

# MiaRec

---

## Phone Softkey-Integration-Guide

*MiaRec, Inc.*

*Copyright © 2024 MiaRec, Inc.*

## Table of contents

---

1. Soft Key Integration Guide	3
2. Configure MiaRec phone services	8
2.1 Configurations steps:	8
2.2 View active phone registration (sessions)	10
3. Integration with Cisco SPA and 3PCC series phones	11
3.1 Supported models:	11
3.2 Option 1. Configure phone using built-in web interface	12
3.3 Option 2. Configure phone using Metaswitch SIP provisioning server	13
3.4 Option 3. Configure phone using generic provisioning server (HTTP-based server)	15
3.5 Troubleshooting	15
4. Integration with Mitel/Aastra phones	17
4.1 Mitel 6871i / MiaRec softkey integration	17
4.2 Configuration of Mitel phone	20
4.3 Troubleshooting	23
5. Integration with Polycom VVX series phones	25
5.1 Supported models:	25
5.2 Edit Polycom XML configuration files on your provisioning server	25
5.3 Troubleshooting	26
5.4 Known limitations	27
6. Integration with Yealink phones	28
6.1 Yealink T46S / MiaRec softkey integration	28
6.2 Yealink T48S / MiaRec softkey integration	31
6.3 Configuration of Yealink phone	33
6.4 Troubleshooting	35
7. Softkey integration with Cisco 7900, 7800 and 8800 series phones	37
7.1 Overview	37
7.2 Create MiaRec IP Phone Service	40
7.3 Subscribe each phone to MiaRec phone service	42

# 1. Soft Key Integration Guide

---

MiaRec integrates with various phone models to provide the following features:

- **On-demand recording** - Users may use their phones to switch on/off recording during an active call.
- **Pause/resume recording** - Users may use their phones to pause recording for a short period of time. For example, when processing credit card transactions over the phone, a user may pause recording before a customer says the credit card information. Such feature allows to comply with PCI requirements.

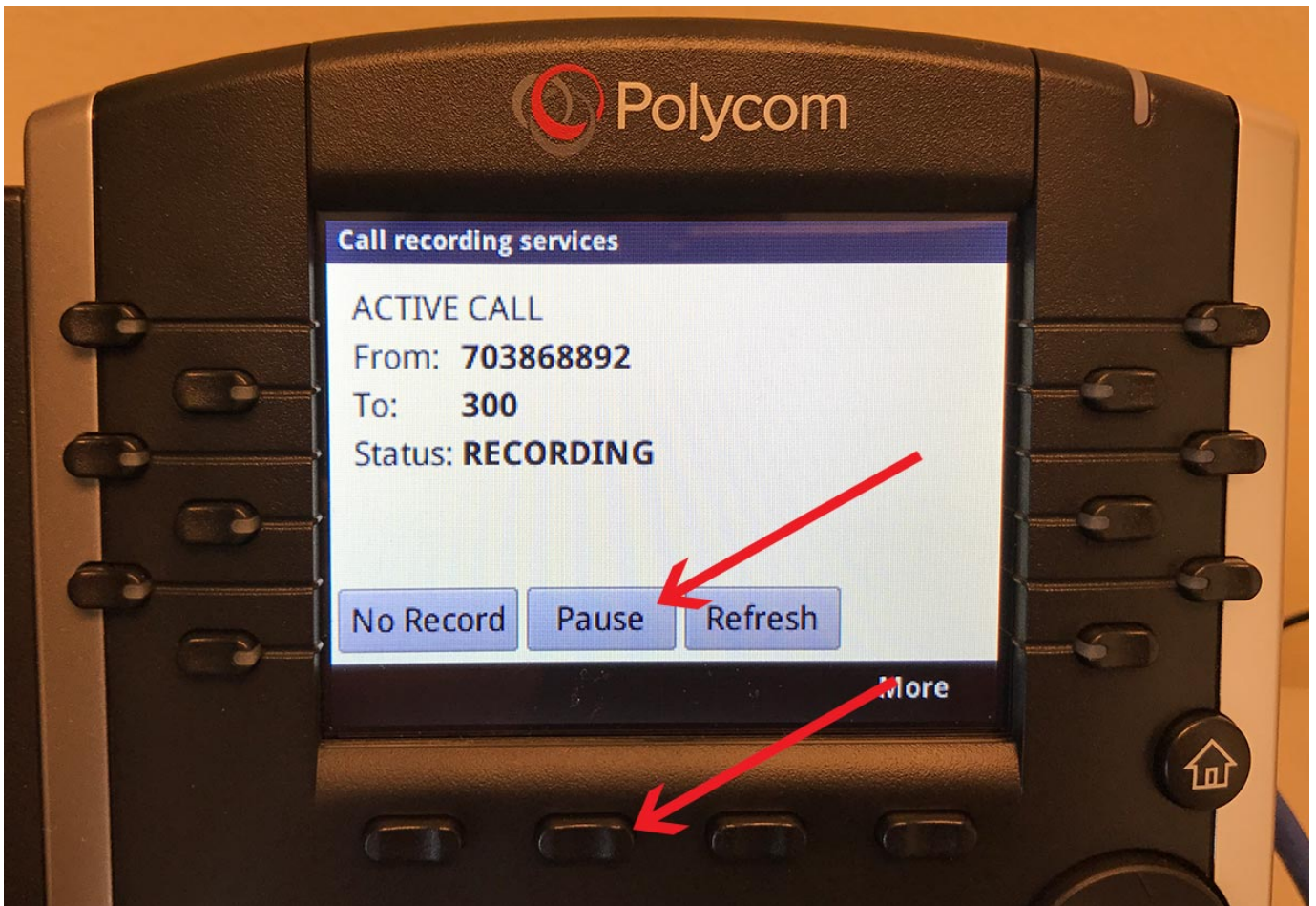
The following images display example of integration with various phone models.

**Cisco 7900 series softphone:**

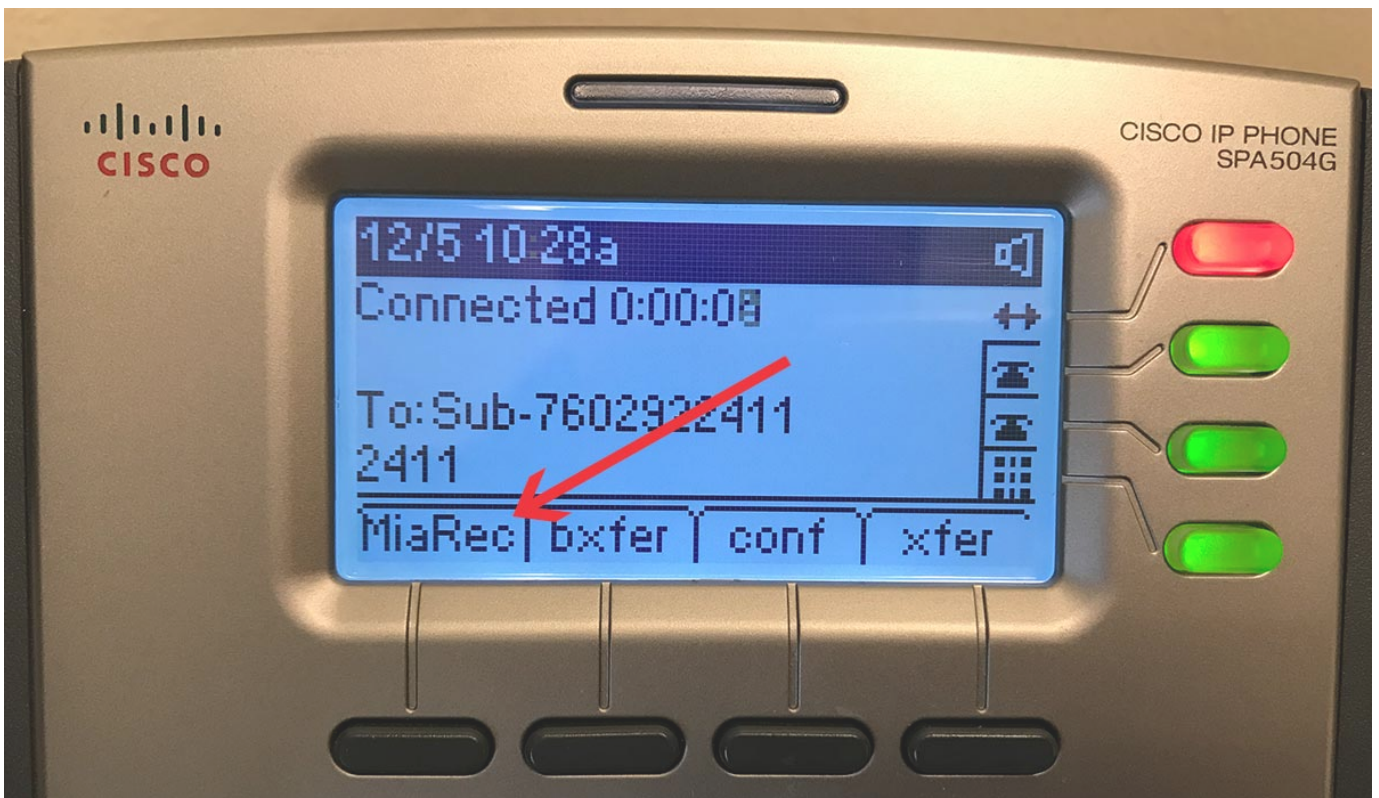


Polycom VVX400 phone:





Cisco SPA504G phone:



**Yealink T46S phone:****Mitel 6800i Series phone:**





## 2. Configure MiaRec phone services

### Info

This guide is for configuring phone services for Polycom VVX, Yealink, Mitel, Panasonic and Cisco/Linksys SPA phone models only. If you need to configure Cisco 7900 series phones, please, check the guide [here](#).

MiaRec integrates with Polycom VVX, Yealink, Mitel, Panasonic and Cisco SPA series phones to provide the following features:

- **On-demand recording** Users may use their phones to switch on/off recording for the current call.
- **Pause/resume recording** Users may use their phones to pause recording for short period of time. For example, when processing credit card transactions over the phone, an agent may pause recording before a customer speaks the credit card information. Such features allows to comply with PCI requirements.

### 2.1 Configurations steps:

1. Configure MiaRec phone services.
2. Configure "Login" and "PIN" attributes at the user profile.
3. Allow "Phone services" permissions at the role profile.
4. Configure the phone.

#### 2.1.1 Configure MiaRec phone services

Navigate in MiaRec web portal to **Administration -> System -> Phone Services**. Click the **Edit configuration** button to open the settings page (see the following screenshot).

Administration > System > Phone Services

## Edit Phone Services Settings

**Enable \*** ☒ Enable phone services

**Max sessions per user**

3

sessions

Increase this parameter if users may have multiple phone devices

**Max session lifetime (days)**

days

If this value is non-empty, then users have to signin from their phones everytime the session expires

**Phones ip network**

192.168.1.0/24

Phone services will be provided only to phones from this ip network. Format: "x.x.x.x" or "x.x.x.x/m" or "x.x.x.x/m.m.m.m". Network mask "0.0.0.0/0" will work for any ip-address.

Save

2.1.2 Configure "Login" and "PIN" attributes at the user profile

Navigate in MiaRec web portal to **Administration -> User Management -> Users** and edit the corresponding user profiles. It is necessary to configure unique "Login" for each user. Users will need to provide their Login and PIN when they access the MiaRec services the first time from their phone.

WEB ACCESS SETTINGS

Login123456

Allow web access?☐ Yes, user can login to web portal

Authenticate with☒ Password ☐ LDAP ☐ Metaswitch CommPortal ☐ SAML 2.0

Valid tillyyyy-mm-dd

PHONE SERVICES

Phone services PIN.....

.....

Digits only. Minimum 3 digits

2.1.3 Allow "Phone services" permission at the role profile

Navigate in MiaRec web portal to **Administration -> User Management -> Roles** and edit the corresponding role profile.

OTHER PERMISSIONS

SET ALL | CLEAR ALL

Audit trail

Not allowed for this access scope

Own calls

☒ View ☒ Playback ☒ Download

☒ Trigger on-demand ☒ Pause recording

☐ Categorize ☐ Add notes ☐ Set confidential flag

☐ Clear confidential flag ☐ Edit ☐ Delete

set all | clear all

Other users' calls

Not allowed for this access scope

Confidential calls

☐ View

set all | clear all

Phone services

☒ Allow

set all | clear all

Public categories

☐ View ☐ Edit ☐ Delete

set all | clear all

Public saved searches

☐ View ☐ Edit ☐ Delete

set all | clear all

## 2.1.4 Configure phone

- [Polycom VVX series phone configuration](#)
- [Cisco SPA series phone configuration](#)

## 2.2 View active phone registration (sessions)

When the user successfully signs in to MiaRec phone services from his/her phone, the corresponding session is opened by MiaRec. An administrator may see all opened sessions using Web portal. Navigate to **Administration -> System -> Phone services** and click the link **View active phone sessions**:

Administration > System

# Phone Services

Edit Configuration

Phone services: **Enabled**

Max sessions per user: **3**

Max session lifetime (days): **unlimited**

Phone ip network: **192.168.1.0/24**

[View active phone sessions](#)

An administrator may terminate (delete) any active session from this screen. If the session is deleted, then the user will be required to sign in again from his/her phone manually.

