



“We saw the emergence of a lot of opportunity for private blockchains, which is where we started our journey.”

Abhinav Ramesh, Founder of Chainflux

Background

Chainflux got started by building a private blockchain-facing horizontal traceability solution that can be applied across many different industries, particularly those where no such solution previously existed. In 2019 the team began working with the India Gold Policy Center at the Premier Management Institute.

The collaboration lasted for a year and a half, over the course of which Chainflux produced two research papers on the effectiveness of blockchain-based traceability solutions that improve the reputation of participants in India’s gold marketplace and help reduce illegal inflow resulting from smuggling. Chainflux research also indicated that improving regard for responsibly sourced gold would strengthen the local gold marketplaces, reducing dependency on gold imports which currently constitute a large part of the gold usage in India.

Chainflux ultimately focuses its traceability solution to target three key industries: precious metals, agriculture, and sustainability. Each of these industries shares a need for a solution that supports traceability and allows for multiple parties to be able to securely share data.

// For most industries no solution existed for traceability. Since there were multiple parties on the supply chain, and you had to view a single source of truth for the data we felt that blockchain would be the ideal way to do it. //

Abhinav Ramesh, Founder of Chainflux

The private blockchain solution from Chainflux allows for cases when participants want to make certain details public, such as a commodity’s history, or business sustainability metrics, while maintaining privacy on other data.

Why EOSIO?

To build Chainflux's private blockchain solution, the team modified EOSIO system contracts, eliminated native tokens, and reconfigured its platform's consensus mechanism to a Proof of Authority (PoA) model as opposed to a Delegated Proof of Stake (DPoS) model. Under PoA consensus, certain network gatekeepers have authority over the system. For example, with PoA, gold industry regulators would be able to ultimately approve or deny transactions. Similarly, in the sustainability industry, when large brands onboard to the platform they gain the ability to authorize certain transactions as authentic or classify those that are not.



Chainflux chose EOSIO as their platform of choice for the following reasons:

Customizability

EOSIO's basic architecture can be reconfigured in any number of ways to suit use cases across industries. By modifying different aspects of the EOSIO platform, Chainflux was able to create a unique private-facing solution for traceability.



Ease of Deployment

As an open-source platform with smart contracts in C++ EOSIO facilitates rapid deployment and implementation.



Performance

EOSIO's industry leading throughput lets Chainflux finalize transactions quickly, making it suitable for enterprise facing applications.



Account Names

EOSIO's ability to attribute names to accounts provides a simpler interface with a higher level of security, particularly in conjunction with the PoA consensus model Chainflux modified EOSIO to deliver.

Solution Overview

The key objective for Chainflux is focusing on platform adoption for multiple industries including government sector, agriculture, finance, manufacturing, news and journalism, as well as healthcare. In addition Chainflux is researching how the platform could serve as the basis for a Universal Basic Income system. Currently regulatory entities are taking interest, such as those in the gold industry as are large brands seeking to adhere to extended producer responsibility standards.



Granular Tracking

Chainflux improves quality assurance using a private blockchain to power its IoT sensor network integrated supply chain solution for traceability and verification, so that every step in the supply chain can be tracked and registered to a tamper-proof blockchain entry.



Data Privacy and Sharing

Chainflux optimizes its systems for privacy by making some data available while keeping other, more sensitive data private. This level of control allows parties to rely on blockchain verification without compromising privacy, and reduces the capacity for data breaches.



Custom Consensus Configuration

EOSIO's unique flexibility allowed Chainflux to reconfigure the platform to build a PoA consensus model where official organizations, government entities, regulators, and more, can validate authentic transactions and invalidate fraudulent ones.

Visit [EOS.IO](https://eos.io) to learn more [↗](#)

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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.