



Who are Miners ?

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Miners validate new transactions and record them on the blockchain. They work like a record keeper who keep the system updated of new payments and the existing ones.

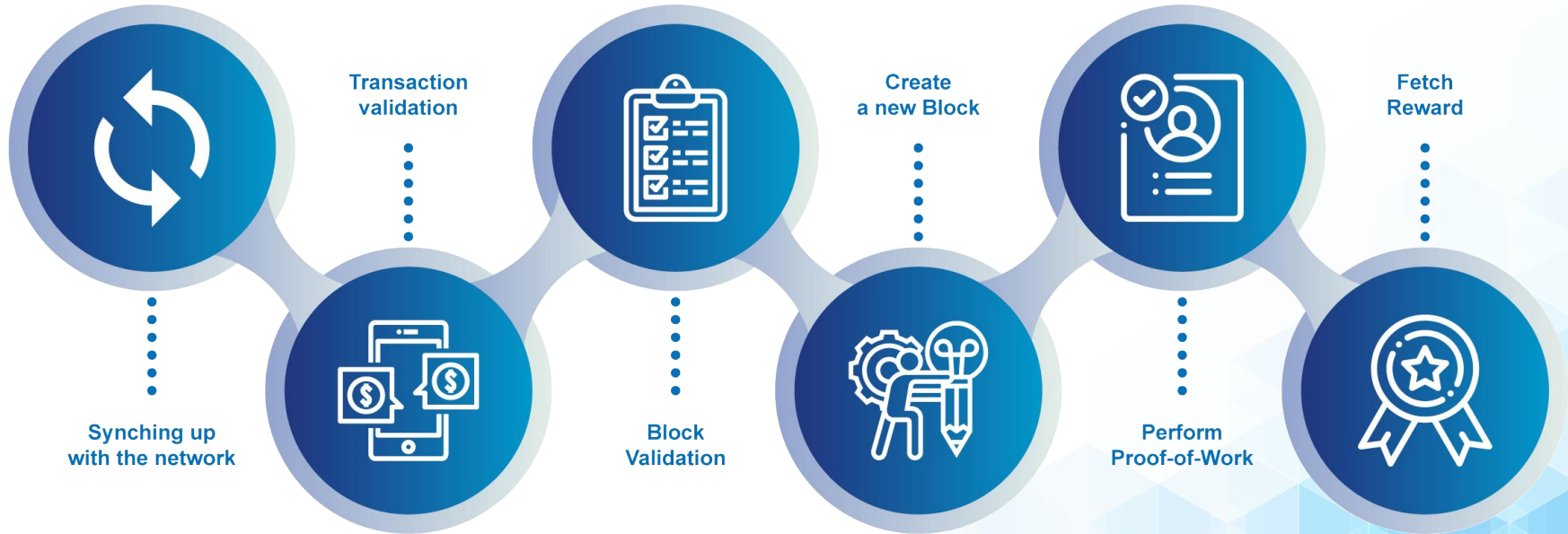
Miners add the transaction to the blockchain as well. But if all the miners add the transaction to the blockchain at the same time, several records of the same transaction would be available. So, to validate a block, they race each other.

The blocks are encoded with an encryption algorithm. This encryption is called a hash. So if you want to add a block, you need to solve the hash by inserting the correct key.

This key is actually worked out by the miners with pure guess. They don't have to do it themselves, the computing power of the computers is used to come up with the encryption solution. So, to fit the encryption, the machines come up with a sequence of different variations.

The first miner to overcome the hash gets to add the block to the blockchain. The transactions gets successful when the nodes on the network accept the new block. The miners get rewards for adding the block.

Tasks of Miners



Mining Algorithm

Retrieve previous block's header from the bitcoin network.

Assemble a set of transactions broadcasted on the network into a block to be proposed.

Compute the double hash of the previous block's header.

Check if the resultant hash is lower than the current difficulty target then PoW is solved.

If the resultant hash is not less than the current difficulty target, then repeat the process after incrementing the nonce.

