

# PhoneFX/NotificationFX Installation & Admin Guide



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# Contents

Overview	4
Document Conventions	4
Requirements	5
System	5
Unified Communications Manager	5
Network Connectivity	5
NotificationFX requirements	6
AutomationFX Installation	7
CUCM Integration	10
Cluster Setup in AutomationFX	10
Automatic Cluster Setup	10
Manual Cluster Setup	12
CUCM Setup	13
Enabling web access on entire phone estate	13
Changing CUCM phone Authentication (Optional)	13
AutomationFX Web Interface Login	15
Requirements	15
Cluster credentials reset/recovery	16
PhoneFX (Phone Remote Control)	17
Phone Filters	19
Creating & Saving a Filter	19
Editing & Deleting a Filter	19
Creating a Custom Group / Category	19
NotificationFX	20
Create a Message	20
Message Features	21
Provision, Subscribe NotificationFX XML Phone Service	
Sending a Message/Notification.	
Sending Message from AutomationFX Admin Interface	
Sending Messages from NotificationFX XML Phone Service	27

## **Overview**

PhoneFX is an efficient and accurate way for CUCM professionals of all skills and experience levels to perform their jobs with an overall improvement in workflow and productivity. This guide introduces you to some of the most useful features of PhoneFX.

PhoneFX is built using AutomationFX hence most of this document makes reference to AutomationFX as technically that is the application that is being installed. PhoneFX is the functionality enabled within the AutomationFX platform for controlling Cisco IP Phones. AutomationFX (and therefore PhoneFX) leverages existing technology from PhoneView, PhoneView is the premier Cisco Endpoint Management product from UnifiedFX and has been used by over 10,000 Cisco UC Engineers worldwide.

## **Document Conventions**

This document uses specific formatting to point out special facts and to warn you of potential issues:



The lightbulb indicates a tip or additional piece of information that may be useful for more advanced users.



The speech bubble highlights important information that is essential for the given context.



The exclamation mark warns you of potential issues and information that requires your full attention.

Furthermore, the following formatting is used:

- Paths and locations on your hard drive or other storage devices are printed in *italics*;
- Important names and concepts are highlighted in **bold**;
- Square brackets are used to reference keys on a computer keyboard, e.g. Press [Shift] +
  [Enter].

# Requirements

## **System**

- Windows 8 (or above) / Windows Server 2012 (or above)
- Microsoft .NET Framework 4.5.2
- Dual Core CPU 2+ GHz / 4GB RAM (or above)
- 1GB free hard drive space
- VMWare Supported
- Modern web browser *i.e.* Chrome, Edge, Firefox, Safari, IE 10+
- Free TCP port (8181 by default)

## **Unified Communications Manager**

- CUCM Version 8.0 (or above)
- Phone Web Server enabled (for getting screenshots)

## **Network Connectivity**

The following tables describe the TCP Port connectivity requirements of PhoneFX:

#### TCP Ports between AutomationFX(PhoneFX) and CUCM

From	То	Port	Purpose
AutomationFX	CUCM	80/TCP	HTTP API Interface
AutomationFX	CUCM	8080/TCP	HTTP API Interface
AutomationFX	CUCM	443/TCP	HTTPS API Interface
AutomationFX	CUCM	8443/TCP	HTTPS API Interface
AutomationFX	CUCM	6970/TCP	HTTP API Interface
AutomationFX	CUCM	2748/TCP	CTI API Interface
AutomationFX	CUCM	2789/TCP	CTI API Interface

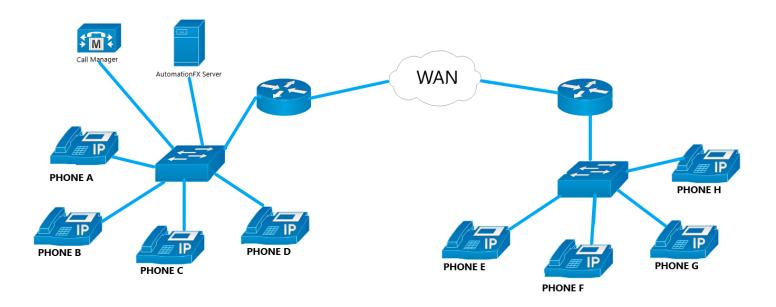
#### TCP Ports between AutomationFX and IP Phones

From	То	Port	Purpose
AutomationFX	IP Phone	80/TCP	HTTP API Interface
AutomationFX	IP Phone	443/TCP	HTTPS API Interface
IP Phone	AutomationFX	8181/TCP (Editable)	HTTP API Interface

#### **NotificationFX requirements**

In order to launch the NotificationFX XML Phone Service, IP Phones need access to AutomationFX Server on TCP Port configured to host the application (Default is 8181).

