

PTT Pro

Workcloud Communication



ZEBRA

Okta Integration Guide

2024/01/22

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Introduction

Workcloud Communication supports OAuth2 authentication using the Okta identity provider. Using OAuth2, multiple users can share a single device. This is referred to as the Shared Device Model.

When you install a Workcloud Communication solution with AD/ADFS services, User Authentication, User Provisioning, and Attribute Transformations are possible using LDAP services. The Okta integration only supports User Authentication. User Provisioning and Attribute Transformations are supported indirectly by using the Flat File Import functionality provided by Workcloud Communication.

The Okta integration uses the OpenID Connect (OIDC) protocol, which requires the Authentication Connection Service (ACS). ACS enables Workcloud Communication to authenticate with Okta using OIDC.

This document describes the Okta and ACS configuration required to support user authentication, and how this affects the configuration of PTT Pro for Android and Workcloud Communication Profile Manager.

Requirements

You must have an Okta instance configured and running and the PTT Pro for Android users must be provisioned in the Okta IdP.

- Okta IdP is installed and in operation.
- Users are provisioned in the Okta IdP.

Configuration Overview

The configuration process is divided into four phases. Complete each phase sequentially because each phase uses configuration elements from the previous phase.

Phase 1

Establish the Realm and Client on the ACS server. The Realm is required to create a client, and the client URL is required to configure Okta.

Phase 2

Create the Application in the Okta server. In this phase, the Authentication and Token Access URLs are created along with the Client ID and Client Secret. These elements are required to create the Identity Provider connection in the ACS.

Phase 3

Create the Identity Provider and finalize the ACS configuration.

Phase 4

Configure the PTT Pro Server OAuth connection with the URLs and Certificate needed to connect to the ACS.

Phase 1 – Configuring the ACS

In Phase 1 you will create the realm, copy the signing certificate, configure the client, and create the user property matcher.

In Phase 1, complete the following tasks:

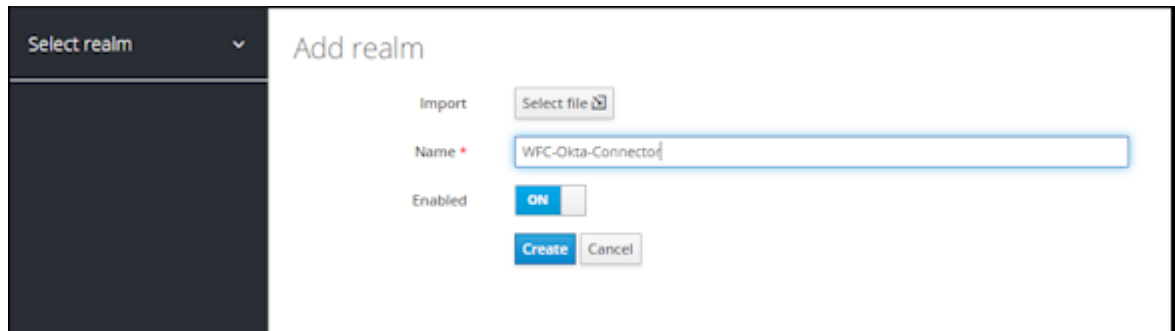
- Create the realm.
- Retrieve the signing certificate for the realm.
- Configure the client.
- Create the user property mapper.

- Capture the IdP redirect URL.

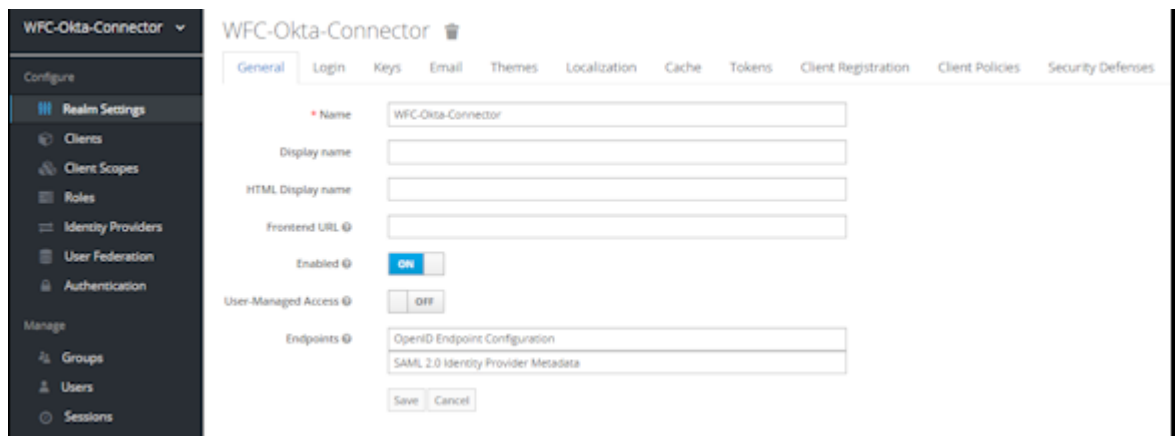
Creating the Realm

Create the realm and enter a meaningful name. The following example uses WFC-OKTA-Connector for the realm name.

1. Select **Add realm** from the **Select realm** menu.



2. In the **Name** text box, enter the name for the new realm.
3. Click **Create**.

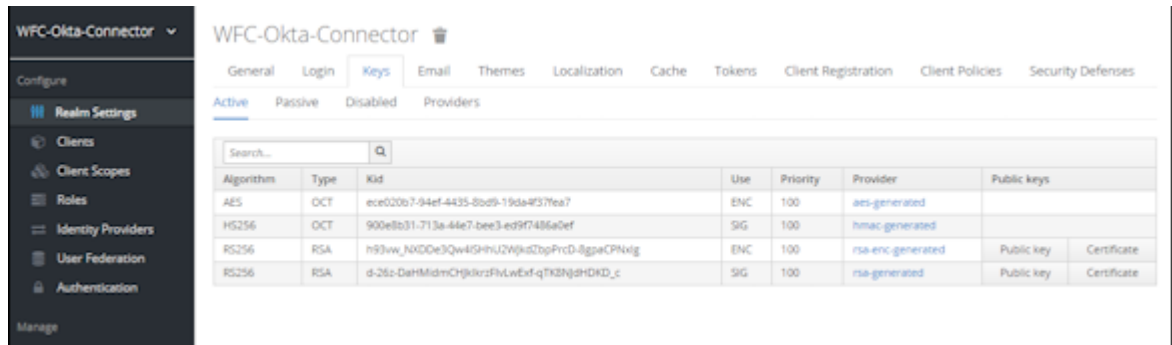


The realm is enabled, and the OpenID endpoint is created.

Retrieving the Signing Certification of the Realm

The signing certification is required to configure the PTT Pro Server.

1. Navigate to **Realm Settings > Keys**.



Algorithm	Type	Kid	Use	Priority	Provider	Public keys
AES	OCT	ece020b7-94ef-4435-80d9-19da4f377ea7	ENC	100	aes-generated	
HS256	OCT	900e8b31-713a-44e7-bee3-ed97f486a0ef	SIG	100	hmac-generated	
RS256	RSA	h93uw_NXDDe3Qw4Gh9hU2WjKtZpPrD-8gpeCPNwig	ENC	100	rsa-enc-generated	Public key Certificate
RS256	RSA	d-26z-DaHMidmChgkkrzFvLwExf-qTK3Nq8HDKD_c	SIG	100	rsa-generated	Public key Certificate

2. Copy the RS256, RSA signing certificate, to a convenient local location on your computer. You use this signing certificate to configure the PTT Pro Server.



NOTE: There are two RSA keys. One is for encoding, ENC, and the other for Signing, SIG. The PTT Pro Server uses the signing certificate.



Algorithm	Type	Kid	Use	Priority	Provider	Public keys
AES	OCT	ece020b7-94ef-4435-80d9-19da4f377ea7	ENC	100	aes-generated	
HS256	OCT	900e8b31-713a-44e7-bee3-ed97f486a0ef	SIG	100	hmac-generated	
RS256	RSA	h93uw_NXDDe3Qw4Gh9hU2WjKtZpPrD-8gpeCPNwig	ENC	100	rsa-enc-generated	Public key Certificate
RS256	RSA	d-26z-DaHMidmChgkkrzFvLwExf-qTK3Nq8HDKD_c	SIG	100	rsa-generated	Public key Certificate

3. Save the certificate in the X.509 format.

The Realm is established.

