Ethereum 2.0 (ETH2 or Serenity)

- **ETH2** is an upgrade to the initial Ethereum protocol.
- ETH2 aims to increase the speed, efficiency, and scalability.

ETH2 Major Upgrades:

1. PoS (Proof of Stake) instead of PoW (Proof of Work)
2. Sharding

PoS (Proof of Stake)

- Miners are called Validators.
- To become a validator, you have to **stake or lock** an amount of ETH in a smart contract.
- High performance hardware is not required to become a validator.
- Rewards are given to the validators because that's what keeps the chain running securely. The more ETH you stake, the more blocks you can validate.
- A validator can loose ETH if he does bad things (going offline, failing to validate etc).
- To conduct a 51% attack a validator needs to stake 51% of the staked ETH.