

WEB3 IN A NUTSHELL

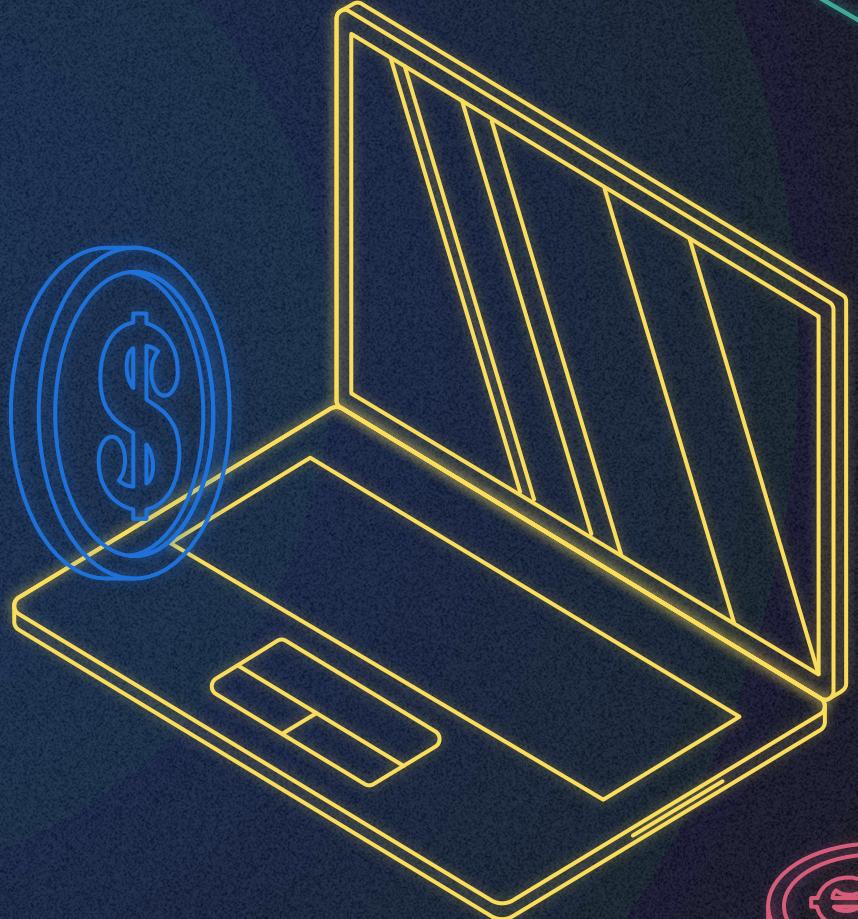


TABLE OF CONTENTS

01 INTRODUCTION

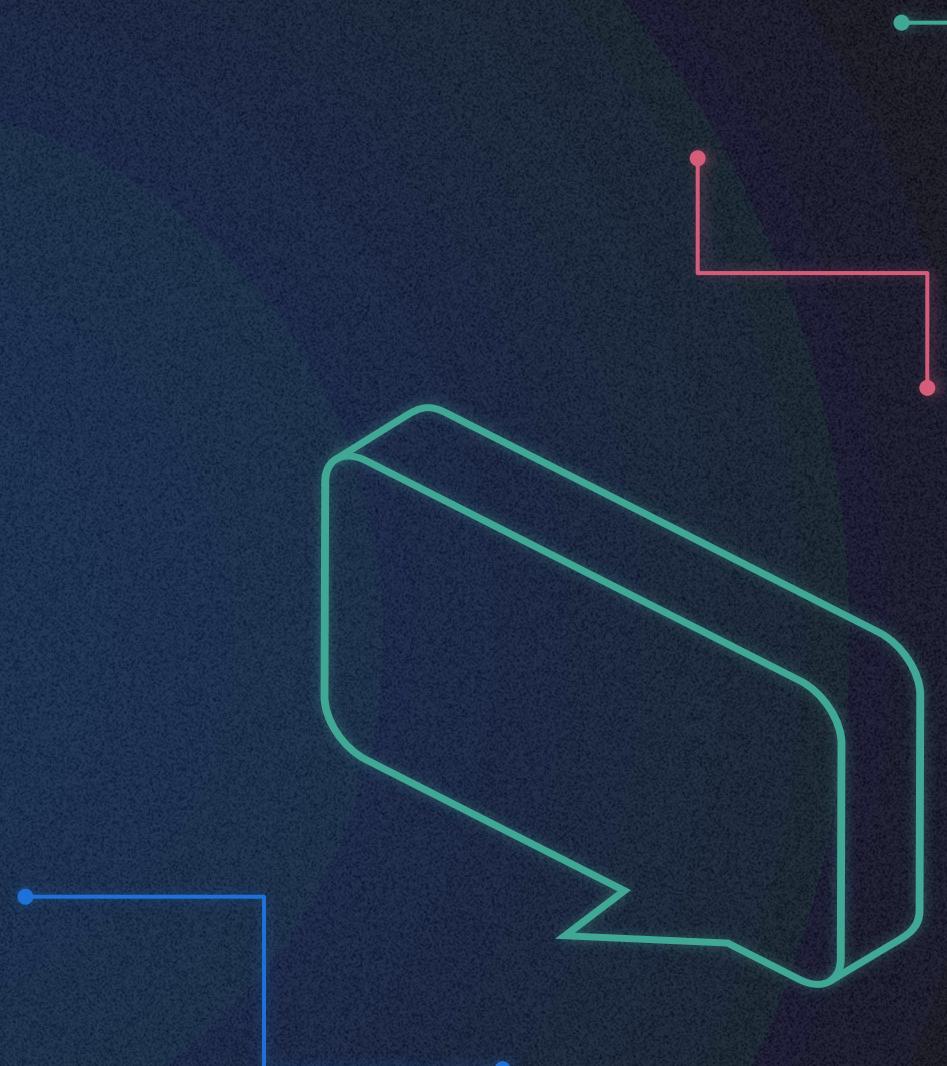
What is Web3?

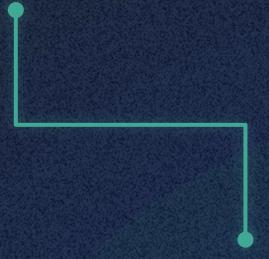
02 ARCHITECTURE

A little deeper into Web3

03 APPLICATIONS

Some potential Web3 ideas





01

INTRODUCTION

- The early web
- What is Web3?
- Why is Web3 important?

