. In this case, the Administrator should configure the provisioning server's type and IP (HostName) manually.

Step 3: Upgrade Firmware (SoundPoint Phones)

This step is not required for VVX models.

If you are deploying any SoundPoint phones, the next step is to make sure that they all have the correct firmware version. Refer to the table on page 6 to determine the correct firmware for each model.

If you are not deploying either of those phone models, skip ahead to *Step 4: Request the Certificate* on page 11.

If you are interested in full details about updating firmware are BootROM, refer to this article:

http://downloads.polycom.com/voice/voip/sip_sw_releases_matrix.html.

Notes:

- For those phones that do not support the firmware auto-upgrade feature, use an isolated network to update the Polycom application and BootROM to the correct version before you put the Polycom phone into a test lab or production environment.
- We recommended that you NOT mix the FTP server for Polycom configuration and the FTP server for Polycom firmware upgrade in the same network. If you mix them, it may cause issues. On an isolated network that is for upgrading the Polycom IP phones only firmware and/or BootROM only, you can use DHCP OPTIONS 66, 160 or 120 in order to shorten the update time on the isolated network.
- Along with the firmware version, the BootROM version is important. Even if a phone has the correct firmware, if the BootROM version is outdated, then the phone may not work correctly.

To update the BootROM for SoundPoint phones, you can update the firmware version to 4.0.8.x, and then downgrade the firmware to version 4.0.4.2906. During the upgrade process, the BootROM will be updated.

- For instructions on updating firmware via an FTP Server, see page 41.

Upgrade a Phone's Firmware

To upgrade a Polycom phone's firmware, you will use the Polycom web configuration utility. (Note that VVX model phones will update automatically, as soon as they register with MaxCS. They do not need to be updated manually.)

Note: The screen shots in this section may look different from your web utility interface. In addition, some fields or options may be found on a different menu that noted here. This is because the web configuration tool varies slightly from one Polycom model to another.

To check a phone's firmware version and upgrade the firmware if necessary, follow these steps:

1. Follow the steps on page 7 to log into the phone's Web Configuration utility.
2. Within the configuration utility, select **Utilities > Software Upgrade** and check the version number (refer to the table on page 6).

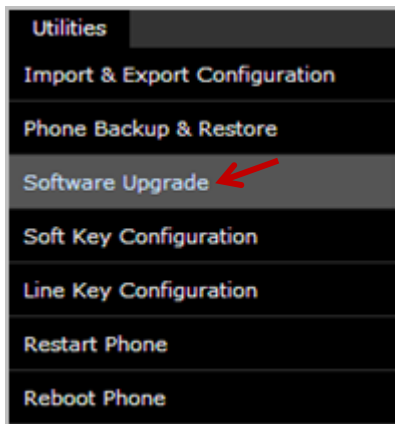


Figure 5: The Polycom configuration tool, Utilities menu

Note: For SoundPoint phones, the BootROM must be version 5.x.x in order to perform the software upgrade directly from the web configuration tool. If the SoundPoint's firmware is too old (earlier than 4.x.x), update it to version 4.0.4.2906. Refer to Polycom's firmware matrix and update the firmware to the version we specified. Refer to this page:

http://downloads.polycom.com/voice/voip/sip_sw_releases_matrix.html

3. If the phone does not have the correct firmware version, check whether the **Clear Upgrade Server** button is enabled. If it is enabled, click it. Then click **Check for Updates** and choose the correct firmware from the list.

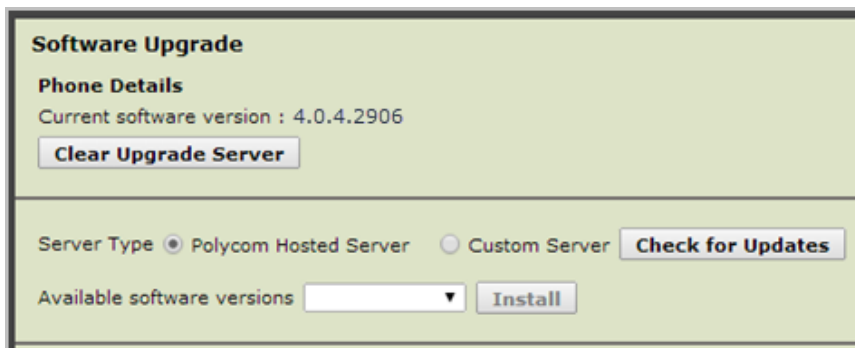


Figure 6: The Polycom configuration tool Software Upgrade panel

The phone will reboot at the end of the upgrade process.

Step 4: Request the Certificate

This section describes how to request the certificate. **You only need to do this once per MAXCS server.**

1. Log into MaxAdministrator and select **System > Request Certificate**.



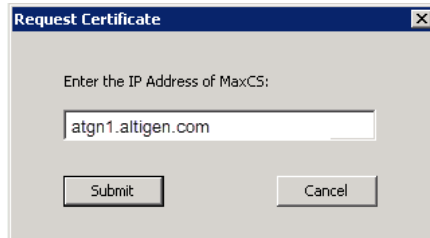
Figure 7: Choose System > Request Certificate

2. Enter the public IP address of this MAXCS server. Polycom phones will use this address to connect to MAXCS.

Considerations:

- If there is no public IP address, then enter the private IP address.
- If the MAXCS server is behind NAT, make sure that *Enterprise Manager* is configured correctly. Refer to the topic *Configuring MAXCS Behind NAT* in the Enterprise Manger Help system (or refer to the *Enterprise VoIP Network Management* chapter in the *MAXCS Administration Manual*) for details.
- If the MAXCS server is behind NAT or if the MAXCS server has both public and private IP addresses, and you have both local and public Polycom phones, then you must enter an FQDN instead of an IP address here. Otherwise, the features "Record button" (page 40) and "Directory Dialing" (page 35), which utilize the Polycom phone's micro browser, will not work correctly.

When you enter the FQDN, **do not include the http:// or https:// prefix**. If you enter either of these prefixes, the mapping will not work.



Make sure that from outside of the network, the FQDN maps to the MAXCS server public IP address, and from an internal network site, it maps to the private IP address.

For MAXCS FQDN mapping, you may need to work with your service provider to set up the public DNS mapping. For internal FQDN mapping, you may need to work with your IT department to set up the mapping if you do not have the privileges to perform those steps.

- Note that this setting will not take effect until you stop and restart all MaxCS services.
3. Click **Submit**.

- The system requests that a certificate be assigned from AltiGen. A confirmation message will instruct you to use AltiGen's *Start and Stop all AltiGen Services* utility to apply the certificate. Click **OK**.
- In Windows, click **Start > MAX Communication Server ACM > Utilities > Start & Stop All AltiGen Services**. Stop all services, and then restart them.

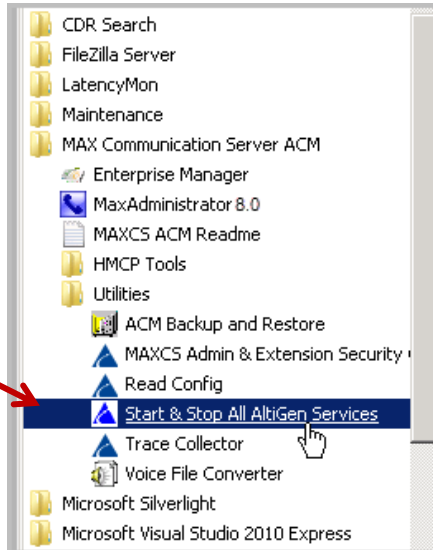


Figure 8: The Start menu showing MAXCS utilities

Step 5: Check the Digit Map

Next, check the Polycom Digit Map. This Digit Map will automatically be downloaded to Polycom phones when those phones are restarted.

- Select **System > System Configuration > Number Plan**. In the lower section of the page is the Polycom Digit Map. Make sure that it is consistent with your system dial plan.
- Click **Generate Polycom Digit Map** to generate the map.

In rare cases, you may need to customize the Digit Map. Refer to the section *Customize the Digit Map* on page 48 for details.

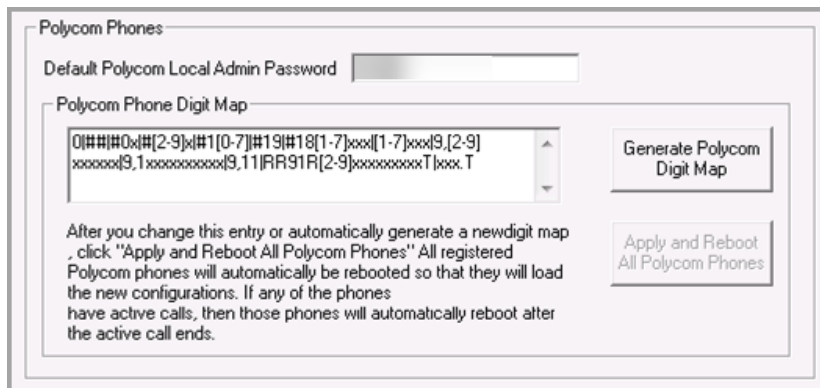


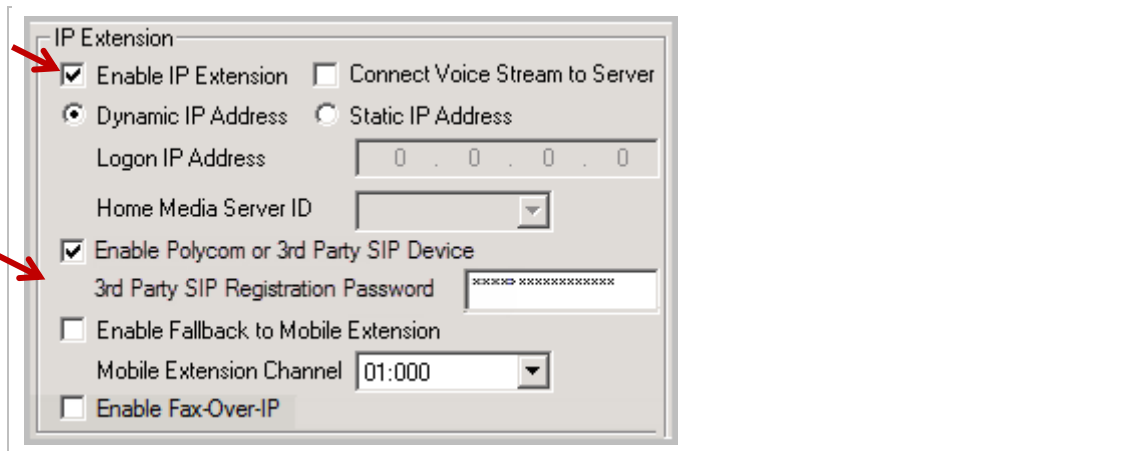
Figure 9: Example of Polycom Phone Digit Map

Step 6: Configure the Extension

In MAXCS Administrator, add new extensions as needed, if you have not already configured extensions. For full instructions on creating new extensions, you can refer to the *MaxCS Administration Manual*.

1. Select **PBX > Extension Configuration**. For each extension, set the following parameters in the *IP Extension* section:
 - Check **Enable IP Extension**.
 - Check **Enable Polycom or 3rd Party SIP Device**.
 - For the password field, enter the password (we use 5656 in this example).

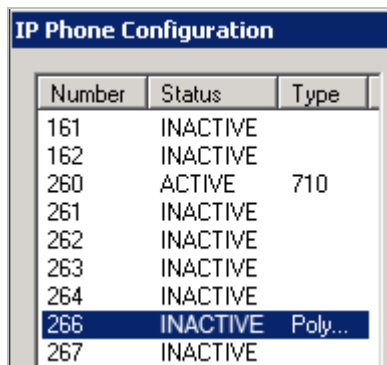
Note: Beginning with MAXCS Release 7.5 Patch 1, users with Polycom phones must enter the voicemail password instead of the SIP Registration password to log in.



The screenshot shows the 'IP Extension' configuration dialog box. The 'Enable IP Extension' checkbox is checked, and the 'Enable Polycom or 3rd Party SIP Device' checkbox is also checked. The '3rd Party SIP Registration Password' field contains a masked password 'XXXXXXXXXXXXXXXXXXXX'. Other options include 'Connect Voice Stream to Server', 'Dynamic IP Address', 'Static IP Address', 'Logon IP Address', 'Home Media Server ID', 'Enable Fallback to Mobile Extension', 'Mobile Extension Channel', and 'Enable Fax-Over-IP'.

Figure 10: The IP Extension options

2. Select **PBX > AltiGen IP Phone Configuration**. Select an extension (in our example, this is 266) in the left panel.



IP Phone Configuration		
Number	Status	Type
161	INACTIVE	
162	INACTIVE	
260	ACTIVE	710
261	INACTIVE	
262	INACTIVE	
263	INACTIVE	
264	INACTIVE	
266	INACTIVE	Poly...
267	INACTIVE	

Figure 11: The IP Phone Configuration panel

3. On the **General** tab, check **Enable SIP Telephony Service** in the *3rd Party SIP Device* section. If the extension will have a *Polycom Advanced Feature* license, you can check that option as well. Click **OK**.



Figure 12: The 3rd Party SIP Device options

Repeat this step for each new extension.

Step 7: Enable the Phone's Directory

This step is optional.

If you want your users to have a directory on their phones where they can store commonly-called contacts, you can edit the configuration file. (This directory is different from the corporate directory that you can enable for VVX phones; that configuration is covered later in this guide.)

- To enable this directory for all users, modify the following file:
C:\Altiserv\PolycomCfg\altigen10060_user.cfg.
- To enable this directory for only a single user, modify that user's extension file: C:\Altiserv\PolycomCfg\Extension_XXX_user.cfg (where XXX is the user's extension).

(If you modify the global file, then it is not necessary to modify any of the Extension_XXX_user.cfg files.)

If the same setting exists in the Extension_XXX_user.cfg file, it will override the AltiGen_10060_user.cfg.

