Boltr. Decentralize Exchange and Automated Aggregated Yield (Whitepaper 1.0)

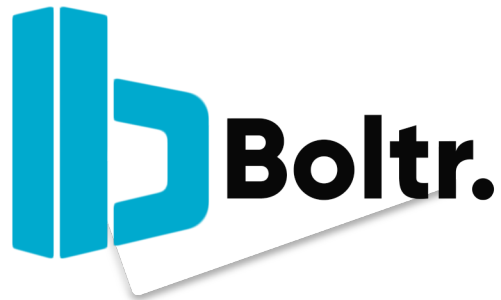www.boltrswap.com

ABSTRACT

This whitepaper explains about the design function behind Boltr core contracts. It also will explain about the design functions of all Boltr ecosystem including all token arbitrary pair and contain the information about Boltr Governance token which is BOL (KRC-20).

TABLE OF CONTENT

Introduction

Boltr. is a yield farming and staking platform on KuCoin Community Chain (KCC), we have chosen KCC because of its low transaction fees and faster speed. We have built this project to provide the best experience with farming while regulating the supply, we believe in the next generation of decentralized finance Boltr will be one of the top tiers in revolutionizing the industry of data ledger in financial transactions.

High Security
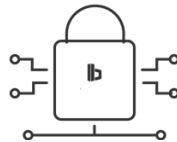
Modular "security as a service", powered by KuCoin Community Chain n(KCC) network and by a distributed pool in a custom Wasm execution environments.

Decentralized

Fully decentralized and without central intermediaries holding funds and managing transactions inside the protocol.

Modular

High customizability, extensibility and upgradeability, short time-to-market, community collaboration

Ecosystem

Boltr DEX is a decentralized application (dApps) for swapping token inside the KuCoin Community Chain with no central entity take govern or as middlemen for trader's token swapping transactions. It is fully operated inside the blockchain and with no risk of central entity owning your asset. The mechanism for swapping a token:

1. User need an account created under a decentralize wallet where user has their right to redeem their private key as for user safety reason on a particular decentralize wallet for KuCoin Community Chain i.e Metamask.
2. User need to connect their account into Boltr platform for gain access on all service inside BoltrSwap including gaining access to the DEX services.

Comparing Boltr DEX to UniswapV1, UniswapV2 using the mechanism of all token will be pair with ETH in order to reduce the fragmantation of liquidity. However it seems too costly for the liquidity providers inside the platform especially if both token that were paired facing a downfall of price changing and it will make the liquidity provider to face a loss of the locked token.

In Boltr DEX, it allows liquidity providers to create pair contracts for any two KRC20 token. A proliferation of pairs between arbitrary KRC20 could make it somewhat more difficult to find the best path to trade a particular pair, but routing can be handled at a higher layer (either off-chain or through an on-chain router or aggregator).

Other Price Oracle

$$pt = \frac{rt^a}{rt^b}$$

Price Marginal offered by other DEX at time *t* computed by dividing the reserves of asset *a* by the reserves of asset *b*. In order to avoid user manipulate the market by buying other token in other pair and sell the token in their own pair in order to get price increasement and usual value of the token if market price changes, Boltr bring up new oracle functionality with major changes to the old oracle concept.

Boltr DEX improves this oracle functionality by measuring and recording the price before the first trade of each block (or equivalently, after the last trade of the previous. In this oracle, Boltr DEX accumulates this price, by keeping track

of the cumulative sum of prices at the beginning of each block in which someone interacts with the contract. Each price is weighted by the amount of time that has passed since the last block produce.

Swapping/Trading

Asset Swaps are the most common way of interacting with the BoltrSwap protocol. For end-users, swapping is straightforward: a user selects a KRC-20 token that they own and a token they would like to trade it for. Executing a swap sells the currently owned tokens for the proportional amount of the tokens desired, minus the swap fee, which is awarded to liquidity providers. Swapping with the BoltrSwap protocol is a permissionless process. Swaps using the BoltrSwap protocol are different from traditional order book trades in many centralize exchanges where they are not executed against discrete orders on a first-in-first-out basis — rather, swaps execute against a passive pool of liquidity, with liquidity providers earning fees proportional to their capital committed.

Price Impact

In a traditional order-book market, a sizeable market-buy order may deplete the available liquidity of a prior limit-sell and continue to execute against a subsequent limit-sell order at a higher price. The result is the final execution price of the order is somewhere in between the two limit-sell prices against which the order was filled.

