

Origin

ETHv2 phase zero is now around the corner, with a spec freeze, implementers busying themselves with the networking and productization of the clients, and a flurry of activity looking towards the horizon.

This post is related to “Phase One and Done”, and meant as a simplification of the ecosystem to see if we could find utility in phase zero.

Phase zero sets up the beacon chain. It is used to create a peer-to-peer network infrastructure of beacon nodes, to which validators connect to, providing votes for blocks.

This is a bare bones architecture for proof of stake.

We have seen [merged mining](#) being explored and discussed in particular in this [paper](#).

Phase zero has little intrinsic value by itself as of now, so there is a chance it will take time for it to catch on.

Interestingly, some of the folks on the research team have looked at making it useful by [providing finality to the ETH 1 chain](#)

This post is a generalization of that approach to any chain or sidechain that would like to use ETHv2 to provide security through PoS and finality through beacon chain finality.

Proposal

Propose blocks containing 32 bytes hashes

We propose to allow a mechanism by which beacon chain blocks may embed a number of hashes provided. If you want to add a hash to a block, you'll need to sign and propose a block on your turn with the hash in it.

Potentially pay for proposing those blocks

We may request that whoever proposes a block with such additional data adds the hash of a transaction of a payment to an ETH1 contract showing that they properly paid for their block proposal, and signs the block with the key of the originator of the transaction.

Maybe. We could also make it free for a while, but it'd be good to give money to those brave stakers, eventually.

Benefits

Well, it gets a bunch of folks running beacon chain nodes. It gets money in the staker pockets.

And it allows scaling by having multiple chains use PoS as a security mechanism.