Blockchain Council

Certified Blockchain Architect

Overview of Blockchain Platforms

Public Platforms

Public Platforms are the ones which are open to all. Most of the public platforms are present as cryptocurrencies. Some of the major Public platforms are:

- Bitcoin
- Ethereum
- Ripple
- Stellar
- EOS

Bitcoin

- It is a globally known cryptocurrency and digital payment system.
- First Decentralized Digital Currency whose ledger is maintained by Blockchain openly.
- It was founded by an unknown person or group of people and released as an open-source software in 2009.
- Peer-to-peer.
- Transactions take place between users directly, without an intermediary.
- These transactions are verified by network nodes and recorded in a public distributed ledger called Blockchain.

Bitcoin

Features that differentiate Bitcoin from government-backed currencies:

- **Decentralized System**: The control of Bitcoin is not under one central authority. The machines work together to mine this currency and process transactions which make up a part of the network, without causing a fiasco by any central authority.
- **Simple Setup Process**: Regular banks make you go through a lot of processes to open an account. However, the configuration process of Cryptocurrency is straightforward and free.
- **Anonymous and Transparent Usage**: Users can have many Bitcoin addresses without a link to any personal identifying information. However, it records every transaction in a large ledger format called Blockchain.
- **Meagre Transaction Fee**: Bitcoin charges a minimal fee for international transfers.
- **Fast Network Process:** The payment process is quick in Bitcoin network.
- **Non-Refundable**: Once sent, Bitcoins cannot be refunded.

Ethereum

- Ethereum is an open source software platform which is based on Blockchain technology that enables developers to build and deploy decentralized applications(like smart contracts).
- It offers Decentralized Virtual Machine aka Ethereum Virtual Machine which can execute scripts using an international network of public nodes.
- Initiated by Vitalik Buterin in late 2013.
- The development for ethereum was funded by an online public crowdsale during July–August 2014, by buying the Ethereum value token (Ether).
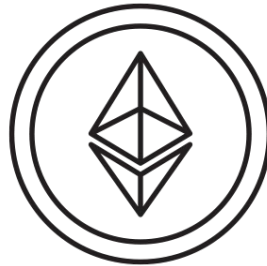
Ethereum

- The first public beta pre-releases network known as "Olympic". The Olympic network provides users with a bug bounty of 25,000 Ethers for stress testing the limits of the Ethereum Blockchain.
- Ethereum's live Blockchain named "Frontier" was launched on 30 July 2015.
- The current milestone is named "Homestead" and is considered stable. As it has led to various improvements such as transaction processing, gas pricing, and security.
- There are at least two other protocol upgrades planned for the future, i.e. Metropolis and Serenity (Proof-of-stake).
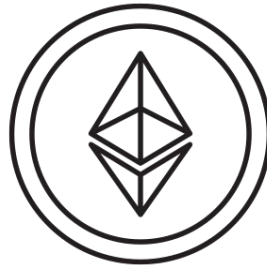
Ripple

- Ripple, is actually a real-time gross settlement system, currency exchange and remittance network.
- Released in 2012 and with the current market cap of $7billion, the Ripple system has been integrated into a few banks and payment networks to reduce costs.
- Ripple "enables banks to settle cross-border payments in real time, with end-to-end transparency, and at lower costs" .
- Ripple's consensus ledger -- its method of confirmation -- doesn't need mining, a feature that deviates from bitcoin and altcoins.
- Known for: strong focus on banking market, real-time settlement

Stellar

- The Stellar network is an open source, distributed, and community owned network used to facilitate cross-asset transfers of value.
- Like Ripple, Stellar can handle exchanges between fiat-based currencies and between cryptocurrencies.
- The native digital asset(Cryptocurrency) of Stellar is called Lumens and denoted by XLM.
- Initiated by Jed McCaleb(Co-founder of Ripple) in Late 2014.
- When the network was started 100 billion Lumens (XLM) were created.
- Stellar have very low transaction fees and fast transaction speed. A transaction using Lumens costs just 0.0001 XLM, and usually takes less than 6 seconds to be settled.

EOS

- EOS is an operating system for marketplaces, data-sharing networks, micro-currencies, and decentralised digital communities. It has the potential to vastly lessen the expense and complications in getting things done in the real world.
- EOS Blockchain is aiming to become a decentralised operating system which can support industrial-scale decentralised applications.
- EOS is planning to delete transaction fees. EOS claims to have the ability to conduct millions of transactions per second.
- EOS runs on DPOS consensus algorithm.

Commercial Platforms

Commercial Platforms are the ones which are available as software tools for the creation of enterprise blockchain projects. Most of the commercial platforms support identity management which is not avaialble on the public platforms. Some of the major Public platforms are:

- Hyperledger
- Corda
- Quorum
- Multichain
- BigChainDB

Hyperledger

Hyperledger is an open source collaborative effort for cross-border blockchain technologies.

Key Points about Hyperledger:

- Hyperledger it does not support cryptocurrency.
- Hyperledger is built by Linux Foundations where developer and companies meet and collaborate to create a blockchain framework.
- The Linux Foundation founded the Platform in 2015.
- Currently, Hyperledger is supported by more than 100+ members including IBM, Intel, Samsung, JP Morgan etc.

What is Corda?

Corda is a distributed ledger open source platform. It is among the most sophisticated platforms to enable the implementation of enterprise blockchain applications.

Key points about Corda:

Corda was introduced by R3 (R3CEV LLC) consortium.

- It is not a public blockchain.
- No native cryptocurrency
- Agreement Based Network.
- Peer-to-peer connection.
- Platform is JVM-based, written in Kotlin.

Quorum

- Quorum is an ethereum based distributed ledger which is the most recent development of J.P Morgan Chase.
- It is a permissioned blockchain that is for any application which requires high speed and high throughput processing.
- It's functioning is similar to Ethereum but has few differences such as
  - All Smart Contracts and derived from the blockchain are validated by every node in the transactions.
  - The state of smart contract is known and validated by the parties and is approved by the third parties such as regulators.
  - Smart Contract in Ethereum blockchain can be seen in Quorum out of the box.
  - Private settlement of digitized assets on quorum is done using Zero-Knowledge Security Layer.

Multichain

- An Open Platform to build Blockchain Applications.
- An extension of Bitcoin Core.
- Multiple features have been added to make it more useful for practical usage other than only asset based transactions.
- What have been added?
    - Permission management
    - Data Streams Transactions
    - Native Assets Transactions
    - Mining & Block Signatures
    - Extended Peer-to-Peer handshaking
    - & Many more

BigChainDB

- BigChain DB is a scalable blockchain database which is designed to combine the features of traditional database with Blockchain Ecosystem.
- BigChain DB supports both public and private deployments, and the transactions done on bigchain db takes less than a second to validate as it is based on the federation of voting nodes.
- It inherits high throughput, high capacity with the help of No-SQL query langauge.
- BigchainDB is interdependent to decentralized processing technologies like EVM, also decentralized file systems like IPFS.

THANK YOU!

Any questions?
You can mail us at
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