KyberNetwork

Decentralized exchange with instant on-chain execution

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KyberNetwork is an Ethereum based decentralized exchange focused on rapid on-chain execution of transactions.

Instead of relying on an orderbook model the project uses a smart contract infrastructure to select the best price from competing liquidity pools automatically. Transactions are intended to occur instantly and without needing to provide a deposit or broadcast intended buy or sell orders. As of Feb. 2018, the platform was operating as a live pilot accessible to token holders.

Project Overview

Name	Kyber Network
Issuer	KayDex Pte. Ltd.
Category	Utility
Sector	Decentralized exchange
Sale Start	09/15/2017
Sale End	09/16/2017

Token Overview

Name	Kyber Network Crystals
Symbol	KNC
Type	ERC20 token
Initial Distribution	144,507,348
Current Supply	134,308,486
Max Supply	215,617,232
Emission Type	Fixed

Resource Links

- [Website](#)
- [GitHub](#)
- [Twitter](#)
- [Telegram](#)
- [Reddit](#)
- [Medium](#)
- [Whitepaper](#)

Project Background

KyberNetwork is building an Ethereum based platform to address the growing market for decentralized token exchanges. The project proposes a solution for instant on-chain transfers between ERC20 tokens, fully based on smart contracts. Plans include support for non-ERC20 tokens though these are highly dependent on the creation of scalable solutions for cross-blockchain compatibility technologies like atomic swaps. Potential solutions include PolkaDot or cosmos as well as ERC20 based implementations on networks like RSK.

Decentralized exchanges have become a popular alternative to centralized exchanges, which can lack transparency or are subject to hacks, like those seen on Mt.Gox, Bitfinex, and CoinCheck. Despite interest in the idea, decentralized exchanges are often subject to drawbacks like limited liquidity, the ability to potentially front-run orders, and transaction fees related to canceling or adjusting orders that can reduce the incentive to adjust bid prices frequently.

The team believes they can solve these issues by creating an automated on-chain solution that directly exchanges tokens between two parties. Instead of using an orderbook the network uses liquidity pools (reserves) run by competing reserve managers. Managers are responsible for setting bid/ask prices for various token pairs and maintaining a certain amount of liquidity in the trading pairs offered. When a user sends tokens to the core KyberNetwork smart contract the transaction is immediately executed based on the best price offered by the reserve managers. By immediately executing transactions the project aims to eliminate the ability to front run trades, and by using the best offered spread on transactions, hopes to incentivize reserve managers to offer competitive spreads. Reserve managers should likewise be prompted to make markets in low liquidity tokens where they can take larger spreads.

The project launched a pilot of the main network on Feb. 11, 2018, with plans to expand access as pilot progresses. Initially, KyberNetwork will act as a reserve manager using 100,000 of the 200,000 ether (ETH) received during the token sale before opening the network to third-parties. Reserve managers will be expected to comply with know your customer (KYC) and anti-money laundering (AML) rules.

Technology

The network relies on the core KyberNetwork smart contract that accepts user tokens for exchange and sends corresponding tokens directly to the user from a reserve account. Users on the network are expected to be individuals, other decentralized applications, and merchants that want to accept a variety of payment options while receiving only a single type. When users send a token for conversion they receive the corresponding token within the same transaction removing the need for deposits or an orderbook.

In order to function properly there must be enough liquidity in various token pairs. Reserve managers attempt to provide this by holding various tokens for exchange and rebalancing their holdings if the balance of a specific token becomes too low. Reserve managers decide on and provide continuously updated exchange rates to the core smart contract. Third-party contributors are expected to provide capital to reserve pools in exchange for a share of the fees, which is the bid/ask spread, collected on transactions. Reserve managers will be able to decide if they wish to operate as a private entity or allow third-party contributors. Tools to track prices and volumes across the network have been created to help manage reserve portfolios.

Initial governance, including listing token pairs and permissioning reserve managers, will be handled directly by the project. Over time the team plans to create a network of "operators" that will handle governance in a more decentralized manner.

Reserve pools that wish to participate in the exchange market are required to stake an amount of KyberNetwork Crystal (KNC) tokens in a smart contract and meet specific liquidity requirements defined by the network. In each trade a small amount of KNC will be transferred from the staked amount, acting as a fee for reserves that use the network. These tokens will be used to compensate partners for services they provide on the network, such as wallets that directed trades to the network. Because fees will be calculated based on trades in different tokens the smart contract will use the prevailing KNC conversion rate when collecting tokens from reserve managers. In the case that this conversion leads to more KNC being collected than needed to compensate partners the remaining tokens will be burned by the network.

Distribution

KyberNetwork raised 200,000 ether (ETH), worth approximately $50 million at the time, during a two day token sale in Sept. 2017. This was the hard cap for the sale and resulted in the creation of 226 million KNC tokens. A total of 138.0 million tokens, representing 61.1% of total supply, were distributed to 21,309 individual addresses during the public sale. In order to participate users were required to completed KYC verification. Each participant was limited to a maximum contribution of 3.6 ETH on the first day while the second day had no contribution limit.

The remaining tokens were split between two groups. The project treasury received 44.0 million tokens, or 19.5% of total supply, as did a group of founders, advisors, and seed investors. Tokens allocated to this second group are subject to a two year vesting period with a one year lockup.[1] In Oct. 2017 the team burned 10.4 million tokens they deemed to be excess from the original sale.[2]

Half of the total amount raised in the sale (100,000 ETH) was set aside to serve as an early liquidity pool on the network. The remaining ETH was allocated to operations (10%), legal (10%), and development (30%).

[1] Source: https://blog.kyber.network/kybernetworks-token-sale-terms-overview-de031ce9738e
[2] Source: https://blog.kyber.network/burning-of-excess-knc-tokens-6f777595561b

Team

Loi Luu
CEO and co-founder

- Co-founder of SmartPool

- Received a Ph.D. in computer science from National University of Singapore

Yaron Velmer
CTO and co-founder

- Technical leader at EZchip semi-conductors

- Received a Ph.D. in computer science from Tel Aviv University

Victor Tran
Lead engineer and co-founder

- Lead engineer at SmartPool

Advisors

Wong Lee Hong
Previously SVP at United Overseas Bank Ltd.

Vitalik Buterin
Founder of Ethereum

Leng Hoe Lon
Co-founder of Shentilium

Chionh Chye Kit
Co-founder and managing director at Cynopsis Solutions

Investors

HyperChain Capital

FBG

Pantera

Danhua Capital

Fenbushi Capital

Blockchain Partners Korea

Kenetic Capital

Signum Capital

AdditionalResources

- Blog: Adressing FAQs about Reserves

- Report: KyberNetwork

- Blog: Deep Dive on Kyber Network

- Token Sale Details

- PitchBook: KyberNetwork