



# VU Voice Recogn<sup>®</sup>



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## ► What is it?

It is a biometric three-factor authentication platform based on voice detection, which works in any language.

## ► Benefits



It prevents the user from having to move to give proof of life.



It allows the user to choose a unique ID phrase by repeating it in several ways to recognize the voice pattern.

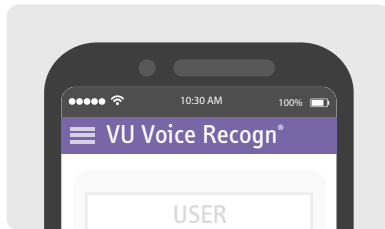


It generates unique, unrepeatable phrases using the parameters of the user's voice



It is designed for senior citizens, as well as government and financial entities.

## ► Differentials



- It uses algorithms of phrase varion to identify and generate vouchers in each operation.
- It is multiplatform and has a high integration capacity.
- It is agentless.

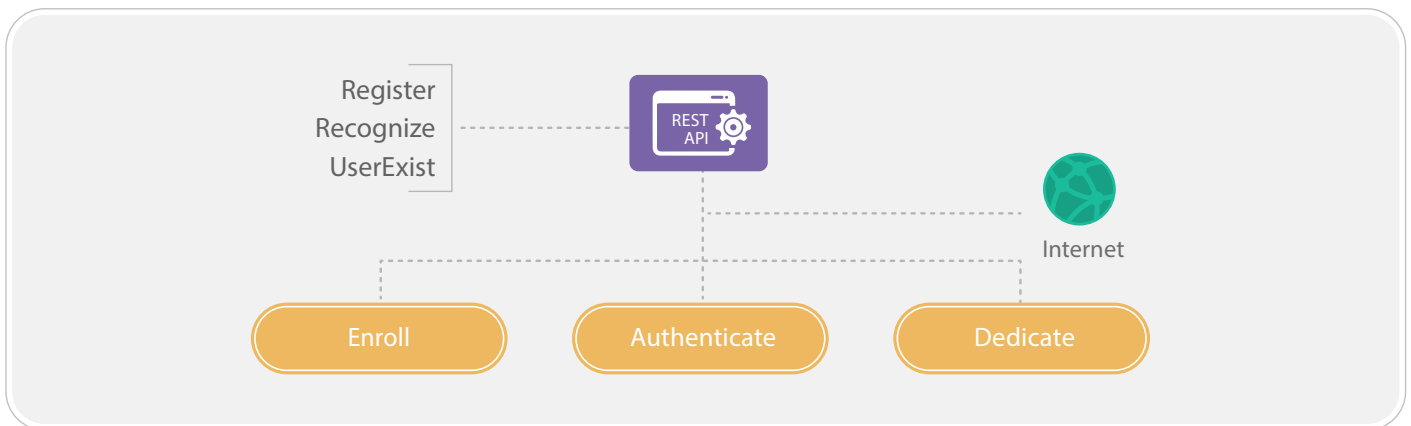


# VU Voice Recogn®

## About VU Voice Recogn®

It is a triple factor authentication biometric platform based on voice detection, regardless of the language used by the citizen.

Provides remote Proof of Life through the user's voice. It allows you to choose one or several unique identification phrases by repeating them in various ways in order to recognize that voice pattern. It is designed for elderly citizens, Government or financial entities, mainly, although it can be applied to any sector.



## Software requirements and compatibility

<b>Operating System</b> Debian 7 or higher Ubuntu 14.04 or higher Red Hat RHEL 6 or higher Suse 10 or higher Solaris 10 x86 Solaris 10 Sparc Windows 2008 R2 or higher	<b>Databases</b> MySQL 5.6 or higher PostgreSQL 9 or higher Oracle 10 or higher MS SQL 2008 or higher MS SQL 5.6 or higher MariaDB 5.5 or higher DB2	<b>Virtualization</b> VMWare Citrix Microsoft Hyper-V RHEV Virtual Box Docker	<b>High Availability</b> HA Proxy KEEPALIVE REPMGR DRBD
<b>Browsers</b> Firefox Internet Explorer 10 or higher Google Chrome Apple Safari	<b>Technologies</b> Java 1.7 or higher	<b>Security</b> RSA / SHA1 / 3DES / AES 256 Security Certificates EAP-PEAP-MSCHAP v2 TimeStamp HOTP/OCRA/TOTP/HMAC	<b>Web Server</b> Apache 2 Nginx IIS Weblogic Jboss Tomcat WebSphere

## Integrations

WS-I Basic Profile 2.0  
SOAP 1.1 or higher  
WSDL 1.1 / WS-Security WSI  
XML Schema 1.0  
TSL 2.0

## Access Management

Radius  
Cisco ACS 4.2 or higher  
FreeRadius  
Active Directory  
Samba  
Cisco ISE

## Register & Report Management

Crystal Reports  
Syslog  
Nagios

## Mobile OS

iOS, Android, Windows Phone, HTML5, USSD  
SMS, Push Notification

## Tecnical Information

The VU Voice Recogn<sup>®</sup> solution is recognizable for its simple and efficient integration interface. Three methods are available through API REST:

### Register:

This method allows you to create a user on the platform. The operation is performed through an HTTP POST and the server delivers using plain text the result of the operation.

### Recognize:

This method enables the user identification by voice. The operation is made through a POST HTTP and the server delivers the result via plain text.

### UserExist:

It verifies a user is enrolled on the system. The operation is made through a POST HTTP and the server delivers the result via plain text.

The following algorithms are used for audio treatment:

- MFCC: It isolates the relevant sounds from the audio and rules out those which impoverish the recognizing process.
- DTW: This algorithm is in charge of measuring the similarity between two signals.

## Hardware Sizing\*

Number of Users	Primary Instance		Secondary Instance		Transactions per second	Storage required	LOG Storage
	Processor	Memory	Processor	Memory			
1 to 10,000	8 processing threads	6 GB RAM	8 processing threads	6 GB RAM	40	60 GB - HD	60 GB - HD
10,000 to 50,000	16 processing threads	8 GB RAM	16 processing threads	8 GB RAM	80	120 GB - HD	120 GB - HD
50,000 to 100,000	32 processing threads	16 GB RAM	32 processing threads	16 GB RAM	160	240 GB - HD	240 GB - HD
100,000 to 250,000	64 processing threads	32 GB RAM	64 processing threads	32 GB RAM	320	480 GB - HD	480 GB - HD
250,000 to 1,000,000	128 processing threads	64 GB RAM	128 processing threads	64 GB RAM	640	1 TB - HD	1 TB - HD

\* The present sizing estimation assumes a high availability setup.

