



VU Vault[®]



► What is it?

It is a sensitive data vault that also works as keyguard for encryption. It reports only a part of the information, using a reference (token) that leads to the validation of the most critical data.

► Benefits



It allows transaction through different channels to prevent the violation of sensitive data.



It is a tool used by TODOPAGO in Argentina.

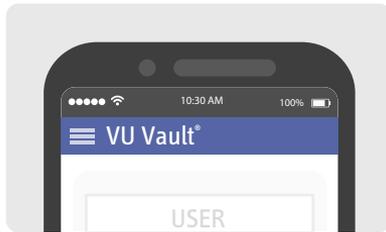


It is verified by VISA for its data tokenization support.



It achieves fast, easy and efficient integration between channels with VU App & Cloud Server.

► Differentials



- It does not require specialized hardware, it has a low acquisition cost and it has a perpetual licensing scheme.
- It includes integration with HSM for the storage of sensitive information encryption keys.
- It is protected in BD and performs integrations through Web Services and API REST.

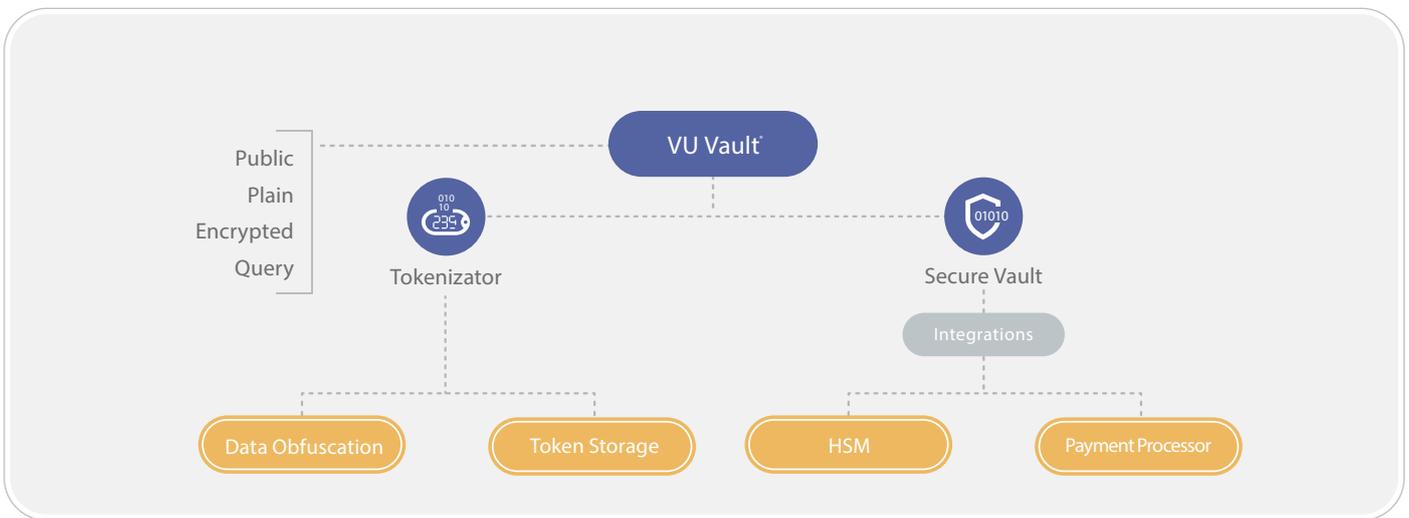


VU Vault®

About VU Vault®

It is a sensitive data vault that also works as an encryption key safeguard. It only reports a small portion of information using a reference (token) to validate the most critical data.

Transactions can be made via different channels to prevent the sensitive data from being breached. It is verified by VISA for its data tokenization compatibility. It is a tool used by TODOPAGO in Argentina. It has a quick, easy and efficient integration between the channels and VU App & Cloud Server®.



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 |

Integraciones

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

Gestión de Accesos

Radius
Cisco ACS 4.2 o superior
FreeRadius
Active Directory
Samba
Cisco ISE

Gestión de Registros e Informes

Crystal Reports
Syslog
Nagios

Compatibilidad Mobile

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

Technical Information

Dynamic variables are created, similar to One Time Passwords (OTP), as references to the original data. This way, only the components that are in a trusty relationship are enabled to access the original data via the tokenizator, the only that knows how to access the information it represents, via the OTP.

At the same time, the attack vectors are reduced, and the sensitive information is kept so the information sensitive to the exposed applications of the circuit is protected.

The sensitive information is in a private network, avoiding malicious access. Only the Tokenizer has access to complete data. The rest of the components access the obfuscated data.

VU Vault[®] is isolated and segmented from data and application processing systems, which previously process or store sensitive data referred by OTPs.

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 through 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 services are:

- Tokenization
- Flat Vault
- Encryption Vault (Private Token)
- Token Enquiry

Hardware Sizing*

| Number of Users | Primary Instance | | Secondary Instance | | Transactions per second | Storage required | LOG Storage |
|----------------------|-----------------------|-----------|-----------------------|-----------|-------------------------|------------------|-------------|
| | Processor | Memory | Processor | Memory | | | |
| 1 to 10,000 | 4 processing threads | 2 GB RAM | 4 processing threads | 2 GB RAM | 40 | 60 GB - HD | 60 GB - HD |
| 10,000 to 50,000 | 8 processing threads | 4 GB RAM | 8 processing threads | 4 GB RAM | 80 | 120 GB - HD | 120 GB - HD |
| 50,000 to 100,000 | 16 processing threads | 8 GB RAM | 16 processing threads | 8 GB RAM | 160 | 240 GB - HD | 240 GB - HD |
| 100,000 to 250,000 | 32 processing threads | 16 GB RAM | 32 processing threads | 16 GB RAM | 320 | 480 GB - HD | 480 GB - HD |
| 250,000 to 1,000,000 | 64 processing threads | 32 GB RAM | 64 processing threads | 32 GB RAM | 640 | 1 TB - HD | 1 TB - HD |

* The present sizing estimation assumes a high availability setup.

