Workforce Connect
Zebra PTT Pro

Installation Guide
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Contents

About This Guide................................................................................................................................  5
   Introduction ..................................................................................................................................  5
   Chapter Descriptions ..............................................................................................................  5
   Notational Conventions ........................................................................................................  5
   Related Documents ..............................................................................................................  6
   Service Information ...............................................................................................................  6
   Revision History ...................................................................................................................  7

Installing Zebra PTT Pro on Android Devices.................................................................................  8
   Overview ..............................................................................................................................  8
   System Requirements ........................................................................................................  8
   Install ..................................................................................................................................  8
      Install Using Google Play Store (GMS Devices Only) ..................................................  9
      Install Using a Sideload Method .................................................................................. 11
         Sideload Zebra PTT Pro .................................................................................. 11
      Install Using Email (GMS Devices Only) ................................................................. 12
   Activate and Post Installation Tasks ................................................................................. 13
      Activate Zebra PTT Pro ................................................................................... 13

Installing Zebra PTT Pro on iOS .................................................................................................... 16
   Overview .......................................................................................................................... 16
   System Requirements ..................................................................................................... 16
   Install .................................................................................................................................. 16
      Email Installation ..................................................................................................... 16
      Manual Installation ................................................................................................. 21

Installing Zebra PTT Pro Dispatch on a PC .................................................................................. 26
   Overview .......................................................................................................................... 26
   System Requirements ..................................................................................................... 26
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install</td>
<td>26</td>
</tr>
<tr>
<td>Activate and Provision</td>
<td>29</td>
</tr>
<tr>
<td>Sign Out of the Client</td>
<td>30</td>
</tr>
<tr>
<td>Add a New User Profile</td>
<td>30</td>
</tr>
<tr>
<td>Post Installation Tasks</td>
<td>31</td>
</tr>
<tr>
<td>Accessing Zebra PTT Pro Management Portal</td>
<td>32</td>
</tr>
<tr>
<td>Overview</td>
<td>32</td>
</tr>
<tr>
<td>System Requirements</td>
<td>32</td>
</tr>
<tr>
<td>Access Zebra PTT Pro Management Portal</td>
<td>32</td>
</tr>
<tr>
<td>Log In via Email Credentials</td>
<td>32</td>
</tr>
<tr>
<td>Activation Troubleshooting</td>
<td>33</td>
</tr>
<tr>
<td>Troubleshoot Activation Issues</td>
<td>33</td>
</tr>
<tr>
<td>Firewall Configuration and Troubleshooting</td>
<td>34</td>
</tr>
<tr>
<td>Overview</td>
<td>34</td>
</tr>
<tr>
<td>Configure the Firewall</td>
<td>34</td>
</tr>
<tr>
<td>Troubleshoot Firewall Issues</td>
<td>35</td>
</tr>
<tr>
<td>Email Support</td>
<td>37</td>
</tr>
<tr>
<td>Open Source Software Disclosure</td>
<td>38</td>
</tr>
<tr>
<td>OpenSSL</td>
<td>38</td>
</tr>
<tr>
<td>Opus CODEC</td>
<td>38</td>
</tr>
<tr>
<td>Index</td>
<td>40</td>
</tr>
</tbody>
</table>
About This Guide

Introduction

This guide discusses the installation and activation of all Zebra PTT Pro applications. Features and operation of each application are discussed separately in corresponding guides. See Related Documents on page 6 for a list of guides.

✓ 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:

- **Installing Zebra PTT Pro on Android Devices** describes how to install Zebra PTT Pro on an Android AOSP and GMS device.
- **Installing Zebra PTT Pro on iOS** describes how to install Zebra PTT Pro on an iOS device.
- **Installing Zebra PTT Pro Dispatch on a PC** describes how to install Zebra PTT Pro on a Windows PC.
- **Accessing Zebra PTT Pro Management Portal** describes how to access Zebra PTT Pro Management Portal on a desktop machine.
- **Activation Troubleshooting** describes how to avoid certain issues that may arise when activating Zebra PTT Pro.
- **Firewall Configuration and Troubleshooting** describes how to configure and troubleshoot firewall issues.

