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Enterprise wide application data protection

RPS All Technical and Functional Characteristics

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Technical Architecture

RPS platform is developed as a full-stack in C sharp (Front-Back end) and in a modular way:

_Multi-OS: Linux, Microsoft.
_Multi clients - Multi tenant.
_High availability infrastructure: Active-active cluster + database replication.
_Separate infrastructure for each service: Protection, reporting, authentication.
_Type of infrastructure: physical server, virtual machines, containers.
_Infrastructure lifting: horizontal.
_Automation of configurations via GUI + excel interface.
_Transformation API services: Protection, protection.
_Authentication server: OAuth 2.0
_Performance via a multi-threaded architecture.
_Datamart for the industrialisation of multi-client reports with a high volume of data: SQL + Mongo DB

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Protection Techniques

RPS uses more than 100 reversible and/or irreversible protection techniques:

_Anonymization

_Encryption

_Tokenization

_Pseudonymization

RPS Technique de protection	**Description > 100 Librairies de protection**				
Strong Encryption	AES 256 NIST	Random initialization vector	Order Preserving Encryption	Quantum Random Number Generator	Partial / Fully Homomorphic
Pseudonymization	Aliasing		Semantic Token		
Vault-based Tokenization	Our tokenization system is vault based by default. Tokenised values are stored encrypted in a mapping storage.				
Vaultless Tokenization	Our Vaultless tokenization by offering in memory tokens. The generation of these tokens is based on strong encryption. AES				
Static and Dynamic Anonymization	Masking Deletion	Random substitution Random shuffling Random scrambling Random dictionnary	Generalization Number variance Date variance	Hashing SHA-256	Differential privacy K-Anonymity / L Diversity / T Closeness NIST / EU
Format preserving Encryption (FPE)	FF1 NIST		Date encryption OPE - Number encryption OPE		

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Services and Technical Features:

Here are all the Services and technical features of RPS (REGDATA Protection Suite)

RPS 3.0 Services Offering	High-Level Description
Data protection services	
Protection type	Static Dynamic (On the fly) Contextual Conditional
Protection techniques	Anonymization Tokenization Encryption Pseudonymization
In the country or centralized protection	In country Centralized
Zero Trust protection	Cloud in confidence through your RPS platform
User Data processing preservation	All type of data processing
User experience preservation	For Business users
User business logic-operations preservation	For IT users (R&D) For BPO users
Type of data protected	Structured Semi-structured Unstructured
Type of data protected	Confidential data Personal sensitive data Regulated vertical market sector data
Type of application protected	Internal Legacy /proprietary (developed within the company) Editor Package Internal modern application
Type of application protected	Internal Hybrid Cloud Public Cloud Private Cloud
Type of environment protected	Production Testing Development Integration Demo

On-demand or as a service data protection	SaaS private customers REGDATA SaaS REGDATA Market Place

Data Reports Analysis Services

Type of reports	Security reports Compliance reports Usage reports
Regulatory Reports	EU-GDPR reports FINMA reports AEOI-FATCA reports
Business-Bespoke reports	Business-Bespoke reports
Security and compliance reports on demand and in service mode	Customer's Private SaaS REGDATA SaaS REGDATA Market Place

Data Value Services (Analysis services)

Confidential data preserving analytics	Confidential data
Privacy-preserving analytics	Personal sensitive data

Data Life Cycle Management

Type of data	Live data Saved data Archived data Erased data

Customers On-Boarding

Enrollment	Your internal customers Your external customers or partners
Billing	Your internal customers Your external customers or partners

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RPS 3.0 Technical features	High-Level Description
RPS Platform	
Service-oriented architecture	Protection Configuration Reporting Authentication Monitoring
Native Cloud architecture	Multi customers Multi applications Multi tenants Multi clouds
Multi infrastructure architecture	OS Server DB Containers
Scalable platform infrastructure architecture	Horizontal scale
Highly available platform infrastructure	Recovery Time objective Recovery Point objective
Robust and performant API'S	2 main API'S: Protect Deprotect
Security	
Management console access	By RPS Administrators Possibility of setting a strong 2-factor authentication process for administrators
Separation of duties	User role
Configurations validation	Validation process between the "Data owner" and a security person and / or DPO
Configurations audit trail	Audit trail for all types of configurations: Protection techniques, contexts, evidence, ...
Authentication RPS modules access	Internal Authentication of all RPS features via our RPS Identity mode
Key Management integration	KMS HSM
Authentication solutions integration (Identity & Access Management)	Infrastructure authentication Application authentication
DLP solutions integration (Data Leak Prevention)	Data leak Prevention
SIEM solutions integration	SIEM Fraud management

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Automation	
Configurations management	All type of configurations (copying, erasing, changing, and moving)
Automatic deployment	For all customer deployments for RPS release management
Multiple and successive configurations	Possibility via a single configuration to trigger several different transformations including different protection techniques
Reporting	
Data model	Open data model able to integrate all types of client dimensions and evidences
Scalable reporting infrastructure	Reporting infrastructure: Data counter held by the customer, multi-tenant, by application (Data Mart)
BI solutions integration	Microsoft Power BI solutions board.
Availability	
Availability monitoring	For Business-critical applications
Corporate monitoring tool integration	IBM, HP, SPLUNK, BMC, CA.
Performance	
Multi threads capabilities	Activate multiple and parallel data protection processing
Cache capabilities	Performance increase up to 80% for some use cases
End to end performance	From RPS to application back end and application back end to RPS
REGDATA Benchmark for files	Based on customers in production
REGDATA Benchmark for fields	Based on customers in production
Capacity Planning	
Stress test	Possible to predict an infrastructure load increase
Incident-Problem Management	
RPS Logs analysis	Possible to access RPS logs by customers

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