1. Open Notepad.
2. Open the configuration file that you want to update (either altigen10060_user.cfg or Extension_XXX_user.cfg).
3. Before the </phone1> line, add the following lines:

```
<keyx2  
feature.directory.enabled="1"  
softkey.feature.directories="0"
```

```
/>
```

4. If you want the user to see the Directory softkey when the user picks up the handset, change the second line to `softkey.feature.directories="1"`
5. Save the file.

Step 8: Confirm Codec Settings

This section describes the codec settings for Polycom phones.

Environments with both Polycom and AltiGen IP Phones

If your environment includes both Polycom IP phones and AltiGen IP phones, be aware that while Polycom phones support the G.722 codec, AltiGen IP phone models IP-705, IP-710, and IP-720 models do not support that codec. (AltiGen's IP-805 model does support G.722.)

Remote sites that are running both Polycom and AltiGen IP phones can coexist even with only one public IP address, as long as you configure one codec profile with the following settings:

- *DTMF* must be set to RFC 2833.
- You must configure a **list** of codecs that include at least one of the following: G.711, G.723 or G.729. You cannot configure G.722 **as the only codec**. You can include G.722 in the list, as long as you also have at least one of those other codecs in the list.

Enterprise Manager Configuration

Follow these steps to confirm various codec settings in Enterprise Manager.

1. Log into MAXCS Administrator. In Enterprise Manager, click the **Codec** button on the toolbar.
2. Confirm that the codec profile for the Polycom IP phones has *DTMF Delivery* set to **RFC 2833**.
3. Confirm that *SIP Early Media* is set to **Disabled**.
4. Confirm that *SIP Transport* is set to **UDP**.

When a Polycom phone is used and the voice stream goes direct, SIP Tie-Trunks need to use RFC2833 instead of SIP INFO. Note that the Release-Link-Tie over SIP Tie-Trunk feature is not supported with *DTMF Delivery* set to RFC 2833.

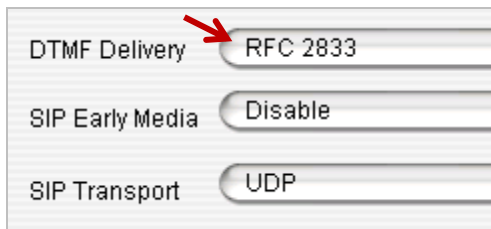


Figure 13: The Enterprise Manager Codec panel

5. Click **Servers** on the toolbar; on the *IP Codec* tab, confirm that the IP Device range and the codec profile are configured properly.

Note: Remember, if your environment includes any AltiGen IP-705, IP-710, or IP-720 phones, the codec list must include G.711, G.723, or G.729 because those phones do not support G.722.

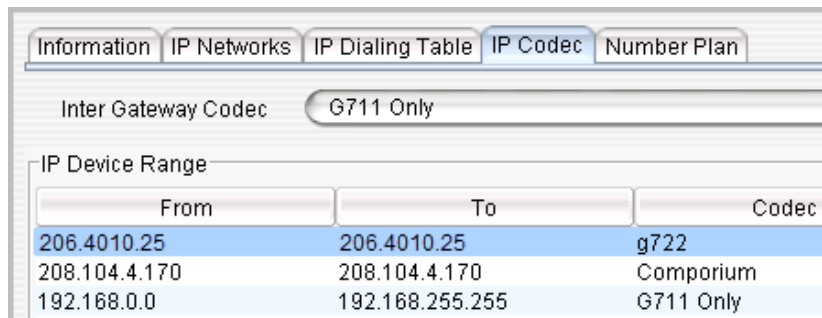


Figure 14: The Enterprise Manager Servers > IP Codec tab

Step 9: Manually Configure Each Phone (Optional)

If you have DHCP option 160 configured correctly (as described in *Step 2: Configure DHCP for Auto-Provisioning* on page 8), skip this step and proceed to *Step 10: User Login Instructions*.

The firmware should be already correct at this point.

If you did not configure DHCP option 160 earlier, you will need to log into the *Polycom Web Configuration Utility* for each phone, to configure that phone directly:

1. Plug the phone into the network.
2. Open the *Polycom Web Configuration Utility* (Refer to page 7). Log in as an administrator.
3. Under **Settings** > **Provision Server**, set the following parameters:
 - Server Type: Change to **HTTP**
 - Server Address: Enter the MAXCS Server's IP address
 - Server User: Enter the phone's extension number (Refer to page 23 if you are implementing E911 support for this extension)
 - Server Password: Enter the extension user's voicemail password



Figure 15: The Provisioning Server panel

4. Click **Save**. The phone should restart within 1 minute.
5. Skip the next section, *Step 10: User Login Instructions* on page 17; there is no need for each user to press #17 to register the phone.

Note: If you did not enter the server user and server password in step 3 above, the phone will still restart but you must provide users with the registration instructions in the next section.

Step 10: User Login Instructions

At this point, you have finished the basic configuration of the phones. There are additional features that can be configured for your users; for example, you can configure BLF and Line park options at this point. Instructions are described in the remainder of this guide.

When you have finished configuring any remaining features, let your users know how to log into their phones. If they see "Press #17" or "Press #17 to Register" when they plug in the phone, provide them with these steps:

1. Press the **Speaker** button or pick up the handset. You should hear a dial tone.
2. Press #17. When prompted, enter your user name and your voicemail password.
3. Follow any remaining prompts.

The phone should reboot and register with MAXCS within a few minutes. For some Polycom phone models, it may take up to four minutes to finish the various provisioning steps. During this time, the phone is downloading system information, such as the MAXCS server IP address, and is retrieving the Polycom certificate. It is also downloading the MAXCS system number plan and any extension-specific features that the Administrator has enabled for your phone

Note: Some Polycom models may respond to your input a bit slowly. Please give the phone time to process the digits you have entered.

Troubleshooting

Here are tips to try if the phone does not configure correctly after a restart:

- Did you reset the phone to the factory defaults? If not, do so and then repeat the configuration process.
- Check that the firmware and BootROM on the phone are the correct version.
- Confirm that the firewall is not blocking ports 80 and 443.
- If the user's Record button or Directory Dialing feature is not working properly, press the **Save and Reboot Polycom Phone button** on the PBX > **AltiGen IP Phone Configuration** panel, on the **Polycom** tab. Or ask the user to unplug the phone, and then plug it back in, so that the phone will download the current configuration.

Basic Polycom Feature Configuration

This section describes the basic features that you can configure for Polycom phones. If an extension has a *Polycom Advanced Features* license, there are additional options that you can configure; see the section beginning on page 26.

Configure Time Display

Follow these steps to configure user time format.

1. In MAXCS Administrator, select **PBX > AltiGen IP Phone Configuration**. Select the extension.
2. On the *General* tab, select an *Offset* option; this is the IP phone's time offset relative to the MAXCS server. In most cases, Daylight saving time is automatically considered.
3. Select a *Format* option; this is the time display format. While there are three choices, Polycom IP phones only support two: 12-hour format and 24-hour format.

If you choose the third format, *AltiGen 12-hour format*, then the Polycom phone will display time in the 12-hour time format.

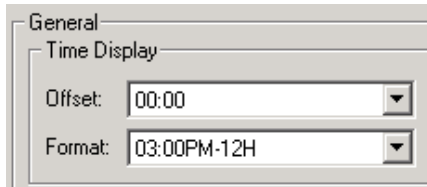


Figure 16: The Time Display settings

4. Reboot the Polycom phone so that your changes can take effect.

Configure TLS/SRTP Support

To enable Transport Layer Security (TLS) and Secure Real-Time Transport Protocol (SRTP),

1. In MAXCS Administrator, select **PBX > Altigen IP Phone Configuration**. Open the *General* tab.
2. In the section *SIP Transport*, you must select either both options or neither. You cannot select one and not the other.

This setting will be sent to the Polycom phone when the phone reboots.

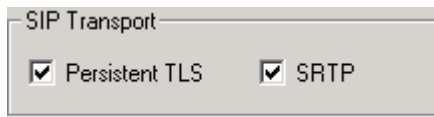


Figure 17: The SIP Transport checkboxes

Digit Map Support

A Digit Map is provided for Polycom phones. It defines when to send the dialed digits to MAXCS.

You can have MaxCS Administrator automatically generate a Digit Map, which will be based upon your current dialing plan. You do this via a button on the **System > System Configuration > Number** tab.

After you make any change to the system dial plan, click the **Generate Polycom Digit Map** button and a new Digit Map will be created base on the current dialing plan. The new Digit Map will overwrite the previous version.

If the previous Digit Map was a custom version, you will be alerted before you save the new Digit Map.

The default Polycom dial plan has also been enhanced to support redialing outbound calls from the phone history logs.

You can update the Digit Map and push the changes to Polycom phones as needed.

1. In MAXCS Administrator, select **System > System Configuration**. Open the **Number Plan** tab.

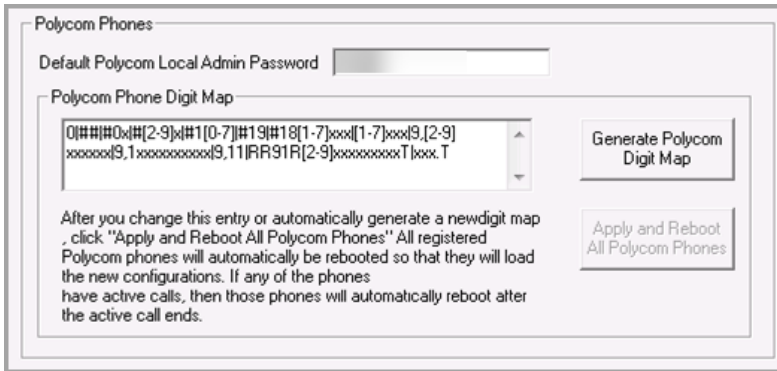


Figure 18: Sample Polycom Phone Digit Map

2. Update the Polycom Digit Map as needed; refer to page 49 for descriptions of the parameters.
3. Click **Apply and Reboot All Affected Polycom Phones**. All registered Polycom phones will be rebooted. For phones with active calls, those phones will reboot when the call ends.

Note: Changing the AltiGen first digit assignment does **not** update the value in the Polycom Phone Digit Map box.

User Password Consolidation

To simplify Polycom phone management, AltiGen has merged the various passwords in MAXCS into a single password. Specifically, the provisioning password, the voicemail password, and the SIP Registration have been combined into a single password: the voicemail password.

This has resulted in changes to two options on the *Extension Configuration* page, found on the *General* tab. Both renamed options are in the *IP Extension* group:

- *Enable Polycom or 3rd Party SIP Device*
- *3rd Party SIP Registration Password*

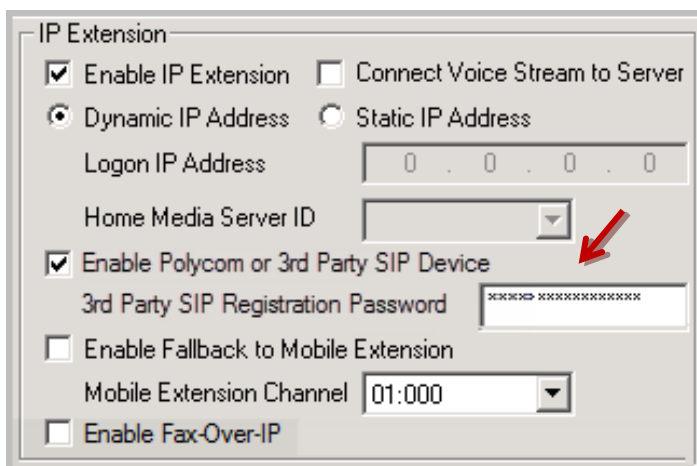


Figure 19: 3rd Party SIP Registration Password

To add a new Polycom extension, just set the extension's voicemail password; the *3rd Party SIP Registration Password* is no longer used.

Default Local Administrator Password

You can change the default Polycom administrator password (which is currently 456) via a new field on the **System > Number Plan** tab. This is the password for the Polycom phone itself; users must enter this password to access menus on the phone to change its configuration.

The system will initially generate a random 5-digit string; you can change this to a string between 4 and 32 characters.

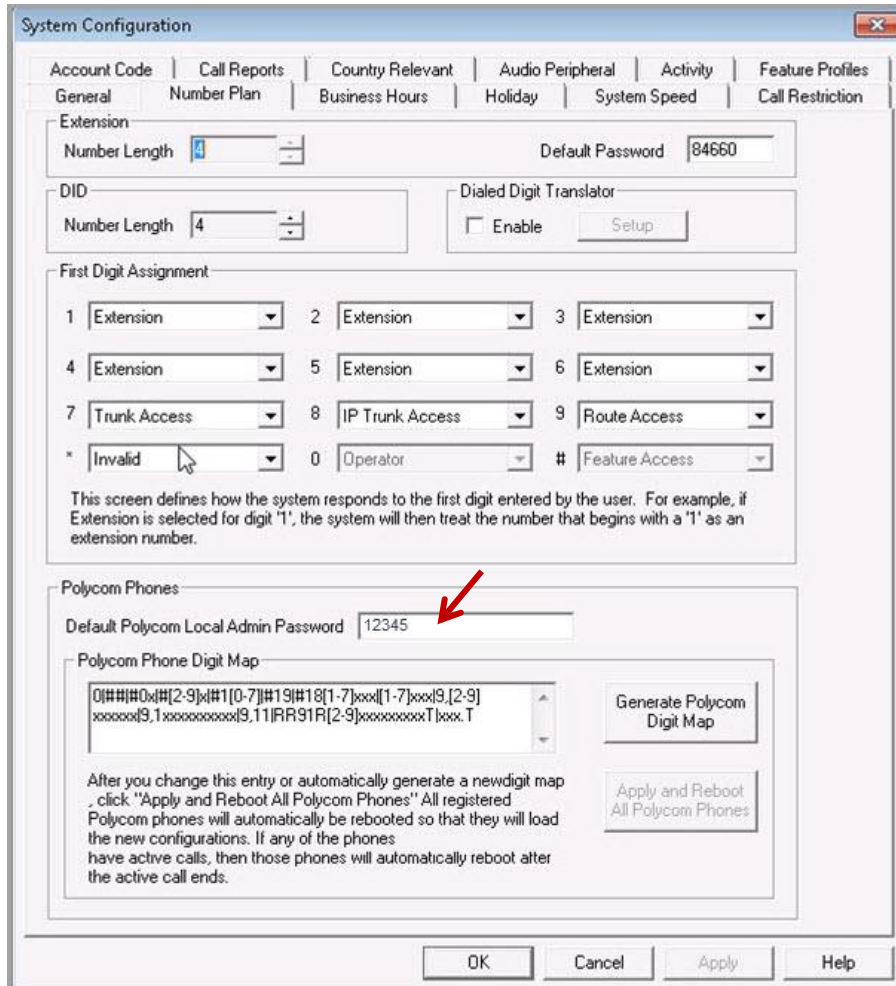


Figure 20: The Polycom default local admin password option

In addition, you can enable a Polycom phone so that it downloads this default password; select **PBX > Altigen IP Phone Configuration**, select the extension, and switch to the Polycom tab. Check the *Enable Password Control* option; the password from the **System > Number** tab will be copied over. You can change this entry as needed.

