

IPCommute

Phone Customization Manager

User Guide

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Introduction

Phone Customization Manager is a tool for the rapid preparation, adjustment and bulk deployment of images to Cisco IP Phones capable of supporting background image display.

Workstation Requirements

Based purely in Java, the only client PC requirement is a Java-capable system. This version has however only been tested and is only supported when running on a Windows platform.

Licensing Requirements

On the first execution you will be prompted to install the license file. The program will present to you the 'Server Name' that you should supply to support@ipcommute.co.uk in order to obtain a license. We aim to supply a license to you within 24-48 hours.

Communications Manager Configuration Requirements

AXL Service : The Communications Manager system must have the 'Cisco AXL Web Service' activated on the server your use to connect with the Phone Customization Manager.

Phone Web Access : Additionally, you must have the 'Web Access' parameter set to 'Enabled' in the Product Specific Configuration section of the phone configuration page in CCM Administration (this may also be applied via a Common Phone Profile to ease administration, or via BAT). This is default before Communications Manager 8.0, however since version 8.0 this defaults to 'Disabled'.

If the Web Access property is not set, then most features will not work – e.g. image set, clear, or ScreenView phone monitoring will all fail.

Network Connectivity Requirements

You must have the following connectivity:

TCP 8080, 8443 from your workstation to the Communications Manager cluster.

TCP 8080 accessible on your workstation from the IP Phones (used to download images)

TCP 80 accessible on the IP Phones from your workstation (used to gather information and send commands to the phones)

Installation

To install the application, simply run the downloaded executable file and follow the wizard to select the target directory.

Once installed, run the application from the Start menu; by default the shortcut will be in the 'IPCommute' folder.

Licensing

On the first execution you will be prompted to install the license file. The program will present to you the 'Server Name' that you should supply to support@ipcommute.co.uk in order to obtain a license.

Whilst waiting for your license, you may run the product in demo mode. For the beta trial the program will simply watermark each image that is deployed; installing your license file removes this watermark.

Quick Start Guide

1. Install and launch the application as described in the 'Installation' section. Either install a license as detailed above or run in demo mode.
2. Once the application is launched, you will be presented with a 'Getting Started' tab displaying brief instructions and notes. The most important information on this page is regarding the required User configuration on Communications Manager. The following steps are important:
 1. Create an 'application' user in the Communications Manager administration pages. This user must be granted 'Super User' rights, OR the rights detailed in the 'Advanced User Permissions Requirements' section of this document. Note that the default system administrator (commonly 'CCMAdministrator', 'CCMAdmin' or 'Administrator' for example) may **not** be used as it is not possible to associate handsets to this user.
 2. The user **must** be associated to all the handsets to which you wish to deploy images.
 3. Phone Personalisation **must** be enabled on each handset to which you wish to deploy an image. By default, the setting on each handset is 'Default', which means the setting is controlled by the top-level 'Phone Personalisation' Enterprise Parameter (in the System/Enterprise Parameters menu). This enterprise parameter may be set to 'Enabled' to meet the requirement.

Phone Personalisation may also be set on 'Common Phone Profiles'. Verify whether these are configured on your system, and set the Phone Personalisation setting to 'Enabled' on these in the Device/Device Setting/Common Phone Profile menu.
 4. Finally, the 'AXL' service **must** be enabled on the Communications Manager server you enter when connecting to the cluster.
3. Click 'Connect to CUCM' on the lower right of the Getting Started tab. Enter the application user created above, password and the IP address or host name of a Communications Manager server that is running the AXL service.
4. The program will retrieve a list of all devices on the CUCM cluster. It will display registration status and IP address information along with the basic device details.
5. On the left hand side is a status column with a red cross or green tick. A green tick means that the phone has passed the permissions validation; a red cross means that the phone is either not associated to your account, is unregistered, or does not have Personalization enabled.