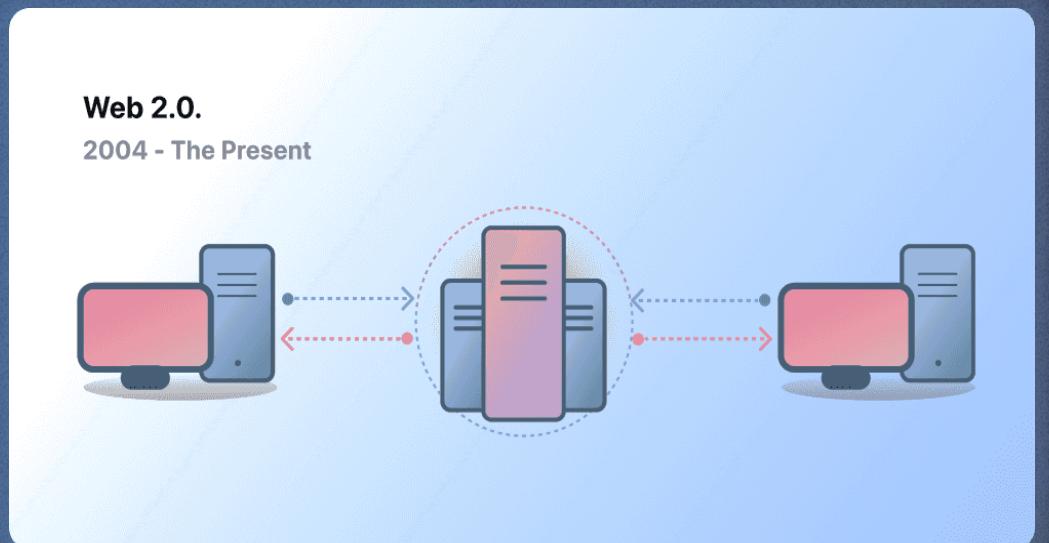
THE EARLY WEB



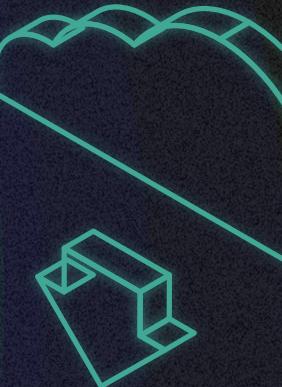
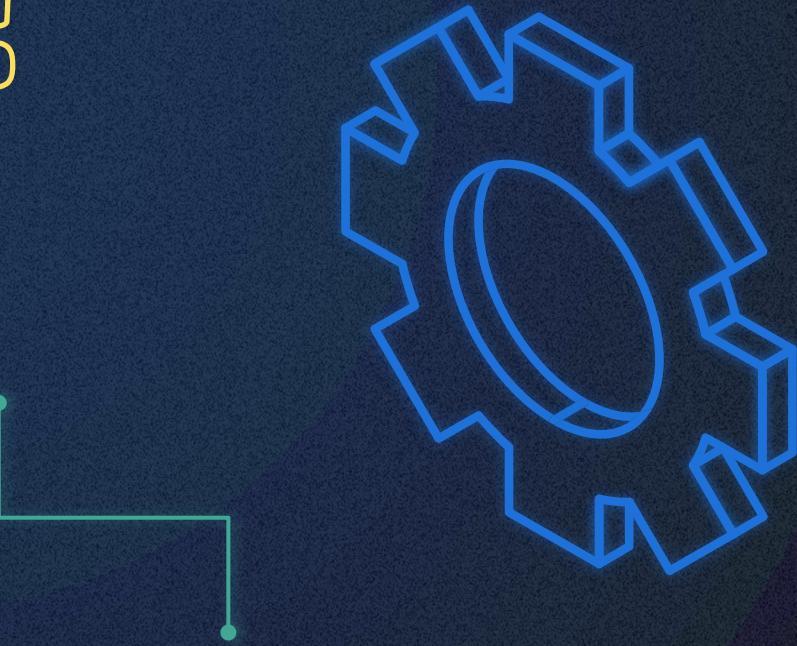
WEB1.0: READ ONLY



WEB2.0: READ-WRITE



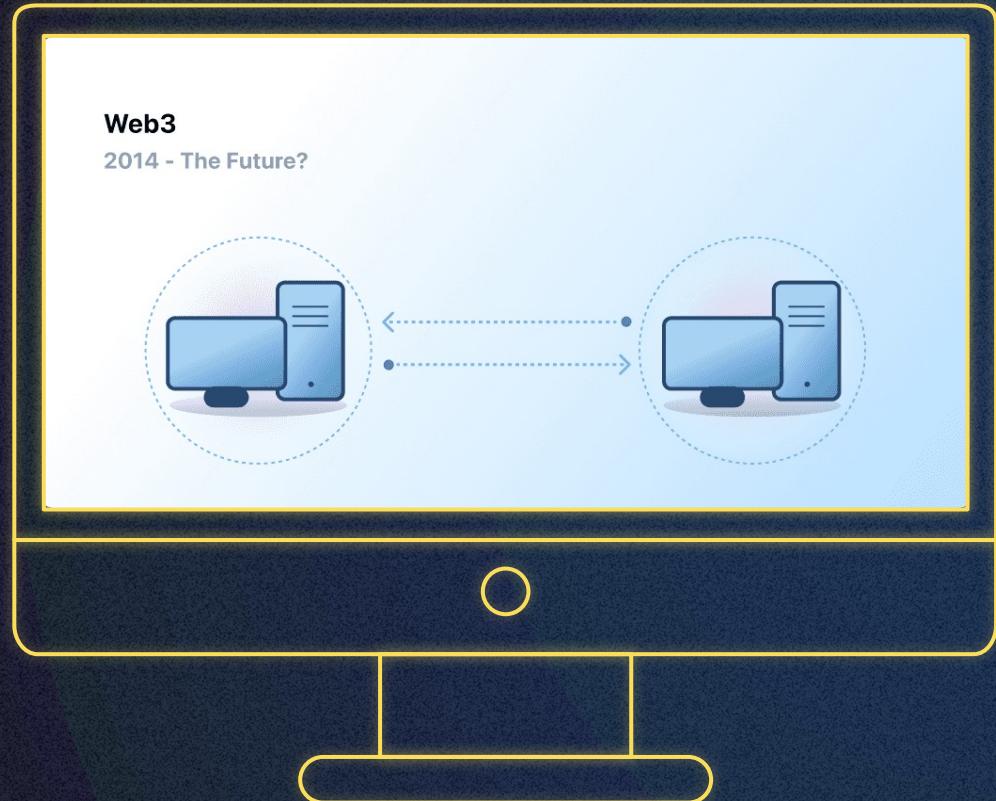
HOW ABOUT WEB3.0?