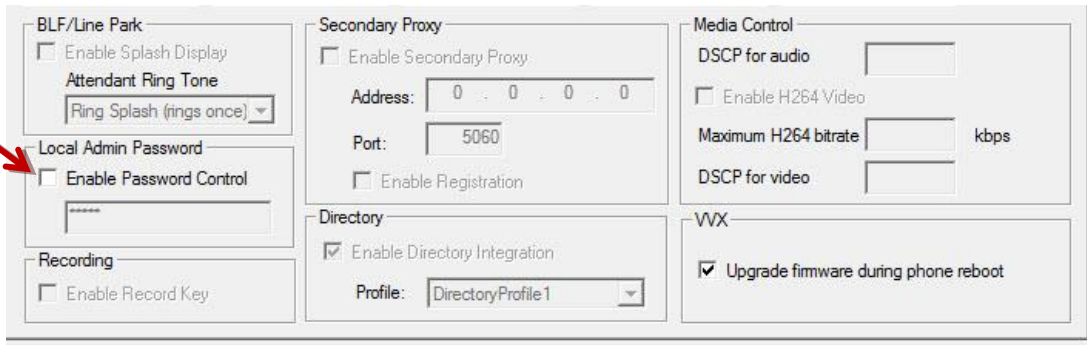


Figure 21: Enable password control for a Polycom phone

Considerations:

- When you enable password control, the next time the phone reboots the phone will update its Web Configuration Utility password to the one password that you specified. Even if the user later changes the password, at the next reboot the phone will revert to the password you specified.
- If you enable password control and enter a custom password, then you later clear that option's checkbox, the phone's password will stay as it is. In other words, MAXCS will not reset the password to the default password. For this reason, it is important to remember the password.

Mobile Fallback

You can now enable mobile fallback on Polycom phones, just as you can with AltiGen IP Phones. When enabled for an extension, if a Polycom phone loses its network connection, it will automatically fall back to a Mobile Extension.

To enable this for an extension,

1. In MAXCS Administrator, open the **PBX > Extension Configuration > General** tab.
2. Choose the extension.
3. Check the *Enable Fallback to Mobile Extension* option, and specify the appropriate mobile extension channel from the list.

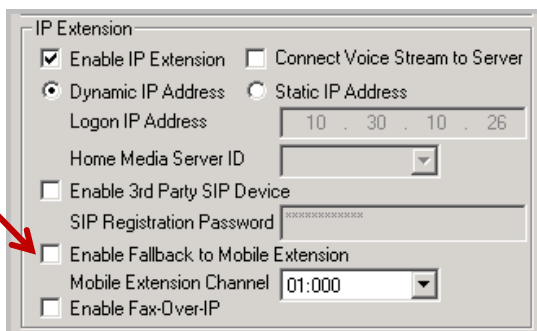


Figure 22: Enable an extension to fallback to a mobile extension

The Polycom phone will not automatically re-register after the fallback; users must press #17 to log in again. Those phones will become available after a few minutes.

Note: The *Secondary Proxy* option and the *Fallback to Mobile Extension* option are mutually exclusive for Polycom phones. In other words, you cannot enable both features for a Polycom phone.

E911 Support

Before applying the below steps on the phones, follow the instructions of Chapter 23 of MaxCS Administration Manual to provision Location IDs. The following steps use extension 286 as the example.

To enable E911 support for Polycom phones,

1. Follow the procedures in [Step 1: Reset Phones to Factory Default Settings](#) to restore the phone to factory default settings.
2. Follow the steps in [Step 9: Manually Configure Each Phone \(Optional\)](#) to configure `[extensiononnumber] xatgnemx [LID]` in the *Server User* field, along with other parameters listed in that section.

For example, `286xatgnemx2` would configure extension 286 with e911 Location ID 2.

DO NOT CLICK SAVE YET.

3. Enter `286` in the Line address of Line 1 under **Settings > Lines > Line1 > Identification > Address**.
4. Click **Save** and wait for the phone to reboot.
5. On the MaxCS server, open the `..\altiserv\PolycomCFG\Extension_xxx.cfg` file.
6. Modify the line `reg.1.auth.userid="286"` to:

```
reg.1.auth.userid="286xatgnemx2"
```

7. Save the file.
8. In MaxCS Administrator, select **PBX > Altigen IP Phone Configuration** and switch to the **Polycom** tab. Select the extension (286) and click **Save and Reboot Polycom Extension**.

Firmware Auto-Upgrade for VVX Models

MaxCS now supports an automatic firmware upgrade to Polycom VVX phones. This feature is supported only on the VVX models.

Two Upgrade Options: New Phones, Existing Phones

There are two separate options that you can use to upgrade VVX firmware. One is for new phones that you have recently acquired and are starting to provision; the other is for existing phones that are already associated with an extension.

- **For new Polycom VVX phones** – A new option is found on the **System > Polycom Configuration** page. Here, you see the firmware that is currently supported, along with a new checkbox, *Upgrade VVX firmware to 5.x.x.xxxx during phone reboot if the phone is not associated with an extension number*.

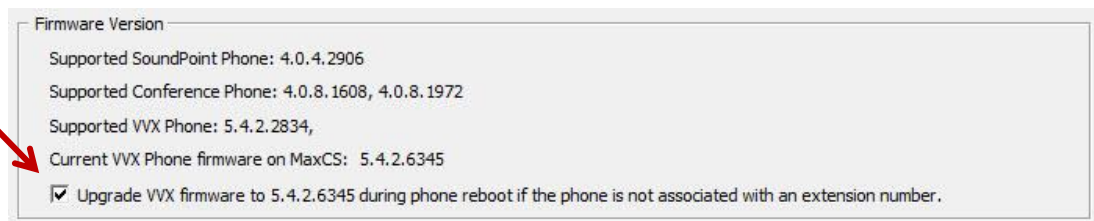


Figure 23: The upgrade checkbox for new Polycom phones

Check this option when you are adding new Polycom phones to your organization and you want to push the currently-supported firmware to phones immediately when they are plugged in.

This option is not selected by default.

This feature allows you to reduce the wait time for users logging into a new VVX phone; downloading firmware may take from 8-10 minutes.

- **For existing Polycom VVX phones** – An extension-specific firmware upgrade setting is found on the **PBX > Altigen IP Phone Configuration** panel, on the **Polycom** tab.

Use this option to control whether to push updated firmware to specific Polycom VVX phones in your organization the next time the phone reboots.

By default, this option is selected.

Enable Firmware Auto-Upgrade for VVX Models

This section describes how to configure VVX extension to automatically upgrade firmware.

1. Download new firmware (split edition) from the Polycom website.
http://downloads.polycom.com/voice/voip/uc_sw_releases_matrix.html
2. Extract all of the files to this folder on the MaxCS server: \Altiserv\PolyComFW\VVX
3. In MAXCS Administrator, select **System > Polycom Configuration** and check the option, *Always upgrade VVX firmware to ...during phone reboot if the phone is not associated with an extension number.*
4. If you want to automatically update firmware on a VVX extension when the phone reboots,
 - a. Select **PBX > Altigen IP Phone Configuration**.
 - b. Select the extension in the left panel. You will see the current firmware version on that Polycom phone in the right panel. The following figure illustrates the information for a phone that is currently running firmware version 5.2.2.0501.

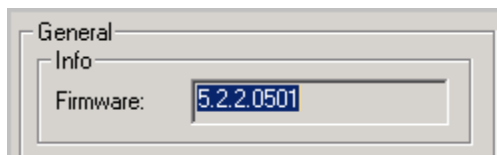


Figure 24: The Firmware field shows the Polycom phone's current firmware version

- c. On the *Polycom* tab, check the option, *Upgrade Firmware to... during phone reboot.*

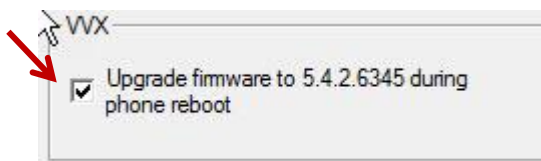


Figure 25: The upgrade option for a specific Polycom extension

The next time that the phone restarts, the firmware on that phone will automatically be upgraded to version 5.4.2.6345.

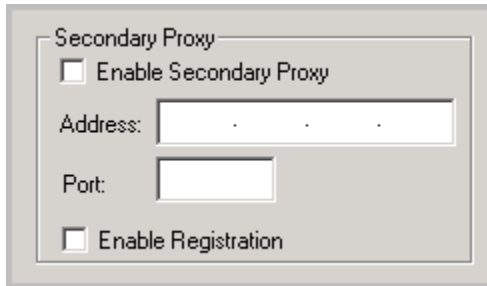
Secondary Proxy Support

You can now assign a secondary proxy server that Polycom phones will connect to when the main MAXCS server becomes unavailable. On this proxy server, some limited inbound and outbound calls can be performed. Only SIP/UDP is supported. When the main MAXCS server is back up, the phones will automatically reconnect to the main server, restoring all functionality.

The supported emergency gateways are AudioCodes MP11x, MultiTech MVP 410, and ADTRAN 900e series. For the MVP, only emergency dialing is supported and outbound DTMF is not supported. For configuration details, refer to those configuration guides in the AltiGen Knowledgebase.

To set a proxy server for an extension, for times when the main server is unavailable,

1. In MAXCS, select **PBX > AltiGen IP Phone Configuration**.
2. Switch to the **Polycom** tab.
3. Select the extension.
4. Check the option **Enable Secondary Proxy**.



The screenshot shows a configuration window titled "Secondary Proxy". It contains the following elements:

- A checkbox labeled "Enable Secondary Proxy" which is currently unchecked.
- An "Address:" label followed by a text input field.
- A "Port:" label followed by a text input field.
- A checkbox labeled "Enable Registration" which is currently unchecked.

Figure 26: The Secondary Proxy options

5. For the *Address* field, enter the emergency gateway's IP address and port number.
6. You can enable SIP Registration to the secondary proxy by checking that option. Refer to your gateway's configuration guide to determine whether to enable SIP registration.

Notes

- The *Secondary Proxy* option and the *Fallback to Mobile Extension* option are mutually exclusive for Polycom phones. In other words, you cannot enable both features for a Polycom phone.
- If the deployment supports both Polycom and AltiGen IP phones, the port number on the gateway must be 5060.
- You can enable TLS/SRTP for the extension; however, when the phone switches to the secondary proxy, it will use only SIP/UDP without encryption to avoid conflicts with the TLS certificate configuration.
Be aware that when you enable TLS/SRTP for an extension, if the phone switches to the secondary proxy, it will use only SIP/UDP without encryption. The extension will switch back to TLS/SRTP when the phone reverts to the main proxy.
- If the user has multiple phones with the same extension number, then all of these phones will have the same secondary proxy. Because of this configuration, remote phones may not work correctly when they cannot reach the main MAXCS server.
- If you use AudioCodes MP-11x as the secondary proxy, SAS (Standalone Survivability) will be used. The MP-11x supports up to 25 registered users when SAS is enabled. To work around this limitation, disable SIP registration on additional Polycom phones. When the phone is not registered to the MP-11x, it cannot receive calls from other extensions. When a PSTN call comes in to the MP-11x, the call cannot be forwarded to a Polycom phone that is not registered to that MP-11x. However, an unregistered Polycom phone can still make PSTN calls. The approach is to enable SIP registration **ONLY** on those Polycom phones that need to receive incoming calls while MAXCS is not reachable. For other SIP extensions, disable the SIP registration.

Limitations

- The secondary proxy/gateway must support digit manipulation. Polycom phones have a pre-loaded Digit Map, and the number sent to the gateway from the phones starts with a trunk access code (usually this is the digit 9). The proxy/gateway will need to remove (strip out) this digit before sending the number to PSTN.
- With an AudioCodes gateway SAS, the Polycom phones with SIP registration enabled will be able to dial extension-to-extension and receive inbound calls. Polycom phones with *Enable Registration* unchecked will only be able to place outbound calls while it cannot reach the main MAXCS server.
- If a Polycom phone must support the #17 feature, disable the SIP registration option. The phone will only be able to place outbound calls while it cannot reach the main MAXCS server.

Advanced Feature Configuration

If your organization has purchased *Polycom Advanced Features* licenses for some extensions, then those extensions will have some additional capabilities. Some features are available only on the VVX models.

