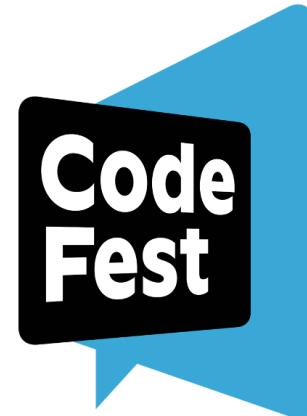


Web3 для фронтендера

Алексей Авдеев, Mish





2



Aleksei Avdeev
@avdeev_alexey

...

Коллеги, мы пообещали, поэтому вы должны успеть

12:29 PM · 13 сент. 2022 г.

40 ретвитов

11 твитов с цитатами

454 отметки «Нравится»

FC FrontendConf 2022 - Професс +

← → C 🔒 frontendconf.ru/moscow/2022

Программный комитет



Глеб Михеев
Skillbox



Виктор Русакович
GP Solutions



Саша Шинкевич
Bravado



Иван Ботанов
Тинькофф



Серёжа Попов
Skillbox



Зар Захаров
VK



Андрей Смирнов
X5 Group



Алексей Авдеев
Mish

JavaScript-фреймворк React.js

go.skillbox.ru/education/course/react-js

12. Формы на примере комментариев и карточки поста

JavaScript-фреймворк React.js

С финальной работой

33/80 видео

0/15 практических работ

0/1 тест

Телеграм-чат курса

Задать вопросы по темам курса вы можете в [Telegram-чате курса](#).

12.1 Экскурс в формы. Проблематика форм React

10 мин.

12.2 Состояние полей. Различные подходы

9 мин.

12.3 Выбираем библиотеку для форм

6 мин.

12.4 Сохраняем состояние формы и валидируем поля

13 мин.

12.5 Смотрим на форму с точки зрения доступности

13 мин.

12.6 Практическая работа

13. «Бесконечные» списки на примере ленты постов

14. Роутинг

15. Deploy

A close-up portrait of a young man with light brown hair and blue eyes, looking directly at the camera with a slight smile. He is wearing a white t-shirt. The background is blurred, showing what appears to be an office environment.

JSON API — работаем по спецификации

Алексей Авдеев,
Neuron.Digital

FC

Frontend
Conf
Moscow 2018



avito.tech

Docker для фронтенданера

Алексей Авдеев
(Neuron.Digital)

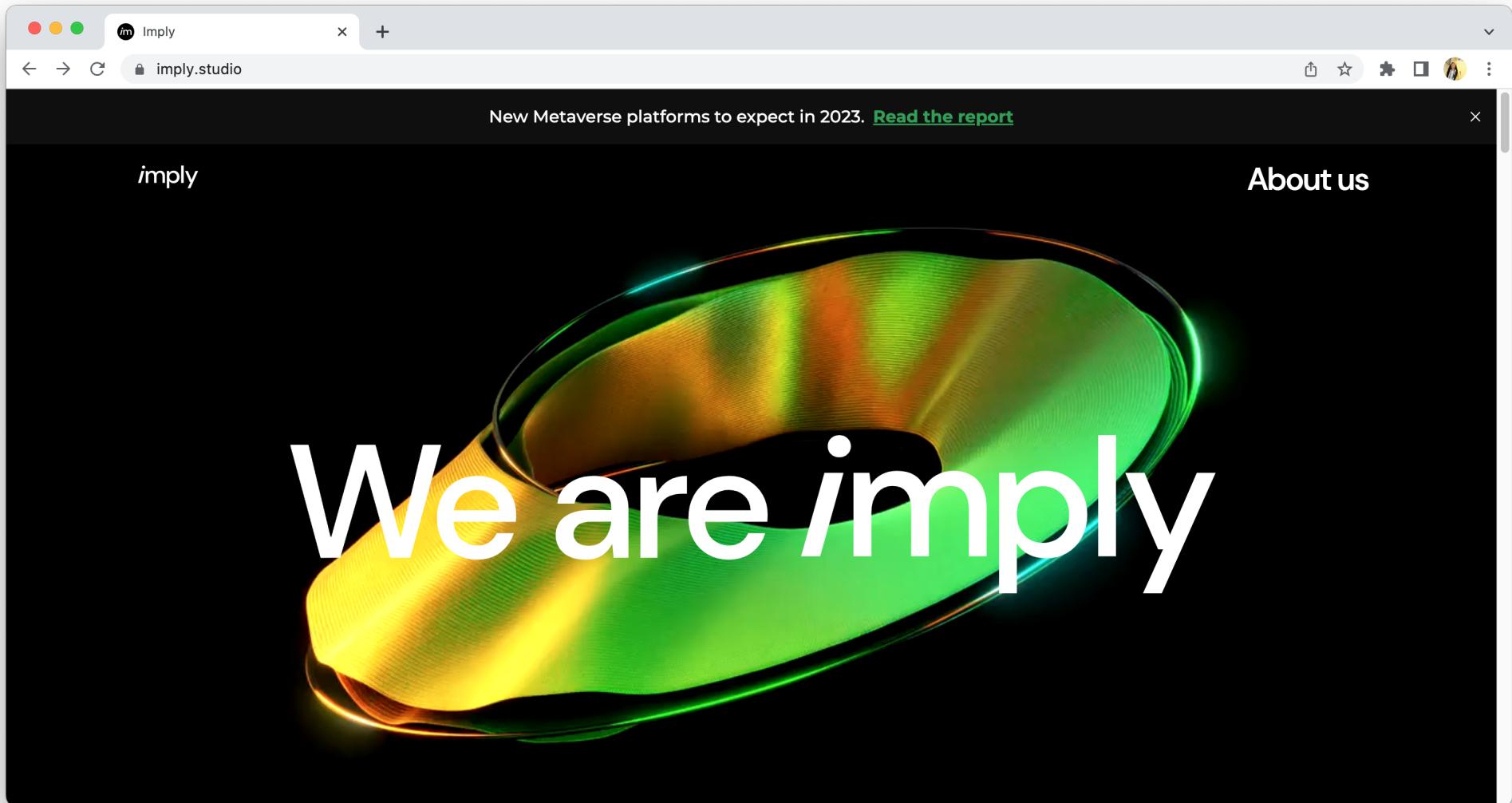


FC Frontend
Conf 2019

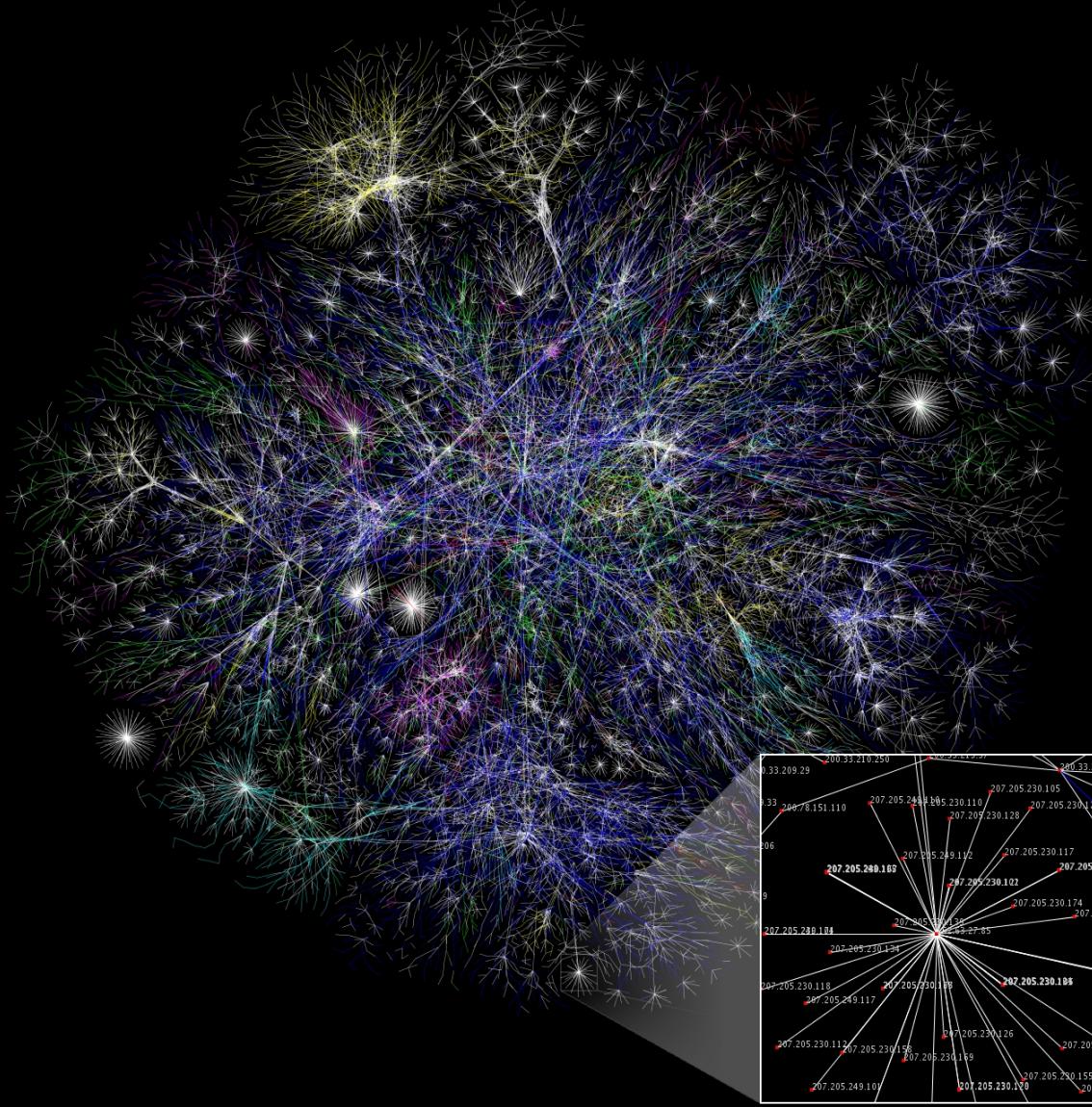


ПРОГРАММИСТЫ VS УЧИТЕЛЯ ИНФОРМАТИКИ





www, w3, Web



Web 2.0



12

What Is Web 2.0 - O'Reilly Med X +

oreilly.com/pub/a/web2/archive/what-is-web-20.html



O'REILLY®

Your Acc

Search

Home Shop Video Training & Books Radar Safari Books Online Conferences

What Is Web 2.0

Design Patterns and Business Models for the Next Generation of Software

by Tim O'Reilly
09/30/2005

Oct. 2009: Tim O'Reilly and John Battelle answer the question of "What's next for Web 2.0?" in [Web Squared: Web 2.0 Five Years On](#).