Sample Signing Certificate



NOTE: The line length is formatted to fit on the page.

```
MIICszCCAZsCBgGBpcwvCzANBgkqhkiG9w0BAQsFADAdMRswGQ
YDVQQDDBJXRkMtT2t0YS1Db25uZWNo0b3IwHhcnMjIwNjI3MTUzM
jEwHhcnMjIwNjI3MTUzMzUwWjAdMRswGQYDVQQDDBJXRkMtT2t0
YS1Db25uZWNo0b3IwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggE
KAoIBAQCacby8lfrJeeDXn8VeKaxMBxxuQAKhiC/tnKC6q2MKCW
IHESQqK21HLZ/Pj1HbnDM7GGpBn7zvHqM+aCJ0XjyZiYxy3wkisB
JTqdc6JEzdEXwXkZ58huenh/PTkpNQy0JLzwcOyzG+iQWwGTy
b/xBuBtY9QJoS2yhSHKU53c8txyytLTqurYNUPTfQC1bcZrQJpe
onAmmH4+FjM5sfOIQ2807xD1g69IQ1hiW3+y1CsMoLp4F68SdQ+
pmkwH8jmIdLGWmIn6R1FscnrdLDiyZc84sZcMCKTMnCPYU3F
GQQZDHSt1goN+QDDfMhCUzbm1zQ4kSXc0kzHo0aG44zAgMBAAE
```

```
wDQYJKoZIhvcNAQELBQADggEBAFv16+350lKPSbEWPUPttNJpWf
WGTBpcVGohNmt8e2tfVj0GT7xh4zvNmQvxh+eaewhzuwKhpT/J
G8dyuQVhF4020s2W8YPZqvtLWS0c0Y9kljqRl1A3z1o2w01IfDU
+D5aaGSkylyBxL7HkuJsPoWtwUMyfbZNH14Xp4Scwb25BfddECP
SBNCGJ+j4s1rwfac5YVKTswjcePF+r4VshZEftgdMhjJha1wI7G
KgZrBX0agZCA6ZfeQMINLTkBSXW6m+xkkcU/owmMXsGJ0TEQ0TT
0HefiBXq0Jt/0h/NReuc6Qk4ALJHh0Cj9FhAT20TPvPbn7Yj3vB
7Tne+dMk+p1A=
```

Creating the Client

Create a client so that PTT Pro for Android users can authenticate using Okta.

1. Select **Clients** to display the list of default clients.

Client ID	Enabled	Base URL	Actions		
account	True	https://wfc-keycloak2.pttpro.zebra.com/auth/realms/WFC-Okta-Connector/account/	Edit	Export	Delete
account-console	True	https://wfc-keycloak2.pttpro.zebra.com/auth/realms/WFC-Okta-Connector/account/	Edit	Export	Delete
admin-cli	True	Not defined	Edit	Export	Delete
broker	True	Not defined	Edit	Export	Delete
realm-management	True	Not defined	Edit	Export	Delete
security-admin-console	True	https://wfc-keycloak2.pttpro.zebra.com/auth/admin/WFC-Okta-Connector/console/	Edit	Export	Delete

2. Click **Create**.
3. In the **Client ID** text box, enter a name for the client.

The client name in this example is oidc.client.

WFC-Okta-Connector > Add Client

Add Client

Import

Client ID *

Client Protocol

Root URL

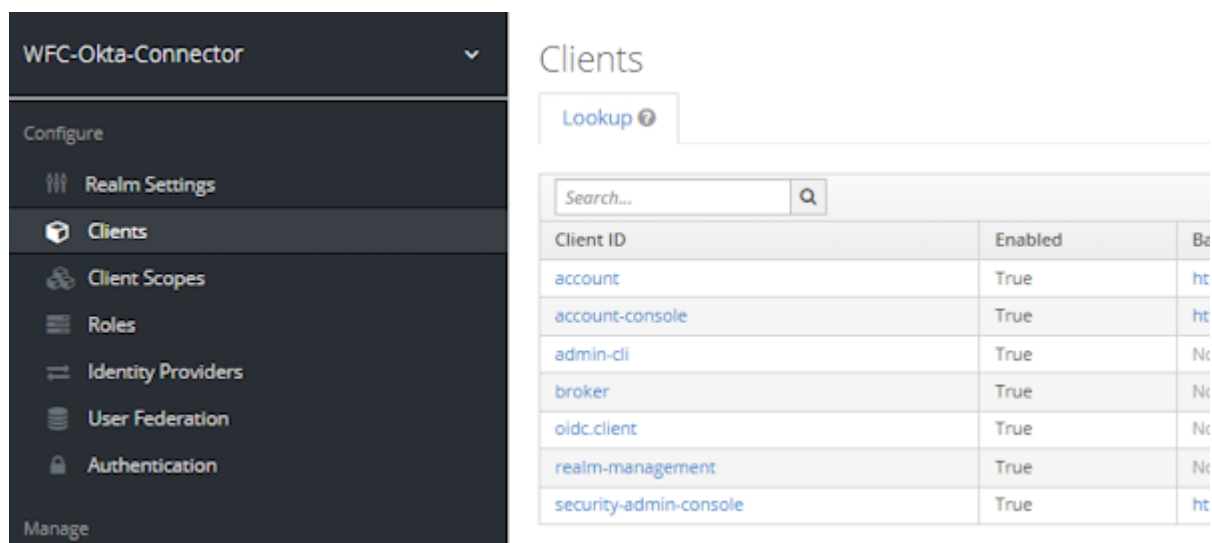
4. Verify that the **Client Protocol** is openid-connect.
5. Click **Save** to proceed and configure the client.

Configuring the Client

Complete the configuration of the client to ensure the integration with PTT Pro for Android.

1. Click **Clients** under the **Configure** menu.
2. Select the client.

The client name in this example is oidc.client



The screenshot shows the Okta Admin Console interface. On the left, a dark sidebar contains the 'Configure' menu with options: Realm Settings, Clients (selected), Client Scopes, Roles, Identity Providers, User Federation, and Authentication. The main content area is titled 'Clients' and includes a 'Lookup' button and a search bar. Below the search bar is a table listing various clients.

Client ID	Enabled	Base URL
account	True	ht
account-console	True	ht
admin-cli	True	Nc
broker	True	Nc
oidc.client	True	Nc
realm-management	True	Nc
security-admin-console	True	ht

3. Select **Settings** and verify the following settings.

The screenshot shows the Okta Admin Console interface. On the left is a navigation menu with sections 'Configure' and 'Manage'. Under 'Configure', 'Clients' is selected. The main area shows the configuration for 'Oidc.client'. The 'Settings' tab is active, displaying various configuration options:

- Client ID:** oidc.client
- Name:** (empty field)
- Description:** (empty field)
- Enabled:** ON
- Always Display in Console:** OFF
- Consent Required:** OFF
- Login Theme:** (empty dropdown)
- Client Protocol:** openid-connect
- Access Type:** confidential (highlighted with a blue border)
- Standard Flow Enabled:** ON
- Implicit Flow Enabled:** OFF
- Direct Access Grants Enabled:** ON
- Service Accounts Enabled:** OFF
- OAuth 2.0 Device Authorization Grant Enabled:** OFF
- OIDC CIBA Grant Enabled:** OFF
- Authorization Enabled:** OFF
- Root URL:** (empty field)
- Valid Redirect URIs:** https://localhost

- **Client Protocol** is openid-connect.
- **Access Type** is confidential
 - The access type public works but does not use a client secret.
 - Switching from confidential to public and back to confidential resets the client's secret to a new value.
 - The access type bearer-only does not work.
- **Standard Flow Enabled** is ON. If not selected, PTT Pro for Android displays a blank screen and does not prompt for credentials.
- **Direct Access Grants Enabled** is ON. If not selected, PTT Pro for Android displays a login screen but then displays a blank screen and does not complete the connection.
- Enter `https://localhost` in the **Valid Redirect URIs** field. An invalid URI generates an error on the device when connecting to the ACS; the login screen does not display.

- Click **Save** to continue.

* Valid Redirect URIs

https://localhost

Base URL

Admin URL

Web Origins

Backchannel Logout URL

Backchannel Logout Session Required

ON

Backchannel Logout Revoke Offline Sessions

OFF

> Fine Grain OpenID Connect Configuration

> OpenID Connect Compatibility Modes

> Advanced Settings

> Authentication Flow Overrides

Save **Cancel**

Copying the Client Secret

The client secret is used to configure PTT Pro for Android. Copy the secret and the Client ID.

- Click the **Credentials** tab to access the client secret.

WFC-Okta-Connector

Configure

Realm Settings

Clients

Client Scopes

Roles

Identity Providers

User Federation

Authentication

Manage

Clients > oidc.client

Oidc.client

Settings **Credentials** Keys Roles Client Scopes Mappers Scope Revocation Sess

Installation

Client Authenticator

Client Id and Secret

Secret

31941cec-9b16-46b8-8749-2e6c3fa4ff23

Regenerate Secret

Registration access token

Regenerate registration access token

- Copy the client secret.
The client secret is automatically generated.
- Save the client secret and the client ID, oidc.client, in this example, to a convenient location.

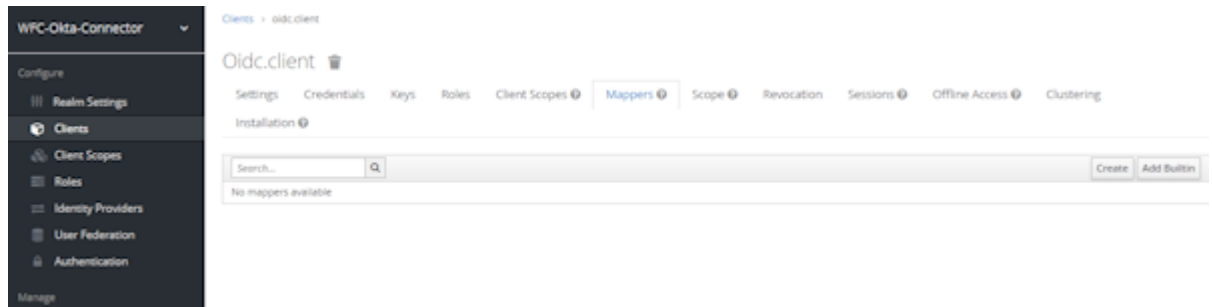
Example Client Secret

31941cec-9b16-46b8-8749-2e6c3fa4ff23

Creating a User Property Mapper

This task maps the token claim `sub` to the `username` attribute used by PTT Pro for Android. If this procedure is not completed, the device user is presented with the credentials screen, but after entering the credentials, the device displays a blank screen.

