WORKFORCE CONNECT
Voice Client 8.2.x

Administrator Guide
for Cisco CME

ZEBRA

MN-001212-08EN

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Revision History

Changes to the original guide are listed below:

Change	Date	Description
-01 Rev A	2/2017	Initial release.
-02 Rev A	6/2017	Update features supported in Basic CME and Premium CME.
-03 Rev A	9/2017	Update licensing information.
-04 Rev A	12/2017	Add information on configuring multiple PBXs, WiFi Preferred, importing contacts.

Change	Date	Description
-05 Rev A	3/2018	Add information on Hunt Group feature. Add information on TCP/UDP port usage.
-06 Rev A	5/2019	Updating features for most recent release of the client.
-07 Rev A	7/2019	Updates to custom ringtone and audio prompt file formats. Update to Home Screen Dashboard section.
-08 Rev A	5/2020	Ringtone option added to main menu. Sign out and reload are now separate options in main menu. When selecting ringtone from SD card, option should read Custom Ringtones.

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About This Guide

Introduction

This manual describes how to install, configure and use Workforce Connect Voice Client on an Cisco CME network.

NOTE: Screens and windows pictured in this guide are samples and can differ from actual screens.

Chapter Descriptions

Topics covered in this guide are as follows:

- Configuring the Client, describes the steps you need to take prior to beginning to configure the device.
- Configuring the PBX, describes the steps you need to take to configure Cisco CME.
- Dynamic Configuration, describes the procedures to dynamically configure the WFC client using an XML variable file.
- Settings, provides detailed information on configuring settings.
- Logging, describes the process used to capture and collect WFC Voice Client log files and Fusion log files.
- Headless Mode and WFCVoice Service, describes the procedures to configure WFC Voice client as a background service.
- Using the Client, explains how to use the functions and features of the WFC client.
- Button Actions, includes a table listing the XML tags used to define a button action.
- XML Tags, includes a table listing all XML tags used in the Workforce Connect Voice Client configuration file and where they are valid.
- XML Example - Profile, provides an XML example for the Profile section.
- XML Example - Footer, provides an XML example for the Footer section.
- XML Example - Dashboard, provides an XML example for the Dashboard section.
- XML Example - Call Buttons, provides an XML example for the In-Call Buttons section.
- Directory Button Configuration, describes the process used to configure the Directory button.
- Configuring a Proxy Server, explains how to configure a proxy server.
- Network Ports and Protocols, provides an overview of the ports and protocols the WFC Voice Client uses on supported Zebra devices.
- Hunt Groups, describes how to configure the Hunt Groups feature.

PBX Integration Statement

Cisco CME configuration references contained within this document is based on Cisco CME version 9.1. Generally Cisco configuration elements are maintained in subsequent releases, however cannot be guaranteed. Reader is advised to consult Cisco CME configuration guide for releases above 9.1 and use in conjunction with this documentation.

NOTE: Workforce Connect Voice Client requires a minimum Cisco CME version of 9.1.

Notational Conventions

The following conventions are used in this document:

- **Bold** text is used to highlight the following:
  - Dialog box, window and screen names
  - Drop-down list and list box names
  - Check box and radio button names
  - Icons on a screen
  - Key names on a keypad
  - Button names on a screen.
- Bullets (•) indicate:
  - Action items
  - Lists of alternatives
  - Lists of required steps that are not necessarily sequential.
- Sequential lists (e.g., those that describe step-by-step procedures) appear as numbered lists.

Related Documents and Software

The following documents provide more information about the Workforce Connect Voice Client.

- Best Practices Guide: Deploying VoWLAN Over Aruba Wireless Networks, p/n MN002151A01
- Best Practices Guide: Deploying VoWLAN Over Cisco Wireless Networks, p/n MN001146A02
- Best Practices Guide: Deploying VoWLAN Over WiNG5 Wireless Networks, p/n MN001150A02

For the latest version of this guide and all guides, go to: www.zebra.com/support.

Service Information

If you have a problem with your equipment, contact Zebra Global Customer Support for your region. Contact information is available at: www.zebra.com/support.

When contacting support, please have the following information available:

- Serial number of the unit

- Model number or product name
- Software type and version number.

Zebra responds to calls by email, telephone or fax within the time limits set forth in support agreements.

If your problem cannot be solved by Zebra Customer Support, you may need to return your equipment for servicing and will be given specific directions. Zebra is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty.

If you purchased your Zebra business product from a Zebra business partner, contact that business partner for support.

Configuring the PBX

Introduction

This chapter describes the steps you need to take to configure Cisco CME.

You will perform the following steps to configure Cisco CME:

- Verify that the CME PBX software is at version of 9.1 or above.
- Collect necessary information
- Login using your credentials
- Add new phone
- Select phone button templates
- Define customer-specific phone button template (PBT)
- Configured and label lines (up to six)
- Check the configuration of the mobile device
- Set Directory/extension number
- Set Caller ID.

Collect Necessary Information

Assemble the following information before you begin to configure the Cisco CME PBX and the mobile device:

- The type of phone that is being emulated by each mobile device.
- The radio MAC address of each mobile device.
- The extension number that is assigned to each mobile device.

Open the Cisco CME Command Line Interface

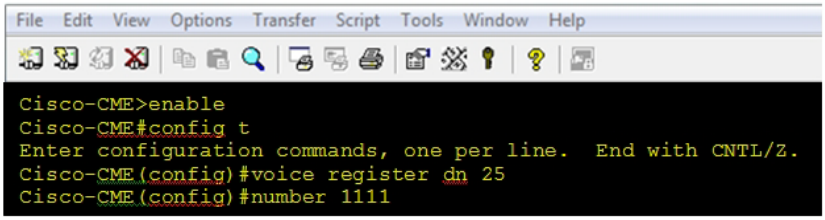
1. Open the Cisco CME command line interface by establishing one of the following connections:
   - Telnet
   - SSH
   - Console session.
2. Login using your credentials. (You must have Admin rights to perform this action.)
3. Enter **Enable Mode** and issue the "config t" command.

IMPORTANT: If you do not have Administrative rights, contact the Support help Desk at: 1.800.653.5350.

Add Directory Numbers

To add Directory Numbers on the CME:

Figure 1 Add Directory Number - CLI

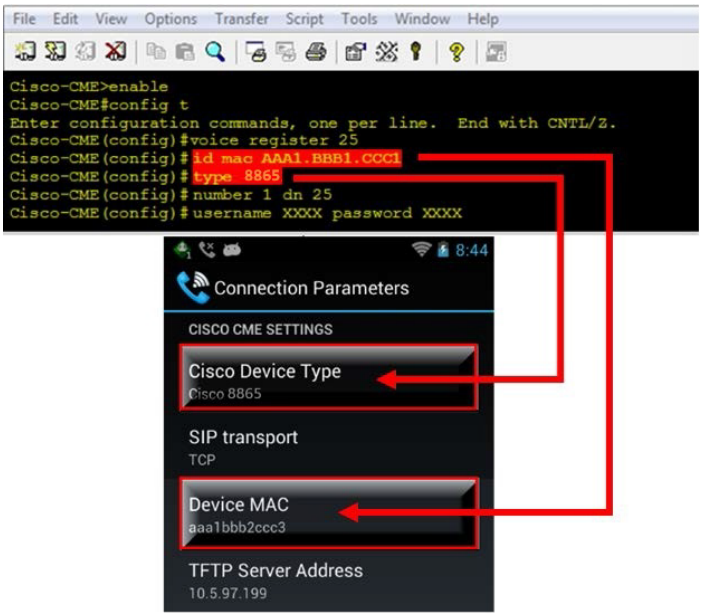


Issue the following commands on the CLI:

```
config t
Enter configuration commands, one per line. End with CNTL/Z.
voice register dn  25
number 1111
```

Add New Phone

Figure 2 Add New Phone - CLI



Add New Phone for Basic CME

Issue the following commands on the CLI:

```
config t
Enter configuration commands, one per line. End with CNTL/Z.
voice register pool  25
id mac AAA1.BBB1.CCC1
number 1 dn 25
username XXXX password XXXX
```

NOTE: Basic CME does not include advanced WFC Voice Client features. For information on features available in Basic CME and Premium CME, see Using the Client on page 123.

Add New Phone for Premium CME

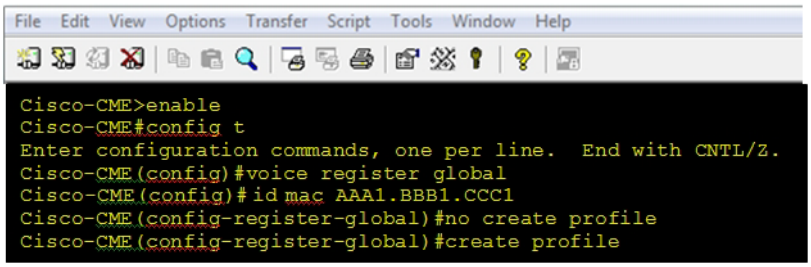
Issue the following commands on the CLI:

```
config t
Enter configuration commands, one per line. End with CNTL/Z.
voice register pool  25
id mac AAA1.BBB1.CCC1
type 8865
number 1 dn 25
username XXXX password XXXX
```

Commit Changes

To commit any DN and Pool changes on the CME:

Figure 3 Commit Changes - CLI



Issue the following commands on the CLI:

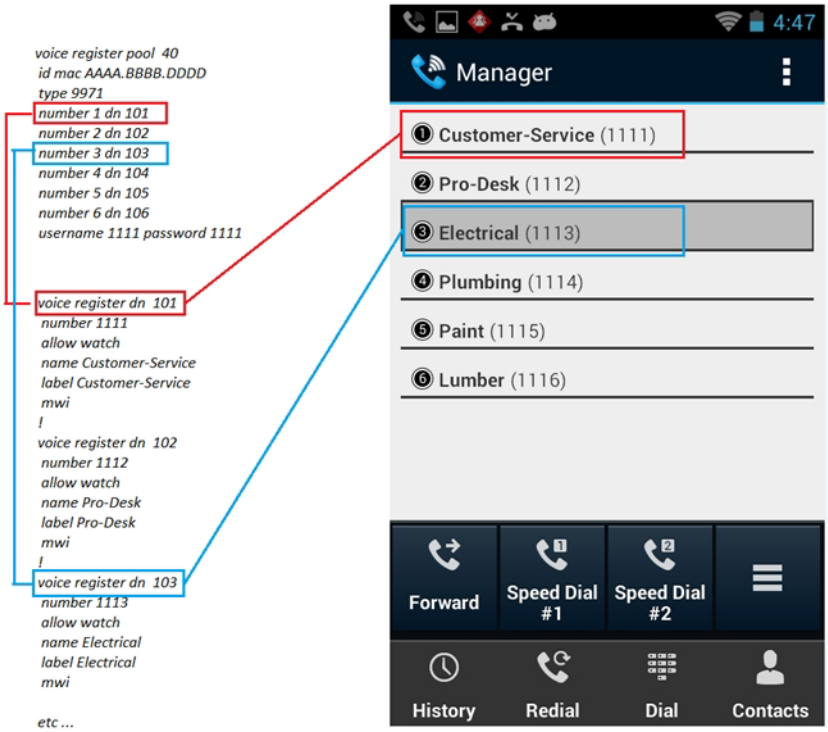
```
config t
Enter configuration commands, one per line.  End with CNTL/Z.
(config)#voice register global
(config-register-global)#no create profile (not mandatory but recommended)
(config-register-global)#create profile
```

Assign Multiple Lines per Device

Many features can be configured on the WFCVC by configuring them on the CME.

Assign various lines per device (up to 6 lines per device by referring to the DNs in the pool configuration using the **number X dn X** command.

Figure 4 Assign Multiple Lines

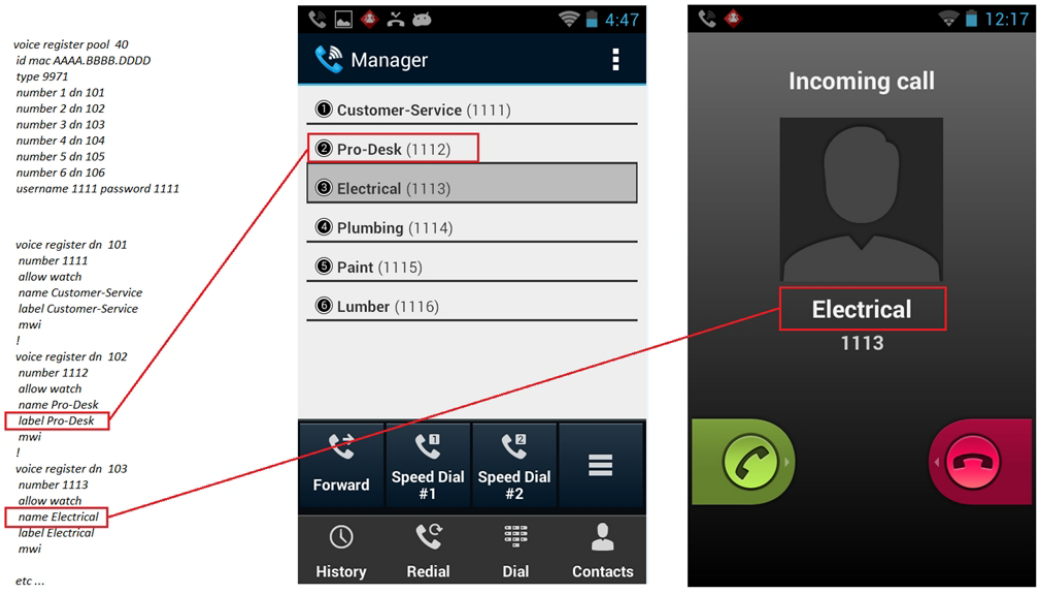


Customizing Line Labels and Caller ID

Many features can be configured on the WFCVC by configuring them on the CME.

Modifying the Label and the Name in the DN configurations modifies the message next to the Line Number and the Name that is presented to the call target when the device initiates a call from a specific line.

Figure 5 Line Label and Caller ID



Device A Home Screen

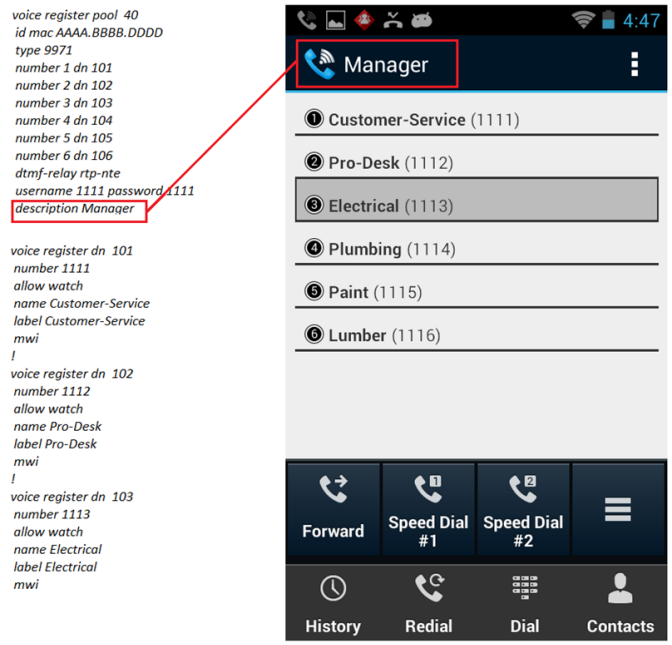
Device B Incoming Call screen when device A initiates a call from line 1113

Customize the WFCVC Status Bar Message

Option A: The Status Bar Reflects the Pool Description

The Status Bar message will vary according to the configuration of the Pool Description and the Line's Label.

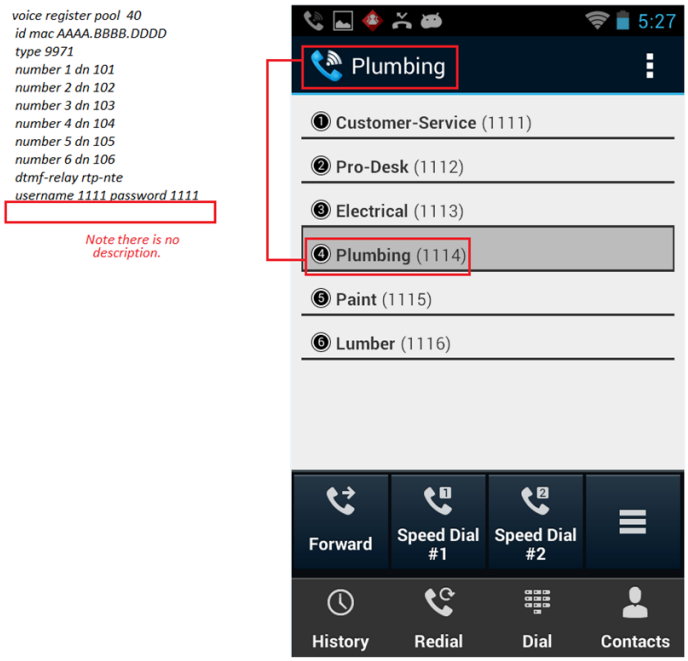
Figure 6 Status Bar Reflects the Pool Description



Option B: The Status Bar Reflects the Line Label

The Status Bar message will vary according to the configuration of the Pool Description and the Line's Label.

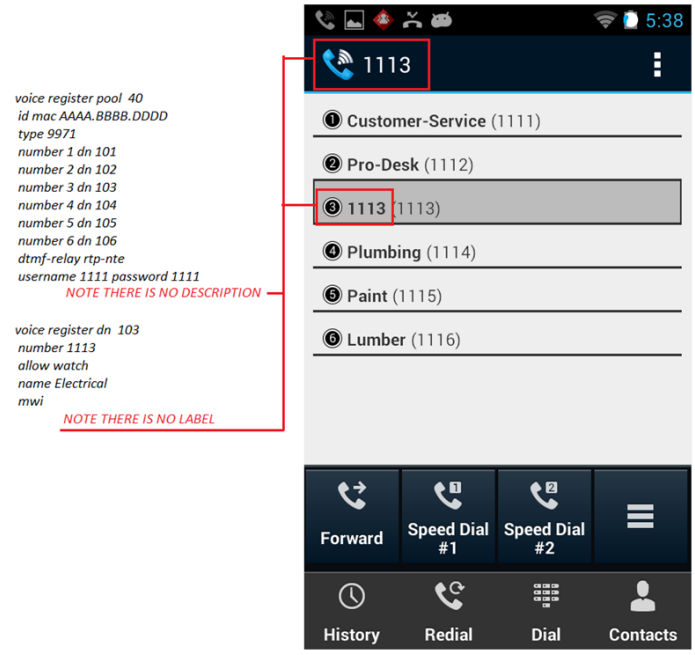
Figure 7 Status Bar Reflects the Line Label



Option C: The Status Bar Reflects the Line Number

The Status Bar message will vary according to the configuration of the Pool Description and the Line's Label.

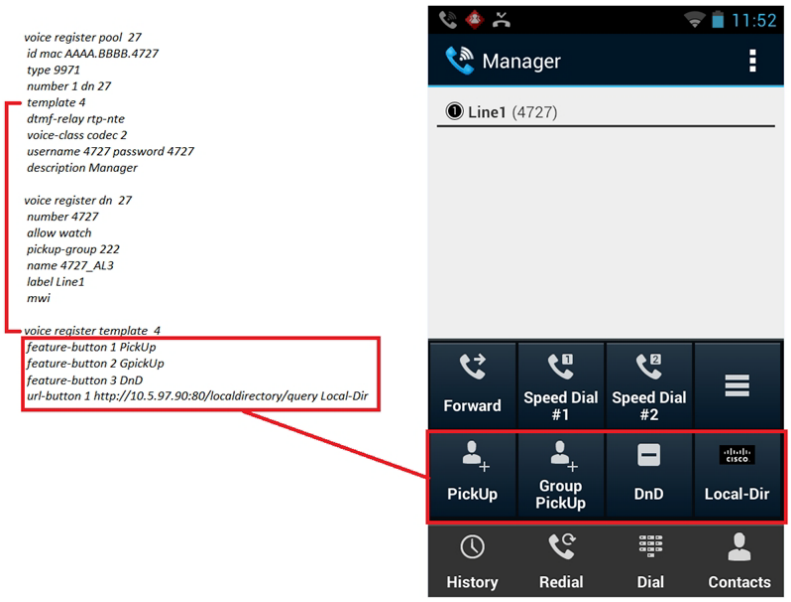
Figure 8 Status Bar Reflects the Line Number



Pushing Buttons from CME

In order to push buttons to the WFCVC, create a template with the desired buttons, and apply the template to the device configuration.

Figure 9 Pushing Buttons from CME



The DHCP server provides network configuration parameters directly to DHCP clients. DHCP relay passes DHCP requests received on one interface to an external DHCP server located behind a different interface.

Cisco IP Phones download their configuration from a TFTP server. When a Cisco IP Phone starts, if it does not have both the IP address and TFTP server IP address preconfigured, it sends a request with option 150 to the DHCP server to obtain this information. A maximum of two TFTP servers can be identified using option 150.

For more information on configuring the CME, review the Cisco Best Practices Guide. If you need assistance, contact Zebra Support at: www.zebra.com/support.

Configuring the Client

Introduction

This chapter describes how to install, activate and configure the Workforce Connect Voice Client (WFC Voice Client).

Determine Deployment Readiness

Assess the suitability of your Wireless Local Area Network (WLAN) for voice traffic, using the Best Practices Guide: Deploying VoWLAN Over Aruba Wireless Networks, Deploying VoWLAN Over Cisco Wireless Networks or Deploying VoWLAN Over WiNG5 Wireless Networks.

WARNING: If your WLAN is not suitable for voice traffic, WFC Voice Client will perform on a best effort basis. Contact the Zebra Software Support Desk for more information: www.zebra.com/support.

Connect Android Wireless Device to Network

Zebra WFC Voice Client for Android includes support for the following device types:

- Enterprise Mobile devices
- Consumer Smartphone devices (evaluation only).

Connect the Android wireless device to the network. See device instructions for more information. If you need assistance, contact the Zebra Support at: www.zebra.com/support.

Install Workforce Connect Voice Client

There are two ways to install the WFC Voice Client:

- USB tether or web server - This section describes using a USB tether or web server to install the WFC Voice Client APK manually or using ADB commands.
- Mobile Device Manager (MDM) - For information on installing the WFC Voice Client APK using an MDM, refer to the Workforce Connect Voice Client Configuration Guide for Mobile Device Managers.

Download and Install Board Support Package (BSP) Operating System

For instructions please refer to www.zebra.com/support and login using your partner login for latest BSP and integration instructions. If you need assistance, contact Zebra Support at: www.zebra.com/support.

Download and Install Android Application Packager (APK) Client

1. From a web browser, go to the Zebra Licensing End User Portal.

   To access the Zebra Licensing End User Portal, follow the instructions in the Software Entitlement email from Zebra. Portal access requires registration at Zebra.com and authorization as a portal user by Zebra Support.
2. From the Zebra Licensing End User Portal, download the latest WFC Voice APK file.

Installing the APK Manually

To install the APK manually:

1. Save the APK file to the root directory of the target device using one of the following methods:
   - USB tether
   - Web server download (if your network supports this option).
2. On the Android device, go to the Apps list and open the file browser.
3. Navigate to the APK file.
4. Run and install the APK file.
5. Check that the WFC Voice Client is available in the Apps Screen.

   The WF Connect icon should be visible in the list of available applications.

Installing the APK Using ADB Commands

To install the APK using an Android Debug Bridge (ADB) connection, open a command prompt and send the following ADB commands to the device:

```
adb install -g <apk_file_name>
adb shell dumpsys deviceidle whitelist +com.symbol.wfc.voice
adb shell appops set com.symbol.wfc.voice SYSTEM_ALERT_WINDOW allow
```

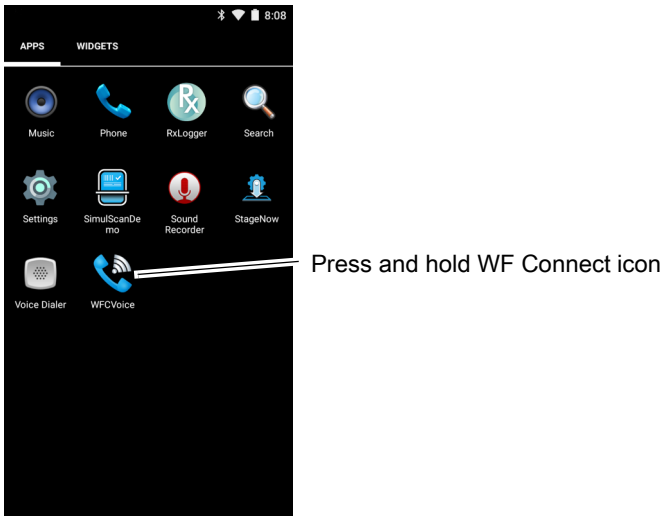
Where **<apk_file_name>** is the name of the WFC Voice APK file.

Create a Shortcut for the Workforce Connect Voice Client

To create a shortcut:

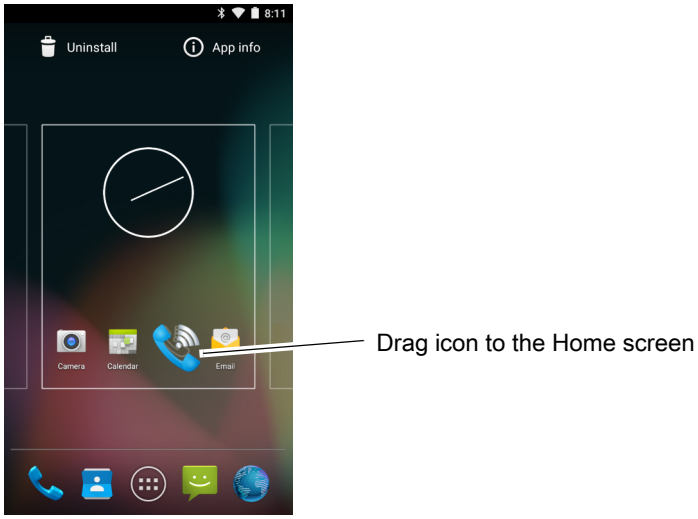
1. In the Apps Screen, press and hold on the WF Connect icon.

Figure 10 Apps Screen



2. Drag the WF Connect Icon to the Home screen.

Figure 11 Home Screen



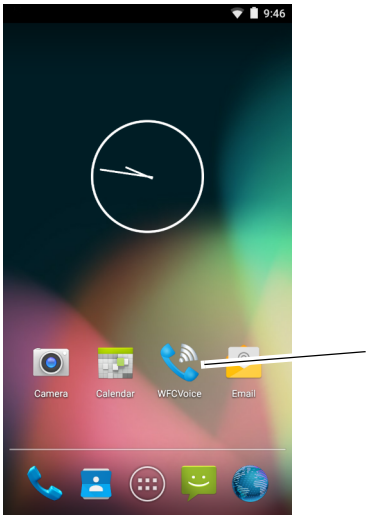
3. Drop icon on Home screen.

Open Workforce Connect Voice Client

To open the WFC Voice Client, use one of the following methods:

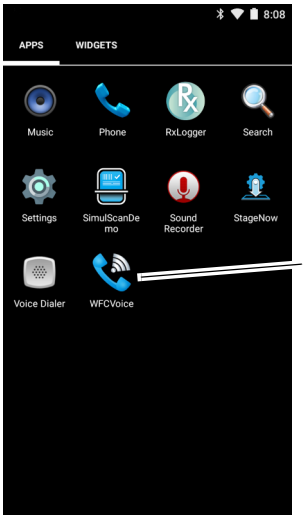
- Touch the WF Connect icon on the Home screen.

Figure 12 Home Screen



- Touch on the WF Connect icon on the Apps screen.

Figure 13 App Screen



The **App Activation** screen displays.

Activate Workforce Connect Voice Client

When the WFC Voice Client starts for the first time, the **App Activation** screen appears. A valid license is required for each PBX. The WFC Voice Client is activated by using an activation key, Mobile Device Manager (MDM), or USB tether.

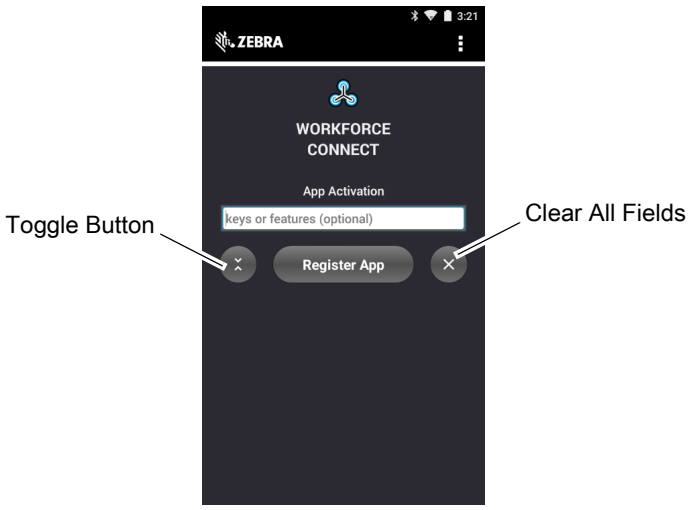
NOTE: When activating a device that does not have direct access to the license source, use a proxy server. See Configuring a Proxy Server on page 190.

Activate Using an Activation Key

To activate the WFC Voice Client:

1. Open the WFC Voice Client.

Figure 14 App Activation Screen



2. Use one of the following activation methods:
   - **Keys or features** - Acquires licenses from the default licensing source.

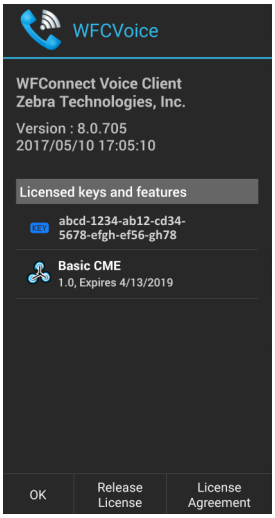
     In the **keys or features** field, enter your activation code(s) separated by commas.

NOTE: The WFC Voice Client version 8.2.729 requires a license source URL when activating using an activation key. Refer to the Workforce Connect Voice Client 8.2.x Administration Guide for Licensing.

3. To enter a **device alias**, touch the **toggle button** and, in the **device alias** field, enter a name to identify the device on the license source.
4. Touch **Register App**.

   The **About** screen appears, displaying currently licensed keys and features.

Figure 15 About Screen



5. Touch **OK**.

Activate Using an MDM

Configuring the WFC Voice Client using an MDM requires a deployment package and the WFC Voice Client configuration file. The configuration file **`WFConnect.xml`** stores all WFC Voice client configuration parameters, including licensing information, as key and value pairs. For detailed information on the XML configuration file, see Settings on page 41.

Define the licensing information using the following XML tags:

- **license_key** - Contains one or more WFC Voice Client activation keys separated by commas.
  Example: **`<license_key>abcd-1234-ab12-cd34-5678-efgh-ef56-gh78</license_key>`**
- **license_source** - The URL of a license source.
  - WFC Voice Client version 8.2.729 - Enter the following URL:
    https://zebra-licensing.flexnetoperations.com/flexnet/deviceservices.
  - WFC Voice Client version 8.2.730 or later - Leave this field blank.
- **license_alias** - Identifies the device on the license source. (Optional)

MDM Deployment

During runtime, WFC Voice Client listens for **`wfc.voice.ACTION_UPDATE_CONFIG`** intent. When the WFC Voice Client receives the intent from an MDM, the configuration file uses **`WFConnect.xml`** to update the WFC Voice Client configuration parameters. Use a single intent to update multiple configuration parameters by including multiple element and value pairs.

For detailed information on MDM deployment, refer to the Workforce Connect Voice Client 8.x Configuration Guide for Mobile Device Managers.

Activate Using a USB Tether

Send the **`WFConnect.xml`** configuration file to the device using a USB tether, use an Android Debug Bridge (ADB) connection.

NOTE: It is not recommended to install the WFConnect.xml file using a USB tether because it can cause permission issues on the device.