To use the **Live paging** feature available in NotificationFX, **Multicast** needs to be enabled across the network.



Multicast needs to be enabled across the WAN, if paging is a requirement across multiple network segments. However if the Transmitter (the device transmitting audio) and receiver/s (devices listening to the paging session) are on the same network segment then the Multicast over WAN is not required.

Following Scenarios demonstrates Multicast requirements.

**Scenario 1** - Refer to Diagram above - "Phone A" Intiates a paging session (i.e. "Phone A" joins the paging group as the transmitter), "Phone B", "Phone C" and "Phone D" joins the paging group as receivers. (Multicast traffic stays in the same network segment so **Multicast needs to be enabled on LAN**)

**Scenario 2** - Refer to Diagram above - "Phone E" Intiates a paging session (i.e. "Phone E" joins the paging group as the transmitter) , "Phone F", "Phone G" and "Phone H" joins the paging group as receivers.(Multicast traffic stays in the same network segment so **Multicast needs to be enabled on LAN**)

**Scenario 3** - Refer to Diagram above - "Phone A" Intiates a paging session (i.e. "Phone A" joins the paging group as the transmitter), "Phone B", "Phone F" and "Phone G" joins the paging group as receivers. (Multicast traffic needs to flow between 2 network segments so in this scenario **Multicast needs to be enabled across WAN**)

## **AutomationFX Installation**

Open the MSI Installer file and click **Next** on the Welcome page

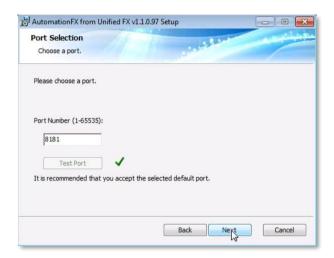


Review and accept the End-User License Agreement then click Next



Choose a local TCP port to host the *AutomationFX Web Application Platform*.

- Click **Test Port** to check that the chosen port is available on the local machine.
- Click **Next** to continue





The default port is **8181**, this can be changed to port 80 as long as there are no other applications hosted on port 80 on the local machine.



The value is saved to the following registry entry:

HKLM\Software\UnifiedFX\AutomationFX\PortNumber

Once all the required information has been captured, click **Install** to start the installation.



All necessary files will then be copied to the local machine and the AutomationFX Windows Service will be installed and started.

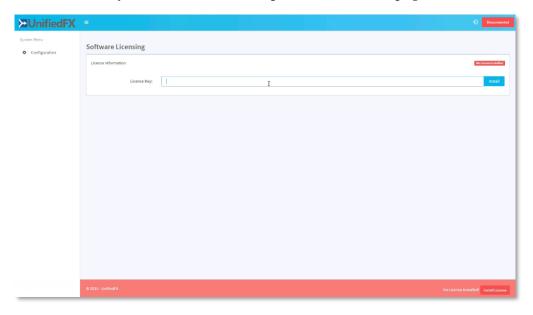


Once the installation is complete click **Finish** to close the installer



After the MSI installation is complete the application web interface is opened automatically (http://127.0.0.1:8181).

The first step for a new installation is to install the license key. Enter the License Key and click **Install**. Once installed, you will see the license parameters on this page.



# **CUCM Integration**

This section provides information on CUCM cluster integration for PhoneFX phone control and configuring the phones to use AutomationFX authentication service.

## **Cluster Setup in AutomationFX**

Once AutomationFX is installed and licensed, the first task is to add one or more CUCM clusters. Click **Configuration** and then **Clusters** - this will navigate to the cluster page.

