



CASE STUDY

Fastest CA Go-Live in the Region How BTC Built Saudi's Digital Trust Backbone with eMudhra

About the Customer

BTC (Business Trading Company) is a pioneering entity in Saudi Arabia's digital trust ecosystem. As part of Saudi's Vision 2030, BTC sought to establish itself as a Qualified Trust Service Provider (QTSP) under the Digital Government Authority (DGA). With a strong commitment to enabling secure digital transactions, BTC aimed to build a highly scalable and compliant Certification Authority (CA) infrastructure to support national and regional trust services. Their focus on PKI-based security solutions has positioned them as a leader in Saudi Arabia's digital transformation journey.

Client Background

Client Name

Business Trading Company (BTC)

Industry

Digital Certification & Trust Services

Location

Saudi Arabia

Impact at a Glance

Fastest

CA go-live in the region

Zero

per-transaction pricing model

100%

compliance with DGA regulations

Scalable

infrastructure powering national trust services

Business Scenario

As part of Saudi Arabia's Vision 2030, the country aims to transition to a 100% digital ecosystem, reinforcing trust in online transactions. The Digital Government Authority (DGA) planned to establish two Certification Authorities (CAs) under its framework to enable secure digital interactions. **BTC**, a forward-thinking entity, sought to become a Qualified Trust Service Provider (QTSP) under the MDDC root in Saudi Arabia. However, achieving this required compliance with strict regulatory standards, high-performance PKI infrastructure, and seamless implementation of trust services.

eMudhra Solution

eMudhra provided **BTC** with its industry-leading **emCA** and **emRA** solutions, delivering a comprehensive and scalable PKI framework that met DGA compliance requirements. The solution ensured quick deployment, regulatory adherence, and self-sufficiency in managing CA operations.

Key features of the Solution:



Fully Configured PKI Setup: Implemented emCA (Certificate Authority software) and emRA (Registration Authority software) with HSM integration.



End-to-End Implementation & Support: Deployed and maintained the solution before transferring complete ownership to BTC.



Remote Signing Module: Enabled seamless remote signing, enhancing efficiency and security.



Training & Self-Management Capabilities: Ensured BTC could operate independently with minimal ongoing support.

Solution Architecture

The PKI solution was designed to meet the highest compliance standards mandated by the DGA. eMudhra implemented a robust CA hierarchy, ensuring secure certificate issuance, remote signing capabilities, and seamless integration with Saudi's digital ecosystem. The system was configured with HSMs, guaranteeing data integrity and cryptographic security while supporting large-scale digital transactions.

Implementation Process



Rapid Deployment

BTC went live faster than any other CA in the region, thanks to eMudhra's agile software capabilities.



Compliance Assurance

Full alignment with Saudi Arabia's digital certification regulations.



Smooth Transition & Self-Sufficiency

After initial setup and maintenance, operations were successfully handed over to BTC for independent management.

Use Case: PKI for National Trust Services

BTC leveraged eMudhra's emCA and emRA solutions to establish itself as one of the biggest CAs in Saudi Arabia. The implementation of a nationally trusted CA enabled seamless digital trust services across various industries, including telecommunications, banking, and government services.

Value Add to Business Trading Company (BTC)

- **Fastest CA Deployment in the Region:** BTC went live significantly faster than competitors, providing a head start in trust services.
- **Cost-Effective & Scalable:** Unlike competitor models with upfront costs and per-transaction pricing, eMudhra's solution provided a sustainable, long-term value proposition.
- **Regulatory & Compliance Readiness:** BTC met DGA standards effortlessly, ensuring seamless operations.
- **Empowering Digital Sovereignty:** By implementing a national CA, BTC reinforced Saudi Arabia's commitment to digital transformation and security..

Client Impact & Future Prospects

BTC's journey from aspiring CA to one of Saudi's biggest digital trust providers showcases the effectiveness of eMudhra's solution. The success of this deployment has led to strong regional references, positioning **BTC** as a model for other trust service providers in the Middle East. The scalable nature of the solution allows **BTC** to expand its services, including potential cross-border PKI implementations.

Conclusion

By deploying eMudhra's emCA and emRA solutions, **BTC** successfully became a leading Qualified Trust Service Provider (QTSP) in Saudi Arabia. The seamless implementation, regulatory alignment, and rapid go-live timeframe positioned **BTC** at the forefront of Saudi's Vision 2030 digital transformation journey. The partnership with eMudhra has enabled **BTC** to power digital trust services while reinforcing the nation's push towards a self-reliant, digital-first economy.

About eMudhra

eMudhra is a global leader in PKI, digital identity, and trust service solutions, enabling governments, financial institutions, and enterprises to securely digitize transactions. With extensive experience in deploying large-scale CAs, eMudhra provides cutting-edge solutions for digital trust, remote signing, and compliance-driven security frameworks that align with the global push for digital transformation.