Secure Digital Asset Private Keys in **Customer-Owned Certified HSM** with Thales and Fireblocks

Take Ownership and Control of your Digital Assets

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- Extend existing certified HSM infrastructure to digital asset workflows such as stablecoins, cryptocurrencies, security tokens, tokenized real world assets & CBDCs

- Enable flexible hot, warm, and cold signing workflows

- Private keys used for transaction signing always remain protected with customer-owned and managed PQC-ready Luna HSMs, complying with audit and regulatory mandates

The challenge for regulated institutions

As digital asset adoption accelerates, regulated institutions must navigate the complexities of securing transaction processing within environments governed by stringent compliance mandates and internal controls. Legacy infrastructure, heightened regulatory scrutiny, and institutional risk management policies often create roadblocks to innovation.

To succeed, digital asset solutions must align seamlessly with established institutional control frameworks, offering flexibility in signing workflows while maintaining auditability, performance, and full integration with enterprise systems.

Thales and Fireblocks: A secure and compliant digital asset signing solution

The Fireblocks and Thales partnership enables regulated institutions, such as banks, custodians, and exchanges, to manage digital asset transactions through a cryptographic signing process fully integrated into their existing infrastructure. Leveraging Fireblocks KeyLink, a secure middleware layer, the solution connects the Fireblocks Digital Asset Platform to Thales Luna Hardware Security Modules (HSMs). Luna HSMs provide institutions with the ability to securely store and manage their cryptographic keys in FIPS 140-3 Level 3 and Common Criteria certified hardware, ensuring that private keys remain within the HSM and meet strict compliance and regulatory requirements. This joint solution delivers the security of on-premises hardware, with the flexibility and scalability of the Fireblocks Digital Asset Platform. This combination ensures institutions maintain full key ownership, meet the highest security and compliance standards, and seamlessly integrate flexible signing workflows, whether automated or air-gapped, within their governance and policy frameworks.

Key Features and Benefits

- Full key ownership and FIPS-validated, root of trust for digital asset signing
  - Cryptographic keys always remain within the secure, tamper-resistant Thales Luna HSM environment.
  - Signing is performed within a FIPS-140-3 Level 3 validated, Common Criteria EAL4+ certified hardware, and eIDAS-compliant Thales Luna HSM.
  - Achieve crypto agility and PQC readiness with Luna HSMs, which protect quantum-safe cryptographic keys by integrating NIST-standardized PQC algorithms directly into their core firmware.

- Seamless integration with existing infrastructure
  - Leverages security architecture already embedded within regulated, bank-grade environments.
  - Minimal operational friction for security, governance, and audit processes.

- Hot or cold signing options
  - Supports real-time, online transaction approvals.
  - Enables air-gapped, offline workflows using secure mechanisms (e.g., USB, SFTP, data diodes).

- Advanced governance and policy controls
  - Granular and fully customizable controls: multi-approval rules, address whitelisting, transaction limits.
  - Comprehensive, immutable logs for audit trails and regulatory proof.

- Native support for tokenization and smart contracts
  - Secure on-chain lifecycle management of tokenized assets.
  - Compatible with smart contract transaction approvals and on-chain asset logic.

- Digital Asset and Stablecoin Ecosystem Connectivity
  - Securely interact with the digital asset and stablecoin ecosystem, from on and off ramps to liquidity providers to issuers, while retaining full key control

- Built for global regulatory compliance
  - Designed to address key regulatory frameworks including HKMA, HKSFC, and JFSA.
  - Supports organizational segmentation by business unit, geography, or regulatory jurisdiction.
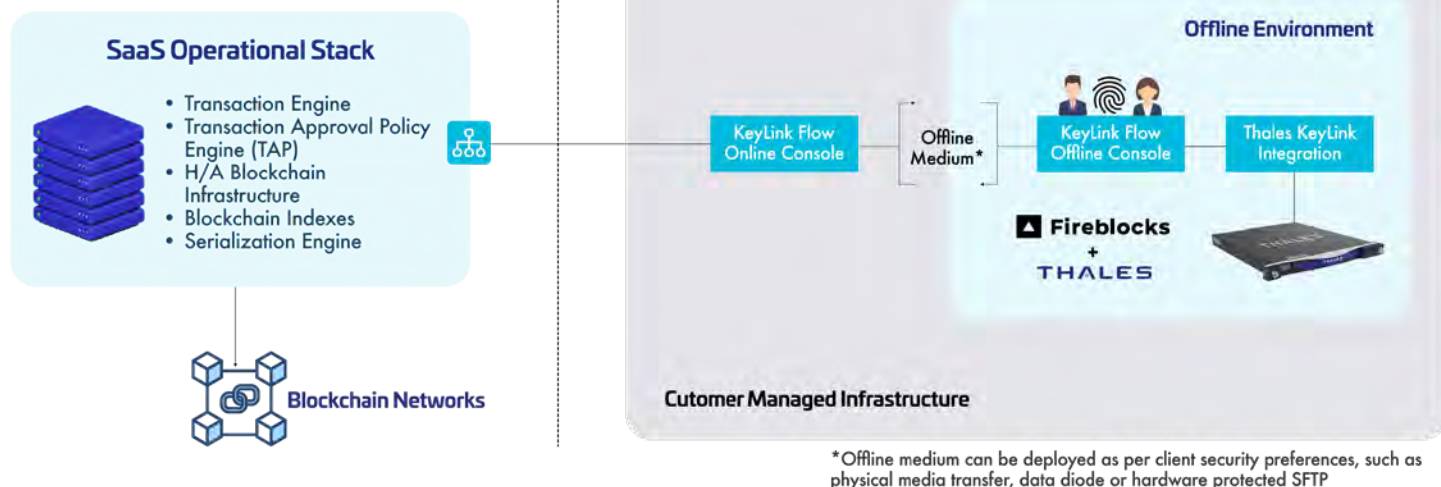
Integrating Thales Luna HSM with Fireblocks' KeyLink strengthens the security and efficiency of digital asset operations.

Summary

Fireblocks KeyLink with Thales Luna HSM, enables institutions to securely manage digital asset workflows using infrastructure that complies with their regulatory and internal security standards. By supporting both legacy HSM systems and modern orchestration platforms, this hybrid approach offers flexibility, confidence, and future readiness. For institutions requiring flexible signing controls, seamless infrastructure integration, and a pathway to expand into digital asset and stablecoin ecosystem, this is your secure foundation of digital trust.

About Fireblocks

Fireblocks is the world's most trusted digital asset infrastructure company, empowering organizations of all sizes to build, run and grow their business on the blockchain. With the industry's most secure, scalable and comprehensive platform, we streamline custody, tokenization, payment, settlement, and trading operations across the largest ecosystem of exchanges, custodians, banks, payment providers and stablecoin issuers in the world. Over 2,400 organizations - including more than 60 global banks such as BNY, BNP Paribas, SCB, SMBC, Wenia, and BTG Pactual - trust Fireblocks to secure more than $10 trillion in digital asset transactions across 100+ blockchains and over 300 million wallets.
Learn more at fireblocks.com

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.