The World of Blockchain

Rosen Santev

Lead of Blockchain

Encorp.io

encorp.io

World of Blockchain

IMAGINE...

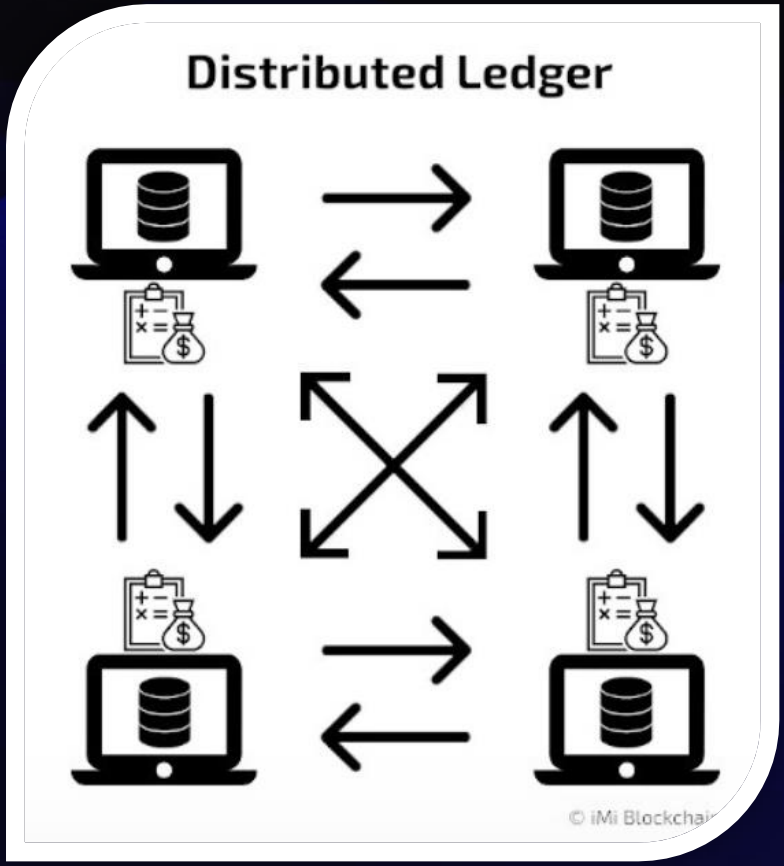
encorp.io

Agenda

- DLT
- Blockchain Building Blocks – Bitcoin, Ethereum
- EVM
- Smart contracts
- Why there are so many blockchains?
- Blockchain use-cases
- Q&A