1. Click the **Mappers** tab in the client definition.



2. Click **Create** to define a mapping.
 - Enter username in the **Name** field.
 - Select **User Property** from the **Mapper Type** menu.
 - Enter username in the **Property** field.
 - Enter sub in the **Token Claim Name** field.
 - Select **String** from the **Claim JSON Type** menu.

 The screenshot shows the 'Create Protocol Mapper' form. The breadcrumb trail at the top reads 'Clients > oidc.client > Mappers > Create Protocol Mappers'. The form fields are as follows:

- Protocol**: openid-connect
- Name**: username
- Mapper Type**: User Property (selected from a dropdown)
- Property**: username
- Token Claim Name**: sub
- Claim JSON Type**: String (selected from a dropdown)
- Add to ID token**: ON (toggle switch)
- Add to access token**: ON (toggle switch)
- Add to userinfo**: ON (toggle switch)

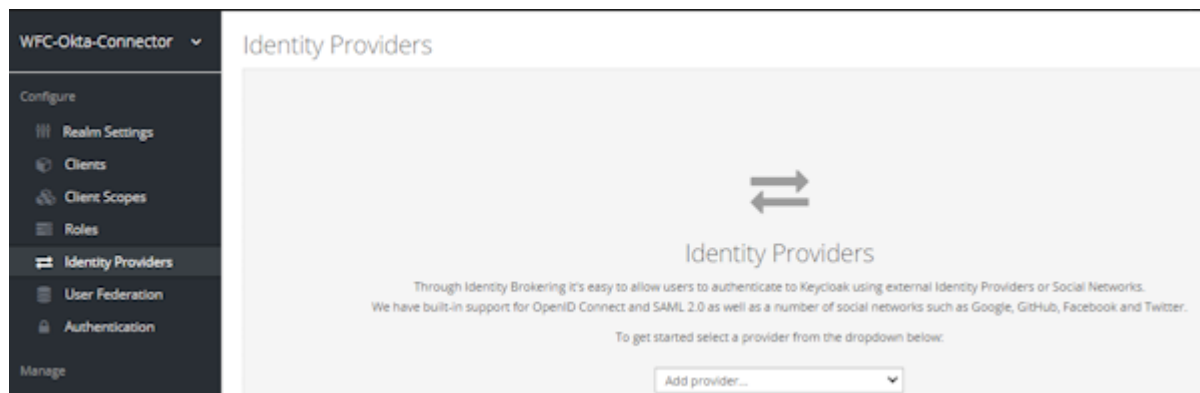
 At the bottom of the form are 'Save' and 'Cancel' buttons.

3. Click **Save** to return to the client definition screen.

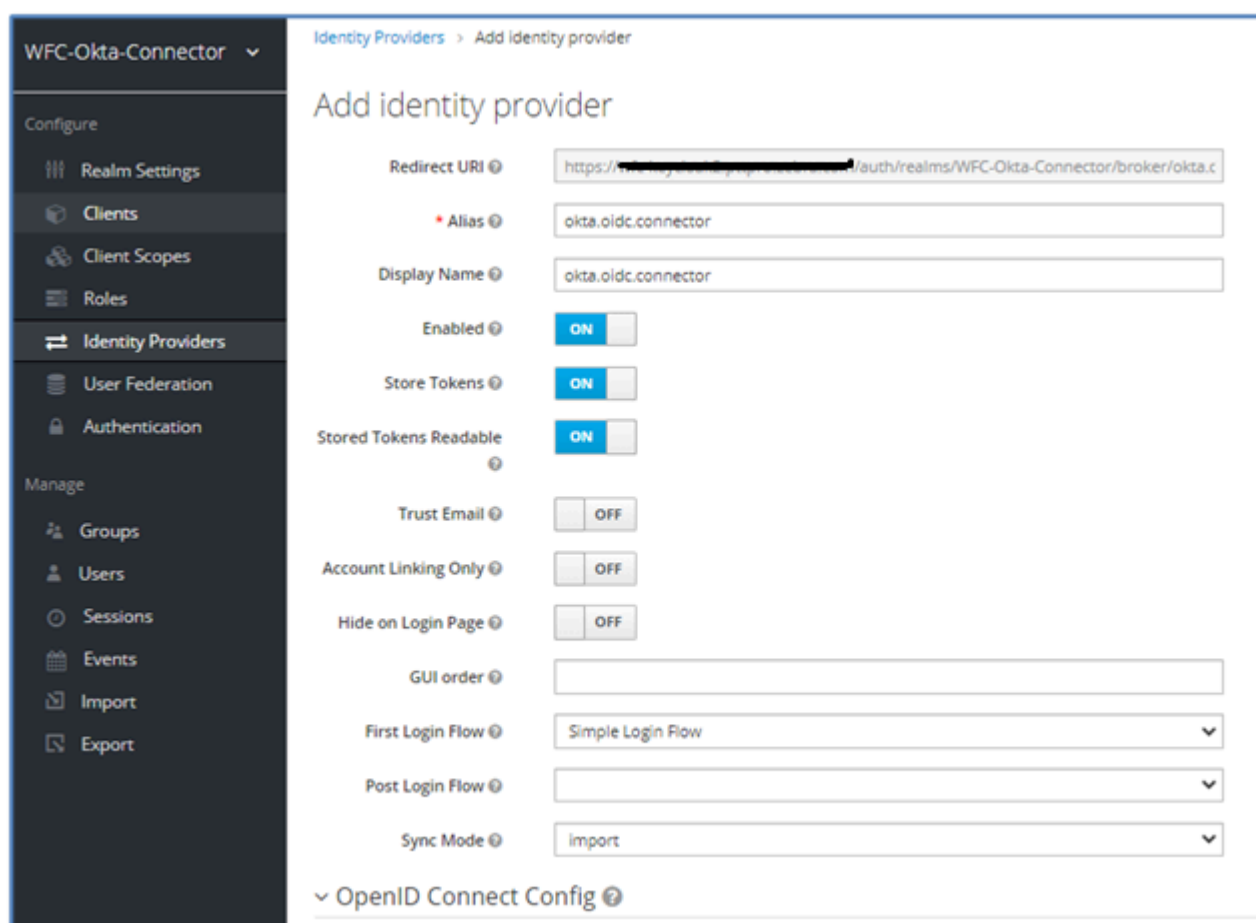
Copying the Identity Provider Redirect URI

Copy the Redirect URI from the ACS to complete the Okta configuration. The ACS IdP requires information from the Okta application configuration, which you complete after the Okta Application is established.

1. Select **Identity Providers** from the client configuration.



2. Select **Open ID Connect 1.0** from the menu to display the redirect URI.
3. Copy the redirect URI from the **Redirect URI** field.



Example Redirect URI

In this example, the redirect URI is: `https://<ACS-server-name>/auth/realm/WFC-Okta-Connector/broker/okta.oidc.connector/endpoint`.

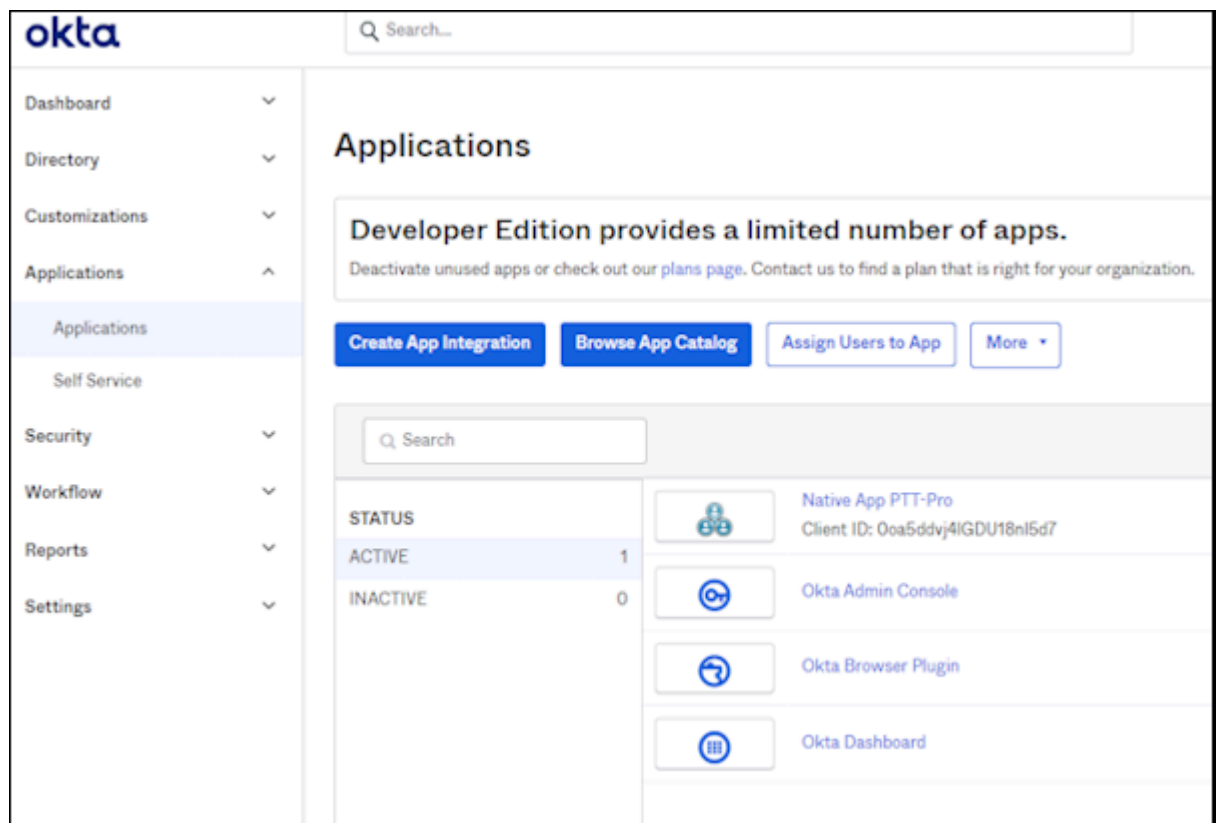
Phase 2 – Configuring Okta

In this phase, you add and configure a new Workcloud Communication native application using configuration elements from the ACS. The users should already exist in the Okta system.