Notational Conventions

The following conventions are used in this document:

- **Italics** are used to highlight the following:
  - Chapters and sections in this and related documents
  - Dialog box, window and screen names
  - Drop-down list and list box names
  - Check box and radio button names
- **Bold** text is used to highlight the following:
  - 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

• Zebra PTT Pro Management Portal Administrator Guide - Discusses the portal, which provides an interface for administrators or technical representatives to manage an organization's Zebra PTT Pro accounts.
• Zebra PTT Pro for Android Quick Start Guide - Discusses procedures for the most common tasks, in a two-sided single page printable format.
• Zebra PTT Pro for Android User Guide - Discusses Zebra PTT Pro for Android features and operation.
• Zebra PTT Pro for iOS Quick Start Guide - Discusses procedures for the most common tasks, in a two-sided single page printable format.
• Zebra PTT Pro for iOS User Guide - Discusses Zebra PTT Pro for iOS features and operation.
• Zebra PTT Pro Dispatch User Guide - Discusses Zebra PTT Pro Dispatch features and operation.

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

Service Information

If you have a problem using the equipment, contact your facility's technical or systems support. If there is a problem with the equipment, they will contact the Customer Support Center at: http://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 e-mail, telephone or fax within the time limits set forth in service agreements.

If your problem cannot be solved by 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 business product from a Zebra business partner, please contact that business partner for support.
# Revision History

Changes to the original guide are listed below:

<table>
<thead>
<tr>
<th>Change</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
</table>
Installing Zebra PTT Pro on Android Devices

Overview

This chapter describes the system requirements for loading Zebra PTT Pro for Android, methods for installation of the software, and activation of the client.

Zebra PTT Pro for Android can consist of either version and the installation methods are described for both:
• AOSP (Android Open Source Project)
• GMS (Google Mobile Services)

In order to complete activation of the Zebra PTT Pro client, the system administrator first must provision a user in the Zebra PTT Pro Management Portal.

System Requirements

The minimum system requirements for Zebra PTT Pro for Android are:
• Android OS version of Kitkat 4.4 or above.
• To take advantage of the full Zebra PTT Pro GMS functionality, Location must be enabled in Settings.

Install

Installation of the Zebra PTT Pro Android client software can be accomplished in multiple ways, and the enterprise may choose the method that works best for their mode of operation. These methods are described below.

Android devices can be classified as GMS (Google Mobile Services) devices or AOSP (Android Open Source Project) devices (also known as non-GMS devices).

The supported installation methods for GMS and AOSP devices differ as indicated in the following table:
MDM and sideloading are well known techniques already in widespread use and which vary between devices and MDM platforms.

### Table 1  Installation Methods

<table>
<thead>
<tr>
<th>Method</th>
<th>GMS or AOSP</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Device Management (MDM)</td>
<td>Both</td>
<td>Download the Zebra PTT Pro Android client software via MDM, if supported by your enterprise. Many enterprises use MDMs to manage the applications and other aspects of their Android devices. Using a file manager, find the APK on the device and click on it to install.</td>
</tr>
<tr>
<td>Sideload</td>
<td>Both</td>
<td>Install the Zebra PTT Pro application without using Google Play store via one of the many sideloading methods.</td>
</tr>
<tr>
<td>App Store</td>
<td>GMS</td>
<td>Search for <strong>Zebra WFC PTT Pro v3.2</strong> in <strong>Google Play Store</strong> and follow the instructions to install the software on the device.</td>
</tr>
<tr>
<td>Email</td>
<td>GMS</td>
<td>Click on the link to the software download package contained in the email from your system administrator. In order to use this method, the user must be provisioned in the Zebra PTT Pro Management Portal.</td>
</tr>
</tbody>
</table>

### Install Using Google Play Store (GMS Devices Only)

To use this method, the following prerequisite exists:

- A Google account is required to download the software from the Google Play Store.

1. Go to [https://play.google.com/store/apps/details?id=com.symbol.wfc.pttpro](https://play.google.com/store/apps/details?id=com.symbol.wfc.pttpro) or search for **Zebra WFC PTT Pro v3.2**. The Zebra PTT Pro application displays. Select the icon to see the application details for Zebra PTT Pro.

