



# VOICE REGISTRATION

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# Voice Registration

[iOS](#) [Android](#) [Voice](#) [Biometric](#) [Token](#)

## 1. Overview

In this article, we will demonstrate how to record a **voice** to enable 2FA using **voice biometrics**.

To use **Voice Biometrics**, it is necessary **WebADM 2.0.\*** and **OpenOTP** mobile application version **1.4.11** or higher for Android and version **1.4.13** or higher for **iOS**.

## 2. Voice Biometric Registration

In order to record a **voice biometric** to a user, log in on the **WebADM admin GUI**, in the left LDAP tree, click on the user account that you want to register a voice. Once you are on the activated user account, in the **Application Actions** box, click on **MFA Authentication Server**.

»

Under the next menu, click on **Register / Unregister Voice Biometrics** item and you will be in the registration page:

»

In that page, click in **Click to Start**, then record your **voice biometric**. It is recommended you use an earphone with microphone or other kind of dedicated audio input device.

»

To make sure it will not be misunderstood by **OpenOTP**, you have to repeat your voice biometric 4 times and not use too short messages.

»

Once the Voice registration is finished, you should see the attribute **WebADM Voice Model** (webadmVoice).

»

If you can see the **WebADM Voice attribute**, that means the voice registration was done successfully.

## 3. End-User enrollment through RCDevs Web Applications

RCDevs provides 2 Web Applications: [SelfDesk](#) and [SelfReg](#) for the user self-enrollment. These applications are free and must be installed on your **WebADM** server. To limit the end-user access to the **WebADM/OpenOTP** servers, you can allow access to these web applications through a [WebADM Publishing Proxy](#). By this way, your end-users will have access to the **WebApps** through the **WAProxy** server and not from the **WebADM** server.

The **User Self-Registration** application is similar to the **User Self-Service Desk**, the only difference between both applications is that the **Self-Registration** can be accessed only under a **WebADM Administrator** request. To allow the user to access this application, the **Administrator** has to send a **Self-Registration** request to the user. Then, the user will receive an one-time link by mail or SMS to access the application.

**Selfdesk application** is accessible at any time by the end-user (if it is not locked in its configuration).

### 3.1 User Self-Registration

In this section, we will focus how to use **Self-Registration** for **Voice** registration. If you want a more complete understanding of how **Self Registration** works, you can check [Self Registration](#) documentation.

In **WebADM portal**, select the user you want under the LDAP tree, the user must be an activated user. Then click in the **User-Self-Registration** link on the right to send an **Self-Registration** link to the specific user.

»

In the next page, write a personalized message and set the parameters accordingly.

»

The user should receive an email with the registration link. After the user click in the link sent, he should enter his credentials to login in the **Self-Registration portal**.

»

Once it is done, the user can start the **Voice Model** registration.

Click in **Voice** tab, then **Click to Start**

»

It is recommended you use an earphone with microphone or other kind of dedicated audio input device. To make sure it will not be misunderstood by **OpenOTP**, you have to repeat your voice biometric 4 times and not use a too short message.

After the procedure is done, you should see the below message:

»

Then you can go to **Voice** tab again and check if there is a **voice biometrics** already registered.

»

### 3.2 User Self-Service Desk

The user **Self-Service** desk is accessible to the following address:

`https://YOUR_WEBADM/webapps/selfdesk/login_uid.php`

Through the WAPRoxy the address is:

`https://YOUR_WAPROXY/selfdesk/login_uid.php`

To allow the user to enroll a Token, you have to allow the OTP management under the [Selfdesk configuration](#).

When that setting is checked, you can log in to the **SelfDesk** application.

»

Once logged on the **SelfDesk** application, go on the **OTP** tab.

»

Change **View My** to **Voice Biometrics**. Then click in **Click to Register**

»

»

»

It is recommended you use an earphone with microphone or other kind of dedicated audio input device. To make sure it will not be misunderstood by **OpenOTP**, you have to repeat your voice biometric 4 times and not use a too short message.

After the **Voice registration** is done. You will see, under **OTP tab**, that the **Voice Login Status** is Ok.

»

## 4. Authentication Test through the WebADM Admin GUI

Login on the WebADM admin GUI and click on your user in the left tree. In **WebADM settings**, click on **Configure**

»

Make sure the **OTP Type** type is set to **VOICE**.

»

## Note

Voice Biometrics feature requires that PUSH is configured and enabled in MFA/OpenOTP application settings. Also, in a real scenario, the user should have an OpenOTP software token registered.

Then, in **Applications Actions** box, click on **MFA Authentication Server**

»

We scroll down and click on **Test User Authentication** :

»

We insert the LDAP password and click on **Start** :

»

Then, if you have **Soft Token with Push** registered, you will get a notification in your mobile. Perform the authentication with **Voice** in your mobile.

We are authenticated!

»

## 5. Using Voice Biometrics with Credential Provider

In order to see **Voice Biometrics** working in a real scenario, we will test it with **Windows Credential Provider** plugin.

To make it work, we should enable **Push Login** in **MFA (OpenOTP)** application. Also, it is necessary that **OTP Type** is set to **VOICE** and **Mobile Voice Login** is set to **Yes**. Lastly, the user must have a **Software Token** registered via **OpenOTP mobile** application.

Since we are testing using **Windows Credential Provider**, having [Windows CP](#) working is also a requirement here.