Creating an App

Use Okta to create a new native application for PTT Pro for Android.

1. Open Okta and navigate to **Applications > Applications** and click **Create App Integration**.



2. Select **OIDC - OpenID Connect** as the **Sign-in method**.

3. Select **Native Application** as the **Application type**.

Create a new app integration

Sign-in method

[Learn More](#)

☒ **OIDC - OpenID Connect**

Token-based OAuth 2.0 authentication for Single Sign-On (SSO) through API endpoints. Recommended if you intend to build a custom app integration with the Okta Sign-In Widget.

☐ **SAML 2.0**

XML-based open standard for SSO. Use if the Identity Provider for your application only supports SAML.

☐ **SWA - Secure Web Authentication**

Okta-specific SSO method. Use if your application doesn't support OIDC or SAML.

☐ **API Services**

Interact with Okta APIs using the scoped OAuth 2.0 access tokens for machine-to-machine authentication.

Application type

What kind of application are you trying to integrate with Okta?

Specifying an application type customizes your experience and provides the best configuration, SDK, and sample recommendations.

☐ **Web Application**

Server-side applications where authentication and tokens are handled on the server (for example, Go, Java, ASP.Net, Node.js, PHP)

☐ **Single-Page Application**

Single-page web applications that run in the browser where the client receives tokens (for example, Javascript, Angular, React, Vue)

☒ **Native Application**

Desktop or mobile applications that run natively on a device and redirect users to a non-HTTP callback (for example, iOS, Android, React Native)

Cancel

Next

4. Click **Next**.

Configuring the New Native App

Configure the app with the described settings. Settings include naming the app and adding the redirect URI that you previously created.

1. Enter a name in the **App integration name** field.

Okta Search... steve.zimmer okta-dev-849

New Native App Integration

General Settings

We found some errors. Please review the form and make corrections.

App integration name: Native PTT-Pro App

Logo (Optional): 

Grant type: Client acting on behalf of a user

- ☒ Authorization Code
- ☐ Interaction Code
- ☒ Refresh Token
- ☒ Resource Owner Password
- ☐ SAML 2.0 Assertion
- ☐ Device Authorization
- ☒ Token Exchange
- ☐ Implicit (hybrid)

Sign-in redirect URIs: Okta sends the authentication response and ID token for the user's sign-in request to these URIs

☐ Allow wildcard * in sign-in URI redirect.

https://[redacted]/auth/realms/WFC-Okta-Cx

https://localhost

+ Add URI

Sign-out redirect URIs (Optional): After your application contacts Okta to close the user session, Okta redirects the user to one of these URIs.

com.okta.dev-84941762:/

+ Add URI

Assignments

Controlled access: Select whether to assign the app integration to everyone in your org, only selected group(s), or skip assignment until after app creation.

- ☒ Allow everyone in your organization to access
- ☐ Limit access to selected groups
- ☐ Skip group assignment for now

Enable immediate access (Recommended): Recommended if you want to grant access to everyone without pre-assigning your app to users and use Okta only for authentication.

☒ Enable immediate access with Federation Broker Mode

To ensure optimal app performance at scale, Okta End User Dashboard and provisioning features are disabled. Learn more about Federation Broker Mode.

Save Cancel

2. Optionally, add an application logo.

3. Select the Grant type.

- Authorization Code is automatically selected.
- Refresh Token sets the refresh from persistent to a time interval.
- Additional types can be selected if required.

4. Modify the Sign-in redirect URIs.

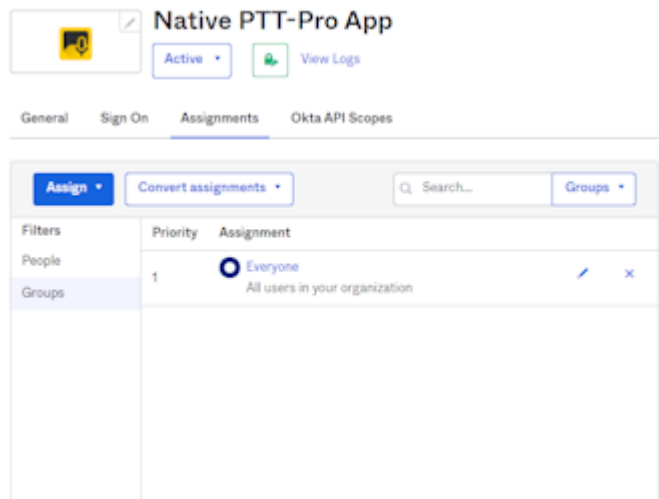
- Delete the default redirect URI.
- Enter the Redirect URI from the OIDC Identity Provider. Go to [Copying the Identity Provider Redirect URI](#) on page 11.
- Click **Add URI** and enter `https://localhost`

5. Do not modify the Sign-out redirect URIs.**6. Under Assignments, determine how users are granted access to the application.**

- Set Controlled Access to Allow everyone in your organization to access.
- Choose whether to grant immediate access with the Federation Broker Mode.
 - When enabled, all users are eligible to access the application. Custom access token claims are applied to these users.
 - When disabled, users are selectively granted access and customized claims need to be created and applied to the users. When the broker is not enabled, additional configuration is required. See [Configuring Access to the Native App](#) on page 16.

7. Click Save to preserve the General Settings.**Configuring Access to the Native App**

When the Federation Broker is not used to grant users access to the application, complete the following task to determine who can access the app.

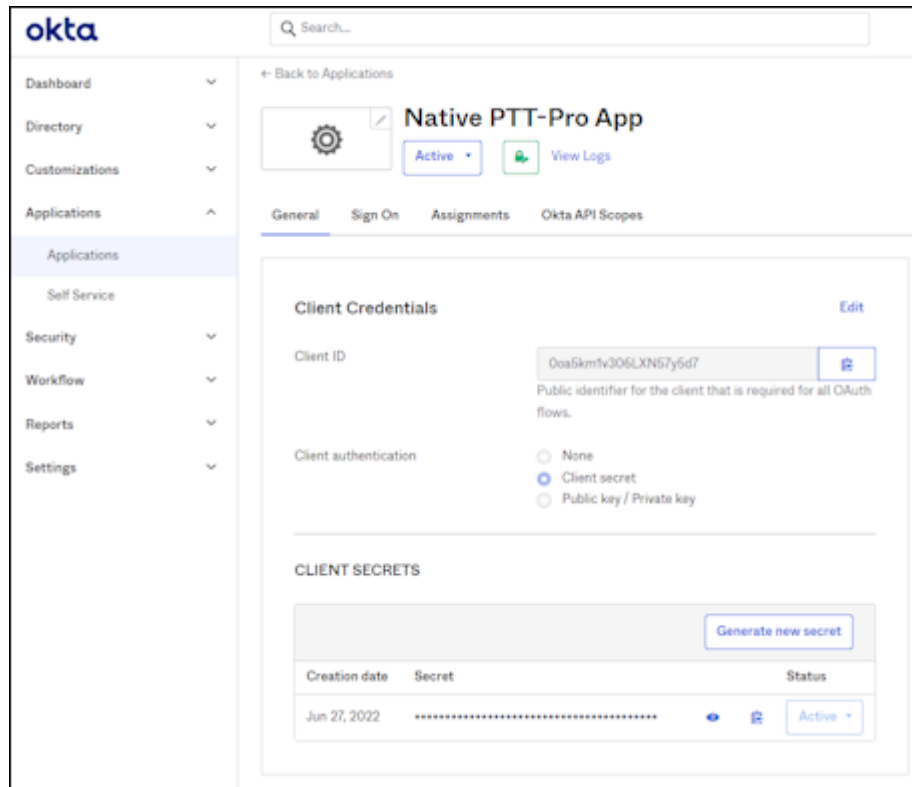
1. Open the application and select the Assignments tab.**2. Select the access appropriate for your environment.**

In this example, the PTT-Pro App is made available to the group Everyone.

Completing the Native App Configuration

Complete the configuration of the app to finish the ACS Identity Provider.