2. Select **Install** on the Zebra PTT Pro Application Details screen.

   If you are not logged into Google, you will be prompted to log in at this time. Click **Sign In**, fill in your login details and click **Next**.
3. Verify the access permissions for Zebra PTT Pro and select **ACCEPT**. For Android 5.0 and below, the application will now load on the device.

4. The Google Play Store Zebra PTT Pro Application Details screen displays again, indicating that the application has successfully loaded. Select **OPEN** to open the application, and proceed to Activate and Post Installation Tasks on page 13 for details on activating the software.

5. For Android 6.0 and above, the Zebra PTT Pro application will ask for Phone, Audio, Location, Access to Files and Photos, and Contacts permissions when the application is opened.
Installing Zebra PTT Pro on Android Devices

Figure 2   Open Zebra PTT Pro

Sideload Zebra PTT Pro

1. Copy the Zebra PTT Pro APK to your computer.

Install Using a Sideload Method

Sideload allows installation of Android applications without using the Google Play Store. Although installing Zebra PTT Pro through the Google Play Store is a simpler approach, sideloading is an available method to install the application.

Sideload can be done using multiple methods. Some include the AirDroid application, Android Debug Bridge (ADB), and manual installation. This section briefly discusses the manual installation method. For more information on any of these methods or other methods, access the application web site or your owner manual.

To use this method, the following prerequisite exists:

• Access to the Zebra PTT Pro APK (software installer) is required for sideloading. Contact your system administrator or Zebra customer manager for more information.

• A File Manager or other Android application is required to allow you to traverse the device's file structure.

• You must enable “Unknown source’s” in Security Settings. You may disable it again after the installation process is complete.

Sideload Zebra PTT Pro

1. Copy the Zebra PTT Pro APK to your computer.
2. Connect the Android device to a computer (for example, using a USB port).
3. Copy the Zebra PTT Pro APK to your Android device.
4. Use the File Manager to locate the Zebra PTT Pro APK.
5. Click the APK file to install Zebra PTT Pro.
6. For Android 5.0 and below, verify the application permissions and select Next and then select Install.
7. When the application has completed installing, click Done to exit the installation process, or click Open to open the application, and proceed to Activate and Post Installation Tasks on page 13 for details on activating the software.
8. For Android 6.0 and above, the Zebra PTT Pro application will ask for Microphone, Phone and Location permissions after the application starts.

Install Using Email (GMS Devices Only)

To use this method, the following prerequisites exist:

- A valid email address where the activation email can be received must be available and accessible by the device. This email does not have to be unique; (for example, it can be used to install software on multiple devices).
- The system administrator must provision the user in the Zebra PTT Pro Management Portal with the valid email address. This causes an installation email with instructions for installation to be generated.
- A Google account is required to download the software from the Google Play store.

The steps to install the client upon receipt of the installation email are below.

1. Open the Zebra PTT Pro Activation email on the device where the application is being installed. Click the setup link to initiate installation. An example email extract follows:

   **Figure 3  Zebra PTT Pro Activation Email**

   ```
   Please use the information on the following link to setup Zebra PTT Pro:
   
   https://provision.pttpro.zebra.com/setup.php?ac=0RFTLEHXMT
   
   For questions and additional support, please contact your internal IT Department help desk.
   
   Thank you,
   The Zebra PTT Pro Support Team
   ```

2. A Zebra PTT Pro Setup screen will open using the device browser. Select Download Zebra PTT Pro. Do not dismiss this window, as you will need to return to it after installation in order to complete activation of the application.
The Zebra PTT Pro application page opens when you select the Download button in the Google Play Store.

3. At this point, the installation instructions are identical to Install Using Google Play Store (GMS Devices Only) on page 9, starting with Step 2: Select Install.

Activate and Post Installation Tasks

After you finish the Zebra PTT Pro installation, activate the application and give Zebra PTT Pro permissions to access device functions.

Activate Zebra PTT Pro

Before performing the activation process, see Troubleshoot Activation Issues on page 33.

Activation correlates the application on the device with a provisioned user in the Zebra PTT Pro Management Portal. This is required in order for permissions, contacts, groups, and other information particular to that user to be available to the user.