1. Install the WFC Voice Client APK. See Download and Install Android Application Packager (APK) Client on page 22.
2. Copy the **`WFConnect.xml`** file in the /sdcard/WFConnect directory.
3. Open a command prompt and send the following adb command to the device:
   ```
   adb shell am start -a "wfc.voice.ACTION_NEW_CONFIG" --es "profile_uri"
   "/WFConnect/WFConnect.xml"
   ```

Update License

To update all WFC Voice Client licenses, refer to the Workforce Connect Voice Client 8.2.x Administration Guide for Licensing.

Configure Workforce Connect Voice Client

The WFC Voice Client is configured using the Graphical User Interface (GUI), an MDM, or a USB Tether.

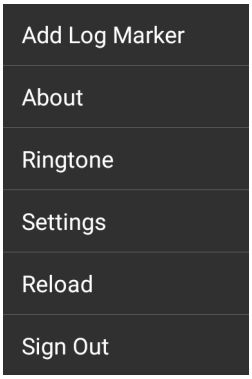
NOTE: It is not recommended to install the WFConnect.xml file using a USB tether because it can cause permission issues on the device.

Configure Using the WFC Voice Client GUI

To configure the WFC Voice Client:

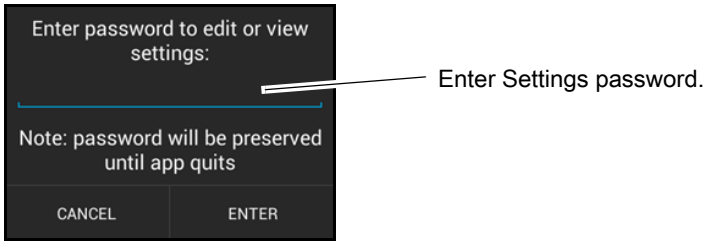
1. Touch the menu button.

Figure 16 WFC Voice Client Menu



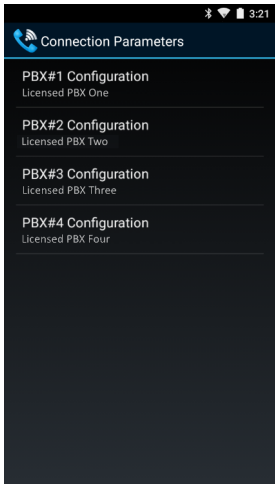
2. Touch **Settings**.

Figure 17 Enter Password Screen



3. Enter the settings password. The default password is: **zamboni**.
4. Touch **Connection Parameters**.

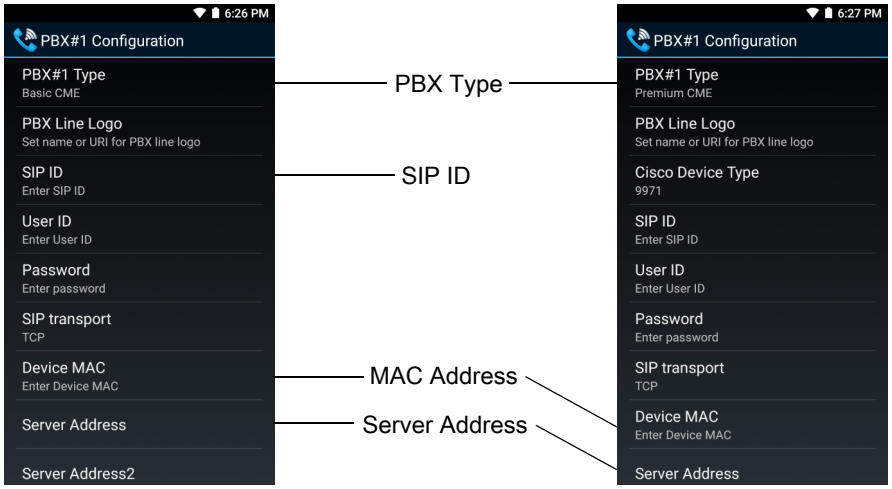
Figure 18 Connection Parameters



5. Select a PBX configuration. The default configuration is: **PBX#1 Configuration**.
   For information on configuring additional PBX types, see Configuring Multiple PBX Types on page 46.

6. Touch the PBX Type field and select Basic CME or Premium CME.
7. Enter SIP ID (Basic CME only).
8. Enter the MAC Address. See Device Identification on page 31 for more information on MAC addresses.
9. Enter the Address of the PBX server.

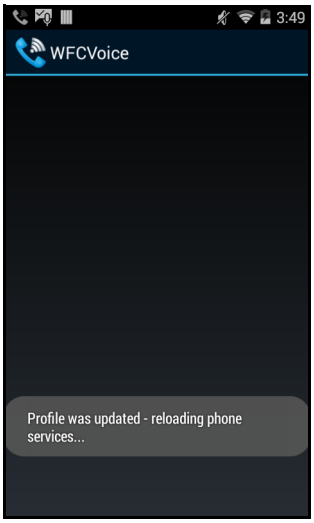
Figure 19 Enter Parameters



NOTE: For information on optional configuration settings, see XML Tags on page 163.

10. Touch the back button three times to return to the WFC Voice Client home screen.

Figure 20 Confirmation Message



A confirmation that the Configuration has been saved to WFConnect.xml displays.

Configure Using an MDM

Configuring the WFC Voice Client using an MDM requires a deployment package and the WFC Voice Client configuration file. The configuration file **`WFConnect.xml`** stores all WFC Voice client configuration parameters, including licensing information, as key and value pairs. For detailed information on the XML configuration file, see Settings on page 41.

Define the licensing information using the following XML tags:

- **license_key** - Contains one or more WFC Voice Client activation keys separated by commas.
  Example: **`<license_key>abcd-1234-ab12-cd34-5678-efgh-ef56-gh78</license_key>`**
- **license_source** - The URL of a license source.
  - WFC Voice Client version 8.2.729 - Enter the following URL:
    https://zebra-licensing.flexnetoperations.com/flexnet/deviceservices.
  - WFC Voice Client version 8.2.730 or later - Leave this field blank.
- **license_alias** - Identifies the device on the license source. (Optional)

MDM Deployment

During runtime, WFC Voice Client listens for **`wfc.voice.ACTION_UPDATE_CONFIG`** intent. When the WFC Voice Client receives the intent from an MDM, the configuration file uses **`WFConnect.xml`** to update the WFC Voice Client configuration parameters. Use a single intent to update multiple configuration parameters by including multiple element and value pairs.

For detailed information on MDM deployment, refer to the Workforce Connect Voice Client 8.x Configuration Guide for Mobile Device Managers.

Configure Using a USB Tether

To send the **`WFConnect.xml`** configuration file to the device using a USB tether, use an Android Debug Bridge (ADB) connection.

NOTE: It is not recommended to install the WFConnect.xml file using a USB tether because it can cause permission issues on the device.

1. Install the WFC Voice Client APK. See Download and Install Android Application Packager (APK) Client on page 22.
2. Copy the **`WFConnect.xml`** file to the WFConnect directory.
3. Open a command prompt and send the following ADB command to the device:
   ```
   adb shell am start -a "wfc.voice.ACTION_NEW_CONFIG" --es "profile_uri"
   "/WFConnect/WFConnect.xml"
   ```

To update a specific parameter in the **`WFConnect.xml`** configuration file using ADB, open a command prompt and send an ADB command to the device in the following format:

```
$ adb shell am start -a wfc.voice.ACTION_UPDATE_CONFIG --es element value
```

For a list of possible elements and values, see XML Tags.

Dynamic Configuration

Introduction

The WFC Voice Client configuration file defines the operational environment of the SIP client running on Zebra mobile android devices. It has various elements that define the network location of the PBX and, for each device, unique defining operational aspects affecting the user experience. Creating this file manually and distributing this file for each device on an enterprise-wide scale introduces significant administrative overhead.

Dynamic configuration:

- Reduces the administrative effort preparing the WFC Voice Client for enterprise operation
- Provides a flexible delivery environment for the customized configuration
- Provides a method for shared device use without manually reloading the configuration
- Provides backward compatibility for existing customers.

Rather than manually creating a unique configuration for each device, this approach dynamically configures the WFC Voice Client using an XML variable file. File delivery can be manual, by an MDM, or automatic through existing network services.

Overview

The chapter includes:

- Providing a new XML tag that triggers dynamic configuration
- Building a multi-user variable file to build user specific configurations for the WFC Voice Client
- Re-synchronizing the WFC Voice Client with the variable file on a regular basis
- Using DHCP resources to provide auto installation for the file.

Properly configuring these elements allows the WFC Voice Client to register to the PBX.

General Device Use Cases

- A unique user is typically a supervisor or manager with a device with a more advanced feature set that is not shared with any other user. This extension may be shared with that person’s desk phone.
- A shared device is typically for line workers or department staff that use a phone representing a functional area, as opposed to a specific person. The device has a basic feature and may also be uniform, sharing common elements (e.g.; button configurations) across all shared devices.

Device Start-Up

There are three stages of device life-cycle in the customer environment that affect how the WFC Voice Client obtains the suitable runtime configuration:

- Initialized out of the box configuration (no configuration)
- A rebooted device previously configured
- A device reassigned to a new extension / user

Device Identification

The Cisco environment identifies each mobile handset by a unique MAC address. This can be the literal interpretation of the mobile device MAC address, or a pseudo MAC character string.

- **Literal MAC -** The WFC Voice Client interrogates and insert the mobile device's MAC address into the WFC Voice Client configuration using an Android API. Replacing the mobile device requires the Administrator to modify the configuration. The replacement device then has the same configuration as the previous device.
- **Pseudo MAC** - The 12 character MAC string is a simple unit identifier in the PBX. The device can be replaced without Administration intervention. The pseudo MAC does not represent the actual device MAC address. To place a replacement device into service, set the WFC XML configuration set to match the existing string defined in the PBX.

Profile Configuration

For the WFC Voice Client to connect to a PBX, the Profile section of the **WFConnect.xml** file must contain XML tags which the device uses to:

- Establish a link to the PBX
- Identify itself to the PBX
- Retrieve the correct privileges and settings.

NOTE: Any element in the WFC Voice Client configuration file can be replaced with a variable.

Connection Attributes

The example below demonstrates how to provide access to the PBX:

```
<Entry>
   <profile_type>CME</profile_type>
   <display>true</display>
   <profname>CME9.1-2708</profname>
   <prof_password></prof_password>
      <sip_userid></sip_userid>
      <sip_userpass></sip_userpass>
   <prof_description>MC40.1</prof_description>
   <sip_mac>080028493481</sip_mac>
   <sip_remhost>10.80.212.58</sip_remhost>
</Entry>
```

The profile section requires:

- An IP address in the **sip_remhost** field to target the appropriate PBX.
- A literal or pseudo MAC address in the **sip_mac** field to identify the device to the PBX.

NOTE: If the MAC address is left blank the device will use the device's physical MAC address.

When using a pseudo MAC address, the PBX device configuration remains static and the MAC address of the device is changed to match the desired profile. The field can be populated with a 12 character hex string resembling a MAC address.

Dynamic Configuration

Enabling Dynamic Configuration

The **var_location** tag enables dynamic configuration, and reduces the entire profile section of the **WFConnect.xml** file to one line.

```
<WFConnect>
<Profile>
   <var_location>file:///wfconnect/wfcvariable.xml</var_location>
</Profile>
```

NOTE: File location is for demonstration purposes. The actual file location may vary.

When the WFC Voice Client initializes and parses the XML file, this tag instructs the device to retrieve the **wfcvariable.xml** file from the stated location. The location can be:

- A local file on the mobile device
  - Provisioned by an MDM
  - Side loaded manually
- A URL

Wcfvariable.xml File

This file collects and organizes XML tags to populate the run-time **WFConnect.xml** file. Tags that are not declared use default values. The **Users** tag supports and organizes multiple users. The **users** section is displayed as a list on WFC Voice Client sign-in screen. When the **display** tag for an entry is set to true, users can select a profile from the list.

When the **display** tag is set to false, the **profname** and **prof_password** tags are used. These tags are used for user authentication when selecting a hidden profile for a dedicated user. For a shared extension, these tags are rarely used.

Users can each be a complete and unique configuration, or they can re-use components, such as the following buttons example.

```
<Users>
   <Entry>
      <profile_type>CME</profile_type>
      <display>false</display>
      <profname>Manager</profname>
      <prof_password>abc123</prof_password>
      <dept>Mgmt-1</dept>
      <sip_mac>aaaabbbbccc1</sip_mac>
      <sip_remhost>192.168.10.50</sip_remhost>
      <layout_location>file:///WFConnect/buttons_1001.xml</layout_location>
   </Entry>
   <Entry>
```

```
        <profile_type>CME</profile_type>
        <display>true</display>
        <profname>1002</profname>
        <dept>Pharmacy</dept>
        <sip_mac>aaaabbbbccc2</sip_mac>
        <sip_remhost>192.168.10.50</sip_remhost>
        <layout_location>file:///WFConnect/buttons_1002.xml</layout_location>
    </Entry>
    <Entry>
        <profile_type>CME</profile_type>
        <display>true</display>
        <profname>1003</profname>
        <dept>Grocery</dept>
        <sip_mac>aaaabbbbccc3</sip_mac>
        <sip_remhost>192.168.10.50</sip_remhost>
        <layout_location>file:///WFConnect/buttons_1002.xml</layout_location>
    </Entry>
    <Entry>
        <profile_type>CME</profile_type>
        <display>false</display>
        <profname>1050</profname>
        <prof_password>jsz935</prof_password>
        <dept>GM</dept>
        <sip_remhost>192.168.10.49</sip_remhost>
        <sip_userid>George</sip_userid>
        <sip_userpass>xyz123</sip_userpass>
        <layout_location>http://user.server/wfcbutton4.xml</layout_location>
    </Entry>
</Users>
```

XML File Location

The previous example shows the **wfcvariable.xml** variable file resident on the device. The variable file can also reside on a centrally accessible server that the client can access. This provides service to all devices in the enterprise and central administrative control.

The **var_location** element specifies whether the WFC Voice Client looks for the XML file on the device (a local file) or at a network location, for example:

- Local: file:///WFConnect/wfcvariable.xml
- HTTP: http://10.5.90.10/wfcvariable.xml
- HTTPS: https://10.5.90.10/wfcvariable.xml
- TFTP: tftp://10.5.90.10/wfcvariable.xml

This provides options for deploying the configuration files. For example, an enterprise using an MDM may supply both the Profile section and the variable file to the device and also have a central location for the variable file.

DHCP Option 150

The WFC Voice Client also supports DHCP Option 150 for retrieving the **wfcvariable.xml** file. If the **var_location** tag is not specified in the **WFConnect.xml** configuration, the client attempts to download the **wfcvariable.xml** file from the TFTP server specified in the Option 150 string.

Configuration Resynchronization

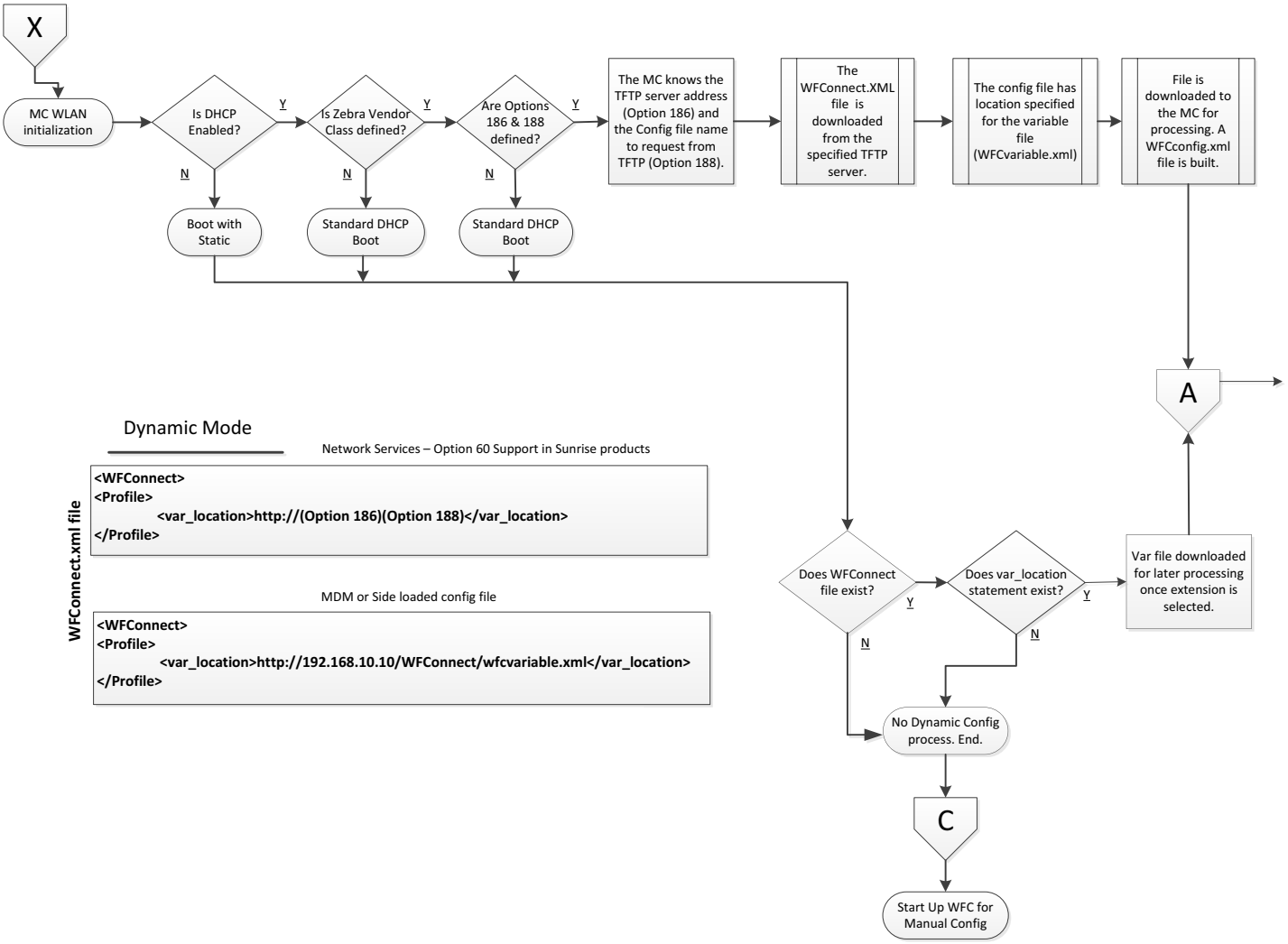
Synchronizing dynamic configuration ensures that devices always have the most current configuration available from the network server or MDM. For example, when a user logs in to an extension, the configuration files may change. The new configuration files are available when the user logs off from the current session and the WFC service re-processes the variable files.

NOTE: The system administrator must ensure that updates are posted to the correct location available to the WFC Voice Client client.

Dynamic Configuration Start-Up - Server Side

The following diagram describes the steps WFC Voice Client follows on the server side to download dynamic configuration during initialization.

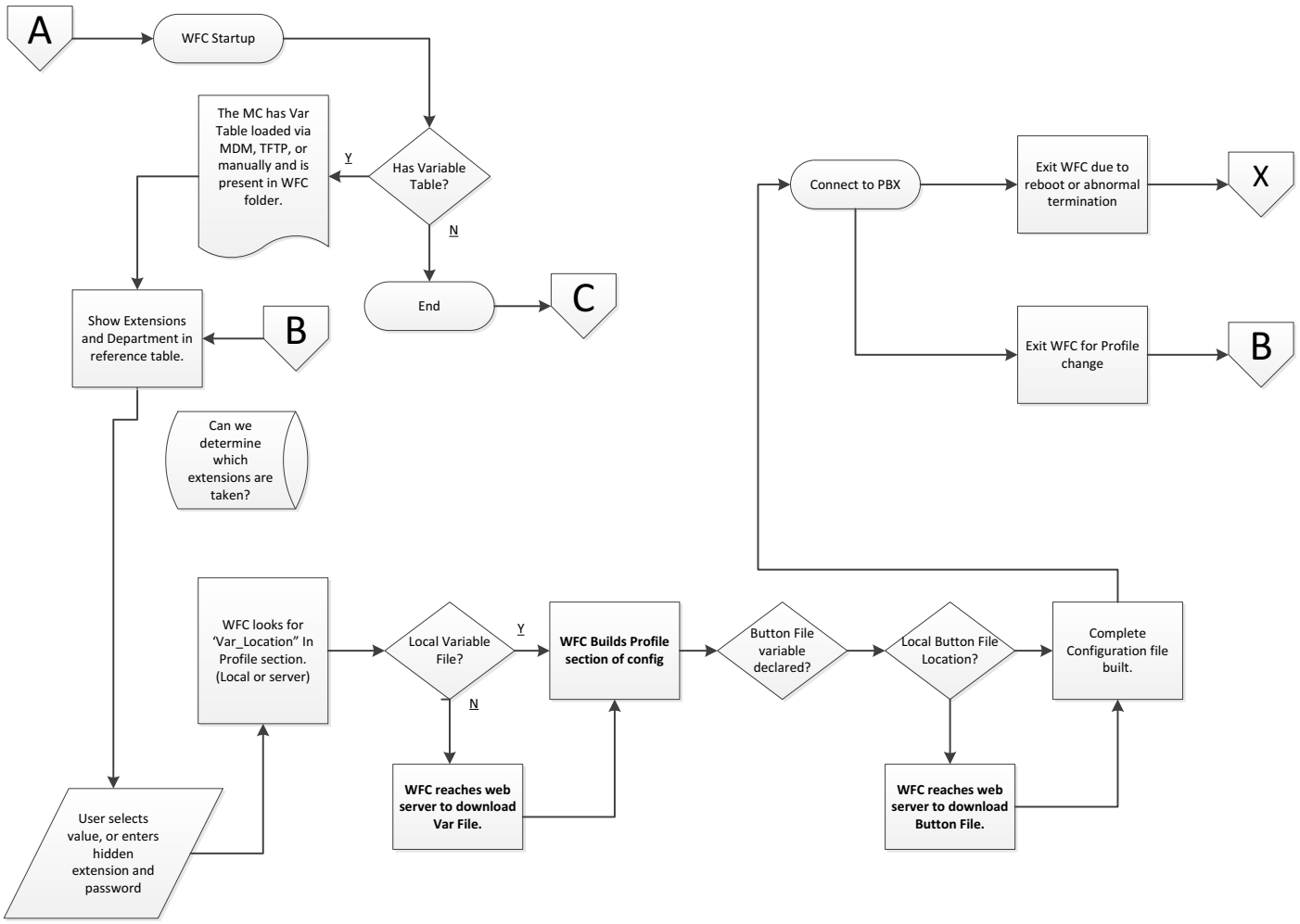
Figure 21 Dynamic Configuration Start-Up Process



Dynamic Configuration Start-Up - Client Side

The following diagram describes the steps WFC Voice Client follows on the client side to download dynamic configuration during initialization.

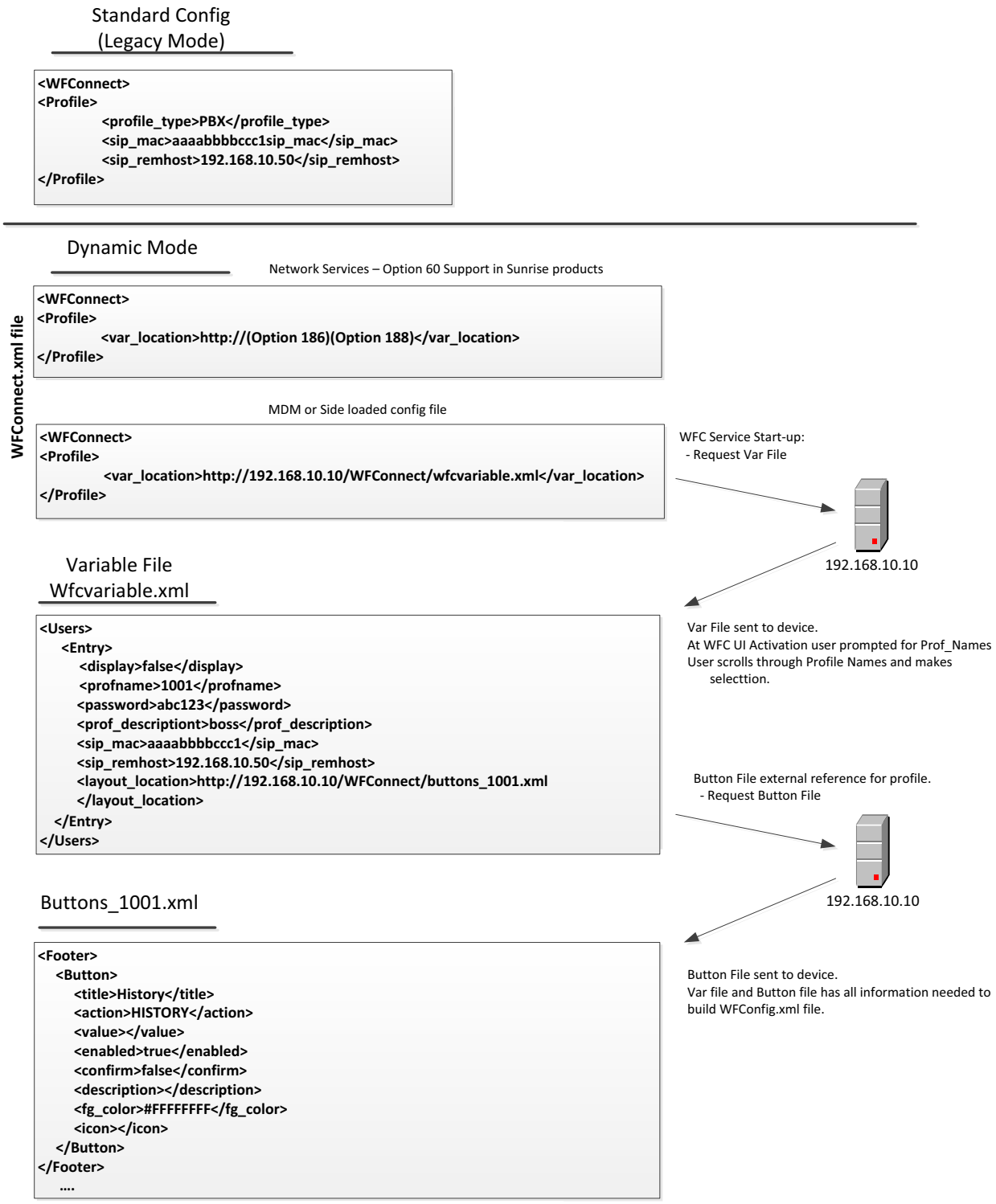
Figure 22 Dynamic Configuration Start-Up Process - Continued



XML File Examples

The following example displays the standard profile and different ways the voice client is able to retrieve a Dynamic Workforce Configuration XML file. Options include local XML and TFTP downloaded XML configuration.

Figure 23 XML Files Example



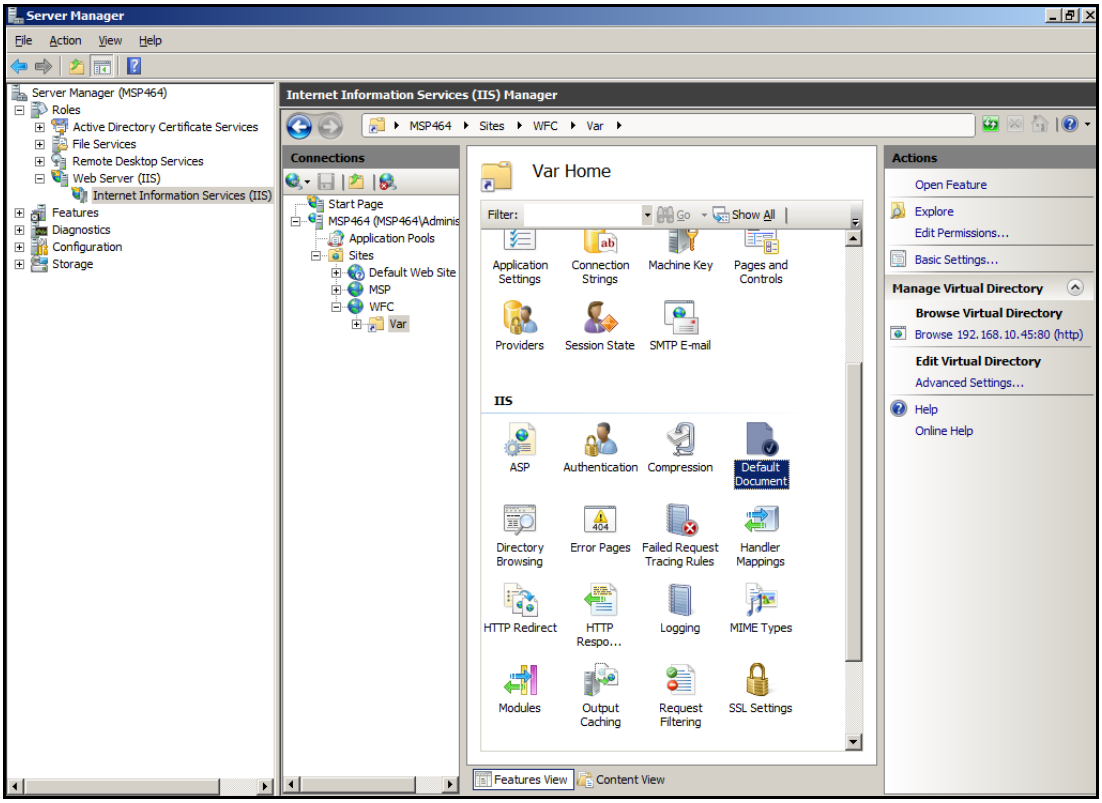
Testing Remote Dynamic Configuration

A test environment can use any remote server supporting web services.

To set up a lab system:

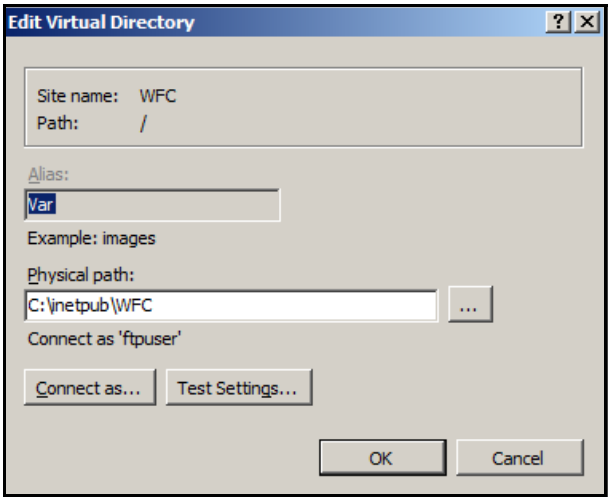
1. Ensure the server is running IIS to support Web services.
2. Establish a WFC Voice Client website.
3. Create the website and add a virtual folder.
4. Open the **Default Documents** properties.

Figure 24 Server Manager



5. Set the folder for the WFC Voice Client XML file repository.

Figure 25 Edit Virtual Directory



6. Test the settings to verify the system and default user can access the files.

NOTE: To test accessibility of the files, point your browser to the web site.

7. After determining access to the files, modify the XML files accordingly:
   - An example of remote access in **WFConnect.xml** is:

```
<Profile>
    <var_location>http://192.168.10.45/var/wfcvariable.xml</var_location>
</Profile>
```

   - An example of remote access in the **wfcvariable.xml** is:

```
<layout_location>http://192.168.10.45/var/buttons_5002.xml</layout_location>
```

A remote server allows consistency of delivery to the remote device. Logging on and off the device synchronizes changes to the device. Each login retrieves the existing XML file targeted for that device.

Settings

Introduction

This chapter contains information on settings used to configure and customize the WFC Voice Client.

The following sections provide detailed information on:

- **Profile Settings** - creating, editing, loading and saving a settings profile.
- **Connection Parameters** - configuring up to four PBX types.
- **Audio Settings** - configuring advanced audio settings.
- **UI Settings** - controlling the appearance and functionality of WFC Voice Client.
- **Call Settings** - configuring advanced call settings.
- **Ringtones** - configuring WFC Voice Client ringtones.
- **Miscellaneous Settings** - locating help files and editing the settings password.

Exiting WFC Voice Client:

1. Touch the menu button, then **Settings**. The password dialog box appears.
2. Enter password (default: **zamboni).**
3. Touch **Enter**.
4. Touch **Stop Service > Yes**.