1. Open the application and perform the following steps under the **General** tab.



2. Click **Edit**.
3. Copy the client credentials from the **Client ID** field.
In this example, the client ID is: 00a5km1v306LXN57y5d7
4. Under **CLIENT SECRETS**, reveal the secret, and copy the secret to your computer for later in the configuration.
In this example, the client secret is: QUnder7dkcARwPFjVyGVh6NeFjzbs00Md2xWYFLS

- Click the **Sign On** tab to edit the **OpenID Connect ID Token** screen.

OpenID Connect ID Token Cancel

Issuer: Okta URL (https://dev-84941762.okta.com)

Audience: 00a5ddvj4IGDU18nl5d7

Claims: Claims for this token include all user attributes on the app profile.

Groups claim type: Filter

Groups claim filter: groups Matches regex .*

[Using Groups Claim](#)

Save Cancel

- Select Okta URL from the **Issuer** menu.
- Audience** is automatically populated with the Client ID.
- Select **Filter** for the **Group claims type**.
- Enter the **Group Claims Filter**.
A typical filter is `.*`.
- Click **Save**.

Review the remaining configuration options of the native application and make any modifications necessary for your environment.

Phase 3 – Completing the ACS Configuration

You completed the application configuration with the Client ID and Client Secret. In this section, you will complete the configuration of the Identity Provider with information from the Okta configuration.

Creating A Simple Login Authentication Flow

The authentication flow enables the mobile client to seamlessly pass credentials through ACS to the Okta IdP.

Complete the Authentication Flow before completing the IdP definition. The Authentication Flow is not required, and other configurations are possible, but it improves the sign-in experience for the user.

For example, if the ACS IdP configuration specifies:

- Browser for the First Login Flow, the user cannot progress past the login screen.
- First Broker Login, the user is prompted to enter their first name, last name, and email address. While this configuration works, it is a poor user experience.
- Direct Grant generates a missing parameter error.
- Registration flow requires that the user enter their user profile information before continuing.

The ACS adds users to the user table as they access the system. The Simple Login Flow automatically populates the user table with the user name when the user signs in. No passwords are examined or tracked. The user authentication occurs on the Okta system

Creating the Authentication Flow

Create an authentication flow to enable the device client to pass credentials through the ACS to the Okta IdP.

1. Select **Authentication > Flows > New**.

Auth Type	Requirement	REQUIRED	ALTERNATIVE	DISABLED	CONDITIONAL
Browser Redirect/Refresh		☒	☐	☐	☐
Authentication Options		☒	☐	☐	☐
Basic Auth Challenge		☒	☐	☐	☐
Basic Auth Password+OTP		☐	☐	☒	☐
Kerberos		☐	☐	☒	☐

2. Enter a name in the **Alias** field and select generic from the **Top Level Flow Type** menu.

Alias: Simple Login Flow

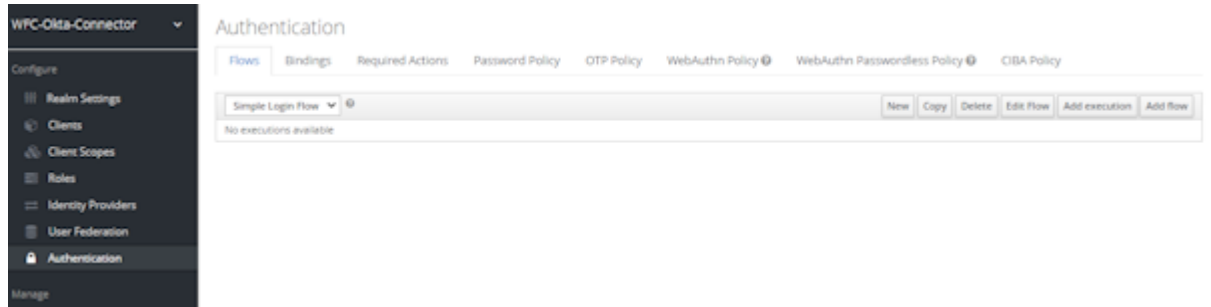
Description:

Top Level Flow Type: generic

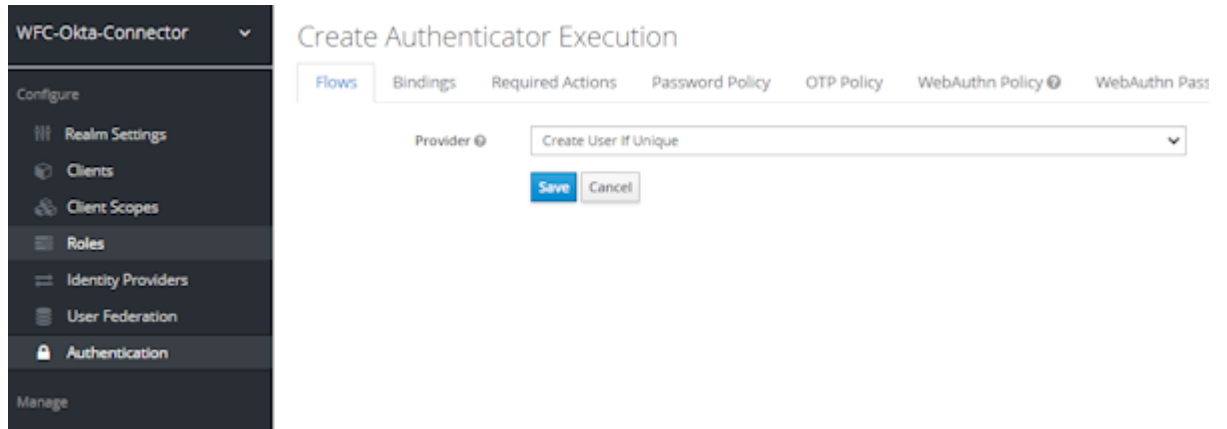
Save Cancel

3. Click **Save** to create the flow.

4. Select the new flow from the **Authentication** view and click **Add Execution**.

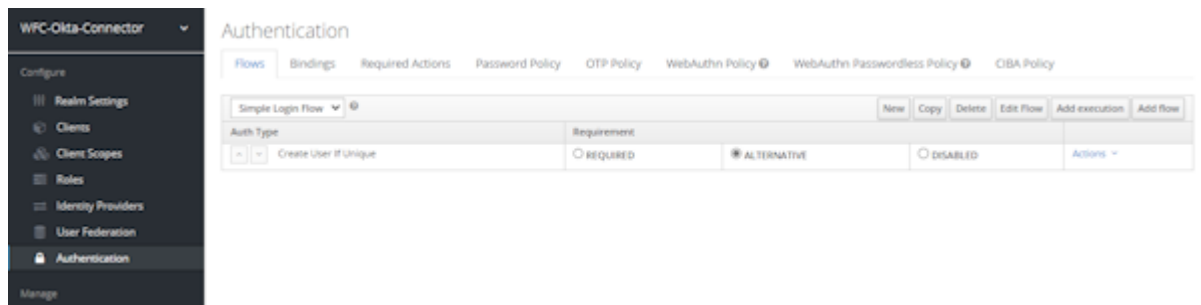


5. Select **Create User If Unique** from the **Provider** menu.



6. Click **Save**.

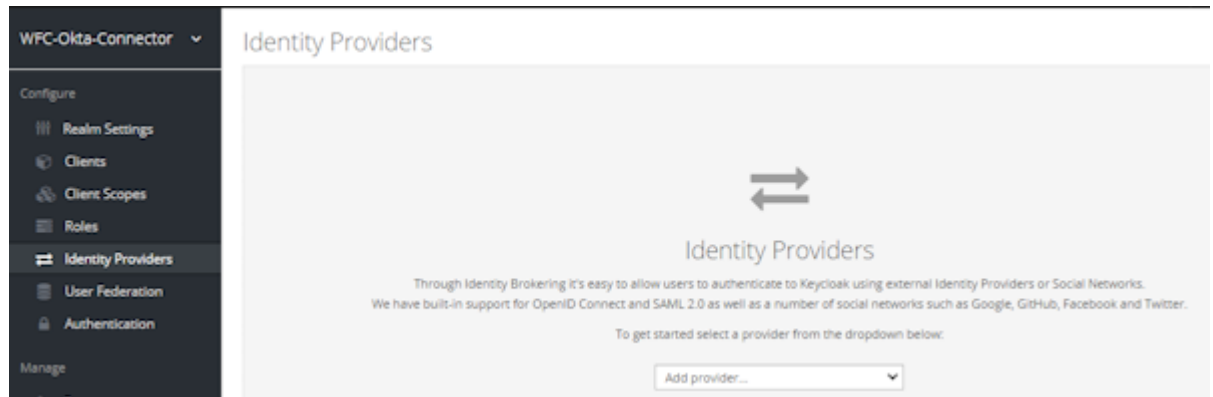
7. In the **Authentication** view, select **Alternative** to activate the flow. The configuration is automatically saved.



Creating the Identity Provider

Create the identity provider using information from Okta to complete the configuration.