- **Do Not Disturb** synchronization – Allows Polycom users to synchronize DND status between the phone and MAXCS clients
- **Busy Lamp Field (BLF)** – Allows Polycom users to view the status of monitored extensions, answer incoming calls for monitored extensions, and pick up parked calls on monitored extensions
- **Line Park** – Allows Polycom users to park a call.
- **Group Paging** – Allows Polycom users to be members of paging groups. Note that Polycom phones can send pages to both AltiGen paging groups and Polycom paging groups, but can only *receive* pages that have been sent from Polycom paging groups.
- **Call Control** – Allows Polycom users to answer calls, put calls on hold, and other call functions via a MAXCS client such as MaxAgent.
- **Transfer and Conference** – Allows Polycom users some enhanced transfer and conference abilities, beyond the basic operations included without the advanced license.
- **Device Auto-Answer** (VVX models only) – Allows Polycom users to set their clients (MaxAgent, MaxCommunicator, AltiConsole, MaxOutlook) to have the Polycom phone automatically answer incoming agent calls.
- **Corporate Directory Dialing** (VVX models only) – Allows Polycom users to choose contacts from a corporate Directory when making calls, transferring calls, and selecting conference participants.
- **Call Record button** (VVX models only) – Allows Polycom users to press a button on the VVX phone to begin recording the current call.
- **Expansion Module Support** (VVX models only) – MAXCS supports the Polycom VVX Expansion Module, which is a third-party device that is sold by Polycom to work with their model VVX IP phones.
- **Video Support**– VVX models only (VVX models only) – MAXCS supports video calls on Polycom IP phones. Supported devices include VVX500 and VVX600.

Note: On Polycom IP phones, these features may behave somewhat differently than on AltiGen IP Phones.

Assign Advanced Features Licenses to Polycom Phones

This section shows how to assign Polycom Advanced Features licenses to IP phones.

An extension must be assigned a 3rd-party license in order to enable a Polycom Advanced Features license for the phone.

1. In MAXCS Administrator, select **PBX > Extension Configuration** and confirm that the extension has a 3rd-party license. (Specifically, confirm that **Enable 3rd Party SIP Device** is checked).
2. Select **PBX > IP Phone Configuration**. Click the extension number in the left pane.
3. On the *General* tab, under the *3rd Party SIP Device* section, check **Enable Polycom Advanced Features**. If no more Advanced Features licenses are available, you will see a notification message.

DND Synchronization

You can configure an extension to synchronize Do Not Disturb (DND) settings between a Polycom IP phone and a MAXCS client.



Figure 27: Example of a Polycom phone display showing DND button

1. In MAXCS Administrator, select **PBX > Extension Configuration**. Select the extension.
2. Switch to the **Answering** tab.
3. In the *Do Not Disturb* section, select **Enable Do Not Disturb**. Click **Ok**.

This setting will be sent to the Polycom phone when the phone reboots.

Do Not Disturb Feature Profile (#33)

When you clear Call Management feature #33 – do not disturb (in **System Configuration > Feature Profiles**), both the DND button and the DND softkey will be disabled in Polycom phones that have been assigned to that profile. However, users will still see the disabled DND softkey until the phone is rebooted.

Similarly, when you *enable* feature #33, some Polycom models will enable the DND button right away; other models may need to be rebooted before the change will take effect.

You may want to advise your Polycom users that if DND does not appear to work shortly, they can reboot the phone to download the configuration change.

Busy Lamp Field (BLF)

The Busy Lamp field feature is designed for users who monitor and pick up calls to other extensions. You can configure up to four BLF slots per phone.

Note: You can now set a Global extension as a BLF softkey for Polycom phones, just as you can with AltiGen IP phones. However, you can only *monitor* the global BLF. You cannot answer a Global BLF call by pressing that button.



Figure 28: Example of a Polycom phone display showing BLF extensions on the left

To configure BLF for an extension,

1. In MAXCS Administrator, select **PBX > Extension Configuration**. Select the extension.
2. On the *Monitor List* tab, configure the extensions to monitor.
3. Select **PBX > AltiGen IP Phone Configuration**. Switch to the *Polycom* tab. Select the extension.

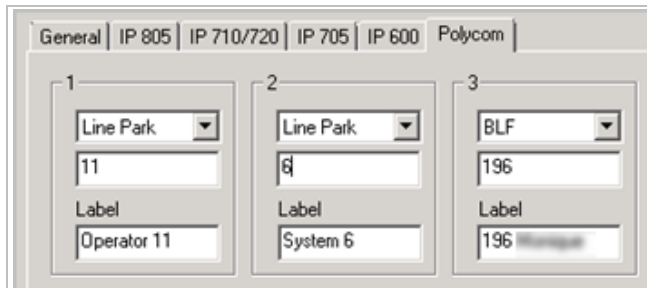


Figure 29: IP Phone Configuration, Polycom tab BLF fields

4. The page shows you ten customizable sets of fields; each one is a lamp slot. You can configure a BLF slot or a Line Park slot for each of the ten sets of fields. (Other options available for AltiGen IP phones are not available for Polycom phones.)

In any available slot (1-10), select **BLF** from the first pull-down menu.

5. In the middle field, enter the extension number; this must be an extension on the Monitor list (which you set up in step 2). If you enter an extension that you have already assigned to a slot, you will see a notification.

6. The **Label** field will populate automatically the first time you configure the slot, based upon the extension that you chose. This text will appear on the Polycom phone beside the extension number.

You can edit this string as needed to clearly indicate the name of the user, a group name, or any relevant string. Be aware that the character display length for this field will vary from one Polycom model to another. To avoid having this entry truncated on a phone's display, enter a relatively short label. We recommend that you check the phone display and layout to check any truncation and adjust the label accordingly.

- Configure whether incoming BLF calls should ring this extension, and if so, which ring tone should play. This setting applies to both BLF and Line Park slots.

To ring the extension when this monitored line has an incoming call, check **Enable Splash Display** and choose the ring tone. This setting applies to all monitored BLF and Line Park slots for this extension; you cannot customize rings for individual slots.

To disable such rings, clear the checkbox; the phone's light will briefly flash to signal an incoming call for the monitored extension.



Figure 30: Enable Splash Display options for BLF and Line Park

- Repeat this step for any other monitored extensions for this extension. Click **Apply** when you have finished configuring the lamp slots for this extension. Click **Save and Reboot** when you have finished all customization for this extension.

The changes will take affect once you reboot this Polycom phone.

Note: If you later remove the Polycom Advanced License from this extension, all ten of the BLF/Line Park slots in the Polycom tab (see Figure 29) will be disabled.

Line Park

The Line Park feature is a kind of call park method. You can configure line park spots for a user to park calls on the Polycom phone.

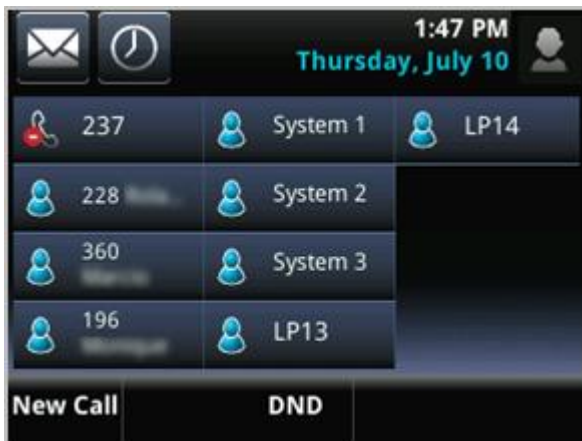


Figure 31: Example of a Polycom phone display showing Line Park slots LP13 and LP14

1. In MAXCS Administrator, set up Line Park groups (select **PBX > Line Park Configuration**). For detailed instructions, refer to the MAXCS Administration Manual.

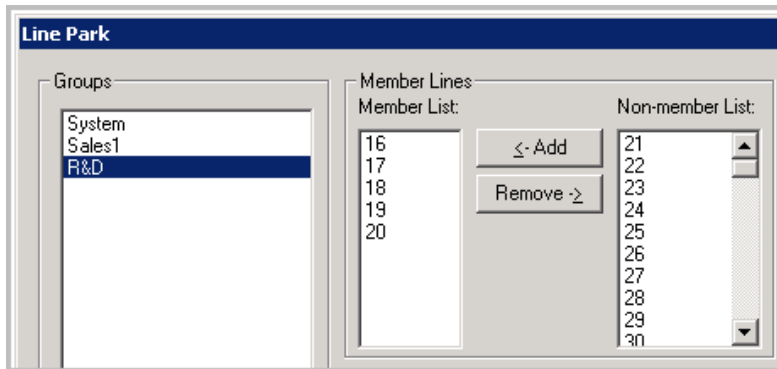


Figure 32: Configure Line Park Groups

2. Select **PBX > AltiGen IP Phone Configuration**. Switch to the *Polycom* tab. Select the extension.

The page shows you ten customizable sets of fields; each one is a lamp slot. You can configure a BLF slot or a Line Park slot for each of the ten sets of fields.

3. In any available lamp slot (1-10), select **Line Park** from an open slot's pull-down menu.

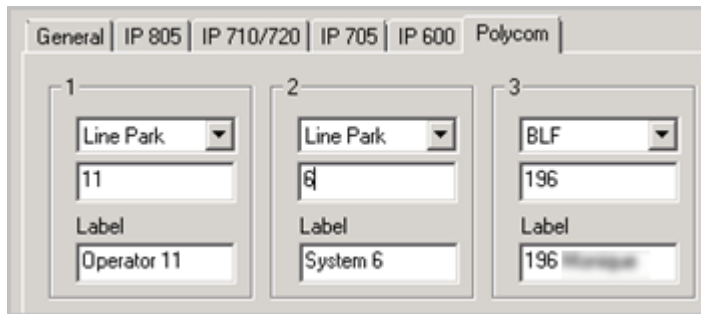


Figure 33: Set up Line Park slots

4. In the middle field, enter the line park number (which you set up in step 2). If you enter a number that you have already assigned to a slot, you will see a notification.

The **Label** field will populate automatically based upon the number that you entered. This text will appear on the Polycom phone beside the line park number.

5. (Optional) You can edit the text in the Label field as needed, to clearly indicate the name of the group.

Be aware that the character display length for this field will vary from one Polycom model to another. To avoid having this entry truncated on a phone's display, enter a relatively short label. We recommend that you check the phone display and layout to check any truncation and adjust the label accordingly.

6. Repeat this step for any other Line park slots for this user. Click **Apply** when you have finished configuring the lamp slots for this extension. [same steps as earlier]

The changes will take effect after the Polycom phone reboots.

Note: The Polycom Line Park feature supports all of the MAXCS standard Line Park features except for one. The **Disable ring tone on IP phone** checkbox, even when checked, is not supported. The user must tap the **Silence** softkey to stop the ringing.

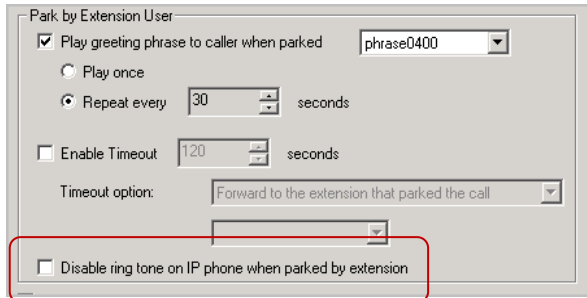


Figure 34: The Disable ring tone... setting is not supported

Client Auto-Answer Changes (VVX Models)

In previous releases, agents with Polycom VVX phones could both enable the Auto-Answer feature as well as set the default voice path (speaker or handset) in a single setting the client's **Configuration > Extension** page.

Due to the specific way that Polycom handles voice paths, AltiGen has changed how users configure this feature. Configuration now requires two separate steps.

1. To enable or disable the client Auto-Answer feature, users still open the MaxAgent *Configuration* page. The choices now are **Enable** and **Disable**. (The choice in earlier releases was *Speaker* or *Headset*).

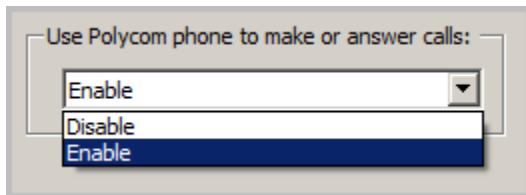


Figure 35: Changes to the MaxAgent Auto-Answer feature

2. Once the feature has been enabled, the default voice path is, by default, the speaker. If users want to switch the default voice path to the headset, they must press the **Headset** button twice while the phone is idle. The Headset button will blink slowly, to indicate that Headset is now the default voice path.

To switch the default voice path back to the speaker, users press the **Speaker** button. (There are two other ways to switch the path to the speaker: Users can pick up the handset or press the **Headset** button once.)

Users can identify the current voice setting by looking at the Headset button on the phone; if the headset button is blinking, the default path is the headset. If that button is not blinking, the default path is the speaker.

Note: With incoming calls, pressing the **Headset** button will answer the call but will not reset the default.

Please make your Polycom VVX users aware of this change.

Polycom Paging Groups

Polycom extensions can send and receive one-way audio announcements to other Polycom users who are in the same Polycom paging group.

Note that Polycom paging works differently from AltiGen IP phone paging.

There are two different sets of Paging Groups in MAXCS:

- Polycom paging groups (paging group members must have a *Polycom Advanced Features* license)

- AltiGen IP Phone paging groups

Note that Polycom extensions can send pages to AltiGen IP Phone paging groups, but cannot *receive* pages from AltiGen IP Phone paging groups.

Polycom Paging Groups can include only users of Polycom phones who have a Polycom Advanced Features license assigned to their extension. Be aware of the following considerations while configuring Polycom Group paging for an extension:

- Polycom Paging Groups can only work with Polycom phones.
- In order to add an extension to a Polycom Paging Group, the extension must have a registered Polycom phone and it must have a *Polycom Advanced Features* license assigned to it.
- A total of 25 Polycom paging groups are available.
- Each Polycom Paging group must be assigned to a channel ID, 1-25. Channel IDs are shared across multiple MAXCS systems on the same network. In other words, phones subscribed to a Paging group assigned to channel 6 will receive pages for channel 6, no matter which MAXCS system they are registered to.
- Polycom phones must be on the same network in order to send and receive Polycom group pages. If an extension is relocated, check its paging group configuration.
- Polycom phones allow three paging groups to be specified, *Default*, *Priority*, and *Emergency*. MAXCS Administrator assigns these three special paging groups to channel ID 1, 24, and 25, respectively.