encorp.io

Distributed Ledger Technology



- Ledger
- Technology
- Distributed
- Immutable
- Decentralized

encorp.io

Ledger

- Write down Movements
- Calculated Balance

- Ships

encorp.io

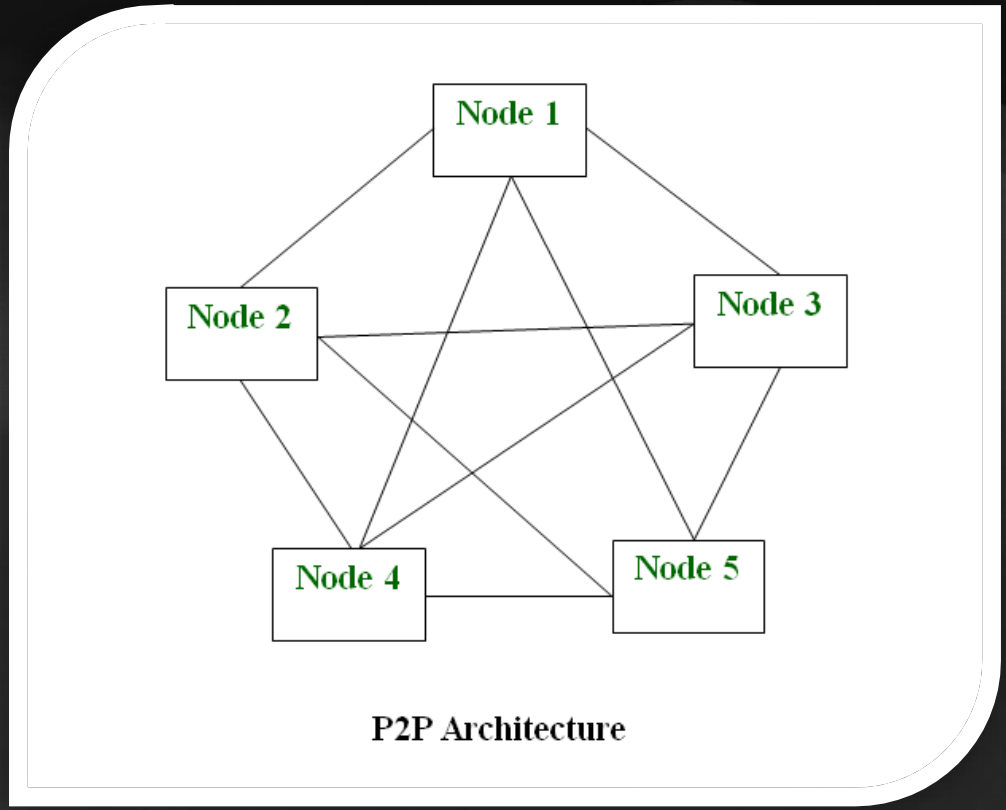
Technology

- Hardware
- Software
- Database
- Aggregations

encorp.io

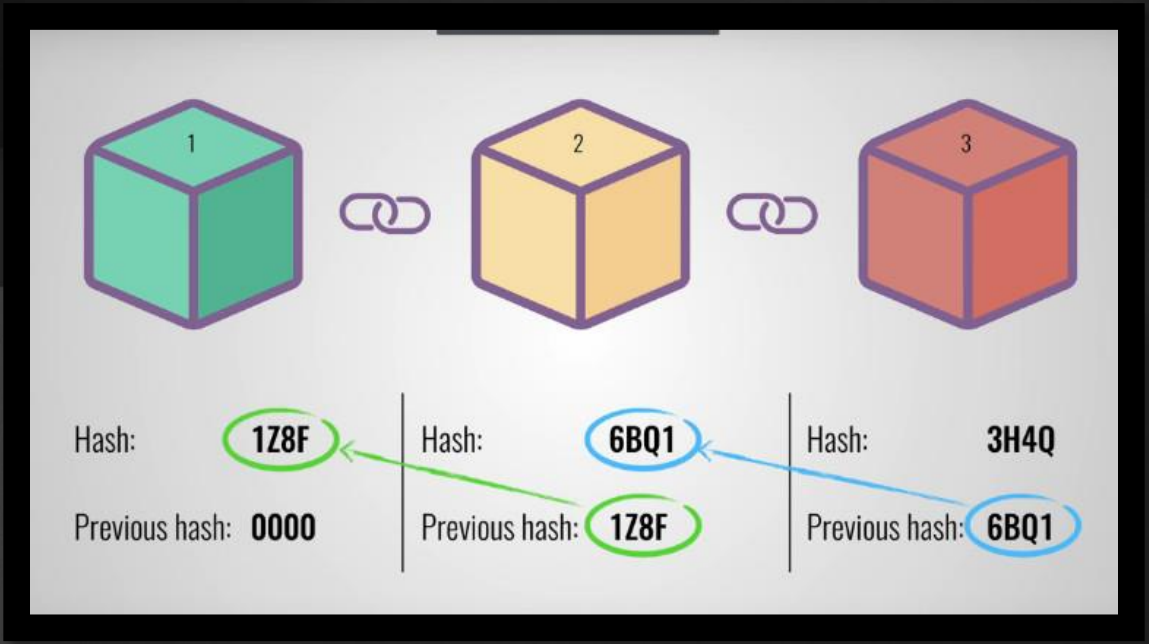
Distributed

- Peer to Peer
- Eliminates the “Single Point of Failure”



encorp.io

Immutable



- Movements History
- Change in one movement record leads to change in every next record