1. Select **Identity Providers** from the ACS interface.



2. Select **Open ID Connect 1.0** from the menu.

3. Configure the Identity Provider.

The screenshot shows the 'Add identity provider' configuration page in the Okta Admin Console. The left sidebar is set to 'WFC-Okta-Connector' and the 'Identity Providers' section is active. The main area is titled 'Add identity provider' and contains the following fields and settings:

- Redirect URI:** `https://<acs-server-name>/auth/realms/WFC-Okta-Connector/broker/okta.c`
- Alias:** `okta.oidc.connector`
- Display Name:** `okta.oidc.connector`
- Enabled:** ☒ ON
- Store Tokens:** ☒ ON
- Stored Tokens Readable:** ☒ ON
- Trust Email:** ☐ OFF
- Account Linking Only:** ☐ OFF
- Hide on Login Page:** ☐ OFF
- GUI order:** (empty text field)
- First Login Flow:** Simple Login Flow (dropdown menu)
- Post Login Flow:** (empty dropdown menu)
- Sync Mode:** import (dropdown menu)

At the bottom, there is a link for 'OpenID Connect Config'.

- **Alias**, `okta.oidc.connector` in this example.
- Set **Enabled** to On.
- (Optional) Set **Store Tokens** to On.
- (Optional) Set **Store Tokens Readable** to On.
- Select Simple Login Flow from the **First Login Flow** menu.

The redirect URI is displayed in the **Redirect URI** field and is used as the Okta Redirect for the native app. In this example, the redirect URI is:

```
https://<acs-server-name>/auth/realms/WFC-Okta-Connector/broker/okta.oidc.connector/endpoint
```

Collecting Information from the Well-Known URL

To complete the configuration of the Identity provider, collect additional information from the well-known URL.

To complete the Identity Provider configuration the following elements are required:

- Authentication URL from the well-known URL
- Token URL from the well-know URL

- Client Authentication
- Client ID
- Client Secret
- Client Assertion Signature Algorithm

You can obtain this information by browsing into the Okta IdP using the well-known URL. The Okta domain and client ID are required to create the well-known URL.

Accessing the Well-Known URL

Use the Okta domain and the client ID to create the well-known URL.

A well-known URL uses the following structure:

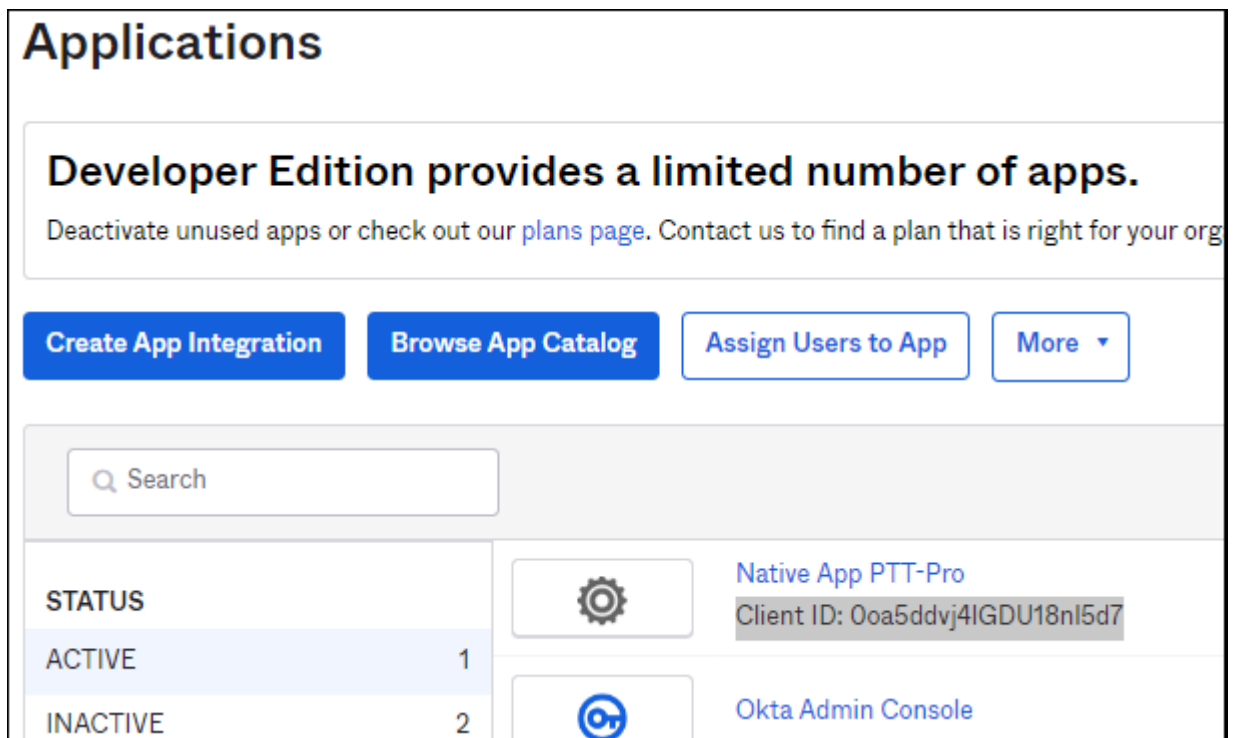
`https://<domain>/well-known/openid-configuration?client_id=<client-id>`

In this example, the well-known URL becomes:

`https://dev-84941762.okta.com/.well-known/openid-configuration?client_id=00a5km1v306LXN57y5d7`

- The domain is `dev-84941762.okta.com`.
- The Client ID, `00a5km1v306LXN57y5d7`, was generated when you created the Native App.

Figure 1 Native App with Client ID



Entering the well-known URL in a web browser returns a response in a JSON file format. The JSON response includes information required for the ACS configuration:

- Authorization endpoint
- Token endpoint

- The supported encrypting format

```
{
  "issuer": "https://dev-84941762.okta.com",
  "authorization_endpoint": "https://dev-84941762.okta.com/oauth2/v1/authorize",
  "token_endpoint": "https://dev-84941762.okta.com/oauth2/v1/token",
  "userinfo_endpoint": "https://dev-84941762.okta.com/oauth2/v1/userinfo",
  "registration_endpoint": "https://dev-84941762.okta.com/oauth2/v1/clients/00a5km1v306LXN57y5d7",
  "jwks_uri": "https://dev-84941762.okta.com/oauth2/v1/keys?client_id=00a5km1v306LXN57y5d7",
  "response_types_supported": [
    "code"
  ],
  "response_modes_supported": [
    "query",
    "fragment",
    "form_post",
    "okta_post_message"
  ],
  "grant_types_supported": [
    "authorization_code",
    "refresh_token",
    "password",
    "urn:ietf:params:oauth:grant-type:token-exchange"
  ],
  "subject_types_supported": [
    "public"
  ],
  "id_token_signing_alg_values_supported": [
    "RS256"
  ],
  "scopes_supported": [
    "openid",
    "email",
    "profile",
    "address",
    "phone",
    "offline_access"
  ],
  "token_endpoint_auth_methods_supported": [
    "client_secret_basic"
  ],
  "claims_supported": [
    "iss",
    "ver",
    "sub",
    "aud",
    "iat",
    "exp",
    "jti",
    "auth_time",

```



```

"amr",
"idp",
"nonce",
"name",
"nickname",
"preferred_username",
"given_name",
"middle_name",
"family_name",
"email",
"email_verified",
"profile",
"zoneinfo",
"locale",
"address",
"phone_number",
"picture",
"website",
"gender",
"birthdate",
"updated_at",
"at_hash",
"c_hash"
],
"code_challenge_methods_supported": [
"S256"
],
"introspection_endpoint": "https://dev-84941762.okta.com/oauth2/v1/
introspect",
"introspection_endpoint_auth_methods_supported": [
"client_secret_basic"
],
"revocation_endpoint": "https://dev-84941762.okta.com/oauth2/v1/revoke",
"revocation_endpoint_auth_methods_supported": [
"client_secret_basic"
],
"end_session_endpoint": "https://dev-84941762.okta.com/oauth2/v1/logout",
"request_parameter_supported": true,
"request_object_signing_alg_values_supported": [
"HS256",
"HS384",
"HS512"
],
"device_authorization_endpoint": "https://dev-84941762.okta.com/oauth2/v1/
device/authorize",
"pushed_authorization_request_endpoint": "https://dev-84941762.okta.com/
oauth2/v1/par"
}

```



NOTE: The authorization and token URLs are shown in the response from the well-known URL. If the Okta system uses a Federation Broker, modify the authorization and token URLs.

The original URLs from the JSON response:

- "authorization_endpoint": "https://dev-84941762.okta.com/oauth2/v1/authorize"
- "token_endpoint": "https://dev-84941762.okta.com/oauth2/v1/token"

Modify the URLs to include the Authorization Server:

- "authorization_endpoint": "https://dev-84941762.okta.com/oauth2/<server_name>/v1/authorize"
- "token_endpoint": "https://dev-84941762.okta.com/oauth2/<server_name>/v1/token"

Completing the Identity Provider Configuration

Use the information from the JSON response to the well-known URL to complete the configuration of the Identity Provider.

