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Secure Trust & Certificate Lifecycle Management with DigiCert® Trust Lifecycle Manager and Thales

Building an automated, hardware-backed, crypto-agile trust foundation

SOLUTION BRIEF

The Solution

DigiCert and Thales deliver a joint solution that enables organizations to automate certificate lifecycle management while securing cryptographic keys within a hardware-based root of trust. This joint infrastructure has been in-place since 1997, demonstrating thirty years of secure, operational excellence.

DigiCert Trust Lifecycle Manager provides centralized discovery, issuance, automation, renewal, and governance of digital certificates across enterprise infrastructure, applications, users, devices, and machine identities.

Thales Luna HSM and Luna Cloud HSM provide hardware-backed protection for cryptographic keys, ensuring private keys are generated, stored, and used within tamper-resistant, certified hardware.

The Problem

As certificate lifetimes shorten and cryptographic requirements evolve, organizations face an increasing risk from manual certificate management and insecure key storage. The sheer volume of certificates would increase by a minimum of 8X. As an example, an organization managing 1,000 annual certificates will surge from 1,000 to at least 7,766 renewal operations. This equates to roughly 21 renewal operations every single working day. PKI remains foundational, but without automation and hardware protection, deployments become costly, complex, fragile, operationally risky, and they waste the time of expert staff who could be put to better use.

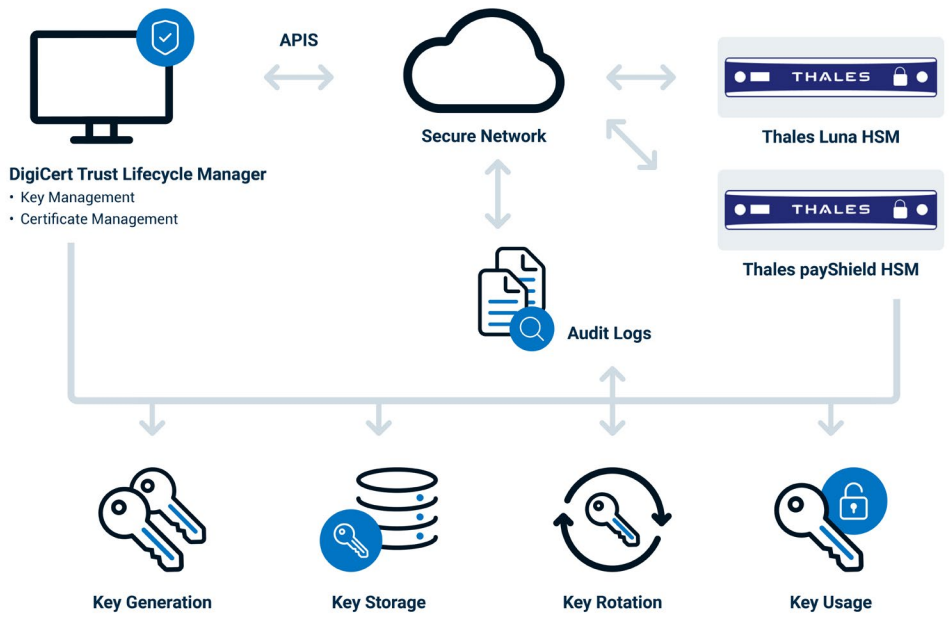
Key Use Cases

- TLS/SSL automation
- Network and application authentication
- Secure email and document signing
- Code signing and software supply chain security
- IoT and device identity
- Zero Trust and remote access
- Post-quantum cryptography readiness
- Crypto-agility

Architecture Overview

The joint architecture positions DigiCert Trust Lifecycle Manager as the control plane for certificate automation and governance, while Thales Luna HSMs serve as the hardware root of trust.

Trust Lifecycle Manager & Thales HSMs



Applications, devices, and network infrastructure request certificates through DigiCert Trust Lifecycle Manager, which enforces policy-driven automation. Cryptographic keys are generated and protected within Thales HSMs, enabling compliance, crypto-agility, and post-quantum readiness.

In Summary

Together, DigiCert and Thales provide a future-ready trust platform that improves operational efficiencies, improves compliance, reduces operational risk, and prepares organizations for imminent cryptographic change.

DigiCert documentation on installing and configuring Luna in TLM - SafeNet HSM installation and configuration.

Key Feature & Benefits

Root of Trust for PKI private keys

- NIST FIPS 140-3 Level 3 & Common Criteria EAL 4+ HSM
- Rapid setup, including account, HSM and CA creation
- Protection for Registration Authority (RA) keys used in strong authentication
- Protection of Local key escrow key issuance process

Maintain compliance readiness

- Centralized authentication management of devices, users and servers
- Auto-enrollment and Active Directory (AD) / LDAP integration
- Ready for post-quantum cryptography

Cost effective with maximum scalability

- Can be deployed on-premises or cloud-based, providing high performance and scalability

Full PKI process audit and reporting

- Easy integration with best-of-breed logging, monitoring and alerting packages

Technical specifications

- Certificate management protocols, including: REST API, ACME, CMPv2 and EST

About DigiCert

DigiCert is a global leader in intelligent trust. We protect the digital world by ensuring the security, privacy, and authenticity of every interaction. Our AI-powered DigiCert ONE platform unifies PKI, DNS, and certificate lifecycle management, to secure infrastructure, software, devices, messages, AI content and agents. Learn why more than 100,000 organizations, including 90% of the Fortune 500, choose DigiCert to stop today's threats and prepare for a quantum-safe future at www.digicert.com.

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