

Setup phone with Redirection Service

Setting up your Sangoma Phone(s) with our redirection service offers true Zero-Touch provisioning

This process allows the phone to auto-discover FreePBX / PBXact and auto-provision itself, simply by un-boxing a new phone and connecting its Ethernet cable to the network

For full details on our Redirection service please visit: [Redirect Service](#)

If you have Option 66 enabled on your network your phone by default will always use option 66 over the redirect server URL so make sure to setup your option 66 to point to your PBX or disable option 66 on your network to use our redirect server. For more information on option 66 with Sangoma Phones click [here](#).

- [FreePBX / PBXact Administration](#)
 - [Verify End-Point-Manager IP Address](#)
 - [Verify we have a proper Template setup](#)
 - [Configuring Buttons on your Phone](#)
 - [Line Key Types](#)
 - [Configuring Line Buttons](#)
 - [User Manager Permissions](#)
 - [Verify Groups Permissions are setup with Access to Phone Apps](#)
 - [Verify my users are setup to inherit permissions from the group](#)
- [Register Your Phone](#)
- [Logging in with your Phone](#)
 - [Automatic Configuration process](#)
- [Managing Phone Apps](#)

FreePBX / PBXact Administration

Requires being on FreePBX Distro or PBXact 10.13.66 release or newer

If using FreePBX you will need to make sure your PBX is registered with the [FreePBX License server](#) to use Phone Apps or End Point Manager for Sangoma Phones for free.

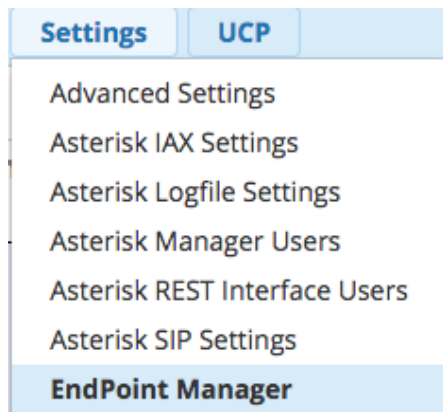
The following information is assuming that you have already configured extension and User Manager accounts within your FreePBX / PBXact . If you have an un-configured out-of-box server, please start here: [FreePBX Distro First Steps After Installation](#)

Verify End-Point-Manager IP Address

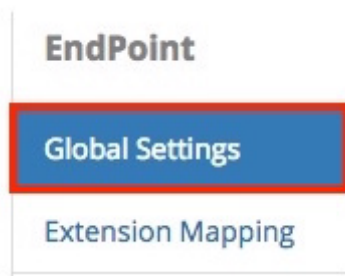
The End-Point-Manager (EPM) module, inside FreePBX / PBXact, is responsible for auto-provisioning Sangoma Phones. In order for EPM to be able to communicate with the phone(s) it must be configured with the same IP address as your FreePBX / PBXact system.

You can verify the IP Address of EPM within the EPM Global Settings:

- Log into your PBX GUI.
- Under the **Settings** section, pick **EndPoint Manager**.




- Navigate to the **Global Settings** section of EPM from the right nav bar.




- Define the **Internal IP Address** or FQDN that phones will connect to when local to the PBX.

Internal IP Address 

- Define the **External IP Address** or FQDN that phones will connect to when not local to the PBX.

External IP Address 

- Also take note what port you have HTTP Provisioning setup on as that port needs to be accessible for your phone to receive its configurations.

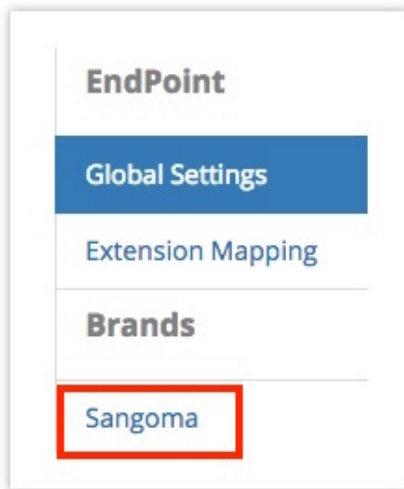
Ports 	Web Server Port	80
	HTTP Provision Port	83

- Press the **Save Global** button.