Administration > System > Phone Services

# Phone Service Sessions

Select a Tenant  Search by User, Extension, Ip-address

0-5 of 7

<input type="checkbox"/>	USER	EXTENSION	IP-ADDRESS	SESSION START TIME	
<input type="checkbox"/>	David A. (900)	300@broadworks.com	192.168.1.111	Today, 10:02 AM	<a href="#">View</a>
<input type="checkbox"/>	David A. (900)	300@broadworks.com	192.168.1.111	Nov 23, 2016, 5:57 PM	<a href="#">View</a>
<input type="checkbox"/>	David A. (900)	300@broadworks.com	192.168.1.101	Nov 23, 2016, 3:12 PM	<a href="#">View</a>
<input type="checkbox"/>	Keri Meder ()	88811001002, 300	192.168.1.101	Nov 22, 2016, 5:14 PM	<a href="#">View</a>
<input type="checkbox"/>	Keri Meder ()	88811001002, 300	192.168.1.101	Nov 22, 2016, 5:13 PM	<a href="#">View</a>

20 per page 0-5 of 7

## 3. Integration with Cisco SPA and 3PCC series phones

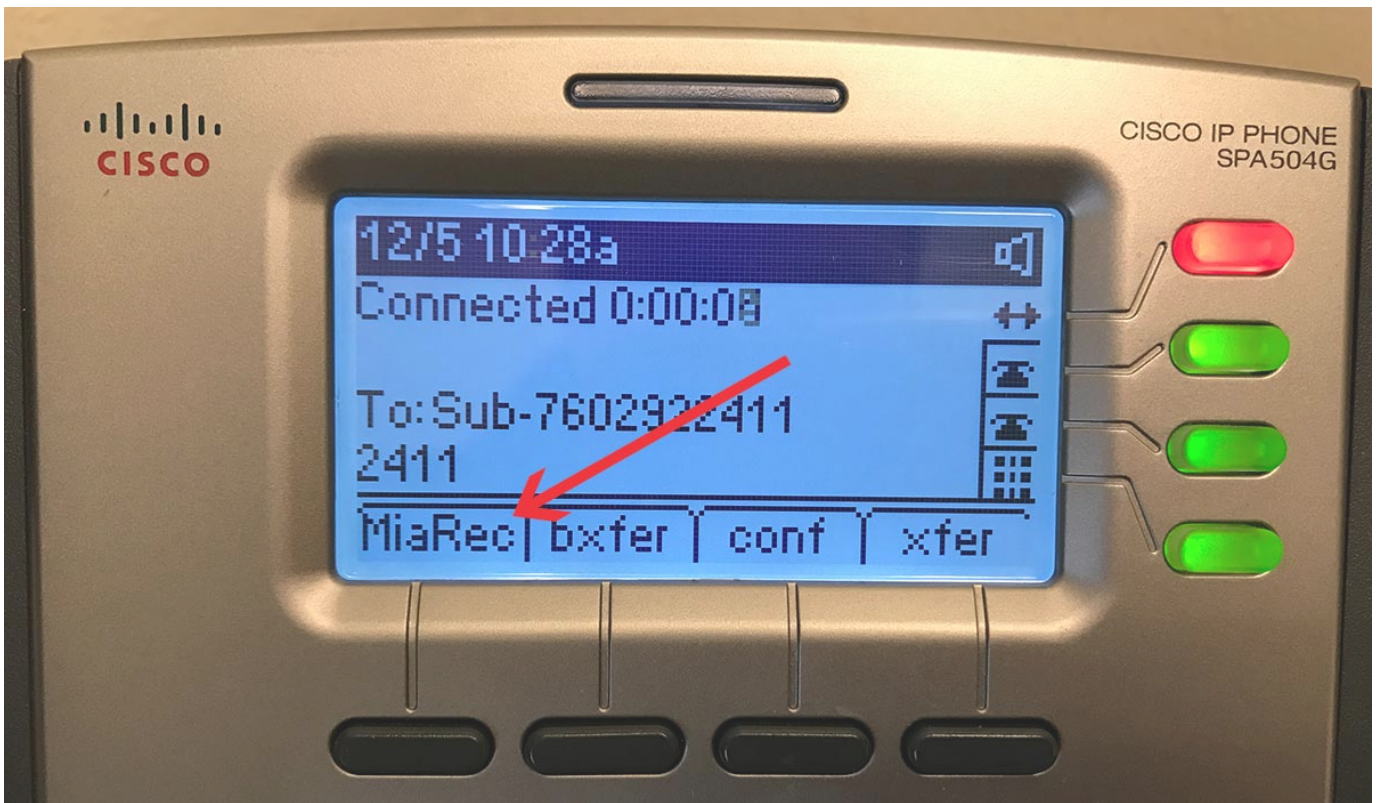
Cisco SPA series phones could be configured in a few ways:

- Using phone's built-in web interface
- Auto-provisioning of phone using HTTP, for example, in Broadworks or Metaswitch environment.

### 3.1 Supported models:

- Cisco SPA 300, 500 Series
- Cisco CP-8800 3PCC Series

Soft key **MiaRec** is displayed on Cisco SPA series phone when phone services are configured properly.



Click the **MiaRec** phone services button to see the **Recording controls** screen. The **Record/No Record** and **Pause/Resume** buttons are displayed on this screen:





### 3.2 Option 1. Configure phone using built-in web interface

Open phone's built-in web interface and navigate to **Administration -> Advanced Settings -> Phone**.

1. Change "Programmable Softkey Enable" to **yes**.
2. Insert the following text into **PSK 1** field (or any other field if PSK 1 is already used).

```
fnc=xml;url=http://{MIAREC_WEB_SERVER}/api/phone_services/cisco_spa/calls/active_call?login=$UID1;nme=MiaRec
```

Where `{MIAREC_WEB_SERVER}` is your MiaRec web server address and `nme=MiaRec` a soft key title. `$UID1` will be substituted with the first line SIP Auth User ID. It should match to the corresponding configuration of user profile in MiaRec web portal (menu **Administration -> User Management -> Users**, field **Login**).

3. Add `psk1|1` to the **Connected Key List** field.

Before:

```
conf|3;xfer|4;toggle;bxfer;confLx;xferLx;park;phold;flash;
```

After:

```
psk1|1;conf|3;xfer|4;toggle;bxfer;confLx;xferLx;park;phold;flash;
```

A number after `|` symbol specifies a position of button (1st in our example). `psk1` corresponds to **PSK 1** field configured above.



Programmable Softkeys

Programmable Softkey Enable:

yes

Idle Key List:

em\_login|1;acd\_login|1;acd\_logout|1;astate|2;avail|3;unavail|3;redial|5;dir|6;cfwd|7;dnd|8;lcr|9;pickup|10;gpicku

Missed Call Key List:

lcr|1;miss|4

Off Hook Key List:

redial|1;dir|2;cfwd|3;dnd|4;lcr|5;unpark|6;pickup|7;gpickup|8;starcode|11;alpha|12

Dialing Input Key List:

dial|1;delchar|2;clear|3;cancel|4;left|5;right|6;starcode|7;alpha|8;dir

Progressing Key List:

endcall|2

Connected Key List:

psk1|1;conf|3;xfer|4;toggle;bxfer;confLx;xferLx;park;phold;flash;

Start-Xfer Key List:

hold|1;endcall|2;xfer|4;toggle;

Start-Conf Key List:

hold|1;endcall|2;conf|3;toggle;

Conferencing Key List:

hold|1;endcall|2;join|4

Releasing Key List:

endcall|2;

Hold Key List:

resume|1;endcall|2;newcall|3;redial;dir;cfwd;dnd

Ringing Key List:

answer|1;ignore|2;toggle|4

Shared Active Key List:

newcall|1;barge|2;cfwd|3;dnd|4

Shared Held Key List:

resume|1;barge|2;cfwd|3;dnd|4

PSK 1:

fnc=xml;url=http://192.168.1.101/api/phone\_services/cisco\_spa/calls/active\_call?login=\$UID1;nme=MiaRec

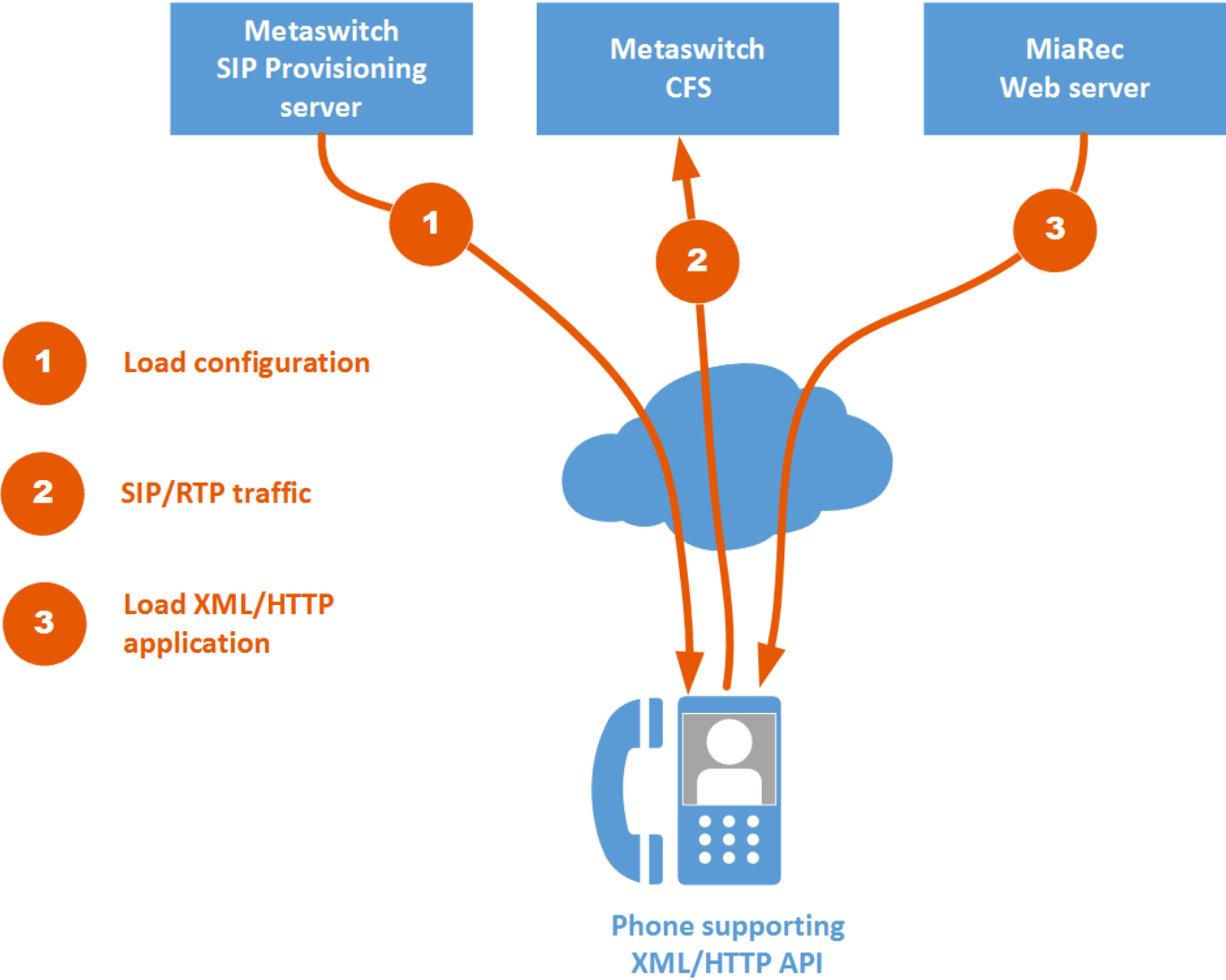
PSK 2:

PSK 3:

For more detail about Custom Phone Keys you can check the [Cisco Small Business SPA300 Series, SPA500 Series, and WIP310 IP Phone Administration Guide](#)

### 3.3 Option 2. Configure phone using Metaswitch SIP provisioning server

You need to create Endpoint Pack Extension for Metaswitch. You can find the detailed instructions in Metaswitch Community. See the document [\[Cisco\] Creating a Cisco pack extension](#).



File **metadata.yaml** (example):

```
ID: cisco_SPA5xx_accredited
PackVersion: 17
Version: 1
Position: End
TemplatePositions:
- Template: config.ftl
  Position: End
```

File **templates/schema.yaml** (example):

```
group_names:
  CustomParameters:
    display_name:
      default: Custom Parameters

settings:
- name: custom_MiaRecPhoneServices_Button
  group_name: CustomParameters
  display_name:
    default: MiaRecPhoneServices_Button
  syntax:
    type: Boolean
  default_value: false
```

File **templates/config.ftl** (example):

```
<flat-profile>
${logger.log("MiaRec Phone Services soft key")}
<Programmable_Softkey_Enable ua="na">Yes</Programmable_Softkey_Enable>
```

```
<Connected_Key_List ua="na">psk16|1;${profile.AdvConnKeyList}</Connected_Key_List>
<PSK_16 ua="na">fnc=xml;url=http://{MIAREC_WEB_SERVER}/api/phone_services/cisco_spa/calls/active_call?login=$UID1;nme=MiaRec</PSK_16>
</flat-profile>
```

Where `{MIAREC_WEB_SERVER}` is your MiaRec web server address and `nme=MiaRec` a soft key title. `$UID1` will be substituted with the first line SIP Auth User ID. It should match to the corresponding configuration of user profile in MiaRec web portal (menu **Administration -> User Management -> Users**, field **Login**).

