

What is 'the merge'? The Ethereum crypto update token users are talking about, explained

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Ethereum, the blockchain network behind the world's second-largest crypto token ether, just completed a major software upgrade that could revolutionize the cryptocurrency universe, some experts say.

The upgrade, called "the Merge" by crypto enthusiasts, promises to lower Ethereum's energy consumption and attract more users. Climate activists have long criticized [digital assets](#) because producing them uses enormous amounts of electricity and generates large CO₂ emissions. The University of Cambridge and Digiconomist estimate that the two largest crypto-assets, Bitcoin and Ethereum, together use around twice as much electricity in one year as the whole of Sweden.

Crypto-production's high energy consumption is due to "proof of work," which is the way transactions are verified and more digital assets are produced. By upgrading its software, Ethereum is changing the process to "proof of stake," which will lower energy consumption, attract more users, and speed up transactions, experts say.

"The Merge might be one of the most important events in history" for digital assets, said Jacky Goh, CEO, and Founder of Rewards Bunny, a platform that rewards shoppers with cashback in either cryptocurrency or U.S. dollars. "It will make Ethereum more usable and scalable, and there will be better adoption."

What is proof of work (PoW)?

To confirm a transaction on the blockchain, people must solve complex mathematical puzzles using powerful computing power. Once the puzzles are solved, the transaction is added to the blockchain ledger and the person, or miner, who solved the puzzles first is rewarded with cryptocurrency. This is also how new cryptocurrencies are released.

What is proof of stake (PoS)?

This method replaces miners with "validators" who put their cryptocurrency up as collateral to create new blocks. Instead of

individuals competing to be the first to solve the same mathematical puzzles to create new blocks, a person is chosen at random by an algorithm to validate, or confirm, a transaction.

Because your chances of getting chosen as a validator depends on how much you pledge, or "stake," many people pool their digital coins to raise their chances of being selected. The rewards are usually then split along the lines of how much each person contributed.

What are the benefits of PoS?

It doesn't require massive computing power since not everyone is trying to solve the same math puzzle at once, making it more energy efficient than PoW.

Also because it doesn't require so much computing power, the barriers to entry are lower. People no longer require expensive, special hardware that can compute complex equations at the speed of light.

"The Merge will be a great evolution to the Ethereum network," said Alan Goldberg, analyst at BestBrokers. "Electricity consumption is expected to plunge by a whopping 99.95% which is massive, especially in context of the current energy crisis."

And that drop in [energy consumption](#) may be key to rendering "Ethereum more palatable to policymakers and regulators," wrote Teunis Brosens, ING head economist of digital finance and regulation, in a report. "This, in turn, removes one stumbling block for traditional financial institutions and other companies to offer Ethereum-based services."

What are the negatives of PoS?

Policymakers, regulators and [financial institutions](#) embracing Ethereum should be a tell-tale sign PoS is a big negative, some say.

The World Economic Forum (WEF) "has an article plastered on its homepage that praises the Merge as a 'sea change towards sustainability among crypto-currencies,'" said Cory Klippsten, SwanBitcoin.com chief executive said.

If an entity like the WEF decided to stake a large amount of cryptocurrency, it could do so without any barriers and exert its influence over Ethereum, Klippsten said.

Ethereum has never been truly decentralized, like Bitcoin, he argues. "Ethereum was started by a group of people like a company is, and it fundraises like a company, and it's run like a company" he said.

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