In order for a device to be activated, a user must be provisioned in the Zebra PTT Pro Management Portal. A unique activation code must be associated with the user in the portal (i.e. the user can not be in the inactive state). If the user is in an inactive state (i.e. the user does not have an activation code in the portal), it must be activated as described in the Zebra PTT Pro Management Portal Administrator Guide before proceeding with activation.

After installation of Zebra PTT Pro, the Activation Options screen will open on the device.
1. Enter the activate code associated with the desired user.

   For example, if this device and instance of Zebra PTT Pro should be provisioned as the user Diane.Newland, the activation code associated with Diane.Newland in the Zebra PTT Pro Management Portal should be entered in the Activate Code field. Contact your system administrator if you do not know the proper activation code.

2. Click **Activate** or **Activate with ESN**.

   If the user clicks **Activate with ESN**, then the administrator will need to have populated the device’s serial number for the activation code. In this way, the ESN can be used.

Note for users of the email installation method:

1. Your activation code is contained on the Zebra PTT Pro Setup screen, which you accessed as part of your installation procedure.

2. You have the option to click **Activate Zebra PTT Pro** on the Zebra PTT Pro Setup screen or manually entering the activation code on the Activation Options page as discussed in the previous section.
Figure 6  Zebra PTT Pro Setup Screen

Start by downloading Zebra PTT Pro:

Download Zebra PTT Pro

Once Zebra PTT Pro is downloaded, activate Zebra PTT Pro:

Username  Rachel.Moore
Code  0YKDDVAVKZ

Activate Zebra PTT Pro
Installing Zebra PTT Pro on iOS

Overview
Installation of Zebra PTT Pro is done using iTunes. The installation and activation methods used can either be from an email message or manually downloaded from the Apple App Store.

System Requirements
The following system requirements are necessary:
• Zebra PTT Pro requires iOS 6.0 or later and is compatible with iPhone, iPad, and iPod touch.
• To take advantage of the full Zebra PTT Pro functionality, Location must be enabled in Settings.
• In order to activate the client on the target device, the system administrator must add a corresponding user on the Zebra PTT Pro Management Portal.
• To install via email notification, the system administrator must add a valid email accessible on the target device.

Install
Zebra PTT Pro for iOS is installed using iTunes. The two methods for installation are:
• Email Installation
• Manual Installation

Email Installation
Use this method if the device has a phone number, and a cellular carrier. Or, use this method if the device has an email address. If the Zebra PTT Pro User account is configured with this information, then an activation message will be sent to the device with instructions to set up your account.

To use this method, the following prerequisites exist:
• An Apple account is required to download the software from the Apple App Store.
• An email account accessible on the target device is required.

Follow the procedure to activate from a few taps on the screen:
1. When the system administrator adds the user for this device with a valid email, an email notification is generated. On your device, open this email and click the link contained within.
2. The Zebra PTT Pro Activation screen displays. Select Download Zebra PTT Pro and the Zebra PTT Pro Application Details screen displays. Do not close the Zebra PTT Pro Activation screen.
3. Select the download icon on the Zebra PTT Pro Application Details screen.

**Figure 9  Zebra PTT Pro Application Details Screen**

4. After installation, the download icon will change to OPEN. Do not select OPEN; instead return to the Zebra PTT Pro Activation screen and select **Sign in to Zebra PTT Pro**.

Before performing the activation process, see **Troubleshoot Activation Issues on page 33**.
5. Verify the notification permissions for Zebra PTT Pro and select OK.

Figure 10  Zebra PTT Pro Application Details Screen and Zebra PTT Pro Activation Screen

Figure 11  Zebra PTT Pro Notification Permissions Screen
6. At the Sign In screen, select **OK** and then select **Sign In**.

**Figure 12**  Zebra PTT Pro Sign In Screen

7. Verify the permissions for Zebra PTT Pro to access your location and select **Allow**.

**Figure 13**  Zebra PTT Pro Location Permissions Screen
8. The Make a Zebra PTT Pro Call screen displays with some details about making calls. Select **OK**.

**Figure 14** Make a Zebra PTT Pro Call Screen

The Zebra PTT Pro application is now installed and ready to use.

**Manual Installation**

To use this method, an Apple account is required to download the software from the Apple App Store.