This action can also be initiated using ADB, an MDM, or a third party app. For example, in ADB you can use the following command:

```
$ adb shell am broadcast -a wfc.voice.STOP_APP
```

Reloading WFC Voice Client:

1. Touch the menu button.
2. Touch **Reload**.

This action can also be initiated using ADB, an MDM, or a third party app. For example, in ADB you can use the following command:

```
$ adb shell am broadcast -a wfc.voice.SIGN_OUT
```

Profile Settings

The WFC Voice Client profile is an XML file that contains all the settings for the current WFC Voice Client session.

Create Profile

Create a new profile. A new XML file is created in the **WFConnect** folder.

To create a new profile:

1. Touch the menu button, then **Settings**. The password dialog box appears.
2. Enter password (default: **zamboni).**
3. Touch **Enter**.
4. Touch the menu button, then **Create new profile**.
5. Touch **Save current profile**.
6. Enter a file name for the new profile.
7. Touch **Save**. The file is saved in the **WFConnect** folder.
8. Touch the **Back** button to return to the WFC Voice Client home screen.

Change Profile Name

To change the name of the current profile:

1. Touch the menu button, then **Settings**. The password dialog box appears.
2. Enter password (default: **zamboni).**
3. Touch **Enter**.
4. Touch **Profile name**.
5. Enter a file name for the new profile.
6. Touch **OK**. The file name in the **WFConnect** folder is updated.
7. Touch the **Back** button to return to the WFC Voice Client home screen.

Shared Profiles URI

Set the URI of shared profile located on a remote or local server.

To set the URI of a shared profile:

1. Copy the profile from the **WFConnect** folder using a USB tether.
2. Move the profile to a remote or local server.
   Supported protocols are file, http, https, and tftp.
3. From the WFC Voice Client, touch the menu button, then **Settings**. The password dialog box appears.
4. Enter password (default: **zamboni).**
5. Touch **Enter**.
6. Touch **Shared Profiles URI**.
7. Enter the URI of the shared profile.
8. Touch **OK**.
9. Touch the **Back** button to return to the WFC Voice Client home screen.

Load New Profile

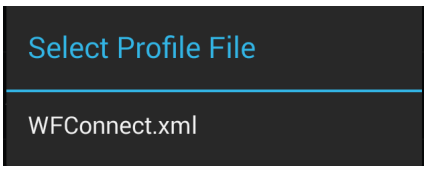
Load profiles previously saved to the:

- WFConnect folder
- SD Card

Loading a New Profile Using the GUI

1. Touch the menu button, then **Settings**. The password dialog box appears.
2. Enter password (default: **zamboni)**.
3. Touch **Enter**.
4. Scroll to the bottom of the screen.
5. Touch **Load new profile**. The **Select Profile File** dialog box appears.

Figure 26 Select Profile Popup



6. Select a profile file name.
7. Touch the **Back** button or **Refresh** button to load new profile.

Loading a New Profile Using XML

```
<WFConnect>
<Profile>
   <profname>WFConnect.xml</profname>
</Profile>
```

Installing the APK Using ADB Commands

To install the APK using an Android Debug Bridge (ADB) connection, open a command prompt and send the following ADB command to the device:

```
$ adb shell am start -a wfc.voice.ACTION_NEW_CONFIG --es profile_uri <configuration_file>
```

Where **<configuration_file>** is the URI of the new XML configuration file.

Save Current Profile

Using the same file name, save the current profile to replace an existing XML file.

To save an existing profile:

1. Touch the menu button, then **Settings**. The password dialog box appears.
2. Enter password (default: **zamboni).**
3. Touch **Enter**.
4. Scroll the bottom of the screen.
5. Touch **Save current profile**. The current profile name appears.

6. Touch **Save**. The file is saved in the **WFConnect** folder.
7. Touch the **Back** button to return to the WFC Voice Client home screen.

Edit a Profile Using XML

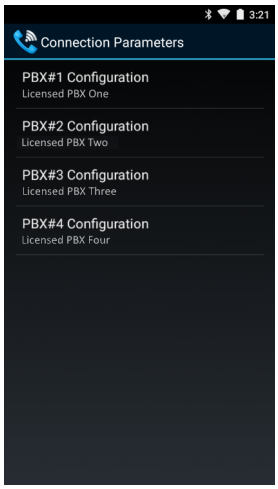
To edit a saved profile using XML, copy the new profile from the **WFConnect** folder using a USB tether.

Connection Parameters

Users can make and receive a call using any configured PBX type. This section describes how to configure up to three additional PBX types using the WFC Voice Client GUI or WFConnect.xml file.

To configure the default PBX (PBX#1 Configuration) see Configure Workforce Connect Voice Client on page 26.

Figure 27 Connection Parameters



Configuring Multiple PBX Types

Set the configuration parameters for additional PBX types:

IMPORTANT: When configuring multiple PBXs, ensure the server IP address and credentials are pointing to the correct PBX call server as indicated by the profile type. For example, the CME_BASIC profile must be configured with the IP address and credentials of a CME call manager.

Using the GUI

1. Touch the menu button, then **Settings**. The password dialog box appears.
2. Enter the password (default: **zamboni)**.
3. Touch **Enter**.
4. Touch **Advanced Settings > Connection Parameters**.
5. Touch **PBX#2 Configuration**.
6. Touch **PBX#2 Type**.
7. Select the PBX type that is the same as the target PBX call server.
8. Enter the configuration information.

   Refer to the Getting Started chapter of the WFC Voice Client Administrator Guide for the desired PBX type.
9. Touch the **Back** button to return to the Connection Parameters screen.
10. Repeat steps 5 through 7 for up to two more PBX types (optional).
11. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<WFConnect>
<Profile>
   <profile_type>Licensed PBX One
   </profile_type>
   <sip_userid>1001</sip_userid>
   <sip_userpass>1234</sip_userpass>
   <sip_localport>5060</sip_localport>
   <sip_remhost>10.5.97.99</sip_remhost>
   <sip_remport>5060</sip_remport>
   <sip_transport>UDP</sip_transport>
   <sip_realm>10.16.2.111</sip_realm>
   <profile2_type>Licensed PBX Two
   </profile2_type>
   <sip2_userid>1002</sip2_userid>
   <sip2_userpass>1234</sip2_userpass>
   <sip2_device_type>9971</sip_device_type>
   <sip2_mac>00-11-22-33-44-55</sip2_mac>
   <sip2_localport>5060</sip2_localport>
   <sip2_remhost>10.5.97.99</sip2_remhost>
   <sip2_remport>5060</sip2_remport>
   <sip2_transport>UDP</sip2_transport>
   <sip2_realm>10.16.2.111</sip2_realm>
</Profile>
...
</WFConnect>
```

Audio Settings

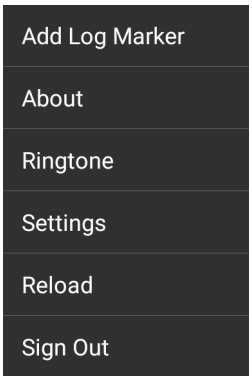
CAUTION: Changing the default audio settings may have adverse results.
Do not modify these settings unless directed to so by Zebra Technical Support.

This section provides detailed information on configuring advanced audio settings. Use the WFC Voice Client GUI or WFConnect.xml file to customize the Profile section. Both methods are discussed with each Function description.

To configure audio settings:

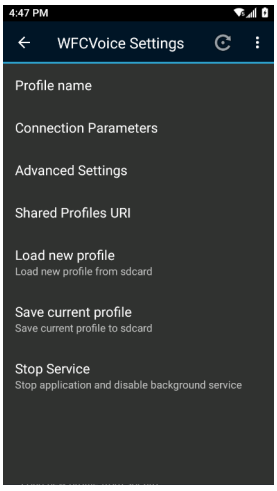
1. Touch the menu button, then **Settings**. The password dialog box appears.

Figure 28 WFC Voice Client Menu



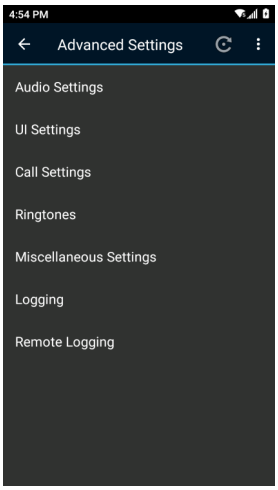
2. Enter password (default: **zamboni)**.
3. Touch **Enter**.

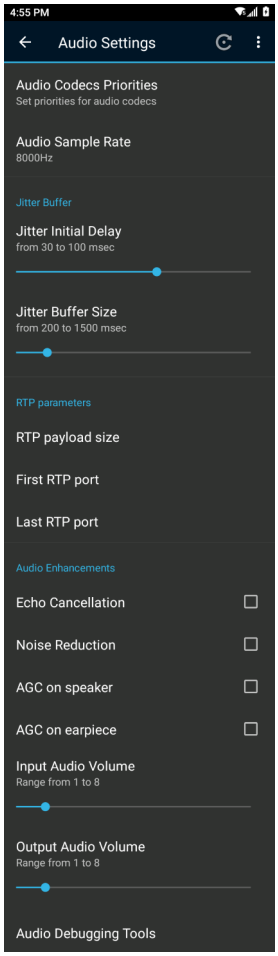
Figure 29 WFC Voice Client Settings Menu



4. Touch **Advanced Settings** > **Audio Settings**.

Figure 30 Advanced Settings / Audio Settings





Audio Codecs Priorities

Set the audio Codecs preferences.

NOTE: Only select audio Codecs available in the PBX.

Using the GUI		Using XML

1. In **Advanced Settings select Audio Settings**.
2. Select **Audio Codecs Priorities**.
3. Select the Codec preference (default order preferred). See Table 1 for descriptions.
4. Touch **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<codec_ulaw_priority>1</codec_ulaw_priority>`
		`</Profile>`
		`...`
		`</WFConnect>`

Table 1 Codecs Priorities

Field Type	Description	XML
G.711 u-Law	When selected, assigns preference priority for G.711 u-LAW Voice codec negotiations between PBX and Client.	`<codec_ulaw_priority>1 </codec_ulaw_priority>`
G.711 A-Law	When selected, assigns preference priority for G.711 A-Law Voice codec negotiations between PBX and Client.	`<codec_alaw_priority>2 </codec_alaw_priority>`
G.729	When selected assigns preference priority for G.729 Voice codec negotiations between PBX and Client.	`<codec_g729_priority>3 </codec_g729_priority>`
G.722	When selected assigns preference priority for G.722 Voice codec negotiations between PBX and Client.	`<codec_g722_priority>4 </codec_g722_priority>`
GSM	When selected assigns preference priority for GSM Voice codec negotiations between PBX and Client.	`<codec_gsm_priority>5 </codec_gsm_priority>`

Jitter Buffer

Jitter Initial Delay

Set the Jitter Buffer initial delay settings.

Using the GUI	Using XML
1. In **Advanced Settings** select **Audio Settings**. 2. **Slide the Jitter Initial Delay slider** (default 60 msec). 3. Touch **Back** button to return to the WFC Voice Client home screen.	<WFConnect> <Profile> <jitter_min>60</jitter_min> </Profile> ... </WFConnect>

Jitter Buffer Max Buffer Size

Set the maximum Jitter Buffer size.

Using the GUI	Using XML
1. In **Advanced Settings** select **Audio Settings**. 2. Slide the **Jitter Buffer Size** slider (default 250 msec). 3. Touch **Back** button to return to the WFC Voice Client home screen.	<WFConnect> <Profile> <jitter_max>250</jitter_max> </Profile> ... </WFConnect>

RTP Parameters

Real-Time Transport Protocol (RTP) Parameters - Payload Size

Set the RTP Payload size.

Using the GUI		Using XML

1. In **Advanced Settings** select **Audio Settings**.
2. Select **RTP payload size**.
3. Select the **RTP payload size** from the dialog box (default 20 ms).
4. Touch the **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<sip_rtp_ptime>20</sip_rtp_ptime>`
		`</Profile>`
		`...`
		`</WFConnect>`

First Real-Time Transport Protocol (RTP) Port

Set the First RTP Port.

Using the GUI		Using XML

1. In **Advanced Settings** select **Audio Settings**.
2. Select **First RTP port**.
3. Enter the **First RTP port number** (default 50000).
4. Select **OK**.
5. Touch the **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<sip_rtp_port1>50000</sip_rtp_port1>`
		`</Profile>`
		`...`
		`</WFConnect>`

Last Real-Time Transport Protocol (RTP) Port

Select the Last RTP Port.

Using the GUI		Using XML

1. In **Advanced Settings** select **Audio Settings**.
2. Select **Last RTP Port**.
3. Enter the **Last RTP port** number (default 50025).
4. Select **OK**.
5. Touch the **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<sip_rtp_port2>50025</sip_rtp_port2>`
		`</Profile>`
		`...`
		`</WFConnect>`

Audio Enhancements

This section describes how to enable and disable audio enhancements.

Configuring Audio Enhancements

Set the following audio enhancements:

- Echo Cancellation
- Noise Reduction
- AGC on speaker
- AGC on earpiece

Using the GUI		Using XML

1. In **Advanced Settings** select **Audio Settings**.
2. Scroll down to **Audio Enhancements**.
3. Tap the check boxes next to the items to enable (default: disabled).
4. Touch the **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<use_aec>false</use_aec>`
		`<use_noise>false</use_noise>`
		`<use_agc_speaker>false</use_agc_speaker>`
		`<use_agc_ear>false</use_agc_ear>`
		`</Profile>`
		`...`
		`</WFConnect>`

Input / Output Audio

Set the input / output volume.

Using the GUI		Using XML

1. In **Advanced Settings** select **Audio Settings**.
2. Scroll down to **Input Audio Volume** and **Output Audio Volume** under **Audio Enhancements**.
3. Use the slider to select the volume levels for Input and Output Audio (default 1).
4. Touch the **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<audio_gain_in>1</audio_gain_in>`
		`<audio_gain_out>1</audio_gain_out>`
		`</Profile>`
		`...`
		`</WFConnect>`

Audio Debugging Tools

Set the following debugging tools:

- Show jitter stats
- Save incoming voice

- Native Sample Rate

Using the GUI		Using XML

1. In **Advanced Settings** select **Audio Settings**.
2. Scroll down to **Audio Debugging Tools**.
3. Tap the check boxes next to the items to enable (default: disabled).
4. Touch the **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<show_jitter_stats>false</show_jitter_stats>`
		`<save_incoming_voice_to_file>false</save_incoming_voice_to_file>`
		`<use_native_sample_rate>false</use_native_sample_rate>`
		`</Profile>`
		`...`
		`</WFConnect>`

UI Settings

Use the GUI to configure the User Interface. Settings made in the GUI are saved to the XML file. The GUI settings and the XML file drives the WFC Voice Client look and functionality. Alternatively edit the XML file, **WFConnect.xml**, to make the same GUI settings. The saved **WFConnect.xml** file can be modified and use to configure other devices.

The **WFConnect.xml** file must be stored on the device in the **WFCconnect** folder. If this file does not exist, the application uses the default parameter values. The WFC Voice Client XML configuration file has the following sections which must be present in the file and in the following order:

- Profile section
- Footer section
- Dashboard section
- Call buttons section.

IMPORTANT: All these sections must be present in the XML file and they must be in the order listed above.

Configuration File Sections

Profile Section

The Profile section contains all the global settings and only requires a few basic items to begin using the WFC Voice Client on a PBX.

- SIP (Literal or Pseudo) MAC Address <sip_mac>
- SIP Remote Host (PBX Server Address) <sip_remhost>

Unless specified, the Profile section of the WFC Voice Client uses the default settings for Audio Settings, Call Settings, Miscellaneous Settings, Logging and Optional Services (This is a suggested best practice). Use the WFC Voice Client GUI or WFConnect.xml file to customize the Profile section. Both methods are discussed with each Function description.

See XML Example - Profile for a profile section example.

Footer Section

The Footer section defines the buttons, or soft keys, on the WFC Voice Client home screen. The buttons are listed in the order they appear on the screen. A maximum of six buttons can be added. The Footer always displays until a call is initiated. While additional items can be defined in the Footer, the following items are strongly recommended:

- History
- Redial
- Dial
- Contacts
- Voicemail.

Use the WFC Voice Client GUI or WFConnect.xml file to customize the Footer. Both methods are discussed with each Function description.

NOTE: The footer area does not require a <columns> element as it is always one row of buttons.

IMPORTANT: If a footer section is not required, do not define any buttons between the <Footer> and the </Footer> tags.

See XML Example - Footer for a footer section example.

Dashboard Section

The Home Screen Dashboard section defines the buttons in the dashboard area of the screen and their layout on the WFC Voice Client screen. The Dashboard displays functions and features specific to the end user. A maximum of 12 buttons can be displayed on the screen; additional buttons are accessed by scrolling up and down. Use the WFC Voice Client GUI or WFConnect.xml file to customize the Footer. Both methods are discussed with each Function description.

See XML Example - Dashboard for a dashboard section example.

Call Buttons Section

The Call Buttons section defines the buttons in the call buttons area of the screen and their layout on the WFC Voice Client screen. In-Call displays the available function and action of call buttons that can be accessed during a call. While on a call the user may wish to perform one of the following:

- Add Call
- Home
- Hold
- Resume
- Park
- Transfer
- Conference
- Complete
- End Call.

See XML Example - Call Buttons for a call button section example.

Headless Mode

For detailed information on Headless Mode see Headless Mode and WFCVoice Service.

Background Logo

Icon Library

To choose a background from the icon library:

Using the GUI		Using XML

1. In **Advanced Settings** select **UI Settings > Background Logo**.
2. From the **LIBRARY** tab, select the new background. A yellow box appears around the selected background.
3. Touch the **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<background_logo>logo</background_logo>`
		`</Profile>`
		`...`
		`</WFConnect>`

Custom Background Configuration

The user can create a custom background. To select a custom background:

1. Connect the device to a host computer using a USB cable.
2. **From the host computer**, copy the icon file to the `WFConnect` folder on device.

Custom Background Configuration

Using the GUI		Using XML

1. In **Advanced Settings** select **UI Settings > Background Logo**.
2. From the **SDCARD** tab, select the new background. A yellow box appears around the selected background.
3. Touch the **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<background_logo>custom_logo.png</background_logo>`
		`</Profile>`
		`...`
		`</WFConnect>`

Buttons Padding

Set the horizontal spacing between in-call buttons from 0 pixels to 50 pixels, in 10 pixel increments.

Using the GUI		Using XML

1. In **Advanced Settings** select **UI Settings > Background Logo**.
2. Slide the **Buttons padding** slider (default 0).
3. Touch **Back** to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<buttons_padding>50</buttons_padding`
		`</Profile>`
		`...`
		`</WFConnect>`

Dialer Padding

Set vertical padding at the bottom of the contacts and history screens from 0 pixels to 200 pixels, in 1 pixel increments.

Using the GUI		Using XML

1. In **Advanced Settings** select **UI Settings > Background Logo**.
2. Slide the **Dialer padding** slider (default 0).
3. Touch **Back** to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<dialer_padding>78</dialer_padding`
		`</Profile>`
		`...`
		`</WFConnect>`

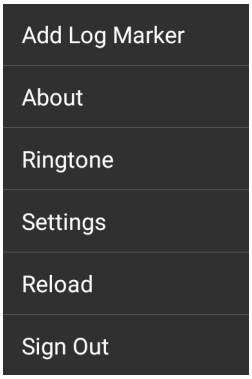
Graphical User Interface Design Tool

Use the GUI Design Tool to customize the Footer, Dashboard and In-Call screen from within the WFC Voice Client. Configure each to fit the specific needs of the customer. The appearance of the WFC Voice Client is configured using the GUI or by directly modifying the **WFConnect.xml** file. Details on specific XML settings and the construct of the XML configuration file are discussed in more detail later in this guide.

To begin using the GUI Design Tool, follow the steps below to configure the Footer, Dashboard or In-Call screens:

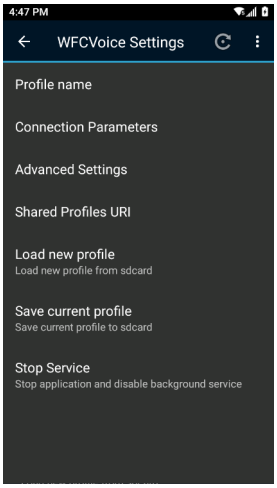
1. Launch WFC Voice Client.
2. Touch the menu button, then **Settings**. The password dialog box appears.

Figure 31 WFC Voice Client Menu



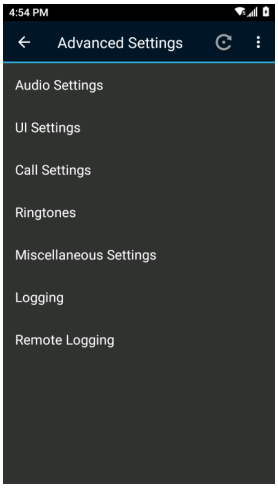
3. Enter password (default: **zamboni)**.
4. Touch **Enter**.

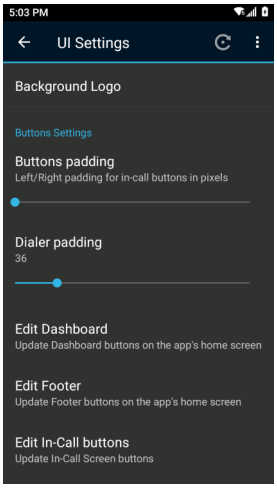
Figure 32 WFC Voice Client Settings Menu



5. Touch **Advanced Settings** > **UI Settings**.

Figure 33 Advanced Settings / UI Settings



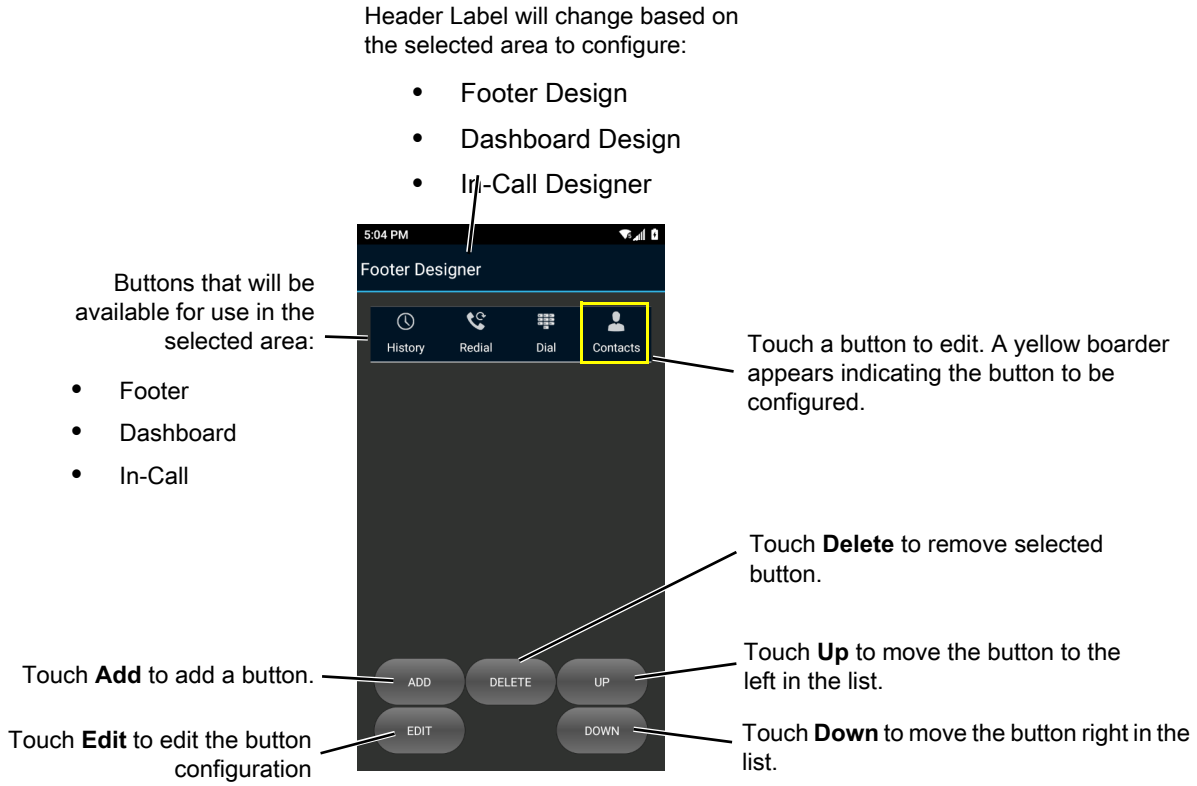


6. Select **Edit Dashboard**, **Edit Footer** or **Edit In-Call Button**.

Using the UI Settings GUI Design Tool

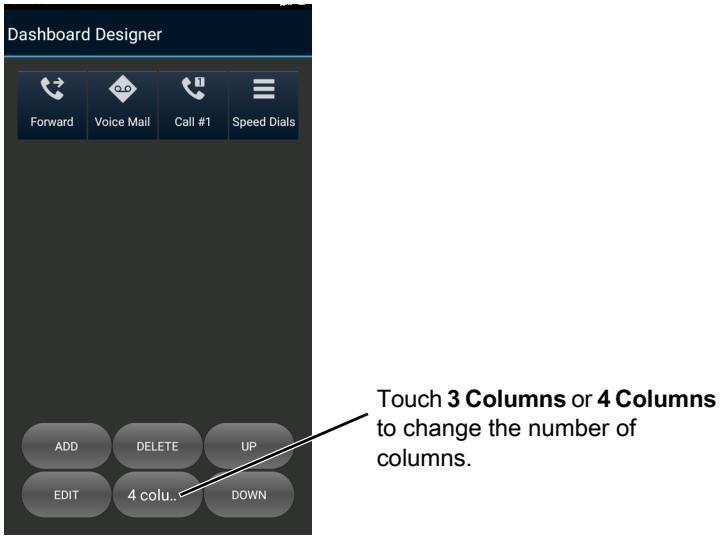
The following diagram describes the buttons available for each area.

Figure 34 GUI Design Tool - Footer



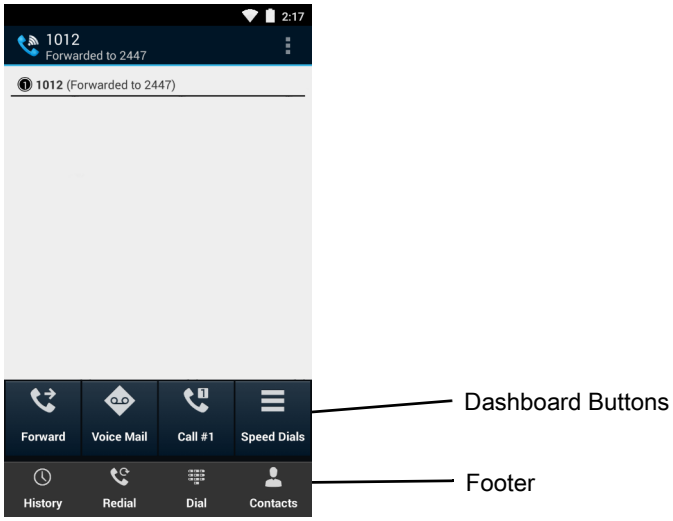
The Footer and In-Call views use the layout displayed in Figure 34. The Dashboard view has an additional toggle button in the bottom center of the screen to change the number of columns on the dashboard (3 or 4).

Figure 35 GUI Design Tool - Dashboard



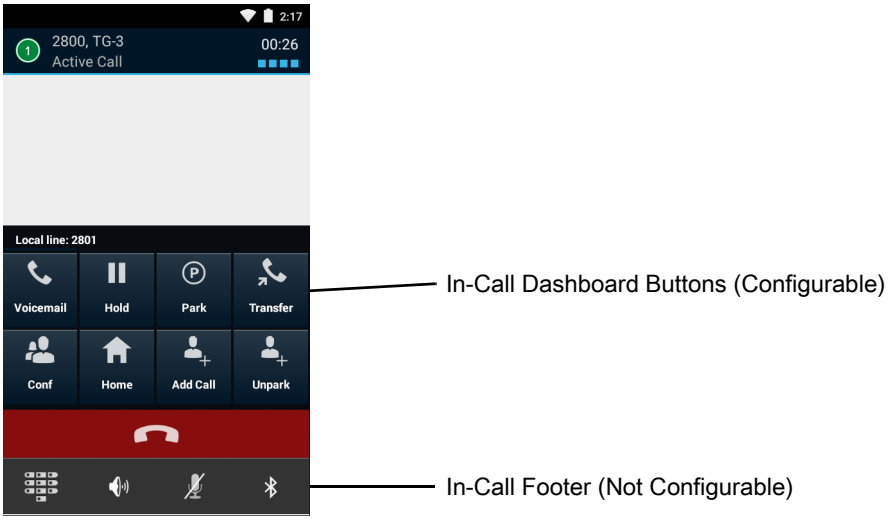
Home Screen Dashboard

Figure 36 Home Screen Dashboard



In-Call Dashboard

Figure 37 In-Call Dashboard



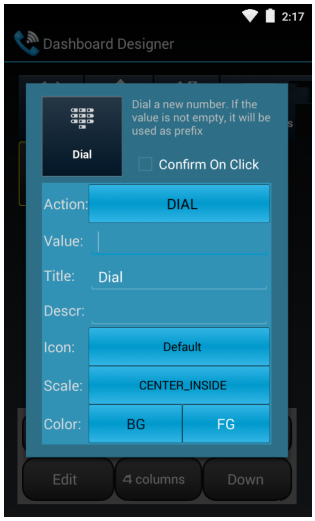
Button Configuration

The following sections describes each button that can be placed on the UI. Each section lists the Designer Tool procedure and corresponding XML configuration.

Call

Call is the ability to make a telephone call to a specific number or location using a prefix. The administrator identifies a target by its extension (phone number) and enters this into the Value field along with the prefix. The user can then use this function to initiate a call to the preset destination.

Figure 38 Sample Button Edit Screen



Configuring the Call Button

Using the GUI

1. In **UI Settings** select **Edit Footer**, **Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **CALL** from the **Select Action** menu.
6. If the dialed number has a prefix, in the **Value** field, enter the prefix number.
7. In the **Title** field, enter **Call**.
8. In the **Description** field, enter a short description of the button function.
9. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
10. Touch **BG** to set the background color. See Button Background Color on page 93.
11. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
12. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<Footer> or <Dashboard> or <CallButtons>
...
   <Button>
      <title>Call</title>
      <action>CALL</action>
      <value>9</value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Make a
      call</description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</Footer> or </Dashboard> or
</CallButtons>
```

Dial

Dial is the ability to dial a specified extension or number to initiate a telephone call. A caller identifies a target by its extension (phone number) and originates the call.

Configuring the Dial Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **DIAL** from the **Select Action** menu.
6. In the **Title** field, enter **Dial**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<Footer> or <Dashboard> or <CallButtons>
...
   <Button>
      <title>Dial</title>
      <action>DIAL</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Dial a number or
      extension</description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</Footer> or </Dashboard> or
</CallButtons>
```

Start App

Start Application defines a button to launch another application on the device. When the button is pressed WFC Voice Client minimizes to run in the background and the defined application launches. For example, a button can be placed in the Footer to open an email application.

Configuring the Start App

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **START_APP**.
6. Touch **Select App Package** and select the application from the **Select App Package** menu.
7. In the **Title** field, enter the application name.
8. In the **Description** field, enter a short description of the button function.
9. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
10. Touch **BG** to set the background color. See Button Background Color on page 93.
11. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
12. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

Opening the music application example is shown in the following XML.

```
<Footer> or <Dashboard> or <CallButtons>
...
   <Button>
      <title>Email</title>
      <action>START_APP</action>
      <value>com.android.email</value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Open email
      application</description>
      <icon>email.png</icon>
   </Button>
...
</Footer> or </Dashboard> or
</CallButtons>
```

Log Marker

Log Marker creates a time stamp in the logs. If you experience any issues with WFC Voice Client functionality, the time stamp focuses troubleshooting of the device to the time the issue occurred for more rapid resolution.

Configuring the Log Marker

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **LOG_MARKER** from the **Select Action** menu.
6. In the **Title** field, enter **Log Marker**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<Footer> or <Dashboard> or <CallButtons>
...
   <Button>
      <title>Log Marker</title>
      <action>LOG_MARKER</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Create time
      stamp</description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</Footer> or </Dashboard> or
</CallButtons>
```

Speed Dial 0-9

Speed Dial places a telephone call to a preset number/extension. Set up to 10 speed dial buttons on the dashboard through the GUI interface.

