

## **What is a blockchain?**

A blockchain is simply a ledger of facts. These facts can be anything from monetary transactions to actual files. These facts are exchanged by nodes on the network and grouped into sets called blocks, which are then arranged into a chain where each block references the previous block in the chain (hence the name “blockchain”). The security is provided by making it computationally expensive to add a block to the chain. This computation is a mathematical “guessing game” where block-makers need to guess a number which, when crunched with the rest of the blocks data contents, results in a hash that meets specific requirements which are relative to the difficulty of solving that block.

## **How does the blockchain actually work?**

Every node in the network gets a copy of the ledger. Special nodes in the network (called “miners”) are responsible for solving the next block in the chain. The miner who solves the next block gets to propose it to the network because it has proved that it has done the required amount of work to be mined. New blocks are added approximately every 10 minutes. Simultaneous proposals are handled by following the “longest chain” rule, which states that miners should always mine on top of the chain that has had the most amount of “work” done on it.

## **Storj**

American start-up using blockchain tech to create a highly distributed cloud storage system.

Files are split into multiple pieces, encrypted, then spread across the network.

Only the user holding the private key can unlock their files.

Nodes (aka users) can “rent” their extra storage space (paid in Storjcoins). These guys are called “farmers” and they’re equivalent to miners in Bitcoin.

Farmers don’t have access to the data they’re hosting, but can “greylist” specific types of data (opt-in).

## **Ethereum**

Open blockchain platform that allows for massive parallel computing and running decentralized applications. All users in the network are running the Ethereum Virtual Machine. Any program can be created and run on the nodes. Although this may seem faster, it isn’t. The massive amount of nodes and consensus among them just ensures 100% fault tolerance and 0 downtime. Blocks represent the accounts. The accounts states are updated in addition of newer blocks.



