MINING CITY

Mining

1. What is mining?

Mining is the process in which transactions are confirmed and added to the blockchain. It is called mining because advanced machines are used to discover a limited resource – in our case, cryptocurrencies.

The process of mining is essentially divided in two parts. The first is solving a complicated mathematical problem and verifying the transactions within this particular block, the second is to add a block to the blockchain, and earn a reward. Even though there are thousands of cryptocurrencies in existence, not all of them can be mined. The majority of cryptocurrencies are based on one of several mining methods, performed by specialized machines.

Let's take a closer look at Bitcoin and Bitcoin Vault mining, which are mined in an identical method.

The Process

The process of mining involves machines (computers called miners) that compete to guess random numbers within a specific cryptographic format. We will go into more details in the chapter about blockchain. It is similar to winning a lottery. The more powerful the equipment – and therefore the more guesses per second – the greater the probability of success, just like it is more likely for someone who buys more tickets to win a lottery. Once a miner mines a block, it adds the information from previous transactions into the blockchain. This is essential for the currency to thrive and grow. Mining and blockchain lie at the very heart of crypto. The process was outlined early in the development of Bitcoin, and is designed to make it as fair as possible for everyone involved.

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Mining goes as follows:

The miner attempts to make a correct guess

If successful, pending transactions are selected and grouped

The successful miner will then update the ledger (blockchain)

The new block is sent to the network

Other miners validate the new block

Every miner that is involved in the validation process updates its copy of the transaction ledger

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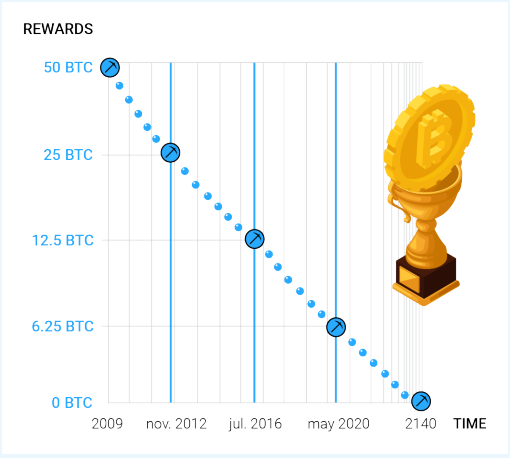
2. What is block reward?

For each correct guess, the miner receives a block reward (allocated every ten minutes on average) as well as the total fees that have been paid for transactions within that block. The miner which guesses the solution the quickest, gets the reward. The block reward for Bitcoin stands at 6.25 BTC (halving started at 50 BTC in 2009).
Every miner who makes a correct guess receives 6.25 BTC plus the transaction fees within that block. After every 210,000 blocks, the reward for Bitcoin is halved.
It is expected that the last Bitcoin will be mined in 2140.

Date	BTC Halving	Date	BTCV Reward Reduction
November 2012	From 50 to 25	May 2020	175 to 150
July 2016	From 25 to 12.5	~November 2020	150 to 125
May 2020	From 12.5 to 6.25	~May 2021	125 to 100
2024	From 6.25 to 3.125	~November 2021	100 to 75
2028	From 3.125 to 1.5625	~May 2022	75 to 50
2032	From 1.5625 to 0.78125	~November 2022	50 to 25
2036	From 0.78125 to 0.390625	~May 2023	25 to 12.5
2040	From 0.390625 to 0.1953125	~November 2023	12.5 to 6.25