There are two methods you can use to add a cluster to AutomationFX: **Automatic Cluster Setup** and **Manual Cluster Setup**.

#### **Automatic Cluster Setup**

When Automatic Cluster Setup is used, the application will automatically create an application user **AutomationFXUser** in CUCM with appropriate permissions for AutomationFX. Once the user account is created successfully, AutomationFX will use this credential to integrate with CUCM.

Enter the following and press the **Setup** button:

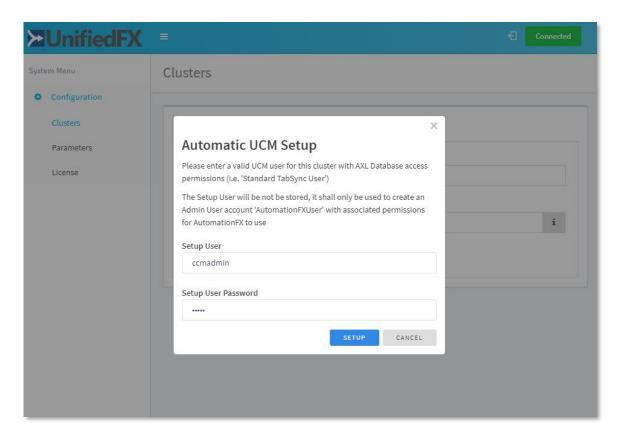
- Friendly Name
- Publisher IP Address



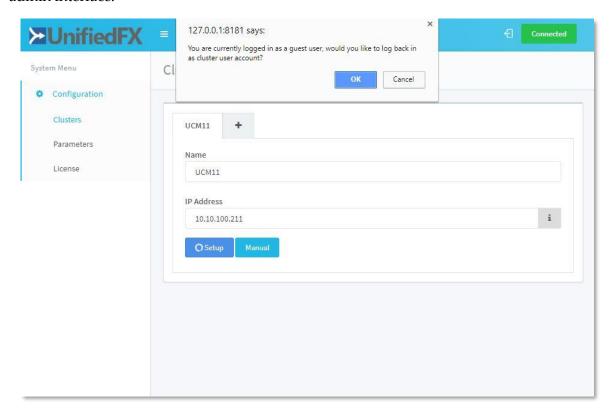
Enter a valid UCM user for this cluster with AXL Database access permissions (*i.e.* **Standard TabSync User**).



The Setup User will be not be stored, it will only be used to create an Admin User account **AutomationFXUser** with appropriate permissions and a Phone User **UFXPhoneUser**.



After adding the first cluster you are prompted to login with a CUCM user account from the newly added cluster. This is required in order to gain access to all menu items within the web admin interface.



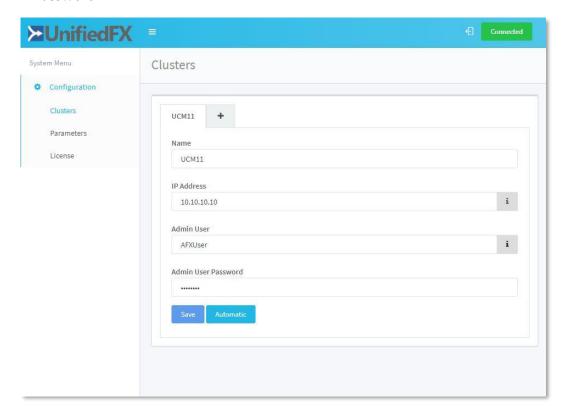
#### **Manual Cluster Setup**

AutomationFX requires a CUCM Application User account to access the relevant CUCM APIs and perform the required functionality. This Admin User account requires the following permissions:

- Standard TabSync User
- Standard CCM Server Monitoring
- Standard CCM Phone Administration
- Standard CTI Enabled
- Standard CTI Allow Control of All Devices
- Standard CTI Allow Control of Phones supporting Connected Xfer and conf
- Standard CTI Allow Control of Phones supporting Rollover Mode
- Standard EM Authentication Proxy Rights
- AutomationFX Group (Custom Access Control Group)
  - o AutomationFX Role (Custom Cisco Call Manager Administration Role)
    - Phone Migration (Resource Read & Update)
    - Super Copy Info (Resource Read & Update)]
    - Phone web pages (Resource Read & Update)

Once the user is account is created in CUCM, click the **Manual** button on the cluster page and enter the following:

- Friendly Name
- Publisher IP Address
- Username
- Password



# **CUCM Setup**

This section provides information on CUCM changes required for Zero Touch Migration and eliminating device association for PhoneFX.