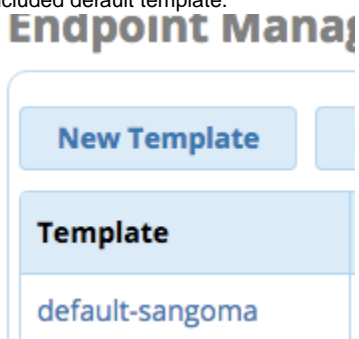


Verify we have a proper Template setup

- In the right nav menu, under **Brands**, click on **Sangoma**.



- Either click on the **New Template** button at the top to create a new template, or click on the **default-sangoma** template name to edit the included default template.



- Give the template a **Name**. For the **Destination Address**, pick either the **Internal** or **External** option. This will pull in the IP address that you entered in the Global Settings section earlier.

Template Name ?

Default Template ?

Destination Address ?

- Define your **Time Zone** and if you want **Daylight Savings** time mode to be enabled.

Time Zone ?

Primary Time Server ?

Daylight Savings ?

- For **Firmware Version**, pick **Firmware Slot 1** from the drop-down menu. (When you install EPM it will install the latest firmware in slot 1.) See [Firmware Management](#) for more information on updating firmware for your phones in the future.

Firmware Version ?

Firmware Slot 1

- Define what **Provision Server Protocol** you want to use to have your phones receive their config files:
 - **TFTP** should be used when phones are local to the PBX, as it's easy to use and requires no setup.
 - **HTTP** should be used for local or remote phones and is easy to use and required no other setup. The default HTTP port used for phone configs is port 83 but may be different on your PBX. You can view the port that is currently setup for HTTP in the Global Settings section we just went through above.
 - **FTP** should be used if your phones are remote, as it requires the phone to know the FTP username and password to receive the config file.
 - If using FTP, you will need to set up an FTP username and password for the PBX. Review the [System Admin - FTP Setup](#) wiki for information on setting up a username and password for phones to receive their configuration files via FTP.

Provision Server Protocol ?

TFTP

FTP

HTTP

- Press the **Save Template** button when done.

Save Template

There are more options that can be set up in a template that we did not cover in this quick overview. To learn more about each option, click on the links below.

- [Default Template \(Hot Desking\)](#)
- [Background Image Options](#)
- [Line Labels](#)
- [MultiCast Options](#)
- [Dial Pattern](#)
- [Firmware Management](#)
- [Ring Tones](#)
- [Screen Saver Options](#)
- [Headset Settings](#)
- [Call Waiting Signal](#)
- [BLF Alert](#)
- [Hotline](#)

Configuring Buttons on your Phone

Line Key Types

- Line keys can be set up in End Point Manager with the following options.

Line Keys		Horizontal Soft Keys		
Key	Type: ⓘ	Label: ⓘ	Value: ⓘ	Account: ⓘ
Line Key 1	Line			Account 1
Line Key 2	Line			Account 1
Line Key 3	Line			Account 1
Line Key 4	Intercom	Intercom		Account 1

- Line Key Types:
 - BLF**- ("Busy Lamp Field") - Monitors another extension or feature code that has state information on your PBX. The state is indicated by the [BLF button](#).
 - Call Park**- Used for one-touch [Call Parking](#).
 - Conference**- Configures a conference button to allow 5-way [conference calling](#).
 - DTMF**- Sends DTMF digits while on a active call, such as having the system dial a feature code while on a active call.
 - Hold**- Places the caller on [Hold](#).
 - Intercom**- Causes the dialed extension to answer using [Intercom Calling/Auto Answer](#) instead of ringing.
 - LDAP**- Button to Launch LDAP directory
 - Line**- Sets up a line key. Each phone needs at least one line key.
 - MultiCast Paging**- Starts a page to a specific [MultiCast](#) address.
 - Record**- Toggles on-demand call recording. Requires the user to have [on-demand recording](#) permissions in the PBX.
 - Redial**- Redials the last number.
 - SpeedDial**- Dials the programmed external number. To insert pauses, use a comma. Each comma adds a 500ms pause when dialing.
 - Transfer**-[Transfers a call](#) to a new recipient.
 - Voicemail**- Dials the voicemail system, allowing the user to [check voicemail](#).
 - XML API**- Provides access to the specified [Phone App](#).