The bursting of the dot-com bubble in the fall of 2001 marked a turning point for the web. Many people concluded that the web was overhyped, when in fact [bubbles and consequent shakeouts appear to be a common feature of all technological revolutions](#). Shakeouts typically mark the point at which an ascendant technology is ready to take its place at center stage. The pretenders are given the bum's rush, the real success stories show their strength, and there begins to be an understanding of what separates one from the other.

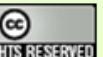
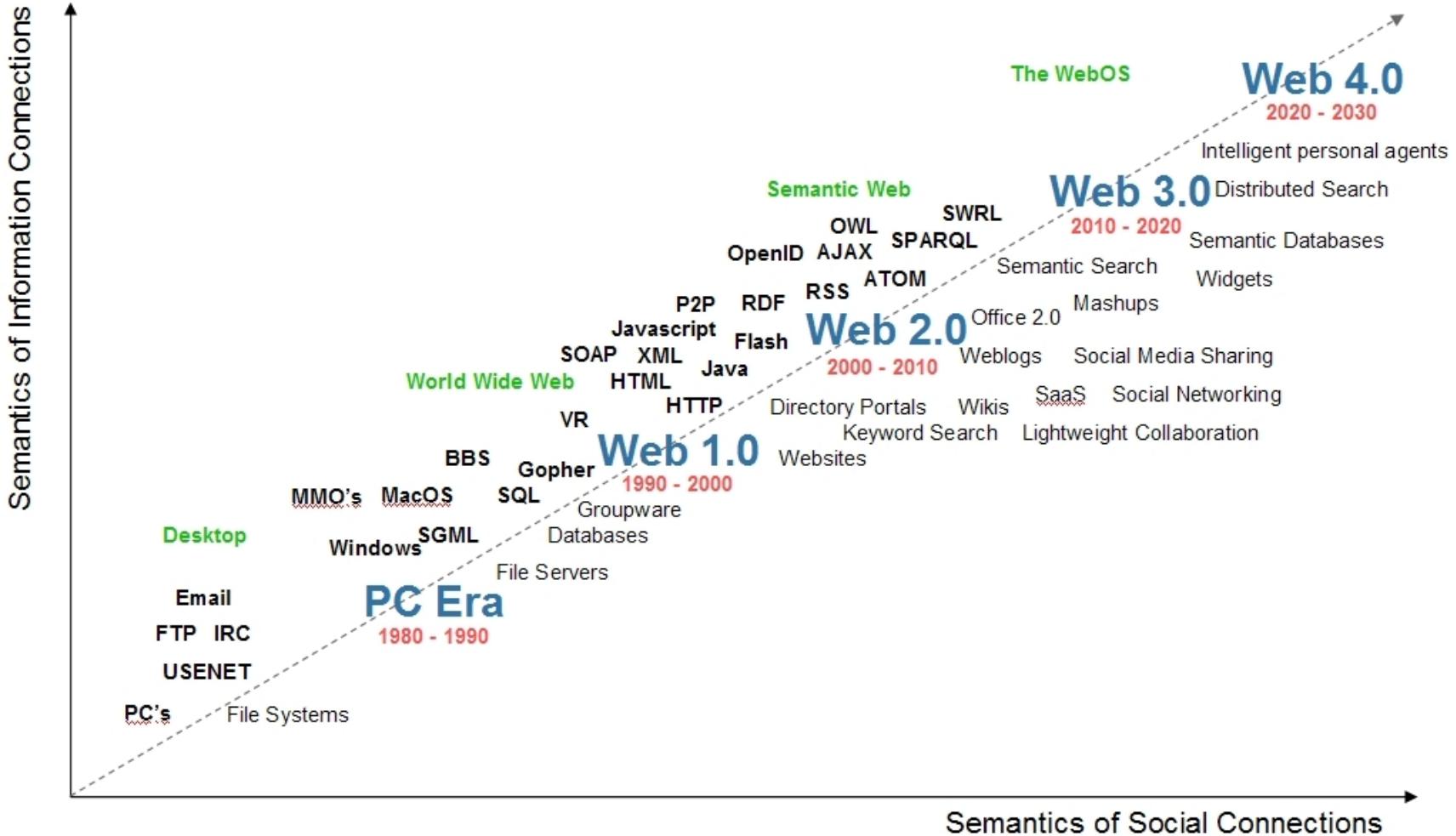
The concept of "Web 2.0" began with a conference brainstorming session between O'Reilly and MediaLive International. Dale Dougherty, web pioneer and O'Reilly VP, noted that far from having "crashed", the web was more important than ever, with exciting new applications and sites popping up with surprising regularity. What's more, the companies that had survived the collapse seemed to have some things in common. Could it be that the dot-com collapse marked some kind of turning point for the web, such that a call to action such as "Web 2.0" might make sense? We agreed that it did, and so the [Web 2.0 Conference](#) was born.

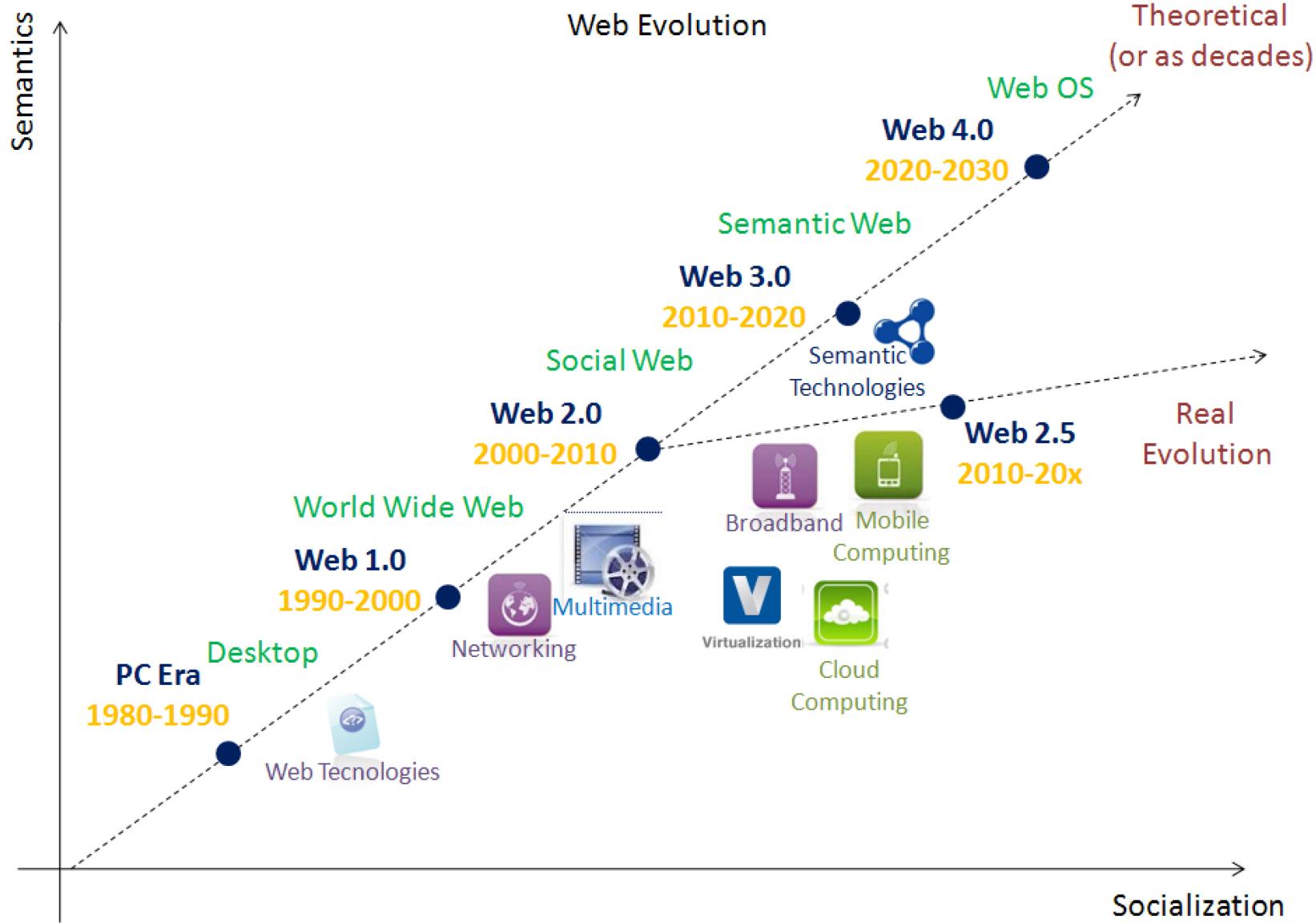
In the year and a half since, the term "Web 2.0" has clearly taken hold, with more than 9.5 million citations in Google. But there's still [a huge amount of disagreement about just what Web 2.0 means](#), with some people decrying it as a meaningless marketing buzzword, and others accepting it as the new conventional wisdom.