## **Enabling web access on entire phone estate**

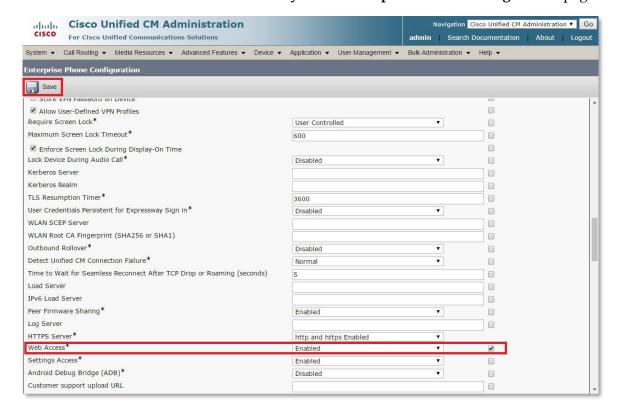


This change is required for PhoneFX Screenshots.



Changing Enterprise Phone Configuration settings can cause phones to reboot or you may need to reboot the phones manually for the changes to take effect.

#### Browse to the CUCM Admin Interface » System » Enterprise Phone Configuration page:



Enable the **Web Access** property and check the **Override Common Settings** check box for the same property, then click **Save** to save the changes.

# **Changing CUCM phone Authentication (Optional)**

Using this configuration AutomationFX will provides an authentication service to IP Phones. This eliminates the need to associate phones with a user account in CUCM as would previously be required for PhoneView. The AutomationFX authentication service will check if the credentials match the Phone User / Password configured for the cluster - if they do not

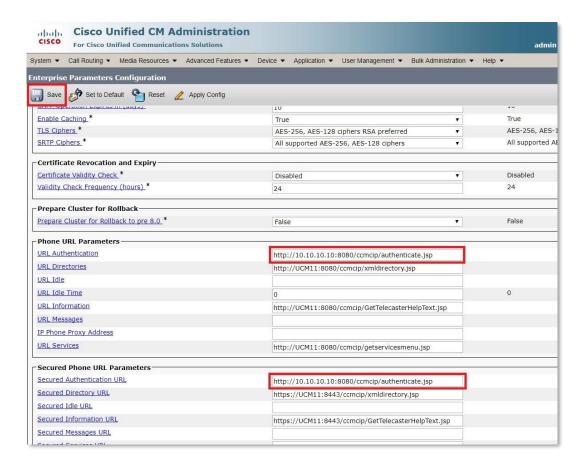
match the request will be forwarded to the publisher to complete the authentication request as normal.

To use the AutomationFX based authenticate service with CUCM, you need to update URL Authentication and Secured Authentication URL within Enterprise Parameters with the following URL:

• http://[AutomationFX\_IP]:8181/ccmcip/authenticate.jsp



Changing Enterprise Phone Configuration settings can cause phones to reboot or you may need to reboot the phones manually for the changes to take effect.



# **AutomationFX Web Interface Login**

This section provides information on AutomationFX web interface login requirements, customising the login permissions and updating / recovering CUCM cluster credentials.

#### Requirements

The web interface for AutomationFX requires authentication once the first CUCM cluster has been added. AutomationFX uses the existing Application and End User accounts on CUCM to provide authenticated access to the AutomationFX web interface, hence the requirement for at least one CUCM cluster to be added before CUCM authentication is possible.

The CUCM Application or End User account requires one of the following permissions:

- Standard CCM Admin
- Standard Phone Administration





Before the first CUCM cluster has been added you can access the AutomationFX admin interface in *guest mode* automatically from the local machine (*i.e.* http://127.0.0.1:8181). However, if you need to access the AutomationFX web interface remotely before the first CUCM cluster has been added, you can use the following hard-coded guest account credentials:

Username: guest

• Password: ufx12345



The guest login is disabled when one or more CUCM clusters have been configured, from that point onward only a valid CUCM login can be used to login.