1. When the system administrator adds the user for this device, an activation code is generated. You will need to obtain the activation code to complete activation of your application.

2. On your device, open the Apple App Store. You may be prompted to log in.

3. Search for **Zebra PTT Pro**. The Zebra PTT Pro application displays. Select the icon to see the application details for Zebra PTT Pro.
4. Select the download icon on the Zebra PTT Pro Application Details screen.

5. After installation, the download icon will change to **OPEN**. Select **OPEN** to open the application.
6. Verify the notification permissions for Zebra PTT Pro and select **OK**.

**Figure 18**  Zebra PTT Pro Notification Permissions Screen
7. At the Sign In screen, ignore the username field, enter your activation code in the password field, and select **Sign In**.

Before performing the activation process, see Troubleshoot Activation Issues on page 33.

**Figure 19**  Zebra PTT Pro Sign In Screen

![Zebra PTT Pro Sign In Screen](image)

8. Verify the permission for Zebra PTT Pro to access your location and select **Allow**.
9. The Make a Zebra PTT Pro Call screen displays with some details about making calls. Select **OK**.

The Zebra PTT Pro application is now installed and ready to use.
Installing Zebra PTT Pro Dispatch on a PC

Overview

Installation is initiated through an email. The email is generated when the system administrator adds the new Zebra WFC PTT Pro Dispatch user in the Zebra PTT Pro Management Portal.

System Requirements

The following minimum system requirements are necessary in order to install Zebra WFC PTT Pro Dispatch on a Windows PC:

- A computer running Microsoft Windows 10 x64 operating system.
- Capability to send and receive audio.
  This may consist of a sound card with a headset plugged into it, or other audio routing options.
- Network connectivity with the Zebra PTT Pro Servers.
  For more information, see Firewall Configuration and Troubleshooting.
- Privileges to load software. (For example, Administrator or Administrator-level access, based on your Windows Operating System configuration and privilege structure.

Install

To install Zebra WFC PTT Pro Dispatch on a Windows PC, perform the following steps:

1. Open the Zebra PTT Pro activation email and click the setup link to initiate the installation.

Figure 22  Sample Activation Email with Setup Link

Please use the information on the following link to setup Zebra PTT Pro:

https://provision.pttpro.zebra.com/setup.php?ac=0RFTLEHXMT

For questions and additional support, please contact your internal IT Department help desk.

Thank you,
The Zebra PTT Pro Support Team
2. Click the **Download Zebra PTT Pro** button on the **Zebra PTT Pro Setup** screen, which opens in the browser.

Do not close this screen, because the activation code is needed the first time you run the Zebra WFC PTT Pro Dispatch application.

**Figure 23**  Zebra PTT Pro Setup Screen

3. After the Zebra WFC PTT Pro Dispatch Setup application is downloaded, double-click the downloaded file to run it.

4. If a prompt displays asking to allow this file to run, click **Yes**.

5. On the **Welcome to Zebra WFC PTT Pro Setup Wizard** screen, click **Next**.
6. On the **Select Destination Location** screen, select **Next** to install Zebra PTT Pro in the default location.

7. On the **Select Start Menu Folder** screen, select **Next** to create a shortcut to the Zebra WFC PTT Pro client in the default location.

8. On the **Select Additional Tasks** screen, select **Run Zebra PTT Pro at start up** if you want the client to start when the system starts. This option is not selected by default.

9. On the **Ready to Install** screen, select **Install**.

10. On the **Completing Zebra PTT Pro Setup** screen, click **Finish**.

Setup is complete. The next step is to configure the client to run with multiple profiles, known as personalities, and activate the software.
Activate and Provision

The Zebra WFC PTT Pro Dispatch client can be configured to run with multiple identities, known as personalities. These personalities are provisioned as separate users in the Zebra PTT Pro Management Portal. A separate email activation notification and activation code is received for each personality.

Before performing the activation process, see Troubleshoot Activation Issues on page 33.

Figure 25  Zebra WFC PTT Pro Add New Profile Screen

NOTE: The Profile Manager Solution is not supported with this version of the Zebra WFC PTT Pro client.

Add a Profile to the Client

1. Start Zebra WFC PTT Pro Dispatch to activate, provision, and configure a personality.
   The Add New Profile screen displays.

