A Blockchain Computer

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Abstract

We propose a design for a new kind of decentralised trustless computer. The shared state is stored in a blockchain. This allows computations to be distributed safely across without trusting indivudual nodes. It also allows proofs of work, and thus crediting nodes for their commmputations. Computations are securely distributed and verified, through a blockchain containing the state By storing shared state in the blockchain, it is possible to By storing the machine state in the blockchain, it is possible to securely run distributed computations, without trusting the individual nodes. Individual nodes only need to know/store the small subset of the blockchain that they need for their computation.

Outline:

- Introduction
    - Motivation
    - Related work
- Architecture
    - State
    - Computation
    - Scheduling of computation
    - General tasks
- Future work
    - Actual implementation (in progress)
    - Stakes in addition to proof of work for better security