



DogCoin: A Platform Empowering Smart Contracts and Decentralized Applications

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dogcoin.network

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Dogcoin: An Introduction

The Dogcoin Platform is an EVM compatible blockchain that bridges the gap between technical, traffic and ecological resources. It offers enhanced efficiency and cost-effectiveness when constructing decentralised applications, as well as comprehensive support in promotion, traffic and resource management. This unified infrastructure platform is positioned to revolutionise the DApp industry. Developers around the world will be able to access a variety of innovative facilities and services delivered by Dogcoin.

Solving the market's biggest problem

Blockchain-based decentralized applications (Dapps) are a major use case of the industry. Unfortunately, many of them experience cash flow issues - despite having numerous users and transactions in their smart contracts, no revenue is generated from such activities. Currently, all fees paid by users are sent to miners or stakers in PoS type blockchains, creating a scenario where "the rich get richer and the poor get poorer". Our innovative solution solves this problem by allowing smart contract deployers to gain a portion of the transaction fees paid by users - providing Dapp developers with a huge positive cash flow that facilitates their projects. This helps ensure that continued innovation occurs within the blockchain ecosystem.

Vision

Aside from being the best public blockchain, Dogcoin's mission is to identify and support high-potential developers and innovative projects. With its largest trading ecosystem, Dogcoin is committed to becoming the birthplace of innovative technologies and innovative businesses, and to creating a complete ecosystem of development, promotion, and trading of technology and applications.

Dogcoin's Performance

- Potential TPS: 40,000
- Average block interval: 2s

Economic Model

DOGS is an endogenous token on the chain; transactions consume DOGS as gas fees.

The gas fee is distributed according to the mortgage proportion by miners who become validator nodes..

Technical Characteristics of Dogcoin

- Maintaining the security of the network and assets through an open and decentralized network.
- To reduce the development and migration costs of smart contracts, support the programmability of EVM.
- Meta-transaction function: reduction of gas fees, reducing developer and user costs.
- Optimise the user experience by supporting cross-chain asset transfers.

Consensus

Up to 21 validators are supported by Dogcoin's DPoS consensus mechanism with low transaction cost, low transaction latency, and high transaction concurrency.

DPoS is a combination of PoA and Pos. In order to become a validator, you need to submit a proposal first and wait for other active validators to vote on it. You can become a validator after more than half of them pass. If the staking volume of the validator ranks in the top 21, it will become an active validator in the next epoch, and anyone can stake to an address that qualifies to become a validator..

As a result of predefined rules, all active verifiers take turns packing out blocks. Whenever a validator does not pack out a block in time in its own round, the active validators who have not been involved in the past $n/2$ blocks (n is the number of active validators) blocks will perform the block-out at random. The blockchain must have $n/2+1$ active validators to ensure its proper operation.

When a fork of the block chain occurs, the block chain selects the corresponding fork based on the cumulative maximum difficulty for each block.

Glossary

- validator. Responsible for packaging out blocks for on-chain transactions.
- active validator. The current set of validators responsible for packing out blocks, with a maximum of 21.
- epoch. Time interval in blocks, currently 1epoch = 200block on Dogcoin. At the end of each epoch, the blockchain interacts with the system contracts to update active validators.

System contracts

Dogcoin-System-Contracts

The management of the current validators are all done by the system contracts.

- Proposal Responsible for managing access to validators and managing validator proposals and votes.
- Validators Responsible for ranking management of validators, staking and unstaking operations, distribution of block rewards, etc..
- Punish Responsible for punishing operations against active validators who are not working properly.

Blockchain call system contracts :

- At the end of each block, the `Validators` contract is called and the fees for all transactions in the block are distributed to active validators.
- The `Punish` contract is called to punish the validator when the validator is not working properly.
- At the end of each epoch, the `Validators` contract is called to update active validators, based on the ranking.

Staking

For any account, any number of coins can be staked to the validator, and the minimum staking amount for each validator is `32DOGS`. If you want to unstake, you need to do the following:

1. Send an unstaking transaction for a validator to the `Validators` contract;
2. Waiting for `86400` blocks before sending a transaction to `Validators` contract to withdraw all staking coins on this validator;

Punishment

After a validator fails to pack a block as predefined, the `Punish` contract is automatically called and the validator is counted. A validator's income is punished when the count reaches 24. When the count reaches 48, the validator is removed from the list of active validators and disqualified.

Cross-Chain

It is possible to map Bitcoin, Ethereum, and stable coins to Dogcoin using an asset bridge. The realization method is to lock a certain number of tokens on the original

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chain and then generate a corresponding number of Dogcoin tokens.

The Dogcoin platform encourages developers to provide more decentralized cross-chain solutions

Meta Transaction Function

A meta-transaction is an operation that fulfills a fee payment in proxy. Address1 sends the transaction to Address2. Address2 signs the information related to the fee deduction and places it in the data segment of the transaction. In accordance with the rules, the blockchain processes the transaction once it has been broadcast.

Dogcoin will cover the payment of the reduced portion of the meta-transaction, which allows to minimize the migration costs for DApp developers, as well as to effectively reduce the costs for DAppusers.

The Genesis Block

Both the mainnet and testnet genesis information of `Dogcoin` chain have been hardcoded in blockchain, and the corresponding genesis files are listed below for verification.

- `chainId` The unique identification of the chain.
- `homesteadBlock` `eip150Block` `eip150Hash` `eip155Block`
`eip158Block` `byzantiumBlock` `constantinopleBlock`
`petersburgBlock` `istanbulBlock` `muirGlacierBlock` Hard fork height configuration.
- `congress` Consensus parameters `period` is time interval of blocks. `epoch` is set for a period in `block`, and at the end of each `epoch`, the validators are adjusted accordingly.
- `number` `gasUsed` `parentHash` `nonce` `timestamp` `extraData` `gasLimit` `difficulty` are all parameters for genesis block.
- `extraData` The initial validators is set up here.
- `alloc` Configured initial account information that can be used for asset-pre-allocation and pre-initialization of system contracts.
 - `0xdaf88b74fca1246c6144bc846aaa3441ed095191 //Genesis account for DOGS`
 - `00000000000000000000000000000000f000 //validators contract address`
 - `00000000000000000000000000000000f001 // punish contract address`
 - `00000000000000000000000000000000f002 // proposal contract address`
- System contract repo: [Dogcoin-System-Contracts](#)

Interact with Us on Social Media

- Twitter: <https://twitter.com/dogcoinme>
- Telegram: <https://t.me/dogcoinme>

Risk Warning

- All users and developers can participate in the current test environment and subsequent stages of Dogcoin for free, and there is no charging scenario.
- All users must distinguish the test environment from the Mainnet. The assets generated in the test environment have no value. Be aware of counterfeit currency fraud.
- Dogcoin announces authorization, promotion and other collaborations only through the official social media platform. Developers and users should check carefully to avoid losses.
- Do not misread the official website (Dogcoin.me), and be cautious with private key phishing.