



CASE STUDY

Innait IMPLEMENTATION

TWO-FACTOR AUTHENTICATION IN ONE OF INDIA'S
LEADING PRIVATE BANKS

INDUSTRY - BANKING, FINANCIAL SERVICES AND INSURANCE



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Introduction: One of India's leading private banks and among the first to receive RBI's approval to set up a private sector bank in 1994

Objective: The primary objective of the bank was to bolster its security infrastructure by implementing Two-Factor Authentication (2FA) using biometrics. This move aimed to mitigate the risks associated with single-factor authentication methods, particularly password-based systems, which are susceptible to breaches and unauthorized access.

Existing System and Requirement: Prior to the implementation of 2FA, the bank relied on Single-Factor Authentication (SFA), predominantly based on passwords. Recognizing the inherent vulnerabilities of this system, the bank outlined specific requirements for the new security solution:

1. **Regulatory Compliance:** Compliance with regulatory standards, particularly those set forth by the Reserve Bank of India (RBI), was imperative.
2. **Biometric Performance:** Stringent performance benchmarks, especially regarding rapid fingerprint comparison times, were crucial for each transaction.
3. **Data Security:** Ensuring the secure encryption of fingerprint templates to safeguard against unauthorized access and maintain data confidentiality was a top priority.
4. **Scalability:** The solution needed to be scalable to accommodate the bank's expansive network and various critical applications seamlessly.
5. **Integration:** Seamless integration with existing client-server and browser-based environments was essential to minimize operational disruptions.

Solution Deployed: After careful consideration, Precision Biometric proposed the integration of InnalT Framework Applications to fulfill the bank's requirements for 2FA using biometrics. The InnalT 2FA solution comprised four key components:

1. **Client Driver:** Installed on every client system, this component facilitated fingerprint capturing and extraction processes.
2. **Server Component:** Housed the fingerprint comparison components in robust environments such as Microsoft.NET and Java, ensuring secure authentication.
3. **Software:** The InnalT-2FA software enabled seamless integration and operation of the 2FA solution within the bank's existing infrastructure.
4. **Hardware:** Fingerprint scanners connected to every PC and thin client via USB ports enabled biometric enrollment and verification processes.

Implementation Process: Enrollment involved the scanning of individual fingerprints, with captured data securely stored as digital templates in the central server. During verification, users' fingerprints were compared to previously registered templates for authentication, ensuring a secure and reliable one-to-one matching process without compromising data privacy.

Benefits: The implementation of InnalT Framework Applications for 2FA yielded several key benefits for the bank:

1. **Enhanced Security:** Integration of biometric authentication significantly strengthened security measures, reducing the risk of unauthorized access and data breaches.
2. **Regulatory Compliance:** The solution ensured compliance with RBI guidelines and other industry regulations, mitigating regulatory risks.
3. **Improved Audit Trail:** Detailed logs of authentication activities facilitated robust audit trails, enabling effective monitoring and analysis for compliance and security purposes.
4. **Future-Ready Architecture:** The InnalT Framework solution offered scalability and flexibility, enabling the bank to adapt to evolving security threats and regulatory changes effectively.

Conclusion: In conclusion, the implementation of 2FA using biometrics via the InnalT Framework Applications provided the bank with a robust security solution tailored to its critical applications. This solution not only ensured compliance and confidentiality but also offered enhanced protection against evolving cyber threats in today's dynamic digital landscape.