Read this article in:

- Arabic
- Chinese
- French
- German
- Italian
- Japanese
- Korean
- Spanish

Таймлайны





уже было

HTML

- HTML
- HTML 2.0
- HTML 3.0
- HTML 4
- HTML 5
- **HTML Living Standard**

The screenshot shows a web browser window displaying the [HTML Standard – Multipage Version](https://html.spec.whatwg.org/multipage/). The page features a large green "HTML" logo at the top left, followed by the text "Living Standard – Last Updated 17 December 2022". To the right is a large green circular icon with a white question mark. Below the title are several navigation links:

- [One-Page Version](#)
html.spec.whatwg.org
- [Multipage Version](#)
/multipage
- [Version for Web Devs](#)
/dev
- [PDF Version](#)
/print.pdf
- [Translations](#)
日本語・简体中文

Below these are more links:

- [FAQ](#)
on GitHub
- [Chat](#)
on Matrix
- [Contribute on GitHub](#)
whatwg/html repository
- [Commits](#)
on GitHub
- [Snapshot](#)
as of this commit
- [Twitter Updates](#)
@htmlstandard

At the bottom, there are four pinkish-red boxes:

- [Open Issues](#)
filed on GitHub
- [Open an Issue](#)
whatwg.org/newbug
- [Tests](#)
web-platform-tests html/
- [Issues for Tests](#)
ongoing work

Table of contents

- [1 Introduction](#)
- [2 Common infrastructure](#)
- [3 Semantics, structure, and APIs of HTML documents](#)
- [4 The elements of HTML](#)
- [5 Microdata](#)
- [6 User interaction](#)
- [7 Loading web pages](#)
- [8 Web application APIs](#)

[File an issue about the selected text](#)

CSS



19

- CSS 1
- CSS 2
- CSS 2.1
- CSS 3
- **CSS Living Standard**

Высокий приоритет	Нынешние	Будущие
CSS Images Level 3 (Модуль Значений Изображения CSS 3-го уровня)	CR	CR
CSS Speech (Синтез речи в CSS)	CR	CR
CSS Text Decoration Level 3	CR	CR
CSS Shapes Level 1	CR	CR
CSS Masking Level 1	CRD	CR
CSS Text Level 3 (Текст в CSS)	CRD	CR
CSS Fragmentation Level 3	CR	PR
CSS Transforms Level 1 (Преобразование в CSS)	CR	PR
CSS Custom Properties for Cascading Variables Level 1	CRD	CR
Compositing and Blending Level 1	CR	CR
CSS Syntax Level 3 (Синтаксис в CSS)	CR	CR
CSS Grid Layout Level 1	CRD	CR
CSS Display Level 3	CRD	CR
CSS Will Change Level 1	CR	PR
Media Queries Level 4 (Медиа Запросы 4)	CR	PR
Geometry Interfaces Level 1	CR	CR
CSS Box Model Level 3	CR	PR
CSS Cascading and Inheritance Level 4	CR	CR
CSS Scroll Snap Level 1	CR	PR
CSS Painting API Level 1	CR	PR
CSS Easing Functions Level 1	CRD	CR
CSS Writing Modes Level 4	CR	PR

20

**Интернет –
живой стандарт**

Web3



Википедия

Свободная энциклопедия

Alexey.avdeev



Обсуждение Черновик Настройки Бета Список наблюдения

Статья

Обсуждение

Читать

Править



Ещё ▾

Вклад Выйти

Искать в Википедии



Web3

[[править](#) | [править код](#)]

Материал из Википедии — свободной энциклопедии

Не следует путать с [Web 3.0](#) — концепцией, основанной на [семантической паутине](#).

Web3^[1] — это идея новой итерации [Всемирной паутины](#) на основе [блокчейна](#), которая включает в себя такие концепции, как децентрализация и экономика на основе [токенов](#)^{[2][3][4]}. Некоторые специалисты и журналисты противопоставляют её [Веб 2.0](#), где, по их мнению, данные и контент централизованы в небольшой группе компаний, иногда называемых [GAFAM](#)^[5]. Термин был придуман в 2014 году соучредителем [Ethereum](#) [Гэвином Вудом](#), а в 2021 году идеей заинтересовались криптовалютные энтузиасты, крупные технологические компании и венчурные фирмы^{[5][6]}.

[Содержание](#) [скрыть]

Web 3.0

Web 3

Web3

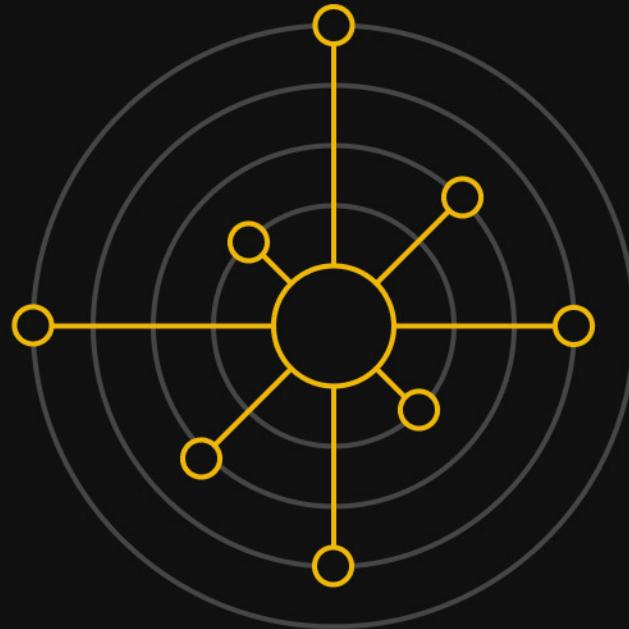
W3

Децентрализованный Интернет

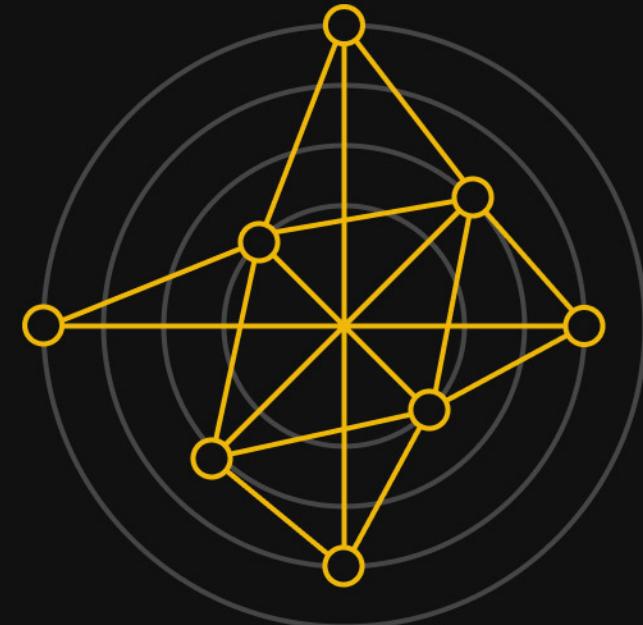
Децентрализованное приложение (DApps, dApp)



ЦЕНТРАЛИЗОВАННАЯ СЕТЬ



ДЕЦЕНТРАЛИЗОВАННАЯ СЕТЬ



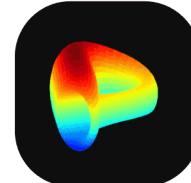
СЕРВЕР

○ ноды

Примеры



30



Кошельки



> 150

Лучший Криптовалютный Кошелек

trustwallet.com/ru/

Trust Wallet

Активы Стейкинг Browser Extension NEW NFTs DApp Браузер Язык

Самый надежный и безопасный крипто кошелек

Покупка , Хранение, Собирать NFTs, Просмотр цен, Торговля и Заработка криптовалют, именно поэтому 60M+ человек используют Trust Кошелек.

DOWNLOAD ON THE App Store GET IT ON Google Play DOWNLOAD APK 6.0+ Android

Available in the Chrome Web Store

Coin	Current Price	Change (%)
Bitcoin	\$67,813.48	73%
Binance Coin	\$643.23	44%
Ethereum	\$4,809.91	14%
Litecoin	\$40	5%
XRP	\$1.24	1%

Криптовалютные биржи

Uniswap Interface

app.uniswap.org/#/swap

Обменять Токены NFT Pools ...

Поиск токенов и коллекций NFT /

Подключить

Обменять Buy ●

1 ETH \$1,816.94

1,815.15 USDT \$1,815.75 (-0.060%)

1 USDT = 0.00055 ETH (\$1.000) \$11.14

Подключить кошелёк

Uniswap доступен на языке English

17317161



Trade ▾

DAO ▾

Earn ▾

More ▾

Bridges ▾

Buy Crypto

Ethereum ▾

Connect wallet



Swap Limit P2P

You sell

ETH Ethereum ~\$1 816.53

You buy

DAI Dai Stablecoin ~\$1 814.66 (-0.1%)

1 ETH = 1815.31 DAI (\$1 814.6) \$0

Connect wallet

Игры

Axie Infinity - Battle, Collect, a... +

axieinfinity.com

MARKETPLACE GAMES AXS NEWS MORE ▾ PLAY FOR FREE

Axie INFINITY

PLAY NOW

Confused? MEET THE COMMUNITY

CryptoKitties | Collect and breed

cryptokitties.co

CryptoKitties Connected wallet: MetaMask

Catalogue Search Guides More Avdeev

CryptoKitties

Collect and breed furrever friends!