In Windows **OpenOTP** page, enter the LDAP credentials as usual:

»

After doing that, **WebADM** endpoint will be called:

»

Then the following notification should appear in your mobile phone:

»

After you click in the **Record** button, you have 5 seconds to enter your **Voice** authentication.

If everything works correctly, you should be able to login.

## 6. Logs

Now, we can check the logs using Voice Biometrics in a real scenario., we click on **Databases** tab:

Click on **WebADM Server log Files** . It corresponds to the `/opt/webadm/log/webadm.log` file:

Each authentication is identified by an ID. Here, it is **Z5J7U1XC**.

```
[Tue Nov 24 11:56:31.259121 2020] [192.168.3.218] [Open0TP:Z5J7U1XC] New
openotpSimpleLogin SOAP request
[Tue Nov 24 11:56:31.259176 2020] [192.168.3.218] [Open0TP:Z5J7U1XC] > Username:
aduser3
[Tue Nov 24 11:56:31.259184 2020] [192.168.3.218] [Open0TP:Z5J7U1XC] > Domain:
adrcdevs.com
[Tue Nov 24 11:56:31.259219 2020] [192.168.3.218] [Open0TP:Z5J7U1XC] > Password:
xxxxxxxxxxxx
[Tue Nov 24 11:56:31.259232 2020] [192.168.3.218] [Open0TP:Z5J7U1XC] > Options: -
LDAP,OFFLINE,NOVOICE
[Tue Nov 24 11:56:31.259254 2020] [192.168.3.218] [Open0TP:Z5J7U1XC] Registered
openotpSimpleLogin request
[Tue Nov 24 11:56:31.259574 2020] [192.168.3.218] [Open0TP:Z5J7U1XC] Resolved LDAP
user: CN=aduser3,CN=Users,DC=adrcdevs,DC=com (cached)
[Tue Nov 24 11:56:31.259651 2020] [192.168.3.218] [Open0TP:Z5J7U1XC] Resolved LDAP
groups: group2,remote desktop users
[Tue Nov 24 11:56:31.270757 2020] [192.168.3.218] [Open0TP:Z5J7U1XC] Started
transaction lock for user
[Tue Nov 24 11:56:31.283882 2020] [192.168.3.218] [Open0TP:Z5J7U1XC] Found user
fullname: aduser3
[Tue Nov 24 11:56:31.283912 2020] [192.168.3.218] [Open0TP:Z5J7U1XC] Found 1 user
mobiles: +123 456789012
[Tue Nov 24 11:56:31.283921 2020] [192.168.3.218] [Open0TP:Z5J7U1XC] Found 1 user
emails: aduser3@adrcdevs.com
[Tue Nov 24 11:56:31.284501 2020] [192.168.3.218] [Open0TP:Z5J7U1XC] Found 49 user
settings:
LoginMode=LDAPOTP,OTPTType=VOICE,PushLogin=Yes,PushVoice=Yes,BlockNotify=MAIL,ExpireNotif
```

```
I:HOIP-SHA1-6:QN06-
TIM,DeviceType=FID02,SMSType=Normal,SMSMode=Ondemand,MailMode=Ondemand,PrefetchExpire=10,

[Tue Nov 24 11:56:31.285679 2020] [192.168.3.218] [OpenOTP:Z5J7U1XC] Found 6 user data:
VoiceState,TokenType,TokenKey,TokenState,TokenID,TokenSerial
[Tue Nov 24 11:56:31.285783 2020] [192.168.3.218] [OpenOTP:Z5J7U1XC] Found 1 registered
OTP token (TOTP)
[Tue Nov 24 11:56:31.287052 2020] [192.168.3.218] [OpenOTP:Z5J7U1XC] Requested login
factors: OTP
[Tue Nov 24 11:56:31.287276 2020] [192.168.3.218] [OpenOTP:Z5J7U1XC] Authentication
challenge required
[Tue Nov 24 11:56:31.409081 2020] [192.168.3.218] [OpenOTP:Z5J7U1XC] Sent push
notification for token #1
[Tue Nov 24 11:56:31.409111 2020] [192.168.3.218] [OpenOTP:Z5J7U1XC] Waiting 28 seconds
for mobile response
[Tue Nov 24 11:56:44.612725 2020] [192.168.3.172] [OpenOTP:Z5J7U1XC] Received mobile
voice response from 192.170.3.17
[Tue Nov 24 11:56:44.612756 2020] [192.168.3.172] [OpenOTP:Z5J7U1XC] > Session:
77Hxxx0zDK02tE1K
[Tue Nov 24 11:56:44.612764 2020] [192.168.3.172] [OpenOTP:Z5J7U1XC] > Sample: 152368
Bytes
[Tue Nov 24 11:56:44.612770 2020] [192.168.3.172] [OpenOTP:Z5J7U1XC] Found
authentication session started 2020-11-24 11:56:31
[Tue Nov 24 11:56:45.318400 2020] [192.168.3.172] [OpenOTP:Z5J7U1XC] Voice sample 0k
(score: 2.066 / 1.936[2.626] with token #1)
[Tue Nov 24 11:56:45.328857 2020] [192.168.3.218] [OpenOTP:Z5J7U1XC] Updated user data
[Tue Nov 24 11:56:45.334469 2020] [192.168.3.218] [OpenOTP:Z5J7U1XC] Sent login success
response
```

The last line, **Sent login success response** indicates the authentication worked.

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