Price impact affects the execution price of a swap similarly but is a result of a different dynamic. When using an automated market maker, the relative value of one asset in terms of the other continuously shifts during the execution of a swap, leaving the final execution price somewhere between where the relative price started - and ended.

This dynamic affects every swap using the BoltrSwap protocol, as it is an inextricable part of AMM design.

As the amount of liquidity available at different price points can vary, price impact for a given swap size will change relative to the amount of liquidity available at any given point in price space. The greater the liquidity available at a given price, the lower the price impact for a given swap size. The lesser the liquidity available, the higher the price impact.

Approximate price impact is anticipated in real-time via the BoltrSwap interface, and warnings appear if unusually high price impact will occur during a swap. Anyone executing a swap will have the ability to assess the circumstances of price impact when needed.

Boltr.
Fuel Ecosystem Token

BOL.

TOKEN CONTRACT :
0x258e78df1f9235025294b29feabdffa18fb5138e

BOL is a governance token inside the Boltrswap DEX platform. It was a token based on KRC-20 contract in the KuCoin Community Chain (KCC). This governance token was officially enshrin[e] Boltrswap as a publicly-owned and self-sustainable infrastructure while continuing to carefully protect its indestructible and autonomous qualities. BOL is also a utility inside the Boltrswap for its multiple ecosystems especially the staking pool and liquidity maintaining of a different asset inside the platform. BOL Pre-Mined:

Total Pre-Mined (9,000,000)	Percentage (%)	BOL (Amount)
Foundation Reserve	12.5%	2,500,000
Liquidity Supply	20%	4,000,000
IFO	10%	2,000,000
Charity	2.5%	500,000

Particulars	Details
Foundation Reserve	Boltr Foundation reserved 12.5% from pre-mined in order to maintain the capital investment and only used for the development of Boltr and provide liquidity to a CEX who requires additional liquidity in their hot-wallet.
Liquidity Supply	Liquidity Supply will be allocated to every pair of BOL inside the Boltr DEX and other DEX platforms.
IFO	Any chosen project who proposes to use Boltr IFO will be provided with liquidity in the swap and staking pool once their IFO finishes in our platform. This requires a high level of review from our expertise to avoid any risk.
Charity	We will provide a donation to any non-profit organization that proposing it for their charity program. This allocated pool of funds will not be used to fundraise a startup project.

Staking become one of the famous ecosystem in crypto world especially when DeFi become popular among cryptocurrency community. Through the development of decentralize finance, staking ecosystem have emerged into various way if compared to the old staking function in blockchain with Proof-Of-Stake consensus. In Proof-Of-Stake consensus, staking function are participants can lock coins (their "stake") at a particular intervals, the protocol randomly assigns the right to one of them to validate the next block. Typically, the probability of being chosen is proportional to the amount of coins – the more coins locked up, the higher the chances to produce the next block. This consensus mechanism have revolutionize the Proof-Of-Work consensus that require too much computational cost for keeping the decentrality of a particular blockchain.

In DeFi, this staking function have emerged into different function which only focusing on the ecosystem of a dApps in the smart contract. In order to make particular dApps comes with more liquidity. This is something that Boltr deploy into its ecosystem. In Boltr platform you can use this staking function using BOL token through different mechanism:
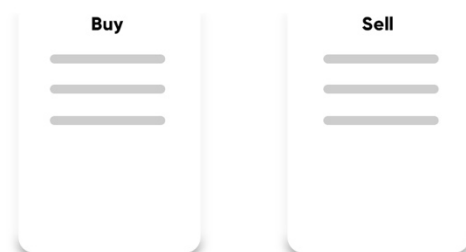
- Stake LP (Liquidity Provider) token to earn BOL.
- Stake BOL to earn BOL
- Stake BOL to earn tokens of other projects

Liquidity Pool

Liquidity Pool is a collection of funds that were locked in Smart Contract. Liquidity pools are used to facilitate decentralized trading, lending, and many more functions in decentralize finance.