6. In order to deploy an image, you must first import it. Go to the 'Background Import' tab, and click the 'New Image Set' button. Import any .jpg or .png picture. From the 'Preview Phone Model' drop-down, select one of the phone models you use in your enterprise. The application will display a preview of how the image will look when sized to fit that phone model. You may use the provided controls to adjust the placement and size of the image and apply a background colour to fill any empty space. If more advanced modification of the image is needed, perform these modifications before importing to this program. Repeat the process of selecting a different preview and adjusting the image for each phone category.
7. Note that 7911/7906 images must be imported separately. Due to the extremely limited display space available, the program will not deploy an automatically resized image to these phones, as these rarely display well. We recommend you create a small image matching the available space (95x34 pixels, monochrome) and import this.
8. Return to the 'Background Deployment' tab, and right click on a test handset to view the pop-up menu. Click 'Instant deploy image to selected phone..' then your imported image name.
9. The status of the test will be displayed in the 'Status' column. If the deployment fails, the software will verify the firmware version on the IP Phone and report the status code returned by the phone – if this happens, see the Troubleshooting section of this document. You can deploy to the rest of the phones by multi-selecting (shift or ctrl clicking the phones, or click and drag) and then right clicking the selection. You may select all phones with CTRL+A.
10. New in R3 is 'Screen View'. As an alternative to the table data view of the phones, you may select the 'Screen View' tab of the 'Background Deployment' tab to see the screens of each phone. This allows you to verify whether backgrounds are properly deployed and re-deploy them if they are changed by users. You can deploy images to a single phone at a time from the Screen View tab by right clicking the phone screen.

Frequently Asked Questions

Q: Why does my image not deploy to 7911 or 7906 model handsets

A: These models have very small displays (95x34 pixels) which can display only very simple images. Any image that looks good on any other model of handset will look extremely poor on these models. Therefore, for an image to be deployed you must use select the '7911/06 – Small Monochrome' option in Background Import for your chosen image set, then use the 'Import Model-Specific Image' button to import an image that matches the 95x34/monochrome specification as closely as possible.

Q: My image doesn't look good on a particular phone model – what can I do?

A: When you import an image, it is resized (maintaining the aspect ratio of the image) for the size of the screen on each phone model. The screens have roughly similar relative dimensions, however occasionally an image may not fit comfortably on a screen, or an image suitable for a colour display may display poorly on a monochrome screen.

To resolve this, you can select a particular phone model (e.g. select the '7941/42, 7961/62 – Grayscale' from the Phone Preview Model box) and use the 'Import Model-Specific Image' to import a separate image you have designed specifically for these models. This forms part of the selected 'Image Set', so when you deploy this image set the other handsets will get the default image, and only the grayscale models will get this new image.

Q: I get an 'IPPhoneError:0' message – why?

A: Typically this is due to the phone not being enabled for personalisation, or due to the phone failing to authenticate against Communications Manager. See the 'Troubleshooting' section of this document for more information.

Q: ScreenView shows 'IO Error' for some/all phones – why?

A: ScreenView retrieves images from the phone from the phone web server. Verify you can browse to the phone by IP address. If successful, check that the phone is associated to the account you are using to log in to the application. If it still fails, supply a ZIP of the 'log' sub-folder of the installation directory to IPCommute support.

Troubleshooting

Common Issues Table

Problem	Solution
The application fails to launch	Check the 'Log' folder (typically found in your 'home' directory on Linux, or in under the main program directory on Windows) which contains further debugging information. For further assistance, contact support@ipcommute.co.uk
The application fails to connect to the CUCM cluster	Verify your username and password are valid by logging into the CCMUser or CCMAAdmin web pages. Verify your user account has the correct permissions as specified in the 'Advanced User Permissions Requirements' section and that the AXL service is running on the Communications Manager server you specify.
Some/all devices show a status of 'Could not Connect'	Verify whether you can browse to the IP address of the device. The application connects directly to the device to collect information, so if there are security restrictions or other network issues preventing direct communication to the phones, some information cannot be captured.
When I deploy an image, IPPhoneError:0 is returned.	This error typically means that the phone experienced errors when authenticating the user to the CUCM system. Verify: <ul style="list-style-type: none"> - The user is associated to this phone - 'Web Access' should be set to enabled for this handset in the 'Product Specific' configuration section in CUCM Administration. This may also be configured on the 'Common Phone Profile' configured for this handset. - See the 'Troubleshooting the Phone Personalisation Setting' and 'Troubleshooting Phone Authentication'
When I deploy an image, IPPhoneError:4 is returned.	Typically this indicates an authentication failure. Check you have the phone associated to the application user correctly.

