



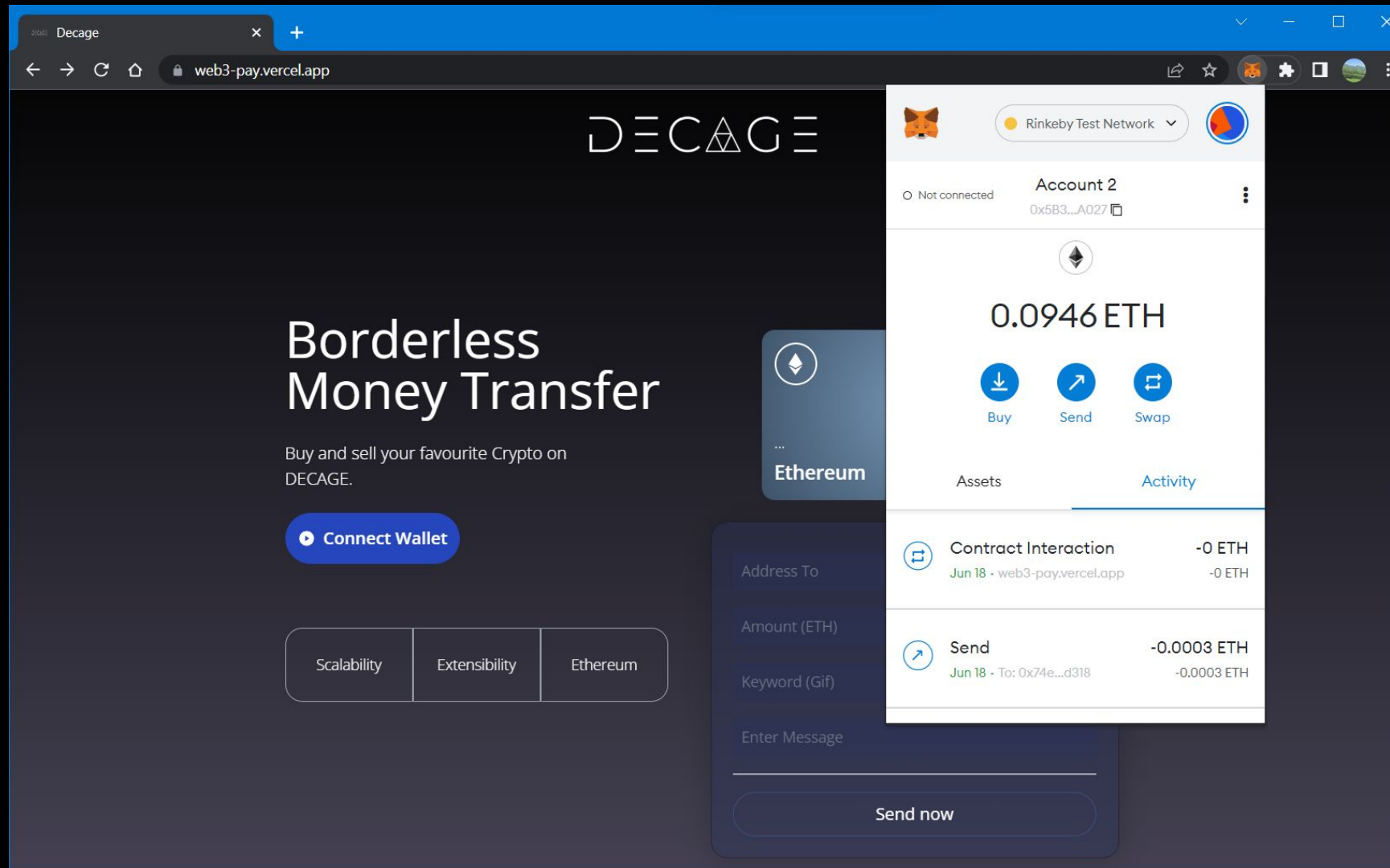
DECAGE

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REHAN GANAPATHY
PRANEETH KUMAR L

ABOUT DECAGE

- We have built this one stop transaction platform which is an Ethereum based web application.
- Ethers can be sent easily between accounts and verified using this web 3.0 application.
- It is built on the rinkeby test network.
- The verification of the transaction can be done on etherscan.
- A giphy is associated with each transaction in the blockchain based on the keyword given by the user.

