



By



BChain Dynamics

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Stateless Ethereum Research

Research on how Ethereum can become stateless.

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Abstract

In the Ethereum ecosystem, trust is established among decentralised parties using a consensus mechanism called Proof of Work. The miners store the complete state of the Blockchain and validate transactions based on current state. Whenever a new Block is added to the Blockchain, state is changed, and the changes are broadcasted to all other nodes. Miners are incentivized for adding blocks to Blockchain. One of the disadvantages in the system is that a miner has to download complete data on his device to start mining. If a miner is out of sync with the current state of Blockchain, he has to re-execute all transactions to get in sync, which may take several days. Concept of Stateless Ethereum aims to solve this problem where a miner only needs to store a hash of the current state and verify transactions based on proof/witness provided along with the Transaction.

Project Description

Tools/Technologies To Be Used

Advantages

Features/Functionalities