Important: We recommend that you set up channel ID 24 for important pages. Because this channel is a priority channel, it will override other channels (except the Emergency channel, 25). It will also interrupt active calls and line parked calls.

- The **Default** group (when enabled) is always shown first in the Paging Group display.
- A **Priority** group page will interrupt Normal pages or active calls.
- An **Emergency** page will interrupt Normal pages, Priority pages, and active calls and plays out at near maximum volume even if Do Not Disturb (DND) is turned on.

Configure Polycom Paging

Once you have enabled Polycom Paging for an extension, the user can subscribe to paging groups, change the default paging group, configure whether pages play during active calls, and send pages.

To configure Polycom Paging groups,

1. In MAXCS Administrator, select **PBX > Paging Group Configuration**.
2. Click **Add** to add a new group.
3. Enter the paging group number.
4. Check **Polycom paging group**.
5. Assign an available paging channel ID number for the group (1-25).

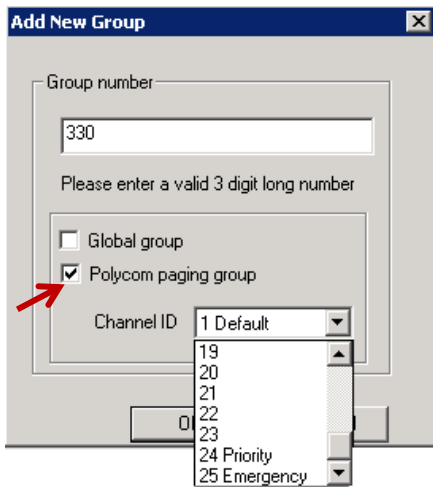
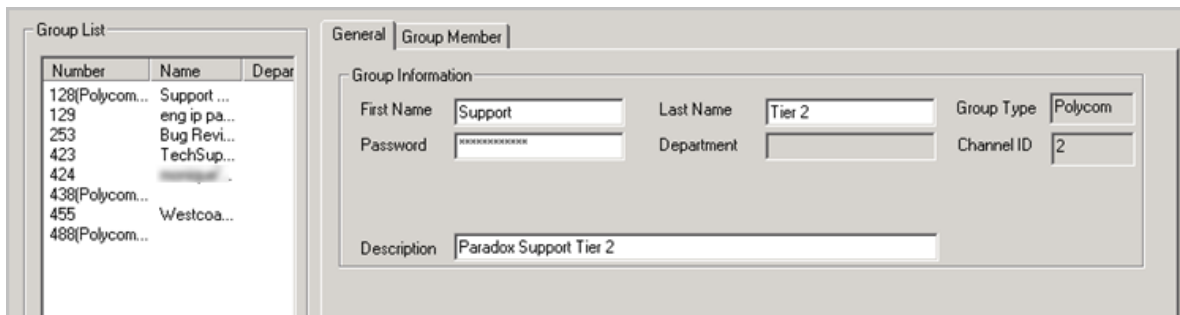


Figure 36: Add a new paging group

6. Click **OK**. You will see the new group in the *Paging Group* page, in the left panel. Polycom groups will show (Polycom) to the right of the number.
7. Modify the group information as needed. For the *First Name* and *Last Name* fields, enter details up to a maximum of 32 characters. You can also enter a description for this group.



Number	Name	Depar
128(Polycom...	Support ...	
129	eng ip pa...	
253	Bug Revi...	
423	TechSup...	
424		
438(Polycom...		
455	Westcoa...	
488(Polycom...		

Group Information			
First Name	Support	Last Name	Tier 2
Group Type	Polycom	Department	
Password	*****	Channel ID	2
Description	Paradox Support Tier 2		

Figure 37: Information for the new Polycom paging group

8. To add extensions to Polycom Paging groups, select the group in the list and open the *Group Member* tab. Move extensions from the *Not Member* list to the *Member* list. Click **Apply**.
9. Click **Reboot affected Polycom phones**. This sends the updated configuration to any Polycom extensions that are impacted by the changes; phones with active calls will be rebooted after the call ends. After the phone reboots, the members of the paging group will see a new softkey on their Polycom phones for that paging group.

Device Auto Answer

Users can have the Polycom phone automatically answer calls by using the feature in MaxAgent, MaxCommunicator, AltiConsole, and MaxOutlook. The extension must have a *Polycom Advanced Features* license to use this feature.

In previous releases, agents with Polycom VVX phones could both enable the Auto-Answer feature as well as set the default voice path (speaker or handset) in a single setting the client's **Configuration > Extension** page.

Due to the specific way that Polycom handles voice paths, AltiGen has changed how users configure this feature. Configuration now requires two separate steps.

1. To enable or disable the client Auto-Answer feature, users still open the MaxAgent *Configuration* page. The choices now are **Enable** and **Disable**. (The choice in earlier releases was *Speaker* or *Headset*).

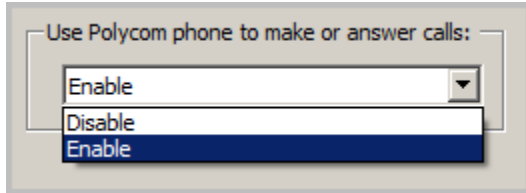


Figure 38: Changes to the MaxAgent Auto-Answer feature

2. Once the feature has been enabled, the default voice path is, by default, the speaker. If users want to switch the default voice path to the headset, they must press the **Headset** button twice while the phone is idle. The Headset button will blink slowly, to indicate that Headset is now the default voice path.

To switch the default voice path back to the speaker, users press the **Speaker** button. (There are two other ways to switch the path to the speaker: Users can pick up the handset or press the **Headset** button once.)

Users can identify the current voice setting by looking at the Headset button on the phone; if the headset button is blinking, the default path is the headset. If that button is not blinking, the default path is the speaker.

Note: With incoming calls, pressing the **Headset** button will answer the call but will not reset the default.

Please make your Polycom VVX users aware of this change.

Instructions are also included in the client documentation.

Global Extension Relocation

Users can now relocate their Polycom phones within the Enterprise domain.

Note: If you have enabled the *IP Phone Redirect* feature, the *Polycom Global Relocation* feature will be disabled. You can implement one of these features, but not both.

Requirements:

In order to use this feature, your environment must meet the following requirements:

- A third-party IP Device license must be assigned to the extension.
- A Polycom Advanced Features license must be assigned to the extension.
- A Polycom Advanced Features license is required on the server to which the extension is being relocated. For example, assume active global extension 200 is on server A. A Polycom phone on server B enters #17, and then enters extension number 200 and the password. When the server B extension is activated, MaxCS automatically checks for a *Polycom Advanced Features* license. If no *Polycom Advanced Features* license is available on server B, then this relocation request would fail.

To accommodate this ability, a checkbox on the Enterprise Manager > **User** > **Resolve** tab has been renamed to *Allow user to relocate a global extension using #17/#27*.

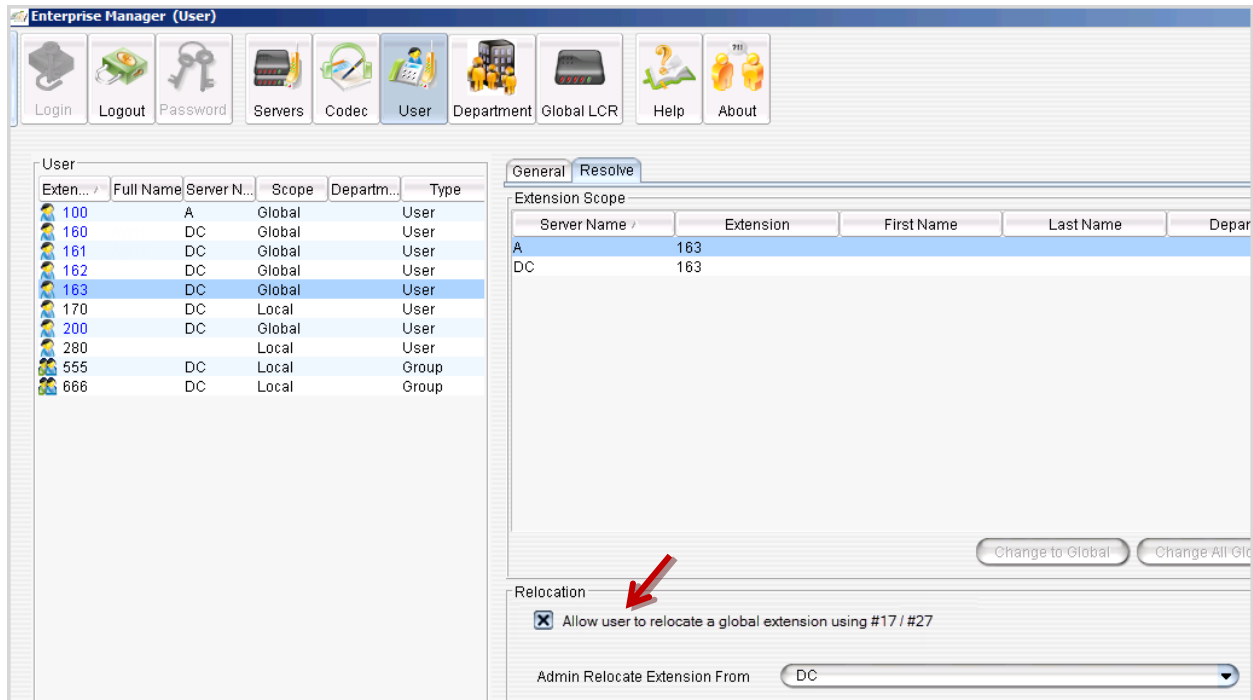


Figure 39: Relocation option

The following data will be relocated from the remote server; the administrator should configure the remaining settings after the first relocation:

- First Name
- Last Name
- Password
- Department
- DID Number

To relocate the phone, users follow these steps:

1. Connect the phone.
2. Enter the extension number and the voicemail password.

Answer via Clients

Users with a *Polycom Advanced Feature* licenses will be able to answer calls via the Polycom phone or a client application.

The MaxCS Clients are now synchronized with Polycom phones; regardless whether you used the client or the Polycom phone to place a call on hold, you can retrieve the call from either the client or the phone.

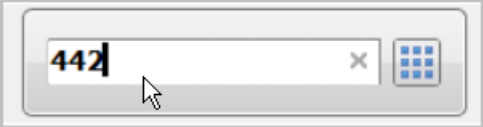
Client Transfer and Conference Enhancements

Users with Polycom VVX phones can perform basic call actions, including answering calls, placing calls on hold, transferring calls, and joining or starting conference calls.

Users with the *Polycom Advanced Features* licenses have additional ways to join and initiate conference calls and perform transfers within the client applications MaxAgent, MaxOutlook, MaxCommunicator, and AltiConsole.

The following table summarizes the various methods to perform each operation.

Transfer Methods with Polycom Phones

Transfer Action	Procedure in the Client
Blind Call Transfer	<p><u>Method 1: Transfer button</u></p> <ol style="list-style-type: none"> 1 Highlight the connected call. 2 Enter the number or contact in the Dial box to indicate where to transfer the call. 3 Click Transfer. (In AltiConsole, click Blind Transfer).  <p><u>Method 2: Right-click menu</u></p> <ol style="list-style-type: none"> 1 Highlight the connected call. 2 Right-click a dialable entry and select Blind Transfer. <p><u>Method 3: Drag and Drop, Directory tab</u></p> <ul style="list-style-type: none"> • Drag a call to an extension on the <i>Directory</i> tab. This will perform a blind transfer.
Supervised Call Transfer	<p><u>Method 1: Transfer button</u></p> <ol style="list-style-type: none"> 1 Call the third party. 2 Highlight the call on hold. 3 Click Transfer. <p><u>Method 2: Transfer button (not supported in AltiConsole)</u></p> <ol style="list-style-type: none"> 1 Call the third party. After discussion, place that call on hold. 2 Pick up the other call. 3 Highlight the connected call. 4 Click Transfer. 5 Select the transfer target from the list of calls on hold. 6 Click Transfer. <p><u>Method 3: Right-click menu</u></p> <ol style="list-style-type: none"> 1 Call the third party. 2 Right-click the call on hold and select Call Transfer. <p><u>Method 4: Directory tab</u></p> <ol style="list-style-type: none"> 1 Put the first call on hold. 2 Call the target extension on the <i>Directory</i> tab and discuss the call as needed. 3 Right-click the original call and select Transfer.

Additional Transfer Options

You can also transfer calls to other calls that are on hold:

- While on a call, if the user highlights a call on hold and presses **Transfer**, the held call will be transferred to the connected call.
- If the user highlights the connected call and presses **Transfer**, the system will open a pop-up listing the calls on hold. The user can select one of those on-hold calls to complete the transfer.

Conference Methods with Polycom Phones

Conference Actions	Procedure in the Client
Initiate an ad-hoc conference	<p><u>Method 1: Conference button</u></p> <ol style="list-style-type: none"> 1 Call the third party. 2 Highlight the connected call and click Conference. 3 Select one of the conference entries on hold and click Conference. <p><u>Method 2: Conference button</u></p> <ol style="list-style-type: none"> 1 Call the third party. Put the call on hold. 2 Highlight the call on hold and click Conference. <p><u>Method 3: Right-click menu</u></p> <ol style="list-style-type: none"> 1 Call the third party. Put the call on hold. 2 Right-click the call on hold and select Join To Conference. <p><u>Method 4: Drag & Drop (not supported by AltiConsole)</u></p> <ol style="list-style-type: none"> 1 Call the third party. 2 Drag a connected call entry onto a call on hold, or drag a call on hold entry onto a connected call entry.
Join a call to an existing conference	<p><u>Method 1: Conference button</u></p> <ol style="list-style-type: none"> 1 Call the next party. 2 Highlight the connected call. 3 Click Conference. <p><u>Method 2: Right-click menu</u></p> <ol style="list-style-type: none"> 1 Call the next party. 2 Right-click the connected call and select Join To Conference. <p><u>Method 3: Drag & Drop (not supported by AltiConsole)</u></p> <ol style="list-style-type: none"> 1 Call the new party. 2 Drag the connected call entry onto any of the hold conference entries.