1. Connect your meta mask wallet



2. Fill details for transaction


The screenshot shows a web browser window with the URL `web3-pay.vercel.app`. The page features the 'DECAGE' logo at the top center. Below the logo, the heading 'Borderless Money Transfer' is displayed, followed by the text 'Buy and sell your favourite Crypto on DECAGE.' To the left of the transaction form are three buttons: 'Scalability', 'Extensibility', and 'Ethereum'. The transaction form on the right includes an Ethereum icon, a truncated address '0x5b3...a027', and a larger input area containing a full Ethereum address '0x74E873aC5CbcC185b00D58b11946570562E0d3', the amount '0.0003', the label 'blockchain', and the memo 'test2'. A 'Send now' button is at the bottom of the form.

DECAGE

Borderless Money Transfer

Buy and sell your favourite Crypto on DECAGE.

Scalability Extensibility Ethereum

 0x5b3...a027
Ethereum

0x74E873aC5CbcC185b00D58b11946570562E0d3

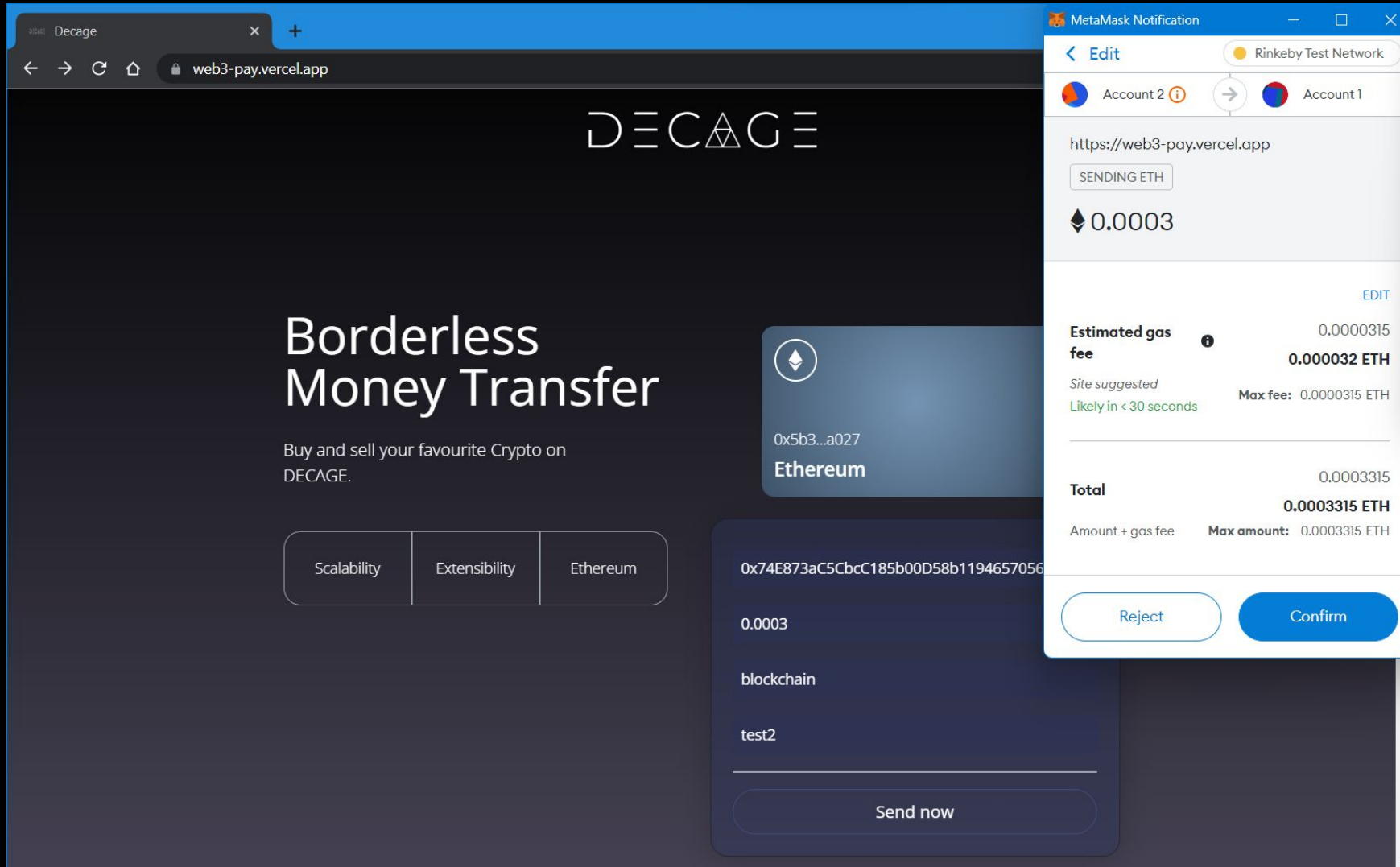
0.0003

blockchain

test2

Send now