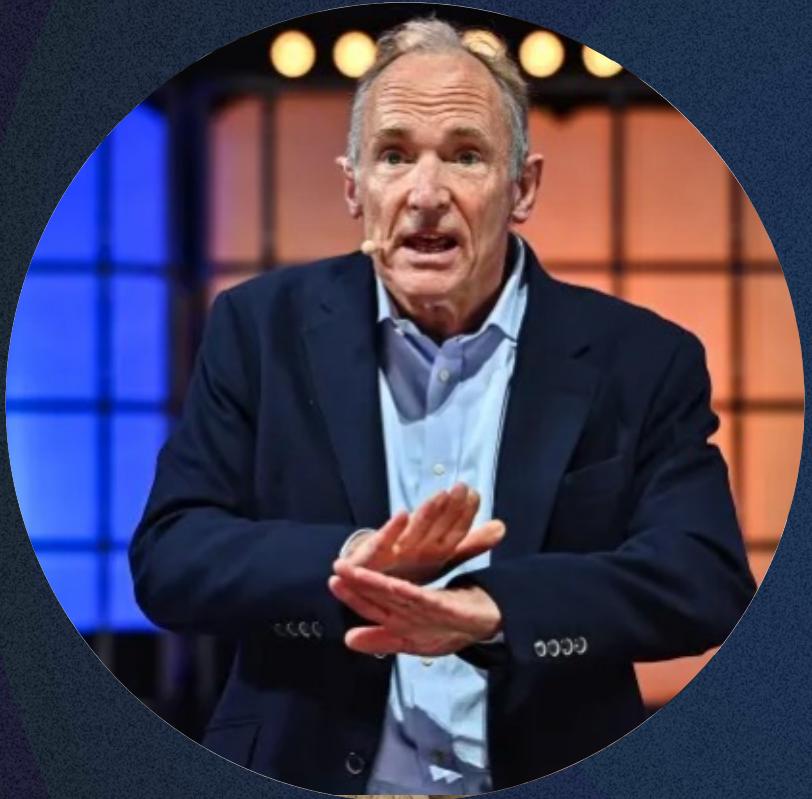
TIM BERNERS-LEE

- We are entering the web of data, which is being achieved through machine learning and the mobility of our technological devices/IoT.
- Within Solid, decentralization means choice: being able to choose where you store your data, independently of the services you want on top of that data.



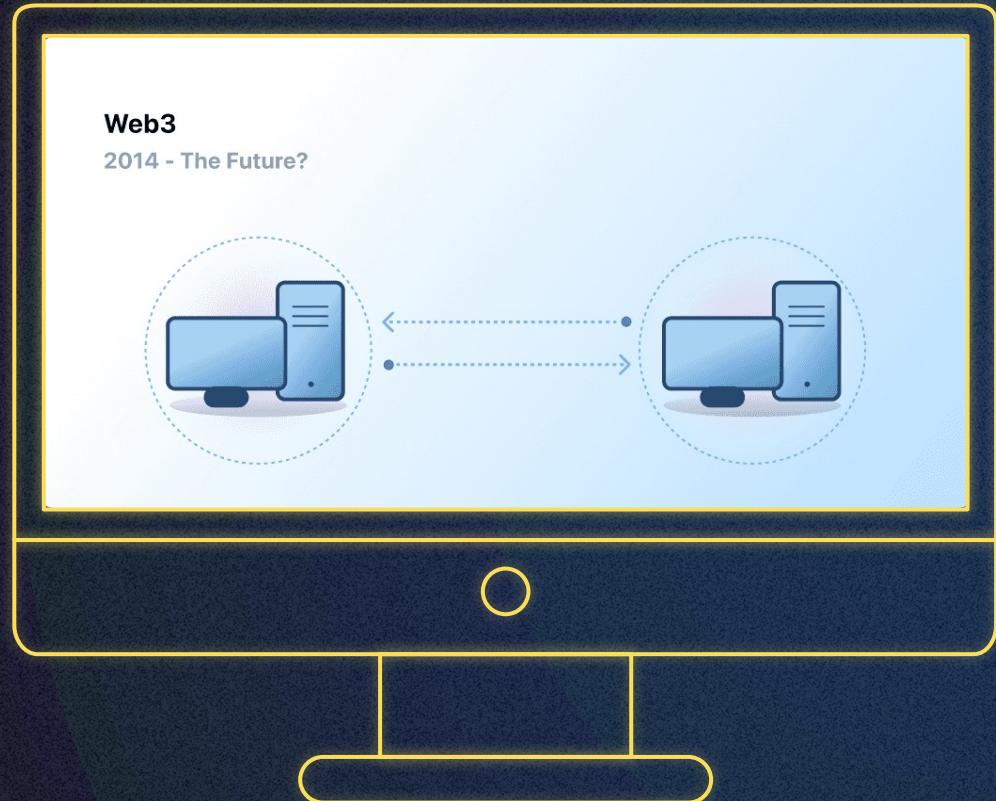
WEB3 by Gavin Wood

Web3 has become a catch-all term for the vision of a new, better internet



TIM BERNERS-LEE

- Crypto visionaries' plan for its future and says we should "ignore" it
- It's a real shame in fact that the actual Web3 name was taken by Ethereum folks for the stuff that they're doing with blockchain. In fact, Web3 is not the web at all.
- "Blockchain protocols may be good for some things but they're not good for Solid", "They're too slow too expensive and too public. Personal data stores have to be fast, cheap and private."

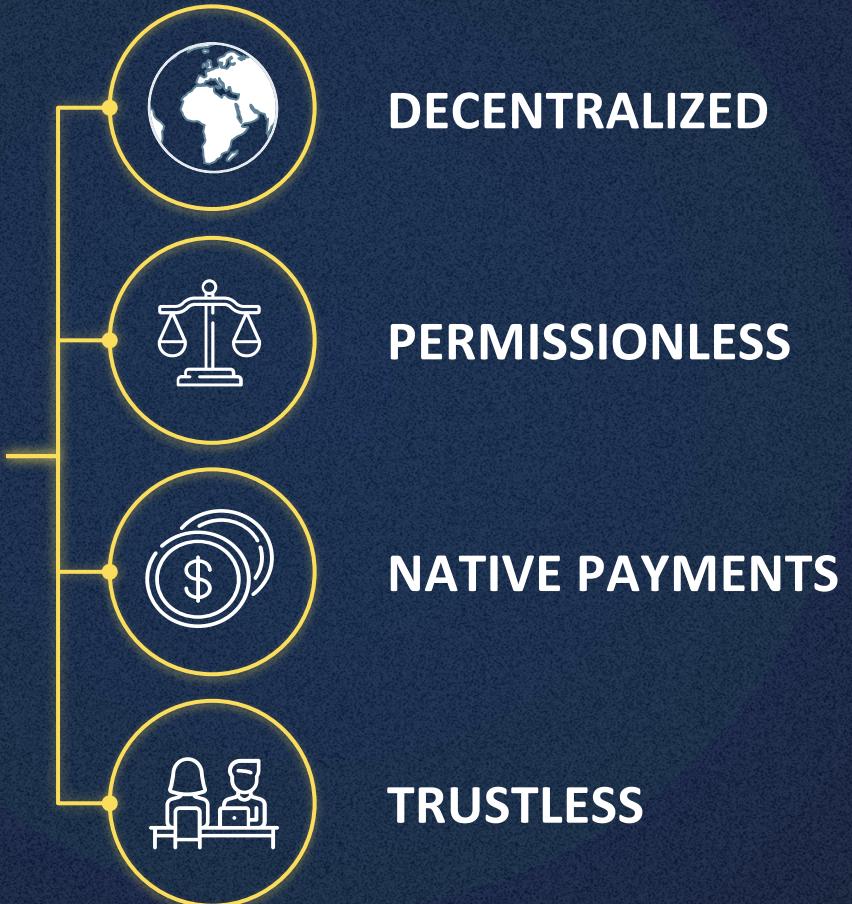


WEB3 by Gavin Wood

Web3 has become a catch-all term for the vision of a new, better internet

WHAT IS WEB3?