1. Open the Identify Provider and complete the configuration.

OpenID Connect Config

* Authorization URL

https://dev-84941762.okta.com/oauth2/v1/authorize

Pass login_hint

OFF

Pass current locale

OFF

* Token URL

https://dev-84941762.okta.com/oauth2/v1/token

Logout URL

Backchannel Logout

OFF

Disable User Info

OFF

User Info URL

* Client Authentication

Client secret as jwt

* Client ID

0oa5km1v306LXN57y5d7

* Client Secret

QUnder7dkcARwPFjVyGVh6NeFjzbs00Md2xWYFLS

* Client Assertion Signature Algorithm

HS256

Issuer

Default Scopes

openid profile

Prompt

login

Accepts prompt=none forward from client

OFF

Validate Signatures

OFF

Use PKCE

OFF

PKCE Method

Allowed clock skew

Forwarded Query Parameters

SaveCancel

2. The example configuration uses the following data.

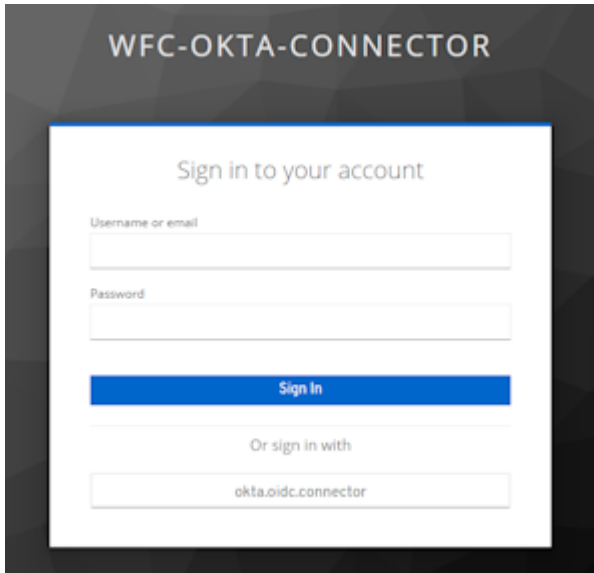
- **Authorization URL** is `https://dev-84941762.okta.com/oauth2/v1/authorize`
- **Token URL** is `https://dev-84941762.okta.com/oauth2/v1/token`
- Set **Client Authentication** to `Client secret as jwt`
 - Sent as Post also works
 - basic auth also works
 - JWT Signed with Private Key will fail. The device displays the error, An Unexpected error when authenticating with the Identity Provider after entering credentials
- **Client ID** is `00a5km1v306LXN57y5d7`
This value is assigned by the Okta system for the Native App definition. Go to [Completing the Native App Configuration](#) on page 17.
- **Client Secret** is `QUnder7dkcARwPFjVyGVh6NeFjzbs00Md2xwYFLS`
This value is assigned by the Okta system for the Native App definition. Go to [Completing the Native App Configuration](#) on page 17.
- **Client Assertion Signature Algorithm** is HS256 (HS384 or HS512)
The authentication algorithm is specified in the response from the well-known URL. If the algorithm is not supported, the device displays an authentication error after the credentials are entered.
- Enter `openid`, `offline_access`, and `profile` as space-separated strings in the **Default Scopes** field. These scope values are returned in the response from the well-known URL.
 - If only `openid` is entered, authentication does not advance beyond the credentials screen.
 - If only `offline_access` is entered, authentication does not advance beyond the credentials screen.
 - If only `profile` is entered, the device displays a web page not available error.
- Enter `login` in the **Prompt** field.
 - The `Consent` and `Select_Account` parameters also work.
 - Unspecified results in a blank screen on the device after the credentials are entered.
 - Non results in a blank screen.

3. Click **Save**.

Setting the Login Browser Flow

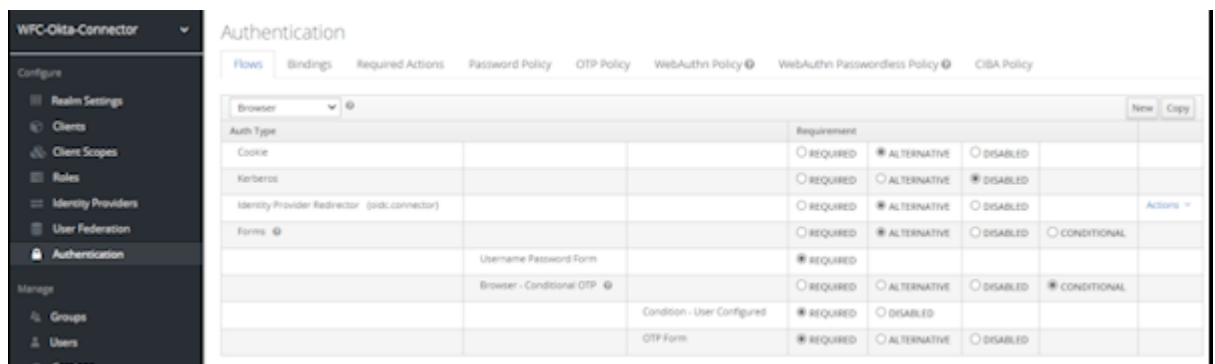
After you configure the Identity Provider, you can complete the configuration of the ACS Identity Provider.

The Identity Provider Redirector should be set to the Identity Provider to enable the Okta login screen. If this step is not performed, the user is presented with the ACS login screen.

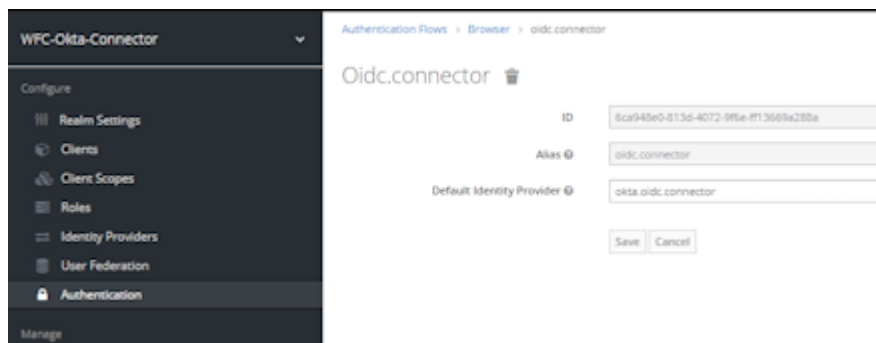


NOTE: A user could click on the **okta.oidc.connector** to log in, but this can be confusing in a runtime environment.

1. Select **Authentication** and click the **Flows** tab to list all of the authentication types.



2. Click the **Actions** menu on the right side of the screen and select **Configuration** for the Identity Provider Redirector.
3. Configure the oidc.connector.



- Enter an **Alias**. In this example, oidc.connector.
- Enter the **Default Identity Provider**. In this example, okta.oidc.connector.

4. Click **Save**.

Validate the Configuration

Validate the configuration before testing with a mobile device. Two tools are used to validate the configuration: the Postman application and the jwt.io token validator.

Validating with Postman

Testing access with Postman validates that the collected information is accurate and produces the expected results.

Create a profile with the following configuration parameters:

- Auth URL
- Access Token URL
- Client ID
- Client Secret
- Scope with the space-separated values of `openid`, `profile`, and `offline_access`

The profile scope is used to get a refresh token.

1. Insert the following URLs into the Postman profile along with the Client ID and Client Secret.

The URLs can be found by entering the well-known URL into a browser. In this example, the well-known URL is `https://<acs-server-name>/auth/realms/WFC-Okta-Connector/.well-known/openid-configuration`

- Authorization endpoint URL: `https://<acs-server-name>/auth/realms/WFC-Okta-Connector/protocol/openid-connect/auth`
- Access Token URL: `https://<acs-server-name>/auth/realms/WFC-Okta-Connector/protocol/openid-connect/token`

Header Prefix ⓘ

Bearer

Configure New Token

Configuration Options ●

Advanced Options

Token Name

Enter a token name...

Grant Type

Authorization Code ▼

Callback URL ⓘ

https://localhost

☐ Authorize using browser

Auth URL ⓘ

https://[redacted]/aut...

Access Token URL ⓘ

https://[redacted]/aut...

Client ID ⓘ

oidc.client ⚠

Client Secret ⓘ

31941cec-9b16-46b8-8749-2e6c3fa4ff!... ⚠

Scope ⓘ

openid offline_access profile

State ⓘ

State

Client Authentication

Send client credentials in body ▼

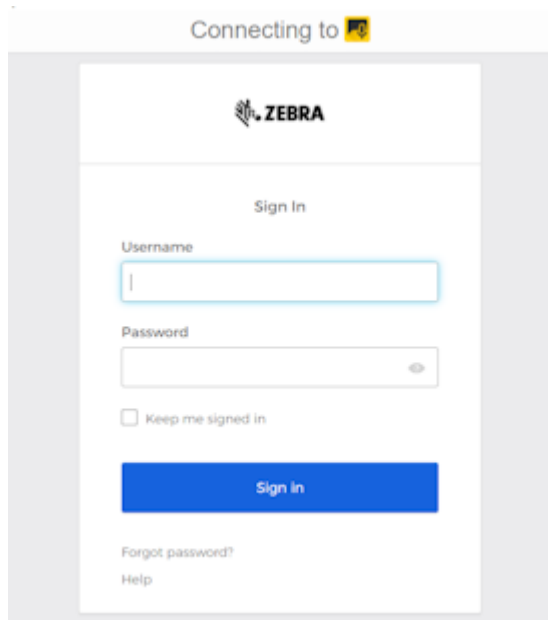
 Clear cookies ⓘ

Get New Access Token

Remember to clear the cookies before running the test again.