2. Enter a profile name in the Profile name field. Profile names help you distinguish between multiple profiles.

3. Enter the activation code from the activation email into the Activation Code field.

4. Click Add.
   The Select Profile screen displays the newly created personality.
Installing Zebra PTT Pro Dispatch on a PC

5. Select the **Play** button to start Zebra WFC PTT Pro Dispatch.

After the system provisions the user, **Zebra WFC PTT Pro Dispatch** opens and is ready for use.

### Sign Out of the Client

Sign out off the Zebra WFC PTT Pro Dispatch client to use a different personality or to add a new personality to the client. Zebra WFC PTT Pro Dispatch starts with the previously used personality unless that user signs out.

1. Start the Zebra WFC PTT Pro Dispatch client.

2. Select the **About** button at the top of the application window and then select **Sign Out**.

   The **Select Profile** screen opens.

### Add a New User Profile

You can also configure additional profiles for the Zebra WFC PTT Pro Dispatch client. Zebra WFC PTT Pro Dispatch opens with the previous personality unless that user signed out of the application.

1. Start the Zebra WFC PTT Pro Dispatch client. If the client opens with a personality, sign out

   The **Select Profile** screen opens.

2. Select the plus sign in the window banner to add a personality to the Zebra WFC PTT Pro Dispatch client.
3. Repeat the steps in Activate and Provision on page 29 to add a new profile.

**Post Installation Tasks**

For more information about configuring the Zebra WFC PTT Pro Dispatch client, see the *Zebra PTT Pro Dispatch User Guide*. 


Overview

The Zebra PTT Pro Management Portal provides an interface for administrators or technical representatives to manage an organization's Zebra PTT Pro accounts.

Use the Management Portal to:
• Add, modify, and delete user accounts
• Add, modify, and delete groups
• Modify feature key settings for individual or multiple accounts
• Change individual contacts
• View provisioning history, call history, and overall usage
• Map display with location history options

System Requirements

The Zebra PTT Pro Management Portal is accessed via an Internet browser and does not require any other software. The following browsers are supported:

• Internet Explorer - IE 11 or Edge (new with Windows 10) is required.
• Google Chrome - To avoid compatibility issues, it is recommended to use the latest version.
• Mozilla Firefox - To avoid compatibility issues, it is recommended to use the latest version.

Access Zebra PTT Pro Management Portal

When your system admin account is set up, an email is generated to the address configured in the account. After your system admin account is set up, log into Zebra PTT Pro Management Portal by clicking on the link contained in the email, or via the Zebra PTT Pro home page.

Log In via Email Credentials

Click on the link in the email you received when your system admin account was set up to proceed to the Zebra PTT Pro Management Portal login page.

Log in with your email address and temporary password, also contained in the email. You will be prompted to create a new password.
Activation Troubleshooting

Troubleshoot Activation Issues

- The Zebra PTT Pro server is not aware of the client type before the device has been activated. When using the email method to download software and activate the client, the user must select the download and activation links on the device being activated. Selecting the link on another device may cause incorrect information to be recorded in the server regarding the type of device being activated and interfere with activation on the correct device.

- An activation code may only be used once. Attempting to activate another device with the same activation code will fail. If the application software is deleted and reinstalled on the same device, a new activation code must be generated in the Zebra PTT Pro Management Portal (Resend Activation).

- If the user has previously activated a device and then switched to a new device, the system admin must clear the public key in the Zebra PTT Pro Management Portal; otherwise the user will experience an Authentication error.

- The device installing the app must have the correct date/time; this is sometimes an issue with Android AOSP devices. An incorrect date/time on the device may cause problems with activation (typically failed activation with error code 54 is seen).

- Activation via ESN (Electronic Serial Number) on the device must be preceded by manual datafill of the ESN in the Zebra PTT Pro Management Portal.
Overview

The Zebra PTT Pro client requires specific network routes to communicate between the host device running the client and the remote PTT Pro servers. If the client device has a firewall enabled or is on a network that operates behind a firewall, such as many corporate wired and Wi-Fi networks, then the required communication routes may need to be configured in the firewall. Many issues with the client are caused by missing or incorrect configuration in the firewall.