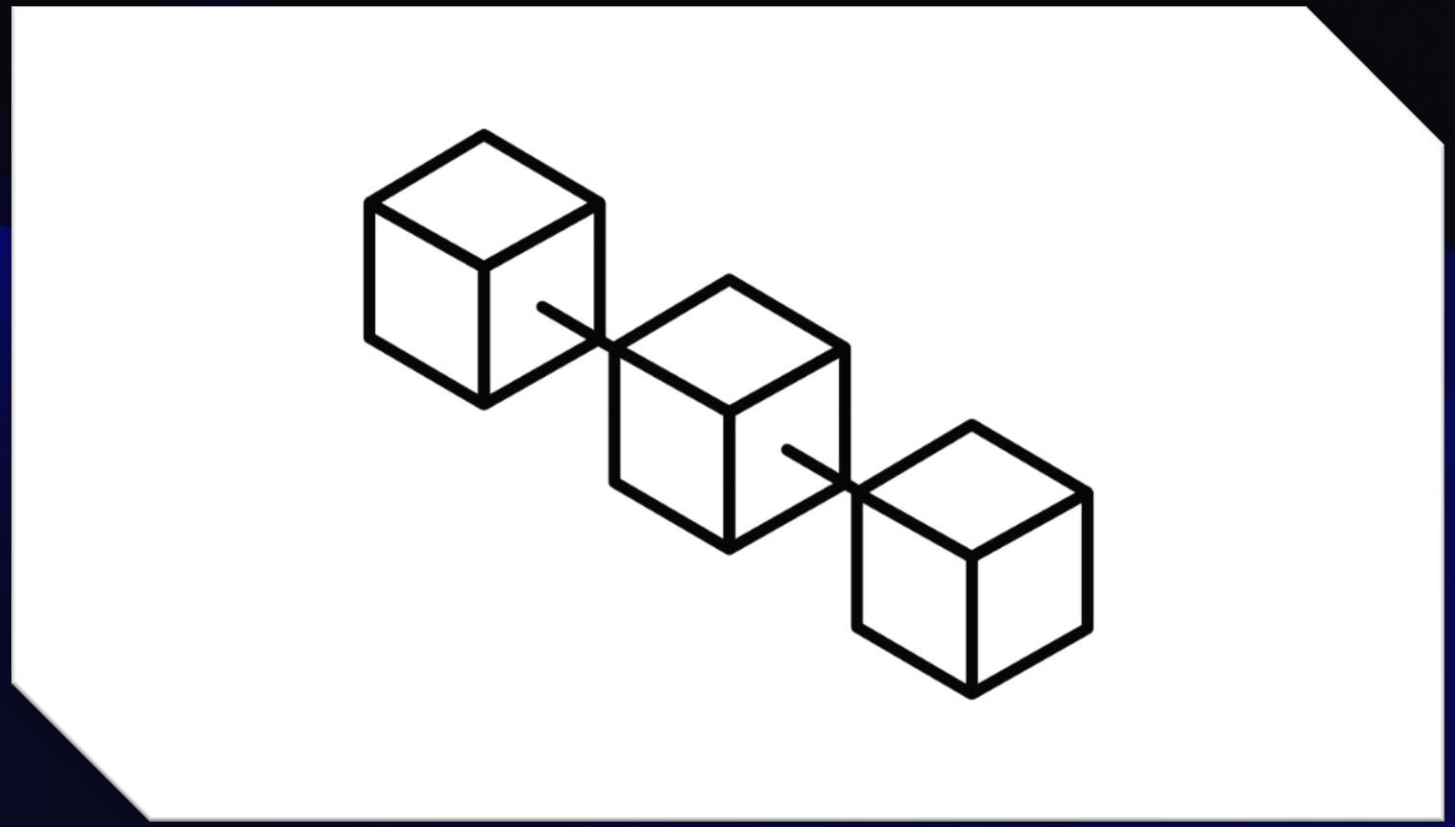
encorp.io

Decentralized

- No Centralized Authority
- Reliability

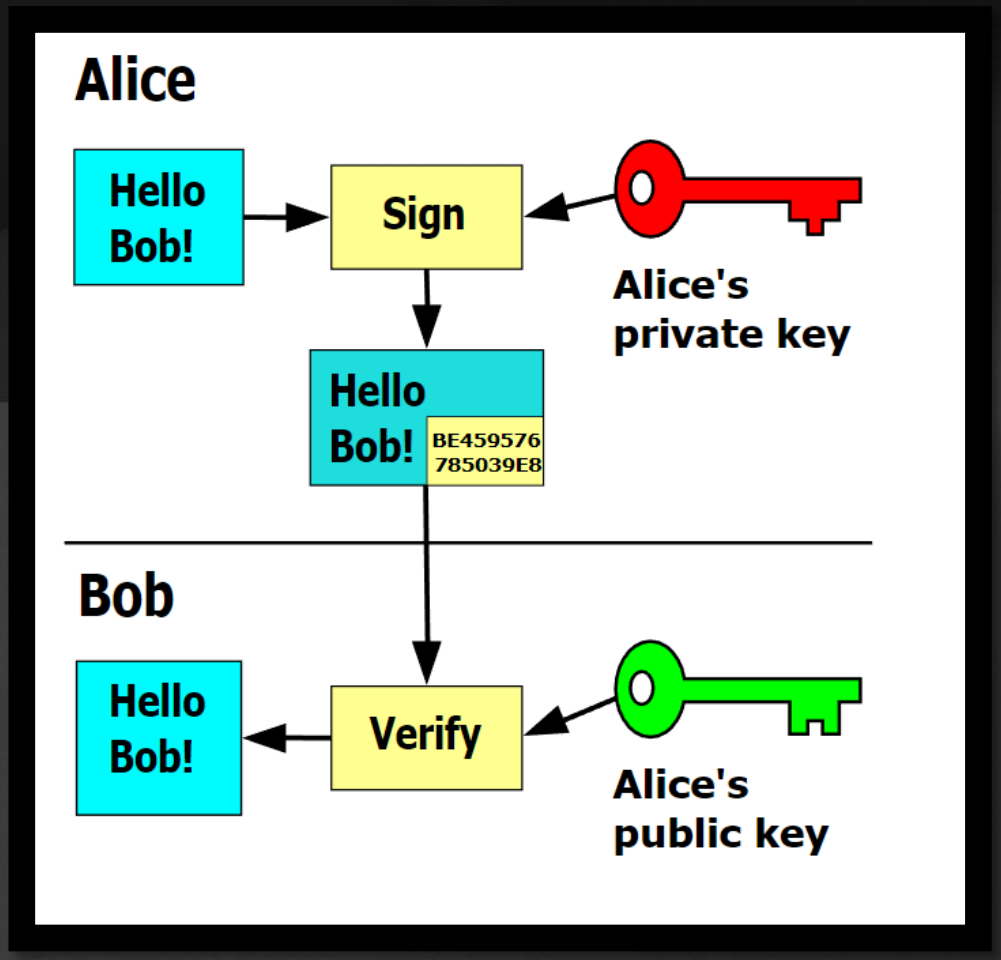
encorp.io

Blockchain Building Blocks



encorp.io