3. Confirm transaction on metamask

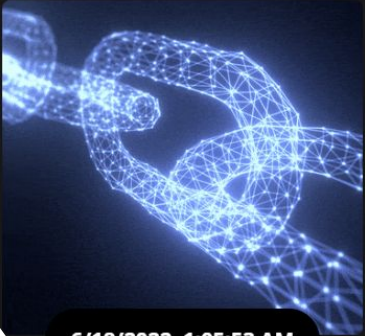




4. Check latest transactions for confirmation

Decage

web3-pay.vercel.app

Latest Transactions

<p>From: 0x5B3...A027 To: 0x74E...d318 Amount: 0.0003 ETH</p> <p>Message: test2</p>  <p>6/18/2022, 1:05:53 AM</p>	<p>From: 0x5B3...A027 To: 0x74E...d318 Amount: 0.0003 ETH</p> <p>Message: test1</p>  <p>6/18/2022, 12:40:20 AM</p>	<p>From: 0x5B3...A027 To: 0x74E...d318 Amount: 0.0003 ETH</p> <p>Message: test</p>  <p>6/17/2022, 11:52:43 PM</p>
<p>From: 0x5B3...A027 To: 0x74E...d318 Amount: 0.0002 ETH</p>	<p>From: 0xc30...0F50 To: 0xC25...6915 Amount: 0.0004 ETH</p>	<p>From: 0xc30...0F50 To: 0xC25...6915 Amount: 0.0005 ETH</p>

5. Verify your transaction on Etherscan

The screenshot shows the Etherscan interface for the Rinkeby Testnet Network. The address `0x5B30c710AD48705c3DF053cb65240d514092A027` is displayed. The balance is `0.093638780569615179 Ether`. The 'Overview' section shows the balance, and the 'More Info' section shows 'My Name Tag: Not Available'.

