

Pathogen

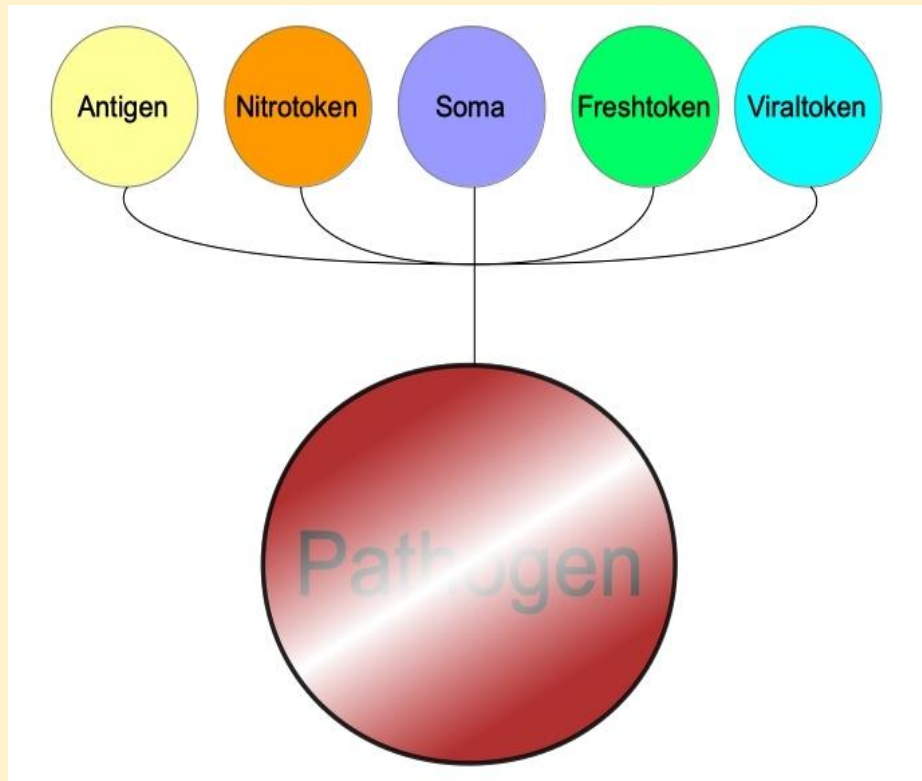
Crypto Asset Management

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What is Pathogen?

- Pathogen (PATH) is an ERC20 token
- Supplies liquidity to various token pools
- Stakes into other tokens
- Reaps rewards accrued per transaction/per pool



How Does Pathogen Work?

The Pathogen Trust has 1,000,000 tokens staked per liquidity pool of the following tokens:

- Antigen (ANTI)
- Nitrotoken (NITRO)
- Soma (SOMA)
- Freshtoken (FRESH)
- Viraltoken (VIRAL)

The Pathogen token, PATH, creates exposure to the Trust's stakes, which generates a daily staking reward, reaping the rewards accrued per transaction per liquidity pool.

Technology Stack

- Language: Solidity
- IDE: Remix
- Developer Environment: Ganache, Metamask
- Other tools: Github



STAKING: What is it?

- Holding funds in a crypto wallet to maintain the operations of a proof-of-stake (PoS)-based blockchain system.
- Simply: **Incentivizing a token holder in supplying liquidity to a pool in return for token rewards.**
- A liquidity pool is a collection of funds locked into a smart contract.
- Encourages holding the token, as opposed to selling or trading.
- Token holding increases its valuation.

TOKENOMICS

- Initial Token Supply = 10,000,000 each of PATH, ANTI, NITRO, SOMA, FRESH, VIRAL
- Price of each token = \$1.00
- Total Value Locked for each = \$10,000,000
- Pathogen Trust Total Value Staked = \$1,000,000 per liquidity pool, 10% of each pool.
- PATH's token exposure is based on the number of liquidity pools the Trust is staking.
Ex: 5 LPs, PATH's exposure is 20% per pool.

Staking Mechanism

$1\text{M} * \$1 = \1M worth tokens staked into each pool respective to the pools' token.

Total tokens staked within it's token liquidity pool = $\$1\text{M} * 5$ pools = $\$5\text{M}$

Example: PATH stakeholder owns 100,000 tokens. 100,000 tokens of it's 1,000,000 total token circulation is 10%.