Configure the Firewall

The table below lists the required routes and the consequences if they are not properly configured in the firewall. [PORT], [PORT-RANGE] and [SERVER] represent enterprise-specific configuration information. Contact IT to determine the proper values for [PORT], [PORT-RANGE] and [SERVER].

Note: while use of IP addresses is acceptable if necessary, it is recommended to define firewall rules using DNS server names whenever possible for future compatibility.

Table 2  Firewall Routes Required by Zebra PTT Pro

<table>
<thead>
<tr>
<th>Description</th>
<th>Server</th>
<th>Type</th>
<th>Port</th>
<th>Potential Client Firewall Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTT Pro Provisioning server, HTTP port</td>
<td>provision.pttpro.zebra.com</td>
<td>TCP 80</td>
<td>The client displays a failure message after attempting to activate with its Activation Code.</td>
<td></td>
</tr>
<tr>
<td>PTT Pro Provisioning server, HTTPS port</td>
<td>provision.pttpro.zebra.com</td>
<td>TCP 443</td>
<td>The client displays a failure message after attempting to activate with its Activation Code.</td>
<td></td>
</tr>
<tr>
<td>PTT Pro Enterprise server, HTTP port</td>
<td>[SERVER]</td>
<td>TCP 80</td>
<td>The client displays a failure message during registration.</td>
<td></td>
</tr>
<tr>
<td>PTT Pro Enterprise server, HTTPS port</td>
<td>[SERVER]</td>
<td>TCP 443</td>
<td>The client displays a failure message during registration.</td>
<td></td>
</tr>
</tbody>
</table>
### Troubleshoot Firewall Issues

This section describes troubleshooting procedures to try if the client cannot connect to a server; in this situation, the client might display a red *Disconnected from server* notification at the top of its main screen. Some procedures may be specific to a Windows computer hosting a dispatch client, while some procedures may also be useful on a device operating with Wi-Fi service.

Before proceeding, contact IT to obtain the correct \[PORT\], \[PORT-RANGE\], and \[SERVER\] values.

1. Check that the firewall is configured correctly.

   Firewall settings should be checked at multiple levels:
   - Contact IT to confirm that the enterprise firewall is configured correctly based on the routing information above.
   - Check the device’s local Windows firewall if applicable. If the firewall is enabled, try the following options:
     - Option 1: Turn the Firewall off.
     - Option 2: Follow the instructions for your Windows release to allow an application (For example, Zebra PTT Pro) through the Firewall.
   - Check if the device is running an Anti-Virus/Firewall program, such as Bitdefender, etc.
     - If such as program is running, then check if its configuration/rules are blocking the Zebra PTT Pro client program network operation.
     - Consider adding an exception, such as adding the Zebra PTT Pro client program or its network routes to the white list of allowed operation. Otherwise, consider disabling the Anti-Virus/Firewall program temporarily to test the Zebra PTT Pro client program operation without it.

2. Check if the device has Internet connectivity.

---

**Table 2  Firewall Routes Required by Zebra PTT Pro**

<table>
<thead>
<tr>
<th>Description</th>
<th>Server</th>
<th>Type</th>
<th>Port</th>
<th>Potential Client Firewall Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTT Pro Enterprise server, PTT Pro Signaling port</td>
<td>[SERVER]</td>
<td>TCP</td>
<td>[PORT]</td>
<td>The client displays a failure message during provisioning, registration, or other operation.</td>
</tr>
<tr>
<td>PTT Pro Enterprise server, PTT Pro Data port range</td>
<td>[SERVER]</td>
<td>UDP</td>
<td>[PORT-RANGE]</td>
<td>The client unsuccessfully sends or receives audio during a call.</td>
</tr>
<tr>
<td>PTT Pro Download server, Client Mapping</td>
<td>download.pttpro.zebra.com</td>
<td>TCP</td>
<td>80</td>
<td>The client map area is black, no map or controls shown.</td>
</tr>
<tr>
<td>Google, PTT Pro Client Mapping Tiles</td>
<td>maps.google.com</td>
<td>TCP</td>
<td>80</td>
<td>The client map area is black, no map or controls shown.</td>
</tr>
</tbody>
</table>

**NOTE:** The Google server rotates through multiple IP addresses, so specifying by DNS name is strongly recommended.
• Ping a well known address (for example, "ping www.google.com"). If the ping command is successful, the device has internet connectivity. You may also ping the servers above ("ping provision.pttpro.zebra.com").