CORE IDEAS



WHY IS WEB3 IMPORTANT?

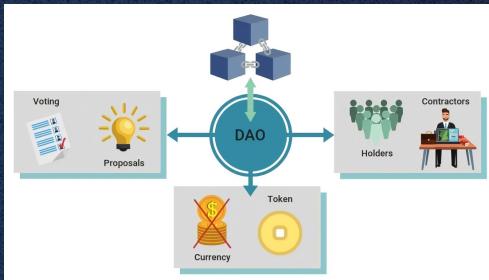
OWNERSHIP



IDENTITY



DAOs



NATIVE PAYMENTS

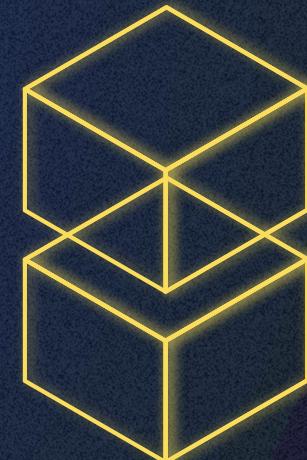
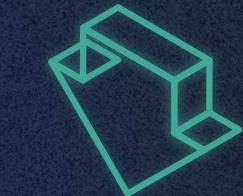


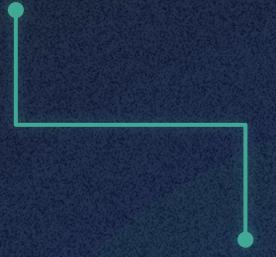
CENSORSHIP RESISTANCE



WEB3 LIMITATIONS

- Accessibility
- User experience
- Education
- Centralized infrastructure





02

ARCHITECTURE

- A closer look
- How does the front-end code communicate with smart contracts?
- Storage on Blockchain
- Querying the Blockchain
- Scaling

A CLOSER LOOK

BLOCKCHAIN

Data can only be written to the Ethereum blockchain

EVM

Executes the logic defined in the smart contracts and processes the state changes

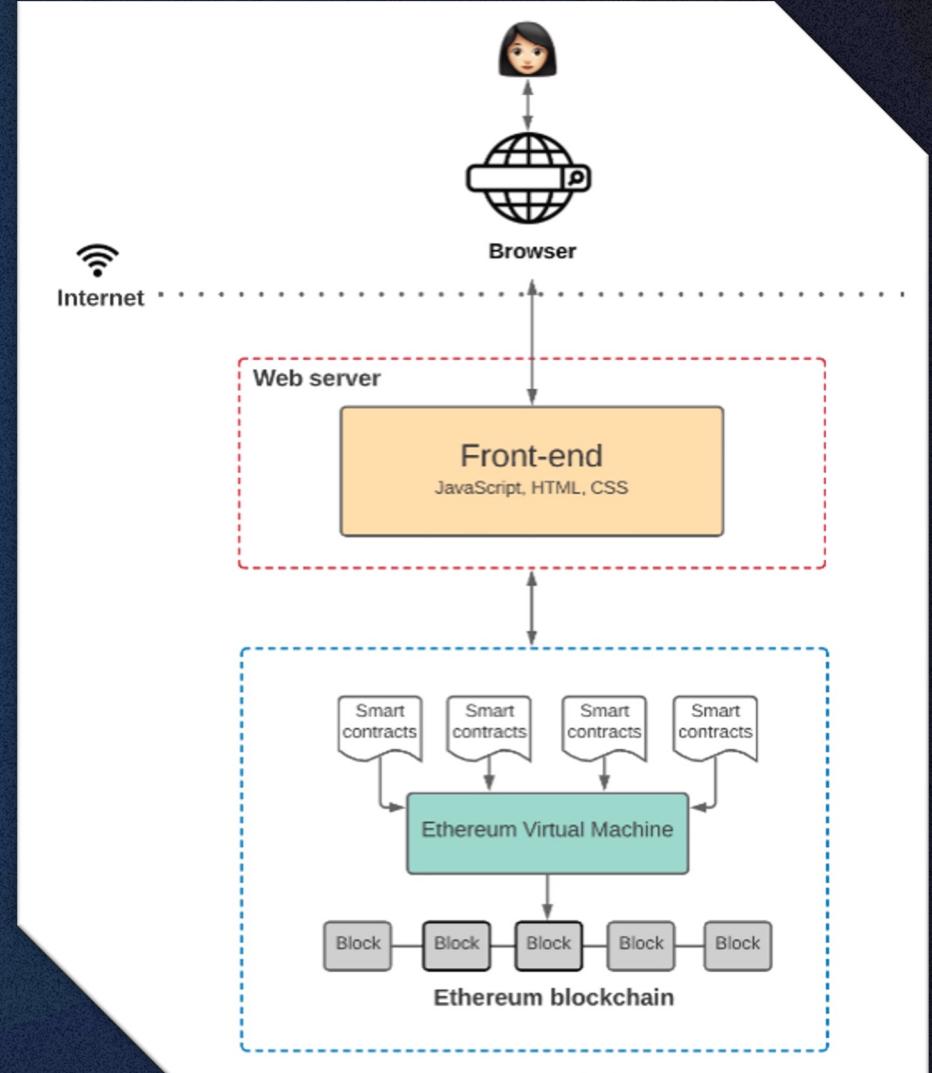


SMART CONTRACTS

Defines the logic behind the state changes happening on the blockchain

FRONT-END

Defines the UI logic and communicates with the application logic defined in smart contracts