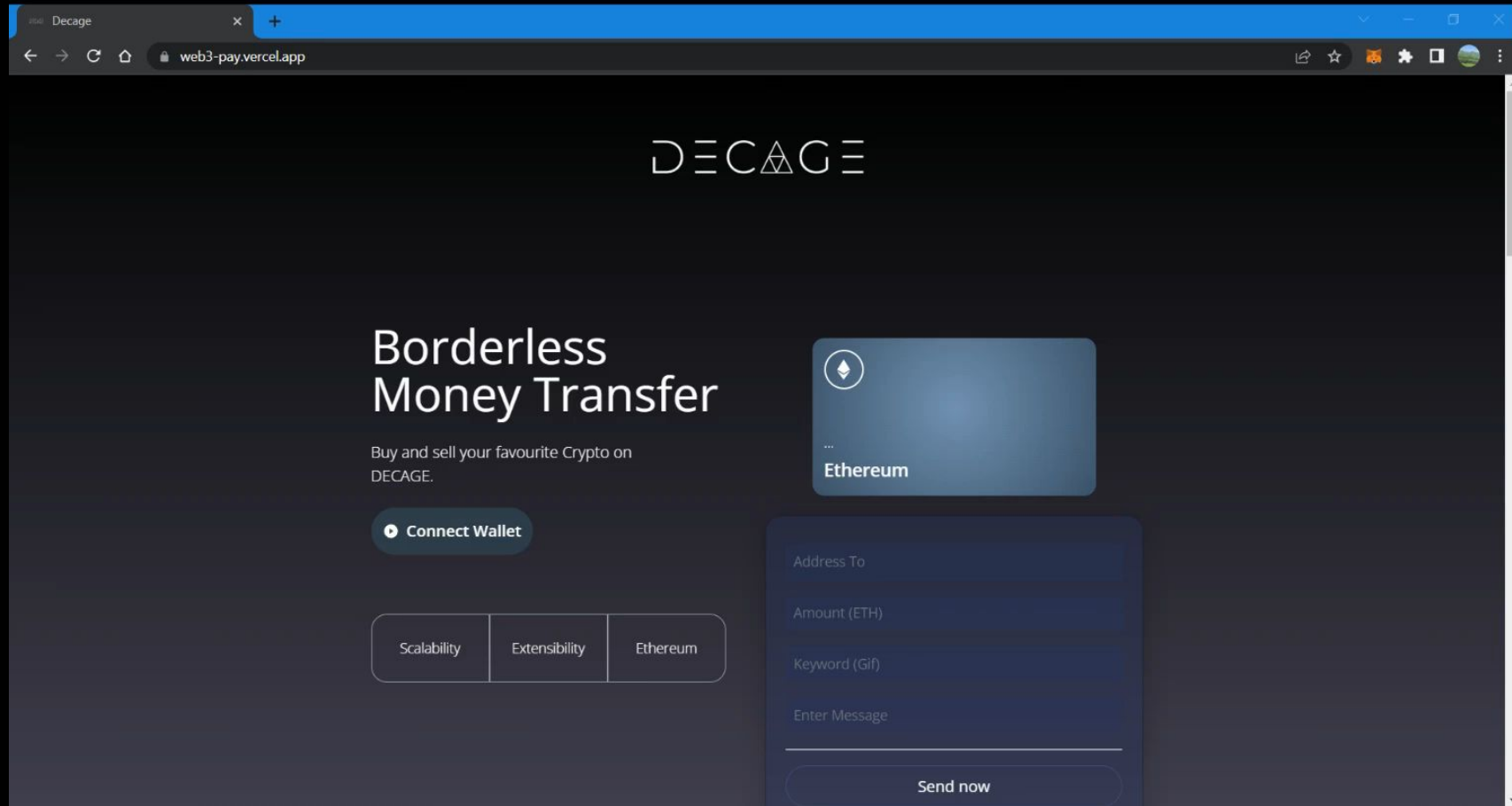
The 'Transactions' section shows a list of transactions. A modal window titled 'Additional Info' is open, displaying details for a specific transaction:

- Status:** Success (15 Block Confirmations)
- Transaction Fee:** 0.00026021400156 Ether (\$0.00)
- Gas Info:** 173,476 Gas Used From 173,476 Gas Limit @ 0.000000001500000009 Ether (1.500000009 Gwei)
- Nonce:** 20 (in the position 3)
- [See more details](#)

The transaction list below shows the following data:

Block	Age	From	To	Value	Txn Fee
10869547	3 mins ago	0x5b30c710ad48705c3d...	OUT 0xd69ec6aae81d8d714f...	0 Ether	0.000260214001
10869546	3 mins ago	0x5b30c710ad48705c3d...	OUT 0x74e873ac5cbcc185b0...	0.0003 Ether	0.0000315
10869546	3 mins ago	0x5b30c710ad48705c3d...	OUT 0x74e873ac5cbcc185b0...	0.0003 Ether	0.0000315
10869445	29 mins ago	0x5b30c710ad48705c3d...	OUT 0xd69ec6aae81d8d714f...	0 Ether	0.000336427043
10869444	29 mins ago	0x5b30c710ad48705c3d...	OUT 0x74e873ac5cbcc185b0...	0.0003 Ether	0.00004074
10869255	1 hr 16 mins ago	0x5b30c710ad48705c3d...	OUT 0xd69ec6aae81d8d714f...	0 Ether	0.000260196001

