



VU Sign[®]



► What is it?

Hit enables the use of signatures as digital elements. It analyzes the digitized data and compares it against the signatures within the database.

► Benefits



It verifies who the author of the document is.



It enables signature workflows and document life-cycle approvals.

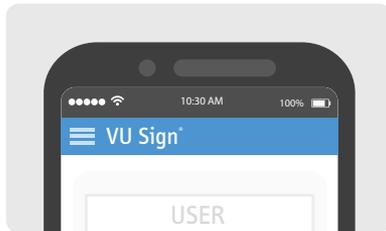


It verifies that the digital signature matches the physical signature.



It guarantees the person is alive and can provide proper identification.

► Differentials



- It uses VU Comm to notify customers or internal staff.
- It makes it easier to issue certificates, contracts, authorizations and consents, among others.
- It offers aesthetic customization in order to provide a unique and customizable solution.



VU Sign®

About VU Sign®

It enables signatures to be used as digital elements. It analyzes the written digitalized data and compares it with the signatures on the database.

It is helpful to identify a document's author. It verifies if the digital signature matches the physical one. It enables the creation of signature and approval workflows for the life cycle of different documents. It guarantees that the person is alive and has the skillful means to identify himself or herself.



Software requirements and compatibility

Operating System 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	Databases 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	Virtualization VMWare Citrix Microsoft Hyper-V RHEV Virtual Box Docker	High Availability HA Proxy KEEPALIVE REPMGR DRBD
Browsers Firefox Internet Explorer 10 or higher Google Chrome Apple Safari	Technologies Java 1.7 or higher	Security RSA / SHA1 / 3DES / AES 256 Security Certificates EAP-PEAP-MSCHAP v2 TimeStamp HOTP/OCRA/TOTP/HMAC	Web Server 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

Technical information

VU Sign[®] can be implemented on any technological environment, given it is multiplatform.

It uses devices that can establish parameters based of the pressure and speed of the trace to procure patterns of a high efficiency:

Digitalizing tablets: also known as ePads. People can sign on the screen with a special pen attached to them.

Electronic pencil: it is a writing device with a small camera that transfers what is written on a surface to a PC or mobile device, usually via Bluetooth.

VU Sign[®] SDK

VU provides the possibility of adding VU Sign[®] to existent applications, through the VU Sign[®] SDK, which includes all the methods that customers will need to integrate the electronic signature functionality:

- Speed channel detection
- Acceleration channel detection
- Time detection
- Time difference detection

It is delivered along with a functions' set instead of a group of screens, so clients are free to create the user experience they wish for their products, besides maintaining the necessary conditions to preserve the product's security and integrity.

To improve the SDK deployment, a guide containing examples of the use of every function is delivered, to make the execution on a real scenario easier.

The SDK is developed on Java for Android, Objective-C for iOS (compatible with Swift) and JavaScript, which enables the integration with Web and hybrid Mobile developments, such as Cordova/ PhoneGap.

Integration API

The integration infrastructure is designed to merge with any other platform, regardless of the language, through Web servers (POST/GET) published on VU App & Cloud Server[®].

The application is composed of different methods, identified with functions destined to the administrative management and for the use of final users. The communication between the presentation layers and the VU App & Cloud Server[®] is made with an SSL connection. The allowed connections to VU App & Cloud Server[®] match with the definition of communication between the layers, particularly on the TCP 80 port or TCP 443 port, according to the integration.

The available methods allow to:

- Obtain a signed document
- Extract the biometric information in a secure way
- Store the obtained biometric data (speed, acceleration, pressure, etc.)
- Use the results based on the biometric parameters for the analysis of an expert to verify the signature

Hardware Sizing*

Number of users	Primary Instance		Secondary Instance		Transactions per second	Storage required	Document Storage
	Processor	Memory	Processor	Memory			
1 to 10,000	8 processing threads	6 GB RAM	8 processing threads	6 GB RAM	16	60 GB - HD	178 GB - HD
10,000 to 50,000	16 processing threads	8 GB RAM	16 processing threads	8 GB RAM	32	120 GB - HD	890 GB - HD
50,000 a 100,000	32 processing threads	16 GB RAM	32 processing threads	16 GB RAM	64	240 GB - HD	4.4 GB - HD
100,000 to 250,000	64 processing threads	32 GB RAM	64 processing threads	32 GB RAM	128	480 GB - HD	6.3 GB - HD
250,000 to 1,000,000	128 processing threads	64 GB RAM	128 processing threads	64 GB RAM	256	1 TB - HD	24 TB - HD

* The present sizing estimation assumes a high availability setup.

