

Thales Helps a Major European Energy Utility Securely Transition to Smart Meters Country-Wide

The Business Challenge

A major European energy utility was transitioning most of the country's subscribers to connected smart meters. This highly regulated utility needed to comply with strict department of energy requirements for cybersecurity and data privacy from the product design phase through implementation and systems management. The organization required a strong, reliable, and scalable security infrastructure that would support mandated cryptographic algorithms based on a FIPS 140-2 Level 3 root of trust.

The Solution

The energy utility deployed Thales Luna Hardware Security Modules (HSMs) to secure all PKI certificate authentication and device signing for millions of smart meters. The Luna HSMs, available on-premises and in the cloud, run the mandated cryptographic algorithm, and generate and manage high entropy keys in a FIPS 140-2 Level 3 environment. The Luna HSMs also enable management of keys independently from service provider. The utility also implemented Ciphertrust Manager to encrypt sensitive personal data from millions of subscribers in databases and file servers.

Luna Hardware Security Modules

Thales Luna HSMs are dedicated crypto processors specifically designed to protect the crypto key lifecycle. HSMs act as trust anchors that protect the cryptographic infrastructure of some of the most security-conscious organizations in the world by securely managing, processing, and storing cryptographic keys inside a hardened, tamper-resistant device. Enterprises use HSMs to protect transactions, identities, and applications, because HSMs excel at securing cryptographic keys and provisioning encryption, decryption, authentication, and digital signing services for a wide range of applications.

Thales Luna HSMs provide the highest level of security by always storing cryptographic keys in hardware. They provide a secure crypto foundation, because the keys never leave the intrusion-resistant, tamper-evident, FIPS-validated appliance. Since all cryptographic operations occur within the HSM, strong access controls prevent unauthorized users from accessing sensitive cryptographic material. Thales also implements operations that make the deployment of secure HSMs as easy as possible. Luna HSMs can be integrated with Thales Crypto Command Center for quick and easy crypto resource partitioning, reporting, and monitoring.

Thales helped the customer achieve audit compliance and improve overall resilience of energy infrastructure by protecting smart meter connections and sensitive data for millions of homes and businesses.



CipherTrust Manager

CipherTrust Manager enables organizations to centrally manage encryption keys for Thales CipherTrust Data Security Platform and third-party products. It simplifies key lifecycle management tasks, including secure key generation, backup/restore, clustering, deactivation, and deletion. CipherTrust Manager provides role-based access control to keys and policies, multi-tenancy support, and robust auditing and reporting of all key management and encryption operations.

The Results

1. Achieved audit compliance with regulations from the Department of Energy & Climate Change, as well as GDPR and PCI.
2. Improved overall resilience of energy infrastructure by protecting smart meter connections at millions of homes and businesses.
3. Successful roll out of Luna HSMs led to expansion into personal information protection using encryption and key management with Ciphertrust Manager.
4. Ensured high performance and scalability able to support millions of smart devices and encryption keys.

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.