Configuring Line Buttons

- Go into End Point Manager in your PBX and choose the Sangoma brand in the menu.

EndPoint
Global Settings
Extension Mapping
Brands
Sangoma

- Click on the template in End Point Manager that you want to change a button for.

Endpoint Manager

New TemplateImport Template

Template	Used By
default-sangoma	5001 5002 5003 5004 5005 5006

Showing 1 to 1 of 1 rows

Default Template

default-sangoma

- Click on the Models menu tab at the top

Template Name ? default-sangoma

General

Models

Regional

Options

Redundancy

VLAN

LDAP

Tasks

- Select a model number you want to add manage buttons for.

Available Phones

S300S400S500S700

- Make your Line Key button changes.

Line Keys

Horizontal Soft Keys

Key	Type: ?	Label: ?	Value: ?	Account: ?
Line Key 1	<div>Line</div>			<div>Account 1</div>
Line Key 2	<div>Line</div>			<div>Account 1</div>
Line Key 3	<div>Line</div>			<div>Account 1</div>
Line Key 4	<div>Intercom</div>	<div>Intercom</div>		<div>Account 1</div>

- Save the Model using the **Save Model** button.

S700

IMAGE NOT AVAILABLE



Save Model

Remove Model

- You now need to update the phone configuration file. Choose an option and click the **Apply** button. The three options at the bottom of the template are:

- Save**- This will only save your changes into the PBX database. It will not write out new config files for the phones that are using this template as mapped in the Extension Mapping section of End Point Manager.

Save

Apply

- Save and Rebuild Config(s)**- This will save your changes to the PBX Database and also write out new config files for the phones that are using this template as mapped in the Extension Mapping section of End Point Manager. The phones do not retrieve the updates.

Save and Rebuild Config(s)

Apply

- Save, Rebuild Config(s) and Update Phones**- This will save changes into the PBX database, write out new config files for the phones, and also immediately update any phones that are mapped to use this template and currently registered to the PBX. This may cause the phones to reboot.

Save, Rebuild Config(s) and Update Phones

Apply

- You can optionally change the label name for any button type except Line. The *Label* is the name that will be shown on your phone screen for that button.
 - When picking the **Line** type, the label name will be whatever you defined in the **Line Label** section of the phone Template Settings. The default is to show the extension number of the device. You can change this to show the name instead, or both name and extension number.

Line Key 20	XML-API	Voicemail	REST-Voicemail	Account 1
Line Key 21	Intercom	Intercom		Account 1

- You can also drag the button to be in a different spot. Left click on the button and while holding down your left mouse drag the button to a different spot and release it.
In our example we will drag Button 21 up toward the top to make it button 4 on the phone. The button number will not change until you save the model.

Key	Type: ?	Label: ?	Value: ?	Account: ?
Line Key 1	Line			Account 1
Line Key 2	Line			Account 1
Line Key 3	Line			Account 1
Line Key 21	Intercom	Intercom		Account 1

User Manager Permissions

Verify Groups Permissions are setup with Access to Phone Apps

- Navigate in your PBX to the User Management module.
- Click on the Groups tab at the top

Users

Groups



Settings

Group Priorities can be changed by clicking and dragging groups around in the order you'd like. Groups with a lower number for priority take priority (EG 0 is higher than 1)

+ Add

x Delete



Search

<input type="checkbox"/>	Group Name	Description	Priority	Action
<input type="checkbox"/>	All Users	This group was created on install and is automatically assigned to new users. This can be disabled in User Manager Settings	5	 

- Press the Edit button




next to the group you want to edit permissions for. By default on a new system we create a Group called All Users and when you create extension they should be auto assigned to this group.