Configuring the Speed Dial Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **SPEED_DIALx** from the **Select Action** menu.
6. In the **Value** field, enter the extension.
7. In the **Title** field, enter **Speed Dial** (#).
8. In the **Description** field, enter a short description of the button function.
9. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
10. Touch **BG** to set the background color. See Button Background Color on page 93.
11. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
12. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<Footer> or <Dashboard> or <CallButtons>
...
   <Button>
      <title>Speed Dial #1</title>
      <action>SPEED_DIAL1</action>
      <value>5133</value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Speed dial
      #1</description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</Footer> or </Dashboard> or
</CallButtons>
```

Redial

Redial places a telephone call to the most recently call location. It is highly recommended that the redial button resides only in the Footer.

Configuring the Redial Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit Footer > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **REDIAL**.
6. In the **Title** field, enter **Redial**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<Footer>
...
   <Button>
      <title>Redial</title>
      <action>REDIAL</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Dial the last number called</description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</Footer>
```

Suspend Mode

Suspend Mode blocks all incoming or outgoing calls.

Configuring the Suspend Mode Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **SUSPEND_MODE**.
6. In the **Title** field, enter **Suspend Mode**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<Footer> or <Dashboard> or <CallButtons>
...
   <Button>
      <title>Suspend Mode</title>
      <action>SUSPEND_MODE</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Block all incoming
      calls</description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</Footer> or <Dashboard> or
<CallButtons>
```

History

History lists recently called numbers and incoming calls, including missed calls.

Configuring the History Button

Using the GUI		Using XML

1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **HISTORY**.
6. In the **Title** field, enter **History**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.
		`<Footer> or <Dashboard> or <CallButtons>`
		`...`
		`<Button>`
		`<title>History</title>`
		`<action>HISTORY</action>`
		`<value></value>`
		`<enabled>true</enabled>`
		`<confirm>false</confirm>`
		`<description>Display recently called numbers and incoming calls</description>`
		`<bg_color>#FF001425</bg_color>`
		`<fg_color>#FFFFFFFF</fg_color>`
		`<icon>Default</icon>`
		`</Button>`
		`...`
		`</Footer> or </Dashboard> or </CallButtons>`

Contacts

The Contacts button dials a new number by selecting an existing contact. Add and store contacts locally on the device.

Configuring the Contacts Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **CONTACTS**.
6. In the **Title** field, enter **Contacts**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<Footer> or <Dashboard> or <CallButtons>
...
   <Button>
      <title>Contacts</title>
      <action>CONTACTS</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Display contacts
      </description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</Footer> or </Dashboard> or
</CallButtons>
```

Favorites

The Favorites button dials a new number by selecting a contact that is set as a favorite. Set contacts as favorites locally on the device.

Configuring the Favorites Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **FAVORITES**.
6. In the **Title** field, enter **Favorites**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<Footer> or <Dashboard> or <CallButtons>
...
   <Button>
      <title>Favorites</title>
      <action>FAVORITES</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Display favorites
      </description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</Footer> or </Dashboard> or
</CallButtons>
```

Voicemail

The Voicemail button dials a number configured on the PBX to access Voicemail messages.

Configuring the Voicemail Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **VOICEMAIL**.
6. In the Value field, enter the Voicemail Pilot number.
7. In the **Title** field, enter **Voicemail**.
8. In the **Description** field, enter a short description of the button function.
9. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
10. Touch **BG** to set the background color. See Button Background Color on page 93.
11. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
12. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<Footer> or <Dashboard> or <CallButtons>
...
   <Button>
      <title>Voicemail</title>
      <action>VOICEMAIL</action>
      <value>9999</value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Voicemail
      messages</description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</Footer> or </Dashboard> or
</CallButtons>
```

Do Not Disturb

Access the Do Not Disturb (DND) feature directly on the phone. Use a Feature Access Code (FAC) to enable or disable this feature. Enabling DND suspends all personal calls targeted to the extension, and sends the call immediately to the defined Coverage Path. DND also removes the extension from consideration during any Coverage Answer Group, Simultaneous Ringing, and Hunt Group call. This feature is the PBX-based implementation of an endpoint device **Call Ignore** feature.

Configuring the DND Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **DO_NOT_DISTURB**.
6. In the Value field, enter the FAC for the Do Not Disturb feature.
7. In the **Title** field, enter **DND**.
8. In the **Description** field, enter a short description of the button function.
9. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
10. Touch **BG** to set the background color. See Button Background Color on page 93.
11. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
12. Touch the **Back** button to return to the WFC Voice Client home screen.

Note: DND is enabled/disabled using Feature Access Code (FAC).

Using XML

```
<Footer> or <Dashboard> or <CallButtons>
...
   <Button>
      <title>DND</title>
      <action>DO_NOT_DISTURB</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Ignore incoming
      calls</description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</Footer> or </Dashboard> or
</CallButtons>
```

Directory

Directory accesses corporate contact information on the PBX.

Configuring the Directory Button

Using the GUI

1. Open **Settings**.
2. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call > Add**.
3. Select the new button. A yellow box appears around the selected button.
4. Touch **Edit**.
5. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
6. Touch **Action** and select **DIRECTORY**.
7. In the **Value** field, enter an address.
8. In the **Title** field, enter **Directory**.
9. In the **Description** field, enter a short description of the button function.
10. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
11. Touch **BG** to set the background color. See Button Background Color on page 93.
12. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
13. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<Footer> or <Dashboard> or <CallButtons>
...
   <Button>
      <title>Directory</title>
      <action>DIRECTORY</action>
      <value>http://X.X.X.X/
      system/dir/complete_dir_list
      </value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Display company
      directory</description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</Footer> or </Dashboard> or
</CallButtons>
```

Add Call

During an active call the Add Call button can dial a preset number. If there is no number in the Value field, it opens the dialer. The current call is placed on hold while the new call is initiated. When the new call connects, you can Transfer, Conference, or End the second call and resume the first call.

IMPORTANT: Only available on the In-Call screen only.

Configuring the Add Call Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **ADD_CALL**.
6. In the **Title** field, enter **Add Call**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<CallButtons>
...
   <Button>
      <title>Add Call</title>
      <action>ADD_CALL</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Add a call by
      opening the dialer </description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</CallButtons>
```

Home

During an active call the Home button invokes the Dashboard to provide access to Dashboard functions.

IMPORTANT: Only available on the In-Call screen.

Configuring the Home Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **HOME**.
6. In the **Title** field, enter **Home**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<CallButtons>
...
   <Button>
      <title>Home</title>
      <action>HOME</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Return to the Home
      Dashboard</description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</CallButtons>
```

Hold

Call Hold politely suspends an active call while you tend to other business or place an additional call using an additional Call Appearance. During call hold, you can switch between the active and held calls at any time.

IMPORTANT: Only available on the In-Call screen.

Configuring the Hold Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **HOLD**.
6. In the **Title** field, enter **Hold**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<CallButtons>
...
   <Button>
      <title>Hold</title>
      <action>HOLD</action>
      <value></value>
      <enabled>false</enabled>
      <confirm>false</confirm>
      <description>Place call on
      hold</description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</CallButtons>
```

Resume

During an active call touch the **Resume** button ▶ to access the current call on hold.

IMPORTANT: Only available on the In-Call screen.

Configuring the Resume Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **RESUME**.
6. In the **Title** field, enter **Resume**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<CallButtons>
...
   <Button>
      <title>Resume</title>
      <action>RESUME</action>
      <value></value>
      <enabled>false</enabled>
      <confirm>false</confirm>
      <description>Resume an active
      call</description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</CallButtons>
```

Transfer

Transfer transfers an active call to a third party. While Call Forwarding must be preconfigured, Call Transfer allows making such call exchanges in real-time with an active call.

IMPORTANT: Only available on the In-Call screen.

Configuring the Transfer Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **TRANSFER**.
6. In the **Title** field, enter **Transfer**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<CallButtons>
...
   <Button>
      <title>Transfer</title>
      <action>TRANSFER</action>
      <value></value>
      <enabled>false</enabled>
      <confirm>false</confirm>
      <description>Transfer a call
      </description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</CallButtons>
```

Conference

Conference joins two separate calls for collaboration between each party on the line at the same time. Use a Feature Access Code (FAC) to enable or disable this feature. See System Feature Settings on page 27.

IMPORTANT: Only available on the In-Call screen.

Configuring the Conference Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **CONFERENCE**.
6. In the **Title** field, select **Conference**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<CallButtons>
...
   <Button>
      <title>Conf</title>
      <action>CONFERENCE</action>
      <value></value>
      <enabled>false</enabled>
      <confirm>false</confirm>
      <description>Start a conference
      call</description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</CallButtons>
```

Complete

This internal type is used for call transfer or conference scenarios.

IMPORTANT: Only available on the In-Call screen.

Configuring the Complete Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **COMPLETE**.
6. In the **Title** field, enter **Complete**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<CallButtons>
...
   <Button>
      <title>Complete</title>
      <action>COMPLETE</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>End a call transfer or
      conference call</description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</CallButtons>
```

End Call

This function ends a call in any state. It is pushed back from the Workforce Connect client to the PBX.

IMPORTANT: Only available on the In-Call screen.

NOTE: Placing the End Call button on the in-call dashboard replaces the default End Call button.

Configuring the End Call Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **END_CALL**.
6. In the **Title** field, enter **End Call**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<CallButtons>
...
   <Button>
      <title>End Call</title>
      <action>END_CALL</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>End a call
      </description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
   </Button>
...
</CallButtons>
```

List

By default, List displays the speed dial list 0-9. Alternatively, configure the List button to open a menu built from other WFC Voice Client buttons.

IMPORTANT: Only available on the In-Call screen.

Configuring the Default List Button

NOTE: This only creates a button. Edit XML file to customize the list.

The List button description appears at the top of the List popup dialog.

Using the GUI		Using XML

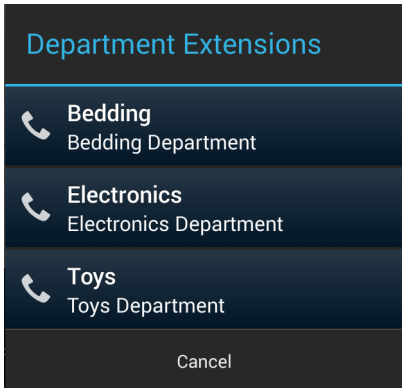
1. In **Advanced Settings** select **UI Settings > Edit Footer** or **Edit Dashboard > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **LIST**.
6. In the **Title** field, enter **List**.
7. In the **Description** field, enter a short description of the button function.
8. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
9. Touch **BG** to set the background color. See Button Background Color on page 93.
10. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
11. Touch the **Back** button to return to the WFC Voice Client home screen.
		`<Footer> or <Dashboard>`
		`...`
		`<Button>`
		`<title>List</title>`
		`<action>LIST</action>`
		`<value></value>`
		`<enabled>true</enabled>`
		`<confirm>false</confirm>`
		`<description>Department extensions </description>`
		`<bg_color>#FF001425</bg_color>`
		`<fg_color>#FFFFFFFF</fg_color>`
		`<icon>Default</icon>`
		`</Button>`
		`...`
		`</Footer> or </Dashboard>`

Configuring List Buttons Using XML

List buttons are configured using XML. The List button contains each sub button before the closing </Button> element. The List button description appears at the top of the List popup dialog. The sub button description appears as a comment under the button title, identifying which action is performed.

For example, to create a list with three custom buttons (Bedding, Electronics and Toys):

Figure 39 List Button Example




```
<Footer> or <Dashboard> or <CallButtons>
...
   <Button>
      <title>List</title>
      <action>LIST</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Department Extensions </description>
      <bg_color>#FF001425</bg_color>
      <fg_color>#FFFFFFFF</fg_color>
      <icon>Default</icon>
         <Button>
            <title>Bedding</title>
            <action>CALL</action>
            <value>1111</value>
            <enabled>true</enabled>
            <confirm>false</confirm>
            <description>Bedding Department</description>
            <bg_color>#FF001425</bg_color>
            <fg_color>#FFFFFFFF</fg_color>
            <icon></icon>
         </Button>
         <Button>
            <title>Electronics</title>
            <action>CALL</action>
            <value>1122</value>
            <enabled>true</enabled>
            <confirm>false</confirm>
            <description>Electronics Department</description
            <bg_color>#FF001425</bg_color>
```

```
            <fg_color>#FFFFFFFF</fg_color>
            <icon></icon>
         </Button>
         <Button>
            <title>Toys</title>
            <action>CALL</action>
            <value>1133</value>
            <enabled>true</enabled>
            <confirm>false</confirm>
            <description>Toys Department</description
            <bg_color>#FF001425</bg_color>
            <fg_color>#FFFFFFFF</fg_color>
            <icon></icon>
         </Button>
   </Button>
...
```

</Footer> or </Dashboard> or </CallButtons>

Blank

Blank provides an empty space between buttons for a more customized look and feel. If touched, the Blank button does not perform an action.

Configuring the Blank Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **BLANK**.
6. In the **Title** field, enter **Blank**.
7. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<Footer> or <Dashboard> or <CallButtons>
...
   <Button>
      <title>Blank</title>
      <action>BLANK</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description>Empty
      space</description>
      <icon></icon>
   </Button>
...
</Footer> or </Dashboard> or
</CallButtons>
```

Reload

Reload allows a user to sign out and then automatically sign back in to the WFC Voice Client.

Configuring the Reload Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **SIGNOUT_CHANGE**.
6. Ensure the **Value** field is empty.
7. In the **Title** field, enter **Sign Out**.
8. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<Dashboard> or <CallButtons>
...
   <Button>
      <title>Sign Out</title>
      <action>SIGNOUT_CHANGE</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description></description>
      <icon></icon>
      <scale>CENTER_INSIDE</scale>
   </Button>
...
</Dashboard> or </CallButtons>
```

This action can also be initiated using ADB, an MDM, or a third party app. For example, in ADB you can use the following command:

```
$ adb shell am broadcast -a wfc.voice.SIGN_OUT
```

Sign Out

Sign Out allows a user to sign out of the WFC Voice Client.

Configuring the Sign Out Button

Using the GUI		Using XML

1. In **Advanced Settings** select **UI Settings > Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **SIGNOUT_CHANGE**.
6. In the **Value** field, enter **0**.
7. In the **Title** field, enter **Sign Out**.
8. Touch the **Back** button to return to the WFC Voice Client home screen.
		`<Dashboard> or <CallButtons>`
		`...`
		`<Button>`
		`<title>Sign Out</title>`
		`<action>SIGNOUT_CHANGE</action>`
		`<value>0</value>`
		`<enabled>true</enabled>`
		`<confirm>false</confirm>`
		`<description></description>`
		`<icon></icon>`
		`<scale>CENTER_INSIDE</scale>`
		`</Button>`
		`...`
		`</Dashboard> or </CallButtons>`

This action can also be initiated using ADB, an MDM, or a third party app. For example, in ADB you can use the following command:

```
$ adb shell am broadcast -a wfc.voice.SIGN_OUT --es change 0
```

Ringtone

Sign Out allows a user to sign out of the WFC Voice Client.

Configuring the Blank Button

Using the GUI

1. In **Advanced Settings** select **UI Settings > Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit**.
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. Touch **Action** and select **RINGTONE**.
6. In the **Title** field, enter **Ringtone**.
7. Touch the **Back** button to return to the WFC Voice Client home screen.

Using XML

```
<Dashboard> or <CallButtons>
...
   <Button>
      <title>Ringtone</title>
      <action>RINGTONE</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description></description>
      <icon></icon>
      <scale>CENTER_INSIDE</scale>
   </Button>
...
</Dashboard> or </CallButtons>
```

Icons

Icon Library

To choose a button from the icon library:

Using the GUI		Using XML
1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call > Add**. 2. Select the new button. A yellow box appears around the selected button. 3. Touch **Edit.** 4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled). 5. In the **Description** field, enter a short description of the button function. 6. Touch **Icon.** The **Select Icon** menu is displayed. 7. From the **Library** tab, select an icon. 8. Touch **BG** to set the background color. See Button Background Color on page 93. 9. Touch **FG** to set the foreground text color. See Button Text Color on page 94. 10. Touch the **Back** button to return to the WFC Voice Client home screen.		<Footer> or <Dashboard> or <CallButtons> ... <Button> <title>Dial</title> <action>DIAL</action> <value></value> <enabled>true</enabled> <confirm>false</confirm> <description>Dial button from library</description> <bg_color>#FF001425</bg_color> <fg_color>#FFFFFFFF</fg_color> <icon>ic_dialpad</icon> </Button> ... <Footer> or <Dashboard> or <CallButtons>

Custom Icon Configuration

NOTE: Icons must be 128 pixels by 128 pixels and in PNG format.

The user can create custom icons. To select a custom icon:

1. Connect the device to a host computer using a USB cable.
2. **From the host computer, c**opy the icon file to the **WFConnect** folder on device.

Using the GUI		Using XML

1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call > Add**.
2. Select the new button. A yellow box appears around the selected button.
3. Touch **Edit.**
4. Select the check box next to **Confirm On Click** to enable this (the default is Disabled).
5. In the **Description** field, enter a short description of the button function.
6. Touch **Icon.** The **Select Icon** menu displays.
7. From the **SDCARD** tab, select an icon.
8. Touch **BG** to set the background color. See Button Background Color on page 93.
9. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
10. Touch the **Back** button to return to the WFC Voice Client home screen.
		`<Footer> or <Dashboard> or <CallButtons>`
		`...`
		`<Button>`
		`<title>Dial</title>`
		`<action>DIAL</action>`
		`<value></value>`
		`<enabled>true</enabled>`
		`<confirm>false</confirm>`
		`<description>Dial button from SD card</description>`
		`<bg_color>#FF001425</bg_color>`
		`<fg_color>#FFFFFFFF</fg_color>`
		`<icon>dialbtn.png</icon>`
		`</Button>`
		`...`
		`<Footer> or <Dashboard> or <CallButtons>`

Icon Scale Type

- CENTER_INSIDE

  Position image in the center area above title. Size of the image will be equal to or less than the size of the button. This is the default scale type.
- SCALE_CENTER

  Scale image in the center to fill area above title. Maintain aspect ratio of the image.
- FILL_CENTER

  Scale in the center to fill button size (no padding) and maintain the aspect ratio. The title is on top of the image in the center.
- FILL_XY

  Scale to fill button size (no padding) in both directions. Does not maintain aspect ratio. The title is on top of the image in the center.

To set the scale type for an icon:

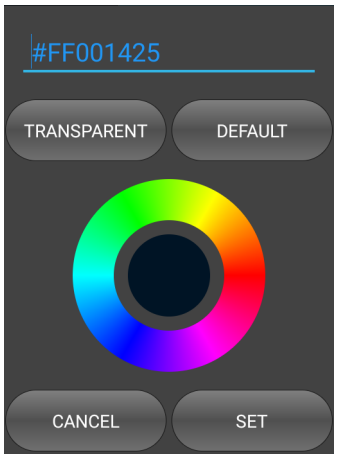
Using the GUI		Using XML
1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call** 2. Select a button. A yellow box appears around the selected button. 3. Touch **Edit.** 4. In the **Scale** field, select a **Scale Type**. 5. Touch the **Back** button to return to the WFC Voice Client home screen.		<Footer> or <Dashboard> or <CallButtons> ... <Button> <action>DIAL</action> <title>Title</title> <value></value> <icon>conference</icon> <scale>SCALE_CENTER</scale> </Button> ... <Footer> or <Dashboard> or <CallButtons>

Button Color

Button Background Color

Use Button Background Color to set the color of individual buttons. Setting a background color overrides the Global Button Background Color. The default background color is dark gray (#FF001425).

Figure 40 Button Background Color



Setting Button Background Color

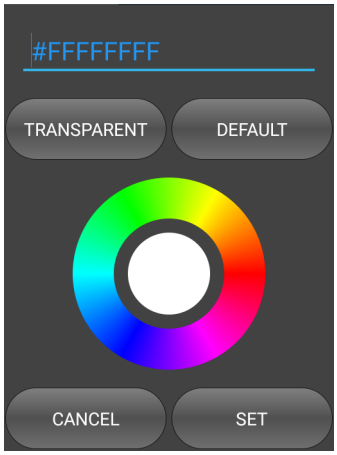
Using the GUI		Using XML

1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call**
2. Select a button. A yellow box appears around the selected button.
3. Touch **Edit.**
4. Touch the **BG** button.
5. Select a color and touch **Set**.
6. Touch the **Back** button to return to the WFC Voice Client home screen.
		`<Button>`
		`<bg_color>#FF001425</bg_color>`
		`</Button>`

Button Text Color

Use Button Text Color to set the color of individual buttons. Setting a text color overrides the Global Button Text Color. The default text color is white (#FFFFFFFF).

Figure 41 Button Text Color



Setting Button Text Color

Using the GUI		Using XML

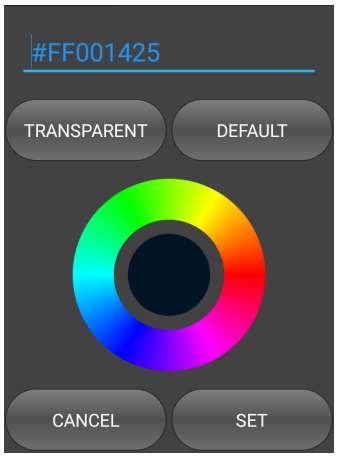
1. In **Advanced Settings** select **UI Settings > Edit Footer**, **Edit Dashboard** or **Edit In-Call**
2. Select a button. A yellow box appears around the selected button.
3. Touch **Edit.**
4. Touch the **FG** button.
5. Select a color and touch **Set**.
6. Touch the **Back** button to return to the WFC Voice Client home screen.
		`<Button>`
		`<fg_color>#FFFFFFFF</fg_color>`
		`</Button>`

Global Button Color Settings

Global Button Background Color

Use Global Button Background Color to set the color of all buttons on the dashboard. The button color can be overridden by the individual Button Background Color. The default background color is dark gray (#FF001425).

Figure 42 Button Background Color



Setting Button Background Color

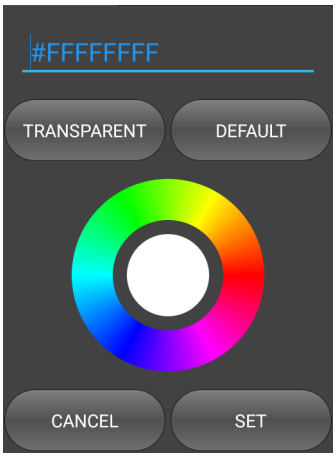
Using the GUI		Using XML

1. In **Advanced Settings select UI Settings.**
2. Select **Button Background color**.
3. Select a color from the color wheel for the button background or enter RGB color in hex format.
4. Touch **Set**.
5. Touch **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<gbg_color>#FF001425</gbg_color>`
		`</Profile>`
		`...`
		`</WFConnect>`

Global Button Text Color

Use Global Button Text Color to set the color of all buttons on the dashboard. The button color can be overridden by the individual Button Text Color. The default text color is white (#FFFFFFFF).

Figure 43 Button Text Color



Setting Button Text Color

Using the GUI		Using XML

1. In **Advanced Settings select UI Settings.**
2. Select **Button text color**.
3. Select a color from the color wheel for the button text or enter RGB color in hex format.
4. Touch **Set**.
5. Touch **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<gfg_color>#FFFFFFFF</gfg_color>`
		`</Profile>`
		`...`
		`</WFConnect>`

Reset Colors to Default

To reapply the factory default button colors:

1. In **Advanced Settings** select **UI Settings > Reset colors to default**.
2. Touch the **Back** button to return to the WFC Voice Client home screen.

Restore Buttons

To reapply the factory default buttons and their layout:

1. In **Advanced Settings** select **UI Settings > Restore buttons**.
2. Touch the **Back** button to return to the WFC Voice Client home screen.

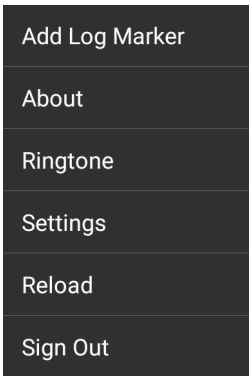
Call Settings

This section provides detailed information on configuring advanced call settings.

To configure call settings:

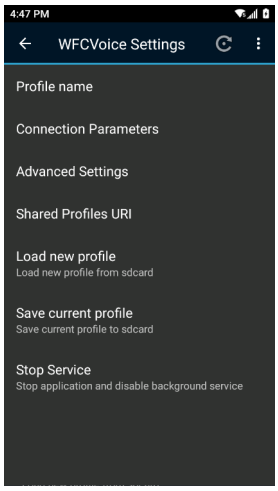
1. Touch the menu button, then **Settings**. The password dialog box appears.

Figure 44 WFC Voice Client Menu



2. Enter password (default: **zamboni)**.
3. Touch **Enter**.

Figure 45 WFC Voice Client Settings Menu



4. Touch **Advanced Settings** > **Call Settings**.

Call Waiting Volume

Set the Call Waiting Volume setting.

Using the GUI		Using XML

1. In **Advanced Settings** select **Call Settings.**
2. **Slide the Call Waiting Volume slider** (default 80).
3. Touch **Back** to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<callwaiting_volume>80</callwaiting_volume>`
		`</Profile>`
		`...`
		`</WFConnect>`

Call Waiting Interval

Set the Call Waiting Interval setting.

Using the GUI		Using XML

1. In **Advanced Settings** select **Call Settings.**
2. **Slide the Call Waiting Interval slider** (default 2000).
3. Touch **Back** to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<callwaiting_interval>2000</callwaiting_interval>`
		`</Profile>`
		`...`
		`</WFConnect>`

Ringer OFF In Charger

Enable Ringer OFF in Charger to disable the ringer while the device is charging.

Using the GUI		Using XML

1. In **Advanced Settings** select **Call Settings.**
2. Select the check box next to **Ringer OFF in Charger** to enable this (the default is Disabled).
3. Touch **Back** to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<ringer_off_in_charger>false</ringer_off_in_charger>`
		`</Profile>`
		`...`
		`</WFConnect>`

Disable Speaker mode

Enable Speaker Mode to answer all incoming calls in speaker mode when the device is placed on a horizontal surface, such as a desk.

Using the GUI		Using XML

1. In **Advanced Settings** select **Call Settings.**
2. Select the check box next to **Disable Speaker Mode** to enable this (the default is Disabled).
3. Touch **Back** to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<disable_speaker>false</disable_speaker>`
		`</Profile>`
		`...`
		`</WFConnect>`

Speaker on table

Enable Speaker Mode to answer all incoming calls in speaker mode when the device is placed on a horizontal surface, such as a desk.

Using the GUI		Using XML

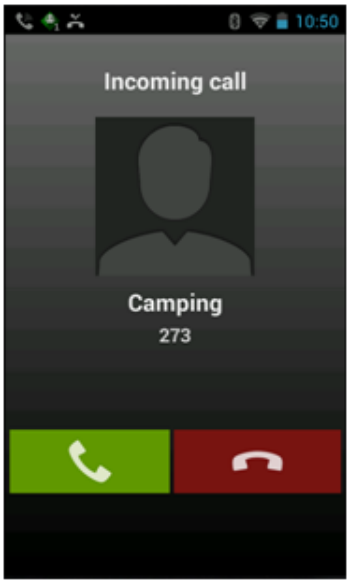
1. In **Advanced Settings** select **Call Settings.**
2. Select the check box next to **Speaker on table** to enable this (the default is Disabled).
3. Touch **Back** to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<speaker_on_horizontal>false</speaker_on_horizontal>`
		`</Profile>`
		`...`
		`</WFConnect>`

Call Accept Style

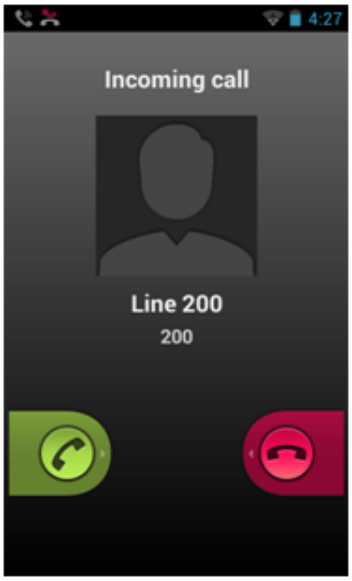
There are various call accept styles on the incoming call screen, such as simple accept and reject buttons, a slider (Gingerbread Android), and Glow Pad buttons (JellyBean Android).

- Accept-Reject - The operator touches one of two buttons to accept or reject an incoming call.
- Slider - The operator swipes one of two buttons across the screen to accept or reject an incoming call.
- Glow Pad - The operator touches a handset symbol to accept or reject an incoming call.

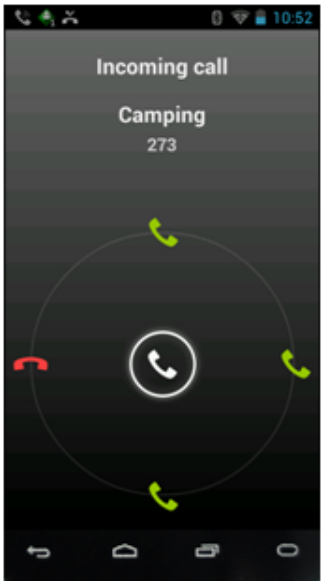
Figure 46 Call Accept Buttons



Accept-Reject Buttons



Sliding Tab



Glow Pad

Configure the Glow Pad Buttons

Using the GUI

1. In **Advanced Settings** select **Call Settings > Call Accept Style**.
2. Select **Sliding Tab (GB)**, **Accept/Reject Buttons**, or **Glow Pad (JB)**.
3. Touch **Back** button to return to the WFC Voice Client home screen.

Using XML

Sliding Tab (GB)

```
<Profile>
   <incall_widget>incall_gb</incall_widget>
</Profile>
```

Accept-Reject Buttons

```
<Profile>
   <incall_widget>incall_buttons</incall_widget>
</Profile>
```

Glow Pad Buttons (JB)

