# Securing Sensitive Financial Systems with Cloak HSM-as-a-Service

## WHAT IT ADMINSTRATORS ARE SAYING

*"I need a HSM for our PKCS11-based infrastructure to meet PCI-DSS and SOX regulatory compliance. But enterprise HSM are so difficult to administer and use. Cloak HSM-as-a-Service simplifies administration tasks and is free to trial."*

## CUSTOMER CHALLENGE

Financial companies needs to secure important cryptographic keys for PKCS11 infrastructure, crypto currency or transaction data protection. Hardware Security Module (HSM) is one of the best way to protect cryptographic keys. However, enterprise HSM is difficult to deploy and administer. This presents a significant technical and resource problem for small to medium sized financial institutions.

## SOLUTION

Hardware Security Module-as-a-Service (HSM-as-a-Service) is a cloud-based offering that delivers secure hardware protected cryptographic key storage, management, and processing capabilities without the need for on-premises hardware. Cloak HSM-as-a-Service leverages state-of-the-art encryption technologies to safeguard sensitive information, such as crypto wallet, user records, transaction data, and communications.

## RESULTS

Peace of mind is hard to price, but Cloak Apps does it

See for yourself how Cloak Apps can improve the security and productivity of your organization with a free trial. Visit site.cloakapps.com, or email sales@cloakapps.com

**Industry:**
Finance, Accounting

**Location:**
USA, Asia

**Products used:**
HSM-as-a-Service

**About us**
Cloak Apps brings true enterprise-grade security to the cloud. Founded by a team of software security research scientists and professionals, we start with the belief that cloud computing is here to stay, but data loss can and must be prevented.

Our solution allows the sharing of confidential documents on public cloud infrastructure. We specifically target cross-location projects requiring the compliant and auditable exchange of sensitive information for finance, legal, corporate development, R&D and engineering teams.

## PROBLEM: HOW TO ACCESS SECURE CRYPTOGRAPHIC KEYS?

IT administrators in Financial SMB (Small and Medium-sized Business) firms know Hardware Security Modules (HSMs) is a valuable asset, to achieve:

**Secure Transaction Processing:** Financial SMBs often handle financial transactions, both internally and with clients or vendors. HSMs play a crucial role in securing these transactions by providing secure key management and cryptographic services, ensuring the confidentiality, integrity, and authenticity of financial data exchanged over networks.

**Secure Access Control:** HSMs can also be used to enforce secure access control policies within financial SMBs. By securely storing cryptographic keys and credentials, HSMs help prevent unauthorized access to critical systems, applications, and data, reducing the risk of data breaches and insider threats.

**Compliance Requirements:** Many financial SMBs are subject to industry regulations and compliance standards, such as PCI-DSS (Payment Card Industry Data Security Standard), GDPR (General Data Protection Regulation), or SOX (Sarbanes-Oxley Act). HSMs help organizations meet these regulatory requirements by providing secure cryptographic key management and ensuring the integrity and confidentiality of sensitive data.

**Protection Against Cyber Threats:** HSMs offer protection against various cyber threats, including data breaches, insider attacks, and malware. By safeguarding cryptographic keys and performing encryption operations within a dedicated hardware device, HSMs

*Enterprise grade security does not have to be difficult to use and administer.*

-- Marcus Tan, CEO, Cloak

## WHAT CLOAK HSM-AS-A-SERVICE OFFERS:

• Secure Key Management: Cloak HSM-as-a-Service ensures the secure generation, storage, and distribution of cryptographic keys, protecting HR and PR SMBs' sensitive data from unauthorized access or tampering.

• Compliance Support: With Cloak HSM-as-a-Service, SMBs can easily achieve regulatory compliance requirements such as GDPR, HIPAA, or CCPA, mitigating the risk of costly fines and penalties.

• Scalability and Flexibility: Cloak HSM-as-a-Service offers scalability to accommodate the evolving needs of HR and PR SMBs, allowing them to expand cryptographic operations seamlessly as their businesses grow.

• Cost Efficiency: By eliminating the need for expensive on-premises hardware and maintenance, Cloak HSM-as-a-Service helps SMBs reduce capital expenditure and

## BENEFITS FOR FINANCIAL SMBS:

• Enhanced Data Security: Cloak HSM-as-a-Service strengthens data security measures, safeguarding sensitive HR records, employee communications, and client information from cyber threats and data breaches.

• Improved Confidentiality: By encrypting sensitive data with Cloak HSM-as-a-Service, HR and PR SMBs can ensure the confidentiality and integrity of their communications, protecting proprietary information and trade secrets.

• Simplified Compliance: Cloak HSM-as-a-Service simplifies the process of achieving regulatory compliance for HR and PR SMBs, providing robust encryption and key management solutions that meet industry standards and regulations.

## FEATURES THAT DELIVER THE DESIRED RESULTS

| SECURE KEY MANAGEMENT | COST EFFICIENCY | INTEGRATION |
|---|---|---|
| HSM-as-a-Service offers secure generation, storage, and management of cryptographic keys. Keys are protected within tamper-resistant hardware, ensuring their confidentiality and integrity. | By eliminating the need for on-premises hardware and maintenance, HSM-as-a-Service offers a cost-effective solution for cryptographic key management. Organizations can reduce capital expenditure and operational costs associated with traditional HSM | The service easily integrates with existing applications, systems, and cloud platforms through APIs and SDKs. This allows organizations to incorporate cryptographic services seamlessly into their workflows. |

# HSM-AS-A-SERVICE SPECIFICATIONS

| SPECIFICATION | DETAILS |
|---|---|
| Key Type | AES (256 bit) <br><br> RSA (1024, 2048, 4096 bit) <br><br> ECC (SECP192R1) <br><br> ECC (SECP256R1) |
| Key Management | HSM key creation, deletion |
| Key Operation | Encryption, Signing |
| Integration | Easily integrates with existing applications and systems through APIs and SDKs. |
| Performance | Scalable, according to service level subscribed |
| Auditing and Logging | Audit trace for HSM key usage, user activities and administration tasks |
| Platform Compatibility | RESTful API <br><br> Kafka Queue Integration |
| Enterprise Tools | Full featured web-based administration console |

See for yourself how Cloak HSM-as-a-Service can improve the security and productivity of your organization with a **free trial**. Simply sign up for an account at https://kmsconsole.cloakapps.com.