Large Multinational Public Sector Bank Implements Zero Trust Security Framework with eMudhra Solutions

eMudhra deploys a Zero Trust security framework, including Certificate Lifecycle Management (CLM) and Identity and Access Management (IAM) solutions, to securely manage certificates and user identities for a large multinational public sector bank.

About The Customer

Our customer is one of the largest and oldest commercial banks operating in India, providing a wide range of banking and financial services, including savings accounts, loans, and investment products. The bank actively adopts alternate channels and technology to provide customers with convenient and secure banking services. Key technologies and channels include:

- **ATMs**: The bank operates the largest network of ATMs in India, with over 65,000 ATMs/ADWMs.

- **Internet and mobile banking**: Enables customers to access accounts and perform banking transactions online and through mobile devices.

- **Video banking and Self-service Kiosks**: Allows customers to interact with bank representatives in real-time from their homes or bank kiosks.

- **Emerging Technologies:** Utilizes AI, big data, and blockchain to enhance digital banking services, improving customer convenience and security.

Business Scenario

The bank faced challenges in managing a high volume of digital certificates across numerous internal and external endpoints. This complexity posed security vulnerabilities, system downtime, and compliance issues. The bank required a robust solution for the supply, installation, configuration, integration, maintenance, and monitoring of an enterprise-wide cryptographic key management system and an identity management system to ensure secure login for its 500 million users.

eMudhra Solution

Zero Trust Framework Implementation:

- **Certificate Lifecycle Management (CLM):**

  - **Integration:** Seamlessly integrated all existing certificates with the CLM system.

  - **Automation:** Automated the reissuance processes for efficient certificate management.

- **emCA Deployment:** Established a private trust root setup with emCA.

- **Identity and Access Management (IAM):**

  - **Secure User Login:** Implemented IAM solutions to manage and authenticate 500 million users, ensuring safe access to banking applications.

  - **User Verification:** Enhanced user verification processes to align with Zero Trust principles.

Key Highlights

- **Comprehensive Management:** Managed the entire certificate lifecycle from discovery to expiry.

- **Automation:** Efficient handling of certificate reissuance processes.

- **Private Trust Root Setup:** Deployed emCA for organization-wide certificate issuance tailored to internal needs.

- **Scalability and Reliability:** Ensured the system's scalability and reliability, enhancing security infrastructure.

Next Phase

Public Root Infrastructure

- emSign Deployment: Deploy certificates using eMudhra's global root emSign, further enhancing the security and reach of the certificate system by leveraging eMudhra's established public root infrastructure.

WebTrust Accredited CA
- **Global Security Standards:** Connection with a WebTrust accredited CA ensured adherence to global security standards.
- **Enhanced Trust:** Increased trust and credibility among stakeholders through recognized certification.
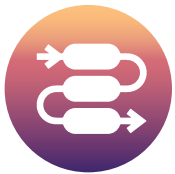
Streamlined Operations
- **Seamless Certificate Management:** Integration with the CLM system for seamless management from discovery to expiry.
- **Efficient Reissuance:** Automation of reissuance processes increased operational efficiency.

High Availability and Redundancy

- **CertiNext and High Availability Engine:** Ensured system continuity and handled exigencies in the production environment.
- **Redundancy Measures:** Provided uninterrupted service.

Cost-Effectiveness

- **Reduced Operational Costs:** Automation and streamlined certificate management saved labour and operational costs.
- **Lower Total Cost of Ownership:** Unified approach reduced the complexity of managing multiple systems.

Scalability

- **Organization-wide Issuance:** Catered to the needs of a large organization, allowing certificate issuance on a large scale.
- **Growth Adaptability:** System designed to scale with organizational needs.

Compliance and Risk Mitigation

- **Regulatory Adherence:** Proper certificate management ensured adherence to regulatory requirements, reducing non-compliance risks.
- **Best Practices:** Internal and external certificate scanning aligned with industry best practices.

Strategic Partnership

- **Specialized Skills and Expertise:** Enhanced the client's internal capabilities through collaboration with eMudhra.

Future-Ready Infrastructure

- **Scalable Architecture:** Built for scale, ensuring readiness for future cybersecurity challenges.
- **Innovation and Customization:** Tailored to the organization's specific internal needs.

Trust and Reputation Enhancement

- **Bolstered Security:** Improved security measures reinforced the bank's reputation as a trusted name in the banking industry.

About eMudhra

eMudhra, a global provider of digital identity and cybersecurity solutions, specializes in digital signature certificates, Public Key Infrastructure (PKI) services, and robust authentication protocols. With impactful presence in India and internationally, eMudhra supports governments and enterprises in safeguarding digital transactions and vital information.

eMudhra offers digital certificates, PKI-based solutions, authentication, and identity governance services. As a leading provider, eMudhra focuses on futureproofing cybersecurity with Post Quantum Ready Cryptography and a Zero-Trust Identity Governance model.