FUTUREX

Securing Data over Public Networks

Why Futurex

Futurex is the trusted leader in Public Key Infrastructure (PKI) and Certificate Authority (CA) solutions, combining over 40 years of cryptographic expertise with innovative, scalable platforms. Its unified code base and firmware ensure seamless interoperability across HSMs, key management servers, and CA products, simplifying operations and accelerating compliance.

Trusted by global enterprises and Tier-1 banks, Futurex has the only HSM supporting PQC that has been PCI HSM validated, enabling secure, future-proof cryptography. With VirtuCrypt's global cloud HSM network and flexible deployment options, Futurex delivers low-latency, highly secure PKI infrastructure backed by exceptional service, empowering organizations to confidently safeguard their critical digital assets today and for tomorrow.

Regulations Spotlight

The CA/Browser (CA/B) Forum mandate became effective from June 1, 2023, and stipulates that all code signing certificate private keys, both extended validation (EV) and non-EV, must be generated and stored in a hardware security module (HSM) certified to at least FIPS 140-2 Level 2 or Common Criteria EAL 4+ standards. This ensures private keys are non-exportable and protected against compromise.

What Is Public Key Infrastructure (PKI) And Certificate Authority (CA)

PKI provides the framework for secure digital interaction, while the CA acts as its trust anchor. By validating identities and issuing certificates, the CA supports PKI's chain of trust, enabling secure, authenticated, and encrypted network communications.

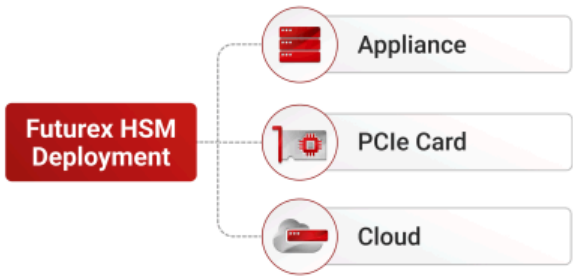
- **Public Key Infrastructure (PKI)** is a framework of roles, policies, hardware, software, and procedures that create, manage, distribute, use, store, and revoke digital certificates and public-key encryption. It secures electronic communication by binding public keys to verified identities through digital certificates, ensuring strong authentication and data integrity in e-commerce, online banking, and confidential messaging.
- **A Certificate Authority (CA)** is a trusted entity within PKI that issues, signs, and manages digital certificates. It verifies the identity of certificate requesters, ensuring the public key belongs to the correct subject. The CA's digital signature confirms the certificate's authenticity.

UNIVERSAL HSM PLATFORMS

Futurex HSMs deliver scalable, high-performance security that strengthens PKI and CA operations across payments, enterprise protection, and cloud environments. Built for flexibility, they enable organizations in financial, enterprise, and regulated sectors to simplify key management, automate certificate lifecycles, and secure digital trust seamlessly across on-premises, cloud, and hybrid deployments.

Excrypt HSMs: Payment And General-Purpose

Excrypt HSMs deliver unmatched performance and scalability for PKI and CA operations, supporting up to 100,000 TPS / 40,000 SPS plus 75 virtual HSMs per host for secure, isolated cryptographic domains. The unified platform simplifies certificate issuance, key generation, and signing, while ensuring FIPS–validated hardware protection for all root and issuing CA functions.



Engineered for crypto agility and post-quantum readiness, Excrypt HSMs enable seamless interoperability across PKI ecosystems and easy migration from legacy systems. Centralized management and flexible deployment, on-premises, cloud, or hybrid, empower enterprises to maintain trusted digital identities, automate certificate lifecycles, and scale cryptographic trust infrastructure with speed, resilience, and compliance.

CryptoHub: The Unified Enterprise Security Platform

This unified encryption and PKI platform is designed to support various certificate authority (CA) functions. Its flexibility allows deployment on-premises, in the cloud, or as a hybrid solution, making it suitable for diverse organizational needs.