Accounts



Every user is associated with Public and Private Key Pair

- Address

- Mail
- MailBox

encorp.io

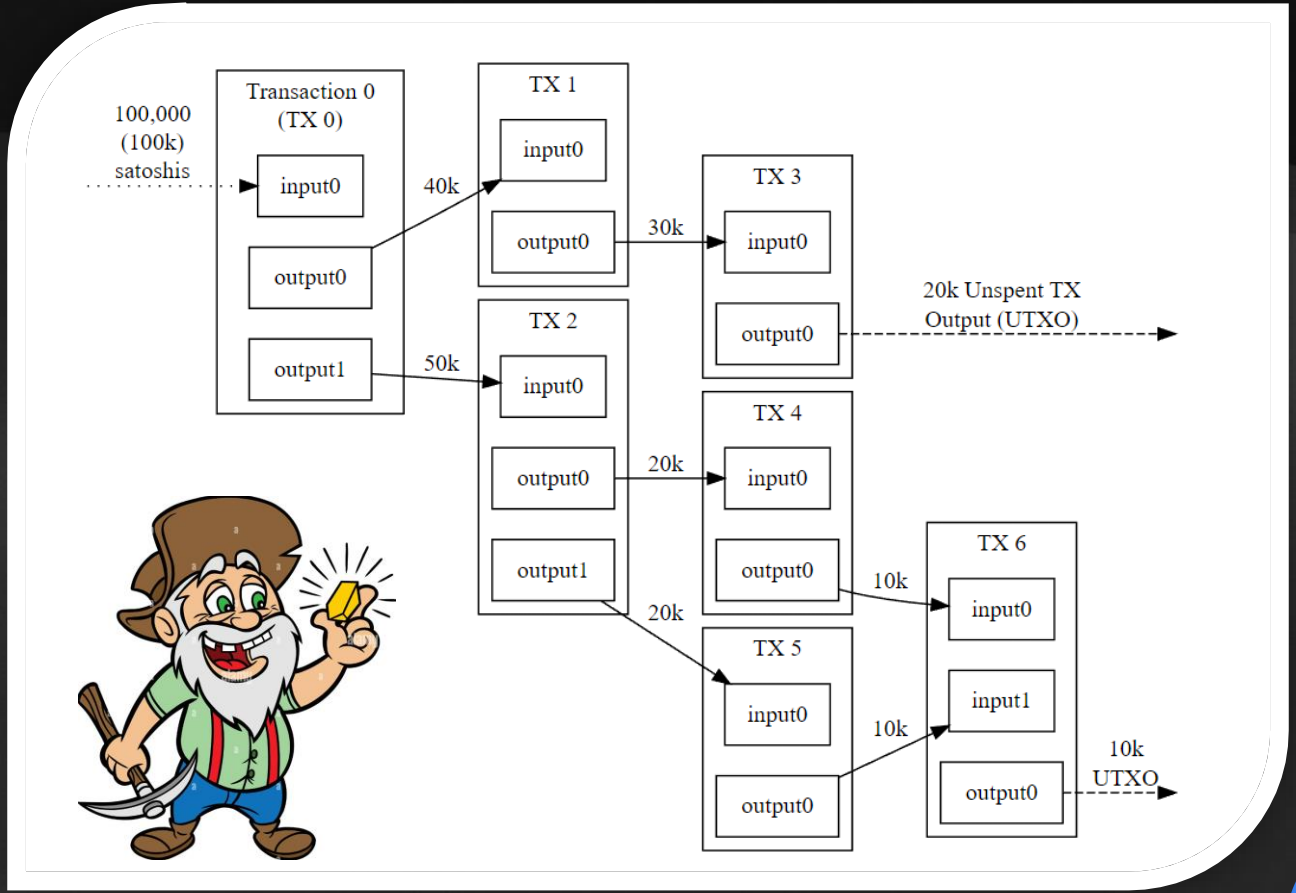
Transactions and Bitcoin UTXOs

Bitcoin is made to be:

- Fully transparent
- Fair
- Auditable

- No Balance Records

- Gold Unique Identifier
- Satoshis

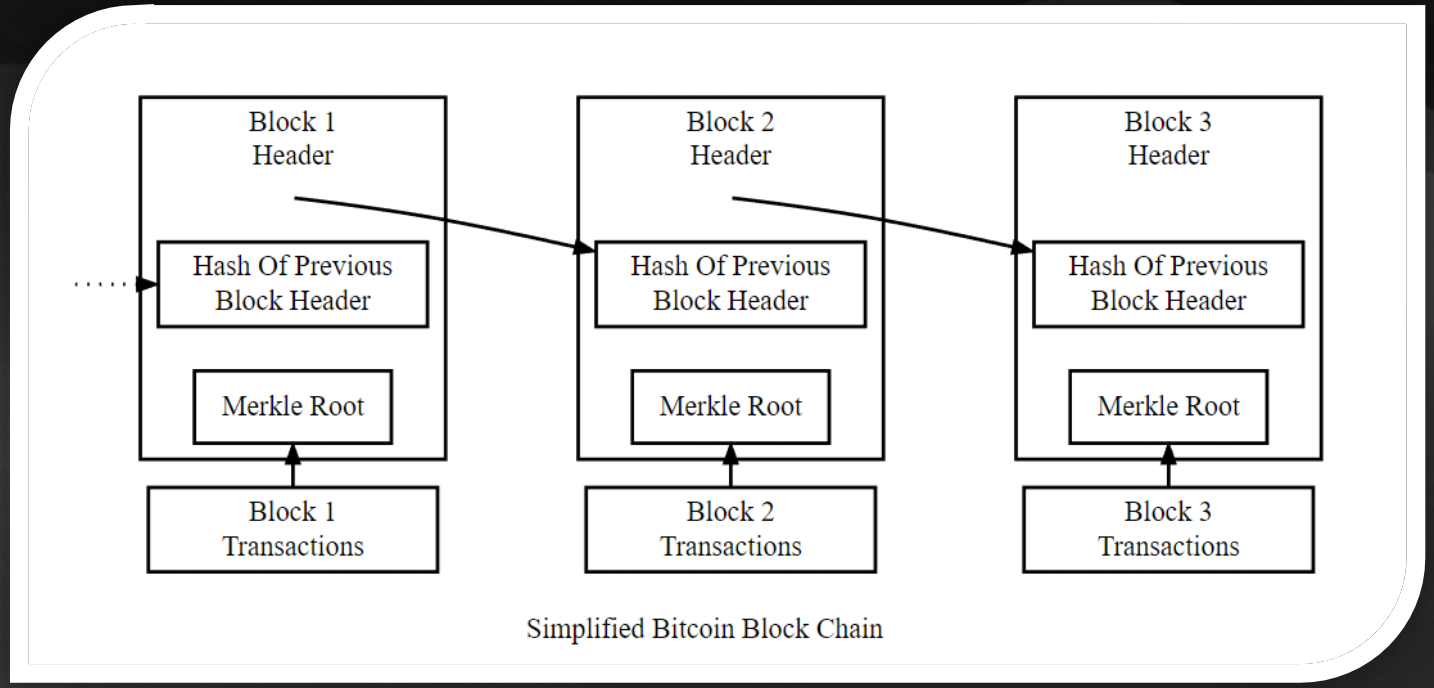


encorp.io

Blocks

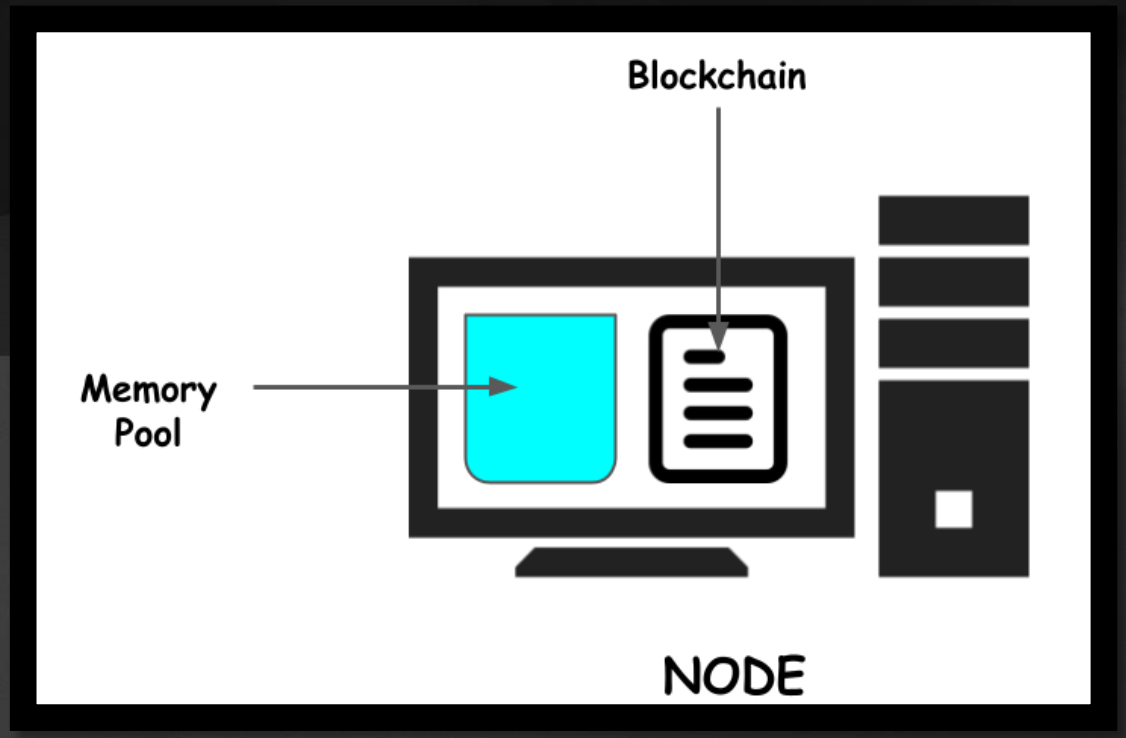
- Just Transactions?
- Better scalability
- Immutability

