Solution Brief

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Securing Data Sovereignty in the Cloud with Thales and eperi

Delivering Compliance, Control, and Confidentiality Across Cloud and SaaS Environments

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CYBERSECURITY

The Evolving Challenges of Cloud Data Security

As organizations modernize through digital transformation and cloud adoption, they face growing pressure to protect sensitive data wherever it resides. Cloud and SaaS environments offer agility and scalability, but they also introduce new risks related to sovereignty, compliance, and control. Sensitive data often leaves the organization's direct oversight, increasing exposure to unauthorized access and misconfiguration. The management and security of sensitive data must also adhere to new and evolving regulations and standards.

Enterprises must ensure that neither cloud administrators nor service providers can access unencrypted data, while also proving to auditors that all cryptographic processes are securely managed. Balancing these security, performance, and compliance needs has become one of the biggest challenges in cloud transformation, requiring a solution that combines encryption, key management, and data governance without compromising flexibility or control.

A Trusted Architecture for Cloud Data Security: Thales and eperi

Unified Data Sovereignty

The collaboration between Thales and eperi delivers a unified, data-focused approach to protecting sensitive information across hybrid and multicloud environments. Together, they combine Thales' trusted expertise in key management and hardware-based security with eperi's advanced pre-cloud encryption and tokenization technology. This enables organizations to secure data before it enters cloud or SaaS applications while keeping full control over encryption keys and security policies.

Thales Data Security Solutions: Security for What Matters Most

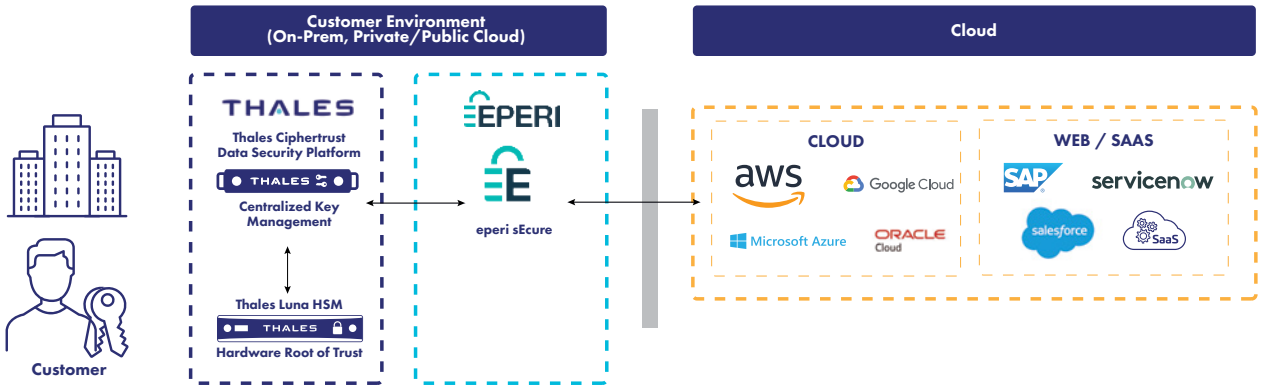
At the core of the joint solution are Thales CipherTrust Data Security Platform (CDSP) and Thales Luna Hardware Security Modules (HSMs). CipherTrust Manager serves as the central control point for CDSP, overseeing key generation, lifecycle management, policy enforcement, and access controls across distributed environments. Keys are safeguarded within Luna HSMs, a FIPS 140-3 Level 3, Common Criteria EAL4+, and eIDAS-compliant hardware root of trust, offering certified, tamper-resistant security. With extensive auditing, reporting, and granular role-based access control, organizations can simplify compliance checks and maintain strict separation of duties, preventing unauthorized access to encryption keys. This integrated architecture enables enterprises to enforce encryption policies and strengthen governance at scale while maintaining full control over cryptographic assets.

eperi sEcure: Data Protection Before the Cloud

Complementing this trusted foundation, eperi sEcure provides strong data protection by encrypting, masking, or tokenizing sensitive information before it is transmitted to cloud platforms such as Microsoft 365, Salesforce, or ServiceNow. Because encryption happens within the customer's own trusted environment, cloud providers and administrators never see plaintext data—a true zero-knowledge architecture. eperi sEcure integrates seamlessly through a proxy-based deployment that requires no changes to existing applications or workflows and maintains functionality. Policies for encryption, masking, or tokenization are centrally managed to ensure compliance with organizational and regulatory needs, providing detailed control over who can access specific data and under what conditions. The solution is also built for long-term resilience, supporting hybrid and post-quantum cryptography through its "Bring Your Own Algorithm" framework aligned with NIST standards.

End-to-End Protection and Control

By integrating Thales CipherTrust Manager and Thales Luna HSMs with eperi sEcure, enterprises can implement a cohesive, end-to-end approach to data sovereignty and compliance. Encryption keys stay fully under customer control, while sensitive data is rendered unreadable before it enters the cloud. Even if encrypted data falls into the wrong hands, the keys remain protected, keeping the data secure and unusable. This comprehensive architecture provides data protection during use, in transit, and at rest without compromising performance or scalability.



Key Benefits

- **Complete Data Sovereignty:** Data remains encrypted at all times while encryption keys and access policies are fully managed through CipherTrust Manager and master keys are safeguarded within FIPS 140-3 Level 3 validated and Common Criteria EAL4+ Luna HSM.
- **End-to-End Protection:** Ensures consistent data security across all states – in use, in transit, and at rest.
- **Advanced Governance and Policy Controls:** Simplifies proof of compliance with GDPR, eIDAS, NIS2, PCI-DSS, and DORA through centralized key lifecycle management, policy enforcement, audit logging, and a highly certified hardware root of trust.
- **Zero-Trust Role Separation:** Enforces strict boundaries between operational and security administration to reduce insider threats.
- **High Availability and Scalability:** Supports enterprise-grade performance across clustered, multi-region deployments.
- **Post-Quantum Cryptography Ready:** Prepared for evolving cryptographic standards, including hybrid and post-quantum algorithms.

Security Without Compromise

The Thales + eperi collaboration unites two leaders in data-centric security to redefine how organizations safeguard information in the cloud. Thales provides the trusted security foundation for encryption key management and hardware-based assurance, while eperi ensures that data remains encrypted and sovereign before it leaves the enterprise perimeter. Together, they enable organizations to embrace the cloud with confidence, maintaining sovereignty, compliance, and operational agility across their most critical workloads.

About eperi

eperi – Privacy is the starting point

We believe that data privacy is a fundamental human right. Our aim is to allow people to always stay in control over their data. Without compromises and with the best technology. With the customer at the center, we have created a solution that is invisible to the user while meeting the highest security standards.

With the eperi solution, companies benefit from all the advantages of Cloud usage, e.g. efficient company-wide collaboration – while staying legally compliant according to worldwide data protection laws. eperi owns several international patents for its innovative Multi-Cloud technology, which provides unrivaled data protection for SaaS applications, custom applications and files. The customer stays in sole control of all sensitive data as no unencrypted data is sent to the Cloud.

About Thales

Thales is a global leader in cybersecurity, helping the most trusted organizations protect critical applications, data, identities, and software anywhere, at scale. Through Thales' integrated platforms, customers achieve better visibility of risks, defend against cyber threats, close compliance gaps, and deliver trusted digital experiences for billions of consumers every day.

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