VirtuCrypt: The Cloud HSM Platform

This fully managed, enterprise-grade cloud cryptographic platform supports various PKI and certificate authority (CA) functions. It spans five continents, and its centralized management, high availability, and integration capabilities make it ideal for diverse enterprise PKI deployments in the cloud.

Global Footprint - Local Residency and Regulatory Compliance

Offline Root Certificate Authority

Futurex excels in Offline Root Certificate Authority (CA) support across its HSMs by combining cutting-edge security with unmatched operational efficiency.

- ***Secure key management:*** Securely generates, stores, and manages root keys offline, blocking unauthorized access and network threats using FIPS-certified HSMs
- ***Provides trusted PKI anchors:*** Ensures that the root CA stays the central and trusted PKI anchor
- ***Lifecycle management:*** A single platform delivers a turnkey service to generate, distribute, rotate, and retire keys
- ***Independent trust chain security:*** Issues and validates subordinate out-of-band CA certificates securely
- ***Strengthen compliance:*** Seamless integration and flexible deployments (on-premises, cloud, or hybrid) boost compliance and enable rapid recovery
- ***Strict access controls enforced:*** Advanced cryptographic protections set Futurex apart in robust, enterprise-class PKI security.

> Futurex solutions have ensured that EPX has stayed ahead of the curve in the payments industry. Their innovation and foresight have helped EPX grow with confidence.

*— **Truscott Lee,** Director of Operations, EPX*

Issuing Certificate Authority

Futurex excels in Issuing Certificate Authority (CA) across its HSMs through comprehensive, hardware-backed security and centralized management.

- ***Robust data protection:*** FIPS-certified HSMs deliver strong compliant security
- ***Validates certificate requests:*** The integrated registration authority (RA) only issues approved certificates for trusted identities
- ***Automated and granular policy controls:*** Issuance, renewal, and revocation are controlled by location, unit, and domain
- ***Seamless integration:*** Centralized and auditable certificate management with HashiCorp Vault and Venafi TPP etc.
- ***Robust and scalable controls:*** Certificates are issued for users, devices and application, meeting evolving standards
- ***Unmatched turnkey security:*** Automation provides greater agility, flexibility and performance.

Code Signing

Futurex distinguishes itself in Code Signing across its HSMs by combining advanced hardware-backed security with seamless integration and deployment flexibility.

- ***FIPS-certified HSM security:*** Secures code signing certificates and keys, preventing unauthorized access and tampering
- ***Developer tools integration:*** Automates signing and manages lifecycles, both on-premises and in the cloud
- ***Full compliance:*** Maintains all code signing operations within HSMs, releasing only authenticated code
- ***Unmatched protection:*** Provides efficiency, and scalability from a unified, hardware-backed solution.

> CryptoHub is a revolutionary development. This would help customers with vast numbers of encryption equipment, and they want to reduce the estate of encryption devices.
>
> — *VeriSafe LLC*

IoT Certificate Authority

Futurex leads in IoT Certificate Authority (CA) through its secure, scalable platform portfolio.

- ***Robust IoT security:*** Uses FIPS-certified key management servers and HSMs
- ***Full IoT lifecycle:*** Manages key loading, certificate issuance, remote updates, and revocation
- ***Security policies enforced:*** Authenticates devices and encrypts communications to block threats
- ***Streamlines bulk volumes:*** Handles high-volume keys and certificates for manufacturing and deployment
- ***Seamless scaling:*** Supports flexible on-premise, cloud, or hybrid integration
- ***Scalable performance:*** Delivers industry-leading uptime, and trusted communications at enterprise scale.

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For over 40 years, Futurex has been an award-winning leader and innovator in the encryption market, delivering uncompromising enterprise-grade data security solutions. Over 15,000 organizations worldwide trust Futurex to provide groundbreaking hardware security modules, key management servers, and cloud HSM solutions.

Futurex is headquartered outside of San Antonio, Texas, with regional offices worldwide and over a dozen data centers across five continents and delivers unmatched support for its clients' mission-critical data encryption and key management requirements.

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