

Near project report

NEAR (<https://near.org/>) is a decentralized application platform which runs atop the NEAR Protocol blockchain. This blockchain, which runs across hundreds of machines around the world, is organized to be permissionless, performant and secure enough to create a strong and decentralized data layer for the new web.

NEAR's main mission is to present a platform that's ideal for running applications that have access to a shared — and secure — pool of money, identity and data which is owned by their users. It combines the features of partition-resistant networking, serverless compute and distributed storage into a new kind of platform.

1. GitHub Metrics (<https://github.com/near>):

Top languages:

- Rust
- JavaScript
- TypeScript
- Python
- C

Repositories - 193

Members - 23

These 3 are most popular repositories with Near code: `Near Core` (<https://github.com/near/nearcore>):

- Total number of commits: 5710
- Number of contributors: 127
- Percentage of commits from top-5 contributors: 40,4%
- Number of pull requests open/closed: 62/6112
- Ratio of open/closed issues: 646/2282
- Releases Num: 147
- Code frequency peaks: October 2019, March 2020, April 2023

`Near-sdk-rs (Rust library for writing NEAR smart contracts)` (<https://github.com/near/near-sdk-rs>):

- Total number of commits: 1096
- Number of contributors: 63
- Percentage of commits from top-5 contributors: 60,7%
- Number of pull requests open/closed : 7/584
- Ratio of open/closed issues: 130/311
- Releases Num: 21

- Code frequency peaks: March 2020, April 2023

‘NEAR Wallet Selector’ (<https://github.com/near/wallet-selector>).

- Total number of commits: 3025
- Number of contributors: 45
- Percentage of commits from top-5 contributors: 61,3%
- Number of pull requests open/closed: 9/612
- Ratio of open/closed issues: 5/222
- Releases Num: 52
- Code frequency peaks: March 2020

2. Token Distribution:

Starting distribution of tokens (<https://coinlist.co/near>):

During the NEAR ICO, which took place in August 2020 on the CoinList platform, 120 million NEAR coins (12% of the initial issue of 1 billion tokens) were sold at a price of \$0.3.

NEAR Economy Design Principles (https://pages.near.org/papers/the-official-near-white-paper/?_gl=1*drqyfu*_up*MQ..*_ga*MTY1NzAzMTQwMy4xNjkwMjAzMTQ1*_ga_9GWCXQJ62J*MTY5MDIwMzE0My4xLjEuMTY5MDIwMzE2MS4wLjAuMA..#economics)

- **Usability:** End users and developers should have predictable and consistent pricing for their usage of the network. Users should never lose data forever.
- **Scalability:** The platform should scale at economically justified thresholds.
- **Simplicity:** The design of each of the system’s components should be as simple as possible in order to achieve their primary purpose.
- **Sustainable Decentralization:** The barrier for participation in the platform as a validating node should be set as low as possible in order to bring a wide range of participants.

Key ideas:

- **Thresholded Proof of Stake:** Validating node operators provide scarce and valuable compute resources to the network. In order to ensure that the computations they run are correct, they are required to “stake” NEAR tokens which guarantee their results.
- **Epoch Rewards:** Node operators are paid for their service a fixed percentage of total supply as a “security” fee of roughly 4.5% annualized. This rate targets sufficient participation levels among stakers in order to secure the network while balancing with other usage of NEAR token in the ecosystem.

- **Protocol treasury:** In addition to validators, the protocol treasury receives 0.5% of total supply annually to continuously re-invest into ecosystem development.
- **Transaction Costs:** Usage of the network consumes two separate kinds of resources — instantaneous and long term. Instantaneous costs are generated by every transaction because each transaction requires the usage of both the network itself and some of its computation resources. These are priced together as a mostly-predictable cost per transaction, which is paid in NEAR tokens.
- **Storage Costs:** Storage is a long term cost because storing data represents an ongoing burden to the nodes of the network. Storage costs are covered by maintaining minimum balance of NEAR tokens on the account or contract. This provides an indirect mechanism of payment via inflation to validators for maintaining contract and account state on their nodes.
- **Inflation:** Inflation is the combination of payouts to validators and the protocol treasury minus the collected transaction fees.
- **Scaling Thresholds:** In a network which scales its capacity relative to the amount of usage it receives, the thresholds which drive the network to bring on additional capacity are economic in nature.
- **Security Thresholds:** Some thresholds which provide for good behavior among participants are set using economic incentives.

The distribution of tokens (<https://coinmarketcap.com/currencies/near-protocol/#About>):

- Token Total Supply: 1,000,000,000 Token + grows at a maximum rate of 5% per year.
- 17.2% - Community Grants
- 11.4% - Operation Grants
- 10% - Foundation Endowment
- 11.7% - Early Ecosystem
- 14% - Core Contributors
- 17.6% - Backers
- 6.1% - Small Backers
- 12% - Community Sale

Funding Rounds:

- \$12.1M was raised in an ICO on July 10, 2019
- \$21.6m was raised in an ICO on May 4, 2020
- \$150m was raised in a Funding round on January 13, 2022
- \$350m was raised in a Venture round on April 6, 2022

3.Blockchain Metrics

(<https://explorer.near.org/>)

- In the NEAR Proof-of-Stake network, a decentralized pool of validators process transactions to keep the network secure. In return, these validators receive a reward for doing so.
- Nodes online (The more nodes, the more decentralized the system): 740
- Node validating (The more nodes, the more decentralized the system) : 218
- Block Time (The shorter the generation time, the more decentralized the system is.): The average time it takes to mine a new block on blockchain. The average block time is around 1.0714s.
- The number of transactions in the last 24 hours (The more transits you can make, the more decentralized the system is.): 360,949
- Security: The dynamically sharded Proof-of-Stake carbon-neutral blockchain team, built for usability and scalability, remains confident that by combining the power of both PoS and sharding, it can become one of the most scalable, secure and sustainable blockchain networks in the crypto space.

4. Governance Metrics:

The top-5 discussions of all time on (<https://gov.near.org/top?period=all>):

The number of replies: 331

The share of views: 20K

5. Operational Metrics:

(<https://coinmarketcap.com/ru/currencies/near-protocol/>)

(<https://explorer.near.org/>)

(<https://nearblocks.io/>)

(<https://www.coinarp.com/currencies/nearprotocol/richlist/>)

- Max Supply: 1,000,000,000 Token + grows at a maximum rate of 5% per year.
- Circulating Supply (is number of cryptocurrency coins or tokens that are publicly available and circulating in the market.): 940,552,817 Tokens
- Total transactions of all time: 334.24M
- Near Price (24 July 2023): 1.3882 USD
- Market capitalization: 1.31B USD
- Average value for one holder: 8,276 USD
- Maximum factual tokens for one holder (BSC: Token Hub): 1,154,593
- Average factual tokens for one holder: 17,809
- Number of holders: 1,198
- 24 Hour Trading (24 July 2023): \$65,829,377

6. Social Distribution:

(<https://www.coingecko.com/en/coins/near>)

- Twitter followers: 1,942,944
- Telegram users: 46,328
- Project build with Near: 750
- Total accounts: 26M+

In conclusion, analysis of various metrics proves that Near is a high decentralized blockchain network that has a great potential for development WEB3 application and others on her base. The distribution of influence among various sides (developers, customers and so on) is a key factor in the decentralization of Near.