### 3.4 Option 3. Configure phone using generic provisioning server (HTTP-based server)

If you are a service provider and provision phone using Broadworks, Metaswitch or home-grown HTTP based system, then you need to add the following customizations to your Cisco SPA phone configuration template. For more details check [Cisco Small Business IP Telephony Devices Provisioning Guide](#)

Example of Plain Text configuration:

```
Programmable_Softkey_Enable "Yes" ;
Connected_Key_List "psk1|1;conf|3;xfer|4;toggle;bxfer;conflx;xferLx;park;phold;flash;" ;
PSK_1 "fnc=xml;url=http://{MIAREC_WEB_SERVER}/api/phone_services/cisco_spa/calls/active_call?login=$UID1;nme=MiaRec" ;
```

Where `{MIAREC_WEB_SERVER}` is your MiaRec web server address and `nme=MiaRec` a soft key title. `$UID1` will be substituted with the first line SIP Auth User ID. It should match to the corresponding configuration of user profile in MiaRec web portal (menu **Administration -> User Management -> Users**, field **Login**).

### 3.5 Troubleshooting

#### MiaRec System Log

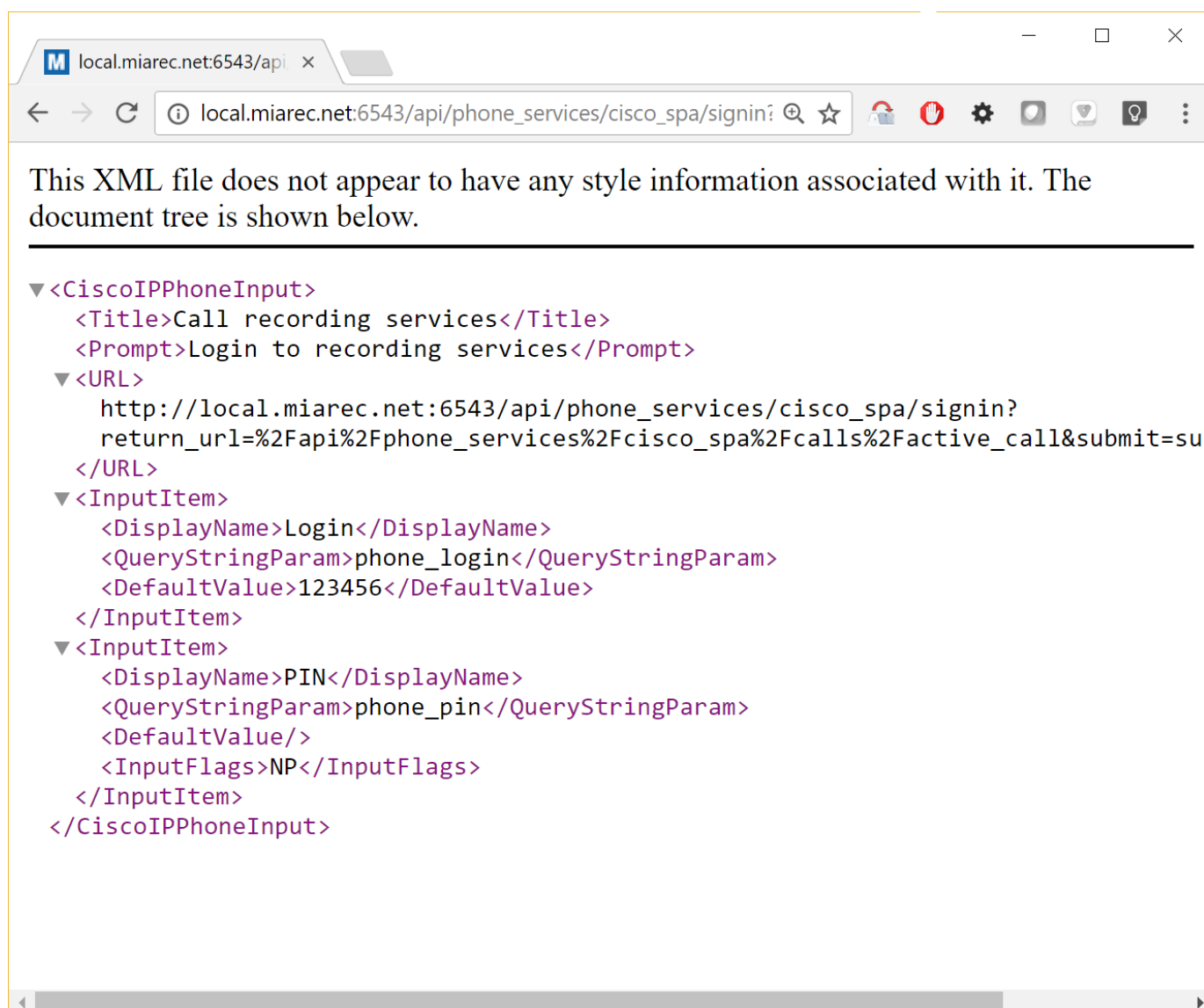
Navigate in MiaRec web portal to **Administration -> Maintenance -> System Log** and check if there are any warnings/errors.

#### Use your web browser to simulate the hardware phone

Open in your web browser the same link as you configured in the Polycom configuration file, for example:

```
https://miarec.example.com/api/phone_services/cisco_spa/calls/active_call?login=123456
```

You should be able to see XML page like the following:



The screenshot shows a web browser window with the address bar displaying `local.miarec.net:6543/api/phone_services/cisco_spa/signin?`. The page content displays an XML document tree for a Cisco IP Phone input form. The XML structure is as follows:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<CiscoIPPhoneInput>
  <Title>Call recording services</Title>
  <Prompt>Login to recording services</Prompt>
  <URL>
    http://local.miarec.net:6543/api/phone_services/cisco_spa/signin?
    return_url=%2Fapi%2Fphone_services%2Fcisco_spa%2Fcalls%2Factive_call&submit=sut
  </URL>
  <InputItem>
    <DisplayName>Login</DisplayName>
    <QueryStringParam>phone_login</QueryStringParam>
    <DefaultValue>123456</DefaultValue>
  </InputItem>
  <InputItem>
    <DisplayName>PIN</DisplayName>
    <QueryStringParam>phone_pin</QueryStringParam>
    <DefaultValue/>
    <InputFlags>NP</InputFlags>
  </InputItem>
</CiscoIPPhoneInput>
```

## 4. Integration with Mitel/Aastra phones

---

MiaRec integrates with Mitel 6800 series phones (previously known as Aastra) to provide on-demand and pause/resume recording control using softkey.

The photos below show Mitel 6867i phone integrated with MiaRec XML application in action.



### 4.1 Mitel 6871i / MiaRec softkey integration

---

Users can press **Record** / **No Record** softkey buttons during a call to selectively record some calls (on-demand recording).

The following photo demonstrates "Recording" state. User can press "No Record" to disable recording.



The following photo demonstrates "Not Recording" state. User can press "Record" to enable recording.





Additionally, MiaRec supports pause/resume recording for PCI Compliance. Users can press **Pause** and **Resume** softkey buttons to temporary mute recording, for example, when customer speaks credit card number.



## 4.2 Configuration of Mitel phone

---

The MiaRec XML application can be configured in Mitel phone using:

- Phone web interface
- Generic provisioning server (recommended).
- Metaswitch SIP Provisioning Server (recommended)

### 4.2.1 Option 1. Configuration of phone using web interface

---

Open web interface to Mitel phone and navigate to **Softkeys and XML->Top Keys**.



Choose one of available line keys and set:

- **Type** to XML
- **Label** to the preferred title, for example, MiaRec or Record
- **Value** should point to MiaRec web server. Format is the following:

```
https://miarec.example.com/api/aastra?login={LOGIN}&password={PASSWORD}
```

Where:

- {LOGIN} is a web access login configured on user's profile in MiaRec web portal
- {PASSWORD} is either Phone Services PIN or web access password depending on phone services configuration in MiaRec.
- miarec.example.com should be replaced with your MiaRec server address.

Key	Type	Label	Value	Line
1	None			global
2	None			global
3	None			global
4	None			global
5	XML	MiaRec	https://miarec.example.com/api/aastra?login={LOGIN}&password={PASSWORD}	global
6	None			global
7	None			global
8	None			global
9	None			global
10	None			global

### HTTP vs HTTPS?

The URL for XML application supports both `http://` and `https://`. For quick testing purposes you can use HTTP (non-encrypted) protocol for XML application, but for production, it is required to use HTTPS as it provides encryption. The user's login/password has to be sent to MiaRec server during authentication, so, encryption is required to protect this data from man-in-middle attacks.

Your MiaRec web server can be deployed with a self-signed certificate (not recommended for production) or with a SSL certificate signed by such providers like Verisign, DigiCert, GoDaddy, etc.

Mitel phone by default trusts only certificates that are signed by following providers: Comodo (EssentialSSL and 4096-bit RSA), CyberTrust, DigiCert, Entrust, GoDaddy, GeoTrust, Mitel MBG, Symantec (Class 3 Secure Server CA - G4), Thawte, TrustZone and Verisign.

If your SSL certificate is signed by other provider, then it is necessary to download provider's CA certificate to the phone as a trusted SSL certificate. Check the **Mitel SIP Phones Administration Guide** for details (chapter **HTTPS Client/Server Configuration**).

### 4.2.2 Option 2. Configuration of phone using a generic provisioning server

Add the following lines to your phone's configuration file:

```
topsoftkeyX type: xml
topsoftkeyX label: MiaRec
topsoftkeyX value: https://miarec.example.com/api/aastra?login={LOGIN}&password={PASSWORD}
```

Where:

- x is a number from 1 to 10 (depending on phone model).
- {LOGIN} is a web access login configured on user's profile in MiaRec web portal
- {PASSWORD} is either Phone Services PIN or web access password depending on phone services configuration in MiaRec.
- miarec.example.com should be replaced with your MiaRec server address

#### 4.2.3 Option 3. Configuration of phone using Metaswitch SIP Provisioning Server

If you are a Metaswitch service provider using Metaswitch SIP Provisioning Server, then you can automate provisioning of MiaRec to all users using custom Endpoint Pack with the following settings:

```
topsoftkeyX type: xml
topsoftkeyX label: MiaRec
topsoftkeyX value: https://miarec.example.com/api/aastra?login=${userData.directoryNumber}&pat=${userData.commportalPAT}
```

Where:

- x is a number from 1 to 10 (depending on phone model).
- miarec.example.com should be replaced with your MiaRec server address

The value \${userData.directoryNumber} will be replaced automatically with the extension of subscriber.

The value \${userData.commportalPAT} will be replaced with subscriber's Persistent Authentication Token (PAT).

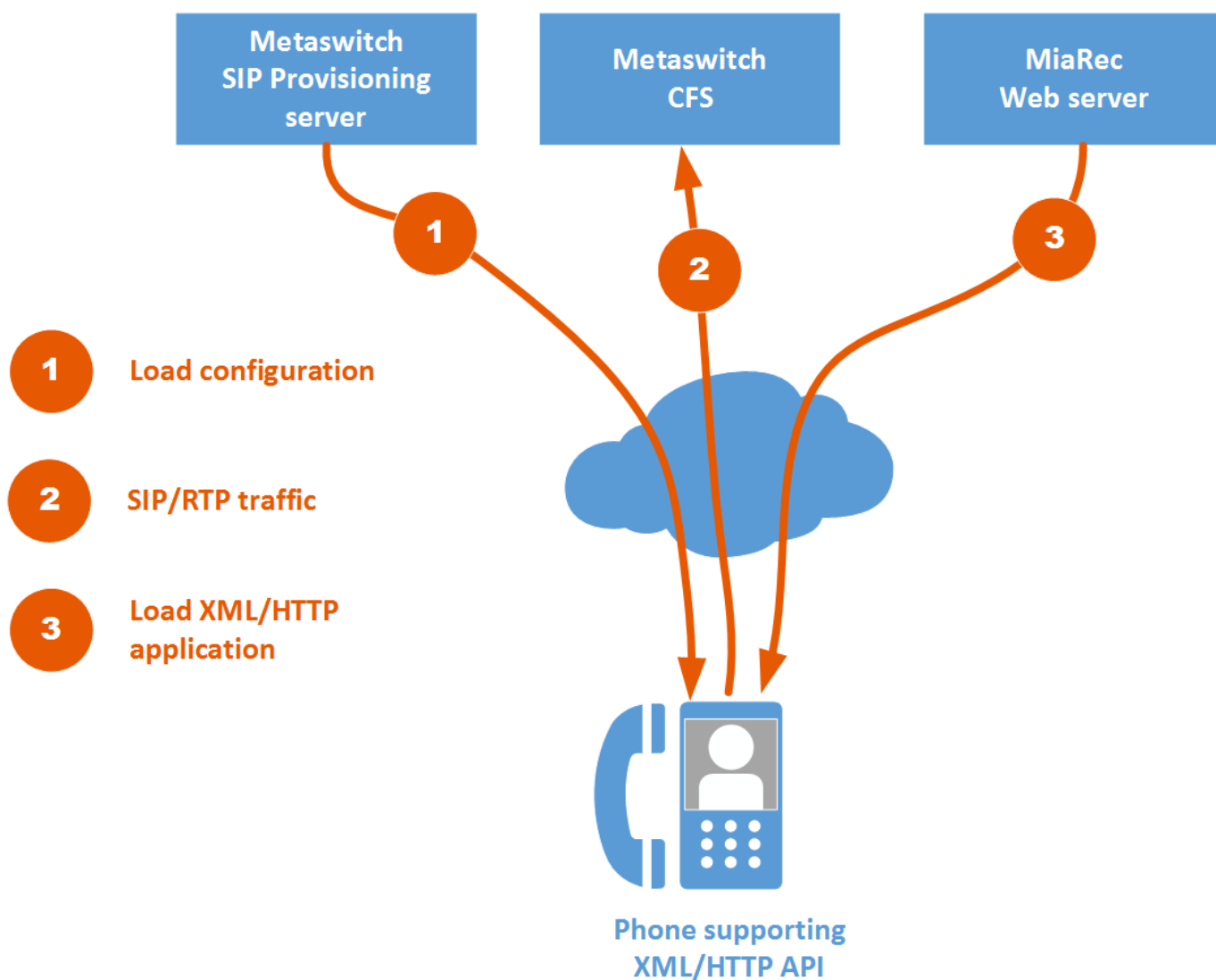
#### Requirements for CommPortal-based authentication

- CommPortal-based user authentication should be enabled in MiaRec (see menu **Administration -> User Authentication -> Metaswitch CommPortal Authentication**)
- Phone services authentication type on Tenant's profile should be set to **Authenticate users using the web access password** (see menu **Administration -> User Management -> Tenants -> Tenant Profile -> Phone Services**)
- Authentication type on User's profile should be set to **CommPortal** (see menu **Administration -> User Management -> Users -> User Profile**).

#### How MiaRec integrates with Metaswitch CFS / CommPortal

Below diagram shows how MiaRec phone services are integrated with Metaswitch platform.

1. The phone loads a custom made EndPoint Pack from Metaswitch SIP Provisioning server. This endpoint pack includes configuration of softkeys as well as HTTPS trust certificate (if necessary). The CommPortal Persistent Authentication Token (PAT) is generated for user and injected into the configuration file.
2. User makes/receives call from Metaswitch CFS
3. Upon pressing the pre-configured softkey, the phone loads XML application from MiaRec web server. The MiaRec server receives user's login and CommPortal Persistent Authentication Token (PAT) in the request, and passes those values to Metaswitch CommPortal for validation. After user credentials verification, the recording control buttons are displayed on phone's screen.



## 4.3 Troubleshooting

### MiaRec System Log

Navigate in MiaRec web portal to **Administration -> Maintenance -> System Log** and check if there are any warnings/errors.

### Use your web browser to simulate a hardware phone

Open in your web browser the same link as you configured in the Mitel configuration file, for example:

```
https://miarec.example.com/api/aastra?login=123456&password=secret
```

You should be able to see XML formatted page like:

```
<?xml version="1.0" encoding="utf-8"?>
<AastraIPPhoneFormattedTextScreen
  destroyOnExit="yes"
  LockIn="no"
  Beep="no"
>

<TopTitle>Recording controls</TopTitle>
<Line>
  From: 551200159
</Line>
<Line>
```

```
To: 300
</Line>
<Line>
  NOT RECORDING
</Line>

<SoftKey index="1">
  <Label>Record</Label>
  <URI>https://miarec.example/api/aastra/calls/...</URI>
</SoftKey>

<SoftKey index="2">
  <Label>Pause</Label>
  <URI>https://miarec.example/api/aastra/calls/...</URI>
</SoftKey>
```

## 5. Integration with Polycom VVX series phones

---

### 5.1 Supported models:

---

- Polycom VVX 300, 400, 500, 600, 1500

### 5.2 Edit Polycom XML configuration files on your provisioning server

---

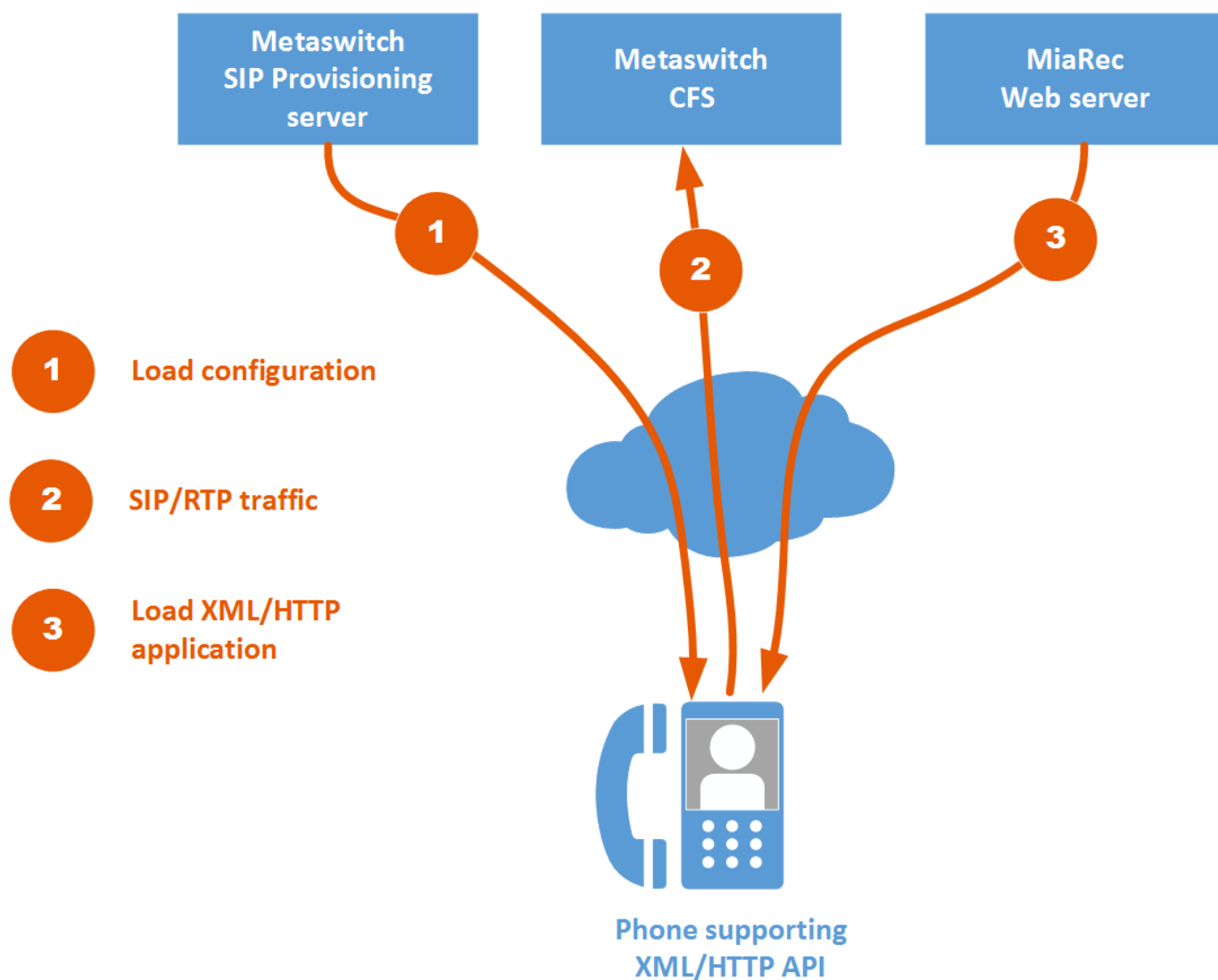
You need to add the following settings to the XML configuration file:

```
<feature>
  <feature.enhancedFeatureKeys feature.enhancedFeatureKeys.enabled="1">
  </feature.enhancedFeatureKeys>
</feature>

<softkey
  softkey.1.label="MiaRec"
  softkey.1.action="https://{MIAREC_WEB_SERVER}/api/phone_services/polycom/calls/active_call?login={LOGIN}"
  softkey.1.enable="1"
  softkey.1.insert="0"
  softkey.1.precede="1"
  softkey.1.use.active="1"
  softkey.1.use.alerting="0"
  softkey.1.use.dialtone="0"
  softkey.1.use.hold="0"
  softkey.1.use.idle="0"
  softkey.1.use.proceeding="0"
  softkey.1.use.setup="0"
>
</softkey>
```

Where `{MIAREC_WEB_SERVER}` is your MiaRec web server address and `{LOGIN}` is an login of the particular user. Each user should have unique login. The login should match to the corresponding configuration of user profile in MiaRec web portal (menu **Administration -> User Management -> Users**).

The diagram below shows how MiaRec phone services are integrated with Metaswitch platform:



## 5.3 Troubleshooting

### MiaRec System Log

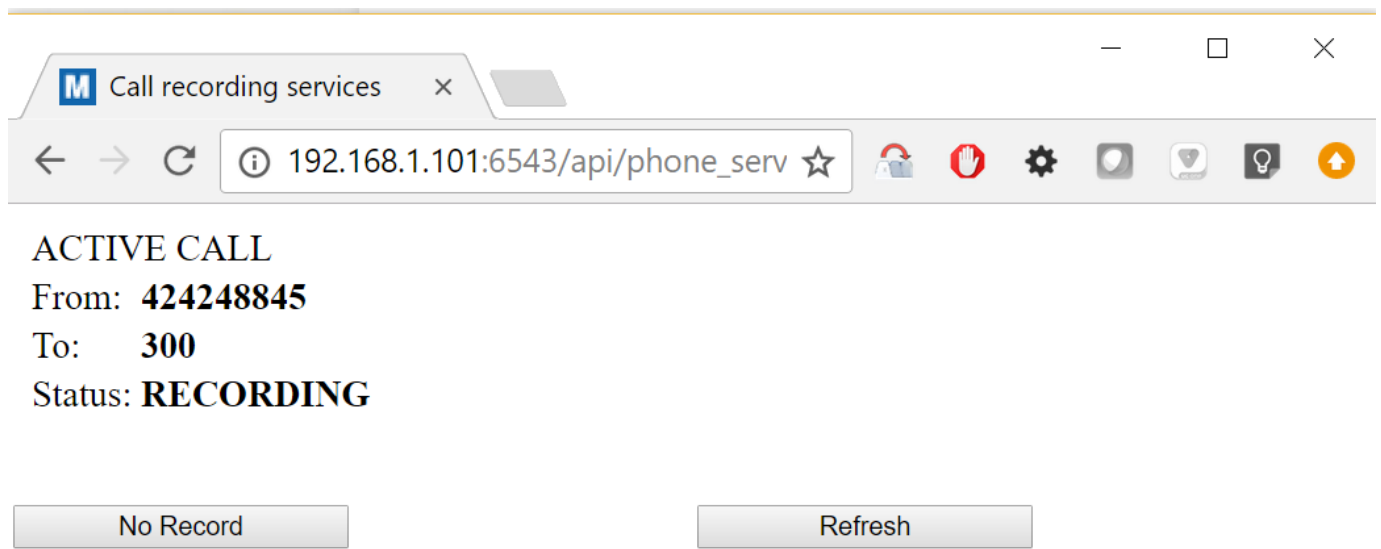
Navigate in MiaRec web portal to **Administration -> Maintenance -> System Log** and check if there are any warnings/errors.

### Use your web browser to simulate the hardware phone

Open in your web browser the same link as you configured in the Polycom configuration file, for example:

```
https://miarec.example.com/api/phone_services/polycom/calls/active_call?login=123456
```

You should be able to login to phone services and see the recording controls.



#### Check Polycom phone logs

By default, Polycom phone automatically uploads own log file to the provisioning system using FTP. Check that log file for any errors.

## 5.4 Known limitations

Polycom phones [do not support wildcard SSL certificates](#), i.e. if your MiaRec web server uses SSL certificate for domain \*.example.com, then XML application will fail to load to Polycom phone with error "SSL/TLS handshake failed".

Solution: use a single-domain SSL certificate for MiaRec web portal, for example, you can use free SSL certificate from Let's Encrypt.

## 6. Integration with Yealink phones

---

MiaRec integrates with Yealink phones to provide on-demand and pause/resume recording control using softkey.

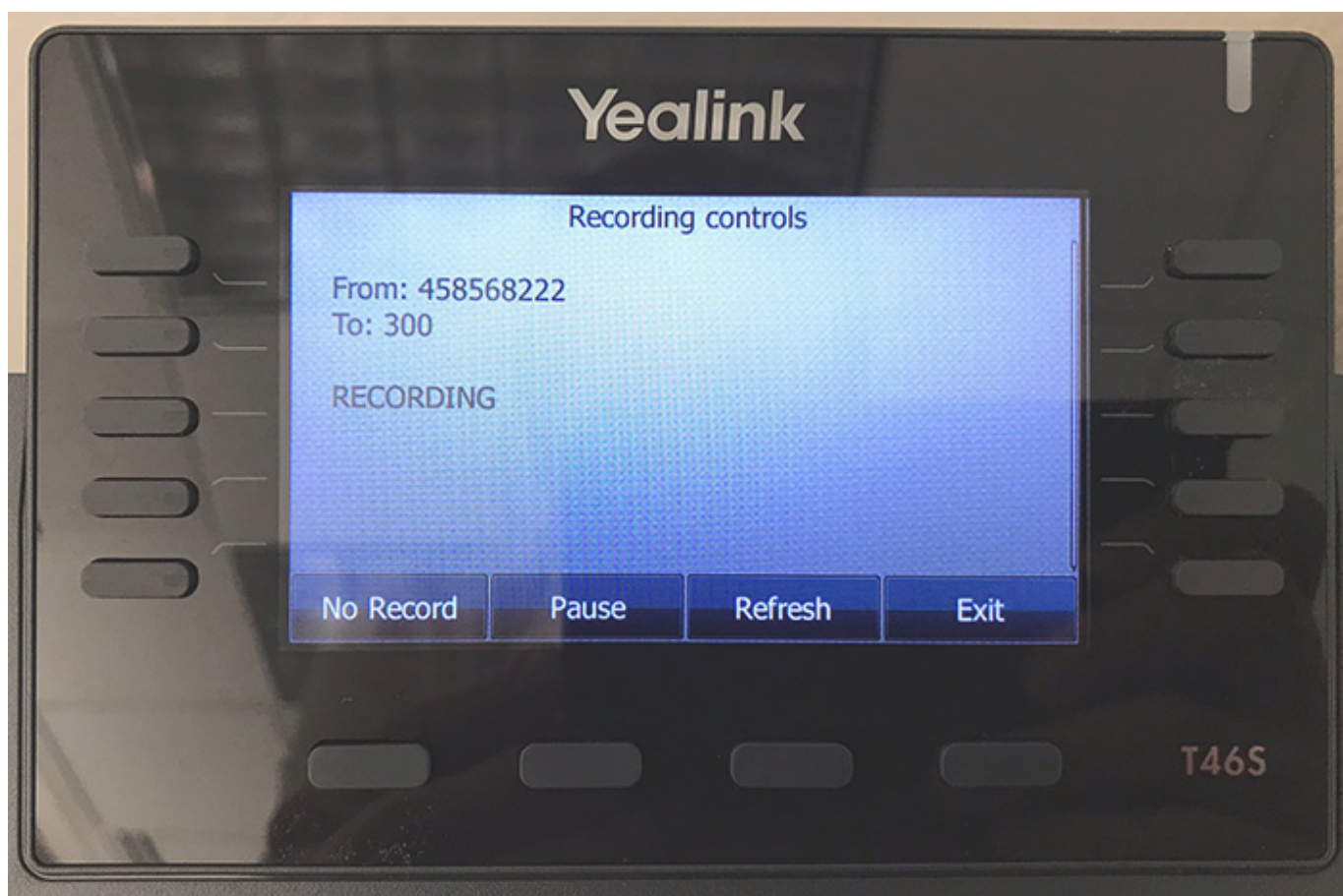
The photos below show example of Yealink T46S and T48S with MiaRec XML application in action

### 6.1 Yealink T46S / MiaRec softkey integration

---

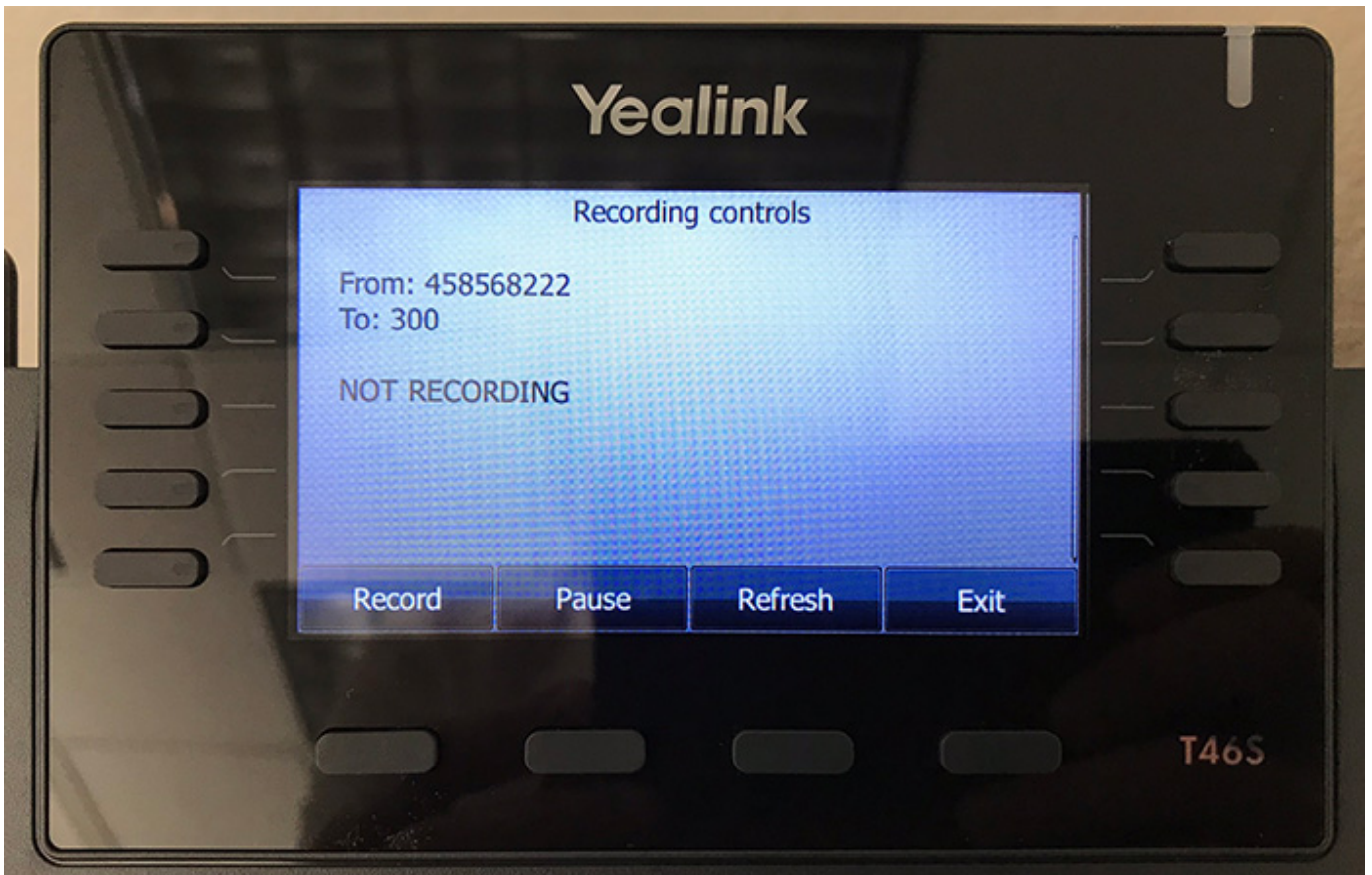
Users can press **Record** / **No Record** softkey buttons during a call to selectively record some calls (on-demand recording).

The following photo demonstrates "Recording" state. User can press "No Record" to disable recording.



The following photo demonstrates "Not Recording" state. User can press "Record" to enable recording.





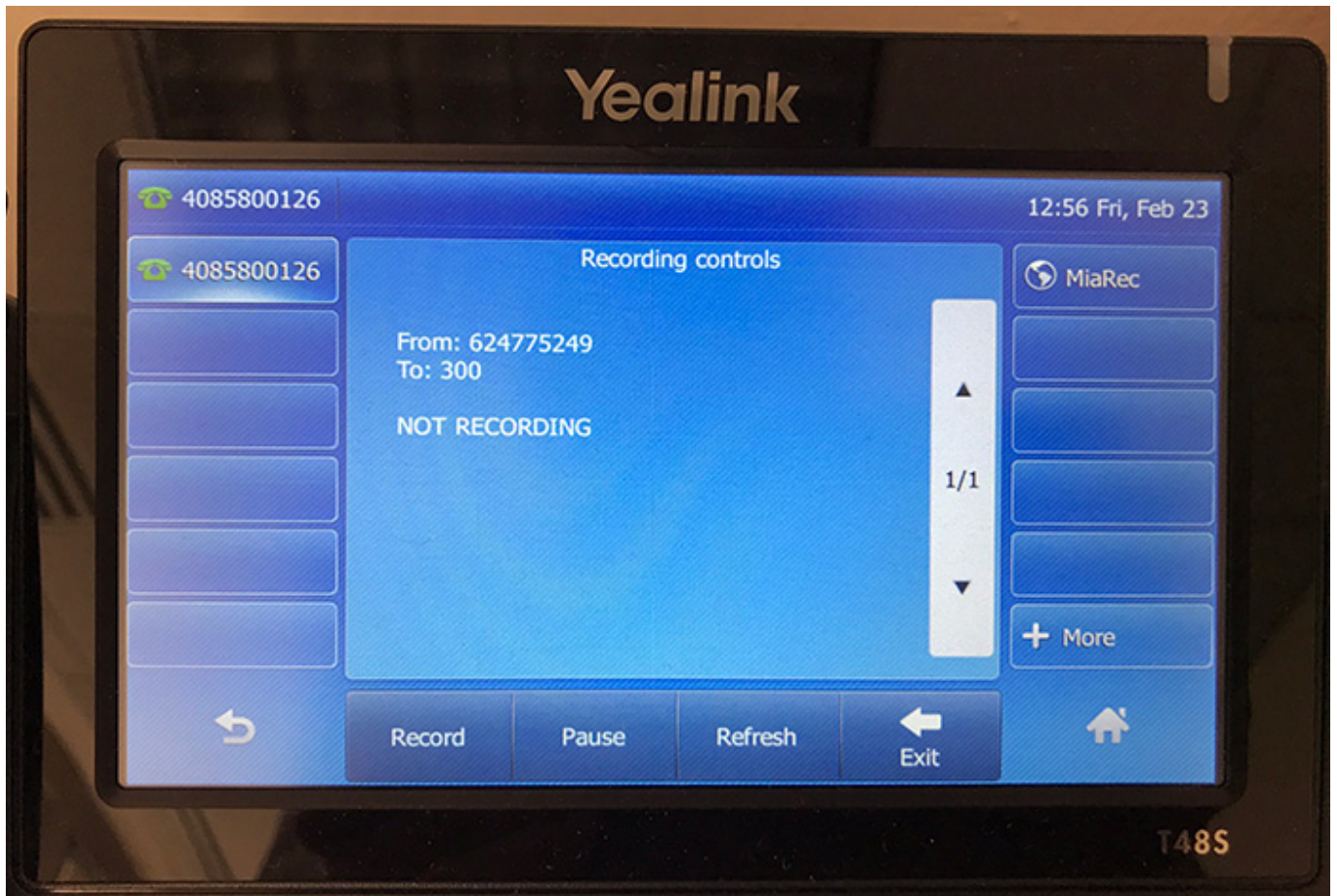
Additionally, MiaRec supports pause/resume recording for PCI Compliance. Users can press `Pause` and `Resume` softkey buttons to temporary mute recording, for example, when customer speaks credit card number.

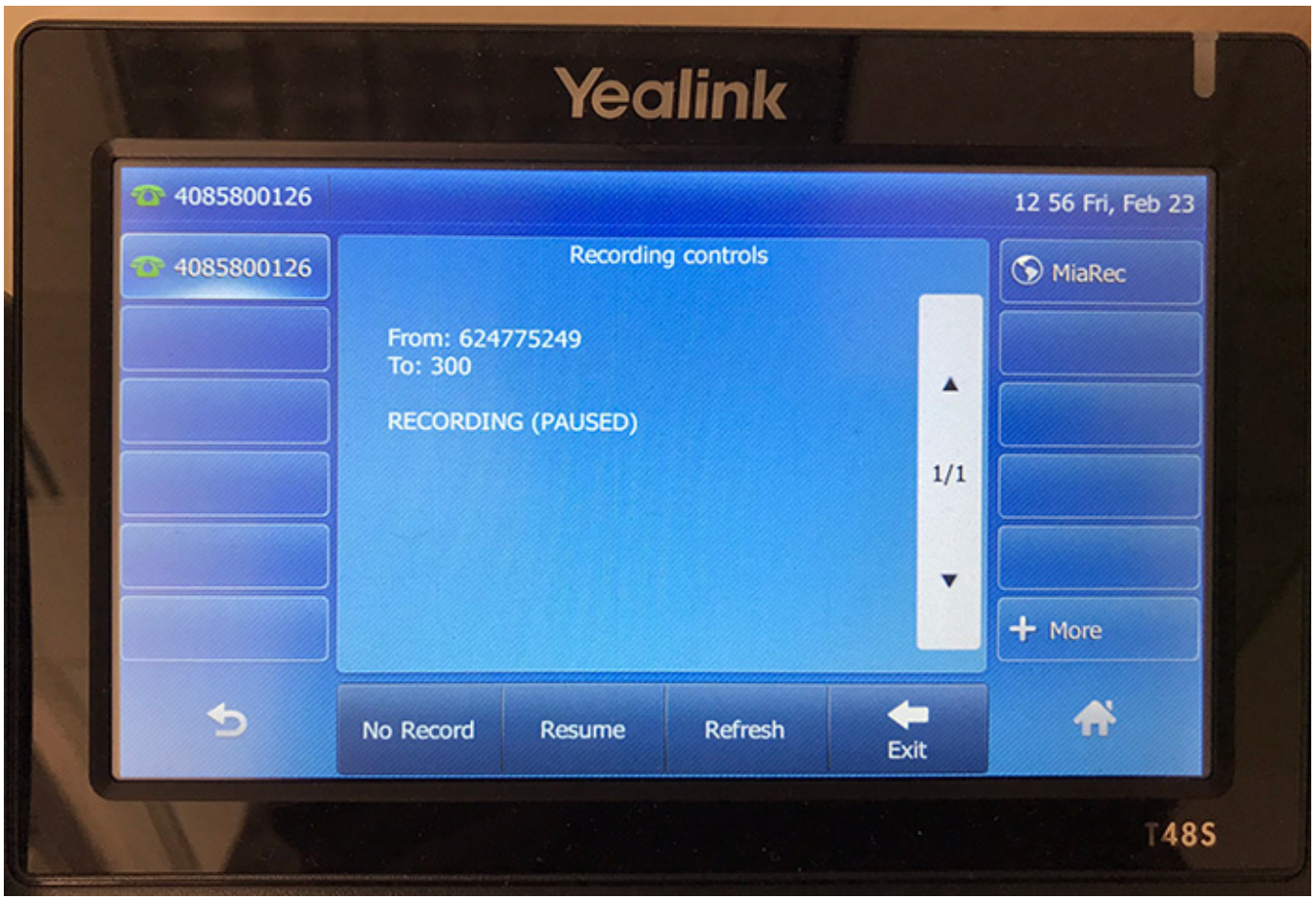


## 6.2 Yealink T48S / MiaRec softkey integration









## 6.3 Configuration of Yealink phone

The MiaRec XML application can be configured in Yealink phone using:

- Phone web interface
- Provisioning server (recommended)

### Option 1. Configuration of phone using web interface

Open web interface to Yealink phone and navigate to **DssKey** -> **Line Key1-9**.

Choose one of available line keys and set:

- **Type** to XML Browser
- **Label** to preferred title, for example, MiaRec or Record
- **Value** should point to MiaRec web server. Format is the following:

```
https://server.example.com/api/yealink?login={LOGIN}&password={PASSWORD}
```

Where:

- {LOGIN} is a web access login configured on user's profile in MiaRec web portal
- {PASSWORD} is either Phone Services PIN or web access password depending on phone services configuration in MiaRec.
- miarec.example.com should be replaced with your MiaRec server address.

Yealink

T46S

Status

Account

Network

Dsskey

Features

Settings

Line Key1-9

Line Key10-18

Line Key19-27

Programable Key

Ext Key

Enable Page Tips

Disabled

Label Length

Default

Key	Type	Value	Label	Line	Extension
Line Key1	Line	Default	904	Line 1	
Line Key2	Line	Default		Line 2	
Line Key3	Line	Default		Line 3	
Line Key4	Line	Default		Line 4	
Line Key5	Line	Default		Line 5	
Line Key6	XML Browser	https://demo.miarec.net/api	MiaRec	N/A	
Line Key7	Line	Default		Line 7	
Line Key8	Line	Default		Line 8	
Line Key9	Line	Default		Line 9	

Confirm

Cancel

Option 2. Configuration of phone using provisioning server

Add the following lines to your phone's configuration file:

```
linekey.X.type = 27
linekey.X.label = "MiaRec"
linekey.X.value = https://miarec.example.com/api/yealink?login={LOGIN}&password={PASSWORD}
```

Where:

- x is a number from 1 to 10 (depending on phone model).
- {LOGIN} is a web access login configured on user's profile in MiaRec web portal
- {PASSWORD} is either Phone Services PIN or web access password depending on phone services configuration in MiaRec.
- miarec.example.com should be replaced with your MiaRec server address

Option 3. Configuration of phone using Metaswitch SIP Provisioning Server

If you are a Metaswitch service provider using Metaswitch SIP Provisioning Server, then you can automate provisioning of MiaRec to all users using custom Endpoint Pack with the following settings:

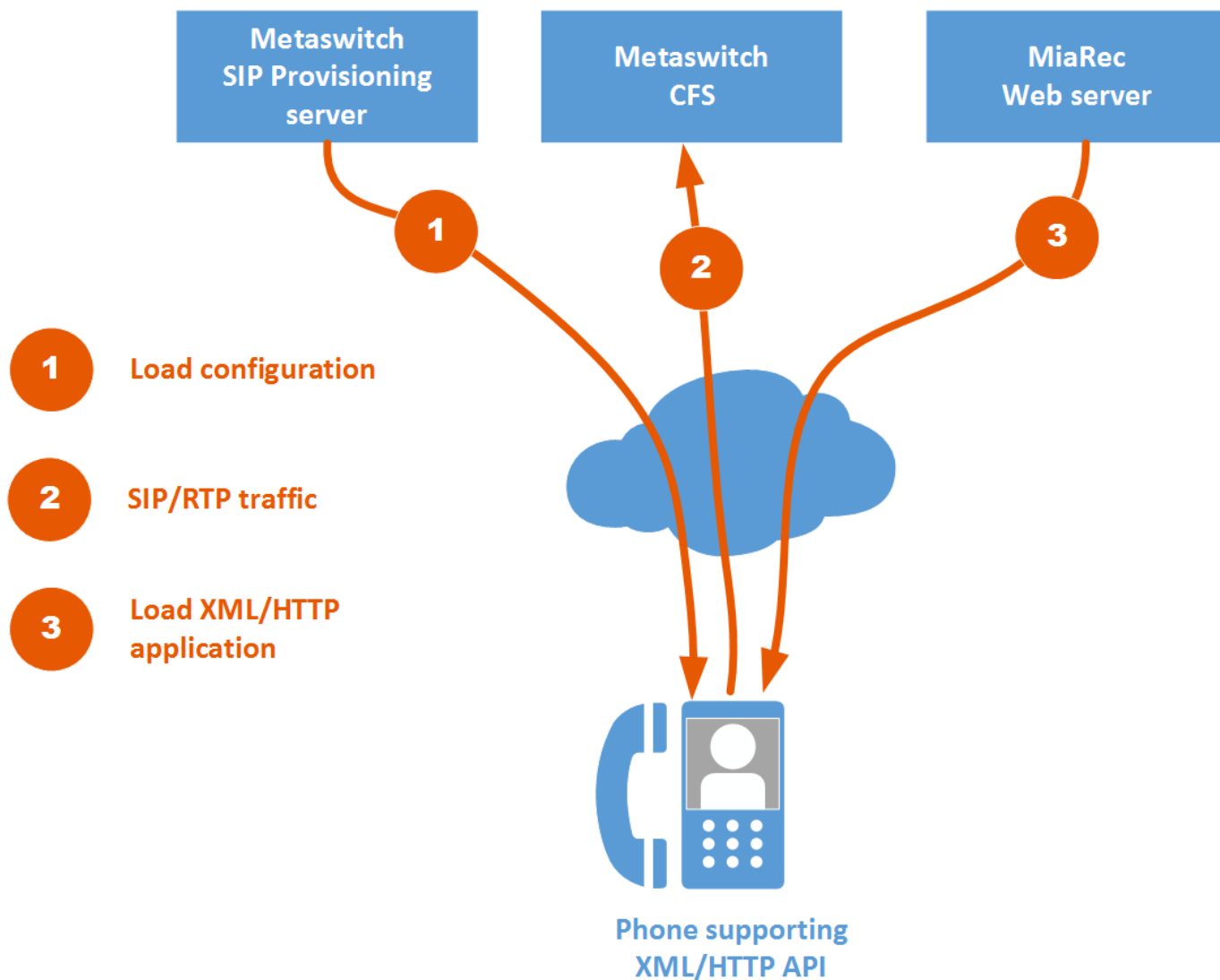
```
linekey.X.type = 27
linekey.X.label = "MiaRec"
linekey.X.value = https://miarec.example.com/api/yealink?login=${userData.directoryNumber}&pat=${userData.commportalPAT}
```

Where:

- x is a number from 1 to 10 (depending on phone model).
- miarec.example.com should be replaced with your MiaRec server address

The value \${userData.directoryNumber} will be replaced automatically with the extension of subscriber. The value \${userData.commportalPAT} will be replaced with subscriber's Persistent Authentication Token (PAT).

Below diagram shows how MiaRec phone services are integrated with Metaswitch platform:



## 6.4 Troubleshooting

### MiaRec System Log

Navigate in MiaRec web portal to **Administration -> Maintenance -> System Log** and check if there are any warnings/errors.

### Use your web browser to simulate a hardware phone

Open in your web browser the same link as you configured in the Yealink configuration file, for example:

```
https://miarec.example.com/api/yealink?login=123456&password=secret
```

You should be able to login to see XML formatted page for Yealink phone like.

```
<?xml version="1.0" encoding="utf-8"?>
<YealinkIPPhoneTextScreen
  destroyOnExit="yes"
  LockIn="no"
  Beep="no"
>

<Title>Recording controls</Title>
<Text>
  From: 551200159
  To: 300
```

```
    NOT RECORDING
  </Text>

  <SoftKey index="1">
    <Label>Record</Label>
    <URI>https://miarec.example/api/yealink/calls/...</URI>
  </SoftKey>

  <SoftKey index="2">
    <Label>Pause</Label>
    <URI>https://miarec.example/api/yealink/calls/...</URI>
  </SoftKey>
```



## 7. Softkey integration with Cisco 7900, 7800 and 8800 series phones

---

### 7.1 Overview

---

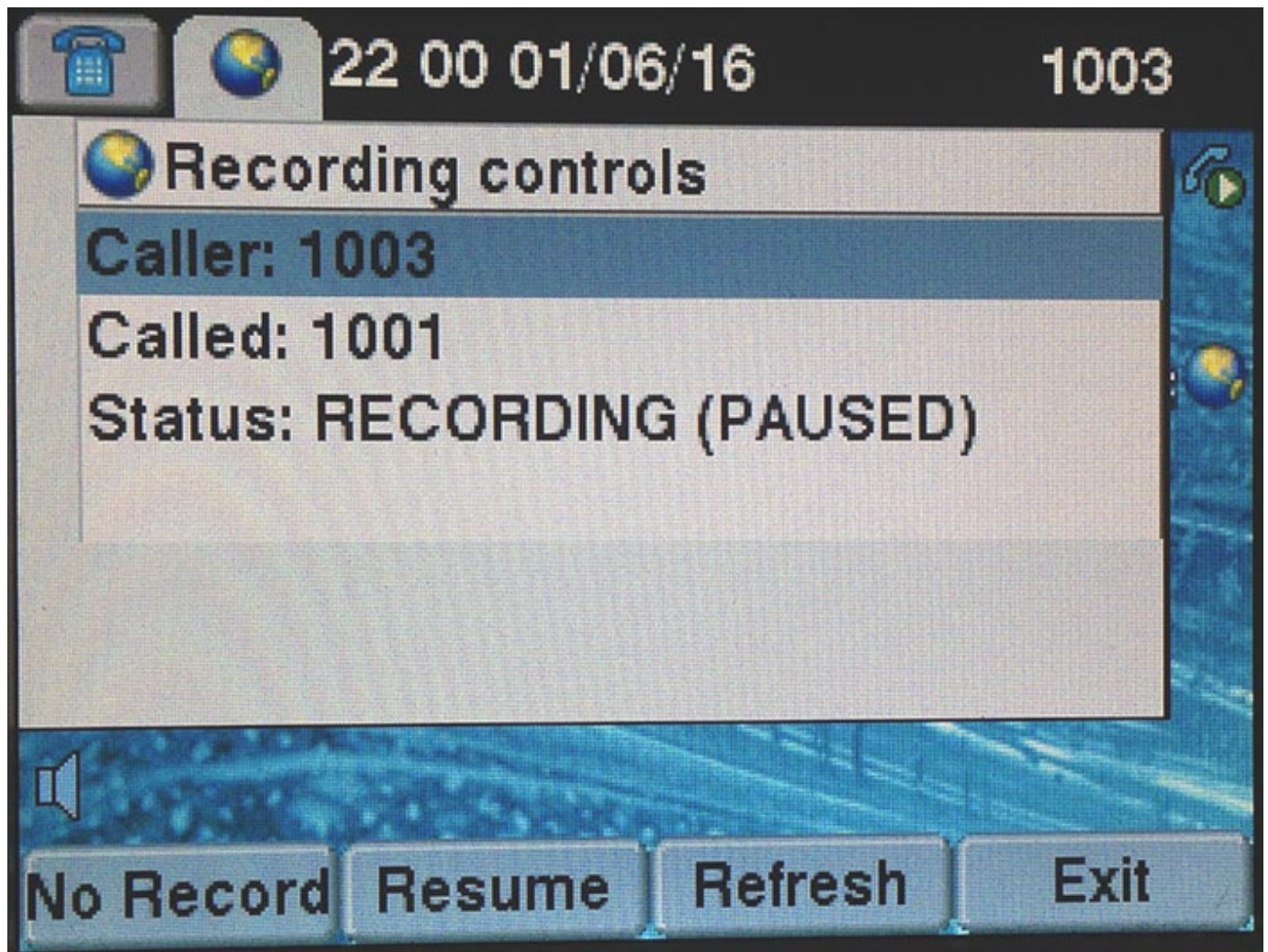
MiaRec integrates with Cisco phone services to provide the following features:

- **On-demand recording** Agents may use their Cisco phones to switch on/off recording for the current call.
- **Pause/resume recording** Agents may use their Cisco phones to pause recording for short period of time. For example, when processing credit card transactions over the phone, an agent may pause recording before a customer says critical credit card information. Such features allows to comply with PCI requirements.

## 7.1.1 Control MiaRec recording from Cisco softphone



## 7.1.2 Control MiaRec recording from Cisco hardware phone



## 7.1.3 Requirements:

- Cisco phone with XML phone services support

## 7.2 Create MiaRec IP Phone Service

Open Cisco Unified Communications Manager administration web portal.

- 1. Select the **Device - Device Settings - Phone Services** menu item.
- 2. Click on **Add New**
- 3. Type in the **Service Name**: MiaRec (you may use different name here)
- 4. Type in the **Service Description**: MiaRec Phone Service
- 5. Type in the **Service URL**:

```
http://0.0.0.0/cisco_phone_service/active_call?name=#DEVICENAME#
```





Replace 0.0.0.0 with your MiaRec server ip-address. This URL should point to MiaRec web portal. If the web portal is running on port different from the default 80, then include port into URL, like http://1.2.3.4:8080/cisco\_phone\_service... . It is recommended to use direct ip-address instead of domain name because name resolution may not work from within Cisco IP phone.


Alternatively, you can use the following URLs, which allow to control recording in one-click:

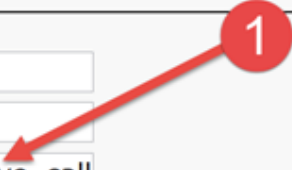

URL	Description
http://0.0.0.0/cisco_phone_service/call/active_call/ondemand/keep?name=#DEVICENAME#	Enable recording in one-click
http://0.0.0.0/cisco_phone_service/call/active_call/ondemand/discard?name=#DEVICENAME#	Disable recording in one-click
http://0.0.0.0/cisco_phone_service/call/active_call/muting/mute?name=#DEVICENAME#	Pause recording in one-click
http://0.0.0.0/cisco_phone_service/call/active_call/muting/unmute?name=#DEVICENAME#	Resume recording in one-click
6. Check <b>Enable</b> option.	
7. Save it.	

See the screenshot below for details.

**IP Phone Services Configuration****Related L**

 Save  Delete  Update Subscriptions  Add New

**Status**  
 Add successful

**Service Information**  
Service Name\* MiaRec  
Service Description MiaRec Phone service  
Service URL\*  http://192.168.1.79/cisco\_phone\_service/active\_call  
Secure-Service URL  
Service Category\* XML Service  
Service Type\* Standard IP Phone Service  
Service Vendor  
Service Version   
☒ Enable

**Service Parameter Information**  
Parameters  

**New Parameter**  
**Edit Parameter**  
**Delete Parameter**

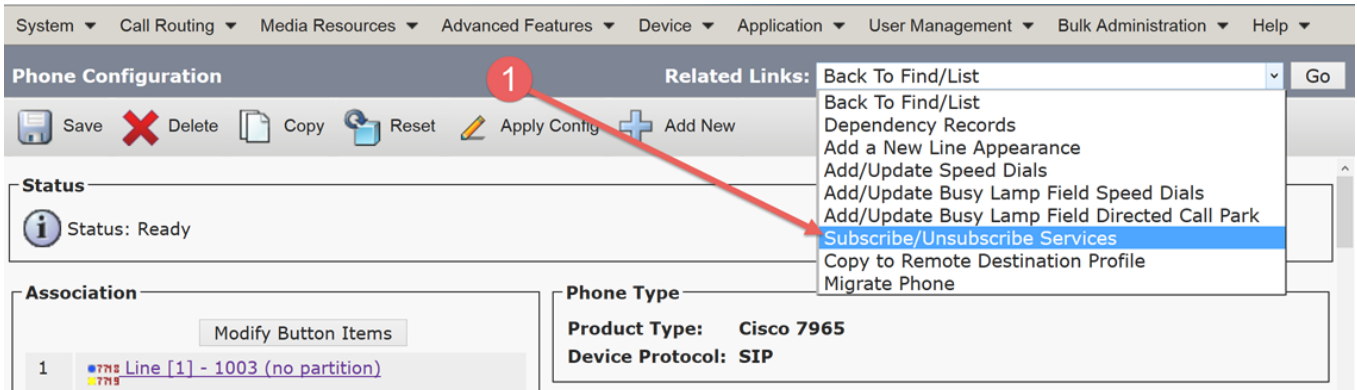
Save Delete Update Subscriptions Add New

## 7.3 Subscribe each phone to MiaRec phone service

---

Open Cisco Unified Communications Manager administration web portal.

1. Select the **Device - Phone** menu item.
2. Select the desired phone/device.
3. Select **Subscribe/Unsubscribe Services** from the "Related links" dropdown list.



System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾

**Phone Configuration** Related Links: Back To Find/List ▾ Go

Save Delete Copy Reset Apply Config Add New

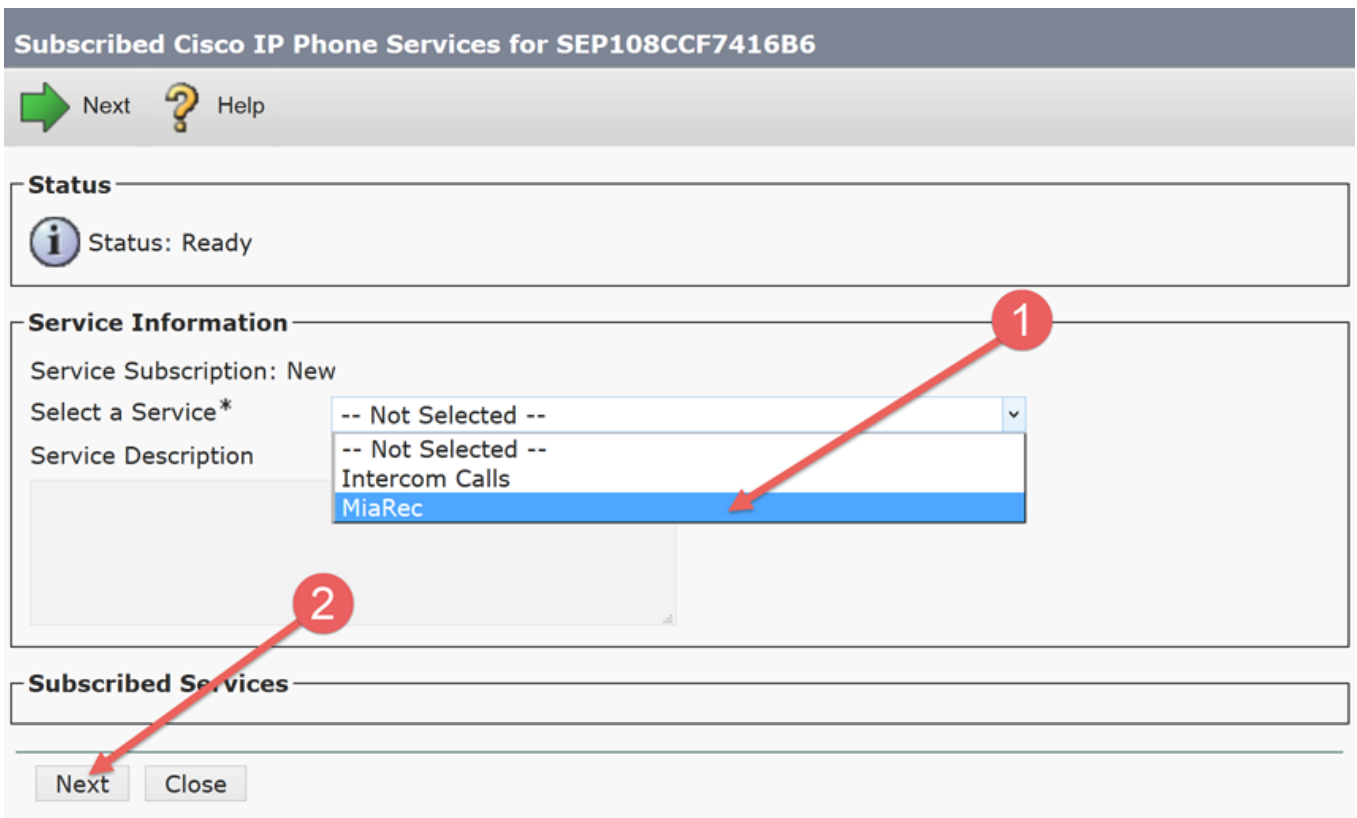
**Status**  
 Status: Ready

**Association**  
 1 Line [1] - 1003 (no partition)

**Phone Type**  
 Product Type: Cisco 7965  
 Device Protocol: SIP

**Related Links:**  
 Back To Find/List  
 Dependency Records  
 Add a New Line Appearance  
 Add/Update Speed Dials  
 Add/Update Busy Lamp Field Speed Dials  
 Add/Update Busy Lamp Field Directed Call Park  
**Subscribe/Unsubscribe Services**  
 Copy to Remote Destination Profile  
 Migrate Phone

4. In the new pop up window, select **MiaRec** from the list box.
5. Click the **Next** button.



**Subscribed Cisco IP Phone Services for SEP108CCF7416B6**

Next Help

**Status**  
 Status: Ready

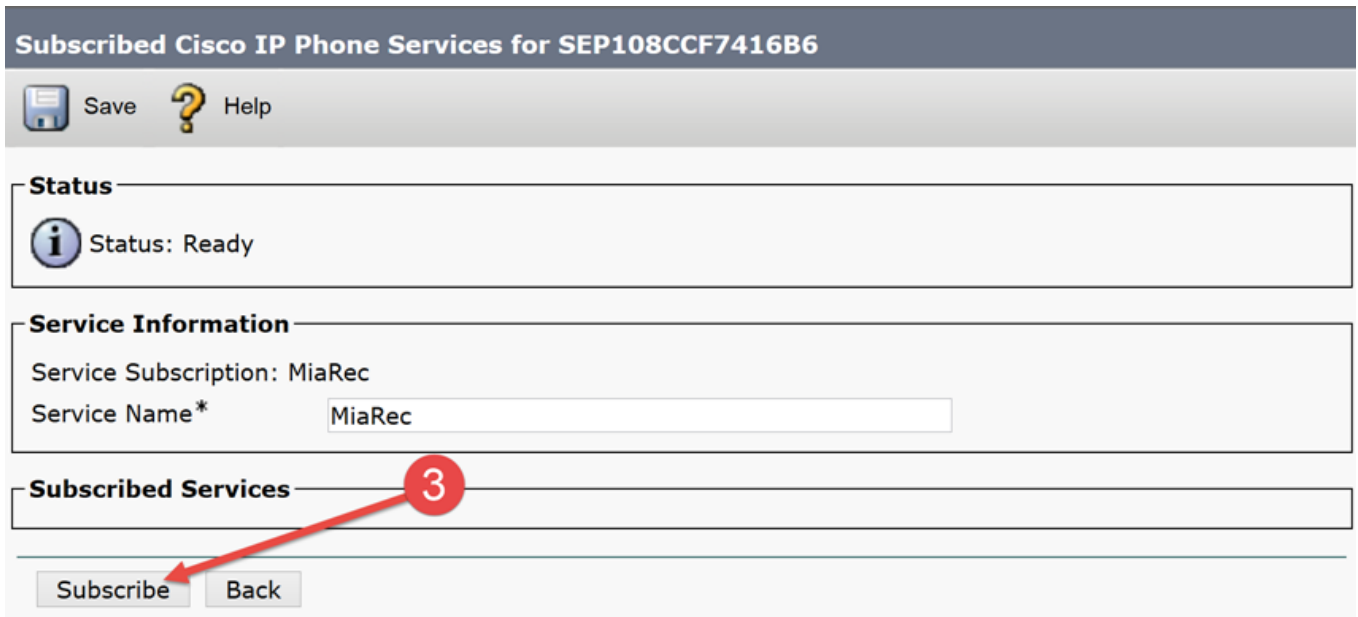
**Service Information**  
 Service Subscription: New  
 Select a Service\* -- Not Selected -- ▾  
 Service Description  
 -- Not Selected --  
 Intercom Calls  
**MiaRec**

**Subscribed Services**

Next Close

6. Click the **Subscribe** button.





**Subscribed Cisco IP Phone Services for SEP108CCF7416B6**

Save Help

**Status**

Status: Ready

**Service Information**

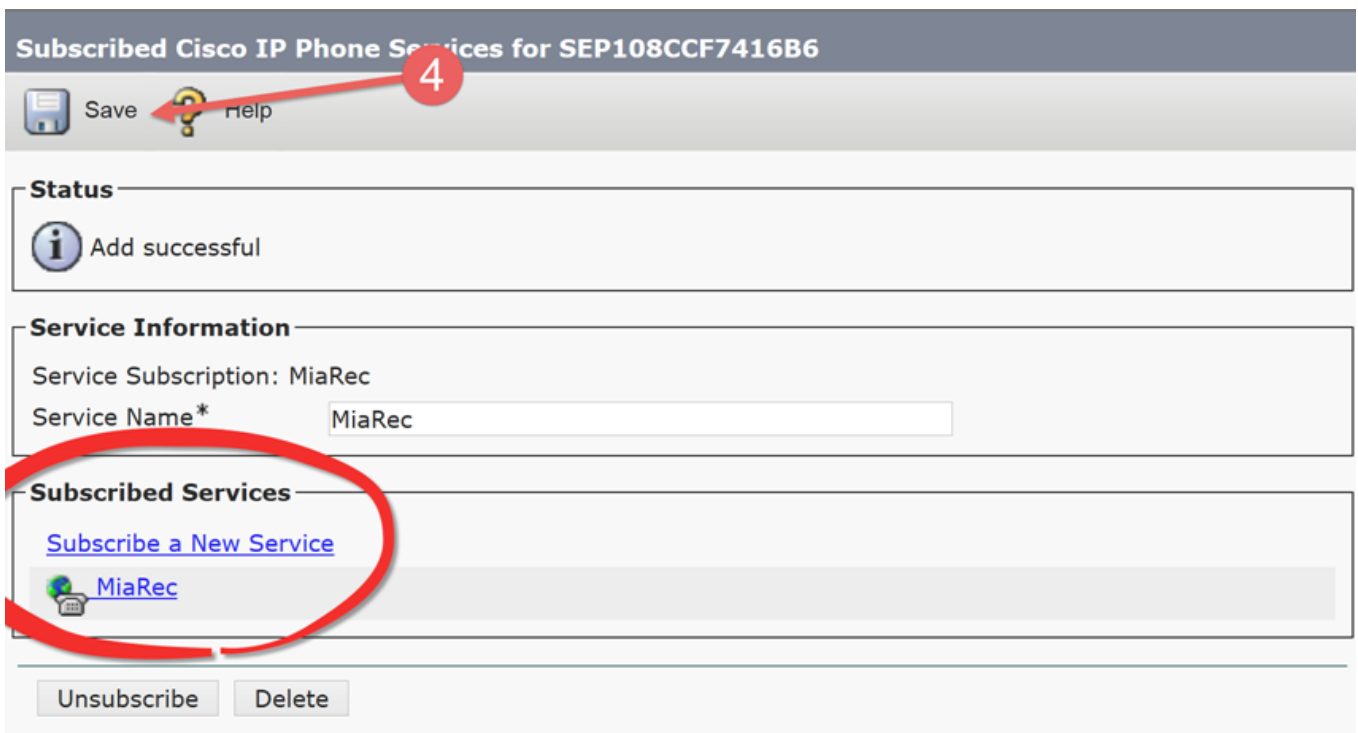
Service Subscription: MiaRec

Service Name\* MiaRec

**Subscribed Services**

Subscribe Back

7. Verify that the phone subscribed to **MiaRec** phone service successfully and click the **Save** button. Then close this pop up window.



**Subscribed Cisco IP Phone Services for SEP108CCF7416B6**

Save Help

**Status**

Add successful

**Service Information**

Service Subscription: MiaRec

Service Name\* MiaRec

**Subscribed Services**

[Subscribe a New Service](#)