```
<Profile>
   <incall_widget>incall_buttons</incall_widget>
</Profile>
```

Auto Answer Mode

Enable Auto Answer Mode to auto-answer all incoming calls.

Using the GUI		Using XML

1. In **Advanced Settings** select **Call Settings.**
2. Select the check box next to **Auto Answer Mode** to enable (Default: disabled).
3. Touch **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<sip_auto_answer>true</sip_auto_answer>`
		`</Profile>`
		`...`
		`</WFConnect>`

Incoming Call Voice Announcer

Enable Incoming Call Voice Announcer to announce the number or user name of an incoming call.

Using the GUI		Using XML

1. In **Advanced Settings** select **Call Settings.**
2. Select the check box next to **Incoming Call Voice Announcer** to enable this (Default: disabled).
3. Touch **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<voice_announcer_check>true</voice_announcer_check>`
		`</Profile>`
		`...`
		`</WFConnect>`

No Audio Cutoff

Use No Audio Cutoff to disconnect a call when no audio is detected for a set interval.

Using the GUI		Using XML

1. In **Advanced Settings** select **Call Settings.**
2. Touch **No Audio Cutoff**.
3. Select a time interval (Default: 30 seconds).
4. Touch **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<no_audio_cutoff>30</no_audio_cutoff>`
		`</Profile>`
		`...`
		`</WFConnect>`

Audio Prompt File

Use Audio Prompt File to select a custom WAV audio file to play when an incoming call is accepted. To select a custom WAV audio file:

1. Save a custom WAV audio file using the following settings: 8 kHz sample rate, Mono, 16-bit, PCM format.
2. Connect the device to a host computer using a USB cable.
3. **From the host computer**, copy the WAV file to the `WFConnect` folder on device.

Using the GUI		Using XML

1. In **Advanced Settings** select **Call Settings.**
2. Touch **Audio Prompt File**.
3. Select an audio file.
4. Touch **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<prompt_file>chewy_roar.wav</prompt_file>`
		`</Profile>`
		`...`
		`</WFConnect>`

MOH Enabled

Music on Hold (MOH) Enabled plays a WAV audio file when a user is placed on hold.

Using the GUI		Using XML

1. In **Advanced Settings** select **Call Settings.**
2. Select the check box next to **MOH Enabled** to enable this (Default: disabled).
3. Touch **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<moh_enabled>true</moh_enabled>`
		`</Profile>`
		`...`
		`</WFConnect>`

MOH File

Use Music on Hold (MOH) File to select a custom WAV audio file to play when a user is placed on hold. To select a custom WAV audio file:

1. Connect the device to a host computer using a USB cable.
2. **From the host computer**, copy the WAV file to the `WFConnect` folder on device.

Using the GUI		Using XML

1. In **Advanced Settings** select **Call Settings.**
2. Touch **MOH File**.
3. Select an audio file.
4. Touch **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<moh_file>opusno1.wav</moh_file>`
		`</Profile>`
		`...`
		`</WFConnect>`

Ringtones

This section provides detailed information on configuring advanced ringtone settings.

To configure ringtone settings:

1. Touch the menu button, then **Settings**. The password dialog box appears.
2. Enter password (default: **zamboni)**.
3. Touch **Enter**.
4. Touch **Ringtones**.

Line Ringtones

Line Ringtones configures a unique ring tone per line. Custom ring tones are available if preloaded on the device. Supported audio formats for custom ring tones are OGG, MP3, and WAV.

NOTE: MP3 and WAV formats are not supported on some earlier releases of WFC Voice.

Using the GUI		Using XML

1. In **Advanced Settings,** select **Ringtones.**
2. Touch **Line Ringtones**.
3. Select a line for which to configure the ringtone.
4. To select the default ringtone, touch **Default**.
5. To select an **Android** ringtone:
a. Touch **Android.**
b. Select a ringtone.
c. Touch **OK.**
6. To select a ringtone from **Library:**
a. Touch **Library.**
b. Select a ringtone.
7. To select a ringtone on the SD card:
a. Touch **Custom Ringtones.**
b. Select a ringtone.
8. Touch **Back** to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<ringtone_line1>-1</ringtone_line1>`
		`<ringtone_line2>UK_Phone</ringtone_line2>`
		`<ringtone_line3>michelle_ringtone.ogg</ringtone_line3>`
		`</Profile>`
		`...`
		`</WFConnect>`

Miscellaneous Settings

This section provides information on the location of help files, flexible TLS, and editing the settings password.

Sign OUT in Charger

By default, the WFC Voice Client remains signed in when using a cable or cradle to charge the device. Enable this option to automatically sign out of the WFC Voice Client when the device begins charging.

Setting Sign OUT in Charger

Using the GUI		Using XML

1. Select **Settings**.
2. Select **Advanced Settings > Miscellaneous Settings.**
3. Select the check box next to **Sign OUT in Charger** to enable this (Default: disable).
4. Touch **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<sign_out_in_charger>true</sign_out_in_charger>`
		`</Profile>`
		`...`
		`</WFConnect>`

Flexible TLS

By default, all remote hosts are trusted for SIP connections. Disable this option to use Android certificates for TLS/SSL connections.

Setting Flexible TLS

Using the GUI		Using XML

1. Select **Settings**.
2. Select **Advanced Settings > Miscellaneous Settings.**
3. Select the check box next to **Flexible TLS** to disable this (Default: enable).
4. Touch **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<flex_tls>true</flex_tls>`
		`</Profile>`
		`...`
		`</WFConnect>`

WiFi Preferred

By default, the WFC Voice Client connects to an available WiFi network. This setting only applies after network state changes or when the client is restarted. Disable this option to use the device's default network.

Setting WiFi Preferred

Using the GUI		Using XML

1. Select **Settings**.
2. Select **Advanced Settings > Miscellaneous Settings.**
3. Select the check box next to **WiFi Preferred** to disable this (Default: enable).
4. Touch **Back** button to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<wifi_preferred>true</wifi_preferred>`
		`</Profile>`
		`...`
		`</WFConnect>`

Help URL

The location of the on-device help file.

Setting Help URL

Using the GUI		Using XML

1. Select **Settings**.
2. Select **Advanced Settings > Miscellaneous Settings.**
3. Select **Help URL**.
4. Set HELP URL location.
5. Touch **OK**.
6. Touch **Back** button to get back to WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<help_url>file:///wfconnect/help.html</help_url>`
		`</Profile>`
		`...`
		`</WFConnect>`

Settings Password

The WFC Voice Client uses a password to access the settings.

NOTE: Once the password is changed if it is forgotten the only recovery method is to reload a new client with a new xml file. The password cannot be set in the XML file.

To change the settings password:

1. Select **Settings**.
2. Select **Advanced Settings > Miscellaneous Settings.**
3. Select **Settings password**.
4. Enter Current Password.
5. Enter New Password and Confirm.
6. Touch **Enter**.

Touch **Back** button to get back to WFC Voice Client home screen.

Additional Profile URI

Set the URI of a buttons layout file saved as an XML file on a remote or local server.

Setting Additional Profile URI

Using the GUI		Using XML

1. Select **Settings**.
2. Select **Advanced Settings > Miscellaneous Settings.**
3. Select **Additional Profile URI**.
4. Set Additional Profile URI location.
5. Touch **OK**.
6. Touch **Back** button to get back to WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<layout_location>file:///wfconnect/buttons-layout.xml</layout_location>`
		`</Profile>`
		`...`
		`</WFConnect>`

Contacts URL

The URL of a contacts list saved as a CSV file on a remote or local server. For information on creating a contacts list see Creating a Contacts List on page 109.

Setting Contacts URL

Using the GUI		Using XML

1. Select **Settings**.
2. Select **Advanced Settings > Miscellaneous Settings.**
3. Select **Contacts URL**.
4. Set CONTACTS URL location.
5. Touch **OK**.
6. Touch **Back** button to get back to WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<contacts_url>`
		`file:///wfconnect/contacts.csv`
		`</contacts_url>`
		`</Profile>`
		`...`
		`</WFConnect>`

Sync Contacts

Use Sync Contacts to import a contacts list saved as a CSV file.

Creating a Contacts List

1. From the host computer, use a spreadsheet program to create a list of contacts where the first row contains the following fields:

contactId	firstName	lastName	cellNumber	officeNumber	homeNumber

2. Enter contact information as needed. For example:

contactId	firstName	lastName	cellNumber	officeNumber	homeNumber
1	John	Smith	2001	516-555-1234	516-555-1235
2	Jane	Doe	2002	516-555-1236	516-555-1237

3. Save the spreadsheet as a CSV file.

Syncing Contacts

1. From the host computer, copy the CSV file to the **`WFConnect`** folder on device.
2. From the WFC Voice Client, select **Settings > Advanced Setting > Miscellaneous Settings**.
3. Touch **Sync Contacts**. A confirmation that the contacts are updated displays.

Logging

Introduction

This chapter describes the process used to capture and collect WFC Voice Client log files and Fusion log files. The Log Marker feature records the date and time of an event into a log file. Log files are used to assist in troubleshooting the WFC Voice environment during run-time operations.

NOTE: For accurate logging, check that the device date and time are set correctly.

Logging Level

- **Error** - Low level application error - not critical
- **Warning** - Feedback from application operation and function
- **Info** - High level / user interaction and call information
- **Debug** - Captures information for developer troubleshooting
- **Verbose** - Captures all information for developer troubleshooting.

Setting Logging Level

Using the GUI		Using XML

1. Select **Settings**.
2. Select **Advanced Settings > Logging.**
3. Select **Logging level**.
4. Choose a level for Logging. Default level “Error” is suggested.
5. Touch **Back** button to get back to WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<log_level>Error</log_level>`
		`</Profile>`
		`...`
		`</WFConnect>`

Logging Types

There are several types of logging within the WFC Voice Client as well as the native Android OS.

Logging to Console

Information sent to the In-Call dashboard for live viewing.

Using the GUI		Using XML

1. Select **Settings**.
2. Select **Advanced Settings > Logging.**
3. Select **Logging to Console**.
4. Touch the box to enable Logging to Console.
5. Touch **Back** button to get back to WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<log_console>false</log_console>`
		`</Profile>`
		`...`
		`</WFConnect>`

Logging to File

Log information is written to a file on the device.

Using the GUI		Using XML

1. Select **Settings**.
2. Select **Advanced Settings > Logging.**
3. Select **Logging to File**.
4. Touch the box to enable Logging to File. The file is saved in the WFConnect folder.
5. Touch **Back** button to get back to WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<log_console>false</log_console>`
		`</Profile>`
		`...`
		`</WFConnect>`

Logging to HTTP Post URL

Post the log file to a server when client starts and daily after midnight.

Using the GUI		Using XML

1. Select **Settings**.
2. Select **Advanced Settings > Logging.**
3. Select **HTTP POST URL**.
4. Enter the server address to send log file to. Set URL value to empty string to disable it.
5. Touch **OK**.
6. Touch **Back** button to get back to WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<post_log_url></post_log_url>`
		`</Profile>`
		`...`
		`</WFConnect>`

Log Files

Two types of log files can be collected:

- Workforce Connect Logs
- Fusion Logs

Workforce Connect Logs

The WFC Voice Client has the following logging methods:

- **Android LogCat** - LogCat provides a mechanism for collecting and viewing system and applications messages. RxLogger tool is used to collect this file. When RxLogger is started, the WFC Voice Client automatically logs all messages into LogCat at the VERBOSE level.
- **Session Initiation Protocol Common Log Format (SIPCLF)** - All received and sent SIP messages are contained in CLF format as single text line. Special software is required to read this file format. This logging method is disabled by default.

  SIPCLF files can be found in the following location:
  .../RxLogger/WFConnect/WFConnect_<device_id>_<timestamp>.clf
- **Crash Report** - WFC Voice automatically stores up to ten crash report files on the device. This logging method is always enabled.

  Crash report files can be found in the following location:
  .../RxLogger/WFConnect/WFConnect_<device_id>_<timestamp>.crash

Fusion Logs

The native Android operating system provides an advanced logging feature. Fusion Logs collect unencrypted data, including Real-time Transport Protocol data. The data is imported to third party software for network troubleshooting and protocol analysis. The captured data is output to a .pcap file and an event log.

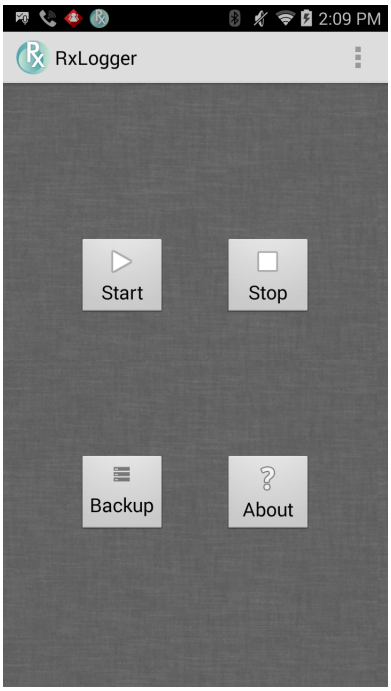
Collecting LogCat with RxLogger

The RxLogger tool integrates into the operating system and collects WFC Voice Client log files. There is no need to set the log level inside WFC Voice Client. When Rxlogger logging starts, WFC Voice Client is notified via plugin to enable VERBOSE LogCat and SIPCLF logging. By default, SIPCLF is disabled.

Enabling RXLogger

From the RxLogger main screen:

Figure 47 RxLogger

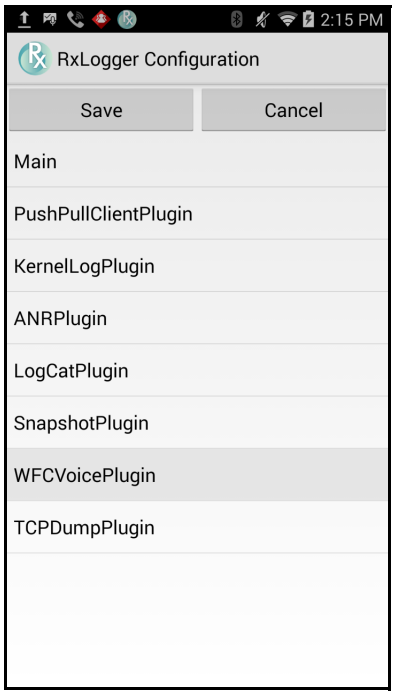


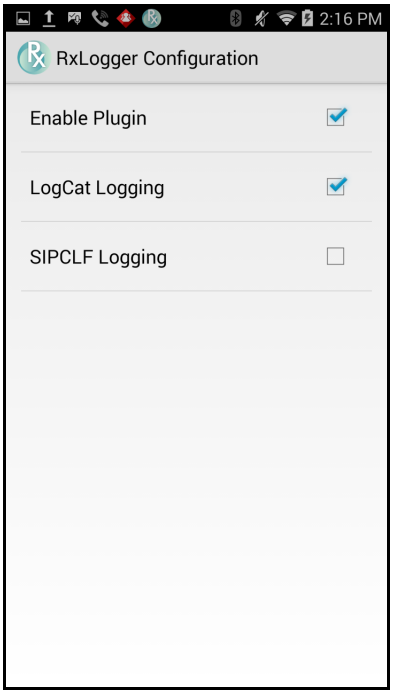
- Touch Start to enable logging
- Touch Stop to disable logging.

WFC Voice logging is automatically enabled when RxLogger logging is enabled. The LogCat file is saved to the location specified in the RXLogger configuration.

Users can customize WFC Voice logging in the RxLogger configurations.

Figure 48 RxLogger Configuration





NOTE: LogCat sets the VERBOSE level in WFC Voice Client.

When RxLogger starts, it overwrites the setting level to VERBOSE.
When using RxLogger, the WFC Voice Client logging is disable and all logging is posted through RxLogger.

Log Marker

Log markers are used to mark specific locations in the LogCat file, identifying when an event occurs. The Log Marker feature can be used as many times as necessary. The follow example displays a Log Marker entry in LogCat.

```
08-24 16:59:09.953: E/UI(4587): ------------------------------------------
08-24 16:59:09.953: E/UI(4587): <<<MARKER>>>
08-24 16:59:09.953: E/UI(4587): <<< optional description >>>
```

08-24 16:59:09.953: E/UI(4587): --

Adding a Log Marker

From the WFC Voice main screen:

1. Touch the **Menu** button.
2. Touch **Add Log Marker.**
3. Enter an optional description.
4. Touch **SET**.

Configuring Log Marker

The Log Marker feature is accessed only by the WFC Voice Client main screen by default. To provide access elsewhere in the client, create a customized button. For example, when troubleshooting in-call errors, a **Log Marker** button is added to the In-Call buttons.

To configure a custom **Log Marker** button, see Log Marker on page 65.

NOTE: When a custom **Log Marker** button is used, the optional description is not available.

Fusion Logs

Fusion Logs are enabled in Wi-Fi settings.

After Fusion Logs are set, run the WFC Voice Client. When events occur they are captured in the location set in Advanced Logging.

NOTE: Powering off the device will delete the collected fusion logs.

Enabling Fusion Settings In Android 6 or 7

1. Touch **All Apps** > **Settings** > **Wi-Fi**.
2. Touch the menu button.
3. Touch **Advanced**.
4. In the Logging section touch **Advanced Logging**.
5. Ensure the **Enable Logging** check box is selected. The user can only change the log file location when Advanced Logging is disabled.

Enabling Fusion Settings In Android 8 or Later

1. Touch **All Apps** > **Settings** > **Network & internet** > **Wi-Fi** > **Wi-Fi preferences** > **Advanced** > **Additional Settings**.
2. In the Logging section touch **Advanced Logging**.
3. Ensure the **Enable Logging** check box is selected. The user can only change the log file location when Advanced Logging is disabled.

Capturing the Logs

Accurate logging is necessary for effective troubleshooting. Check that the device date and time are set correctly.

1. Connect the device to the host computer using a USB cable.
2. Copy log files to the computer.
3. Ensure log files were set up correctly and captured relevant data.
4. Identify Log Marker events by date and time stamps.

NOTE: It is recommended to delete and recapture inaccurate log files.

Headless Mode and WFCVoice Service

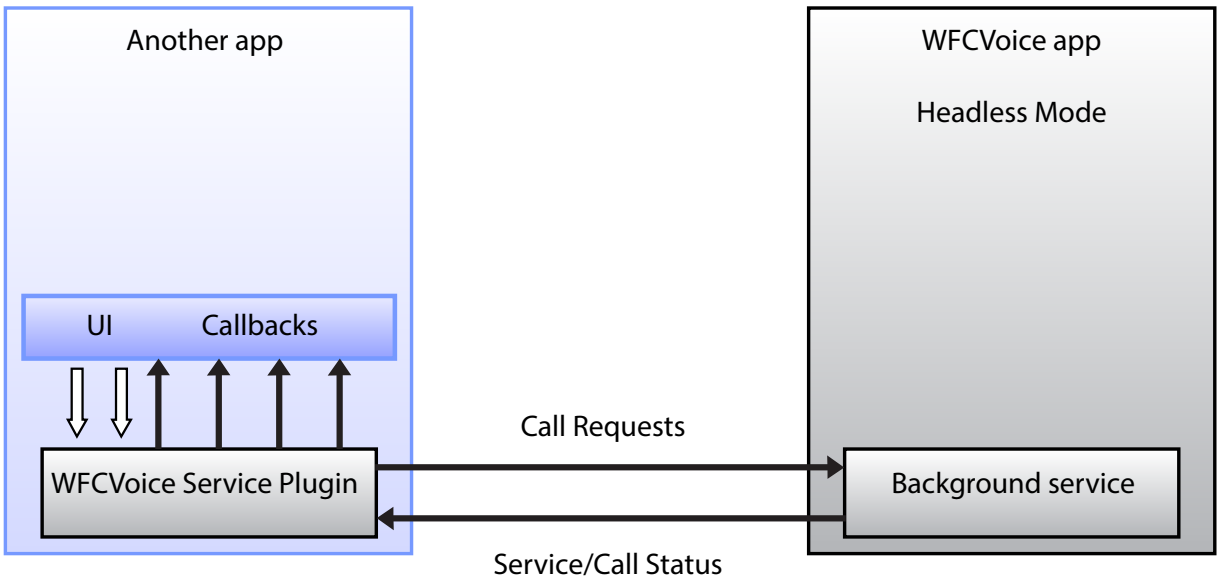
Introduction

WFC Voice Client is configurable as a background service allowing third party applications to manage voice calls via remote service or plug-in. In Headless Mode, WFC Voice Client runs without showing the main dashboard screen, and launches the dialer instead. Touching the header section launches the settings screen of the third party application. All other screens and functions are the same as default mode.

The WFCVoice Service is a plug-in allowing another application to remotely manage voice calls using WFC Voice Client Headless Mode. The plug-in is a small library (WFCVoiceConnector.jar) providing an interface between WFC Voice Client and another android client. Third party applications use custom UI screens to control voice calls, or existing WFC Voice Client **In-Call** screens for advanced features.

The figure below illustrates WFC Voice Client communicating with third party applications using the WFCVoice Service plug-in.

Figure 49 WFCVoice Service



Integrating WFCVoice Service Plug-in

NOTE: To obtain the JAR file for the WFCVoice Service plugin, contact your Zebra account representative.

1. Add **WFCVoiceConnector.jar** file as a library in the project
2. Declare a WFCVoiceConnector object in the activity
3. Initialize it inside onStart() method

When the WFCVoiceConnector object is created, it automatically registers with WFCVoice Service. To unregister, call WFCVoiceConnector.disconnect() method inside onStop() in your activity.

WFCVoice Service plug-in allows applications to send commands to WFC Voice Client, and receive notifications about service or call state changes. See WFCVoiceConnector class for a list of all available commands. The ConnectorCallback sends voice and call status notifications from WFC Voice Client. Third party applications implement ConnectorCallback and pass it to a WFCVoiceConnector object during initialization.

For more information, refer to the *Java Documentation for Service Plugin* provided with the source code bundle.

Enabling Headless Mode

Using the GUI		Using XML

1. Open **Settings**.
2. Select **Advanced Settings > UI Settings**
3. Select **Headless Mode**
4. Select **Back** to return to the WFC Voice Client home screen.
		`<WFConnect>`
		`<Profile>`
		`<headless_mode>true</headless_mode>`
		`</Profile>`
		`...`
		`</WFConnect>`

Initiating a Call

To initiate a call third party applications can use the following intents with a tel, sip, or csip data scheme:

- android.intent.action.CALL
- android.intent.action.DIAL
- android.intent.action.VIEWS

For example, to initiate a call to extension 2001 using ADB:

```
$ adb shell am start -a android.intent.action.CALL -d sip:2001
$ adb shell am start -a android.intent.action.VIEW -d csip:2001
```

Reporting App State

The WFC Voice Client broadcasts its status to a third party app using the following intent:

Action: **`wfc.voice.PHONE_STATE`**

Extras:

`registration_state`: ACTIVE|ACTIVE_DND|CONNECTING|INACTIVE

`state`: IDLE|CALLING|RINGING|ACTIVE

`number`: the phone number for the current session (optional, reported when voice call state changes)

`line_id`: the line number (optional, reported when one of the line registers)

`line_extension`: the line extension (optional, reported when one of the line registers)

`line_registered`: true/false (optional, reported when one of the line registers)

Where: **`registration_state`** is PBX registration state, and state is a voice call state

The following code example calls wfc.voice.PHONE_STATE from a third party app.

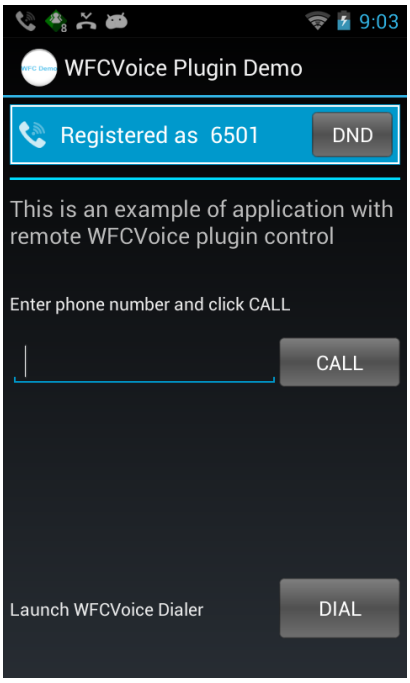
```
// create broadcast receiver
BroadcastReceiver mMessageReceiver = new BroadcastReceiver() {
          @Override
          public void onReceive(Context context, Intent intent) {
                Log.i(TAG,
                      "Received PHONE_STATE from WFCVoice “
                    + " registration_state=" + intent.getStringExtra("registration_state")
                    + " call state=" + intent.getStringExtra("state")
                    + " number=" + intent.getStringExtra("number")
                    + " line_id=" + intent.getStringExtra("line_id")
                    + " line_extension=" + intent.getStringExtra("line_extension")
                   + " line_registered=" + intent.getBooleanExtra("line_registered", false)
                    );

          }
};