<input type="checkbox"/>	Group Name	Description	Priority	Action
<input type="checkbox"/>	All Users	This group was created on install and is automatically assigned to new users. This can be disabled in User Manager Settings	5	 

- We will first see all the users who are apart of this group and can add any missing users to this group from here.

Group Details FreePBX Administration GUI Conferences Contact Manager Fax Rest API Phone Apps >


Group Name ? All Users 

Group Description ? This group was created on install and is automatically assigned to new users. This can be disabled in Usi

Users ? 8000 ✕ 8001 ✕

- Click on the tab at the top for Phone Apps

Group Details FreePBX Administration GUI Conferences Contact Manager Fax Rest API Phone Apps >

What are Phone Apps 

General Conferences Queues Time Conditions Call Flow Control Voicemail Parking Other Apps

Allow Access ? ☒ Yes ☐ No

Override 'Apps' Menu ? ☒ Yes ☐ No

Main Menu ?


Active Menu Items	Inactive Menu Items
Conference	
Call Flow	
Queues	
Queue Agent	
Voicemail	
Transfer VM	
Time Conditions	
Presence	
DND	
Follow Me	
Contacts	
Call Forward	
Parking	
Endpoint Manager	

- From here we can see we have Allow Access to Phone Apps enabled

Allow Access ? ☒ Yes ☐ No

- Click on any specific application tab we can now set permissions on that application. In our example we will select the Conference tab

Group Details FreePBX Administration GUI Conferences Contact Manager Fax Rest API Phone Apps >

What are Phone Apps 

General **Conferences** Queues Time Conditions Call Flow Control Voicemail Parking Other Apps

- We will verify that access to the Conference Room is set to yes for this group.

Enable Conference Access ?

Yes

No

- We can also then control what conference rooms the user can see.
 - in our example below we are saying the user has access to their own conference room that is linked to them from the conference room module in your PBX and also we have shared the General Conference Room to all users in this group.

Allowed Conference Bridges

User Linked Conference <linked> X

General <9999> X

- From here go into each tab under Phone Apps and make sure you have your permissions setup correct and press the submit button at the bottom of the page when done.

Verify my users are setup to inherit permissions from the group

- By default when a new user is created most permissions for that user are told to be inherited by the group they are apart of. We are going to go verify they are all setup correct. If a user permission is not setup when they try to use a app on the phone or login to the phone they will get error saying they do not have permissions.
- Navigate in your PBX to the User Management module.
- Click on the Users tab at the top

Users

Groups

Settings

+ Add

✕ Delete

✉ Send Email




Search

<input type="checkbox"/>	Username	Display Name	First Name	Last Name	Linked Extension	Description	Action
<input type="checkbox"/>	8000	Tony Test	Tony	Test	8000	Autogenerated user on new device creation	<div><div></div><div></div><div></div></div>
<input type="checkbox"/>	8001	Mike			8001	Autogenerated user on new device creation	<div><div></div><div></div><div></div></div>

- Press the Edit button




next to the user you want to edit permissions for.

<input type="checkbox"/>	Username	Display Name	First Name	Last Name	Linked Extension	Description	Action
<input type="checkbox"/>	8000	Tony Test	Tony	Test	8000	Autogenerated user on new device creation	  

- Click on the Phone Apps tab on the top

Edit User

< Rest API Phone Apps VPN UCP XMPP

 What are Phone Apps

General Conferences Queues Time Conditions Call Flow Control Voicemail Parking Other App:

- For each permission you want to verify it is set to inherit from the group. If you wanted to override a permission for a user to be different then the group permissions you can do that here by not using the inherit option.