- Settlement in banking



encorp.io

Mempool



- Last stop before Blockchain
- https://txstreet.com/v/eth-btc

encorp.io

Nodes

The Software and Hardware which forms the Blockchain

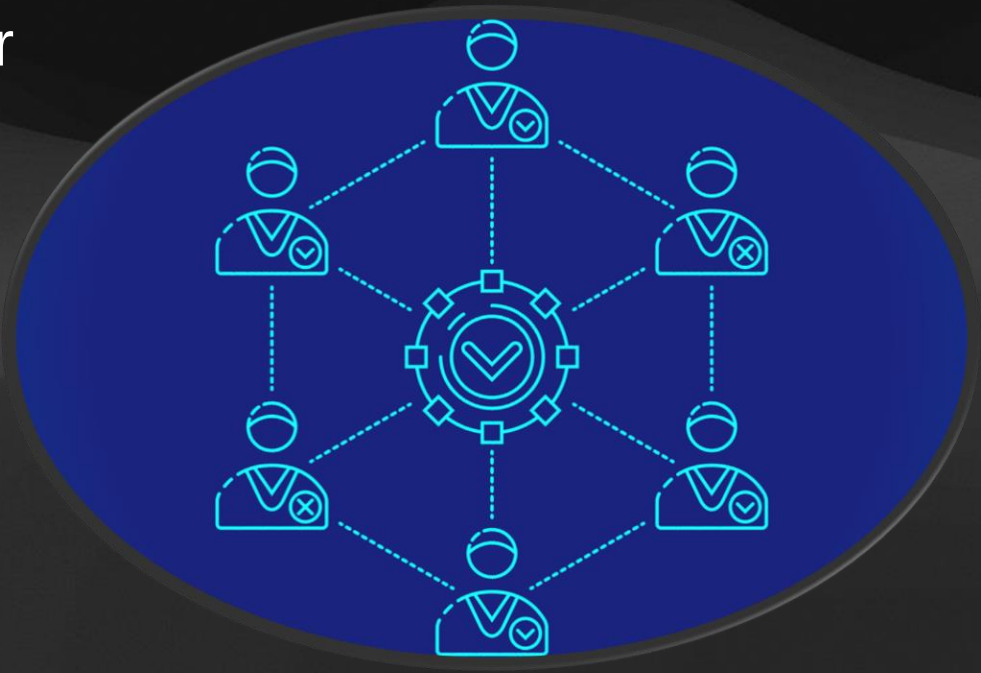
- Peer to Peer network communication
- Store State
- Validate State

- Miners - Build new blocks

encorp.io

Consensus

- Consensus algorithm - Nodes' network can achieve a blockchain consensus over the latest state of the ledger
- Is this a pen?
- Proof of Work
  - Mining
  - Nonce
  - Difficulty
  - 2016 blocks



encorp.io

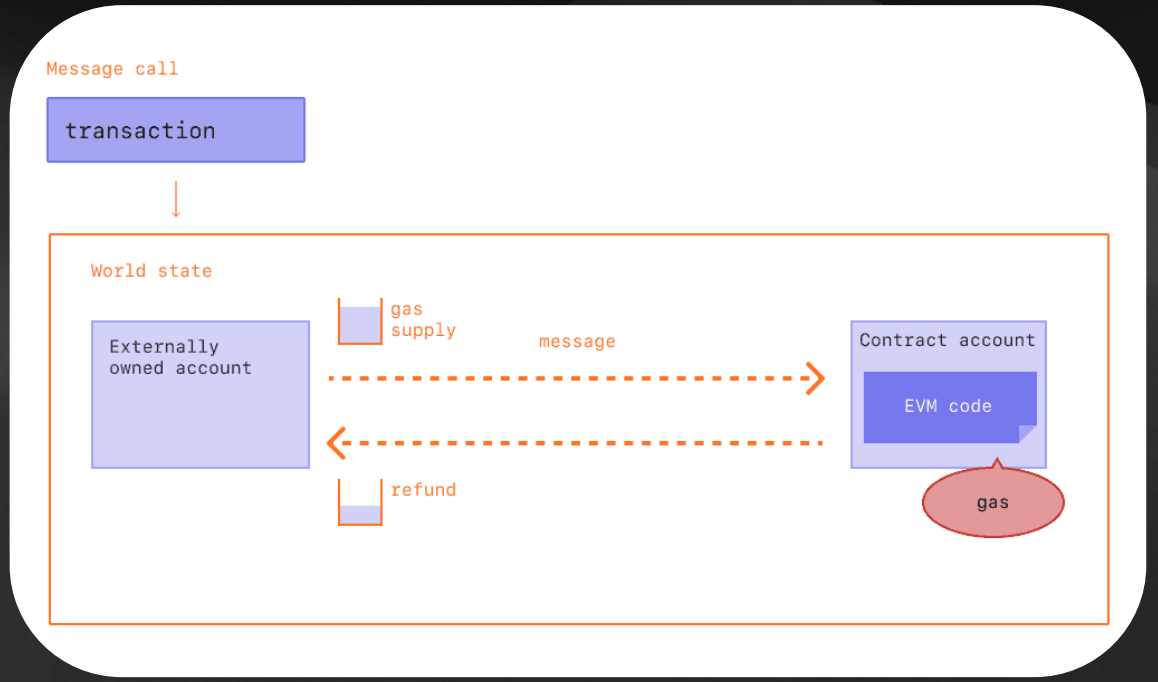
What about Ethereum?