## **Cluster credentials reset/recovery**

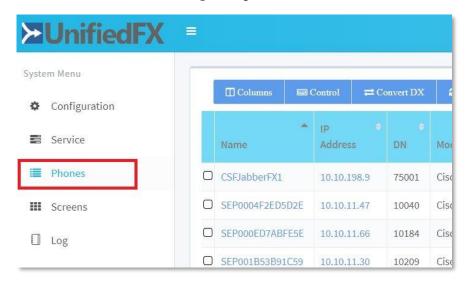
There may be a scenario where the credentials used to integrate CUCM cluster with AutomationFX have been changed. In this case users with appropriate permissions can login to the admin interface and update the cluster password.

By default, the admin login permission will stay the same as web interface login mentioned in the previous sections, however if the permissions were customised, user will require the custom permission/group configured in AutomationFX.

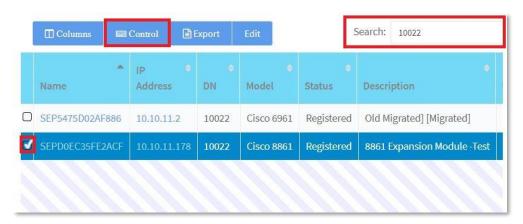
# **PhoneFX (Phone Remote Control)**

This section provides information on how to control Cisco IP phones from the AutomationFX admin interface.

Click on the **Phones** menu from the navigation panel:



Find a specific phone from the search bar on the top right corner:





The **Search** feature is a wildcard multi-field search, so you can find a device by any of the following values:

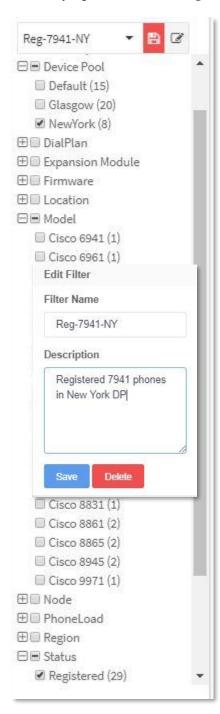
- Device Name
- Description
- Directory Number
- IP Address etc.

Select the check box for the desired phone, then click on the **Control** button above the table to launch PhoneFX. A new browser popup window will be opened with the PhoneFX remotecontrol interface.



## **Phone Filters**

The Filter menu is shown at the bottom of the AutomationFX navigation sidebar section when you navigate to the **Phones** page. You can create filters to group devices using built in summary options or custom grouping / tagging.



## **Creating & Saving a Filter**

To create a filter tick / apply the appropriate filter rules.

Type an appropriate name and press [Enter] or click on the name typed. If the provided name is added to the filter list, the **Save** button will be highlighted with a red overlay to indicate that there is a save operation pending.

Click the Save button to persist the created filter.

## **Editing & Deleting a Filter**

To edit a filter, load the appropriate filter and click the **Edit** icon . You can change the filter rules if desired or enter an appropriate description.

Click **Save** to save the changes or **Delete** to delete the filter.

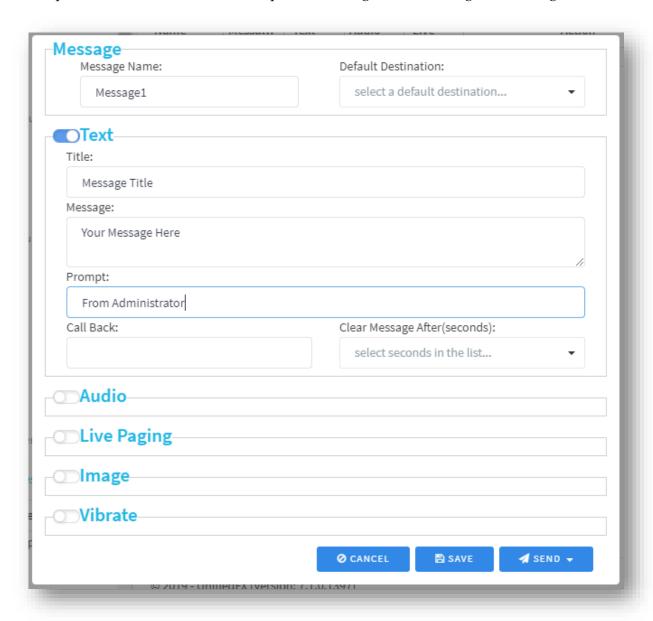
## **Creating a Custom Group / Category**