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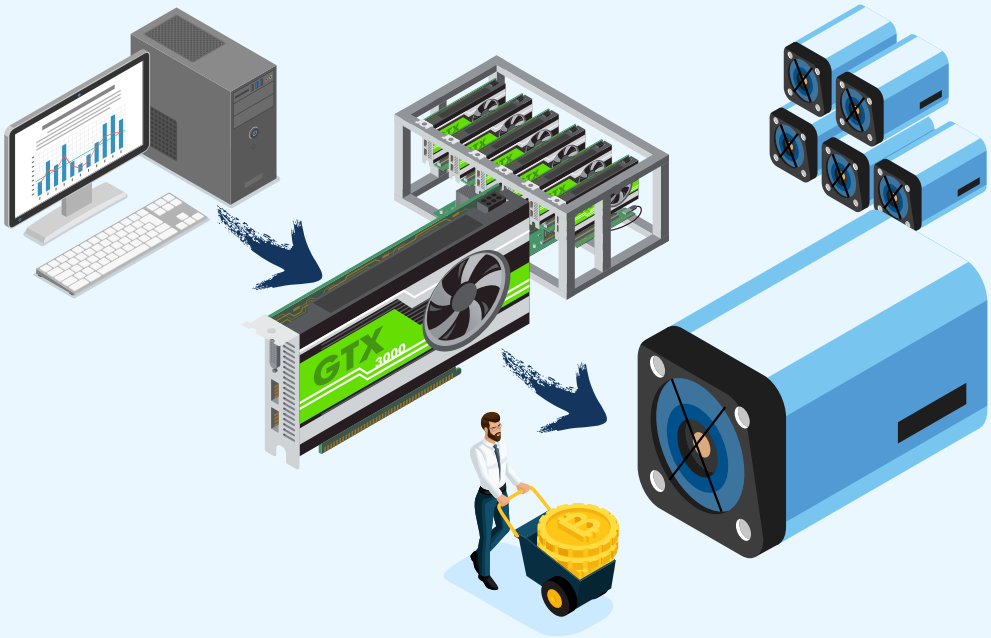
3. The evolution of mining

During the early days, it was relatively easy to mine Bitcoin. All that was needed was a computer and a stable internet connection. As time progressed, more people started to mine cryptocurrencies and the pursuit of higher power and greater profits led to the use of graphics cards. Graphics processing units (GPUs) became the machinery of choice because they could perform more operations per second.

The current generation of miners, called ASICs (Application Specific Integrated Circuit) were invented so that individuals could get more computing power for the power they consumed. Since mining difficulty increases with the number of machines operating on the network, it became increasingly difficult for people using computers and graphics cards. ASIC miners are now the only type of hardware that can efficiently mine Bitcoin and Bitcoin Vault.



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4. Mining profitability

The process of mining involves the use of machinery and electricity. The purchase price of the miner, the efficiency and electricity costs are all factored in when considering cryptocurrency mining as they all affect profitability. Machines with higher hash-power (the computing capacity of a cryptomining equipment to solve the cryptographic algorithm) usually consume more electricity. As an example, one of the latest-generation miners, the Antminer S19Pro is rated at 3,250W (+/- 5%). That is the equivalent of three industrial-grade vacuum cleaners. Many mining farms – locations which manage crypto mining – can run thousands of miners simultaneously. That is why any source of efficiency is important.

Mining Pools

Since there are so many miners competing worldwide, the probability of an individual to make a correct guess is very low. For this reason, people combine their computing power to form a mining pool. In a pool, several miners combine their power to mine. If that particular pool is successful, the reward earned will be divided amongst contributing miners. Rewards are shared on a pro rata basis. Think of it like people buying shares in a company. When that company is sold, all the shareholders receive a portion of the profits in relation to how much they originally put in. The more hashing power an individual contributes, the more they will earn. Below is a list of well-known Bitcoin mining pools.

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BTC mining pools

- Poolin
- BTC.com
- Slushpool
- Bitfury
- F2pool
- ViaBTC

Other solutions

Mining is a technologically advanced exercise that needs specialized equipment. It requires a lot of energy and dedicated support as they are devices that break easily and their maintenance is a complicated task only for specialists. Mining City offers a tailored service for people who would like to experience mining but do not want to deal with the hassle of mining for crypto.

As the popularity of Mining City increases, more people are joining the community on a daily basis. However, the block reward received by miners does not change. This means that all the plan holders should share the block rewards received on a daily basis. If the cost of electricity is constant, it means that — there more people with mining plans, the less each plan holder receives.