MiaRec

Unsubscribe Delete

Now, after you save phone configuration and restart the phone, the **MiaRec** phone services should be available upon clicking the **Services** button on the phone.

### 7.3.1 [Optional] Use phone's line button for quick access to **MiaRec** phone services.

1. Click the **Modify Button Items** in the **Phone Configuration** window.



System
Call Routing
Media Resources
Advanced Features
Device
Application
User Management
Bulk Administration
Help

Phone Configuration
Related Links: Back To Find/List
Go

Save
Delete
Copy
Reset
Apply Config
Add New

Status
Status: Ready

Association
Modify Button Items
1 Line [1] - 1003 (no partition)
2 Line [2] - Add a new DN
3 Add a new SD
4 Add a new SD
5 Add a new SD
6 Add a new SD
----- Unassigned Associated Items -----
7 Add a new SD
8 Add a new SURL
9 Add a new BLF SD




Phone Type
Product Type: Cisco 7965
Device Protocol: SIP

Real-time Device Status
Registration: Registered with Cisco Unified Communications Manager cucm11
IPv4 Address: 192.168.1.152
Active Load ID: SIP45.9-4-2SR1-1S
Download Status: Unknown


Device Information
Device is Active
Device is trusted
MAC Address\*: 108CCF7416B6
Description: SEP108CCF7416B6
Device Pool\*: Default
View

2. Select the **Add a new SURL** from the list **Unassigned Associated Items** and click **<** button.

### Reorder Phone Button Configuration

 Save  Close  Help

#### Status


 Status: Ready


#### Manage Button Associations.


Associated Items


Line [1] - 1003 (no partition)- Fixed feature - button 1  
Line [2] - Add a new DN  
Add a new SD  
Add a new SD  
Add a new SD  
Add a new SD


Unassigned Associated Items


 Add a new SD


 **Add a new SURL**


 Add a new BLF SD


 Add a new BLF Directed Call Park


 Do Not Disturb

 Intercom [1] - Add a new Intercom

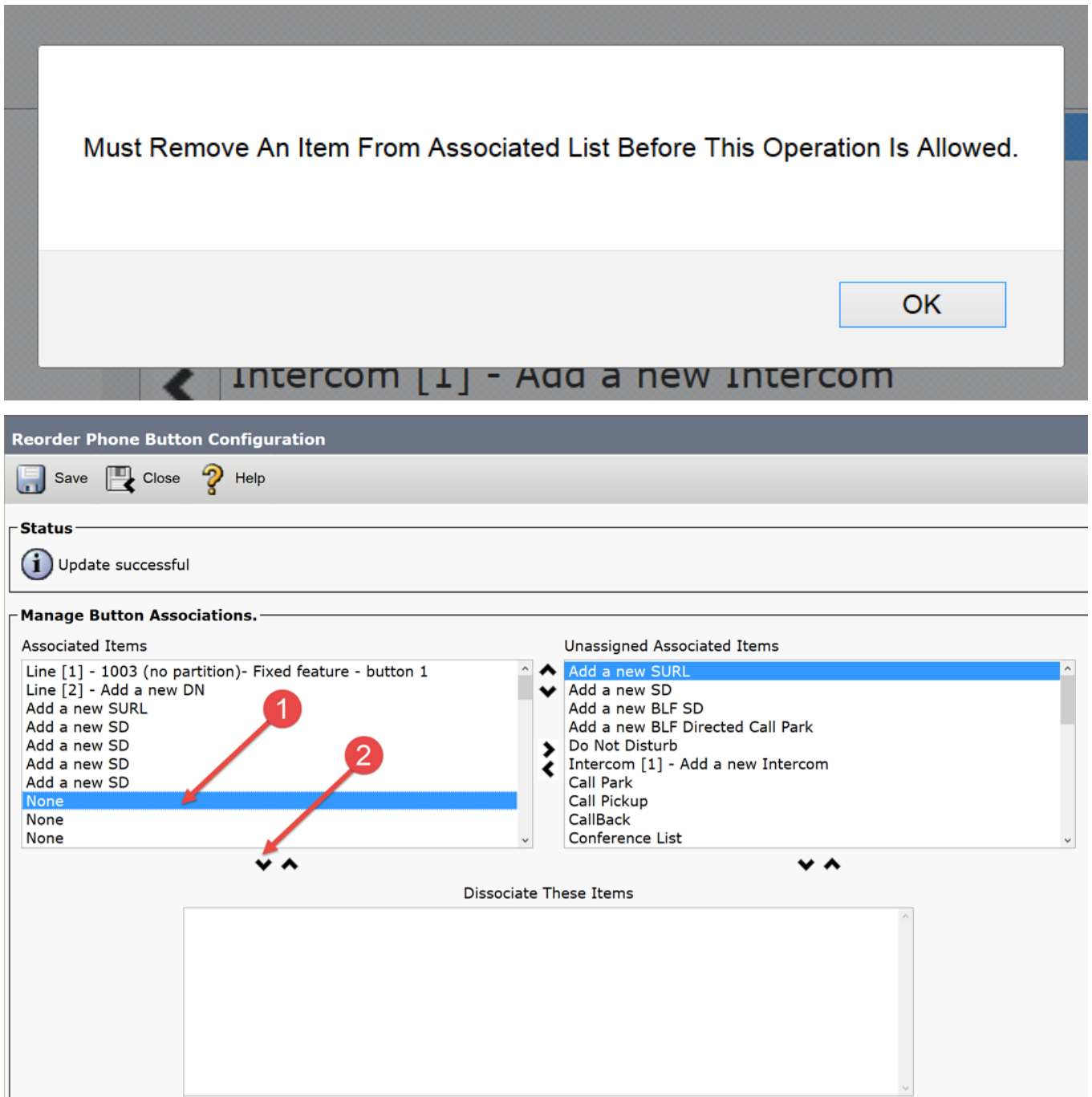
 Call Park

 Call Pickup

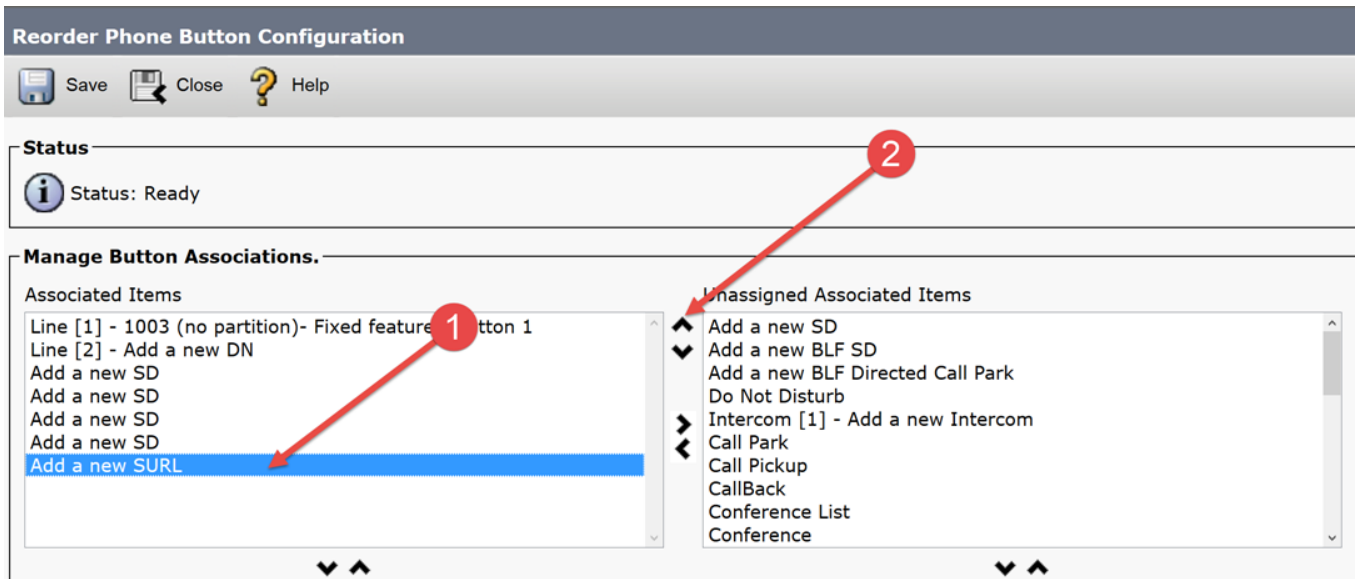
 CallBack

 Conference List

3. If you receive the error **Must Remove An Item From Associated List Before This Operation is Allowed.**, then select one of unnecessary items in the list **Associated Items** and click **V** button.

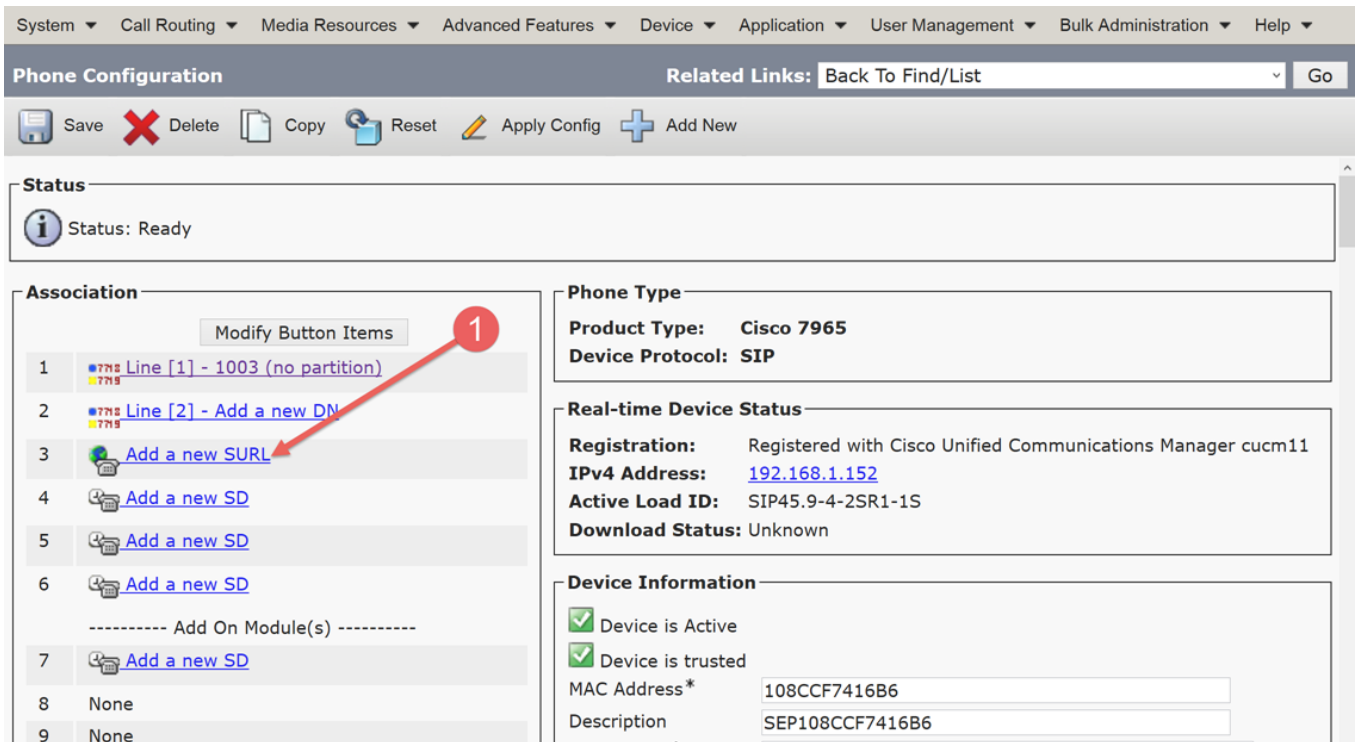


4. Select the **Add a new SURL** in the list **Associated Items** and click button ^ as many times as necessary to move it to the correct position. For example, if the phone has only 4 line buttons, then position should be from 1 to 4, otherwise the button will not be visible.



5. Click the **Save** button and close this pop up window.

6. Click the newly created **Add a new SURL** link.



7. Select **MiaRec** from the list box and click **Save** button two times.

### Configure Service URL Buttons for SEP108CCF7416B6

Save Close Help

**Status**  
Status: Ready

**Service URL Settings on base Phone**

Button	Service	Label
1	< None > MiaRec	

Save Close

8. Verify that **MiaRec** is shown on the line button. Save the phone configuration and click **Apply Config** (depending on phone firmware it may be necessary to restart the phone to apply changes).

System Call Routing Media Resources Advanced Features Device Application User Management Bulk Administration Help

### Phone Configuration

Related Links: Back To Find/List Go

Save Delete Copy Reset Apply Config Add New

**Status**  
Update successful

**Association**

Modify Button Items

1	Line [1] - 1003 (no partition)
2	Line [2] - Add a new DN
3	MiaRec
4	Add a new SD
5	Add a new SD
6	Add a new SD
----- Add On Module(s) -----	
7	Add a new SD
8	None

**Phone Type**

Product Type: Cisco 7965  
Device Protocol: SIP

**Real-time Device Status**

Registration: Unregistered  
IPv4 Address: 192.168.1.152  
Active Load ID: SIP45.9-4-2SR1-1S  
Download Status: Unknown

**Device Information**

Device is Active  
Device is trusted  
MAC Address\*: 108CCF7416B6  
Description: SEP108CCF7416B6