3. Check if the device IP address is constant or changing over time.
   • Does the device’s IP address change over time? Each time the device’s IP address changes, the dispatch client will re-register with the server.
   • Display the device’s IP address at different times (for example, ipconfig command for Windows) such as each hour or day and note the IP Address value each time.

4. Check that the Zebra PTT Pro client can connect to the Zebra PTT Pro server TCP port.
   There are multiple methods for checking TCP/UDP connectivity between the Zebra PTT Pro client and server.
   a. The nmap command: Nmap is a useful port diagnosis tool that is available for Windows, although you may need to install it. The Windows procedure is below.
      i. Start a Windows Command Shell.
      ii. Run nmap for each TCP port number in the table above. Example: nmap –sT –p 80 [SERVER]. Examine the results for a successful response.
   b. Run nmap for each UDP port number in the table above. Example: nmap –sU –p [PORT] [SERVER].
      The telnet command: Telnet establishes a TCP connection between the originating computer and the specified destination. The Windows procedure is below.
      i. Start a Windows Command Shell.
      ii. Run telnet for each TCP port number in the table above. Example: telnet [SERVER] 80. Examine the results for a successful response (the Command Shell clears to all black).
      iii. Telnet cannot be used for UDP.
   c. Commercial and free software is available, as well as free online services, to check TCP and UDP port connectivity. Consult your IT department for more information.

5. For a Windows client, check if the Windows User account has the correct privileges for installing and running the client.
   On a Windows single or multiple User work station: Verify that the Zebra PTT Pro Dispatch client is installed from and run by a Windows User account that has appropriate network and other privileges, such as the Windows Administrator account or an account with Administrator privileges.

6. For a Windows client, check the Zebra PTT Pro Dispatch client version number and ensure the most current version is installed.
   a. Start Zebra PTT Pro Dispatch, if possible.
   b. Click the About button.
      Note the Zebra PTT Pro Dispatch - Version value displayed in the About screen.
   c. Click Cancel to close the About screen.
   d. Contact IT to confirm the Zebra PTT Pro Dispatch client version number.

7. Check if more than one dispatch client is simultaneously running on the computer.
   • If more than one dispatch client is running on the computer, then one of the clients usually stays connected to the server, while each other client(s) displays a red Disconnected from server notification at the top of its main screen.
• Right-click the Windows task bar and select the Task Manager menu item. Then, view the Processes tab, where a single Zebra PTT Pro Dispatch client should be displayed under the OpenJDK Platform binary process.
• The Windows task bar should contain a single Zebra WFC PTT Pro client icon.

8. Check if access to the Google DNS server names for Mapping Tiles are properly configured.
   • maps.googleapis.com
   • maps.gstatic.com
   • khmdb0.googleapis.com
   • khmdb1.googleapis.com
   • khm.googleapis.com
   • khm0.googleapis.com
   • khm1.googleapis.com
   • khms0.googleapis.com
   • khms1.googleapis.com
   • khms2.googleapis.com
   • khms3.googleapis.com
   • https://maps.googleapis.com/

Email Support

If you are still having connectivity issues, you may use the Email Support option from within Zebra PTT Pro Dispatch. This procedure also uploads log files to the support team, allowing for a more thorough investigation into the issue. The procedure is as follows:

1. Start Zebra PTT Pro Dispatch, if possible.
2. Email support from within the client via the Help > Email Support menu option.
3. Click the Upload button in the Zebra PTT Pro Support screen.
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Index

C
conventions
  notational ........................................ 5

D
dispatch
  activate, provision, configure ................. 29

F
firewall
  configure ........................................ 34
  troubleshoot issues .............................. 35

I
install methods
  email for android ............................. 12
  google play for android ...................... 9
  iTunes for iOS ................................ 16
  side-load for android ......................... 11
installing
  android ........................................ 8
  dispatch ....................................... 26
  iOS ............................................. 16

M
management portal ................................ 32

S
service information .............................. 6
support ........................................... 6
Symbol Technologies support .................... 6