- EVM
- Smart Contracts
- Advanced State
- Gas
- Account balances
- PoS

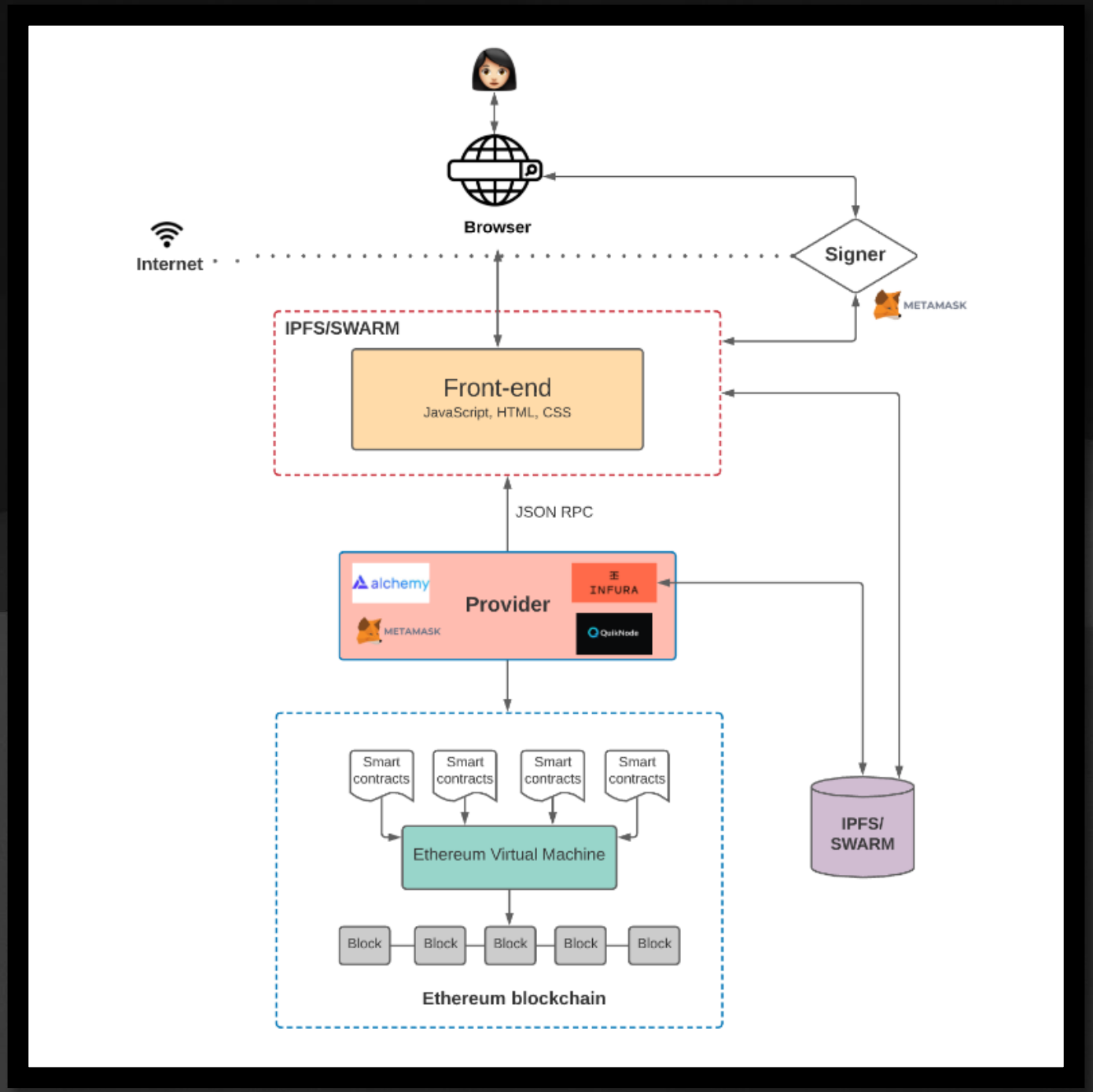
encorp.io

Smart Contracts

- Program that runs on the Ethereum blockchain
- Type of Ethereum Account
- Code is Law
- Interact by submitting transactions



