# **Profile Manager** and **PTT Pro**

# **Workcloud Communication**



# **Azure AD Integration Guide**

#### 2024/05/08

ZEBRA and the stylized Zebra head are trademarks of Zebra Technologies Corporation, registered in many jurisdictions worldwide. All other trademarks are the property of their respective owners. ©2023 Zebra Technologies Corporation and/or its affiliates. All rights reserved.

Information in this document is subject to change without notice. The software described in this document is furnished under a license agreement or nondisclosure agreement. The software may be used or copied only in accordance with the terms of those agreements.

For further information regarding legal and proprietary statements, please go to:

SOFTWARE: zebra.com/linkoslegal. COPYRIGHTS: zebra.com/copyright. PATENTS: ip.zebra.com. WARRANTY: zebra.com/warranty. END USER LICENSE AGREEMENT: zebra.com/eula.

# Terms of Use

### **Proprietary Statement**

This manual contains proprietary information of Zebra Technologies Corporation and its subsidiaries ("Zebra Technologies"). It is intended solely for the information and use of parties operating and maintaining the equipment described herein. Such proprietary information may not be used, reproduced, or disclosed to any other parties for any other purpose without the express, written permission of Zebra Technologies.

#### **Product Improvements**

Continuous improvement of products is a policy of Zebra Technologies. All specifications and designs are subject to change without notice.

### **Liability Disclaimer**

Zebra Technologies takes steps to ensure that its published Engineering specifications and manuals are correct; however, errors do occur. Zebra Technologies reserves the right to correct any such errors and disclaims liability resulting therefrom.

### **Limitation of Liability**

In no event shall Zebra Technologies or anyone else involved in the creation, production, or delivery of the accompanying product (including hardware and software) be liable for any damages whatsoever (including, without limitation, consequential damages including loss of business profits, business interruption, or loss of business information) arising out of the use of, the results of use of, or inability to use such product, even if Zebra Technologies has been advised of the possibility of such damages. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

# Introduction

This guide describes the steps for an administrator to configure Azure AD, PTT Pro, and Profile Manager to provide authentication, provisioning, and transformation using Azure AD.

# **Configuring Azure AD**

Create a new app registration for Zebra PTT Pro. Create and copy the client secret to configure Zebra PTT Pro.

1. Log in to the Azure instance and select Azure Active Directory > App Registrations > All Registrations.

Home > wfc connect				
wfc connect   App r	egistrations 🖉 …			
Overview     Preview features     X Diagnose and solve problems	New registration     Compoints     Propoints     Provide applications     Deviced applications     Deviced applications     Provide applications     Provide applications	Download      Preview features	🖉 Got feedb	ack?
Manage	2 applications found Display name 1:	Application (client) ID	Created on $\uparrow_{\downarrow}$	Certificates & secrets
Groups	Azure AD OIDC Test2	3305d28b-7b5a-42b8-96d3-627469	8/22/2023	Current
External identities	A Acure AD Test for Documentation	157da5a6-1df6-468c-8ca9-3d2a946	8/21/2023	Current
& Roles and administrators	-			
Administrative units				
👍 Delegated admin partners				
Enterprise applications				
Devices				
App registrations				

2. Select the + New Registration from the menu to register a new application.

3. Enter the application name and select the first option from Supported account types .

Home / App registrations /			
Register an application			
* Name			
- Name Than and the second se			
Nov 90 000 1992			
Supported account types			
When can use this association or access this API?			
Accounts in this organizational directory only (w/c connect only - Single tenant)			
Accounts in any organizational directory (Any Azure AD directory - Multiterant)			
Accounts in any organizational directory (Any Asure AD directory - Multitenant) and personal Microsoft accounts (e.g. Skype, Xbos)			
Personal Microsoft accounts only			
Help me choose			
Redirect URI (optional)			
We'll return the authentication response to this URI after successfully authenticating the user. Providing this now is optional and it can be			
changeo atter, ou a visue in requireo or most autorenocation scenarios.			
Public client/native (noble , v) e.g. myapp://wuth v)			
Register an app you're working on here. Integrate gallery apps and other apps from outside your organization by adding from Enterprise applications.			
By proceeding, you agree to the Microsoft Platform Policies C <sup>2</sup>			
Register			

- 4. Click Register.
- **5.** Select the newly created app from the app registrations and navigate to the **Authentication** tab on the right menu.
- 6. Select the + Add a platform.
- 7. Click the Authentication menu option on the left tab.
- 8. On the right panel, enter https://localhost for the redirect URI. Also, select the bottom two checkboxes shown in the following screenshot.