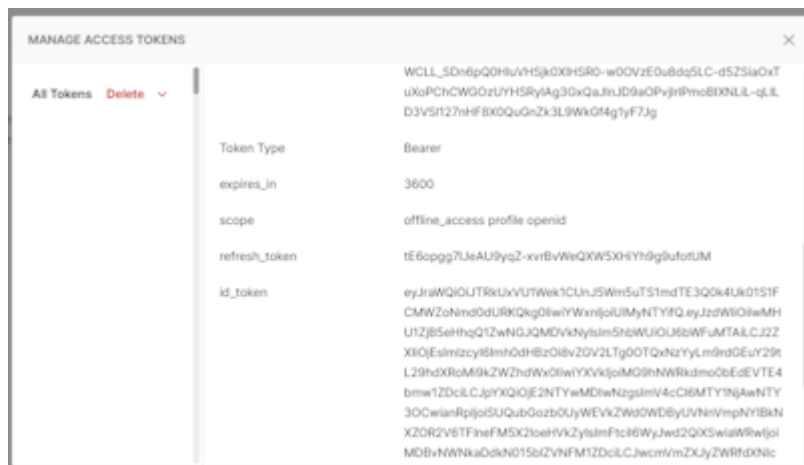
2. Click **Get New Access Token**.

A successful test displays the Okta login screen from the ACS.



NOTE: The branding icons in the example are configured separately and outside the scope of this document.

3. Enter user credentials.



2. Enter the Access URL and Authorization Endpoint URL (OAuth URL) in the **Configure OAuth** dialog.
 - The Authorization Endpoint URL is the **OAuth URL** field: `https://[acs-server-name]/auth/realms/WFC-Okta-Connector/protocol/openid-connect/auth`
 - The Access URL is the **Access URL** field: `https://[acs-server-name]/auth/realms/WFC-Okta-Connector/protocol/openid-connect/token`

These are the same URLs used to validate the configuration with Postman and obtained from the JSON output of the well-known URL.

3. Enter the OAuth Token Certificate. You copied the certificate previously in [Retrieving the Signing Certification of the Realm](#) on page 5.

Copy the certificate and paste it into a text editor such as Notepad++. Add Begin Certificate and End Certificate as shown in the example.

```
-----BEGIN CERTIFICATE-----
MIICszCCAZsCBgGBpcwvCzANBgkqhkiG9w0BAQsFADAdMRswGQYDVQQDBJXRkMt
T2t0YS1Db25uZW50b3IwHhcNMjIwNjI3MTUzMjEwWWhcNMzIwNjI3MTUzMzUwWjAd
MRswGQYDVQQDBJXRkMtT2t0YS1Db25uZW50b3IwggEiMA0GCSqGSIb3DQEBAAQUA
A4IBDwAwggEKAoIBAQCacby8lfrJyEeDXn8VeKaxMBxxuQAkhiC/tnKC6q2MKCWIHES
QqK21HlZ/Pj1HbnDM7GGpBn7zvhQm+aCJ0XjyZiYxy3wkisBJTqdc6JEzdEXwWxkZ
58huenh/PTkpNQy0JLzwC0yzG+iQWwGTyb/xBuBtY9QJoS2yhSHKU53c8txyytLTq
urYNUPTfQC1bcZrQJpeonAmmH4+FjM5sf0IQ2807xD1g69IQ1hiw3+y1CsMoLp4
F68SdQ+pmkwH8jmIdLGWmIn6R1FscnrdLDiydZc84sZcMCKTMnC9PYu3FGQQzDH
sT1goN+QDDfMhCUzbn1zQ4kSXc0kzHo0aG44zAgMBAAEwDQYJKoZIhvcNAQELBQAD
ggEBAFv16+350lKPSbEWPUPttNjPwFwGTBpcVGohNmt8e2tfVj0GT7xh4zvNmQv
xh+eaewhzuwKhpT/JG8dyuQVhF4020s2W8YPZqvtLWS0c0Y9kljqRl1A3z1o2w0
1IfDU+D5aaGSkylyBxL7HkuJsPoWtwUMyfbZNH14Xp4Scwb25BfddECPSBNCGJ+j
4s1rwfac5YVKTswjcePF+r4VsHzEfTgdMhjJha1wI7GKgZrBX0agZCA6ZfeQMInL
TkBSXW6m+xkkcU/owmMXsGJ0TEQ0TT0HefiBXq0Jt/0h/NReuc6Qk4AlJHh0Cj9
FhAT20TPvPbn7Yj3vB7Tne+dMk+p1A=
-----END CERTIFICATE-----
```



NOTE: Do not add or remove any characters from the certificate because it will cause the authentication to fail.

4. Enter the device serial number in the PTT Pro Server and create OAuth user accounts with an accurate OAuth name.

Modify User (3 of 25 used, 22 remaining)

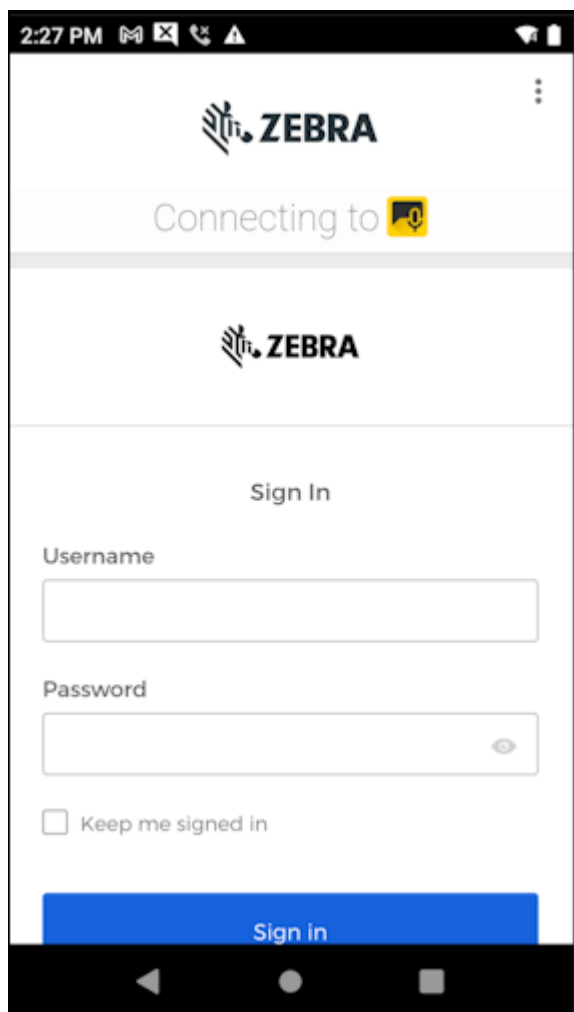
User Login: zman10
 Department: test
 First Name: Steve
 Last Name: Zimmerman
 OAuth Name: zman10@zebra.com
 Phone Number: Click to Assign
 Email:
 Activation Method: ☒ Trusted ☐ Automatic ☐ Manual
 Priority: 0
 Client Type: Unknown
 Maximal Contacts

Deactivate Resend Activation New Activation Code Submit Cancel

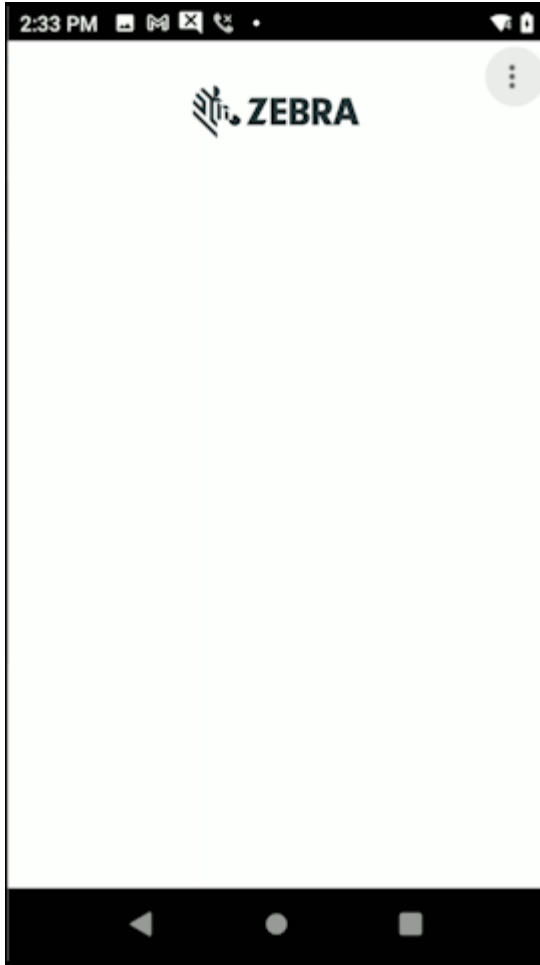
5. Add the JSON configuration to the mobile devices so that the PTT Pro client connects to the ACS server.

```
{
  "oAuthClientID" : "oidc.client",
  "oAuthClientSecret" : "31941cec-9b16-46b8-8749-2e6c3fa4ff23",
  "oAuthBasicHeader" : true
}
```

6. Use a mobile device to verify the configuration. The Okta sign-on screen should display.



If the device displays a blank screen after entering the credentials, potential causes include a certificate with unprintable characters or white space. Another potential cause is that the Authorization Endpoint URL or Access URL is not correct.



Revision History

Revision	Date	Description
MN-004831-01EN	January, 2024	First version.