Get your own Kitty

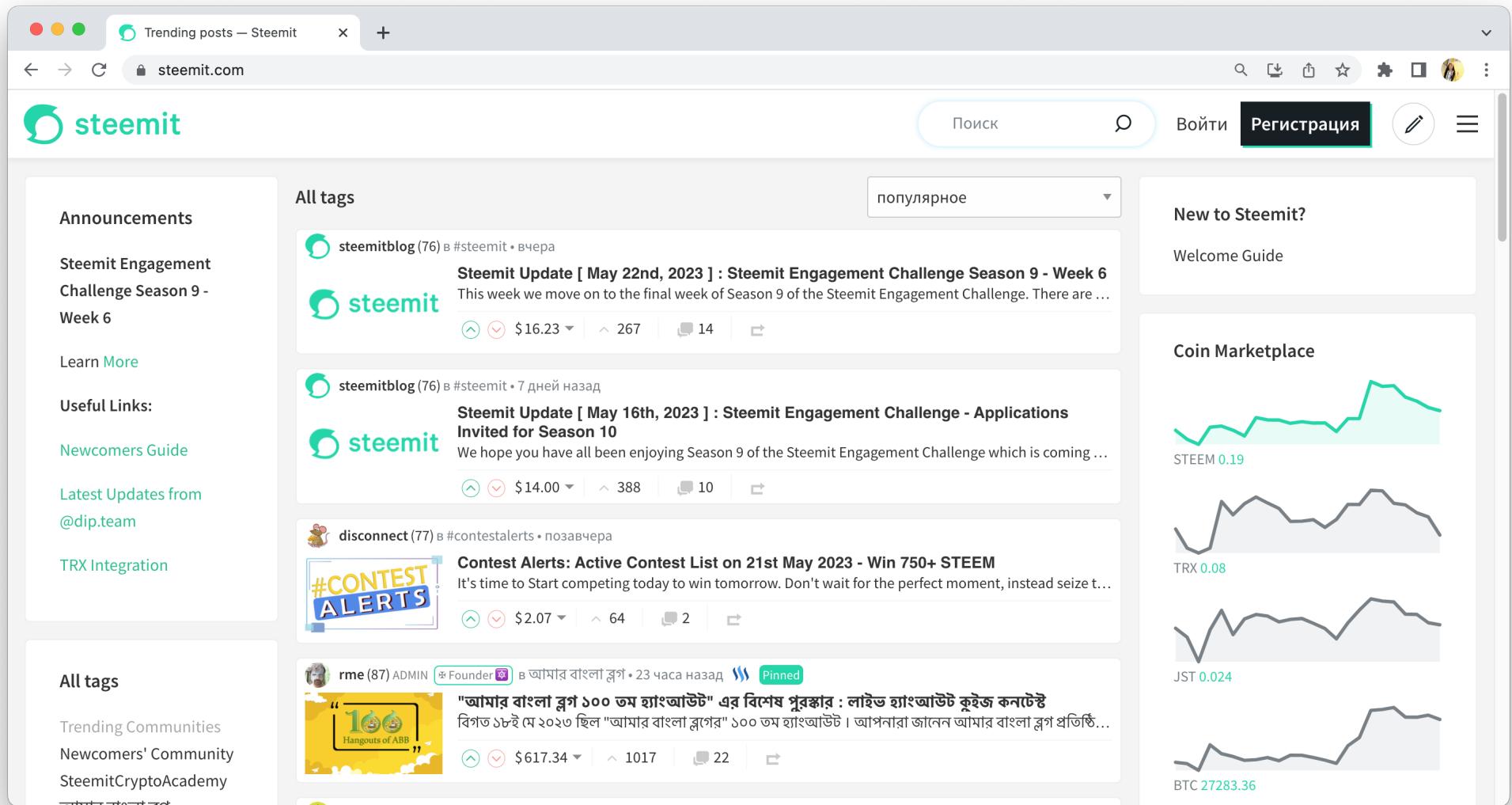
Buy & sell cats with our community

Create collections & earn rewards

Crack puzzles alongside other players

Chase limited edition Fancy cats

Социальные сети



Minds minds.com Login Join Now

MINDS

Explore Minds+ ... Больше

Поиск умов

Minds @minds · 21h
Free speech exposes ignorance.
Censorship hides it.

288 34 29

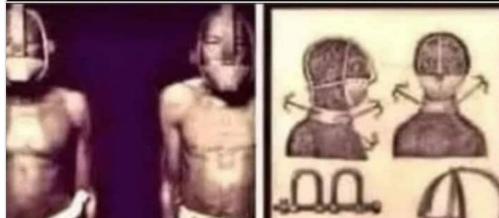
View 29 comments

Bill Ottman @ottman · 22h
The gov can't pay its debt but it expects citizens to.
Nice.

258 20 51

View 51 comments

NOBODY @Milica42 · 7h



The Community-Owned Social Network

- Speak your mind
- Expand your audience
- Chat privately with friends
- Engage with diverse opinions
- Make money
- Earn crypto rewards
- Open source & decentralized



Децентрализованные финансы (DeFi)

Aave - Open Source Liquidity Protocol

app.aave.com/markets/

AAVE Dashboard Markets Stake Governance More ⋮

0xe3...9847 ⋮

Ethereum Market Version 3

Total market size **\$1.44B**

Total available **\$910.52M**

Total borrows **\$526.49M**

Ethereum assets

Asset	Total supplied	Supply APY	Total borrowed	Borrow APY, variable	Borrow APY, stable	
Dai Stablecoin DAI	36.63M \$ 36.63M	2.18 %	25.35M \$ 25.35M	3.52 %	—	<button>Details</button>
LUSD Stablecoin LUSD	3.06M \$ 3.08M	1.07 %	1.49M \$ 1.50M	2.46 %	—	<button>Details</button>
USD Coin USDC	163.19M \$ 163.18M	2.04 %	123.94M \$ 123.93M	3.00 %	—	<button>Details</button>
Tether USDT	72.96M \$ 72.97M	2.58 %	54.88M \$ 54.89M	3.83 %	—	<button>Details</button>

Search asset name, symbol, or address

Compound | Markets

app.compound.finance/markets?market=usdc-mainnet

Compound Dashboard Markets Extensions Vote

USDC Ethereum 0.0000 0xE307...9847

USDC | Ethereum

0xc3d688B66703497DAA19211EEdff47f25384cdc3

Total Collateral

\$409.70M

Total Borrowing

\$198.66M

Total Earning

\$255.23M

Earn APR

2.52%

Earn Distribution

0.00%

Reserves

\$1.29M

Utilization

77.84%

Total Borrowing

\$198.66M

Borrow APR

4.22%

Borrow Distribution

3.14%

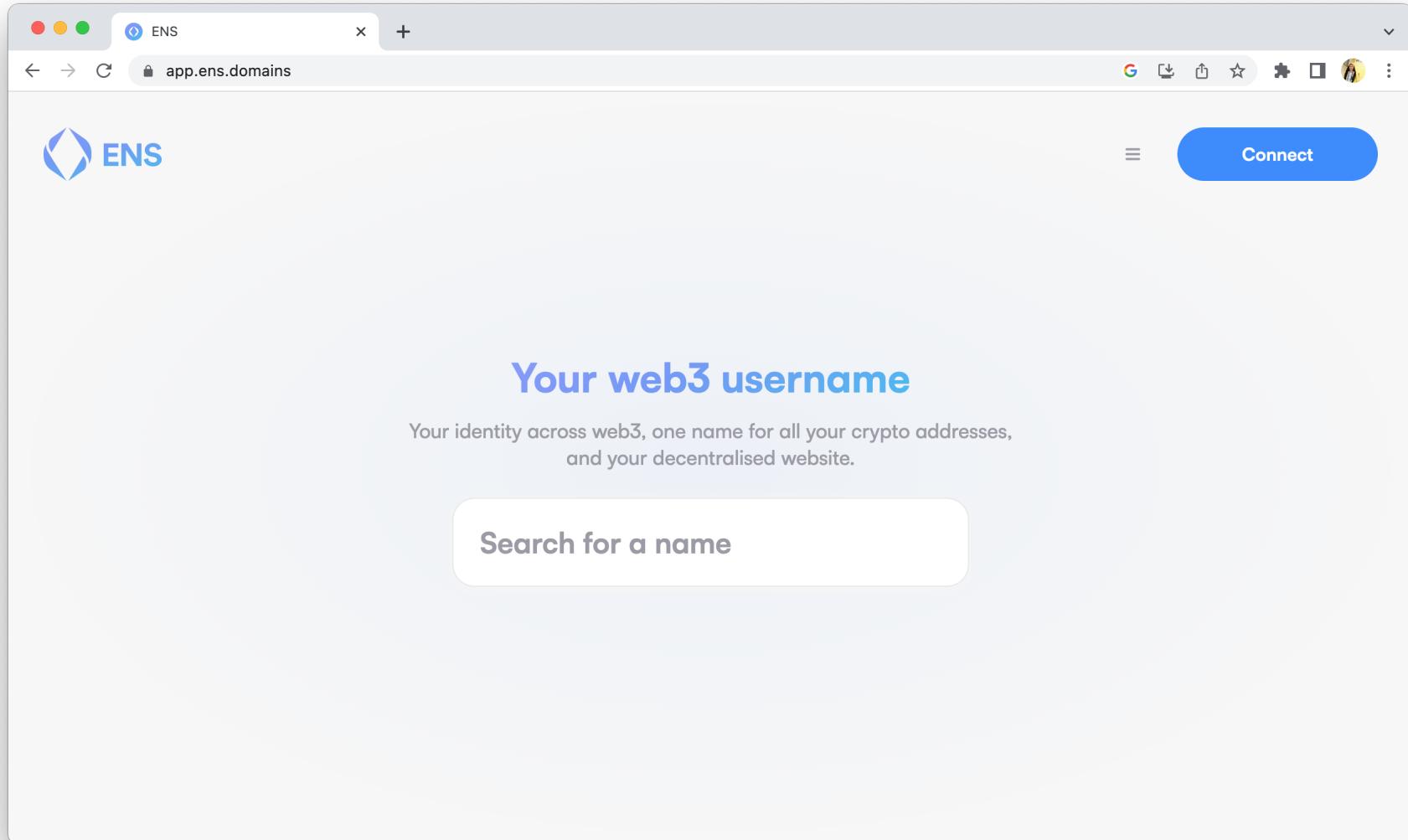
Oracle Price

\$1.00

Earn APR

0.50%

Идентификация



The image shows a screenshot of a web browser window displaying the ENS (Ethereum Name Service) application at app.ens.domains. The browser's address bar shows the URL and a lock icon indicating a secure connection.