9. In Advanced settings , select allow public client flows.



**10.** From the left panel menu, select the **Certificates and Secrets** to add in a client secret. The client's secret expiration should be set to a value agreed upon with the customer.

After adding, copying, and saving, the client's secret is important as it cannot be retrieved later.

Azure AD OIDC Test	t2   Certificates & secrets 🔗	***		
Search «	R Got feedback?			
B Overview				
Quickstart	Got a second to give us some feedback? →			
💉 Integration assistant				
Manage	Credentials enable confidential applications to iden scheme). For a higher level of assurance, we recomm	tify themselves to the mend using a certifica	) authentication service when receivir ite (instead of a client secret) as a cre	vg tokens at a web addressable location (using an dential.
Branding & properties				
Authentication	Application registration certificates, secrets and	federated credentials c	an be found in the tabs below.	
Y Certificates & secrets				
Token configuration	Certificates (0) Client secrets (1) Federal	ted credentials (0)		
<ul> <li>API permissions</li> </ul>	A secret string that the application uses to prove it	ts identity when requ	esting a token. Also can be referred t	o at application pastword
Expose an API	r sources and grant on approximation and to prove t	a second marriedo		a a apportant parameter.
R App roles	+ New client secret			
A Owners	Description	Expires	Value 🖸	Gr Copied ind et ID
& Roles and administrators	Azure AD OIDC Test2	11/20/2023	57A8Q-4wqzvN4afd3.ğ3o-tX.FA3L	Jw80

# **Configuring the Token**

Configure the security tokens so that Zebra PTT Pro users can authenticate.

1. From the Token configuration menu, select Access from Token type. Enable the Given Name, Family Name, and upn as well as any other attributes the customer may require.

Search R Cot feedback?	Once a token type is selected, you may choose from a list of available optional claims.
22 Denview Optional claims	* Taken type
Original data want to particular attitical interaction while a state of the second secon	Access and ID tokens are used by applications for authentication. Learn morecy
Magnition assistant	0.0
+ Add optional chaim + Add groups chaim	Access
Manage	O same
Banding & properties Claim 1 Description	The sector of th
Authentication No results	Care T Description
Certificates & second	Carp Spectra and the second se
2 IX Taken configuration	Director Director Construction of Comparison
+ AP persisions	
Expose an API	L oprior
II. Approles	onpremused On-premises security identifier
Ja Owners	preferred_username Provides the preferred username claim, making it ex
Roles and administrators	pwd_exp The datatime at which the password expires
Manifest	peel_uni A UR; that the user can visit to change their passes
	id Session ID, used for per-session user sign out
Buggett + Treutleshooting	tenant_ctry Resource tenant's country/region
@ Troublehooting	tenant_region_scope Region of the resource tenant
A New Support request	g upn An identifier for the user that can be used with the s
	verified, primary, email Sourced from the user's PrimaryAuthoritativeEmail
	verified, secondary, email Sourced from the user's SecondaryAuthoritativeEme
	unet VNET specifier information
	whether the application can handle claims challeng
	ums pdl Preferred data location
2	area al User preferred language
	U um tal Tanat aviorad languate
	And Canad

2. From the Expose an API menu tab, select +Add a scope.

The **Application ID URI** is automatically populated.

- 3. Enter the scope name, Admin consent name, , and description.
- 4. From Who can consent, select Admins and users.
- 5. When done, select add scope.

D Seatth	- P Get Invehach?	Scope name * O
		AsuraDODCTest2
Cvenview		4pr//3354286-7614-4286-9683-42749985396/AbireAD010(1682-
<ul> <li>Quickstart</li> </ul>	Ablection (2) (as   shr/1392/article_1229-4136-2443602349 (2) (St	Whe can consent? O
💉 Integration assistant		Admine and users Admine only
	Scopes defined by this API	Admin consent display name * 🔘
Manage	Define custom scopes to restrict access to data and functionality protected by the API. An application that requires access to parts of this	AsureADDIDCTest2
Branding & properties	API can request that a user or admin consent to one or more of these.	
Authentication	Adding a scope here creates only delegated permissions. If you are looking to create application-only scopes, use 'App roles' and define app	roles assignable to application Admin consent description * 🕐
	type. Go to App roles.	AsureADOIDCTest2 Testing
Certificates & secrets	+ titlerman	
III Token configuration	T Nod a scope	
· API permissions	Scopes Who can consent Admin consent display User consent display	na State User consent display name. O
	No scopes have been defined	e.p. Read your lifes.
Ge Expose an API		User research description.
R App roles		e.e. Allows the sen to read using files
A Owners	Authorized client applications	and second and the second second
2. Roles and administrators	Authorizing a client application indicates that this API trusts the application and users should not be asked to consent when the client calls	
III Manifest	DIS API.	State O
		Linking Distret
Support + Troubleshooting	+ Add a client application	
@ Troubleshooting	Client Id Scopes	
New support request	No client applications have been authorized	