Directory Dialing (V VX)

Note: In order to implement this feature, you must enter an FQDN instead of an IP address in *Step 4: Request the Certificate* on page 12.

Polycom users can now choose contact from a corporate directory to place calls, transfer calls, and perform other basic functions.

This feature requires a *Polycom Advanced Features* license, and is only supported on the following V VX model IP phones. (The feature is not disabled for other Polycom models, but it is only supported on V VX phones.)

- V VX 300/310
- V VX 400/410
- V VX 500
- V VX 600

A default Directory Profile, named *System*, is provided by default. It includes all extensions. You can configure additional Directory Profiles as needed.

Note: Polycom phones have a “Directories” button, which shows recent calls. The Directories that you create are different; they are company Directories. You may need to explain the difference to your users.

Adding Polycom Directory Profiles

To configure additional Polycom directories,

1. Choose **System > Polycom configuration**.
2. Just below the list of profiles on the left, click **Add**.
3. Enter a name for this profile.
4. Using the **Add** and **Remove** buttons, build this profile by selecting the departments and extensions that you want to include in the profile.

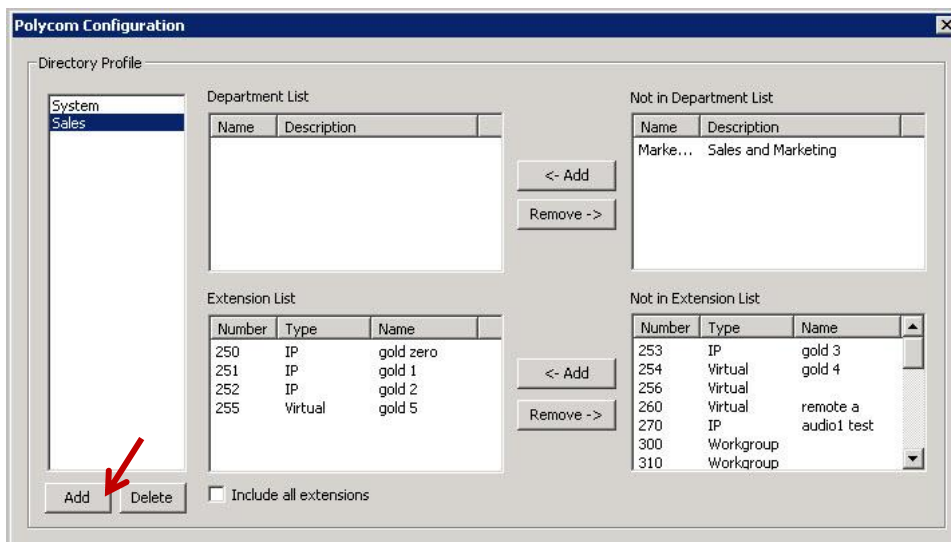


Figure 40: Configure Directory profiles for a Polycom VVX phone

Offering Directory Profiles for Polycom Users

To enable directory dialing for a Polycom VVX user,

1. Select **PBX > AltiGen IP Phone Configuration**.
2. Select the extension. On the *Polycom* tab, check the option *Enable Directory Integration*.

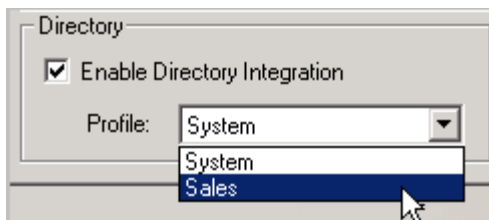


Figure 41: The option to enable directory integration for a Polycom extension

3. For the *Profile* field, select which Directory Profile this extension should use.

The change will take effect the next time that phone is rebooted.

Once you have configured the directory profiles in MaxAdministrator and enabled directory integration for Polycom extensions, those users can tap a **Directory** softkey to display contacts within the directory. Users can also search the directory to find a contact.



Figure 42: A sample Directory view on a Polycom VVX phone

Using the Directory to Transfer Calls

To ensure that your users can transfer calls, you can perform the following steps with two phones. These steps are also included in the *MAXCS Polycom VVX User Guide*.

Before you begin, make sure the Directory feature is correctly enabled on Polycom phone A. Make sure this extension is working properly by placing and answering calls with it.

1. Connect a call between phone A and the other phone.
2. (Recommended) While on the active call, on phone A, select **Directory**. Navigate the list to locate the transfer target, but **do not** select that entry.
3. If your phone is a model VVX 300 or VVX 400, press the physical **Transfer** key on the phone.
If your phone is a model VVX 500 or VVX 600, press the **Home** button a few times until the Transfer soft key appears along the bottom of the display. Then tap the **Transfer** softkey.
4. Press the **Home** button and select **Application**. If you performed step 2, the Directory page will open to show the target extension. If you did not perform step 2, you will need to scroll to find the target extension.
5. Choose the target extension and select the “call” softkey. The line will ring. Either wait for the agent to pick up the call and then choose **Transfer** (for a *Supervised* transfer), or choose **Transfer** while the line is ringing for a *Blind* transfer.

We recommend that you perform step 2 to avoid hearing a constant dial tone while searching for the target contact in step 4.

Using the Directory to Conference Calls

Your users will follow this general process to choose a contact from the Polycom Directory to join a conference call:

1. While you are on a call with another person, select **Directory**. Navigate the list to locate the next contact to join in a conference target, but **do not** select that entry.
2. If your phone is a model VVX 300 or VVX 400, press the physical **Conf** key on the phone.

If your phone is a model VVX 500 or VVX 600, press the **Home** button a few times until the Conf softkey appears along the bottom of the display. Then tap the **Conf** softkey.

3. Press the **Home** button and choose **Application**. If you performed step 2, the Directory page will open to show the target extension. If you did not perform step 2, you will need to scroll to find the target extension.
4. Choose the contact and tap the “call” softkey.

Call Record Button (VVX)

Note: In order to implement this feature, you must enter an FQDN instead of an IP address in *Step 4: Request the Certificate* on page 12.

To enable a *Record* softkey for Polycom VVX extension,

1. In MAXCS Administrator, select **PBX > AltiGen IP Phone > Configuration**.
2. Select the extension and switch to the **Polycom** tab.
3. Check the option *Enable Record Key*.

This option is initially disabled.

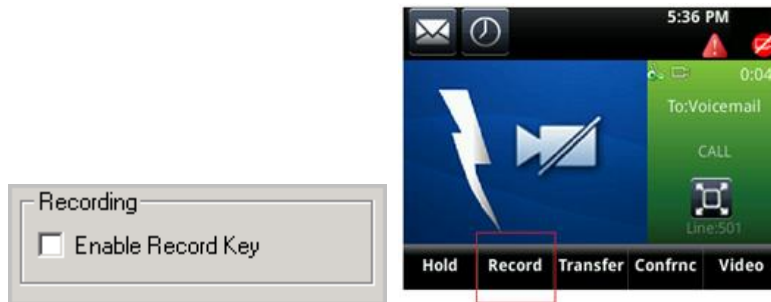


Figure 43: The recording option for a Polycom extension; the Record softkey shown on the VVX phone

Once this feature has been enabled, the VVX extension user can tap a **Record** softkey on the Polycom phone to choose to record the call in progress. A new page opens, with a **Record** button for users to click.

The content of this recording page is based on the Call recording option of the extension or the workgroup. Recording is not available when the extension or workgroup recording method in the call recording option set as *Disable* or *Auto record to central location*. The recording button only supports the recording method *Record on demand to central location* or *Record on demand to extension VM*.

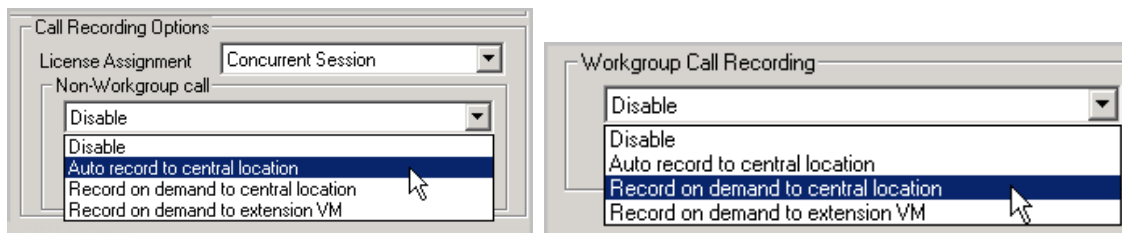


Figure 44: The Call Recording options for extensions and workgroups

The recording buttons only appears when the phone is connected, is part of a conference call, or is monitoring a call.

Expansion Module Support

MaxCS now supports the Polycom VVX Expansion Module, which is a third-party device that is sold by Polycom to work with their model VVX IP phones.

The BLF slots that you configure will overflow from the VVX phone onto the expansion module. In other words, the BLF slots will fill up all available slots on the Polycom phone's LCD display first, then will begin filling up the expansion module.

Line Park Blinking

Line Park blinking on the expansion module can become erratic under some specific conditions:

- Line Park can handle a reasonable amount of traffic on the extension being monitored. If the call volume is too high, it will cause high CPU usage and impact the usability of the phone.
- Consider turning off the BLF/Line park "Splash Display" feature: Select **PBX > IP Phone Configuration > Polycom > BLF/Line Park** and clear the option **Enable Splash Display**. This will improve the performance to some degree.
- When a call is answered, a popup message may block the user's BLF and Line park screen the phone. Users can press the **Home** button one or more times to switch to the background and other screens.
- If the user has a parked or BLF call, the user can press the **BLF/Line park** key for 3 seconds to get the caller ID of the BLF ringing or parked call.
- If an agent is using the BLF and Line park features a lot, but the phone switches to power saving mode too often, have the user open the phone's menus and select **Setting > Basic > Power saving** and adjust the office hours and timeout settings to the maximum value. This will reduce the frequency of the phone switching to power saving mode.

Crowded BLF/Line Park Display

If a VVX 500 or VVX 600 model has an expansion module, the BLF/Line Park display on the phone may become too crowded.

To alleviate this over-crowding, you can limit the number of columns that appear on those phones. You edit a configuration file to accomplish this.

1. In Notepad, open the file `Extension_xxx_user.cfg` in the folder `C:\Altiserv\PolycomCfg`, where `xxx` is the extension number.
2. Insert `<numOfDisplayxx up.numOfDisplayColumns="x" />` between the xml tag `<phone1>` and `</phone1>`.
`x` = the number of columns you want to appear; enter a value from 1-4
3. Save the file. Reboot the phone.

Here are the maximum number of columns that you can display:

- VVX 500: 3 columns (if you specify 4, only 3 will appear)
- VVX 600: 4 columns

```

...
<phone1>
...
<numOfDisplayxx up.numOfDisplayColumns="1" />
...
</phone1>

```

Polycom-to-Polycom Video Support

In this release, MaxCS supports video calls on Polycom IP phones for Softswitch deployments. Video calls are not supported on Max1000 or Office systems.

Supported devices include VVX500 and VVX600 models (these models require a separate Polycom VVX USB camera).

Considerations:

- Video conferences are not supported; only direct peer-to-peer calls are supported.

To configure support for video calls,

1. In MaxCS Administrator, open *Boards View*, double-click the **HMCP** board, and click **Board Configuration**.
2. In the *Video Forwarding Resource* section, assign a number of resources for video.

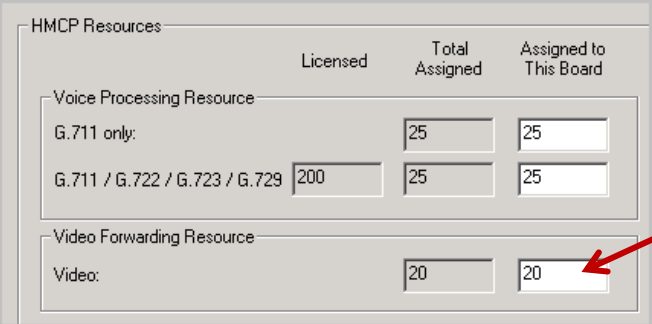


Figure 45: The field to specify the number of resources to dedicate to video

You must assign sufficient video forwarding resources. Be aware that the larger the number that you assign, the more overhead you will impose on your system.

3. Open *Enterprise Manager*. For the profile that the Polycom phones use, check the **Enable H264 Codec** option. Note that MaxCS does not support video over SIP Tie trunks or SIP Trunks.

In order to support video calls between VVX phones at multiple sites, the 'Default' codec must have the **Enable H264** option checked.

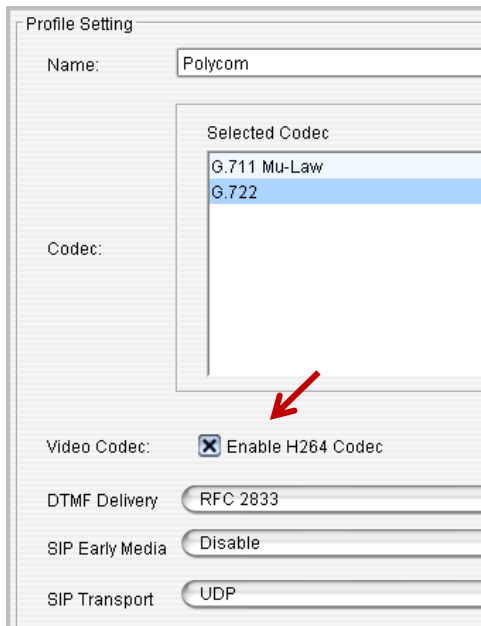


Figure 46: The option to enable video codec (in Enterprise Manager)

4. Close *Enterprise Manager*. In *MaxCS Administrator*, select **PBX > Altigen IP Phone Configuration**. For each Polycom extension that will have video enabled, make sure that the option **Enable Polycom Advanced Features** is checked (on the *General* tab).