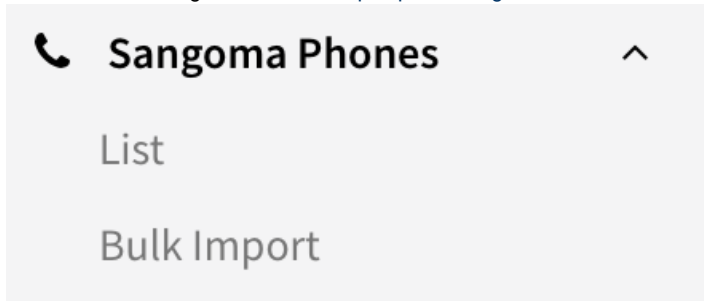
- From here go into each tab under Phone Apps and make sure you have your permissions setup correct and press the submit button at the bottom of the page when done.

Register Your Phone

To setup your phone using the redirection service, you must register your phone(s) in our Sangoma Portal. This procedure will automatically point your phones to the FreePBX / PBXact installation

After registering your phones, they are ready to be deployed. Connect them to the network, power them up and start making calls

- From within the Sangoma Portal at <https://portal.sangoma.com> click on the Products > Sangoma Phones > List



- If you do not see your phone listed this would mean the phone was purchased by you from a Reseller or Partner and you will need to make a claim on the phone as a co-owner by pressing the Claim Button below. The entity that purchased the phone from us will be notified by email of your claim and they will need to approve your request. Once approved you will receive a email that your co-ownership claim has been approved and you can now setup your redirect settings and you can now manage the phones redirect settings as outlined here. [Managing Existing Phones](#)

Want to claim a product? Click here!

Logging in with your Phone

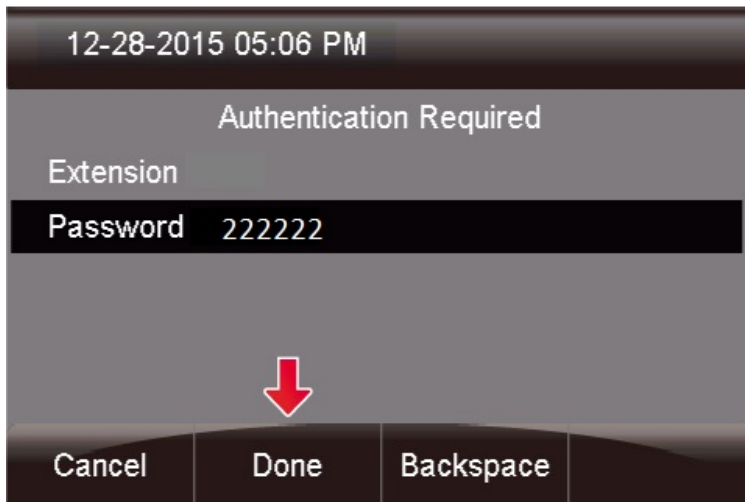
Now that we have told our phone how to reach the PBX using a redirect server and we have verified that End Point Manager is setup in our PBX and our users have permissions for Phone Apps we will now log our phone into the PBX.

Your FreePBX / PBXact system must be on firmware version **10.13.66** / **10.13.66-11** or later to take advantage of Zero-Touch auto-provisioning for your Sangoma Phone.

Firmware from this version onward comes with automatic (free-of-charge) access to End-Point-Manager (only for Sangoma phones) and with pre-configured Sangoma Phone templates (which are used to configure your phone)