encorp.io

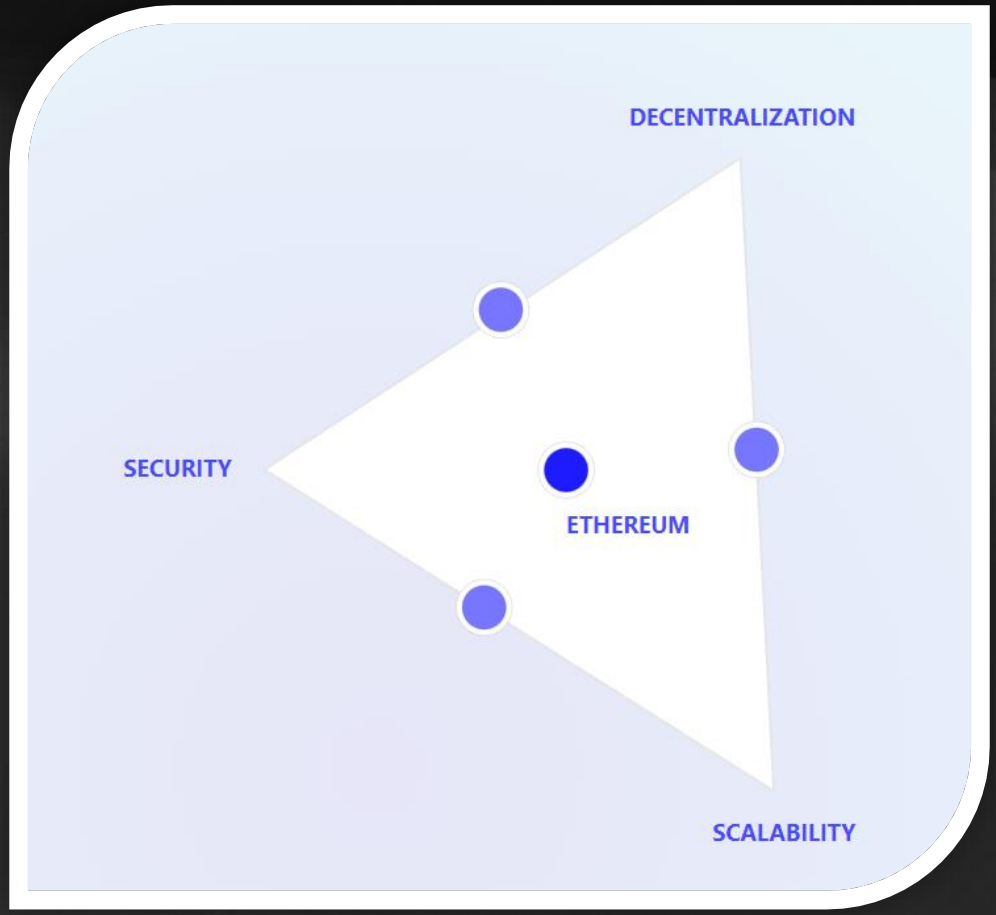


Web 3.0 Application Architecture

encorp.io

Why there are so many blockchains?

- Blockchain Trilema
  - Security
  - Scalability
  - Decentralization
- Sharding
- Layer 2
- Sidechains



encorp.io

Blockchain Use-Cases

- No Central Authority
- Increase transparency
- Advanced efficiency

encorp.io

Blockchain Use-Cases (1)

Bitcoin

- Durability
- Portability
- Divisibility
- Fungibility
- Scarcity
- Acceptability

encorp.io

Blockchain Use-Cases (2)

Decentralized Finance (DeFi)

- Borrow
- Save
- Invest
- Trade
- Accessible to anyone
- Always open markets
- No centralized authority
- Transparent

Uniswap

Compound

Maker

yEarn

Lido

encorp.io

Blockchain Use-Cases (3)

Metaverse

- Virtual space
  - Meet People
  - Education
  - Virtual office
  - Buy works of art
  - Sell Real Estate

- Why would it be better with blockchain?
  - Assets interoperability
  - Unique identity
  - Advanced Economic

encorp.io

Blockchain Use-Cases (4)

Real Estate

- Tokenization
- Mortgage securitization
- Urban planning
- Others

encorp.io

Blockchain Use-Cases (5)

Supply Chain

- Transparency into the provenance of consumer goods
- Traceability
- Transparency

encorp.io

Live Demo

- Smart Contract
- Remix IDE
- Goerli Testnet

encorp.io

Q&A

encorp.io

Get in Touch

LinkedIn
Rosen Santev

encorp.io