

PolkaDomain

Characteristics

- Decentralized domain name service
- Convert hexadecimal crypto address into convenient domain
- Make on-chain transactions with domains
- Cross-chain communication and interoperability backed by Polkadot

Native Token

- Registration deposit
- Trade domains
- Transaction fees
- Governance

Features

Basic Features

- Domain registration
  - Register unclaimed domains, connect domain with user's Polka Domain (PD) wallet address
  - Set PolkaDomain wallet address as main address, automatically connect to PD address after registration
  - Can connect to multiple addresses on multiple chains
    - BTC
    - Ethereum
    - Polkadot
    - Kusama
    - Parachain
    - etc ...
  - User needs to stake 100 PD tokens as registration deposit; the tokens get unstaked after one obtains the domain
- Domain release
  - Release ownership of one's domain
  - Released domains become available for public registration
  - Unstake 100 PD tokens after release
- Domain transfer
  - Transfer domain from the connected main address to bind with another address
- Domain transaction
  - Start an on-chain transaction through a domain. The domain management module looks for the corresponding sending and receiving addresses, generate transaction data, and broadcast transaction
  - If the receiving the address is on a different blockchain network, the system generates cross-chain data through Polkadot XCMP which enables cross-chain transactions
- Top-level domain management
  - A top-level domain is at the highest level in the hierarchical DNS after the root domain, eg. .com, .eth, .pd
  - The governance module will vote on whether to make a top-level domain available for registration
  - Users can register as a top-level domain's second-level domain, like mydomain.pd

Advanced features

- Domain marketplace
  - Acquisition
    - Buyer needs to stake 100 native token prior to purchasing domains. Automatically unstake tokens if purchases don't go through.
  - Sales (Fixed Swap)
    - Users can list and sell their domains at a fixed price in the marketplace
  - Auction
    - Dutch Auction
    - English Auction
  - Domain as NFT
    - Newly registered domain becomes a NFT and stored as an asset automatically
    - NFT metadata is stored on the IPFS distributed file system
    - After a domain has been transferred/sold, the NFT is held by the new owner
- Cross-chain transaction
  - Supports multi-chain, multi-address cross-chain transactions
- Anonymous address
  - Provide wallet address anonymity through blockchain privacy technology

Development

- PD Blockchain
  - Domain blockchain developed on Substrate
    - Native Token
    - Governance module
      - Initiate voting
      - User voting
      - Execute voting
    - Domain management module
      - Subdomain registration
      - Subdomain release
    - Domain exchange module
    - Cross-chain transaction module
    - NFT module
- PD dApp
  - Front end application development on react.js
    - Transfer transactions
    - Cross-chain transaction
    - Domain marketplace
- PD Blockchain explorer
  - PD explorer
    - <https://apps.polkadomain.com/?rpc=wss%3A%2F%2Ftestnetrpc.polkadomain.com#/accounts>
  - Third party explorer
    - <https://polkadot.js.org/apps>
    - <https://polkascan.io/>
    - <https://www.subscan.io/>
- Wallet
  - Wallets that support conversion between domain and addresses
    - Polkadot Wallet
      - polkadot.extension
    - Ethereum Wallet
      - Metamask
- Technology stack
  - dApp
    - react.js
    - polkadot.js
    - web3.js
  - Smart contract
    - Smart Contract
  - Blockchain
    - Rust
    - Substrate
  - Back end
    - The Graph
    - ...
  - Storage
    - IPFS
  - Cross-chain protocol
    - XCMP
      - <https://wiki.polkadot.network/docs/en/learn-crosschain>