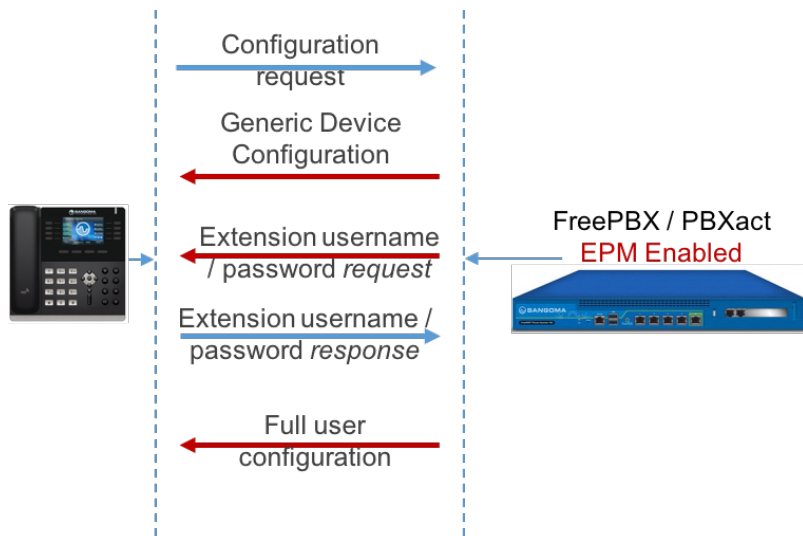
Automatic Configuration process

- When the phone contacts your PBX it will communicate with the End-Point-Manager (EPM) module inside.
- EPM will detect any Sangoma phone that is requesting configuration and if the MAC Address has already been setup in EPM Extension Mapping it will use the configuration for that phone.
 - If the Mac Address has not been mapped to a user or template inside EPM yet it will prompt you with a login screen. Since your PBX will not have any information on the phone at this point, the phone will prompt the user to enter their Extension and voicemail password and EPM will generate a configuration for this phone based on your default template.



The factory default password of the phone is 'admin' however after connecting to FreePBX / PBXact, the password will become the admin password that is defined in the Global Settings of EPM which by default is 222222. (This password can be changed under the 'Global' settings of End Point Manager). The admin password can also be used as the login password for the phone if you do not know your voicemail password or do not have voicemail setup for your extension.

- When EPM receives the user's Extension and password it will lookup to verify that the user exists (i.e as a valid extension already configured)
 - If the user does exist, EPM will perform automatic extension mapping and push full user configuration to the phone. The phone will immediately be ready for phone calls



- Below is a screenshot of what the phone will display upon initial configuration

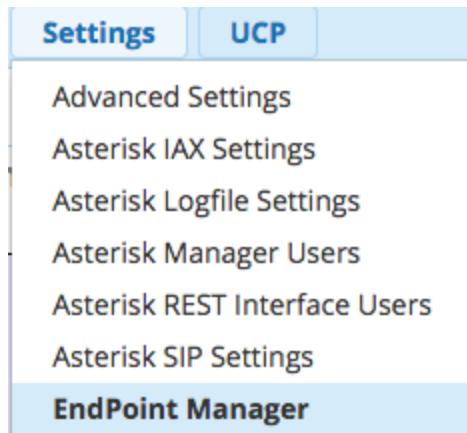


Note: The above 220 and 230 are example extensions. Your phone will display the extension number that the user logged in with.

Managing Phone Apps

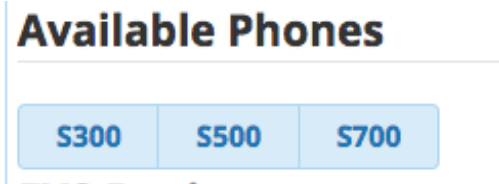
The following information describes how to modify the phone apps that are displayed on screen.

- For new FreePBX / PBXact installations, where the default Sangoma Phone template has not been modified, the phone's display will appear similar to the image below.
(we will discuss the Sangoma Phone template below)
- As noticed from the image above, no phone apps are assigned to the buttons. Since phone app assignment is customizable we allow the user to customize.
- To customize the phone apps to be displayed on phone's screen, we need to modify the default Sangoma Phone template
- Log into your PBX GUI.
- Under the **Settings** section, pick **EndPoint Manager**.



For **PBXact UCC** users using the compact Dashboard, there will be an EndPoint Manager button directly from the Dashboard icons

- In the right nav menu, under **Brands**, click on **Sangoma**
- Click on the **default-sangoma** template name to edit the included default template or any other template that you want to edit.
- Click on the 'Models' tab to list the available Phones, then select the phone model.



- You will be presented with a view of all available programmable buttons for that phone model.
example from S700

Line Keys		Horizontal Soft Keys		
Key	Type: ?	Label: ?	Value: ?	Account: ?
Line Key 1	Line ▼			Account 1 ▼
Line Key 2	Line ▼			Account 1 ▼
Line Key 3	Line ▼			Account 1 ▼
Line Key 4	Intercom ▼	Intercom		Account 1 ▼
Line Key 5	▼			▼
Line Key 6	▼			▼
Line Key 7	▼			▼
Line Key 8	▼			▼
Line Key 9	▼			▼
Line Key 10	▼			▼

- The first 2-3 buttons should always be set up as line keys. A *line key* is what allows you to make or receive a call, so if you want to manage two calls at a time, you need to set up two line keys.