// register broadcast receiver in the Activity
IntentFilter mMessageReceiver = new IntentFilter();
requestFilter.addAction(“wfc.voice.PHONE_STATE”);
registerReceiver(mMessageReceiver, requestFilter);
```

WFCDemo Android Project

WFCDemo is a sample android application for demonstrating WFCVoice Service integration. It allows user to initiate and control a new voice call remotely in the WFC Voice Client.

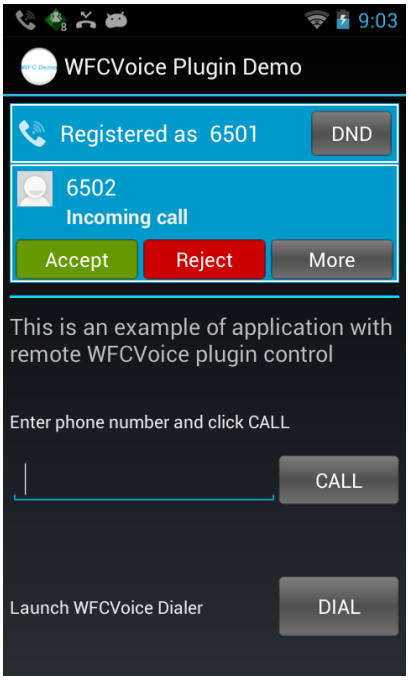
The following figures illustrate accepting and controlling an incoming call in the WFCDemo application.

Figure 50 WFCDemo Idle State



In Figure 50, WFCDemo is in an idle state displaying WFC Voice Client status in the blue box.

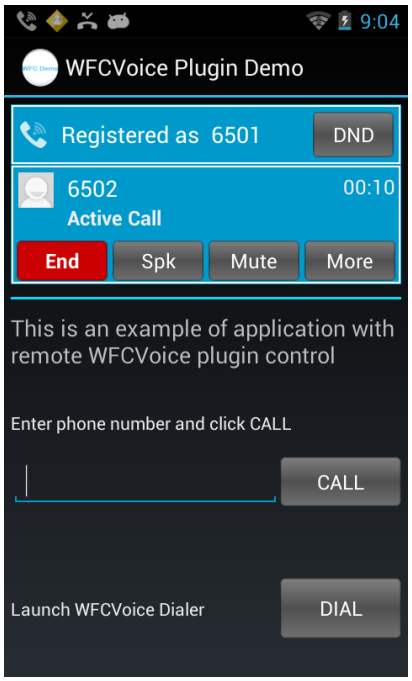
Figure 51 Incoming Call



In Figure 51, the application plays a custom ring tone and the user selects:

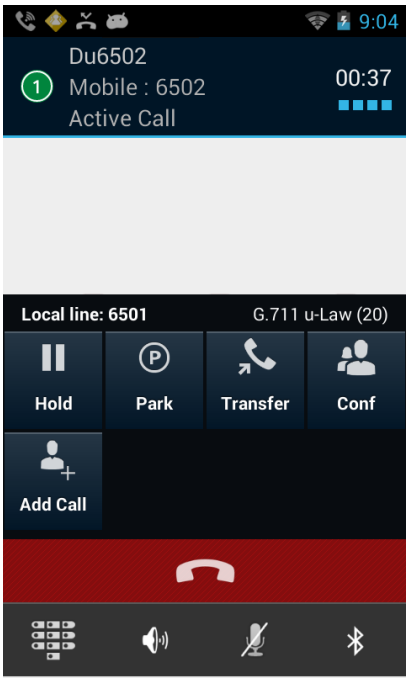
- Accept
- Reject
- **More**, to display the WFCVoice incoming screen.

Figure 52 Active Call



In Figure 52, the WFCDemo screen controlling a call (end, speaker, mute). Selecting **More** accesses advanced controls by displaying the WFCVoice In-Call screen, shown in Figure 53.

Figure 53 WFCVoice In-Call Screen



Using the Client

Introduction

The WFC Voice Client improves the effectiveness of communications within an organization, providing enterprise voice communications across multiple media types on unified mobile devices.

With WFC Voice Client you can:

- Use a rich selection of features on configured wireless devices
- Seamlessly communicate with co-workers or take an outside call from a customer or vendor
- Use the device most appropriate and convenient for each situation.

NOTE: This guide covers default button icons, which the system administrator can modify.

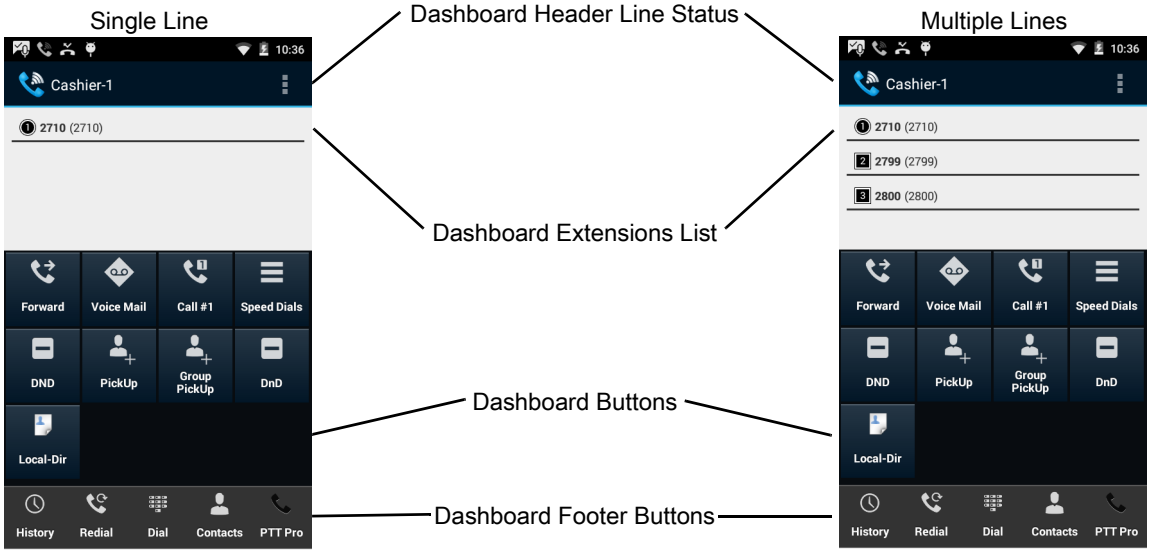
This chapter explains how to use the following functions and features:

- Home Screen Dashboard on page 125
- In-Call Dashboard on page 125
- Signal Quality on page 126
- Calling on page 126
  - Call Hold and Resume on page 132
  - Call Park and Unpark on page 132 (Premium Feature)
  - Dashboard of Parked Calls on page 137 (Premium Feature)
- Voicemail on page 138
  - Message Waiting on page 138
  - Message Retrieval on page 138
- Contacts on page 139
- Call Log / Call History on page 141
- Advanced Calling Features on page 143
  - Multiple Lines on page 143 (Premium Feature)
    - Multiple Line Appearances on page 143 (Premium Feature)

        - Busy Indicator on page 144 (Premium Feature)
    - Transfer (attended, semi-attended) on page 145
    - Ad hoc Conference on page 146 (Premium Feature)
    - Call Forward on page 148
- Miscellaneous Features on page 152
    - Speed Dial Numbers on page 152
    - Do Not Disturb on page 152 (Premium Feature)
    - Directory on page 154
    - List on page 155
    - Home on page 155
    - Call Pickup on page 156
    - Adjusting the Ring Volume on page 157
    - Unique Ringtone per Line Appearance on page 157 (Premium Feature)
    - Unique Ringtone per Contact on page 158
    - Distinctive Ringing on page 158
    - Vibrate/Ring Tone on page 158
    - Start Application on page 158
    - Log Marker on page 158
    - Caller ID on page 158
    - Hold Recall on page 158
    - On-hook Dialing on page 159

Home Screen Dashboard

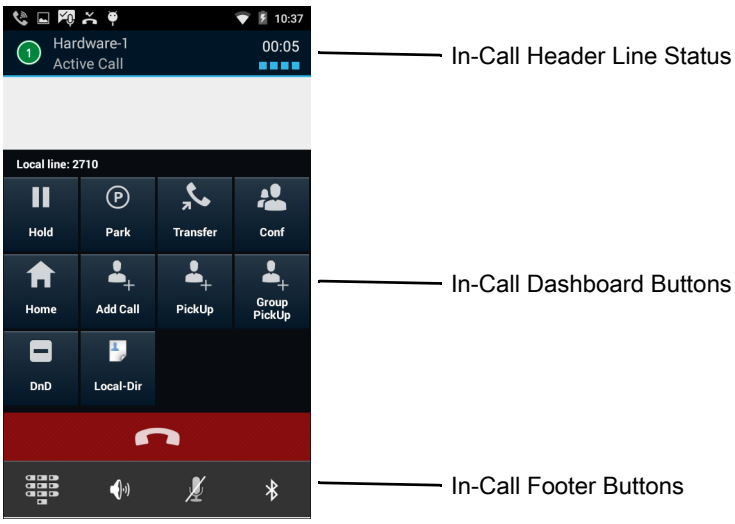
Figure 54 Home Screen Dashboard



NOTE: If multiple PBXs are configured, the PBX type for each appears on the right.

In-Call Dashboard

Figure 55 In-Call Dashboard

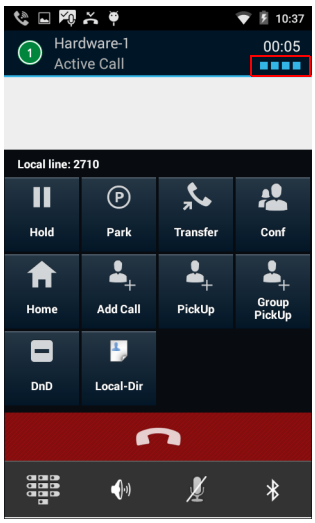


Signal Quality

During an active call, the signal quality indicator appears in the upper right portion of the screen, indicating voice traffic errors on the network.

- excellent
- good
- acceptable
- bad

Figure 56 Signal Quality Indicator



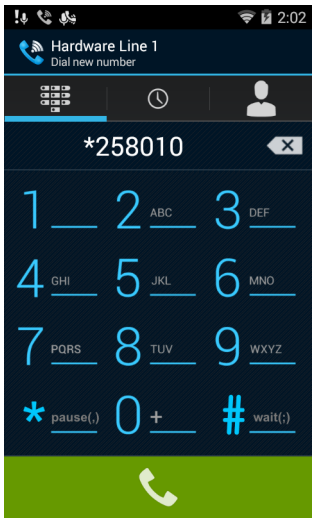
Calling

Making a Call

There are various ways to initiate a telephone call:

- Touch to enter a specified extension or phone number, and then touch to initiate a call.

Figure 57 Dialer Screen



- Touch to display a list of previous calls. See Call Log / Call History on page 141 for more information.
- Touch to display a list of saved contacts. See Contacts on page 139 for more information.
- Touch to display a list of favorite contacts. See Contacts on page 139 for more information.
- Touch to initiate a call to the most recently dialed location.
- Touch to initiate a call to a number preset by the system administrator

For information on initiating a call using a third party app, see Headless Mode and WFCVoice Service.

Receiving a Call

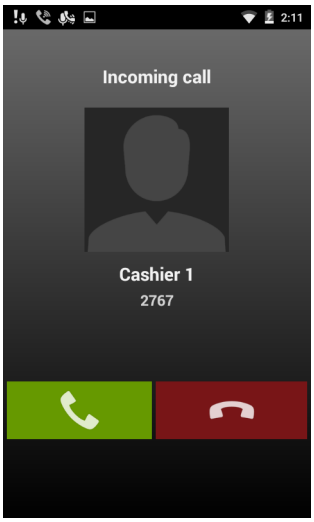
The incoming screen offers various call accept styles, such as accept and reject buttons, a slider, and Glow Pad buttons.

NOTE: Available ring tones vary. Use the device system settings to set tones and vibration notification.

Figure 58 Call Accept Buttons

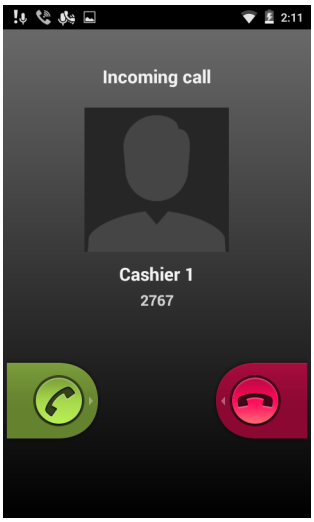
Accept-Reject Buttons

Touch one of two buttons to accept or reject an incoming call.



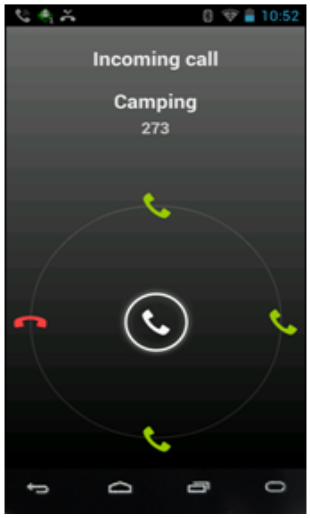
Sliding Tab

Swipe one of two buttons across the screen to accept or reject an incoming call.



Glow Pad

Touch a handset symbol to accept or reject an incoming call.



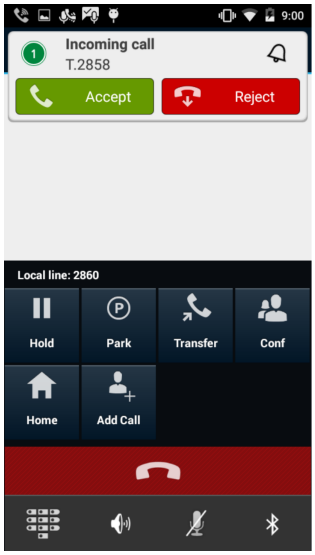
Popup Window

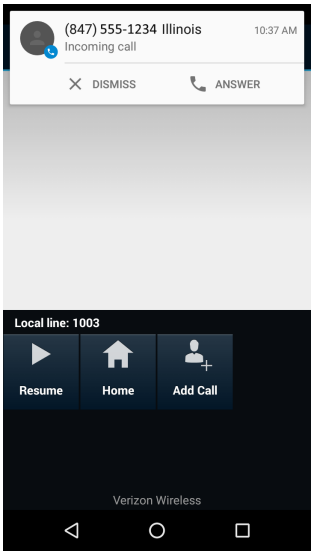
During an active call, a popup window appears when an incoming call is received. Touch one of two buttons to accept or reject an incoming call.

NOTE: When an incoming call is through a wide area network (WAN), the WFC Voice Client call is placed on hold. If the WAN call is accepted, the WFC Voice Client call remains on hold.

To resume the WFC Voice Client call, open the WFC Voice Client and touch ▶.

Figure 59 Popup Window

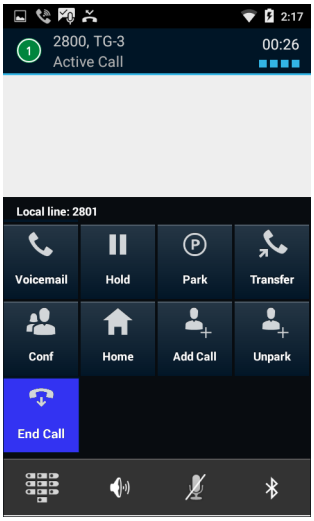


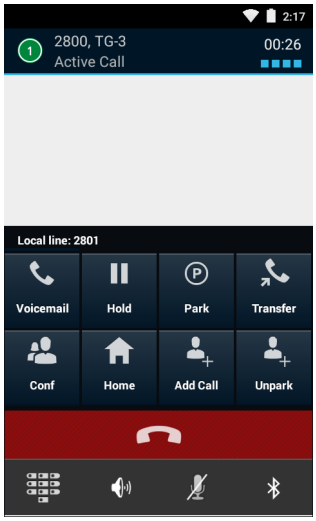


End Call

The End Call feature ends a call in any state.

Figure 60 End Call Icon and Button



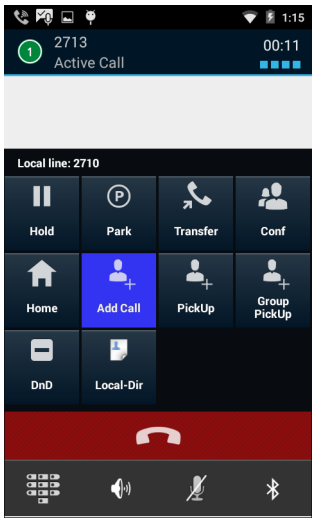


Touch or the red **End Call** button to end any call.

Add Call

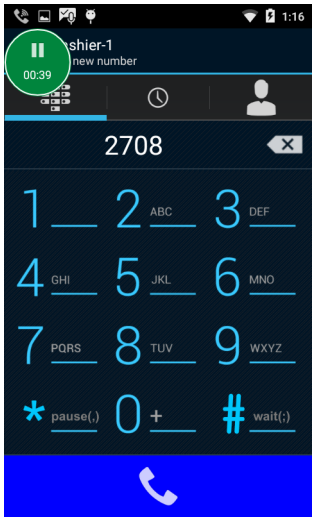
During an active call the **Add Call** button dials a preset number or opens the dialer. This places the current call on hold while initiating the new call. When the new call connects, you can Transfer, Conference, or End the second call and resume the first call.

Figure 61 Add Call Button



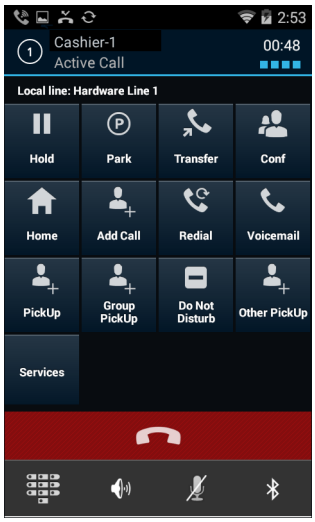
Touch to display the dial pad.

Figure 62 Add Call Dialer



Enter the new number and touch .

Figure 63 Added Call

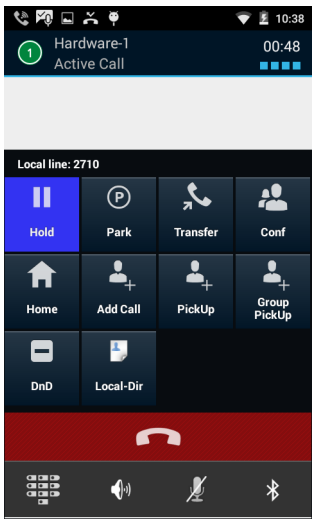


The first call is on hold with the option to resume and the new number becomes the active call. To resume the first call, touch the extension.

Call Hold and Resume

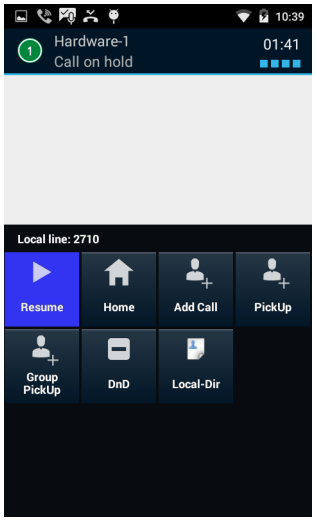
Use the Hold feature to temporarily disconnect a call, use the telephone for another call, and then use Resume to return to the original call. For information on setting up the Hold and Resume buttons, see Hold on page 77 and Resume on page 78.

Figure 64 Hold Button



Touch ⏸ to display the Hold screen.

Figure 65 Hold Screen



Touch ▶ to resume the call.

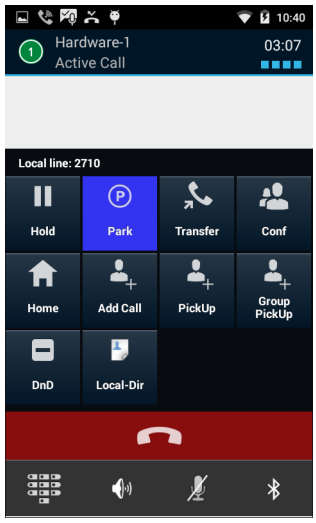
Call Park and Unpark

✓ **NOTE:** Feature only available with Cisco CME Premium.

Call Park

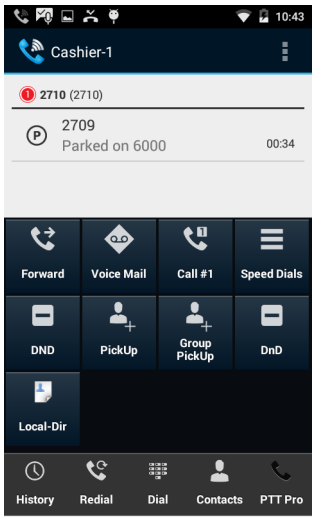
Use the Call Park/Unpark feature to put a call on hold and then retrieve that call from any other telephone within the system.

Figure 66 Park Button



Touch (P) to display the Park screen.

Figure 67 Park Screen



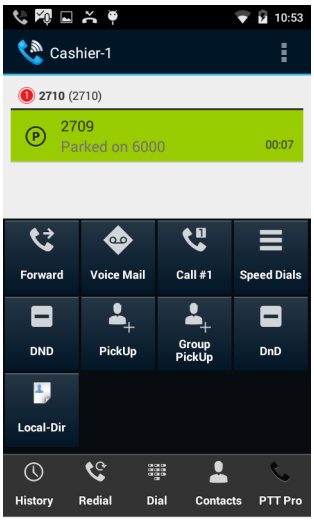
Call Unpark

Unpark a call so anyone capable of retrieving the parked call can continue speaking with the caller on any phone. The method for retrieving a parked call varies depending on who is unparking the call.

Call Originator

To unpark a call placed by the call originator touch **Parked on [parked extension].**

Figure 68 Call Originator Unpark



Other Users

To unpark a call placed by someone other than the call originator touch **Unpark** button.

Figure 69 Unpark Button

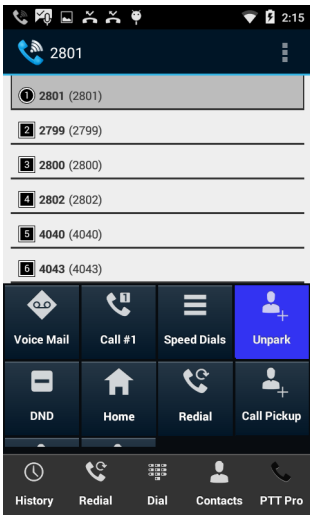
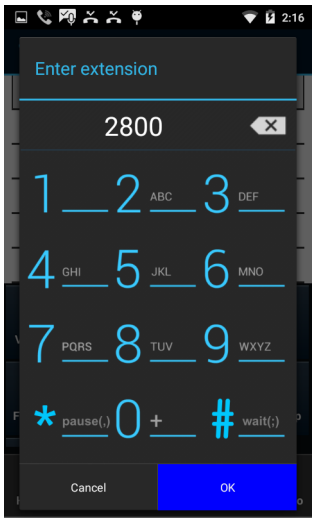


Figure 70 Call Originator Unpark



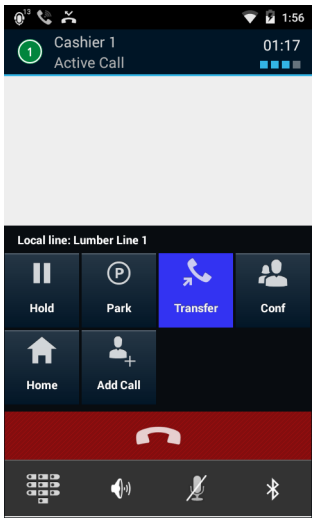
1. Enter the extension for the **[call originator]**.
2. Touch **OK**.

Call Park Using Feature Access Code

NOTE: Feature only available with Cisco CME Premium.

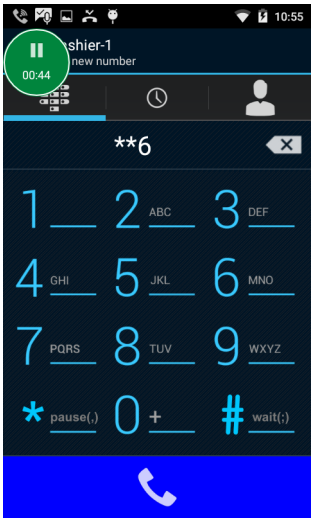
Use the Call Park Feature Access Code (FAC) to transfer a call to a preset number. Another user then retrieves that call from any other telephone within the system.To use Call Park Directed:

Figure 71 Transfer Button



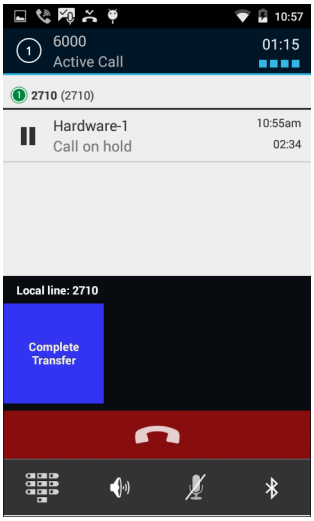
1. Touch **Transfer** to display the dial screen.

Figure 72 Transfer Dialer



2. Dial the number and touch .

Figure 73 Transferring Call

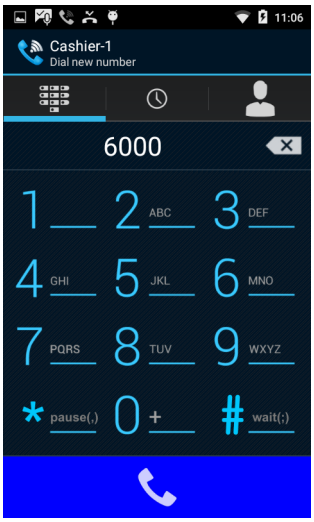


3. Touch **Complete Transfer** to complete the call transfer.

Call Park Feature Access Code Retrieval

To retrieve a call parked using a feature access code:

Figure 74 Call Originator Unpark



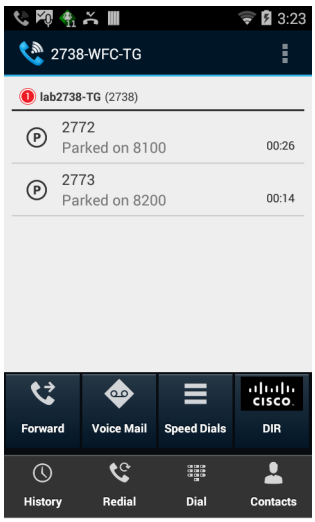
Dashboard of Parked Calls

The Dashboard of Parked Calls displays when multiple calls are parked.

NOTE: Available in CME version 10.5 and later.

Feature only available with Cisco CME Premium.

Figure 75 Dashboard of Parked Calls



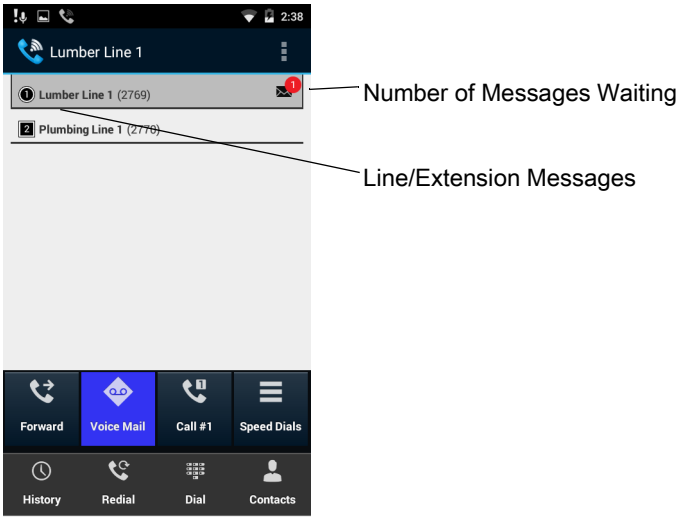
Voicemail

Use the Message Retrieval feature to retrieve voice messages from the voice mail server. For information on configuring the Voicemail button, see Voicemail on page 72.

NOTE: To configure Voicemail go to **Settings>Advanced Settings>Connection Parameters>HTTPS Server Address** and enter the utility server IP address. For more information, see Setting the Utility Server IP Address on page 23.

Voicemail messages appear for each line/extension next to the extension number.

Figure 76 Voicemail Messages



Touch to call the user's Voicemail box and display a list of received Voicemail.

Message Waiting

The Message Waiting feature provides notifications of messages waiting. The extension and associated voice messages appear in a bar on the main screen.

Message Retrieval

Use the Message Retrieval feature to retrieve voice messages from the voice mail server. Voice messages can also be retrieved by pressing the Message Waiting bar or the Voicemail button.

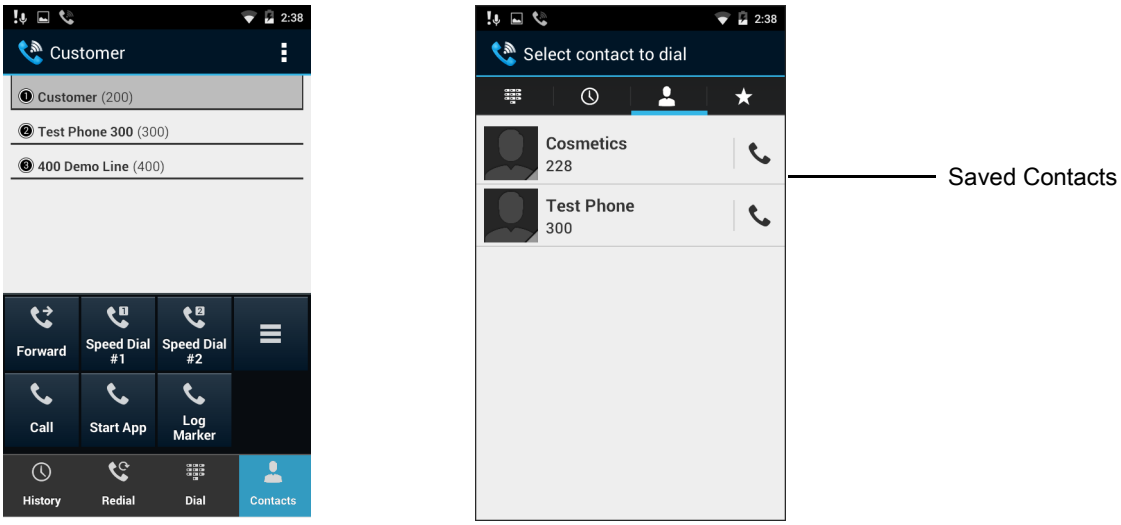
Contacts

Use the Contacts feature to store and dial frequently used numbers. See Contacts on page 70 for information on how to create the Contact button.

NOTE: Add and edit contacts from the native Android operating system. Refer to the Android guide for more information.

Touch the default **Contacts** button to display a list of saved contacts.

Figure 77 Contact List



Touch a contact number to call that contact.

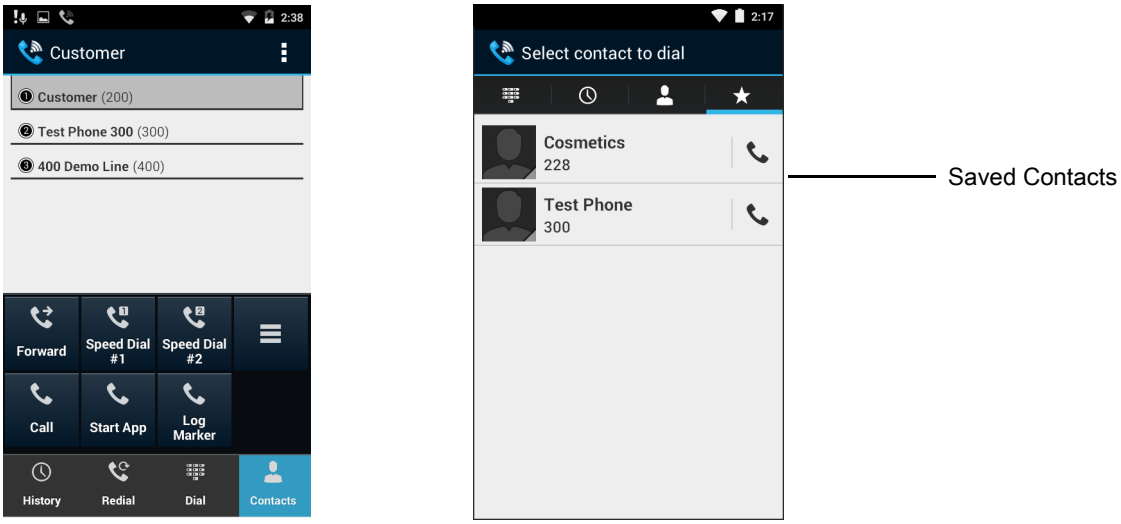
Favorites

Use the Favorites feature to store and dial contacts that are set as favorites. See Favorites on page 71 for information on how to create the Favorites button.

NOTE: Set contacts as favorites from the native Android operating system. Refer to the Android guide for more information.

Touch the default **Contacts** button , and select the **Favorites** tab to display a list of favorite contacts.

Figure 78 Contact List



Touch a contact number to call that contact.

Call Log / Call History

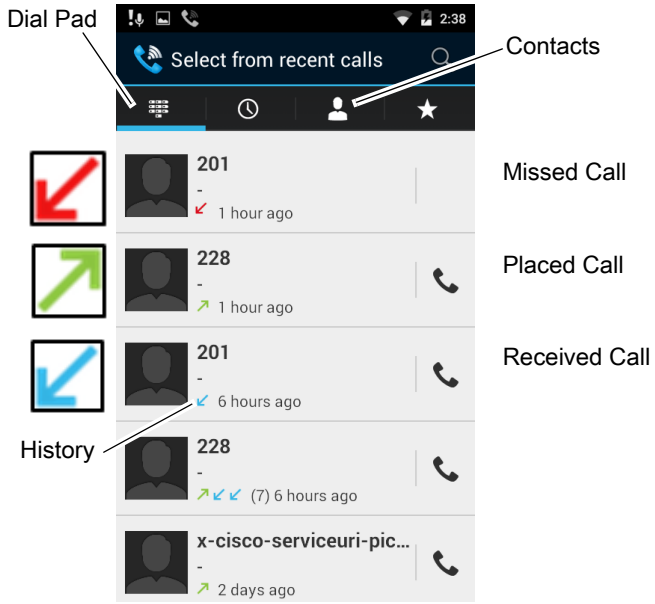
View Recent Calls

This feature records missed, answered, and outgoing calls in the call history log. Use this log to initiate a call, delete an entry, or view details of an entry.

For information on configuring the Call History button, see History on page 69.

Touch the **History** button to view the call history screen.

Figure 79 Call History



Touch a call history button to see the call detail, which includes the caller ID, extension, call type, time, date and duration.

Dial from Call History

Touch next to a recent call.

Delete Call History

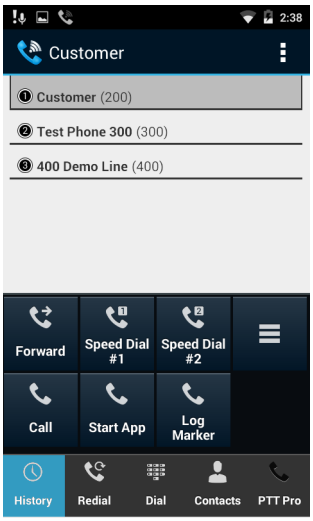
Touch the Menu button, then **Clear all recent calls**.

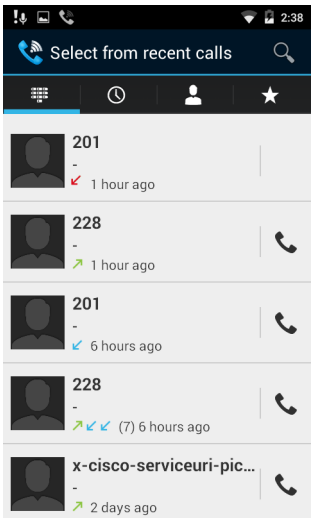
View Call History

History lists recently called numbers and incoming calls, including missed calls.

Touch to display a list of previous calls.

Figure 80 Recent Call List





Advanced Calling Features

Multiple Lines

NOTE: Feature only available with Cisco CME Premium.

The WFC Voice Client supports and displays a presence icon displayed to the left of each line. The shape, color, and animation of the icon indicates its type and status. Table 2 lists presence icon combinations.

Table 2 Presence Icon Description

Icon Status	Dedicated Line	Shared Line
Idle (Solid Icon)		
Active (Solid Icon)		
Call on Hold (Blinking Icon)		
Busy / Registering Status text appears next to the extension (Solid Icon)		
Busy in a call (Blinking Icon)		

Figure 81 Multiple Extensions

Multiple Line Appearances

Use the Multiple Line Appearances feature to associate and use multiple lines with a device. Configure multiple lines in the PBX.

Busy Indicator

The WFC Voice Client supports Busy indicators for multiple extension configurations. An icon is associated with each extension indicating if the line is idle, active, on hold, or busy. See Presence Icon Description on page 143.

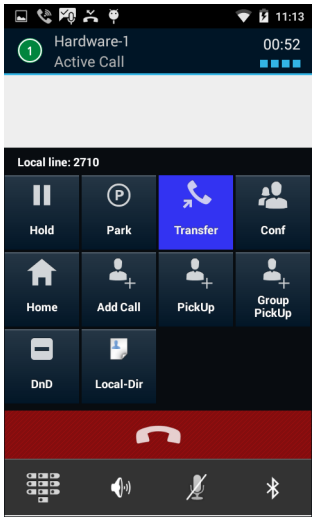
Transfer (attended, semi-attended)

The Transfer feature transfers an active call to a third party. While Call Forwarding must be pre-configured, use Call Transfer to make call exchanges in real-time with an active call. To set up the Transfer button, see Transfer on page 79.

There are two types of transfer:

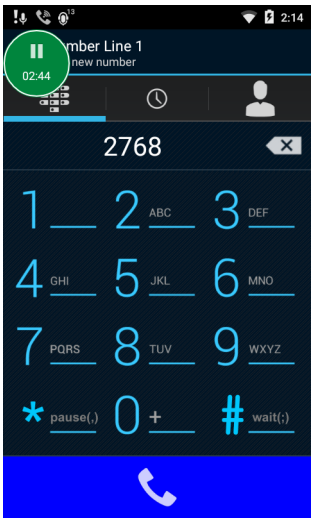
- Call Transfer Attended - The transferring party does not complete the transfer (i.e. remains on the call) until the transferred-to party answers.
- Call Transfer Blind - The transferring party completes the transfer (i.e. drops the call) while the transferred-to party is still ringing.

Figure 82 Transfer Button



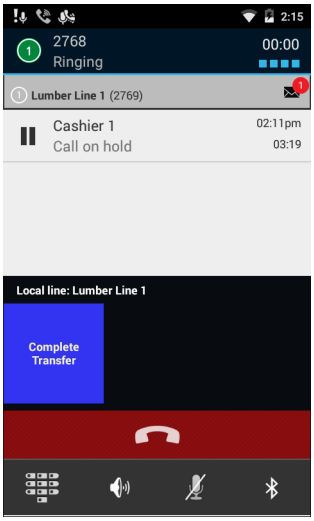
1. Touch to display the dial screen.

Figure 83 Transfer Dialer



2. Dial the number and touch .

Figure 84 Transferring Call



3. Touch **Complete Transfer** to complete the call transfer.

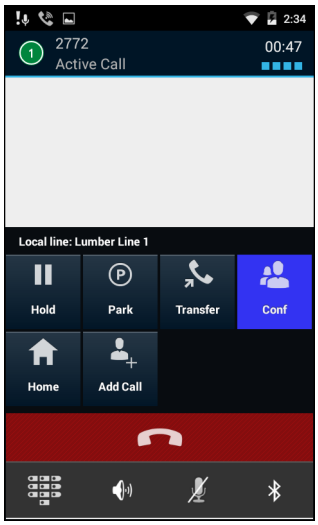
Ad hoc Conference

NOTE: Feature only available with Cisco CME Premium.

All conference participants must enable the G.711 codec.

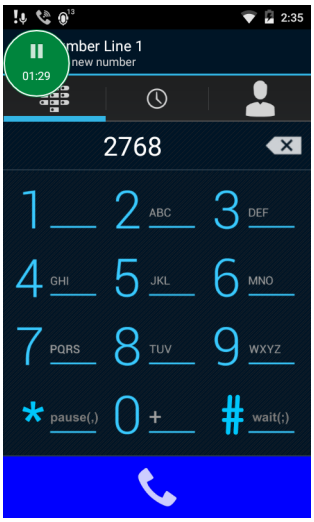
Use this feature to create a conference without the assistance of an attendant and with up to six participants. The Conference feature joins two separate calls for collaboration between each party on the line at the same time. To set up the Conference button, see Conference on page 80.

Figure 85 Conference Button



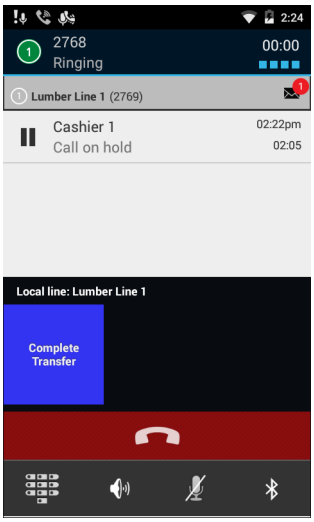
1. Touch to dial the conference number.

Figure 86 Dial Conference Number



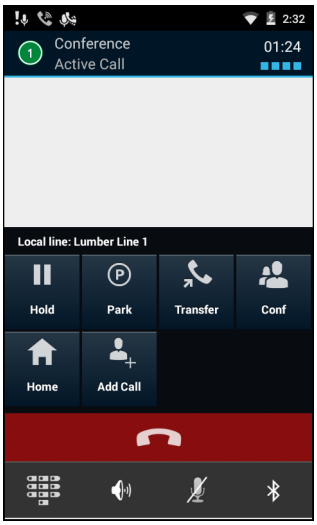
2. Enter a number and touch .

Figure 87 Conference Complete Button



3. Touch the **Conference Complete** button to join the completed conference call.

Figure 88 Conference Screen

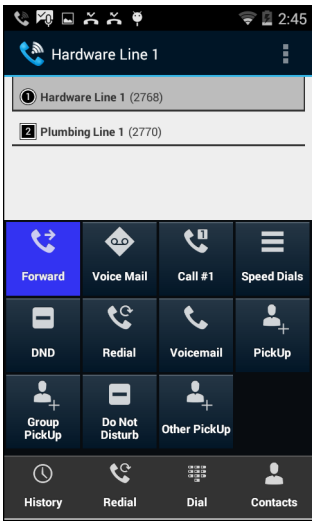


Call Forward

Use this feature to redirect calls to an Internal extension, Off-network number, or Attendant group.

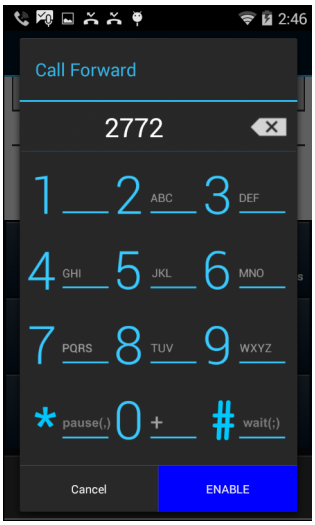
To enable Call Forward:

Figure 89 Forward Button



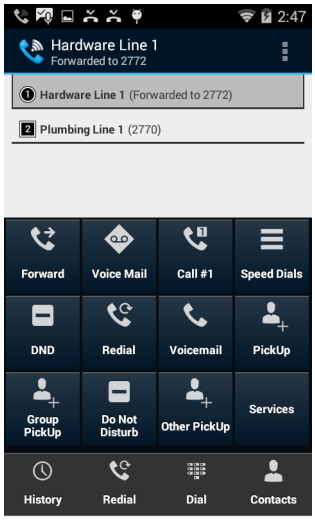
1. Touch the **Forward** button .

Figure 90 Enter Forward Number



2. Enter a number.
3. Touch **ENABLE**. The Call Forward number displays in the header.

Figure 91 Call Forward Enabled



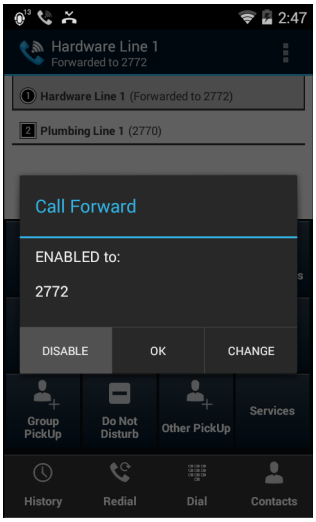
Disabling or Changing Call Forward

To disable or change the Call Forward feature touch the **Forward** button . The **Call Forward** popup window appears.

Disable Call Forward

To disable the Call Forward feature, touch **DISABLE**.

Figure 92 Call Forward Disable



Change Call Forward

To enter a different Call Forward number, touch **CHANGE**.

Figure 93 Call Forward Change

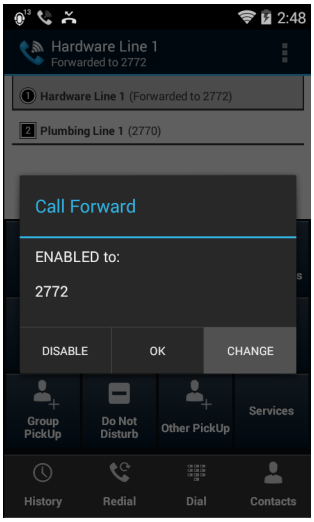
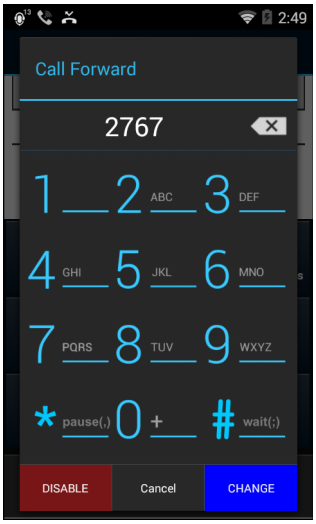
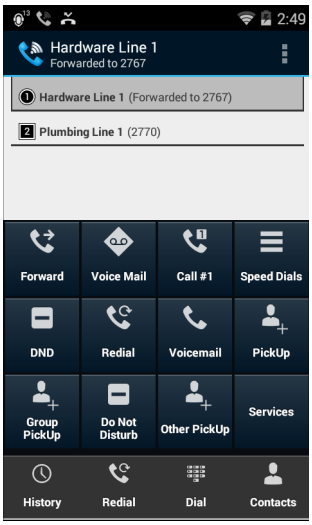


Figure 94 Change Call Forward Number



Enter the new call forwarding number and touch **CHANGE**. The new call forwarding number appears in the header and the Android notification bar.

Figure 95 Call Forward Number Changed



Miscellaneous Features

Ringtone

By default, the WFC Voice Client uses the ringtone configured in the native Android settings.

Touch the Menu button, then **Ringtone** to change the default ringtone for the WFC Voice Client.

Reload

Touch the Menu button, then **Reload** to sign out and then automatically sign back in to the WFC Voice Client.

Sign Out

Touch the Menu button, then **Sign Out** to sign out of the WFC Voice Client. To sign back in to the WFC Voice Client, touch **Sign In**.

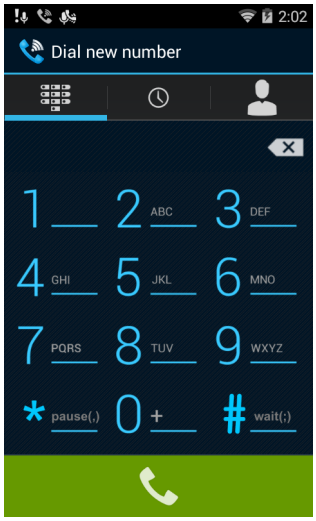
After signing out, touch the Menu button, then **Quit**, to exit the WFC Voice Client.

Speed Dial Numbers

Speed Dial places a call to a preset number or extension. Up to 10 speed dial buttons are available. The system administrator configures speed dial numbers.

Touch the **Speed Dial** button to make a call using the preset destination.

Figure 96 Dialer Screen - Speed Dial



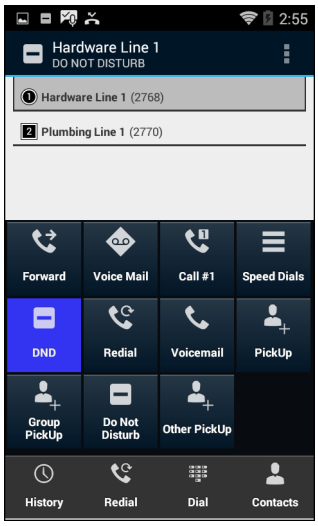
Do Not Disturb

NOTE: Feature only available with Cisco CME Premium.

Do Not Disturb (DND) ignores all calls to the extension, and routes the call immediately to an extension specified by the system administrator. DND removes the extension from any Coverage Answer Group, Simultaneous Ringing, and Hunt Groups.

Touch the default **DND** button to enable Do Not Disturb on the selected line.

Figure 97 Do Not Disturb Enabled

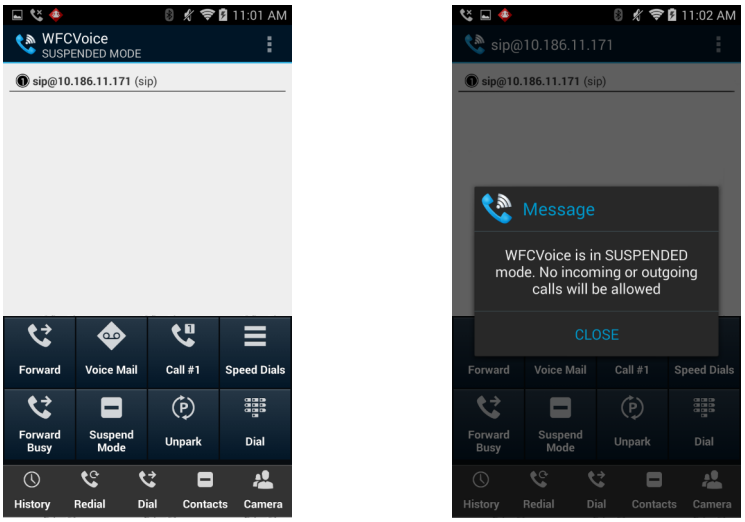


Suspend Mode

Suspend Mode blocks all incoming or outgoing calls.

Touch the **Suspend Mode** button to enable or disable **Suspend Mode**.

Figure 98 Suspend Mode



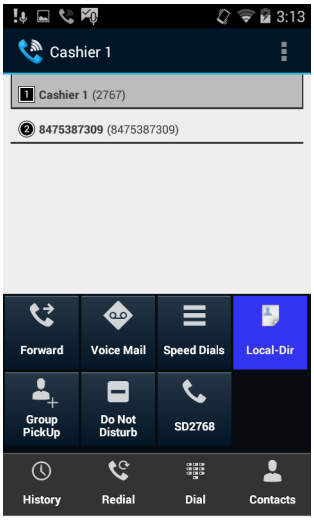
Directory

Use the directory feature to access corporate directory entries. For information on setting up the Directory button, see Directory on page 73.

NOTE: This feature is separate from the Contacts feature. Only directory entries display.

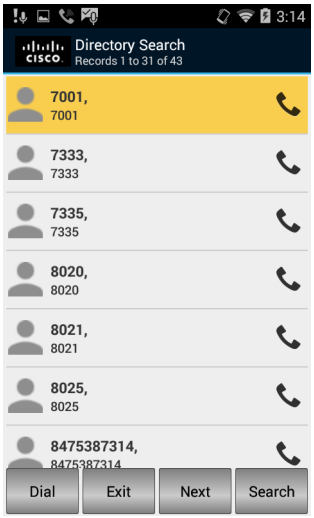
Touch the default **Local Dir** button to list contact directories.

Figure 99 Directory Button



Enter contact information and touch **Submit**. Only the first 31 results display.

Figure 100 Directory Results



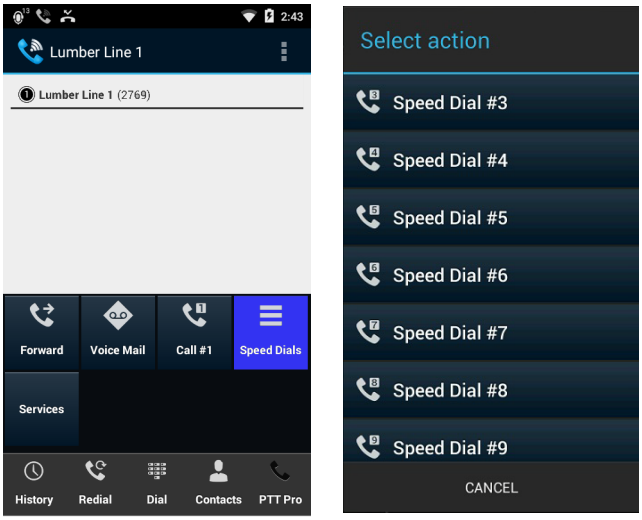
List

List displays a speed dial list by default.

IMPORTANT: List is configured by the system administrator.

Touch the default **List** button ☰ to display the speed dial list.

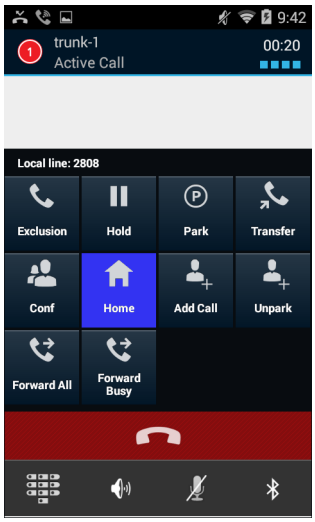
Figure 101 Speed Dial List



Home

During an active call touch ⌂ to display the Dashboard and access to Dashboard functions.

Figure 102 Dashboard



Call Pickup

Use the Call Pickup feature to answer calls for devices belonging to the same pickup group. The Call Pickup feature requires that users are defined in advanced and are members of the same pickup group.

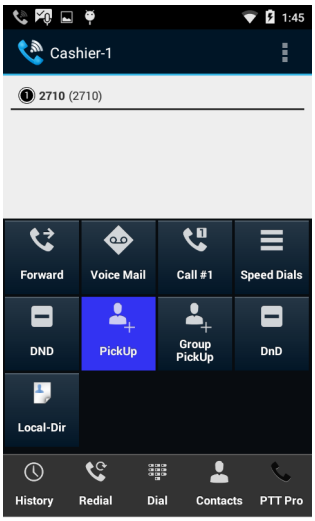
There are two Call Pickup variations which provide enhanced functionality above the basic Call Pickup:

To configure Call Pickup, see Communication Manager Endpoint Configuration on page 20.

Using Call Pickup

When a call is placed to a device in a Call Pickup group, on each device in that pickup group and sounds an alert. Anyone in that pickup group may answer the call by touching the **Call Pickup** button.

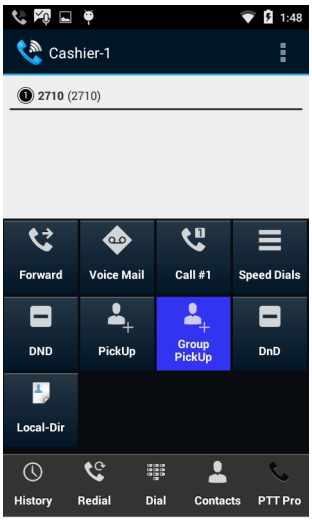
Figure 103 Call Pickup



Using Pickup

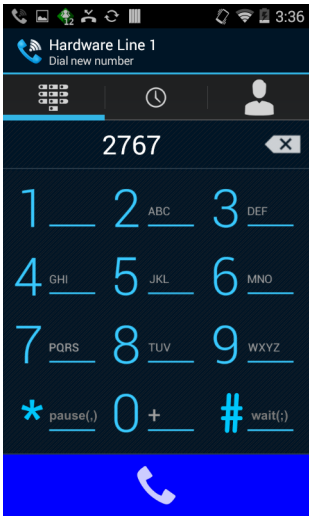
To answer a call using Pickup:

Figure 104 Pickup



1. Touch **Pickup**.

Figure 105 Pickup Dialer



2. Enter the pickup group number for the device that is ringing.
3. Touch to answer the call on the ringing device.

Adjusting the Ring Volume

Configure using the device's sound settings. Refer to the MC40, TC70 or TC75 User Guide at www.zebra.com/support for more information.

Unique Ringtone per Line Appearance

NOTE: Feature only available with Cisco CME Premium.

To configure ringtones per line, see Line Ringtones on page 106.

NOTE: Feature only available with Cisco CME Premium.

Unique Ringtone per Contact

Configure using the device's sound settings. Refer to the device User Guide at www.zebra.com/support for more information.

Distinctive Ringing

Use the Distinctive Ringing feature to distinguish between incoming call types based on the ringing pattern of the call. For example, internal versus external calls.

Vibrate/Ring Tone

Configure using the device's sound settings. Refer to the MC40, TC70 or TC75 User Guide at www.zebra.com/support for more information.

Start Application

WFC Voice Client can be configured by a system administrator to launch another application on the device. When the button is pressed WFC Voice Client minimizes to run in the background and the application launches.

Touch the application button to launch another application.

Log Marker

Log Marker creates a time stamp in the logs. If you experience any issues with WFC Voice Client functionality, the time stamp focuses troubleshooting of the device to the time the issue occurred for more rapid resolution.

Adding a Log Marker

From the WFC Voice main screen:

1. Touch the **Menu** button.
2. Touch **Add Log Marker.**
3. Enter an optional description.
4. Touch **SET**.

Caller ID

The Caller ID feature displays calling party information on your display telephone that is signaled over ISDN or H.323 trunks. Refer to the WFC Voice Quick Start Guide for more information on setting up and using this feature.

Hold Recall

Use Hold Recall to be notified when a call is on hold too long, based on the Hold Recall Timer. Visual and audible warnings are sent to the telephone when a call has been on hold past a specified period of time. Both visual and audible warnings are used if the telephone is on-hook. If the telephone is off-hook, a "priority ring" is used.

On-hook Dialing

On-hook dialing enables the user to pre-dial digits before going off-hook, or pressing the send key. The WFC Voice client provides this capability automatically and does not go off-hook until the send key is pressed.

Button Actions

Table 3 Button Actions

Action Type	Description	Value
ADD_CALL	Calls the number in Value tag. If there is no number in Value tag, opens the dialer. Allowed on the in-call screen only.	Phone number.
BLANK	No action. Creates a gap or space between other buttons.	N/A
CALL	Calls the number in Value tag. If there is no number in Value tag, opens the dialer.	Phone number.
COMPLETE	This is internal type used for call transfer or conference scenarios. Only allowed on the in-call screen.	N/A
CONFERENCE	Joins two separate calls for collaboration between each party on the line at the same time. Only allowed on the in-call screen.	N/A
CONTACTS	Displays the contacts list.	N/A
DIAL	Opens the dialer.	Prefix to dialed number. The prefix is not displayed to the user.
DIRECTORY	Accesses corporate contact information on the PBX.	Path of the directory lists.
DO_NOT_DISTURB	Triggers DND function. This Feature Button is pushed from the PBX Configuration during registration.	N/A
END_CALL	This is internal type used for END call button on in-call screen. Only allowed on the in-call screen.	N/A

Table 3 Button Actions (Continued)

Action Type	Description	Value
FORWARD_BUSY	Diverts a telephone call targeted to a busy phone line to a second phone line. This Feature Button is pushed from the PBX Configuration during registration.	Feature Access Code
GROUP_PICKUP	Retrieves calls targeted to a call group from any extension in the target group.	N/A
HISTORY	Shows a list of recently called numbers.	N/A
HOLD	Puts the call on hold. Only allowed on the in-call screen.	N/A
HOME	Jumps to the Home screen. Only allowed on the in-call screen.	N/A
LIST	Shows buttons as a pop-up list. This feature can only be set in an XML configuration.	N/A
LOG_MARKER	Creates a time stamp in the logs.	N/A
OTHER_PICKUP	Retrieves calls within a users own call group.	N/A
PARK	Parks the call. Only allowed on the in-call screen. This Feature Button is pushed from the PBX Configuration during registration.	The park number.
PICKUP	Retrieves any currently ringing phone call on another extension.	N/A
REDIAL	Redials the last number. Only allowed in the footer area of the display.	N/A
RESUME	Resumes a call that is on hold. Only allowed on the in-call screen.	N/A
SPEED_DIAL0	Calls the number in Value tag. If there is no number in Value tag, opens the dialer.	Phone number.
SPEED_DIAL1	Calls the number in Value tag. If there is no number in Value tag, opens the dialer.	Phone number.
SPEED_DIAL2	Calls the number in Value tag. If there is no number in Value tag, opens the dialer.	Phone number.
SPEED_DIAL3	Calls the number in Value tag. If there is no number in Value tag, opens the dialer.	Phone number.
SPEED_DIAL4	Calls the number in Value tag.If there is no number in Value tag, opens the dialer.	Phone number.

Table 3 Button Actions (Continued)

Action Type	Description	Value
SPEED_DIAL5	Calls the number in Value tag. If there is no number in Value tag, opens the dialer.	Phone number.
SPEED_DIAL6	Calls the number in Value tag. If there is no number in Value tag, opens the dialer.	Phone number.
SPEED_DIAL7	Calls the number in Value tag. If there is no number in Value tag, opens the dialer.	Phone number.
SPEED_DIAL8	Calls the number in Value tag. If there is no number in Value tag, opens the dialer.	Phone number.
SPEED_DIAL9	Calls the number in Value tag. If there is no number in Value tag, opens the dialer.	Phone number.
START_APP	Starts an application.	Path and filename of the application.
SUSPEND_MODE	Blocks all incoming or outgoing calls.	N/A
TRANSFER	Transfers the call. Only allowed on the in-call screen.	N/A
UNPARK	Retrieve a parked call using another telephone. This Feature Button is pushed from the PBX Configuration during registration.	N/A
VOICEMAIL	Opens voicemail. Dials voice mail number configured on the PBX.	N/A

XML Tags

Table 4 WFConnect Tags

Element	Description
Call Buttons	Defines the buttons available in the in-call area.
Dashboard	Dashboard section.
Profile	Profile section.

Table 5 Profile Tags

Element	Description	Value
audio_gain_in	Input Audio Volume (Optional).	Number between 1 and 8 Default: 1
audio_gain_out	Output Audio Volume (Optional).	Number between 1 and 8 Default: 1
background_logo	Set a background image for the WFC Voice Client home screen dashboard (Optional).	Default: None (Disabled)
buttons_padding	Set the horizontal spacing between in-call buttons in pixels (Optional).	Number between 0 and 50 Default: 0
callwaiting_interval	Interval of call waiting tone.	500ms to 8000ms Default: 2000ms
callwaiting_volume	Call waiting volume.	Percentage between 10% and 100% Default: 80%
codec_alaw_priority	Assigns preference priority for G.711 A-Law Voice codec negotiations between PBX and Client.	Number between -5 and 5 Negative numbers disable the codec. Default: 2
codec_g722_priority	Assigns preference priority for G.722 Voice codec negotiations between PBX and Client.	Number between -5 and 5 Negative numbers disable the codec. Default: 4

Table 5 Profile Tags

Element	Description	Value
codec_g729_priority	Assigns preference priority for G.729 Voice codec negotiations between PBX and Client.	Number between -5 and 5 Negative numbers disable the codec. Default: 3
codec_gsm_priority	Assigns preference priority for GSM Voice codec negotiations between PBX and Client.	Number between -5 and 5 Negative numbers disable the codec. Default: 2
codec_ulaw_priority	Assigns preference priority for G.711 u-LAW Voice codec negotiations between PBX and Client.	Number between -5 and 5 Negative numbers disable the codec. Default: 1
contacts_url	The URL of contacts list located on a remote or local server (Optional).	File type: CVS. Protocols: file, http, https, tftp. Default: none
dialer_padding	Set vertical padding at the bottom of the contacts and history screens (Optional).	Number between 0 and 200 Default: 0
disable_speaker	Do not answer incoming calls in speaker mode when the device is placed on a horizontal surface (Optional).	true: Disable speaker mode. false: Enable speaker mode. Default: false
flex_tls	Set security for SIP connections (Optional).	true: Trust all remote hosts. false: Use Android certificates for TLS/SSL connections. Default: true
gbg_color	Background color used on all buttons, if not customized in the button element <bg_color> (Optional).	The color is one of the following: red, blue, green, black, white, gray, cyan, magenta, yellow, lightgray, darkgray, grey, lightgrey, darkgrey, aqua, fuchsia, lime, maroon, navy, olive, purple, silver, teal, or, it is an RGB value in one of the following formats expressed as a decimal, or a hexadecimal, number: • #RRGGBB • #AARRGGBB Default: 0xFF001425

Table 5 Profile Tags

Element	Description	Value
gfg_color	Text color used on all buttons, if not customized in the button element <fg_color> (Optional).	The color is one of the following: red, blue, green, black, white, gray, cyan, magenta, yellow, lightgray, darkgray, grey, lightgrey, darkgrey, aqua, fuchsia, lime, maroon, navy, olive, purple, silver, teal, or, it is an RGB value in one of the following formats expressed as a decimal, or a hexadecimal, number: • #RRGGBB • #AARRGGBB Default: 0xFFFFFFFF
headless_mode	Headless mode (Optional). See Headless Mode and WFCVoice Service.	true: Headless mode enabled. false: Headless mode disabled. Default: false
help_url	The URL of the entry point for the on-device online help (Optional).	Default: **`file:///WFConnect/help.html`**
incall_widget	Call accept style on the incoming call screen (Optional).	Select one of the following: • **incall_buttons**: Simple buttons. • **incall_gb**: Slider. • **incall_jb**: Glow pad. Default: incall_gb
jitter_max	Maximum jitter buffer in milliseconds.	250 msec to 1500 msec Default: 250 msec
jitter_min	Initial jitter delay in milliseconds.	30 msec to 100 msec Default: 60 msec
layout_location	The URL of the buttons layout file (Optional).	Protocols: file, http, https, tftp. Default: none
license_alias	Identify the device on the license source. (Optional)	Device alias.
license_key	One or more WFC Voice Client activation keys. When using license_source element, license_key can be used to list one or more PBX types.	Comma separated list of: • Activation keys • PBX types.
license_source	The URL of a license source running on the cloud or a local network. Use license_key element to define PBX types. If license_key value is not set, the client requests the PBX type set in the WFC Voice Client profile.	Default: Flexera server

Table 5 Profile Tags

Element	Description	Value
log_file	Enable logging for WFC Voice Client (Optional). Log files are saved to the WFConnect folder on the device.	true: Logging enabled. false: Logging disabled. Default: false
log_level	The log level for all log messages produced by Workforce Connect (Optional).	Select one of the following: • Error • Warning • Info • Debug • Verbose For debugging use Verbose. Default: Error
log_sipclf	Enable logging of SIP messages. Logs are stored as a CLF file on the device in SIP Common Log Format (Optional).	true: Log to a file on the device. false: Do not log to file. Default: false
moh_enabled	Enable music on hold to play a WAV audio file when a user is placed on hold (optional).	Default: false
moh_file	Select a custom WAV audio file to play when a user is placed on hold (optional).	WAV file stored in the WFConnect folder Default: None
no_audio_cutoff	Disconnect a call when no audio is detected for a set interval.	Select one of the following: • 0 • 30 • 60 • 120 • 300 Default: 30
process_cell_call	Ignore all call requests from Android dialer. Required on device with call service.	true: Process Android calls false: Do not process android calls Default: false
profile_type	Primary PBX type.	Contents: Text Default: None
profile2_type	Second PBX type (Optional).	Contents: Text Default: None
profile3_type	Third PBX type (Optional).	Contents: Text Default: None

Table 5 Profile Tags

Element	Description	Value
profile4_type	Fourth PBX type (Optional).	Contents: Text Default: None
profname	Profile name (Optional). For information only.	Contents: Text Default: None
prompt_file	Name of the audio prompt file. (Optional).	WAV file stored in the WFConnect folder Default: None
ringer_off_in_charger	Disable ringer while device is charging.	true: Disable ringer while charging false: Enable ringer while charging Default: false
ringtone_callback	Call back ringtone (Optional).	One of the following: • A number indicating a ringtone in Android. • The name of an audio file stored in the wfconnect folder in OGG format. Default: UK_Phone
ringtone_external	Ringtone for external calls (Optional).	One of the following: • A number indicating a ringtone in Android. • The name of an audio file stored in the wfconnect folder in OGG format. Default: HI_UK_Phone
ringtone_intercome	Rington for intercome calls (Optional).	One of the following: • A number indicating a ringtone in Android. • The name of an audio file stored in the wfconnect folder in OGG format. Default: French_Phone
ringtone_line1	The ringtone for line #1 (Optional).	One of the following: • A number indicating a ringtone in Android. • The name of an audio file stored in the WFConnect folder in OGG format. Default: None (The default Android ringtone is used.)

Table 5 Profile Tags

Element	Description	Value
ringtone_line2	The ringtone for line #2 (Optional).	One of the following: • A number indicating a ringtone in Android. • The name of an audio file stored in the WFConnect folder in OGG format. Default: None (The default Android ringtone is used.)
ringtone_line3	The ringtone for line #3 (Optional).	One of the following: • A number indicating a ringtone in Android. • The name of an audio file stored in the WFConnect folder in OGG format. Default: None (The default Android ringtone is used.)
ringtone_line4	The ringtone for line #4 (Optional).	One of the following: • A number indicating a ringtone in Android. • The name of an audio file stored in the WFConnect folder in OGG format. Default: None (The default Android ringtone is used.)
ringtone_line5	The ringtone for line #5 (Optional).	One of the following: • A number indicating a ringtone in Android. • The name of an audio file stored in the WFConnect folder in OGG format. Default: None (The default Android ringtone is used.)
ringtone_line6	The ringtone for line #6 (Optional).	One of the following: • A number indicating a ringtone in Android. • The name of an audio file stored in the WFConnect folder in OGG format. Default: None (The default Android ringtone is used.)

Table 5 Profile Tags

Element	Description	Value
ringtone_park	The ringtone for park (Optional).	One of the following: • A number indicating a ringtone in Android. • The name of an audio file stored in the wfconnect folder in OGG format. Default: None (The default Android ringtone is used.)
ringtone_priority	Priority call ringtone (Optional).	One of the following: • A number indicating a ringtone in Android. • The name of an audio file stored in the wfconnect folder in OGG format. Default: None (The default Android ringtone is used.)
rtp_stats	Show Real Time Transport Protocol (RTP) Statistics on in-call screen (Optional).	true: RTP statistics are shown. false: RTP statistics are not shown. Default: false
sample_rate	Audio sample rate. Selecting an audio codec overrides this setting (Optional).	Select one of the following: • 8000 • 16000 • 32000 • 48000 Default: 8000
save_incoming_ voice_to_file	Save incoming voice to a file in the wfconnect folder. The file name is a time-stamp plus PCM extension (Optional).	true: File is saved. false: File is not saved. Default: false
show_department_name	Display the department name associated with an extension (Optional).	true: Department names are shown. false: Department names are not shown. Default: false
show_jitter_stats	Show jitter statistics (Optional).	true: Jitter statistics are shown in audio debugging files. false: Jitter statistics are not shown in audio debugging files. Default: false

Table 5 Profile Tags

Element	Description	Value
sign_out_in_charger	Automatically sign out of the WFC Voice Client when the device begins charging (Optional).	true: Sign out when charging begins. false: Stay signed in while charged. Default: false
sip_auto_answer	Auto answer mode (Optional).	true: Workforce Connect client auto-answers all incoming calls. false: The user must use Workforce Connect to answer the call. Default: false
sip_confnum	SIP default conference number. Use with primary PBX type (Optional).	Default: None
sip_device_type	The Cisco device type. Use with primary PBX type (Optional).	Default: 8865
sip_localport	The primary local listening port for SIP connections. Use with primary PBX type (Optional).	Default: 5060
sip_parknum	SIP default call park extension. Use with primary PBX type (Optional).	Default: None
sip_pbx_logo	Identify the PBX type on the WFC Voice Client home screen dashboard. Enter text or set a logo (Optional).	Default: Displays the default text for the PBX type.
sip_mac	Primary radio MAC address of this mobile device. Use with primary PBX type (Optional).	MAC address Default: None
sip_realm	SIP domain. Use with primary PBX type (Optional).	Default: None
sip_remhost	Primary TFTP server address #1. Use with primary PBX type (Optional).	Server address Default: The server address provided by option 150 in the DHCP.
sip_remhost2	TFTP server address #2. This is a secondary address used if the primary address is not reachable. Use with primary PBX type (Optional).	Server address Default: None
sip_remhost3	TFTP server address #3. This is a secondary address used if the primary address is not reachable. Use with primary PBX type (Optional).	Server address Default: None
sip_remport	TFTP server remote port. Use with primary PBX type (Optional).	Default: 5060

Table 5 Profile Tags

Element	Description	Value
sip_rtp_port1	First RTP port.	Default: 51000
sip_rtp_port2	Last RTP port.	Default: 51025
sip_rtp_ptime	RTP payload size in milliseconds.	Select one of the following: • 20 • 30 • 40 • 50 • 60 • 70 • 80 Default: 20
sip_transport	SIP transport type. Use with primary PBX type (Optional).	Select one of the following: • UDP • TCP • TSL Default: TCP
sip_userid	SIP user or authentication ID. Use with primary PBX type (Optional).	Default: None
sip_userpass	SIP authentication password. Use with primary PBX type (Optional).	Default: None
sip_vmnum	SIP voice mail extension. Use with primary PBX type (Optional).	Default: None
sip2_confnum	SIP default conference number. Use with second PBX type (Optional).	Default: None
sip2_device_type	The Cisco device type. Use with second PBX type (Optional).	Default: 8865
sip2_localport	The local listening port for SIP connections. Use with second PBX type (Optional).	Default: 5060
sip2_mac	Radio MAC address of this mobile device. Use with second PBX type (Optional).	MAC address Default: None
sip2_parknum	SIP default call park extension. Use with second PBX type (Optional).	Default: None

Table 5 Profile Tags

Element	Description	Value
sip2_realm	SIP domain. Use with second PBX type (Optional).	Default: None
sip2_remhost	TFTP server address #1. Use with second PBX type (Optional).	Server address Default: The server address provided by option 150 in the DHCP.
sip2_remhost2	TFTP server address #2. This is a secondary address used if the primary address is not reachable. Use with second PBX type (Optional).	Server address Default: None
sip2_remhost3	TFTP server address #3. This is a secondary address used if the primary address is not reachable. Use with second PBX type (Optional).	Server address Default: None
sip2_remport	TFTP server remote port. Use with second PBX type (Optional).	Default: 5060
sip2_transport	SIP transport type. Use with second PBX type (Optional).	Select one of the following: • UDP • TCP • TSL Default: TCP
sip2_userid	SIP user or authentication ID. Use with second PBX type (Optional).	Default: None
sip2_userpass	SIP authentication password. Use with second PBX type (Optional).	Default: None
sip2_vmnum	SIP voice mail extension. Use with second PBX type (Optional).	Default: None
sip3_confnum	SIP default conference number. Use with third PBX type (Optional).	Default: None
sip3_device_type	The Cisco device type. Use with third PBX type (Optional).	Default: 8865
sip3_localport	The local listening port for SIP connections. Use with third PBX type (Optional).	Default: 5060
sip3_mac	Radio MAC address of this mobile device. Use with third PBX type (Optional).	MAC address Default: None

Table 5 Profile Tags

Element	Description	Value
sip3_parknum	SIP default call park extension. Use with third PBX type (Optional).	Default: None
sip3_realm	SIP domain. Use with third PBX type (Optional).	Default: None
sip3_remhost	TFTP server address #1. Use with third PBX type (Optional).	Server address Default: The server address provided by option 150 in the DHCP.
sip3_remhost2	TFTP server address #2. This is a secondary address used if the primary address is not reachable. Use with third PBX type (Optional).	Server address Default: None
sip3_remhost3	TFTP server address #3. This is a secondary address used if the primary address is not reachable. Use with third PBX type (Optional).	Server address Default: None
sip3_remport	TFTP server remote port. Use with third PBX type (Optional).	Default: 5060
sip3_transport	SIP transport type. Use with third PBX type (Optional).	Select one of the following: • UDP • TCP • TSL Default: TCP
sip3_userid	SIP user or authentication ID. Use with third PBX type (Optional).	Default: None
sip3_userpass	SIP authentication password. Use with third PBX type (Optional).	Default: None
sip3_vmnum	SIP voice mail extension. Use with third PBX type (Optional).	Default: None
sip4_confnum	SIP default conference number. Use with fourth PBX type (Optional).	Default: None
sip4_device_type	The Cisco device type. Use with fourth PBX type (Optional).	Default: 8865
sip4_localport	The local listening port for SIP connections. Use with fourth PBX type (Optional).	Default: 5060

Table 5 Profile Tags

Element	Description	Value
sip4_mac	Radio MAC address of this mobile device. Use with fourth PBX type (Optional).	MAC address Default: None
sip4_parknum	SIP default call park extension. Use with fourth PBX type (Optional).	Default: None
sip4_realm	SIP domain. Use with fourth PBX type (Optional).	Default: None
sip4_remhost	TFTP server address #1. Use with fourth PBX type (Optional).	Server address Default: The server address provided by option 150 in the DHCP.
sip4_remhost2	TFTP server address #2. This is a secondary address used if the primary address is not reachable. Use with fourth PBX type (Optional).	Server address Default: None
sip4_remhost3	TFTP server address #3. This is a secondary address used if the primary address is not reachable. Use with fourth PBX type (Optional).	Server address Default: None
sip4_remport	TFTP server remote port. Use with fourth PBX type (Optional).	Default: 5060
sip4_transport	SIP transport type. Use with fourth PBX type (Optional).	Select one of the following: • UDP • TCP • TSL Default: TCP
sip4_userid	SIP user or authentication ID. Use with fourth PBX type (Optional).	Default: None
sip4_userpass	SIP authentication password. Use with fourth PBX type (Optional).	Default: None
sip4_vmnum	SIP voice mail extension. Use with fourth PBX type (Optional).	Default: None
sms_enabled	Short Message Service (SMS) (Optional).	true: Enable SMS false: Disable SMS Default: false
speaker_on_horizontal	Answer calls in speaker mode when the device is placed on a horizontal surface	true: Enable speaker mode false: Disable speaker mode Default: false

Table 5 Profile Tags

Element	Description	Value
use_android_dialer	Use the native Android dialer to place calls.	true: Use Android dialer false: Use Workforce Connect dialer
use_accelerometer	Use the native Android accelerometer (Optional).	true: Accelerometer is used. false: Accelerometer is not used. Default: false
use_aec	Echo Cancellation (Optional).	true: Echo cancellation is used. false: Echo cancellation is not used. Default: false
use_agc_ear	Automatic Gain Control (AGC) on earpiece (Optional).	true: AGC is used. false: AGC is not used. Default: false
use_agc_speaker	Automatic Gain Control (AGC) on speaker. (Optional).	true: AGC is used. false: AGC is not used. Default: false
use_native_sample_rate	Use the native sample rate set by Android (Optional).	true: Android native sample rate is used false: Sample rate is 8000 Default: false
use_noise	Noise Reduction (Optional).	true: Noise reduction is used. false: Noise reduction is not used. Use native sample rate set by Android.
use_prox_wake_lock	Use the Android platform default proximity WAKE LOCK (Optional).	true: Uses the Android platform default proximity WAKE LOCK. false: Uses a workaround solution. Default: true
var_location	The URI of shared profile located on a remote or local server (Optional).	Protocols: file, http, https, tftp. Default: none (Disabled)
vibrate_when_ringing	The device vibrates when a call is received (Optional).	true: The device vibrates when a call is received. false: The device does not vibrate when a call is received. Default: false

Table 5 Profile Tags

Element	Description	Value
voice_announcer_check	Announces the number or user name of an incoming call (Optional).	true: Incoming calls are announced. false: Incoming calls are not announced. Default: false
wifi_preferred	Connect to an available WiFi network. This setting only applies after network state changes or when the client is restarted.	true: Connect to an available WiFi network. false: Only connect to the device's default network. Default: true

Table 6 Dashboard Tags

Element	Description
Columns	Number of columns on the dashboard area.
Button	The definition of an on-screen button. See Table 8 for details.

Table 7 Call Buttons Tags

Element	Description
Button	The definition of an on-screen button. See Table 8 for details.

Table 8 Button Tags

Element	Description	Value
action	The button action.	This must be one of the action types listed in Button Actions. If this string is not a valid action type the button is not created.
bg_color	Button background color (optional). If no color is defined then the profile element <gfg_color> is used.	The color is one of the following: red, blue, green, black, white, gray, cyan, magenta, yellow, lightgray, darkgray, grey, lightgrey, darkgrey, aqua, fuchsia, lime, maroon, navy, olive, purple, silver, teal, or, it is an RGB value in one of the following formats expressed as a decimal, or a hexadecimal, number: • #RRGGBB • #AARRGGBB Default: #FF001425
confirm	After touching the button, the operator is asked to confirm the action before it is executed (optional).	true: Confirm action false: Do not confirm action Default: false

Table 8 Button Tags (Continued)

Element	Description	Value
description	Description is used by the LIST action type.	On the LIST action type button: • It is used as the title on the popup dialog • It appears as a comment for each LIST sub button, identifying which action is performed by the button. For all other buttons, the description is optional.
enabled	Defines whether the button is available on the Workforce Connect client screen (optional).	true: Button is visible and active. false: Button is not visible. Default: true.
fg_color	Button text color (Optional). If no color is defined then the profile element <gfg_color> is used.	The color is one of the following: red, blue, green, black, white, gray, cyan, magenta, yellow, lightgray, darkgray, grey, lightgrey, darkgrey, aqua, fuchsia, lime, maroon, navy, olive, purple, silver, teal, or, it is an RGB value in one of the following formats expressed as a decimal, or a hexadecimal, number: • #RRGGBB • #AARRGGBB Default: #FFFFFFFF
icon	The icon that appears on the button (Optional).	Select one of the following: • none: Only the title is displayed on the button. • default: Displays the default icon for the associated action type. • <filename>: The filename of a PNG file, containing the icon, in the WFConnect folder. Include .png in the filename. Default: default
title	Button title (Optional). This text is displayed on the on-screen button. If the string contains spaces, the text displays on 2 lines; otherwise, all the text displays on one line. The font size adjusts depending on text length.	Contents: Text Default: New

Table 8 Button Tags (Continued)

Element	Description	Value
value	Additional information required by the <action> element (Optional).	For details on the values associated with each action type see Button Actions.
Button	The definition of an on-screen button.	N/A

XML Example - Profile