DEMO VIDEO



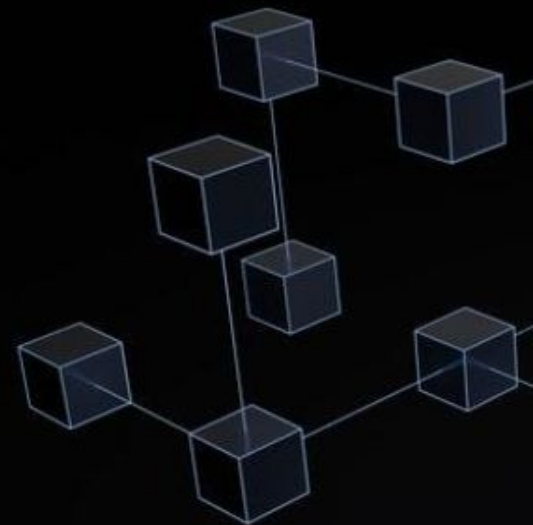
Scalability

Why Dapps need Scalability?

Scalability is an important factor in business as well as technological innovations.

Every technological innovation needs great scalability to reach its maximum potential.

Being able to scale a product to various devices of different computational power is essential for delivering the product to maximum users.

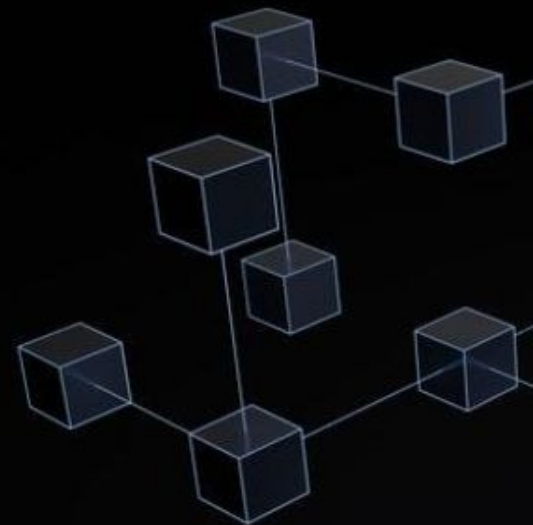


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There are Various ways to Scale Dapps, some of the popular techniques are :

- On-Chain Scaling:
It deals with increasing in capacity at the core blockchain layer.

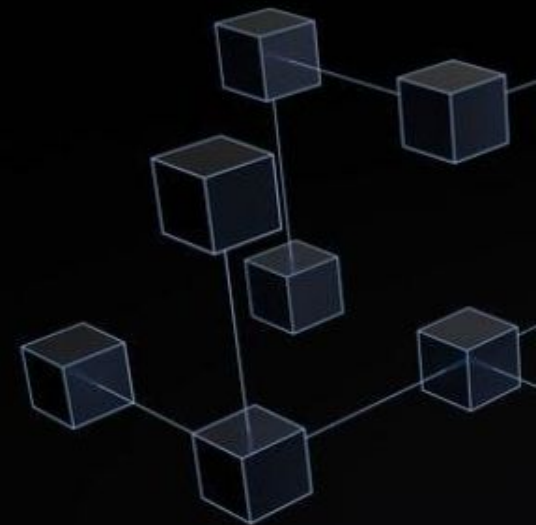


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This refers to the creation of additional layers capable of handling transactions without relying on the core blockchain.