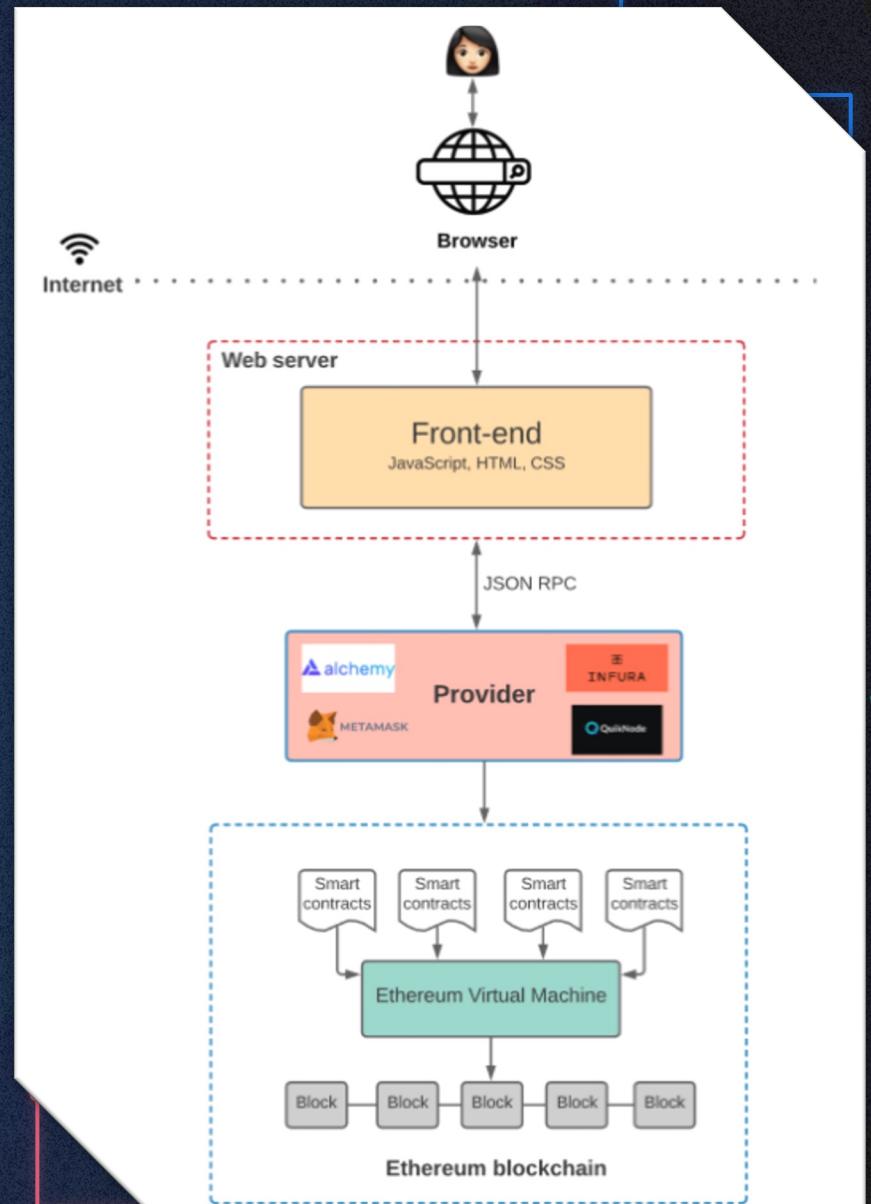


HOW DOES FRONTEND CODE COMMUNICATE WITH SMART CONTRACTS?

There are two ways to broadcast a new transaction:

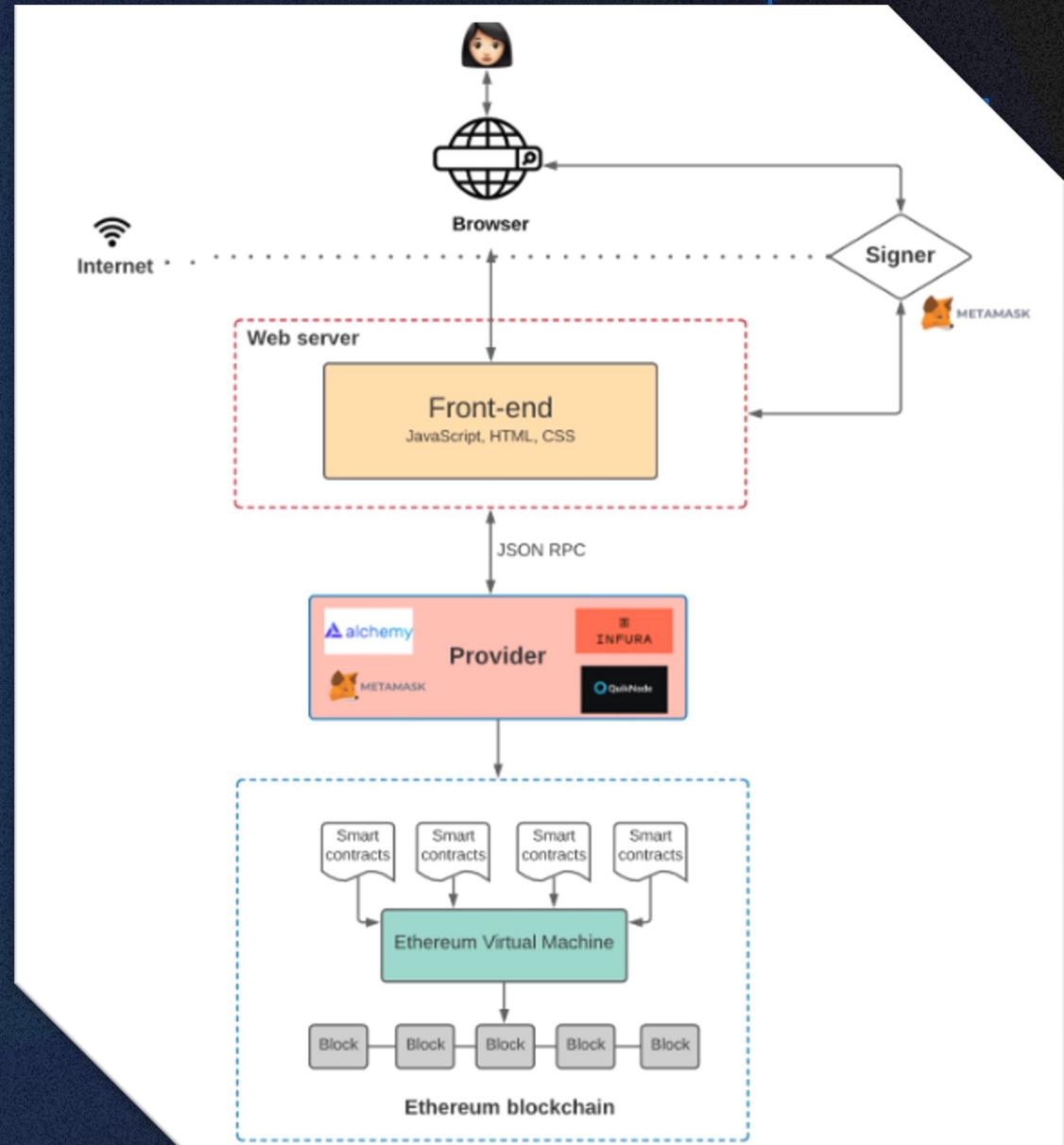
- Set up your own node which runs the Ethereum blockchain software
- Use nodes provided by third-party services like Infura, Alchemy, and Quicknode

Every Ethereum client (i.e. provider) implements a JSON-RPC specification. This ensures that there's a uniform set of methods when frontend applications want to interact with the blockchain.