Troubleshooting the Phone Personalization Setting

To verify if this is the issue, you can run this command from a Windows PC to obtain the phone configuration file. Use the IP of your CallManager TFTP server, and the name of the handset to which you cannot deploy an image in place of the examples here:

```
tftp 1.1.1.1 get SEP123412341234.cnf.xml
```

If successful, the TFTP configuration file (SEP123412341234.cnf.xml in this example) will be in the current directory. On Windows 7, 'TFTP Client' must be installed from the Add/Remove Windows Features control panel. Launch the downloaded file in Notepad like so:

```
notepad SEP432123443212.cnf.xml
```

In this document there should be a line like so :

```
<phonePersonalization>1</phonePersonalization>
```

If this reads '0' then the phone is not enabled for personalisation. Check the following settings:

Phone Configuration Page – 'Phone Personalization' is either 'Enabled' (or 'Default' to use the system-wide setting)

Common Phone Profile – If the handset has a Common Phone Profile assigned, it must have 'Phone Personalization' set to 'Enabled' (or 'Default' to use the system wide setting)

Enterprise Parameters – If the above settings are set to 'Default', then the 'Phone Personalization' Enterprise Parameter must be set to 'Enabled'.

If you change any of the above settings, repeat the TFTP check above to verify that the configuration file is updated. You must also reset the phones from the Communications Manager administration pages to have the configuration files updated.

Troubleshooting Phone Authentication

Another common issue is authentication. The username and password is checked at login, but the permissions assigned to the user are not checked.

A quick test is to browse to the 'screen shot' page of an IP Phone. Browse to this URL (inserting a valid phone IP address, and ensuring it is typed correctly with matching case) and enter the username and password to be used with the Phone Customization Manager application:

<http://phoneip/CGI/Screenshot>

If you get a screenshot of the phone display, the test is successful. If you get an IPPhoneError or other response, then check:

- Phones are associated correctly to the user used with this application.
- On a CUCM8.0 or higher system, the default is to use SSL and a hostname (rather than IP address) to reach the 'Authentication' URL. Check the URL listed in the Enterprise Parameters for Authentication is valid, and is reachable by the IP phones which may not be in the same subnet as your PC, and therefore may not be properly configured with DNS servers etc.
- A test for the validity of the SSL/hostname related to the Authentication URL is to simply delete the value of the 'Secured Authentication URL' from the Enterprise Parameters menu, and then reset your test phone; once restarted test the screenshot URL again. We do not recommend you leave the 'Secured Authentication URL' blank, as this results in clear-text transmission of authentication credentials from the handset to the Communications Manager server.
- Note that the 'URL Authentication' Enterprise Parameter also contains a hostname by default; if this is not resolveable by the phones the hostname should be replaced with the a CUCM server IP address; typically the publisher address.

Note that it is often necessary to close all browser instances to clear cached authentication failures after an initial failure.

Troubleshooting the Screen View

Screen View requires that the user you are logged in as is associated to the phones. If you have a properly configured user for background deployment, then the screen view should work. However, note the following errors that might be displayed:

IO Error – Check you can browse to the IP Address of the phone. If you cannot browse to the phone, verify 'Web Access' is enabled on the phone in CCMAAdmin, and that you can ping the phone.

Phone Not Associated – This phone is not associated to the user account that you are logged in as.

Screen View Not Supported – Some models do not support screen grabs, notably Cisco IP Communicator. Some versions of CIPC crash when a screen grab is attempted, and others simply fail the screen grab operation.

In addition to the above errors, you the small bullet icon on the lower left of each screen displays the result of the last attempted screen grab. You can hover the cursor over this bullet to see more detailed information.

Advanced User Permissions Requirements

The user that is specified when connecting to the CUCM cluster is required to have permissions to access both the AXL and RIS APIs. To assign these permissions, you may either use a 'Super User' or assign the following 'Roles' to the user:

- Standard CCM Admin Users
- Standard CCMADMIN Read Only
- Standard SERVICEABILITY
- Standard AXL API Access

Finally, the user must have all handsets to which you wish to deploy images associated on the user configuration page. We recommend associating all handsets to the user created for this application.

Getting Further Assistance

For any problems relating to the operation of this product, contact support@ipcommute.co.uk or visit our website www.ipcommute.co.uk

If you suspect your problem is due to a configuration or other issue relating to Communications Manager or your network, you should deal with Cisco Systems or your Channel Cisco partner organisation. Alternatively we highly recommend the community-based assistance available at www.cisco.com/go/netpro.