The main content area features the ENS logo (a blue stylized 'E' inside a hexagon) and the text "Your web3 username". Below this, a subtitle explains the concept: "Your identity across web3, one name for all your crypto addresses, and your decentralised website." A large, rounded rectangular input field contains the placeholder text "Search for a name". In the top right corner of the page, there is a "Connect" button.

Unstoppable Domains

unstoppabledomains.com

Domains Partners Learn Build Merch

Sign Up / Log In

It's your name. Own it.

Own your identity in the digital world.
Get started with a Web3 domain.

Search for your name.nft

Search

.crypto / .nft / .x / .wallet / .polygon / .dao / .888 / .zil / .blockchain / .bitcoin

AS FEATURED IN

The New York Times TechCrunch Forbes coindesk



Serto Search

search.serto.id

i Serto Search is in beta. We welcome [your feedback](#) as we continue to improve.

 [How it works](#) [Add Organization](#)

Search Engine for Decentralized Identities

Use Serto Search to verify issuers' identity (DIDs), credentials (VCs) or NFT authorship.

[Domains & DIDs](#) [Credential Verification](#) [NFT Authorship](#)

Search an organization or DID 

Civic Pass - identity management

civic.com

BUSINESS USERS DEVELOPERS DOCS ABOUT NEWS LAUNCH APP

YOUR PORTABLE IDENTITY

Access the decentralized web with an identity owned by you and built around your unique self-expression.

SET UP YOUR PROFILE

Аналитика

Ethereum (ETH) Blockchain Explorer

ETH Price: \$1,819.19 (+0.72%) Gas: 54 Gwei

Etherscan

Home Blockchain Tokens NFTs Resources Developers More Sign In

The Ethereum Blockchain Explorer

All Filters Search by Address / Txn Hash / Block / Token / Domain Name

Featured: Build Precise & Reliable Apps with Etherscan APIs. [Learn More!](#)

ETHER PRICE
\$1,819.19 @ 0.06758 BTC (+0.72%)

MARKET CAP
\$218,792,916,109.00

TRANSACTIONS
1,975.56 M (13.0 TPS)

MED GAS PRICE
54 Gwei (\$2.06)

LAST FINALIZED BLOCK
17317258

LAST SAFE BLOCK
17317290

TRANSACTION HISTORY IN 14 DAYS

1 200k
960k May 7 May 14 May 21

Latest Blocks

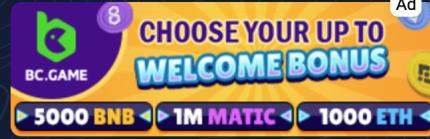
17317340 Fee Recipient rsync-builder 20 secs ago 149 txns in 12 secs 0.14581 Eth

17317339 Fee Recipient Fee Recipient: 0xa... 20 secs ago 149 txns in 12 secs 0.14467 Eth

Latest Transactions

0x6fa4220890d7d... From 0x1f9090...e676c326 To 0x2eeb30...68b597B5 20 secs ago 0.14467 Eth

0x760028d58cf3c From 0xDc325E...A448f716 20 secs ago 0.14467 Eth



Polygon (MATIC) Blockchain Explorer

polygonscan.com

Home Blockchain Tokens Resources More Sign In

Polygon PoS Chain Explorer

All Filters Search by Address / Txn Hash / Block / Token / Domain Name

Sponsored: Gasless execution and MEV protection on 1inch - #1 DEX aggregator. Try now!

MATIC PRICE
\$0.87 @ 0.000033 BTC (+1.92%)

MATIC MARKET CAP ON POLYGON
\$8,111,183,913.00 (9,279,469,069 MATIC)

TRANSACTIONS
2,720.43 M (23.7 TPS)

LATEST BLOCK
43025916 (2.5s)

MED GAS PRICE
130 Gwei (<\$0.01)

POLYGON TRANSACTION HISTORY LAST 14 DAYS

May 7 May 14 May 21

Latest Blocks

Bk	Block ID	Validated By	Gas Used
Bk	43025916	0x26c80cc193b27d73d2...	0.32765 MATIC
	31 secs ago	49 txns in 2 secs	
Bk	43025915	Valid	This website uses cookies to improve your experience. By continuing to use this website, you agree to its Terms and Privacy Policy.
	33 secs ago	38 tx	2f... 0 MATIC

Latest Transactions

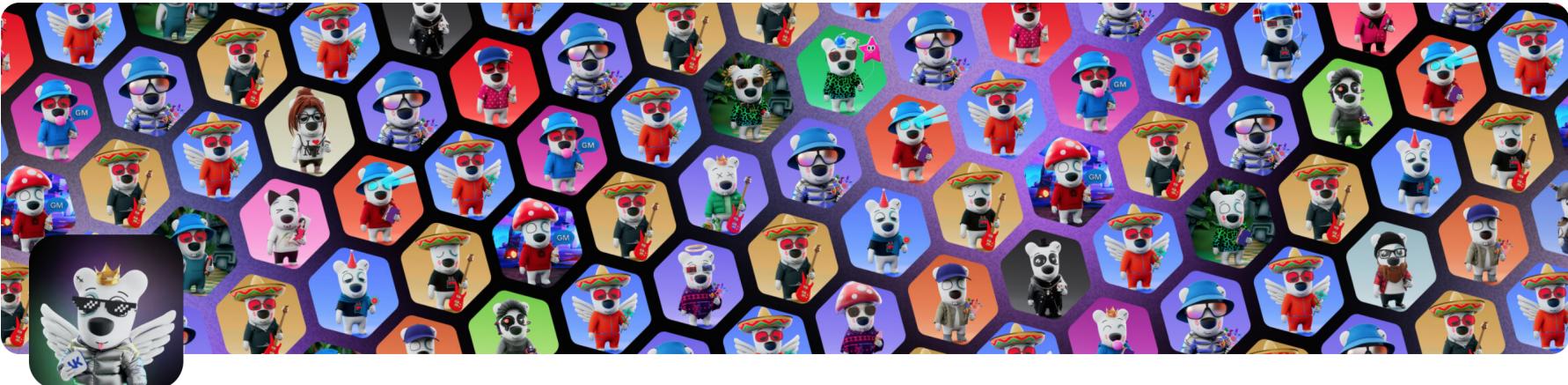
Tx	Transaction ID	From	To	Gas Used
Tx	0x61e14b6a742b...	From 0x31bcf254fd9d14eba32...	To 0xdab625853c2b35d0a9...	0 MATIC
	31 secs ago			
	Got It			

Коллекционирование

CryptoSpotty Collection NFTs

rarible.com/collection/polygon/0x0ad52bfd0ddd09f581f0f790fe4f7369e9097712/items

Rarible Search for collections, NFTs or users / Explore Create Sell + Marketplace ⚡ 🎨 🛒



CryptoSpotty Collection 🌟

Created by 0x1ed75...e3b3 Address 0x0ad...7712

Create marketplace Place a bid for any NFT from this collection Place a bid ⬆️ ⬇️

We eat use cookies for better experience X

Floor	30 MATIC
Volume	76.1K MATIC
Items	8K
Owners	2.9K
Blockchain	Polygon

CryptoSpotty Collection - Collection

opensea.io/collection/cryptospotty-1

OpenSea | Drops | Stats | Search items, collections, and accounts | Connect wallet | Cart

CryptoSpotty Collection

Items **8 003** · Created **Apr 2023** · Creator earnings **0%** · Chain **Polygon**

Welcome to the home of CryptoSpotty Collection on OpenSea. Discover the best items in this collection.

