



A Next Generation Tokenization System for Financial Institutions

[Knox Networks](#) is global payments infrastructure software operated by financial institutions that supports the movement of all regulated digital money and securities. Our APIs support complex multi-party, multi-asset transactions with atomic settlement, and is designed to work **within the current two-tier banking system and regulatory environment**. Knox bridges current legacy systems into the digital world for **asset transfer across networks**.

Our next-generation [File-Based Digital Asset](#) technology (FBDAs), a non-DLT solution, allows banks to tokenize and transact variety of assets, at the **wholesale and retail level**.

Tokenization

Represent various assets on one platform: digital banknotes, treasuries, repos etc. Discrete, fixed-value denomination assets that are backed by real reserves. Record of ownership and transfer lives within the asset.

Contract Based Transactions

API based creation of multi-party, multi-asset atomic transactions without requiring smart contracts, can support: cross border payments, atomic swaps of various assets (e.g. delivery-vs-payment, payment-vs-payment), multi-party transactions, settlement sequencing etc.

Separated Transaction and Asset Layer

Transaction and PII data are external to the asset, so that asset transfer focuses on performance while the transaction layer delivers diverse payment types. Event-driven architecture supports customized checks needed by banks before asset transfer (e.g. pre-validation, AML/CFT). Programmability is optional and API-based.

Knox Solves for Key Technical Challenges

SCALABILITY

- High throughput, low latency, designed for high TPS
- No expensive consensus algorithm; built to horizontally scale
- Double spend checks and fraud detection
- 24/7, enables atomic settlement for PvP and DvP

INTEROPERABILITY

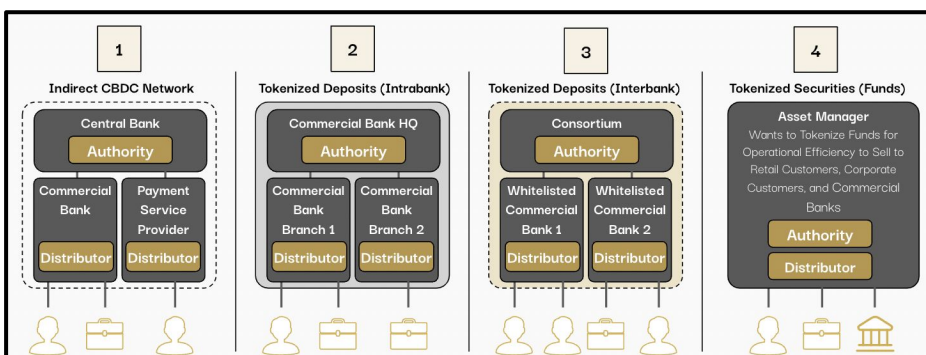
- Interoperable with other payment networks and ledgers (i.e. legacy, DLT)
- Transport information from other standards with Knox transactions (e.g. ISO-20022, SWIFT, DID/VC, OIDC/SAML)
- Leverages existing bank accounts and KYC/AML

PRIVACY/COMPLIANCE

- Identity Bridge provides W3C Decentralized Identifier (DID) and Verifiable Credentials (VC) services
- Disaggregate PII from asset transfer and customize compliance checks
- Cryptographically protected and verifiable data only shared for bank compliance, not publicly traceable
- Transaction-based analytics without compromising consumer PII

Flexible Architectural Model

1. **Knox services are flexible and composable** - can be filled by different parties for different use cases
 - a. **Authority Service** - sets the rules and controls limits of assets
 - b. **Distributor Service** - interacts with Authority and distributes assets to end users
2. **A variety of assets can be tokenized and transacted** - intra-bank or interbank by deploying core services



Architecture is built to be run and operated by banks, which helps them: (1) Generate more revenue from deposits and Knox products/services, (2) Comply with current regulatory authorization, (3) Take part in multiple model implementations simultaneously.

Read more in our [white paper](#) and [blog](#) | www.knox-networks.com