

Designing a Secure and Private Electronic Know your Customer (E-KYC) System using Blockchain Technology

Yash Tambe, Salman Ahmad, Bhushan Nakhate, Aditya Chougale, Prof. Priyanka Raikar
Smt. Kashibai Navale College of Engineering, Pune, Maharashtra, India

Abstract: *The electronic Know Your Customer (e-KYC) system plays a crucial role in establishing customer identification and data verification processes among relevant parties. Cloud deployment is a popular choice for e-KYC systems due to its resource efficiency, accessibility, and availability. However, existing KYC methods heavily rely on encryption, which can be slow and potentially expose consumer information to unauthorized financial entities. To address these challenges, this paper proposes leveraging Blockchain technology to enhance the efficiency and security of the e-KYC system. By utilizing the inherent properties of Blockchain, such as immutability and distributed ledger, the KYC process can be strengthened. Additionally, the introduction of smart contracts enables automation of fraud detection. To achieve this, a shared private Blockchain can be implemented within the bank's infrastructure, ensuring that KYC identification details are securely stored and verified. This approach provides users with control over their sensitive documents while facilitating banks' access to compliance-related records.*

Keywords: e-KYC, authentication, AES, key management, access control, blockchain

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