S700




IMAGE NOT AVAILABLE

Line Keys		Horizontal Soft Keys		
Key	Type: ?	Label: ?	Value: ?	Account: ?
Line Key 1	▼			▼
Line Key 2	▼			▼
Line Key 3	▼			▼

Save Model

Remove Model

- If you wish to add more Line keys, beside the line key number, select the **Type** drop down, and choose **Line**.

✓

- Blank
- Line
- BLF
- Speedial
- Voicemail
- Call Park
- Intercom
- DTMF
- XML-API
- Record
- Multicast Paging

- For the remaining buttons on your phone, assign whichever phone apps you wish, to each button.
- To assign a phone app, beside the line key number, select the **Type** drop-down, and choose **XML-API**

Example for Line key 5 on S700:

Line Key 5	XML-API ▼		Select ▼	Account 1 ▼
------------	-----------	--	----------	-------------

- Click on the **Value** drop-down beside the line key and select the phone app you wish to assign to that line key

Select ▼
Select
REST-Apps
REST-Call Flow
REST-Call Forward
REST-Conference
REST-Contacts
REST-DND
REST-Follow Me
REST-Login
REST-Parking
REST-Presence
REST-Queues
REST-Queue Agent
REST-Time Conditions
REST-Transfer VM
REST-Voicemail

- Once selecting the phone app the line key will be updated with the phone app.
In the below image, the **Call Flow** phone app was chosen for line key 5

Line Key 5	XML-API ▼	Call Flow	REST-Call Flow ▼	Account 1 ▼
------------	-----------	-----------	------------------	-------------

The default text presented under the **Value** field is the name of the phone app that will be displayed on the phone's screen for that button. Feel free to change the default name

- Finish selecting the phone app you wish to assign for each button
- Once completed, your phone app view would look something like the following image, based on the phone apps chosen

Key	Type:	Label:	Value:	Account:
Line Key 1	Line			Account 1
Line Key 2	Line			Account 1
Line Key 3	Line			Account 1
Line Key 4	Intercom	Intercom		Account 1
Line Key 5	XML-API	Parking	REST-Parking	Account 1
Line Key 6	XML-API	Login	REST-Login	Account 1
Line Key 7	XML-API	Time Conditio	REST-Time Conditions	Account 1
Line Key 8	XML-API	Queues	REST-Queues	Account 1
Line Key 9	XML-API	Presence	REST-Presence	Account 1

- When done editing, press the **Save Model** button to save your settings for this model.

S700

IMAGE NOT AVAILABLE



Save Model

Remove Model

- You now need to update the phone configuration file. Choose an option and click the **Apply** button. The three options at the bottom of the template are:

- Save**- This will only save your changes into the PBX database. It will not write out new config files for the phones that are using this template as mapped in the Extension Mapping section of End Point Manager.

Save

Apply

- Save and Rebuild Config(s)**- This will save your changes to the PBX Database and also write out new config files for the phones that are using this template as mapped in the Extension Mapping section of End Point Manager. The phones do not retrieve the updates and will need to be rebooted to get their update.

Save and Rebuild Config(s)

Apply

- Save, Rebuild Config(s) and Update Phones**- This will save changes into the PBX database, write out new config files for the phones, and also immediately update any phones that are mapped to use this template and currently registered

to the PBX. This may cause the phones to reboot in rare instances but while the phone is processing the updated config for 5-10 seconds the buttons will not be usable on the phone.

Save, Rebuild Config(s) and Update Phones

Apply

- The Phone apps on the phone's display should now be presented by each button. Below is a screenshot of a phone with some phone apps configured.



- For information on how to use each phone app, visit: [Application Userguides](#)