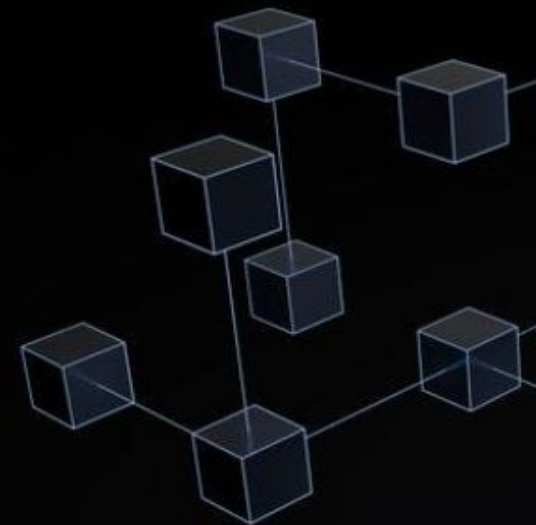


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- State Channel:
State Channels allow users to conduct peer-to-peer transactions 'off-chain,' only sending messages onto the main chain when they want to exit the channel



Casper Protocol

Casper is a protocol that will convert Ethereum's current Proof of Work (PoW) model to Proof of Stake (PoS). Miners must currently expend energy in order to solve a cryptographic equation and mine a block using PoW.

They are rewarded if they solve the equation, but the process consumes a tremendous amount of energy (and will continue to require more and more).

In PoS, "validators" take the place of miners and "validate" (rather than mine) blocks onto the blockchain. Validators stake their funds on a specific block rather than expending energy on it. The block with the greatest amount of money staked on it is verified and added to the blockchain.

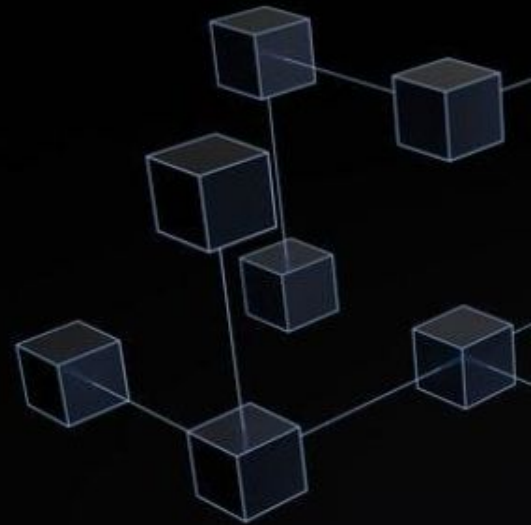
In theory, this change should protect the blockchain from malicious attacks. A failed attack on the blockchain costs the attacker time and power in PoW. A failed attack on the blockchain directly costs the user money in PoS, as s/he immediately lose all funds staked on the incorrect block.



Sharding

Sharding is the process of horizontally splitting a database to spread the load. Sharding reduces network congestion and increases transactions per second by forming new chains known as “shards.”

This will also reduce the workload for each validator, as they will no longer be required to process the entirety of all network transactions.

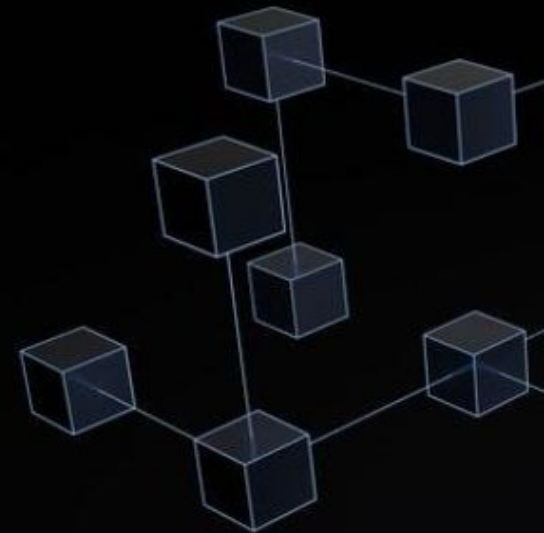


Plasma Technology

Plasma is another scaling method that handles transactions “off-chain,” that is, not on the main Ethereum blockchain. Plasma enables many blockchains to branch off from the original blockchain.

As a result, each child chain can process and maintain its own transaction records while relying on the root chain’s underlying security.

One of the biggest strengths of this method is that each of these plasma chains has its own quality and set of standards. This means that different child chains can support transactions with varying requirements (for example, privacy) while remaining within the same secure ecosystem.



THANK YOU