```
<WFConnect>
<Profile>
    <use_android_dialer>true</use_android_dialer>
    <sip_remhost2></sip_remhost2>
    <ptt_userid>user</ptt_userid>
    <background_logo>company_logo.png</background_logo>
    <lux_threshold>0</lux_threshold>
    <sip_remhost3></sip_remhost3>
    <rtp_stats>false</rtp_stats>
    <prompt_file>greeting.wav</prompt_file>
    <codec_ulaw_priority>2</codec_ulaw_priority>
    <show_dialpad>true</show_dialpad>
    <sip_expires>36000</sip_expires>
    <use_noise>true</use_noise>
    <ptt_transport>UDP</ptt_transport>
    <use_native_sample_rate>false</use_native_sample_rate>
    <jitter_max>250</jitter_max>
    <post_log_url></post_log_url>
    <sip_device_type>8865</sip_device_type>
    <sip_rtp_ptime>20</sip_rtp_ptime>
    <sip_transport>TCP</sip_transport>
    <sip_rtp_port2>50025</sip_rtp_port2>
    <sip_rtp_port1>50000</sip_rtp_port1>
    <audio_gain_in>5</audio_gain_in>
    <use_prox_wake_lock>true</use_prox_wake_lock>
    <log_console>true</log_console>
    <use_agc_speaker>true</use_agc_speaker>
    <sip_realm>10.16.2.111</sip_realm>
    <jitter_min>60</jitter_min>
    <sip_subscribe>false</sip_subscribe>
    <help_url>file:///wfconnect/help.html</help_url>
```