8 ETH
total volume

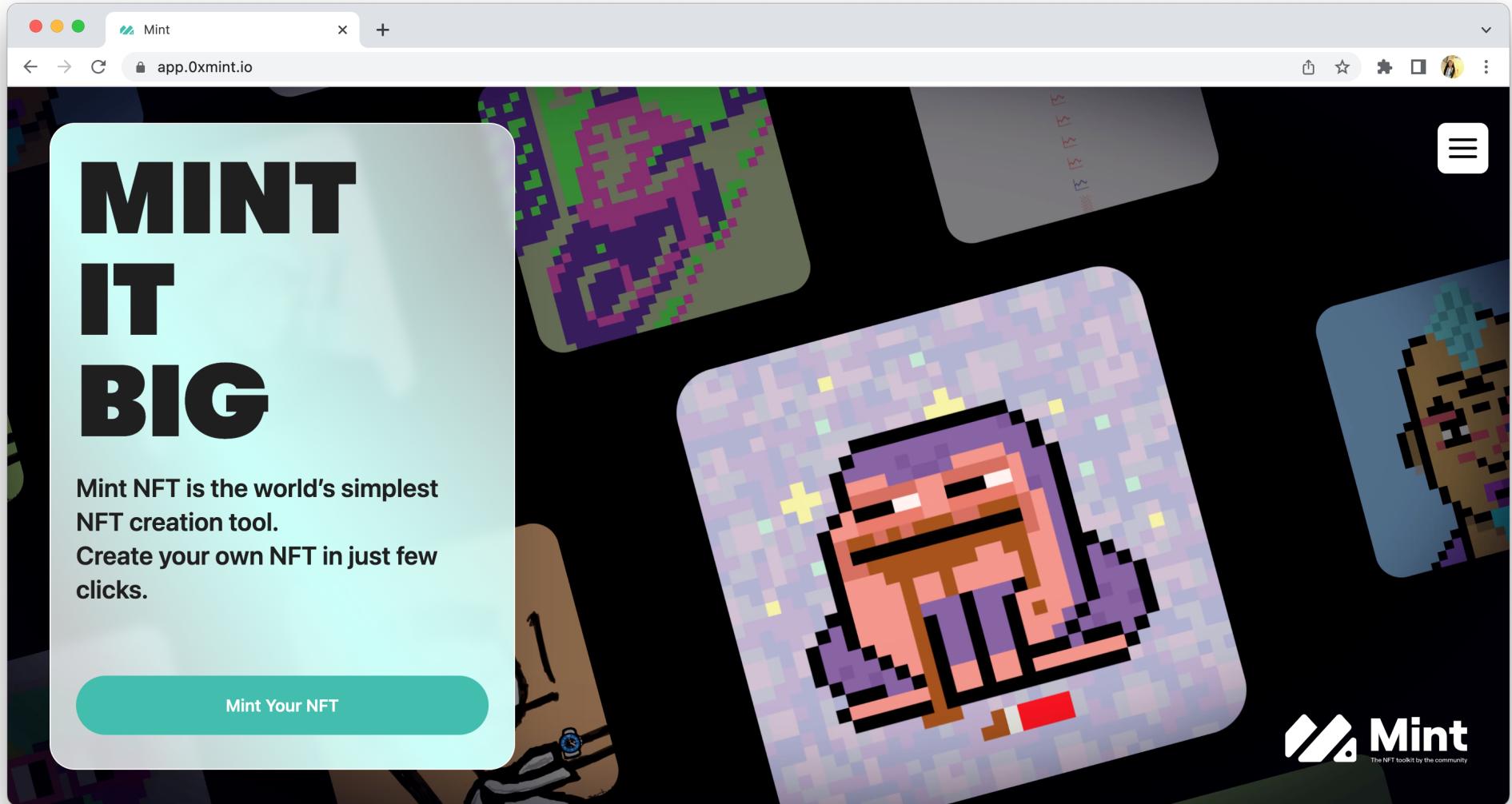
32 MATIC
floor price

0,0107 ETH
best offer

2%
listed

2 926
owners

37%
unique owners



Web 2.5

A Venn diagram consisting of three overlapping circles on a purple background. The left circle is yellow and labeled "Web 2". The right circle is red and labeled "Web 3". The middle circle is orange and labeled "Web 2.5". All three circles overlap.

Web 2

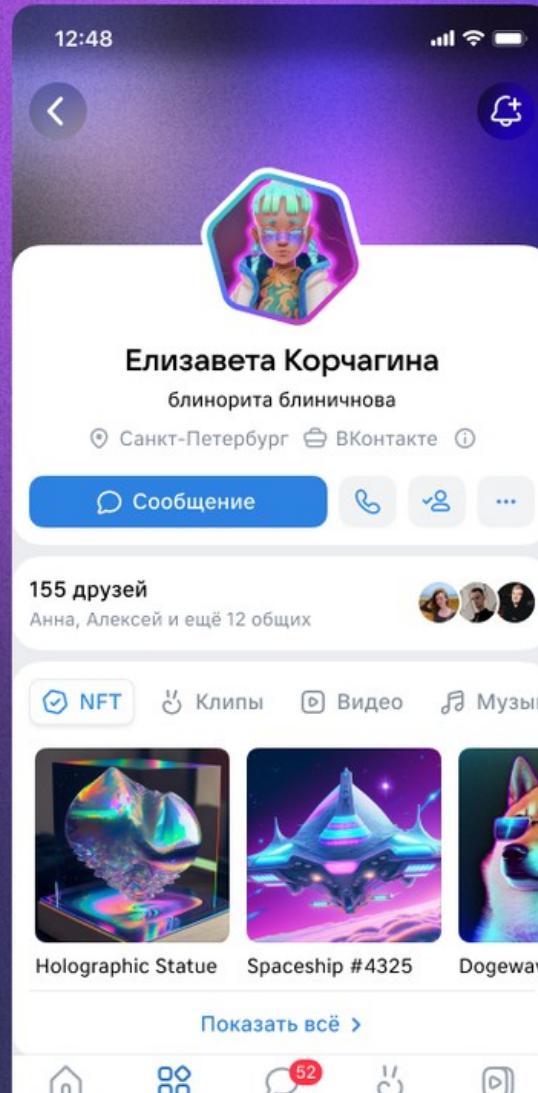
Web 2.5

Web 3



VK NFT

Установка NFT на
аватар и витрину в
вашем профиле



Преимущества

Открытый исходный код

Прозрачность

Нулевое время простоя

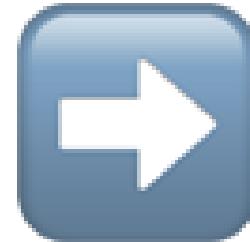
Сопротивление цензуре

Архитектура

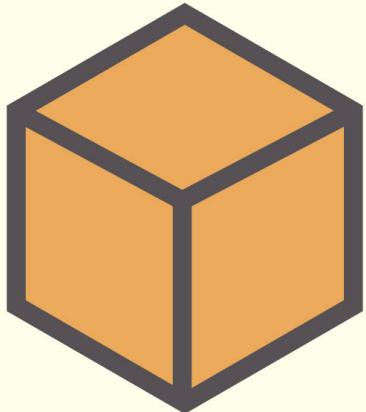
Архитектура

- Хранилище ➔ Блокчейн
- Бэкенд ➔ Смарт-контракт
- NEW Node Provider
- Фронтенд

Хранилище Блокчейн



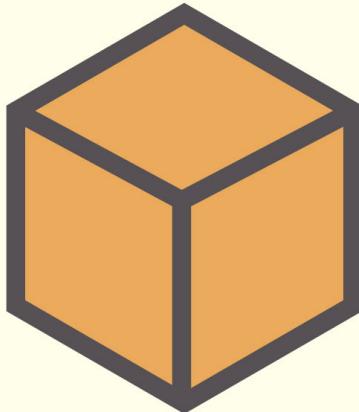
Block 1



Hash: **6U9P2**

Previous Hash: **0000**

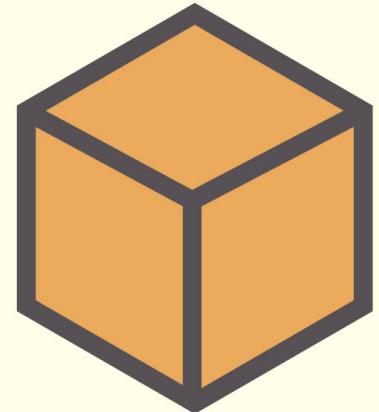
Block 2



Hash: **8Y5C9**

Previous Hash: **6U9P2**

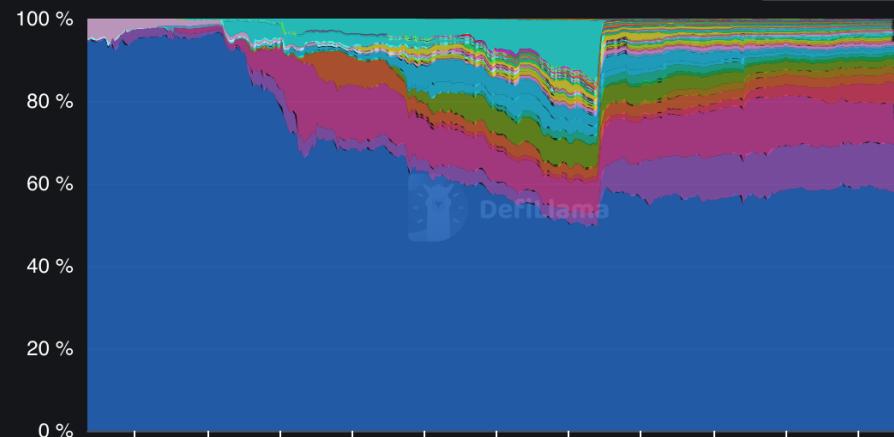
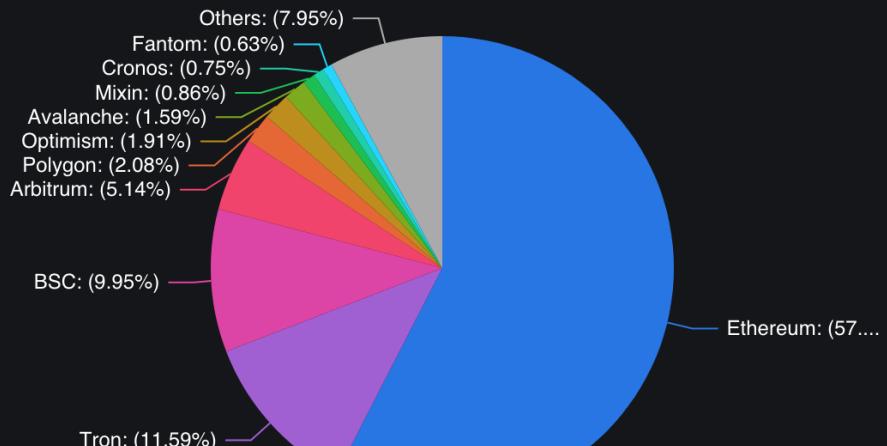
Block 3



Hash: **9I4z1**

Previous Hash: **8Y5C9**

Total Value Locked All Chains

[Download all data in .csv](#)

191 Chains ▾

Total Value Locked (USD)

\$46.89b

⤓ .CSV

Change (24h)