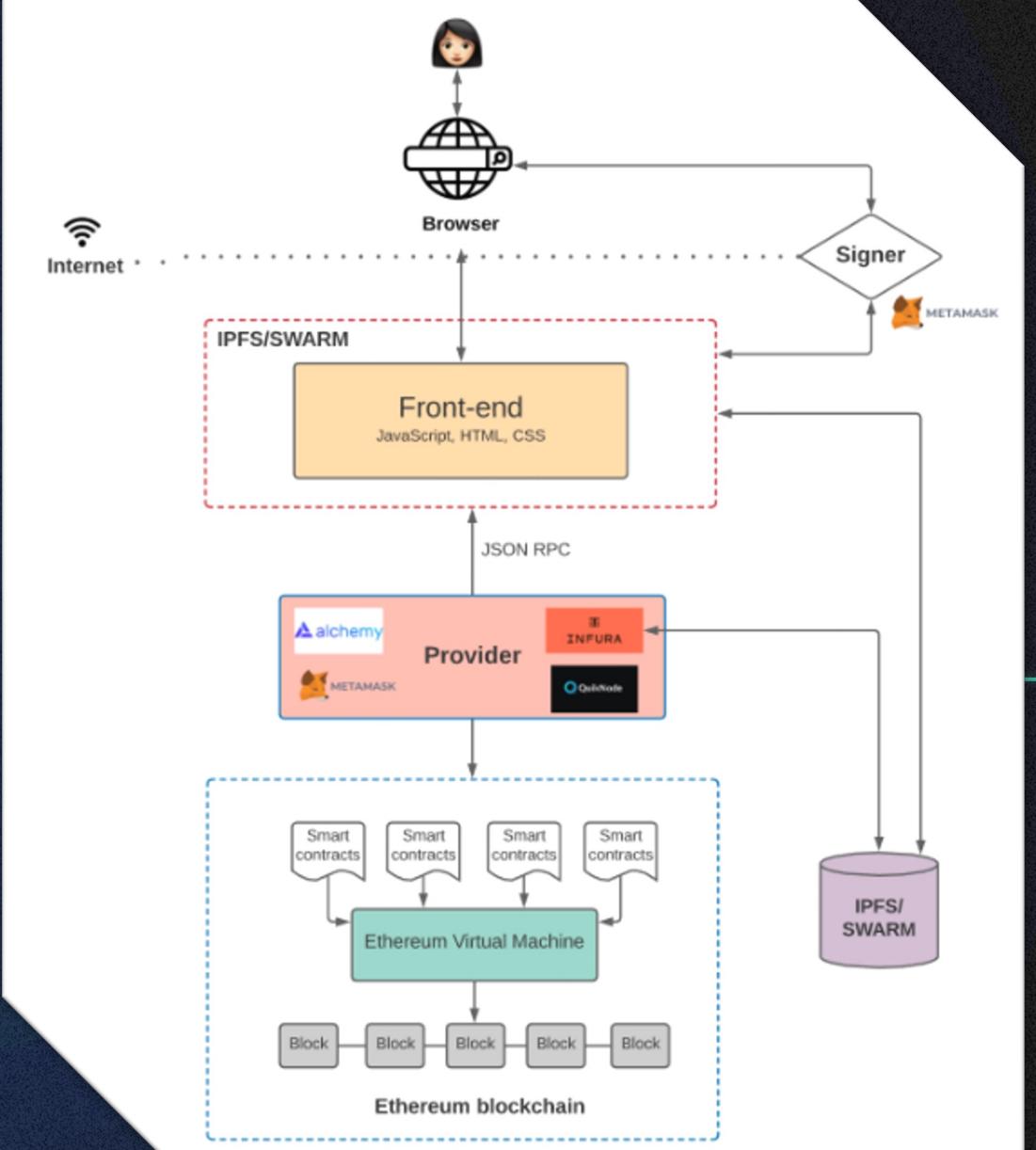
TO WRITE TO THE STATE

- When a user wants to publish a new post onto the chain, our DApp would ask the user to “sign” the transaction using their private key — only then would the DApp relay the transaction to the blockchain. Otherwise, the nodes wouldn’t accept the transaction.
- This “signing” of transactions is where Metamask typically comes in.



STORAGE ON THE BLOCKCHAIN

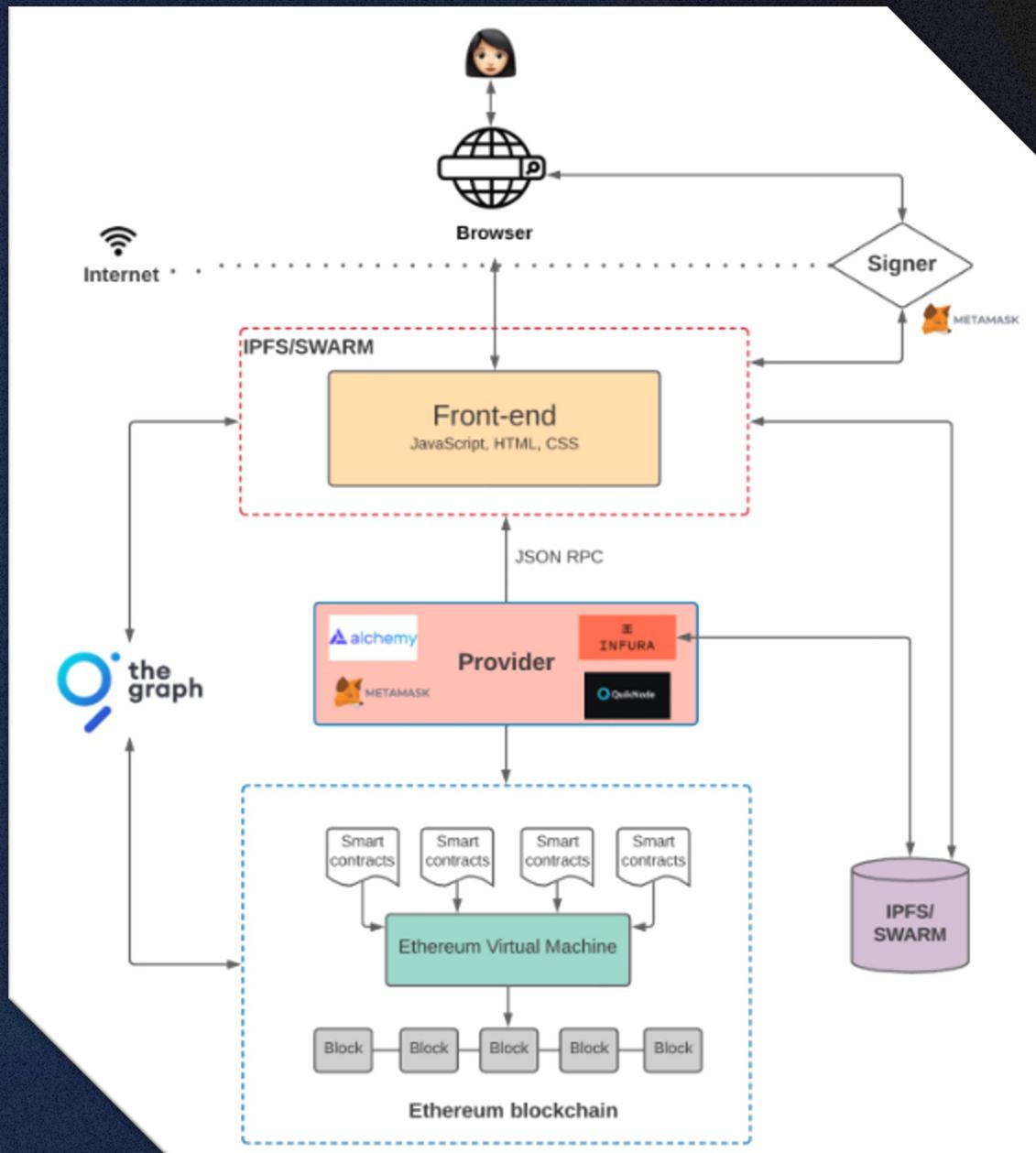
- IPFS is a distributed file system for storing and accessing data. The IPFS system distributes and stores the data in a peer-to-peer network. This makes it easy for you to retrieve it when you need to.
- Swarm's incentive system is built-in and enforced through smart contracts on the Ethereum blockchain for storing and retrieving data.