In liquidity pool, user have to put a liquidity of two different KRC-20 token in order to create/add liquidity to the pair of the token. Compare to the order book mechanism, liquidity pool mechanism requires a Liquidity Provider to add a liquidity of pair of token and in returns, the Liquidity Provider will receive income

from fees generated on the swap made by user who swapped their token in the pool. The mathematical equation of the mechanism is as follows.

$$x+y = K$$

x is the token A quantity, while *y* is the token B quantity that makes equal to *constant.* The flow of the ecosystem is like in the **Diagram 2** below:
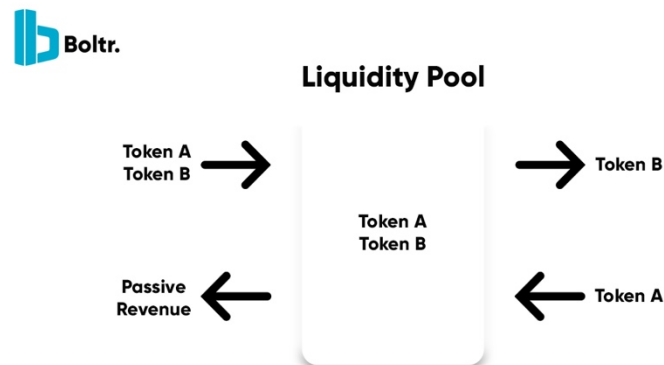

Whenever liquidity were deposited into a pool, unique tokens known as **Liquidity Pool Token (LP Token)** are minted and sent to the provider's address. These tokens represent a given liquidity provider's contribution to a pool. The proportion of the pool's liquidity provided determines the number of liquidity tokens the provider receives. If the provider is minting a new pool, the number of liquidity tokens they will receive will equal sqrt(x * y), where x and y represent the amount of each token provided. Just imagine that the LP token is the receipt token that proven your contribution in the pool. For example, when you provide a funds into any physical project, they will give you a letter of grant ownership in order to proof that you are one of the shareholders. LP Token is exact the same with that protocol.

Passive Revenue will be earn by the liquidity providers from fees that were executed during the swapping transaction made by user in the Liquidity Pool inside Boltr.

Stake LP

Staking LP is a set of liquidity provides in a particular pair of token in order to earn LP token and allow traders to swap their asset. Please refer the flow in the diagram below:
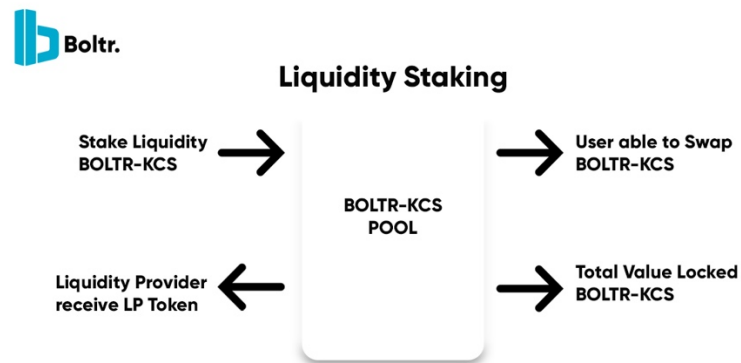
When you stake your LP, for example you stake the pair of BOL-KCS. You will receive a BOL-KCS LP Token in your wallet that proof your liquidity provided in the pool. For you to understand more on what is going to happen to the pool when you stake your LP, you may refer here. You can stake the LP Token in the LP Token pool in order to receive reward in **BOL**. Whenever you unstake your BOL-KCS, the LP Token will be automatically removed from your wallet.
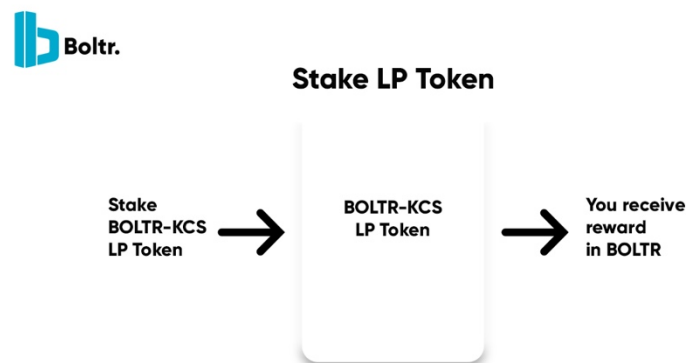
You can stake any other KRC-20 token in Boltr Platform. Below is the explaination of choosing a farm through the multiplier seeking on its multiplier:

PAIR	YIELD	LIQUIDITY	MULTIPLIER
BOL - KCS	APR – 75%	$ 189,750,968	40x
BOL – TOKEN X	APR –455%	$ 694,654	5x

When you want to stake your LP in the farm, you'll see different multipliers for each farm. Multiplier is not something that determine the high return of the farm. The multiplier is about the amount of BOL token allocated to each farm. On the other hand, the yield (APR) affected by both the multiplier and the amount of LP

staked in the farm. The reason of the BOL-KCS farm's multiplier is higher than BOL-TOKEN X farm because of the amount of BOL allocated to the farm is higher than the other one. So, liquidity provider need to identify the farm with lower multiplier in order to get high return on its APR.
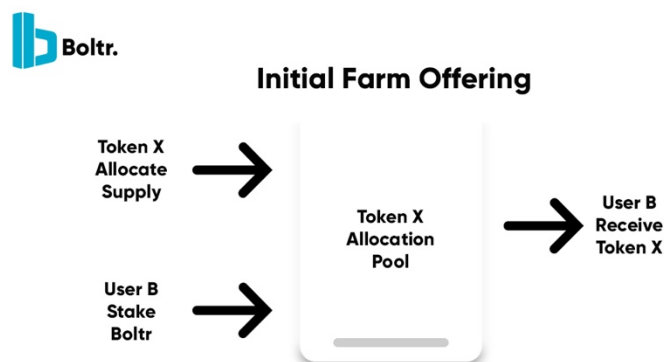
Stake BOL to earn BOL

This is one of the staking pool main function. A sets of BOL token will be allocated to the staking pool with percentage of APY will be based on 2 : 4 between the amount of trade on swapping and the amount distributed to the stakeholders. For example:

- 2,000,000 BOL were allocated to the BOL-BOL staking pool.
- 200 users make a stake of 5000 BOL in 24hrs count of block production
- In 24 hrs count of block production the amount of buying are 10,000 BOL
- It means that the percentage of staking is 50% of the buying amount.
- So, the flexible of APR will be 50% at that particular time.

Initial Farm Offerings (IFO)

IFO is a new type of token sale event popularized by Decentralized Exchange (DEX) platforms, and Boltr also did not missed with this kind of service initiative to bring decentralize finance into the next level.

This IFO works by participation on Stake **BOL** to earn other asset that were listed on IFO sections. This mechanism could help startup project in increasing awareness on their project and gain user on their early stage. In the last day of their IFO period, snapshot of TVL will be taken by Boltr in order to allocate 2% liquidity of Boltr based on the TVL value on the snapshot. You may read the IFO allocation tokenomics in here.

Procedure	Results
Token X apply for IFO listing in Boltr through this form.	Boltr will make a snapshot of TVL in the last day of Token X IFO. **i.e** Total value of lock of Token X = 10,000 BOL

Token X already been approved after security review on its contract. **Token X** provide amount of allocation into the IFO pool. User have to stake their BOL in the IFO in order to earn **Token X**	Boltr will allocate 2% from the TVL in purpose of Token X liquidity in swap function. **i.e** *2% X 10,000 BOL = 200 BOL* 200 BOL will be allocated to liquidity of BOL/TokenX

Kucoin Community Chain
(KCC)

Boltr is a technology platform powered by KuCoin Community Chain (KCC) in storing and keeping data through decentralized and distributed mechanisms. KCC is a decentralized public chain with high performance. KCC solves pain points associated with Blockchains, like high gas fees and slow speeds, without sacrificing on security. For more info related to KCC you may refer this website:

www.kcc.io

Blockchain Explorer:

https://explorer.kcc.io/en/token/0xa08bf28b0791812b243b6c7b90152e00aebb61c3

KCC RPC Network

Mainnet

```
Chain Name      : KCC-Mainnet
RPC-Url         : https://rpc-mainnet.kcc.network
Chain ID        : 321
Symbol          : KCS
Explorer        : https://explorer.kcc.io/en
```

Testnet

```
Chain Name      : KCC-Testnet
RPC-Url         : https://rpc-testnet.kcc.network
Chain ID        : 322
Symbol          : KCS
Explorer        : https://scan-testnet.kcc.network
```

CLOSING TOUGHTS

"Boltrswap is an innovative exchange protocol built on KuCoin Community Chain (KCC). It allows anyone with a KCC wallet to exchange tokens without middleman. In this version (1.0), this whitepaper only covering the topic about the ecosystem inside Boltr. In the next version whitepaper, Boltr Foundation (Labs) will include more explainations related to the ecosystem and market segmenting for Boltr."

Boltr Foundation (Labs)
Whitepaper 1.0

Refference:

Ethereum. (2021). *A Next-Generation Smart Contract and Decentralized Application Platform.* Retrieved from: https://ethereum.org/en/whitepaper/

Chitra, T., Noyes, C., Chiang, R., Kao, H.T., & Angeris, G. (2019). *An analysis of Uniswap Market.* Retrieved from: https://web.stanford.edu/~guillean/papers/uniswap_analysis.pdf