-0.36%

Lido Dominance

25.09%

180b USD

150b USD

120b USD

90b USD

60b USD

30b USD

0 USD

2019

2020

2021

2022

2023



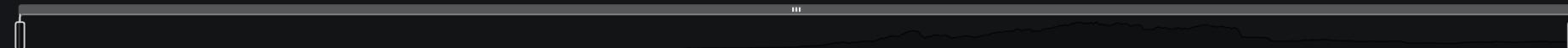
DefiLlama

TVL

Volume

Raises

Stablecoins



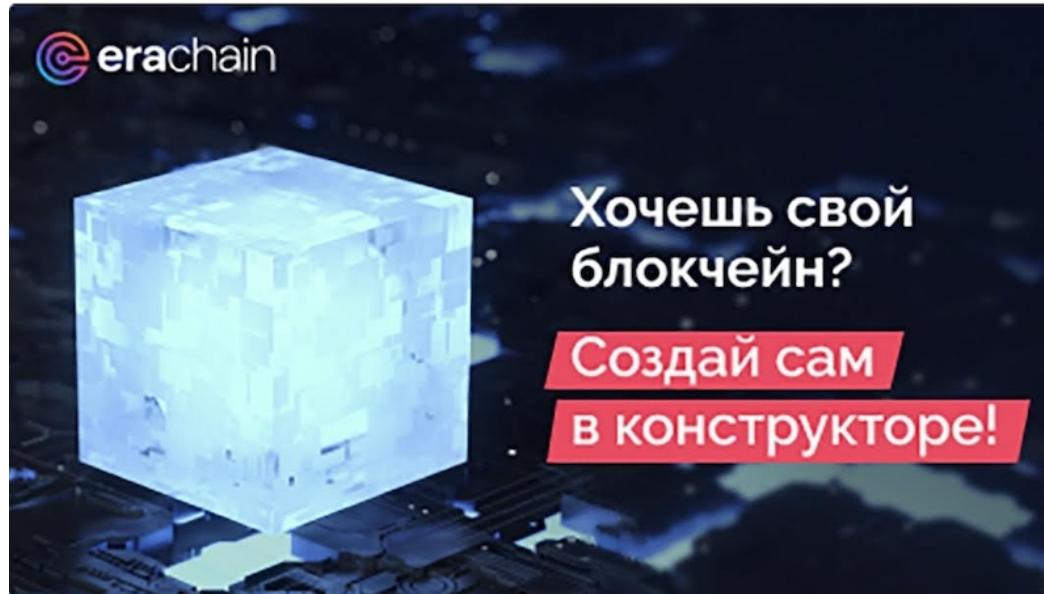


Erachain

Реклама · launcher.erachain.ru



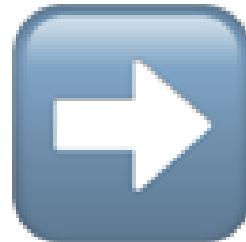
Создай смарт-блокчейн с готовыми dApps без
разработки!
Техподдержка. Бесплатная консультац



Создай свой блокчейн
launcher.erachain.ru

В магазин

БЭКЕНД



СМАРТ-КОНТРАКТ

Hello World

```
01. // HelloWorld.sol
02. pragma solidity ^0.8.17;
03.
04. contract HelloWorld {
05.     string public greet = "Hello World!";
06. }
```

CryptoKitties: Sales Auction | A X +

ETH Price: \$1,822.54 (+0.54%) Gas: 31 Gwei

Search by Address / Txn Hash / Block / Token / Domain Name

Transactions Internal Transactions Token Transfers (ERC-20) NFT Transfers Contract Events Analytics Comments

Code Read Contract Write Contract

Contract Source Code Verified (Exact Match)

Contract Name: SaleClockAuction Optimization Enabled: Yes with 200 runs

Compiler Version v0.4.18+commit.9cf6e910 Other Settings: default evmVersion

Contract Source Code (Solidity)

VS Code IDE Beta Outline More Options

```
1 /*
2 *Submitted for verification at Etherscan.io on 2017-11-28
3 */
4
5 pragma solidity ^0.4.11;
6
7
8 /**
9  * @title Ownable
10  * @dev The Ownable contract has an owner address, and provides basic authorization control
11  * functions, this simplifies the implementation of "user permissions".
12  */
13 contract Ownable {
14     address public owner;
15
16
17 /**
18  * @dev The Ownable constructor sets the original `owner` of the contract to the sender
```

CryptoKitties: Sales Auction | A X +

ETH Price: \$1,819.22 (+0.72%) Gas: 56 Gwei

Search by Address / Txn Hash / Block / Token / Domain Name

Code Read Contract Write Contract

Connected - Web3 [0xE307....9847] [Expand all] [Reset]

- 1. createAuction (0x27ebe40a)
- 2. unpause (0x3f4ba83a)
- 3. bid (0x454a2ab3)
- 4. withdrawBalance (0x5fd8c710)
- 5. pause (0x8456cb59)
- 6. cancelAuctionWhenPaused (0x878eb368)
 - _tokenId (uint256) +
 - _tokenId (uint256)
- 7. cancelAuction (0x96b5a755)
- 8. transferOwnership (0xf2fde38b)

Write



Node Provider

ethereum/go-ethereum: Official Go Ethereum implementation

github.com/ethereum/go-ethereum/

README.md

Go Ethereum

Official Golang execution layer implementation of the Ethereum protocol.

-go reference go report A+ build passing discord join chat

Automated builds are available for stable releases and the unstable master branch. Binary archives are published at <https://geth.ethereum.org/downloads/>.

Building the source

For prerequisites and detailed build instructions please read the [Installation Instructions](#).

Building `geth` requires both a Go (version 1.19 or later) and a C compiler. You can install them using your favourite package manager. Once the dependencies are installed, run

```
make geth
```

or, to build the full suite of utilities:

```
make all
```

Executables

Web3 as a service



◊ Infura Web3 API

The Infura Web3 API provides instant access to Ethereum, Polygon, Arbitrum, Optimism, and more over HTTPS and WebSockets. Our goal is to provide the most accessible and reliable Web3 connection for developers, freeing you up to spend less time on infrastructure, and more time building great software. Infrastructure for your Web3 app has never been easier.

[MORE ABOUT OUR ETHEREUM API →](#)

Core

Free

- ✓ 100,000 Total Requests/Day

Includes up to 25,000 Ethereum Mainnet Archive Requests/Day

Developer

\$50/mo

- ✓ 200,000 Total Requests/Day

Includes up to 100,000 Ethereum Mainnet Archive Requests/Day

- ✓ Direct Customer Support

Team

\$225/mo

- ✓ 1,000,000 Total Requests/Day

Includes up to 1,000,000 Ethereum Mainnet Archive Requests/Day

- ✓ Direct Customer Support

Growth

\$1000/mo

- ✓ 5,000,000 Total Requests/Day

Includes up to 5,000,000 Ethereum Mainnet Archive Requests/Day

- ✓ Direct Customer Support

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[GET STARTED](#)

[GET STARTED](#)

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designed for you**

With our new plans, Web3 builders get access to the entire QuickNode platform — all chains, recent and historical data, NFT API's, trace, debug & more — and only pay for what they use.

Plan	API Credits*	Price
Discover	10 Million API Credits*	Free monthly
Build	20 Million API Credits*	\$49 monthly
Scale	120 Million API Credits*	\$299 monthly

Discover

Interact with our powerful api's for free with our Discover Plan. Great for tinkerers, traders, or anyone learning web3.

✗ Auto Scaling

Build Most Popular

This plan is the starting point for businesses. All of our features plus auto-scaling to grow as your business grows.

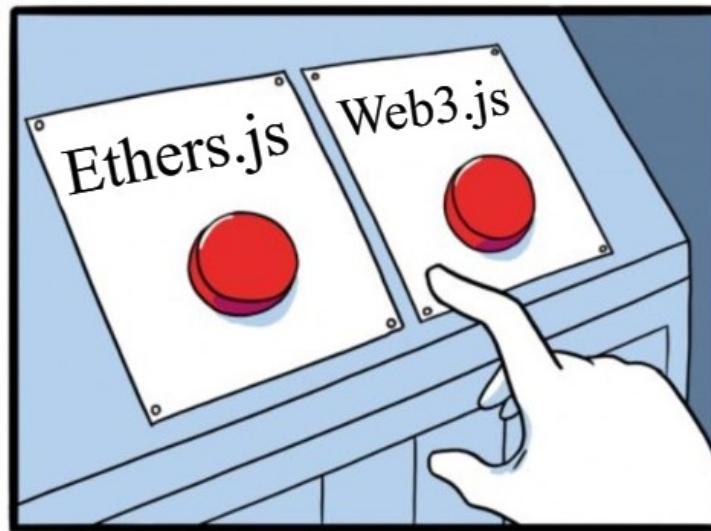
✓ Auto Scaling at \$20 /additional million

Scale

Scale offers the best in class performance, global distribution, and hyper scale for your high performance workloads.

✓ Auto Scaling at \$10 /additional million

Фронтенд



Ethereum Provider

- [buidler.dev](#)
- [ethers.js](#)
- [eth-provider](#)
- [MetaMask](#)
- [WalletConnect](#)
- [**web3.js**](#)

web3/web3.js: Ethereum JavaScript API

github.com/web3/web3.js

☰ README.md



web3.js - Ethereum JavaScript API

downloads 2.7M/month jsDelivr 8M hits/month Discord 1113 online web3js stackexchange npm v1.8.1 Build passing
coverage 80% maintained with lerna netlify Success GitPOAPs 44 Web3.js 1.8k

Web3.js 4.x has been released. Checkout 4.x [API documentation and migration guide](#) for testing, early feedback and contributions.

This is the Ethereum [JavaScript API](#) which connects to the [Generic JSON-RPC spec](#).

You need to run a local or remote [Ethereum node](#) to use this library.

Please read the [documentation](#) for more.