QUERYING THE BLOCKCHAIN

There are two primary ways to do this:

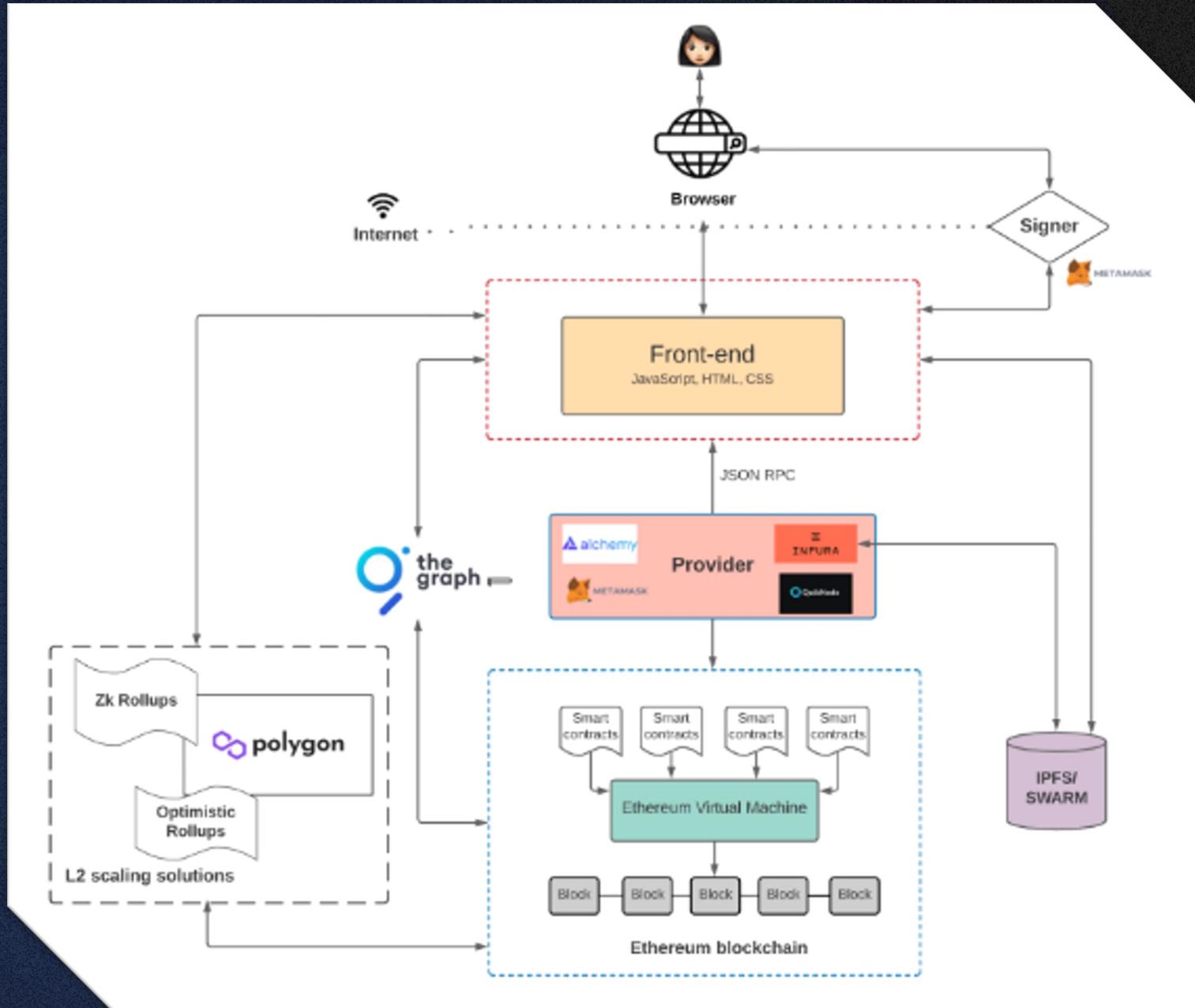
- Smart Contract Events: You can use the Web3.js library to query and listen for smart contract events. You can listen to specific events and specify a callback every time the event is fired.
- The Graph: The Graph is an off-chain indexing solution that makes it easier to query data on the Ethereum blockchain. It uses GraphQL as a query language, which many frontend engineers love because of how expressive it is compared to traditional REST APIs.

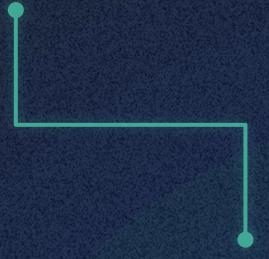


SCALING YOUR APP

There are many solutions:

- Polygon has “sidechains” that process and execute transaction.
- Optimistic Rollups and Zk Rollups





03

APPLICATIONS

- NFTs with Use Cases
- Improved DeFi Protocols and DAOs
- Decentralized Social Networks
- Brands as a Service
- Blockchain Data Storage
- Web3 Gaming

APPLICATIONS

NFTs WITH USE CASES



IMPROVED DEFI PROTOCOLS AND DAOs



DECENTRALIZED SOCIAL NETWORKS



BRANDS AS A SERVICE

Coca-Cola  @CocaCola · Jul 28
Introducing the first-ever Coca-Cola NFTs! To celebrate International Friendship Day, we'll be donating all proceeds to our longtime friend and partner @SpecialOlympics. Check them out on @opensea. #NFTCommunity #OpenSeaNFT maketafi.com/coca-cola-nft

A Coca-Cola vending machine with red glowing lines around it, suggesting energy or digital interaction.