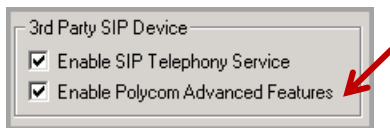


Figure 47: Enable the Advanced Features option

5. Switch to the *Polycom* tab in that window. For each Polycom extension that will have video enabled, check the option **Enable H264 Video** and set a maximum bitrate for Polycom phones; the default is 768 kbps. Set *DSCP for video* to **AF41**.

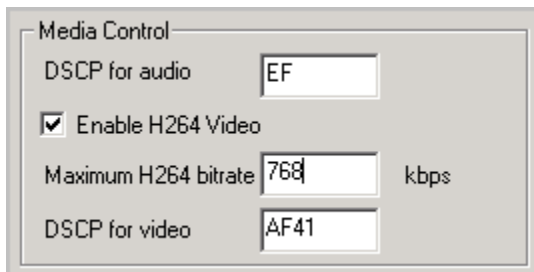


Figure 48: Media settings for Polycom video

6. If SRTP and TLS are enabled on these phones, select **PBX > Extension Configuration**. For each Polycom extension that will have video enabled, check the option **Connect Media Stream to Server** on the *General* tab. (This requirement may not be needed in future Polycom releases.)



Figure 49: Enable the option "Connect Media Stream to Server" for each extension

7. Reboot the phones.
8. Make a direct call between two of the video-enabled Polycom phones and test that the video appears on both phones.

Operational Notes

- If two Polycom phones are on a video call, and one phone conferences in a third participant, video will be lost. Video will not return even when the third participant drops out of the conference.
- When a Polycom phone transfers a video call to another party, the video will freeze for the user making the transfer. The user can click Stop/Start to resume the video.

Using an FTP Server to Update Firmware Files

For some organizations, extensions do not have access to the internet, which can make it difficult to update firmware on Polycom phones. For these situations, you can use an FTP server to update the firmware.

In these instructions, the open-source FTP server *FileZilla* is used to demonstrate how to update firmware files to a Polycom IP phone. If you are using a different FTP server, the configuration procedure will be similar. This FTP server and Polycom phones to be upgraded should be on an isolated LAN, to minimize any potential problems that may arise.

For a Private Cloud or On-Premise configuration, consider installing the FTP server on the MAXCS server. Port forwarding for FTP is required if the MAXCS server is behind NAT.

Note: We recommend that you use these procedures only in environments where you cannot follow the procedures described earlier in this manual.

Set up the FTP Server

Note: Stop other FTP servers while using FileZilla as an upgrade server for Polycom IP phones.

1. Download FileZilla FTP Server from <http://filezilla-project.org/download.php?type=server>.
2. Set up the FTP user and home directory:
 - A. Start FileZilla Server from the **Start** menu and connect to the server. (The *Administration password* field is blank by default.)

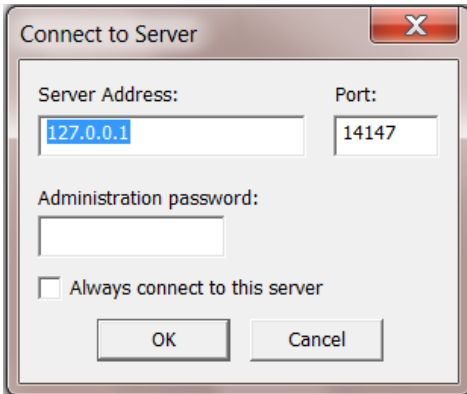


Figure 50: Set up the FTP Server

- B. From the **Edit** menu, select **Users**.
- C. In the **General** page, enter a username and password. The Polycom factory default values are user "PlcmSplp" and password "PlcmSplp" - **the password is case-sensitive**.

Note that you can use a different username and password – they must match the user name and password that you enter in the *Provisioning Server* page of the Polycom phone tool in step 3 on page 46.

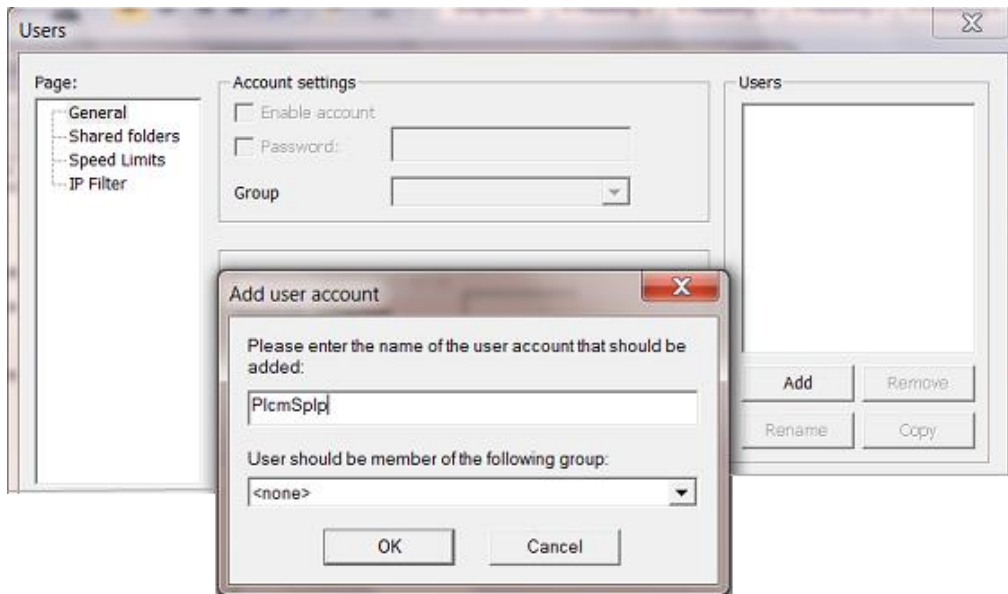


Figure 51: Enter a username and password

- D. Click the **Shared folders** page and add the directory that you want to use as the FTP root (for example "C:\FtpRoot"), and then click the **Set as home dir** button to make it the home directory.
- E. Check all of the privileges in the *Files and the Directories* sections and click **OK**.

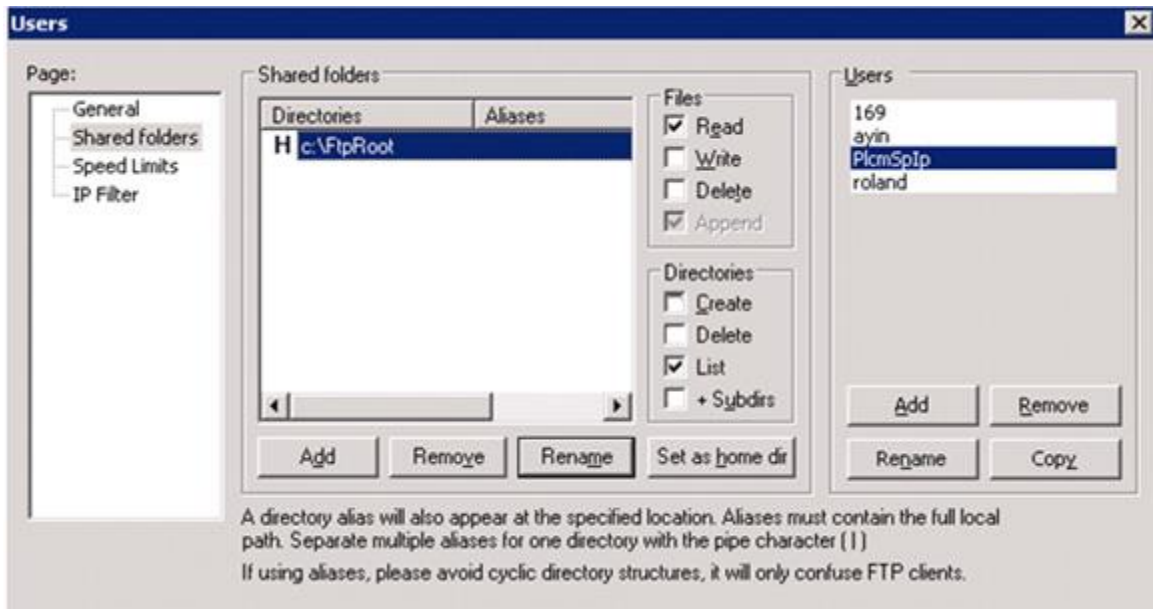


Figure 52: Select the privileges

Update Firmware and the Default Configuration Files

Firmware can be downloaded from the “Polycom Release Matrix” at this URL:

http://downloads.polycom.com/voice/voip/sip_sw_releases_matrix.html

For SoundPoint phones, in order to update the firmware from the *Software Update* page, a version 5.x.x.x Updater (BootROM) is required. For SoundPoint phones, choose the 4.0.4 Split version.

Store the firmware file in the FTP root, and store the unzipped files under the FTP root (use the folder that you specified on page 45).

1. On the VVX or SoundPoint phone’s menu, under **Settings > Status > Network > TCP/IP Parameters**, determine the IP address of the phone. In this example, the address is 192.168.1.76.
2. Open a web browser to visit the IP phone’s configuration page (in our example, this URL is <http://192.168.1.76>. Log into the web interface (as admin) and enter **456** as the password.
3. Select **Settings > Provisioning Server**
 - Set the **Server type** to **FTP**
 - Set the **Server Address** to the IP address that the Filezilla application is running on
 - Set the **Server User** to the username that you added in Filezilla (from step C on page 45)
 - Set the **Server Password** to the password that you applied in Filezilla (from step C on page 45)
4. Expand the **DHCP Menu** section at the bottom of the window. Ensure that the **Boot Server** dropdown is set to **Static**.