Installation

You can install the package either using [NPM](#) or using [Yarn](#)

Вызываем метод смарт-контракта

```
01. import Web3 from 'web3'  
02. const web3 = new Web3(Web3.givenProvider || "ws://localhost:8545");  
03.  
04. const abi = [...];  
05. const address = "0xe435e2a3cb5dc62c75d8bb2dba8470771405911d";  
06. const contract = new web3.eth.Contract(abi, address);  
07.  
08. contract.methods.getValue().call().then(console.log);
```

Подписываемся смарт-контракт

```
01. ....  
02. const abi = [...];  
03. const address = "0xe435e2a3cb5dc62c75d8bb2dba8470771405911d";  
04. const contract = new web3.eth.Contract(abi, address);  
05.  
06. const subscription = await contract.events.VALUE_CHANGE();  
07. subscription.on("data", console.log);
```

Читаем данные из блокчейна

```
01. import Web3 from 'web3'  
02. const web3 = new Web3("https://mainnet.infura.io/v3/endpoint")  
03.  
04. web3.eth.getBalance("0x1b3cB81E51011...").then(console.log)  
05. // result: BigInt(560000000065000000000000)  
06.  
07. web3.eth.getBlockNumber().then(console.log)  
08. // result: BigInt(13497160)
```

Полезные утилиты

```
01. Web3.utils.sha3("example")  
02. // '0x6fd43e7cffc31bb581d7421c8698e29aa2bd8e7186a394b85299908b4eb9b175'  
03.  
04. Web3.utils.toWei('1', 'ether') // 1000000000000000000000000  
05. Web3.utils.toWei('1', 'gwei') // 1000000000  
06.  
07. Web3.utils.padLeft('0x3456ff', 20); // '0x00000000000000003456ff'
```

Connect wallet

Web 1.0

Username

Password

Web 2.0

Sign in with Google



Sign in with Facebook



Sign in with Twitter



web3

connect wallet

 Log in with Facebook

 Log in with Google

 Log in with GitHub

 Log in with Twitter

 Log in with Amazon

 Log in with Instagram

 Log in with LinkedIn

 Log in with Microsoft

 Log in with Buffer

 Log in with Telegram

 Log in with Apple

 Log in with Discord

 Log in with Okta

 Log in with Slack

 Log in with Yahoo

 Log in with Zalo

 Log in with TikTok

 Log in with Metamask

Connect wallet (1)

```
01. <script src="https://.../web3.min.js"></script>
02. <input
03.   type="button"
04.   value="Connect Wallet"
05.   onclick="connect();"
06. >
```

Connect wallet (2)

```
01. async function connect() {  
02.   if (!window.ethereum) return;  
03.   await window.ethereum.request({ method: "eth_requestAccounts" });  
04.   window.web3 = new Web3(window.ethereum);  
05.   console.log(`Wallet: ${account.givenProvider.selectedAddress}`);  
06. }
```

Реализации для React

Реализации для React

- web3-react
- useDApp
- wagmi

Connect wallet для React (1)

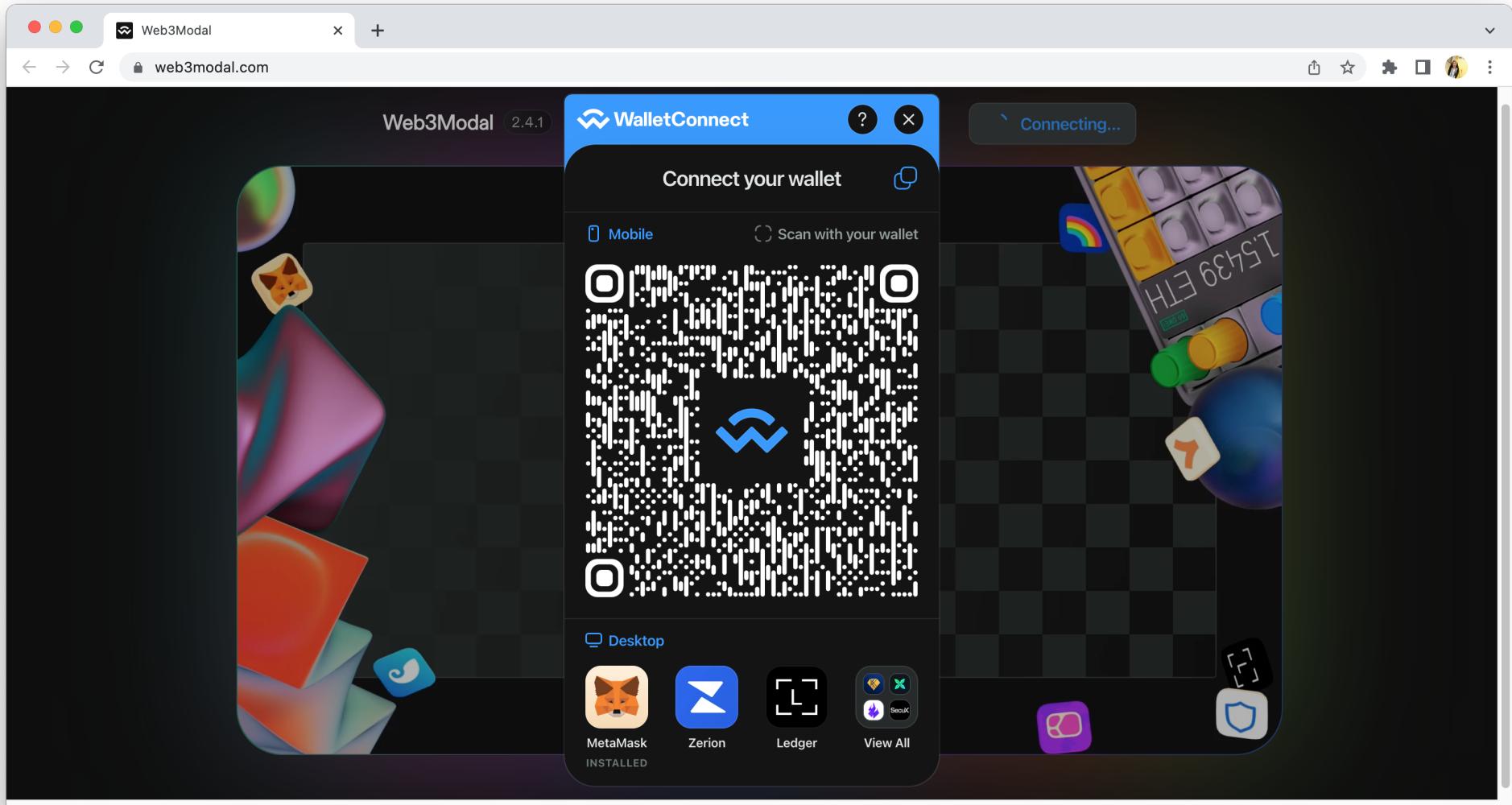
01. `npm install`
02. `wagmi`
03. `viem`
04. `@web3modal/ethereum`
05. `@web3modal/react`



100

Connect wallet для React (2)

```
01. import { Web3Button } from '@web3modal/react'  
02.  
03. function HomePage() {  
04.   return <Web3Button />  
05. }
```



Тестирование

**Нужен тестовый
стенд**

Mainnet (основная сеть)

Testnet (тестовая сеть)

Транзакции платные

Blockchain	Type	Token	Gas Used	Gas Used	Gas Current Cost
 Ethereum https://ethereum.org/	Layer 1	ETH 1824.17 USD	84904	Standard 35	5.4208 USD
 Arbitrum One https://offchainlabs.com/	Layer 2	ETH 1824.17 USD	84904	Standard 0.1	0.0155 USD
 Optimism https://optimism.io/	Layer 2	ETH 1824.17 USD	84904	Standard 0.1	0.0155 USD
 Binance Smart Chain https://www.binance.org/en/smartChain	Sidechain	BNB 329.94 USD	84904	Standard 3	0.0840 USD
 Avalanche https://www.avax.network/	Sidechain	AVAX 17.08 USD	84904	Standard 31	0.0450 USD
 Polygon https://hermez.io/	Sidechain	MATIC 0.971332 USD	84904	Standard 312	0.0257 USD
 Gnosis https://www.xdaichain.com/	Sidechain	XDAI 1.009 USD	84904	Standard 3	0.0003 USD
 Celo https://celo.org/	Sidechain	CELO 0.590495 USD	84904	Standard 1	0.0001 USD

Hardhat | Ethereum development environment for professionals

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Home Tools Plugins Documentation Tutorial

Flexible. Extensible. Fast.

Ethereum development environment for professionals

Get started



Hardhat

01. `mkdir my-smart-contract`
02. `cd my-smart-contract`
03. `npm init`
04. `npm install --save-dev hardhat`

Hardhat

01. npx hardhat

02.

03. ? What do you want to do? ...

04. › Create a JavaScript project

05. Create a TypeScript project

06. Create an empty hardhat.config.js

07. Quit

Hardhat



111

```
01. $ npx hardhat node
02. Started HTTP and WebSocket JSON-RPC server at http://127.0.0.1:8545/
03.
04. Accounts
05. =====
06. Account #0: 0xf39Fd6e51aad88F6F4ce6aB8827279cffFb92266 (10000 ETH)
07. Private Key: 0xac0974bec39a17e36ba4a6b4d238ff944bacb478cb...
```



Ethereum Mainnet ▾



< Networks



A malicious network provider can lie about the state of the blockchain and record your network activity. Only add custom networks you trust.

Network Name

HardhatNetwork

New RPC URL

http://127.0.0.1:8545/

Chain ID ⓘ

31337

Currency Symbol (optional)

Чеклист

Создаём DApp в Ethereum

- Установите **Hardhat** и запустите тестовую сеть
- Задепloyте в локальную сеть ваш **Smart Contract**
- Установите кошелёк **MetaMask** как браузерное расширение
- Настройте кошелёк для работы с тестовой сетью (<http://127.0.0.1:8545>)
- Установите в ваш фронтенд библиотеку **web3.js**
- При помощи библиотеки и кошелька делайте запросы в сеть
- Задепloyте всё в продакшен, используя **mainnet**
- У вас Web3 приложение

Включи Web3 в своём фронтенде

Спасибо за внимание! Есть вопросы?

-  Алексей Авдеев
-  github.com/avdeev
-  twitter.com/avdeev_alexey
-  vk.com/alexey.avdeev
-  Продуктовая лаборатория [Mish](#)



Оцените доклад