In most cases the built-in summary filters will be sufficient, however there may be scenarios where a custom group (subset of phones) is required for more granular control. You can tag phones to a category (custom group) by browsing to the **Phones** page and selecting the desired phones. [Ctrl] + Click and [Ctrl] + [Shift] + Click options are available for multiple selection.

# **NotificationFX**

# Create a Message.

Step 1: Click **New** button, this will open the message form to configure a message.



Step 2: Provide a name and other optional settings as required and click Save.

#### **Message Features**

# **Text**

This feature allows user to send a text message. (text message will be displayed as shown in the image below)



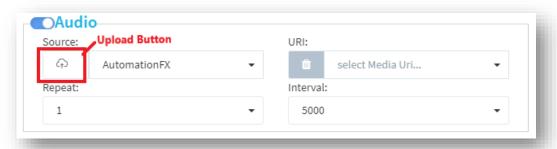
Prompt/Title/Message (See sample text message above)

 $Call\ Back$  - When a call back number provided in the message. Reciever will get a "Dial" softkey option available with the text message which will allow user to easily call the number provided in the message form.

**Clear Message** - The message will clear from recievers phone after the provided duration.. "0" option will not clear the message automatically until the receiver presses the "Exit" softkey.

# Audio

Allows user to add pre-recorded audio or Text to Speech to the message.



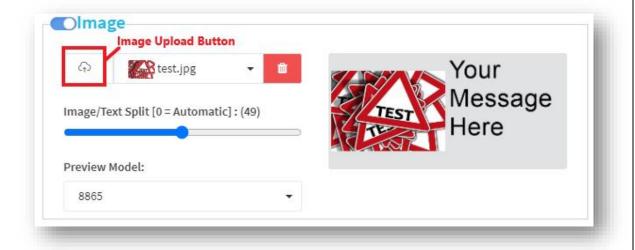
**Pre-recorded Audio -** User can upload an audio file to TFTP server which requires converting the file to the appropriate format.

User can upload audio file to AutomationFX server which automatically converts the audio to appropriate formats. (Select source AutomationFX as the source and click [cloud with arrow] Upload button).

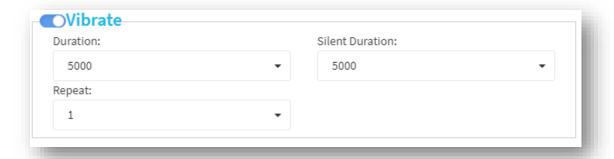
**TTS** - User can choose TTS (Text to speech) option in source drop down menu to get the text message to be read aloud.

# **Image**

Allows user to a add an Image to the Message. Phone Model that supports imgae will receive an Image along with the Text, otherwise the device will just receive the text.



## Vibrate



Makes the phone vibrate when message delivered. Only applicable to wireless phones.

# <u>Live</u> <u>Paging</u>

Allows user to start a live paging a session to a specific group (Filter/Destibation) of phones.

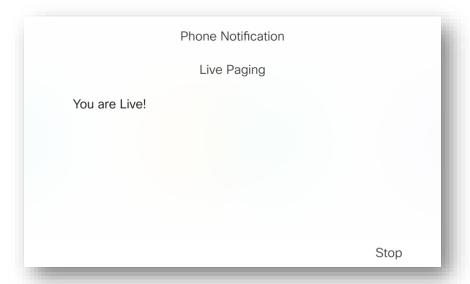
- Choose one of the pre-defined page groups. (A page group is a multicast range IP Address and Port pair)
- Search and nominate a phone to transmit audio. (Enter any of the following Mac Address, Description or Directory Number to search for a device)





• If a Paging Notification is initiated from the AutomationFX Admin Portal then the phone selected in the Live paging section will transmit audio, however if a Pagin Notification is initiated from an IP phone through the XML Phone Servive, then the transmitter phone configured in the Live paging section is overridden and the phone initiating the Paging Notification will automatically become the Transmitter.