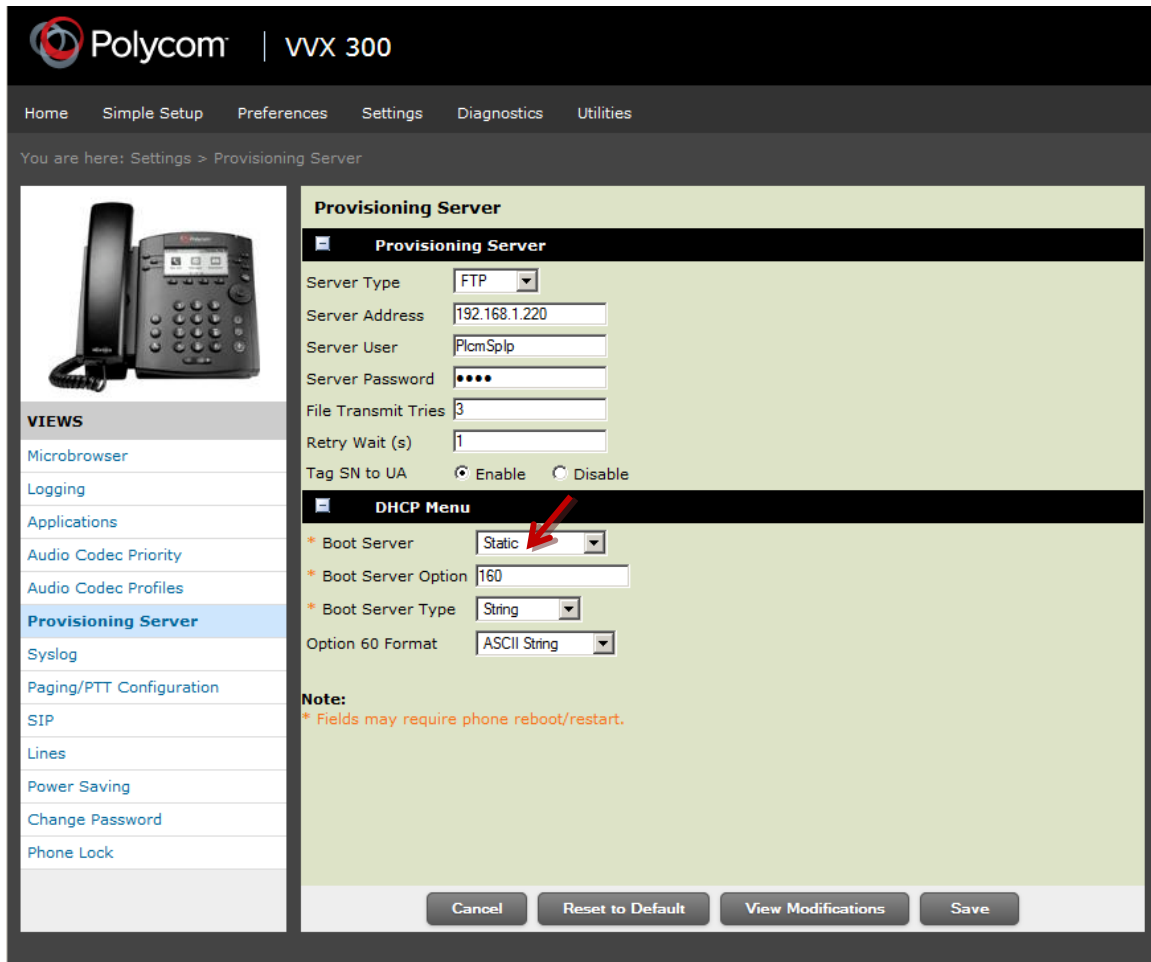


Figure 53: Server type FTP - Set Boot Server to Static

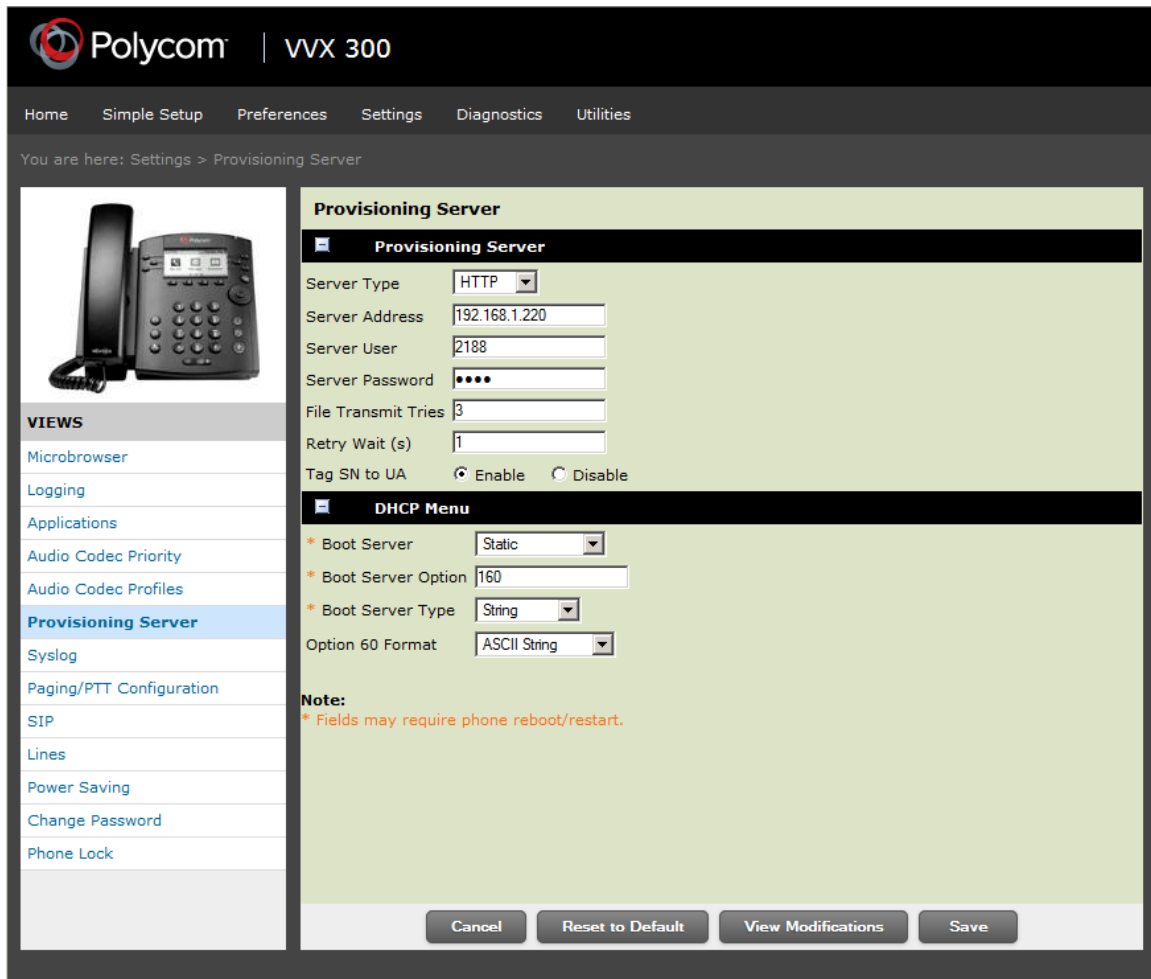
5. Click the **Save** button at the bottom of the screen.
6. Click **Yes** when you are prompted “Do you want to save the configuration changes? The phone should now reboot.
7. Monitor the Filezilla window for login and updates. If the login is successful, there will be multiple iterations of information provided in the upgrade window. One of which should name the 3111-xxxx-002 file, or similar. This is a good indication that the phone is being upgraded.

Note: The upgrade process takes several minutes. In one test scenario, ten minutes elapsed before the process was completed.

Once you are able to log back into the phone, you may need to retrieve the configuration file from the server once again. You do so by following these steps:

1. Open a web browser to visit the IP phone’s configuration page (in our example, this URL is <http://192.168.1.76>. Log into the web interface (as admin) and enter **456** as the password.
2. Select **Settings > Provisioning Server**
 - Set the **Server type** to **HTTP**.
 - Set the **Server Address** to the IP address of the MaxCS ACM server.

- Set the **Server User** to the extension user name. (Refer to page 23 if you are implementing E911 support for this extension.)
 - Set the **Server Password** to the extension password.
3. Expand the **DHCP Menu** section at the bottom of the window.
- Ensure that the **Boot Server** dropdown is set to **Static**.



Provisioning Server

Server Type: HTTP

Server Address: 192.168.1.220

Server User: 2188

Server Password: [Masked]

File Transmit Tries: 3

Retry Wait (s): 1

Tag SN to UA: Enable Disable

DHCP Menu

* Boot Server: Static

* Boot Server Option: 160

* Boot Server Type: String

Option 60 Format: ASCII String

Note:
* Fields may require phone reboot/restart.

Buttons: Cancel, Reset to Default, View Modifications, Save

Figure 54: Server Type HTTPS - Set Boot Server to Static

4. Click the **Save** button at the bottom of the screen.
5. Click **Yes** when you are prompted “Do you want to save the configuration changes? The phone should now reboot.

Customize the Digit Map

In most cases, you can automatically generate a Polycom Digit Map that matches your system. However, if your extension length, trunk access codes, or any other settings do not match the defaults, then refer to the next table to see which entries you need to change.

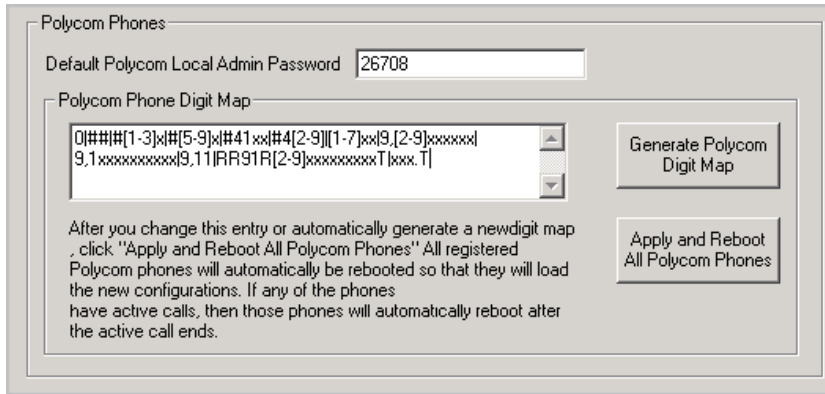


Figure 55: Example of Polycom Phone Digit Map

Following is an example of a Digit Map:

```
0|##|##[1-3]x|##[5-9]x|#41xx|#4[2-9][1-7]xx|9,[2-9]xxxxxx|9,1xxxxxxxx|9,11|RR91R[2-9]xxxxxxxxT|xxx.T
```

Parameter	Description
0	The user can dial 0 to ring the operator extension or WG defined in the AltiGen server
##	Accept ## to access voice mail
#[1-3]x	Accept feature code #1x, #2x, and #3x
#[5-9]x	Accept feature code #5x, #6x, #7x, #8x, and #9x
#41xx	Accept system call park with two-digit ID
#4[2-9]	Accept other feature codes starting with #4
[1-7]xx	The extension length is three digits with a prefix starting with 1 to 7 (for example, extension 123 is a valid extension number, but 823 or 923 are not); if your extension digit length is 4, then change [1-7]xx to [1-7]xxx
9,[2-9]xxxxxx	The dialing trunk access code is 9 plus a 7-digit local call; if your local call is 10-digit dialing, change this to 9,[2-9]xxxxxxxx. The comma (,) provides a second dial tone when the caller presses 9.
9,1xxxxxxxx	The dialing trunk access code is 9 plus an 11-digit long distance number; the comma (,) provides a second dial tone when the caller presses 9
9,11	Force a call to be sent immediately if 911 is dialed
RR91R[2-9]xxxxxxxxT	For 10-digit dialing, insert 91 as the prefix. For example, suppose a user dials 4085979000 on a Polycom phone. The Polycom phone will send 914085979000 to MaxCS instead of 4085979000.
xxx.T	Force a call to be sent immediately if 3 or more digits are dialed and the "dial" softkey is pressed; this sets the minimum digit length before the dial softkey will appear.

Note: If a dialed number is not defined in this dial plan, the caller will need to either wait for the call to time out or press the softkey **Send** to initiate dialing.

Operational Notes

This section describes various feature implementations with Polycom phones. Remember that Polycom phones will behave slightly differently from AltiGen IP phones.

General

- Some Polycom models may respond to user input a bit slowly. Please give the phone time to process the digits you have entered.
- If you use IP address as a certificate, then later change it to an FQDN, you will need to re-enable the Record feature and the Directory feature for extensions. They will not work if you do not re-enable these two features.
- If your environment includes both AltiGen IP phones and Polycom phones, be aware that Polycom phones support G.722 codec, but the AltiGen IP-705, IP-710, and IP-720 phones do not support it. (The AltiGen IP-805 phone does support the G.722 codec.)
- If you use the web configuration tool to change the server password, after the phone reboots it may still be able to register with MAXCS even if the new phone password does not match the MAXCS SIP registration password. This occurs because the phone reverts to its previous configuration when it is not able to register with the new password.
- When a Polycom user is making an outbound call and the phone is in a ringback state, if a trunk call rings that extension then the call will go to the call waiting queue immediately.
- On VVX500 and VVX600, when a Polycom phone enters power saving mode, the phone screen will be turned off. If the screen is off and **Enable Splash Display** is also off, then any outstanding BLF or Line Park calls will not turn the screen back on. In other words, the user may not know that there are some outstanding calls. To somewhat alleviate this issue, set up office hour and idle timeout to maximum to prevent this issue from happening too often.
- Single call waiting is unsupported on Polycom phones.
- Polycom phones will ring slightly longer than AltiGen IP Phones will, when you set the workgroup option "Number of Rings Before Handling" option.
- Polycom phones, in some cases, behave differently from AltiGen IP phones. For example, if a Polycom phone is placing a call and another call comes in, if the user presses **Answer** to pick up the incoming call, one of two things will happen:
 - If the incoming call is an internal call, the incoming call will be answered and the outgoing call will be dropped. This behavior is different from AltiGen IP phones.
 - If the incoming call is a trunk call (for example, over a SIP Trunk), then the incoming call will not ring the Polycom phone, but will go directly to busy call handling-personal queue. This behavior is the same as with AltiGen IP phones.

#17

- To allow users to use the #17 feature (station login into multiple phones), a SIP-Tie trunk is required in order to communicate with the server.
- If you have the #17 feature enabled, you may have times when one or more Polycom phones may be using the same extension. This may cause conflicts if *Enable Registration* is selected, because that

feature allows multiple Polycom phones to register to the Secondary Proxy at the same time. If this is a concern, you can uncheck the *Enable Registration* option.

BLF and Line Park

- If switching shuts down or if an extension is offline, the BLF for the extension will show as *Busy*.
- On VVX models, if a user taps a BLF softkey twice (the second time while the call is ringing), the call may be disconnected. Tapping a BLF softkey twice on a SoundPoint model places the call on hold.
- In some cases, if you change a BLF softkey setting on a Polycom phone, the phone may reboot twice. There may be a slight delay between these two reboots. If a call comes in between reboots, the agent can answer the phone and talk as needed; the phone will do the second reboot after the call disconnects.
- If a VVX user is navigating through the screens (in other words, they are not on the Home screen that shows the BLF and LP keys) when a BLF or Line Park rings, and if their extension does not have the Splash screen feature enabled, then the Polycom phone will not show the BLF ringing status, and therefore, the call may be missed.

Transfers

- On VVX 300 and 400 phones, the **Transfer** and **Hold** softkeys have been disabled to free up space on the display. Users must press the phone's physical buttons to perform those tasks.
- If the Polycom phone's extension does not have the forwarding option enabled, if the user tries to transfer a call, the transfer will fail and a message will appear on the Polycom phone.

Conference

- If a Polycom user places a conference call on hold and then all other participants drop off of the conference, the Polycom user will still have a "Hold Conference" MaxAgent record. This hold entry will be cleared once the Polycom user makes or receives another call.
- When a user initiates a conference call using a Polycom phone, sometimes the packet loss counter increases when there is actually no packet loss.
- If the conference initiator hangs up the call and there are only two parties left on the conference call, then the call reverts to a direct call.

However, if the conference initiator is one of the two remaining callers, the call will remain a conference call. In this scenario, neither party can transfer the call to another party. If the conference initiator wants to transfer the call, the initiator must conference in the other party and then drop off.

- If a Polycom user tries to conference someone but the call is switched to the person's voicemail mailbox, the user should not press **Conference**. If the user does this twice, the first call will drop.

MaxAgent

- Agents using the Advanced Feature "Auto Answer" with MaxAgent may experience an additional few seconds of delay before the call is answered.

AltiGen Technical Support

AltiGen provides technical support to Authorized AltiGen Partners and distributors only. End user customers, please contact your Authorized AltiGen Partner for technical support.

Authorized AltiGen Partners and distributors may contact AltiGen technical support by the following methods:

- You may request technical support on AltiGen's Partner web site, at <https://partner.altigen.com>. Open a case on this site. A Technical Support representative will respond within one business day.
- Call 888-ALTIGEN, option 5, or 408-597-9000, option 5, and follow the prompts. Your call will be answered by one of AltiGen's Technical Support Representatives or routed to the Technical Support Message Center if no one is available to answer your call.

Technical support hours are 5:00 a.m. to 5:00 p.m., PT, Monday through Friday, except holidays.

If all representatives are busy, your call will be returned in the order it was received, within four hours under normal circumstances. Outside of AltiGen business hours, only urgent calls will be returned on the same day (within one hour). Non-urgent calls will be returned on the next business day.

Please be ready to supply the following information:

- Partner ID
- AltiGen Certified Engineer ID
- Product serial number
- MAXCS version number
- Number and types of boards in the system
- Server model
- The telephone number where you can be reached