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THALES
Building a future we can all trust

CipherTrust Data Protection Gateway

The rapid evolution of applications to web-services based continues unabated. Large and small organizations and enterprises are developing and deploying web services that front both databases and unstructured data stores, leveraging RESTful communications as the industry-standard protocol for modern web services.

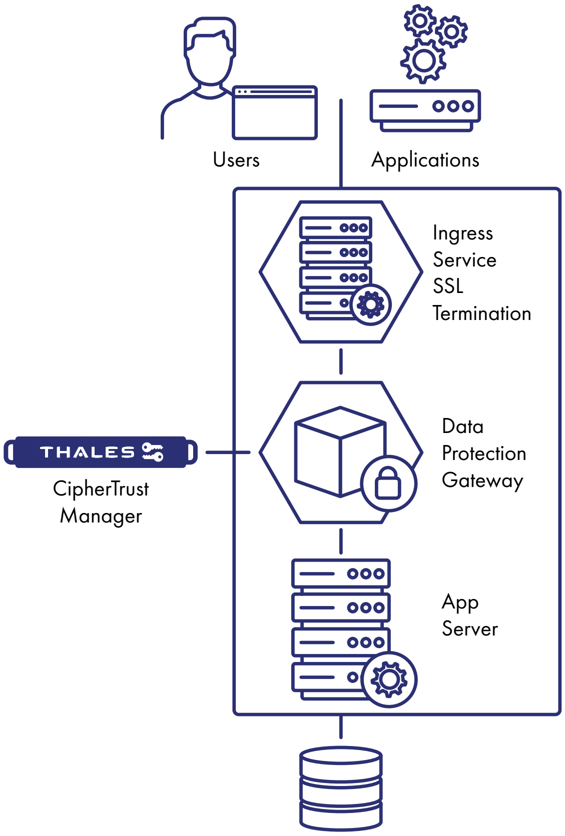
In parallel with this application evolution, organizations face ever-more stringent data protection and anonymization mandates. The chief information or chief security officer has signatory responsibility for data security.

For many new and evolving applications, the DevOps team may face a challenge: requirements to protect data for web services-based applications but lacking access to either, or both, the application and database or data store.

Other trends add to the primary challenge: first, along with the application evolution to web services, deployment architectures like containers and cloud-scalability solutions such as Kubernetes and Helm demand data protection solutions offering forward compatibility with cloud-first initiatives.

To meet these challenges, the CipherTrust Data Protection Gateway from Thales offers transparent data protection to any RESTful web service or microservice leveraging REST APIs.

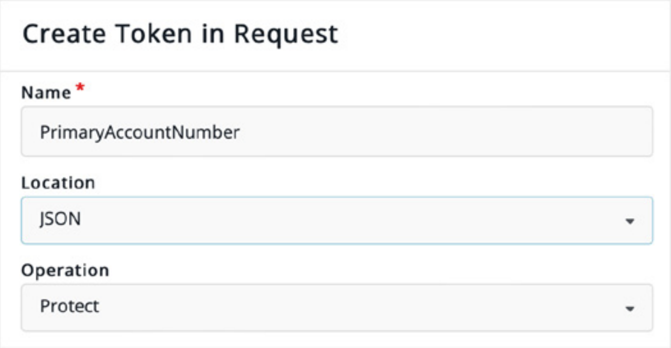
Architectural Overview



Data Protection Gateway is deployed inline between the client and web service and operates transparently to all entities on the network. The Gateway interprets RESTful data and performs protection operations based on profiles defined centrally in the Thales CipherTrust Manager and operates seamlessly with other components such as ingress services used to terminate SSL.

Protecting Sensitive Data In REST

Fields in REST are tagged with identifiers. Selecting which fields to protect is fast and easy. But perhaps more important is that field selection, and protection method are configured centrally on CipherTrust Manager, delivering full separation of duties for higher security.



Create Token in Request

Name *

PrimaryAccountNumber

Location

JSON

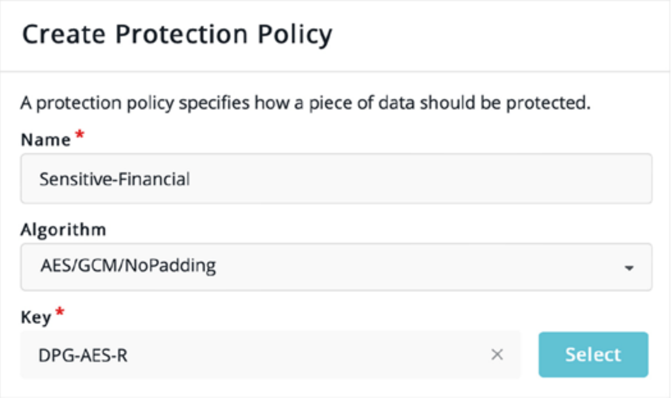
Operation

Protect

Configuring a REST field for protection

Protection Methods

REST field data may be protected using an ever-growing list of encryption algorithms across the AES, DES and FPE families. In another example of separation of duties, protection policy keys can be managed by a different role than the role used to create the protection policy.



Create Protection Policy

A protection policy specifies how a piece of data should be protected.

Name *

Sensitive-Financial

Algorithm

AES/GCM/NoPadding

Key *

DPG-AES-R

Creating a Protection Policy

Cloud-Ready and Cloud-Scale

Data Protection Gateway is deployed as a container and is fully compatible with Kubernetes orchestration systems such as Helm, Ansible and Terraform, and, of course, Kubernetes horizontal scaling. It can also be deployed as a standalone container for development and testing use cases as well as legacy production deployments.

Thales Application-Layer Protection

Data Protection Gateway is one of several application-layer data protection offerings from Thales. CipherTrust Application Data Protection offers data protection from within applications with assist from developers. CipherTrust Database Protection offers transparent, column-level data protection for a wide range of databases. Finally, CipherTrust Batch Data Transformation offers high-performance Static Data Masking for databases and structured files.

CipherTrust Data Security Platform

Data Protection Gateway is part of the CipherTrust Data Security Platform, which unifies data discovery, classification, data protection, and unprecedented granular access controls, all with centralized key management. This simplifies data security operations, accelerates time to compliance, secures cloud migrations and reduces risk across your business. You can rely on the Thales CipherTrust Data Security Platform to help you discover, protect and control your organization's sensitive data, wherever it resides.

About Thales

The people you rely on to protect your privacy rely on Thales to protect their data. When it comes to data security, organizations are faced with an increasing number of decisive moments. Whether the moment is building an encryption strategy, moving to the cloud, or meeting compliance mandates, you can rely on Thales to secure your digital transformation.

Decisive technology for decisive moments.