Once a Paging Notification is initiated, the phone transmitting the audio will display the message saying "you are live" (See image below)



• To **Stop** pagoing session, press the **Stop** softkey option on the Transmitters phone

#### **Provision, Subscribe NotificationFX XML Phone Service**

#### 1. Provision/Deploy the NotiicationFX Phone Service in CUCM.

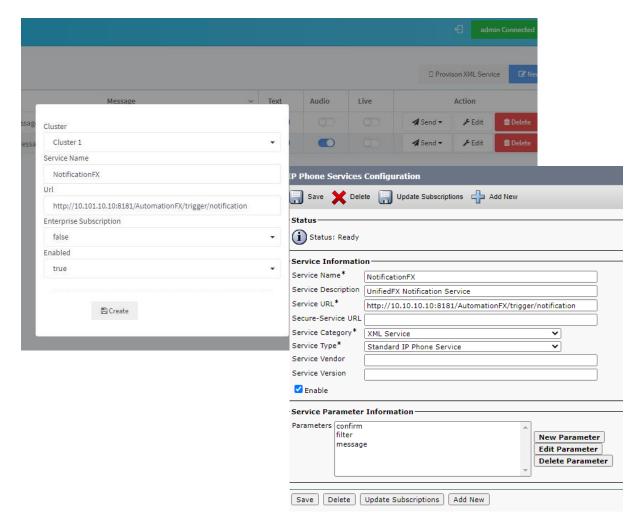


Provisioning the phone service to CUCM is a **one time operation** that the admin will be performing against a cluster.

- Navigate to Messages Page in AutomationFX Admin interface and Click "Provision XML Service"
- Selecet the cluster to deploy the XML Service.
- Click "Create" button



Ensure the IP Address on the URL is the correct IP Address of the AutomationFX Server.If the IP Address is incorrect then navigate to Configuration > Parameters and update the host name with the correct IP Address of AutomationFX Server prior to the Phone Service Creation.



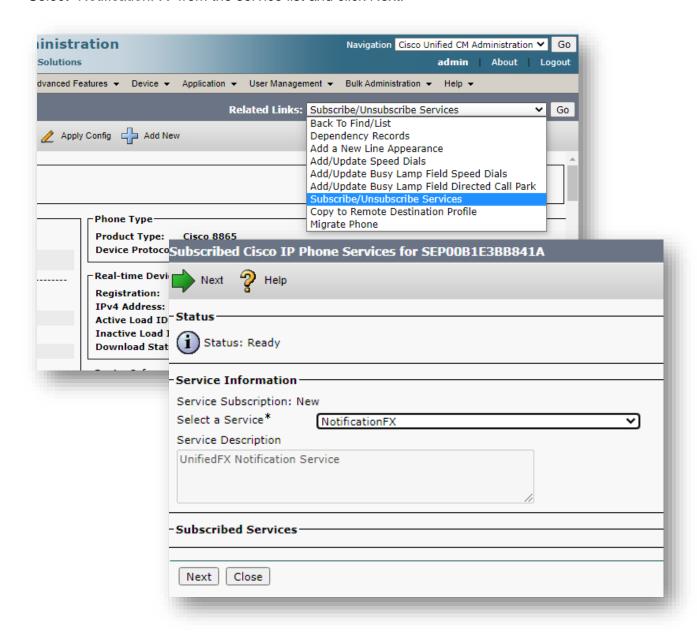
Once the Service is created in CUCM, user can navigate to CCM Admin Interface > Device > Device Settings > Phone Service > NotificationFX to verify the Creation.

