# What's good about Ethereum 2.0?

There are several benefits of Ethereum 2.0 over the existing Ethereum network. More scalability is one of the main benefits. Sharding allows Ethereum 2.0 to execute more transactions per second than the existing Ethereum network.

Because it will enable Ethereum to support more users and apps, this is crucial for its development and adoption.

One further benefit of Ethereum 2.0 is its enhanced security. Because 51% of assaults are less likely when PoS is used in the beacon chain, network security is increased. In a PoW network, a 51% attack happens when one miner or a small group of miners holds more than 50% of the mining power. This enables them to tamper with transactions and spend coins twice. PoS makes it more challenging for one entity to take over the network because validators are selected based on the quantity of Ethereum staked.

Finally, compared to the present Ethereum network, Ethereum 2.0 is less environmentally damaging. PoS is a more environmentally friendly choice than PoW because it uses less energy to verify transactions.

## Difficulties of Ethereum 2.0

Ethereum 2.0 has several benefits, but there are also some implementation difficulties. One of the most challenging tasks is switching from the present Ethereum network to Ethereum 2.0. Substantial cooperation and testing will be required to guarantee that the transition proceeds smoothly and that the network remains safe. The likelihood of centralization is another problem. In a PoS system, validators are chosen according to their Ethereum holdings.

This could result in network centralization because individuals with more Ethereum are more likely to be chosen as validators. The Slashing Condition, which penalizes validators who behave maliciously or go offline for protracted periods, is a solution introduced by Ethereum 2.0 to this problem.

Interoperability is a problem, too, in the end. Applications and smart contracts created on the present Ethereum network will not operate with Ethereum 2.0 since it is a separate blockchain from the current Ethereum network. Users' and developers' need to rebuild their applications and contracts to function with the new network may hinder adoption.

## What does Ethereum 2.0's future hold?

The development team is presently working on implementing the succeeding phases, which will involve the installation of shards and migrating the existing Ethereum network to Ethereum 2.0. The first phase of Ethereum 2.0, the Beacon Chain, is already operating.

The development team is working in stages to guarantee that each phase is completely tested before moving on to the next. Once completely deployed, Ethereum 2.0 can potentially transform the blockchain sector. With increased energy efficiency, scalability, and security, it may take over as the preferred platform for decentralized applications and smart contracts.