**6.** After the scope has been added, select the **Add a client application**. Add the client ID and select the Authorized scopes. The client ID can be found on the overview page of the Azure instance.

7. Add the client ID, and select the Authorized scopes. The client ID can be found on the overview page of the Azure instance.



# **PTT Pro Setup**

When PTT Pro is deployed, Zebra requires the following information to configure the PTT Pro Server and Profile Manager for the customer.

- PTT Pro configuration elements:
  - OAuth URL
  - Access URL
  - OAuth Token

The configuration elements are available through the Well-Known URL.



#### NOTE:

- To support the shared-device model, the serial numbers of each device must be entered into the PTT Pro Server.
- The PTT Pro Server can support a mix of OAuth and Activation Code device users.
- Each device user must have an OAuth user name to authenticate to the Azure AD.

#### Finding a Well-Known URL

Customers may know their well-known URL. The construction of a well-known URL is typical; for example https://login.microsoftonline.com//.well-known/openid-configuration, although
there can be some differences. In this URL, the <Tenant-ID> is used as a placeholder for the actual Tenant
ID.

#### About the Well-Known URL for Azure AD

The Well-Known URL concept was created to provide a publicly available central location for server and metadata resources. It provides publicly available information about a site. A Well-Known URL defines a sign-in flow that enables a client application to authenticate a user and obtain information (or claims) about that user, such as the user name, email, etc. Identifying URLs, encryption schemes, and other information useful in establishing server-to-server communications is useful.

#### **Configuring the PTT Pro Server and Clients**

Configure the PTT Pro Server with the OAuth parameters to support authentication with the Azure AD.

On the PTT Pro server, the OAuth URL, Access URL and Certificates must be configured.

SUPPLIC Enabled No.
---------------------

If the user runs the PTT Pro without Profile Manager, the Client ID and Client secret must be configured within the PTT Pro clients. The Client ID and the Client secret are provided with a PVM token that the user can scan when launching PTT Pro. The components needed for basic configuration are:

- oAuthClientID
- oAuthClientSecret
- oAuthBasicHeader



# **Configuring Profile Manager to Support Azure AD**

The Profile Manager configuration requires five elements; each element can be derived from the Well-Known URL based on the Azure Configuration or the Token Certificate.

Enter each of the elements in the **OAuth Details** screen, as shown in the following example:

# Profile Manager and PTT Pro Azure AD Integration Guide

Product Sy	stem Test	PRODTest/ExternalTeam	Tenant1	Tenant1
1	Edit Customer			
	OAuth Details:			
	Host Url			
	login.microsoftoni	ine.com		
andada	Authentication Path			
No descri	/40-04-04-04-04	)/oauth2/author	ize	
	Token Path			
	/40mm/shimmenum	0/oauth2/token		
	Client ID			
	15%84/109986	226		
1	Client Secret Key			
99999				0
l enant fo	Token Username			
1	unique_name			
	Client Authentication	*		
	Send client creden	tials in body		~

 Table 1
 Fields Description Details

Name	Description
Host URL	This is the customer domain. The Host URL is the prefix for the Authentication and Token Path, https is assumed and automatically added by the system.
Authentication Path	The Authentication Path is appended to the authorization_endpoint as captured in the JSON response from the Well-Known URL.
Token Path	The token path is appended to the token_endpoint as captured in the JSON response from the Well-Known URL.
Client ID	and the Application ID from Azure AD.
Client Secret Key	
Token Username	The Token Name can be determined by using the JWT.IO website to examine the access token retrieved by Postman.
Client Authentication	Send client credentials in the body.

# **Revision History**

Version	Date	Description
MN-004943-01EN	05/08/2024	First version.



www.zebra.com