# What is Consensus Algorithm?

Also known as a consensus mechanism or consensus protocols, consensus algorithm is a group of processes that are used to validate the authenticity of transactions and maintain the security of the blockchain. This mechanism allows the users of a blockchain network to agree on the legitimacy of every transaction, and once that has been validated it is then recorded on the blockchain. The first consensus algorithm created by Bitcoin. For each transaction, a new block required approval by the network in order for it to be added to the chain. For example, in order for you to actually purchase and own any cryptocurrency, the network must agree to validate your purchase.

The following are three types of consensus algorithms that are most used:

* Proof-of-Work (POW): Crypto miners compete against each other in validating transaction blocks in order to earn a reward.
* Proof-of-Stake (POS): Those with the largest amount of currency validates new blocks in the network and earn rewards for continued participation.
* Practical Byzantine Fault Tolerance (PBFT): An algorithm that uses Byzantine Fault Tolerance It is how a network correctly reaches a suitable consensus despite system failing or distributing misinformation with the goal of protecting against catastrophic system failures. Based on the Byzantine Generals Problem where all parties involved must agree on a single strategy to avoid complete failure while assuming some of the involved parties might be corrupt or unreliable otherwise.

Resources:

What is Practical Byzantine Fault Tolerance (pBFT)? - Crush Crypto. (2018, October 19). Crush Crypto. <https://crushcrypto.com/what-is-practical-byzantine-fault-tolerance/#:~:text=Practical%20Byzantine%20Fault%20Tolerance%20(pBFT)%20is%20an%20algorithm%20that%20optimizes,systems%2C%20including%20some%20blockchain%20platforms>.

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Chawla, V. (2020, January 20). *What Are The Top Blockchain Consensus Algorithms?* Analytics India Magazine; Analytics India Magazine. <https://analyticsindiamag.com/blockchain-consensus-algorithms/>

BangBit Technologies. (2018, May 14). *What is Consensus Algorithm In Blockchain & Different Types Of Consensus Models*. Medium; Medium. <https://medium.com/@BangBitTech/what-is-consensus-algorithm-in-blockchain-different-types-of-consensus-models-12cce443fc77>