BLOCKCHAIN DATA STORAGE



WEB3 GAMING



Uniswap Overview

TVL

\$3.03b

Volume 24H

\$934.79m

D

W

M

Volume 24H: \$934.79m (↑21.39%) Fees 24H: \$747.54k (↓7.40%) TVL: \$3.03b (↑0.91%)

Top Tokens

[Explore](#)

#	Name	Price	Price Change	Volume 24H	TVL ↓
1	 USD Coin (USDC)	\$1.00	0.00%	\$740.47m	\$804.13m
2	 Ether (ETH)	\$1.28k	↑ 0.91%	\$649.84m	\$794.94m
3	 Dai Stablecoin (DAI)	\$1.00	0.00%	\$35.06m	\$340.15m

Uniswap



PancakeSwap (CAKE)

USD BNB

Show MCap Chart

Total Value Locked

\$2.9b

.csv

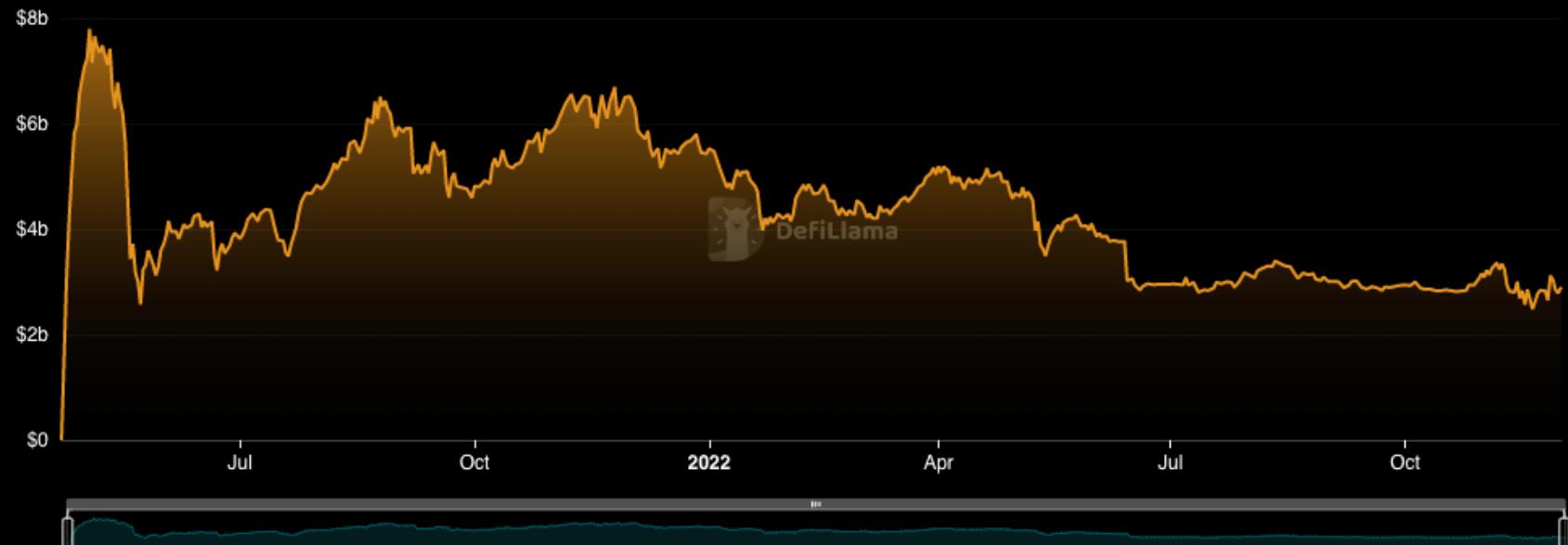
Chain Breakdown

BSC	\$2.88b
Aptos	\$11.18m
Ethereum	\$9.91m

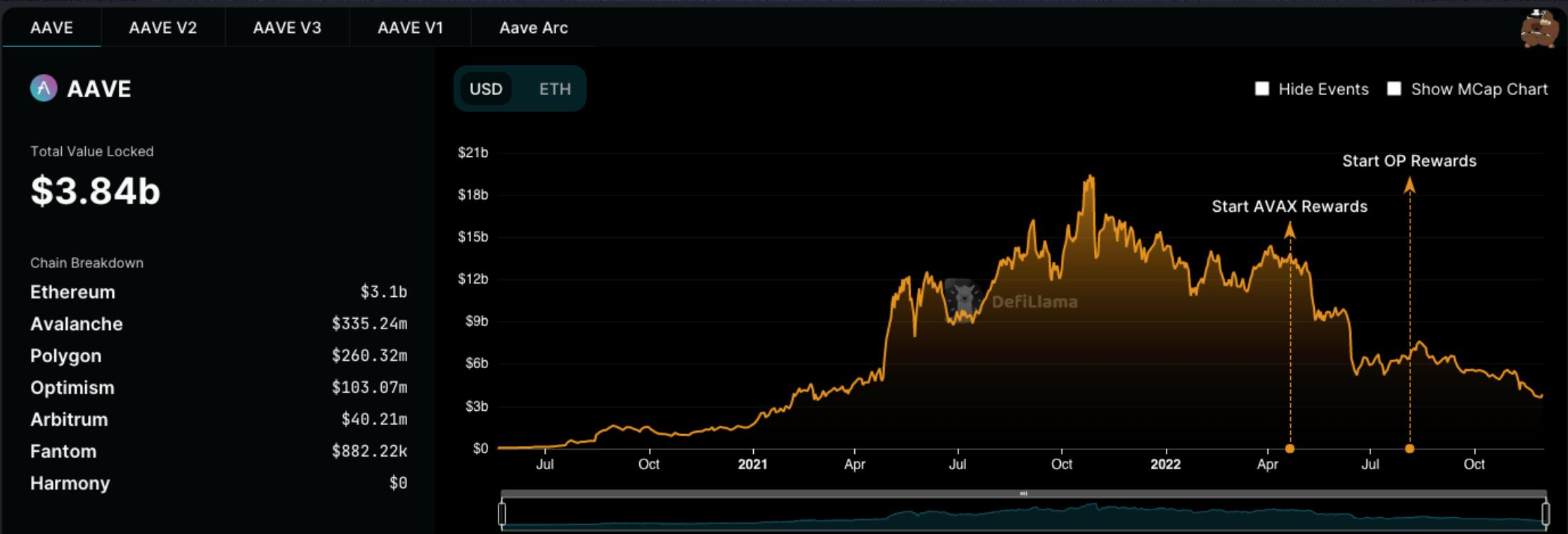
Include in TVL (optional)

Staking

\$999.94m



Pancake Swap



Aave

IPFS Project Roadmap v0.6.0

Table of Contents

- IPFS Mission Statement
- 2021 & 2022 Priorities
- 2020 Priority
 - Content Routing
- 2019 Priority
 - Package Managers
- Future Goals
 - Large Files
 - Decentralized Web
 - Encrypted Web
 - Distributed Web
 - Personal Web
 - Sneaker Web
 - Interplanetary Web - Mars 2024
 - Packet Switched Web
 - Data Web
 - Package Switched Web
 - Self-Archiving Web
 - Versioning Datasets
 - Interplanetary DevOps
 - The World's Knowledge becomes accessible through the DWeb
 - WebOS

IPFS