

Distributed Systems Advanced & Blockchain

In the News

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- 06.11.2020: [Why Proof of Stake \(Nov 2020\)](#)

- By Vitalik Buterin, co-creator Ethereum

- Three key reasons why PoS is a superior blockchain security mechanism compared to PoW

1. PoS offers more security for the same cost

- GPU-based proof of work: \$0.26
- ASIC-based proof of work: \$486.75
 - “ASICs provide this heightened level of security against attacks at a high cost of centralization”

- Proof of stake: \$2189

2. Attacks are much easier to recover from in proof of stake

- PoW counter-measures: “wait it out until the attacker gets bored”
- “In a GPU-based system, there is no defense”
- ASIC: “hard-forking to change the PoW algorithm”
- PoS: “slashing”: minority user-activated soft fork

3. Proof of stake is more decentralized than ASICs

- “Additionally, proof of stake is more censorship resistant. GPU mining and ASIC mining are both very easy to detect: they require huge amounts of electricity consumption”

- PoW advantages

- Open system
- “Node must find some third-party source to determine the correct head of the chain”