#### 2. Subscribe to the NotificationFX XML Phone Service.

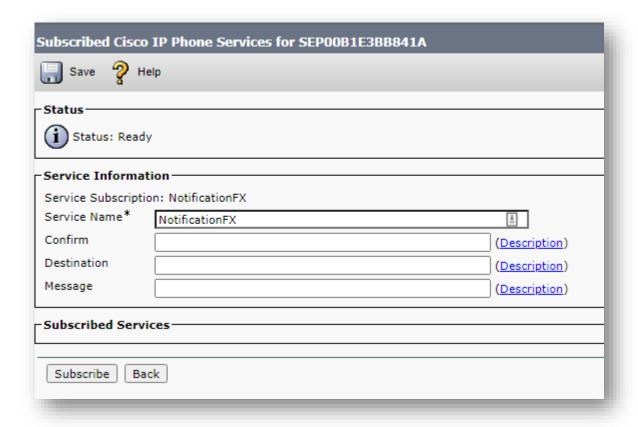
NotificationFX allows users to initiate Notifications from a Cisco IP phones. Follow the instruction below to subscribe the NotificationFX XML Phone service and configure a Service URL on the device.

Browse to CCM Admin Interface and navigate to the phone page and find the phone to Subscrbe the NotificationFX service.

- CCM Admin > Device > Phone.
- Find the Phone to setup the Phone Service.
- Select the "Subscribe/Unsubscribe Services" from the related links drop down.
- Select "NotificationFX" from the service list and click Next.



There are three optional query parameters can be set on the phone service.



- 1. **Message (Optional)** , if this parametrer is set then the user does not get a prompt to select a message. Parameter value should be a name of a message created in AutomationFX admin portal.
- 2. **Destination (Optional) -** if this parameter is set then the user does not get a prompt to select the destination. Parameter value should be a name of a Filter created in AutomationFX admin portal.
- **3. Confirm (Optional) -** If the value for this set to "n" then the user will not get a prompt to confirm the Notification sending process. (Recommended to leave it blank)
- Clcik Subscribe.



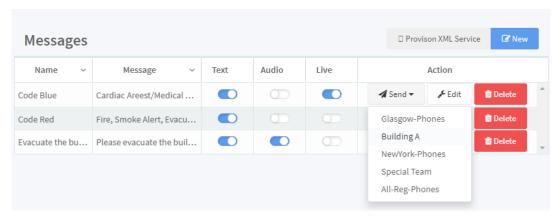
Once the above is configured, user should be able to open Phone Services on the device and Launch the NofificationFX phone service and Initiate a notification. Depending on how the service is subscribed to the device, user may get a prompt to select a message, filter and confirm the Notification.

#### Sending a Message/Notification.

Once the message/s and filter/s are created and saved, user can initiate a Notification from AutomationFX Admin portal or from a Cisco IP Phone (XML Phone Service).

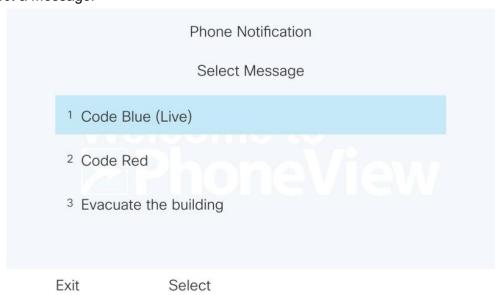
#### 1. Sending Message from AutomationFX Admin Interface

To send a message from the Admin interface, navigate to **Messages page** click **Send dropdown button** on the message to be sent and select the Filter (Phone Group/Destination) to send the message.

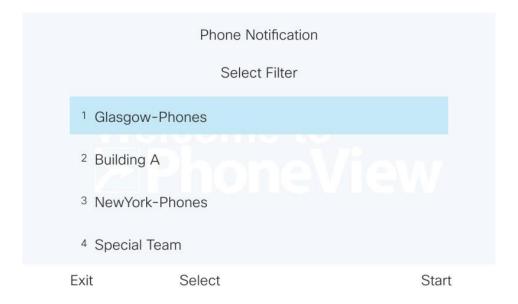


#### 2. Sending Messages from NotificationFX XML Phone Service

- Open Services on the Phone. (Optionally the service can be assigned to a service URL button on the phone as well).
- Select a Message.



Select a Filter (Phone Group/Destination)



Confirm the message and filter.



Press "Yes" softkey button to send the Notification.

See Image below for this specific example notification (Notification with Text, Image and Live Paging enabled)