```
    <codec_g722_priority>4</codec_g722_priority>
    <save_incoming_voice_to_file>false</save_incoming_voice_to_file>
    <profile_type>Licensed PBX</profile_type>
    <gfg_color>#FFFFFFFF</gfg_color>
    <codec_alaw_priority>3</codec_alaw_priority>
    <codec_g729_priority>1</codec_g729_priority>
    <sip_userid>1001</sip_userid>
    <log_file>true</log_file>
    <rssi_limit>-85</rssi_limit>
    <incall_widget>incall_buttons</incall_widget>
    <sip_mac></sip_mac>
    <sip_auto_answer>false</sip_auto_answer>
    <audio_gain_out>5</audio_gain_out>
    <show_jitter_stats>false</show_jitter_stats>
    <use_aec>true</use_aec>
    <gbg_color>#FF001425</gbg_color>
    <license_key>abcd-1234-ab12-cd34-5678-efgh-ef56-gh78</license_key>
    <sip_remhost>10.5.97.99</sip_remhost>
    <sip_userpass>1234</sip_userpass>
    <sip_remport>5060</sip_remport>
    <use_accelerometer>true</use_accelerometer>
    <profname>WFConnect.xml</profname>
    <use_agc_ear>true</use_agc_ear>
    <codec_gsm_priority>5</codec_gsm_priority>
    <srtp_type>1</srtp_type>
    <log_level>Error</log_level>
</Profile>
...
```

XML Example - Footer

```
...
<Footer>
   <Button>
      <title>History</title>
      <action>HISTORY</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description></description>
      <fg_color>#FFFFFFFF</fg_color>
      <icon></icon>
   </Button>
   <Button>
      <title>Redial</title>
      <action>REDIAL</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description></description>
      <fg_color>#FFFFFFFF</fg_color>
      <icon></icon>
   </Button>
   <Button>
      <title>Dial</title>
      <action>DIAL</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description></description>
      <fg_color>#FFFFFFFF</fg_color>
      <icon></icon>
```

```
    </Button>
    <Button>
        <title>Contacts</title>
        <action>CONTACTS</action>
        <value></value>
        <enabled>true</enabled>
        <confirm>false</confirm>
        <description></description>
        <fg_color>#FFFFFFFF</fg_color>
        <icon></icon>
    </Button>
    <Button>
        <title>Voicemail</title>
        <action>VOICEMAIL</action>
        <value></value>
        <enabled>true</enabled>
        <confirm>false</confirm>
        <description></description>
        <bg_color>#FF001425</bg_color>
        <fg_color>#FFFFFFFF</fg_color>
        <icon>Default</icon>
    </Button>
</Footer>
...
```

XML Example - Dashboard

```
...
<Dashboard>
   <Columns>4</Columns>
   <Button>
      <title>Dial</title>
      <action>DIAL</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description></description>
      <icon></icon>
   </Button>
   <Button>
      <title>SpeedDial#1</title>
      <action>SPEED_DIAL1</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description></description>
      <icon></icon>
   </Button>
   <Button>
      <title>SpeedDial#2</title>
      <action>SPEED_DIAL2</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description></description>
      <icon></icon>
   </Button>
   <Button>
```

```
    <title></title>
    <action>LIST</action>
    <value></value>
    <enabled>true</enabled>
    <confirm>false</confirm>
    <description></description>
    <icon></icon>
</Button>
<Button>
    <title>SpeedDial#3</title>
    <action>SPEED_DIAL3</action>
    <value></value>
    <enabled>true</enabled>
    <confirm>false</confirm>
    <description></description>
    <icon></icon>
</Button>
<Button>
    <title>SpeedDial#4</title>
    <action>SPEED_DIAL4</action>
    <value></value>
    <enabled>true</enabled>
    <confirm>false</confirm>
    <description></description>
    <icon></icon>
</Button>
<Button>
    <title>SpeedDial#5</title>
    <action>SPEED_DIAL5</action>
    <value></value>
    <enabled>true</enabled>
    <confirm>false</confirm>
    <description></description>
    <icon></icon>
</Button>
<Button>
    <title>SpeedDial#6</title>
    <action>SPEED_DIAL6</action>
    <value></value>
    <enabled>true</enabled>
    <confirm>false</confirm>
    <description></description>
```

```
    <icon></icon>
</Button>
<Button>
    <title>SpeedDial#7</title>
    <action>SPEED_DIAL7</action>
    <value></value>
    <enabled>true</enabled>
    <confirm>false</confirm>
    <description></description>
    <icon></icon>
</Button>
<Button>
    <title>SpeedDial#8</title>
    <action>SPEED_DIAL8</action>
    <value></value>
    <enabled>true</enabled>
    <confirm>false</confirm>
    <description></description>
    <icon></icon>
</Button>
<Button>
    <title>SpeedDial#9</title>
    <action>SPEED_DIAL9</action>
    <value></value>
    <enabled>true</enabled>
    <confirm>false</confirm>
    <description></description>
    <icon></icon>
</Button>
<Button>
    <title>Call</title>
    <action>CALL</action>
    <value></value>
    <enabled>true</enabled>
    <confirm>false</confirm>
    <description></description>
    <icon>Default</icon>
</Button>
<Button>
    <title>StartApp</title>
    <action>START_APP</action>
    <value>Camera</value>
```

```
            <enabled>true</enabled>
            <confirm>false</confirm>
            <description></description>
            <icon>Default</icon>
        </Button>
        <Button>
            <title>LogMarker</title>
            <action>LOG_MARKER</action>
            <value></value>
            <enabled>true</enabled>
            <confirm>false</confirm>
            <description></description>
            <icon>Default</icon>
        </Button>
        <Button>
            <title>Blank</title>
            <action>BLANK</action>
            <value></value>
            <enabled>true</enabled>
            <confirm>false</confirm>
            <description></description>
            <icon>Default</icon>
        </Button>
    </Dashboard>
    ...
```

XML Example - Call Buttons

```
...
<CallButtons>
   <Button>
      <title>AddCall</title>
      <action>ADD_CALL</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description></description>
      <icon>Default</icon>
   </Button>
   <Button>
      <title>Home</title>
      <action>HOME</action>
      <value></value>
      <enabled>true</enabled>
      <confirm>false</confirm>
      <description></description>
      <icon>Default</icon>
   </Button>
   <Button>
      <title>Hold</title>
      <action>HOLD</action>
      <value></value>
      <enabled>false</enabled>
      <confirm>false</confirm>
      <description></description>
      <icon></icon>
   </Button>
   <Button>
      <title>Resume</title>
```

```
        <action>RESUME</action>
        <value></value>
        <enabled>false</enabled>
        <confirm>false</confirm>
        <description></description>
        <icon>Default</icon>
    </Button>
</CallButtons>
</WFConnect>
```

Directory Button Configuration

Configuring the Directory Button

To define a button that finds contacts in a directory:

1. Open **Settings**.
2. Select **Advanced Settings** > **UI Settings** > **Edit Footer**, **Edit Dashboard** or **Edit In-Call** > **Add**.
3. Select the new button. A yellow box appears around the selected button.
4. Touch **Edit**.
5. In the **Action** field, select **DIRECTORY**.
6. In the **Value** field there are two options:
    - PBX provides the URL, no action is needed
    - URL is manually entered
7. In the **Title** field, enter **DIRECTORY**.
8. In the **Icon** field, choose an icon.
9. Touch the **Back** button to return to the WFC Voice Client home screen.

Using the Directory Button

To use the directory button:

1. Touch the **DIRECTORY** button. The **Directory Search** screen appears.
2. Enter contact information or leave blank to view the entire directory.
3. Touch **Search**.

Configuring a Proxy Server

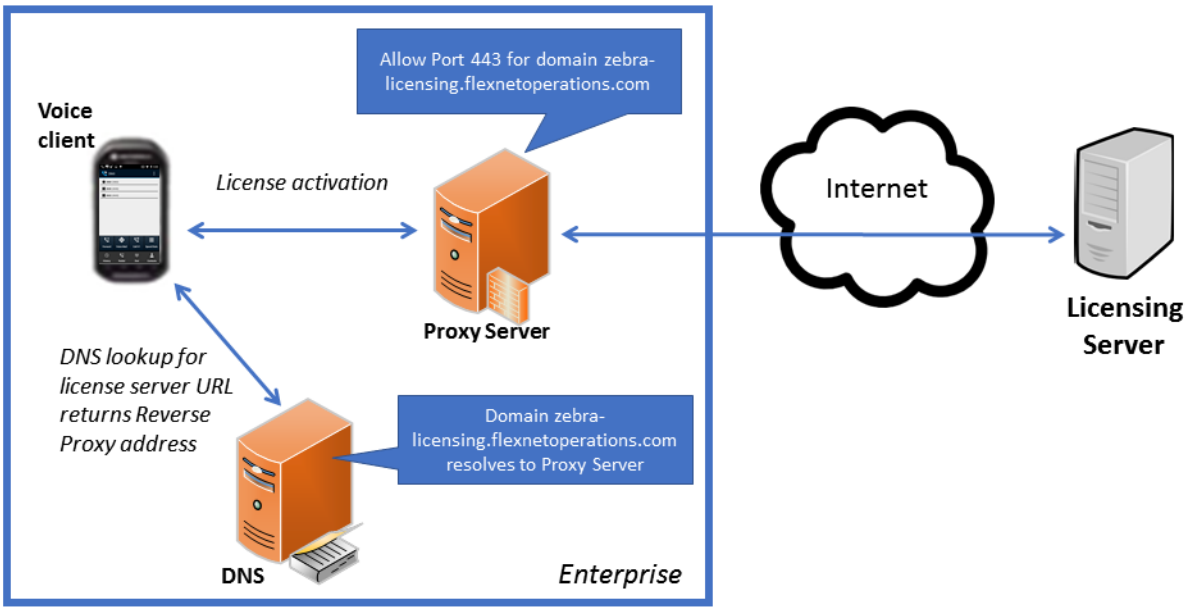
Configuring a Proxy Server

To activate the WFC Voice Client, one or more licenses must be retrieved from one of the following types of license sources:

- Local license server
- Cloud license server.

A proxy server is required when using a device that does not have direct access to the license source. For example, when a device is connected to a local network.

Figure 106 Proxy Server Configuration



To configure a proxy server:

1. Ensure the proxy server and DNS server are running.
2. Ensure the device running the WFC Voice Client is connected to the DNS server.
3. In the DNS server, change the DNS information to resolve the licensing server domain to the proxy server.
   The default license server domain is: **`zebra-licensing.flexnetoperations.com`**.
4. In the proxy server, allow internet traffic on port 443.

Network Ports and Protocols

Network Ports and Protocols

This section provides an overview of the ports and protocols the WFC Voice Client uses on supported Zebra devices.

Zebra devices may contain applications that use the same ports and protocols for normal operation as the WFC Voice Client. Refer to the application documentation for more information.

Table 9 Ports for Advanced Features

Port	Destination	Comments
443	https://zebra-licensing.flexnetoperations.com	License registration and validation for WFC Voice Client.
5060	Call Manager server(s)	SIP messaging to Call Manager. To use a different port, change in both the device configuration and PBX Call Manager.
69	TFTP server(s)	TFTP services download.Required for advanced Cisco Premium features.
51000 – 51025	RTP Traffic to other devices	To use a different port, change in the device configuration.
80	WebServer	HTTP, HTTPS, or TFTP file download of the WFC Voice Client configuration file, and the contacts list CSV file, if available.

Hunt Groups

Introduction

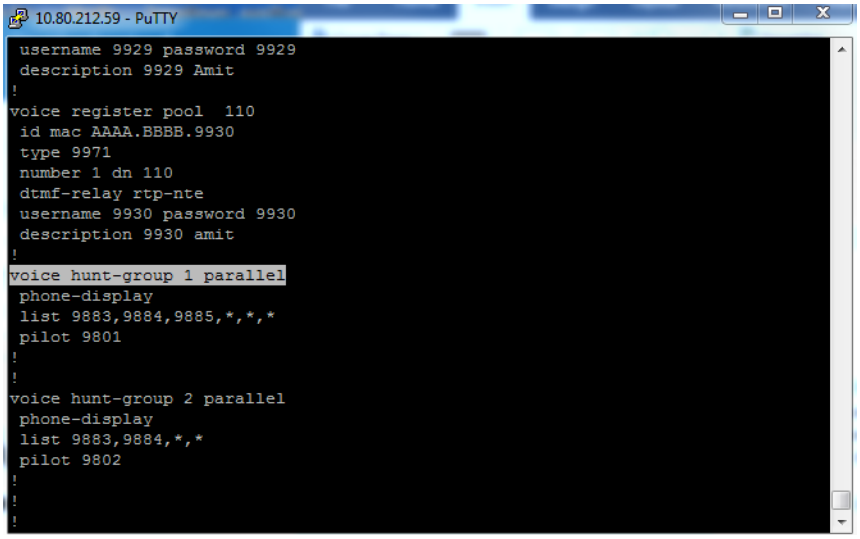
This chapter describes how to configure the Hunt Groups feature. The Hunt Groups feature allows incoming calls to a specific number to be directed to a defined group of extension numbers. When configured, the Hunt Groups feature allows end users to sign in and out of hunt groups in the WFC Voice Client.

Configuring the PBX

This section contains an overview on configuring the Hunt Groups feature in Cisco CME. For more information, refer to https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucme/admin/configuration/manual/cmeadm/cmecover.html

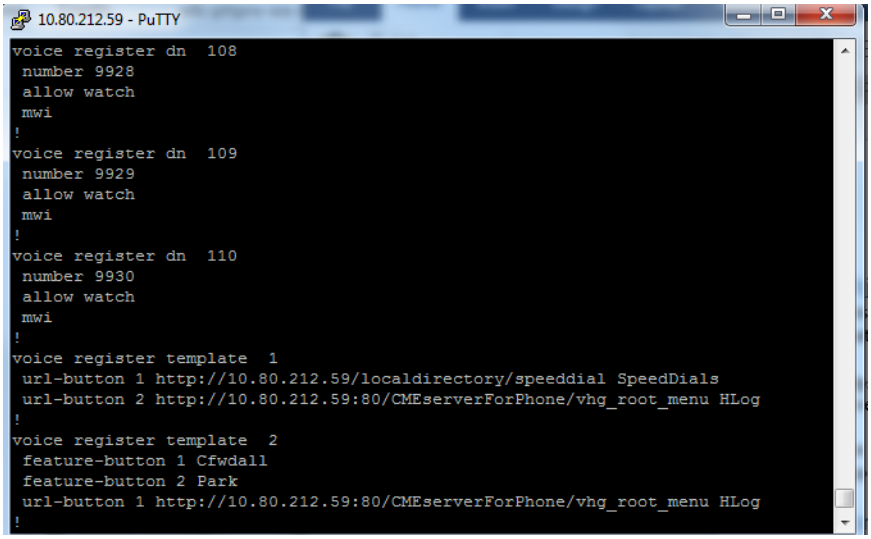
To configure the Hunt Groups feature in Cisco CME, use a PuTTY terminal to:

Figure 107 Create Hunt Group



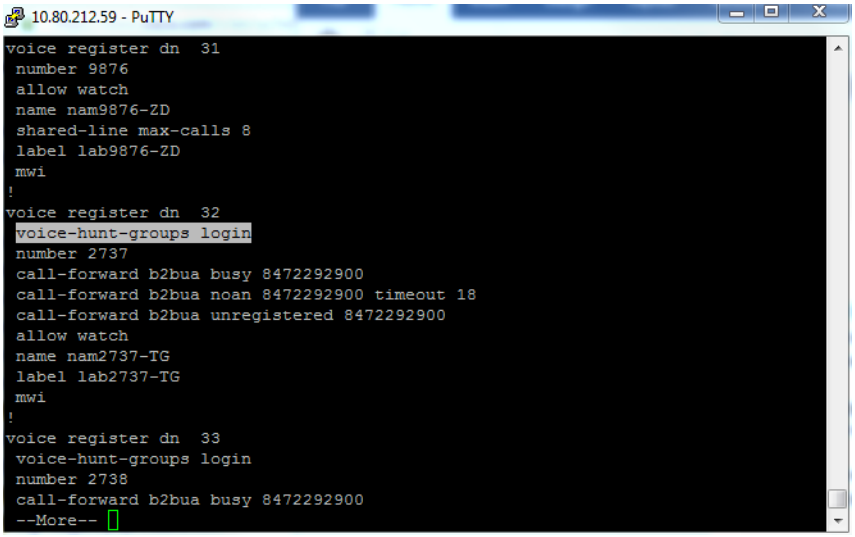
1. Create a hunt group.

Figure 108 Create Voice Register Template



2. Create a voice register template (optional).

Figure 109 Add Hunt Group



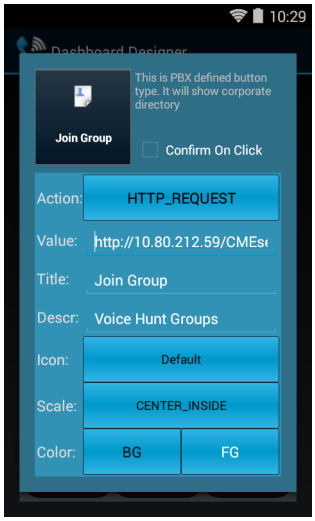
3. Add the hunt groups login to the voice register dn.

Configuring the Workforce Connect Voice Client

To add the **Join Group** button in the WFC Voice Client:

1. Touch the menu button, then **Settings**. The password dialog box appears.
2. Enter password (default: **zamboni).**
3. Touch **Enter**.
4. Touch **Advanced Settings > UI Settings > Edit Dashboard > Add**.
5. Select the new button. A yellow box appears around the selected button.
6. Touch **Edit**.

Figure 110 Edit Button



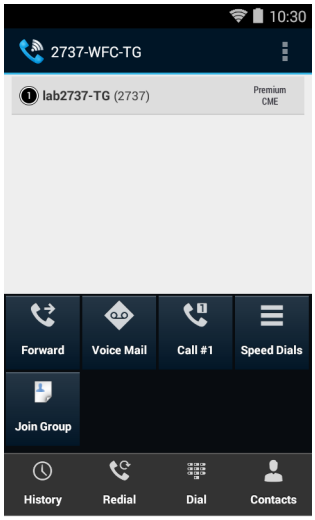
7. Touch **Action** and select **HTTP_REQUEST**.
8. In the **Value** field, enter **`http://<cmeip>/CMEserverForPhone/vhg_root_menu`** where **`<cmeip>`** is the IP address for the CME PBX.
9. In the **Title** field, enter **Join Group**.
10. In the **Description** field, enter a short description of the button function.
11. Touch **Icon** and select an icon from the **Select Icon** menu. See Icons on page 90.
12. Touch **BG** to set the background color. See Button Background Color on page 93.
13. Touch **FG** to set the foreground text color. See Button Text Color on page 94.
14. Touch the **Back** button to return to the WFC Voice Client home screen.

Using Hunt Groups

Join Group

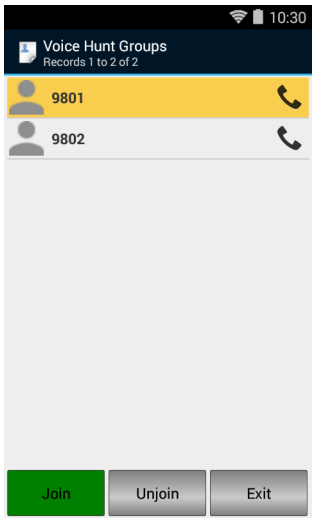
To use the **Join Group** button:

Figure 111 Join Group Button



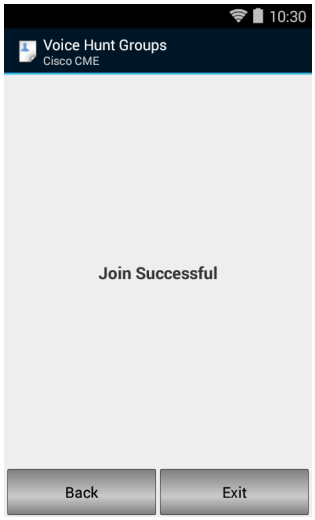
1. From the Home Screen, touch **Join Group**.

Figure 112 Join Hunt Group



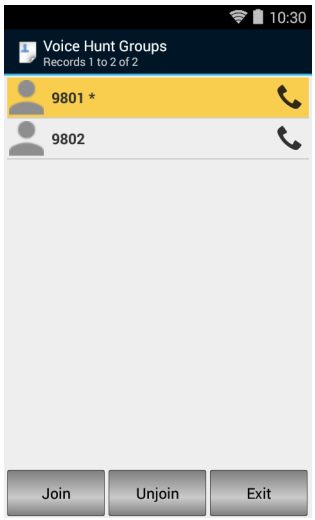
2. Touch a group and select **Join**. A confirmation screen displays.

Figure 113 Join Successful



3. Touch **Exit**. On the hunt groups screen, an * (asterisk) symbol displays next extension numbers logged into a hunt group.

Figure 114 Joined Hunt Group

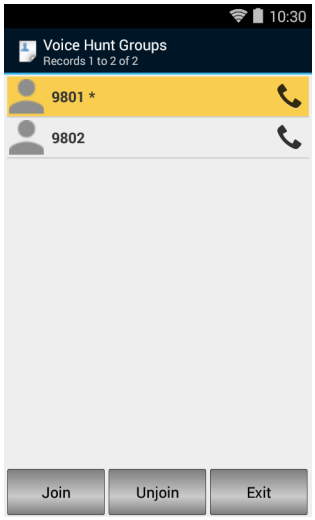


Unjoin Group

To leave a group:

1. From the Home Screen, touch **Join Group**.

Figure 115 Unjoin Hunt Group



2. Touch a group and select **Unjoin**.
3. Touch **Exit**. Leaving a hunt group removes the * (asterisk) symbol from next to the extension number.