$100,000 / 5\text{M} = 0.02\%$ of the Trust's liquidity stakes.

EARNING REWARDS



- Stakeholder owns 100,000 tokens of PATH
- Each transaction generates 0.02% rewards to the liquidity pool providers. The maximum amount of rewards that can be earned by a liquidity pool provider is 1%.
- Example: All pools had 100 transactions each for 1 day, which generates the 1% max reward allowance to be earned in a 24 hour period.
- 1% is the reward earned by the token holder, but will remain in the pool.
- $100 \times 5 \text{ pools} = 500 \text{ transactions}$; $1\% \times 5 \text{ pools} = 5\% \text{ cumulative total reward / day to Pathogen Trust, earning 50,000 tokens a day.}$
- $50,000 / 1\% \text{ (user's ownership of the entire PATH token supply)} = 500 \text{ tokens per day to PATH stakeholder.}$
- Reward tokens earned by the stakeholder is 1% of the entire Pathogen Trust reward pool.
- Total value of stakeholder's wallet $100,000 + 500 \text{ tokens awarded} = 100,500.$

Deploying Procedure

Legend:

Execute functions as

- **O**: Owner/Contract Deployer
- **U**: User/Non-Owner/Stakeholders

(Make sure environment is setup.
Ganache/Truffle, Metamask, Remix, etc)

1. Deploy Contract(O)
2. Transfer(O)(Stakeholders(s) address(es), token amount to transfer to stakeholder(s))
3. addStakeholder(O)(Accepts and adds stakeholder to contract)
4. createStake(U)(Amount of tokens to stake by stakeholder)
5. totalStakes(O/U)(Checks how many coins are staked to contract)
6. calculateReward(O)(Generates rewards to distribute)
7. totalRewards(Calculates aggregated rewards)
8. distributeReward(O)(Distributes rewards to stakeholders)
9. withdrawReward(U)(Withdraws reward to stakeholder's wallet)
10. removeStake(U)(Amount of tokens you want to remove)
11. balanceOf(O/U)(Check balance of wallet)

Deploying Pathogen

Deploy

☐ Publish to IPFS

OR

At Address

Load contract from Address

Transactions recorded 8

Deployed Contracts

PATHOGENTOKEN AT 0XD91...39138

addStakeholder

"0x5B38Da6a701c568545d"

approve

address spender, uint256 am

createStake

_stake:

1000

transact

decreaseAllow...

address spender, uint256 sut

distributeRew...

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decreaseAllow...

address spender, uint256 sut

distributeRew...

increaseAllow...

address spender, uint256 adr

mint

address recipient, uint256 an

removeStake

_stake:

1000

transact

removeStakeholder

_stakeholder:

0xAb8483F64d9C6d1EcF9b84

transact

transfer

recipient:

"0xAb8483F64d9C6d1EcF9b8"

amount:

"100000"

transact

transferFrom

address sender, address recip

withdrawRew...

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Deploying Pathogen



allowanceaddress owner, address spen

balanceOf

account:"0x5838Da6a701c568545dCf"

call

0:uint256: 9900000

calculateReward0x5838Da6a701c568545dC

0:uint256: 0

decimals

initial_supply

0:uint256: 10000000

isStakeholderaddress _address

name

pathogen_trust

0:uint256: 1000000

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rewardOfaddress _stakeholder

stakeOfaddress _stakeholder

symbol

0:string: PATH

totalRewards

0:uint256: 0

totalStakes

0:uint256: 0

totalSupply

0:uint256: 10000010

tvI

Conclusion/Results

- The sentiment behind this token was to give the token holder the ability to part take in liquidity pool staking and reap the rewards without the numerous gas taxes that come along with the process.
- With Ethereum's success and it's current Layer 1 structure, transaction fees will also rise as it will take a larger effort by the node validators. Layer 2 applications have arrived and Ethereum 2.0 hopes to bring a more cost efficient solution.

Future Additions

- Add liquidity pool pairing with Ethereum or possibly other stable coins for staking
- Consensus voting forums to add/remove tokens to stake into
- Create a governance token, which can be given to stakeholders based on the amount they hold, on voting proposals.
- NFTs to unlock special features like higher reward generation for NFT holders
- Crosschain interoperability

**Questions/ Feedback/
Suggestions?
Thank you.**

