eosio | case study

A self-sovereign digital identity solution

"Our platform is based on EOSIO, which ensures a high degree of scalability, enabling the OmniOne Network to run smoothly while supporting a high volume of transactions."

Alex David, OmniOne Business Developer

Background

OmniOne's founders are driven to standardize a self-sovereign digital identity solution facilitated by a blockchain-based, distributed, biometric protocol. The company is powered by one of Korea's leading ICT security software companies, RAON, who is responsible for providing authentication solutions for over 80% of the financial industry in Korea.

Traditional digital identity solutions came from numerous central providers, where data stored in siloed central servers was subject to attack from malicious actors therefore presenting a security risk. The system lacked any universally recognized login credentials, making it inconvenient for users, and users had no control over their data.

Today's digital identity systems run on a federated model where single sign-on (SSO) providers manage login credentials that are accepted across a wide range of platforms. This model is more convenient for users, but fails to address issues of security, and leaves a lot of ambiguity regarding user privacy, a growing concern in an era weighing the implications of monetization and consent.

> **"EOSIO seems to be more suitable for services that provide users with blockchain ID and authenticate them with these IDs in an enterprise environment."**
>
> Alex David, OmniOne Business Developer

OmniOne's EOSIO blockchain-based model utilizes Decentralized Identifiers (DIDs). Adopting Decentralized Identifiers while leveraging the blockchain technology provides a more secure identity solution than traditional central server-based storage. Since the ID system utilizes biometric authentication, users enjoy convenient access to connected applications, literally at their fingertips. Finally, users take control of their data by storing it on their own device, and providing access to it on their own terms.

Why EOSIO?

OmniOne's team's research showed that the concept of DID was very similar to that of EOSIO's concept of multiple public keys being associated to a single account, meaning much of the groundwork was already done. In addition, OmniOne found that EOSIO can be configured to support a Proof of Authority governance model, similar to Delegated Proof of Stake consensus, that increases the confidence in identity systems.

OmniOne selected EOSIO as their platform of choice for the following reasons:

Transaction speed

EOSIO features rapid finality with leading block production speed, and transaction processing

Smart contracts

EOSIO smart contracts are highly-performant, configurable, and coded in C++

Integration with DID

EOSIO's use of accounts with public key pairs is well-suited for DID

Permissioned + public platform

EOSIO BP selection method is suitable for enterprise customers that require a permissioned + public platform

Solution Overview

OmniOne's ID solution begins when users first create an identity on the platform by registering a key pair through their fingerprint. This key pair is then bound with a DID, which is a public key that will be used by the blockchain and serves as the connection point between the data stored on a user's device and the blockchain. So the OmniOne network never stores the data, but rather uses the DID to recognize and authenticate data.

Portable Verification

A user can request verification from issuers that serve as certification authorities that help to prove identity.

Designed for Adoption

Ready to adopt by financial organizations, medical facilities, government entities, or educational institutions.

Privacy

Users have domain over when and where their credentials are used, and who can access them.

Minimized Risk

Use of Verifiable Credentials Data Model while leveraging blockchain technology to minimize the risk of doing business for service providers.

Visit EOS.IO to learn more

sales@block.one eos.io block.one blockoneofficial block_one_

ABOUT EOSIO EOSIO is a next-generation, open-source blockchain protocol, widely recognized as the most performant blockchain platform, enabling solutions that are fast, scalable, and reliable.

ABOUT BLOCK.ONE Block.one is a software firm specializing in high-performance blockchain technologies. A pioneer in distributed ledger innovation, Block.one develops the EOSIO open-source software, which is widely regarded as the market leader for blockchain power and scalability. Companies and developers around the world use EOSIO to create secure, transparent, and performant digital infrastructures.