

DefiSpace.com

Decentralized Exchange

[FreeTon DEX Implementation Stage 3
Contest](#)



Introduction

Website: <https://trade.defispace.com>

Support: <https://t.me/DefiSpacecom>

Contact: <https://t.me/UltraNihilist>

GitHub: <https://github.com/radianceteam/dex3>
<https://github.com/radianceteam/defispace-front>

License: Free Software (Apache 2.0)

Wallet: 0:e989bda452d7276ec42cce90307dc3ed1d828205c304776322c8df2e2350780d

Team

General manager:	Dmitry Summit
Team manager:	Anzor Daurov
Lead developer:	Yaroslav A.
Developer:	Anzor B.
Developer:	Ramazan C.
Developer:	Maxim Z.
Developer:	Roman O.

Concept

We see the adoption process as a key factor to success for the whole Decentralized Finances. Our vision is to provide a smooth and efficient experience for end-users, to bring them new value and accommodate the demands of mass-users.

Our **DefiSpace.com** will take its course to promote DeFi and succeed Free TON.

Abstract

Opening the new world of Decentralized Finances for newcomers.

Vision

DefiSpace.com envisions to be the top DeFi onboarding site.

Mission

Our mission is to bring new value from the synergy of services.

DefiSpace Overview

Product:	AMM and order book (limit orders) decentralized exchange
Wallets supported:	Web-based wallet , mobile Chrome support and Android app Supports TIP-3 compatible tokens and TrueNFT.
Monetisation:	<ul style="list-style-type: none">• Liquidity Providers earn on swap commissions and liquidity farming• Governance token holders earn on token price growth• Referrers/Affiliate partners earn on swap commissions
Add-on product:	Staking into depools functionality leads to issue TrueNFT certificates (as external owner)
Decentralization and Governance:	<ul style="list-style-type: none">• Open-source code, repositories are opened for pull-requests• Smart-contracts deployment and upgrades through multisig• TIP-3 compatible governance token (DEX)• Governance token holders voting by Simple Majority Voting (SMV)
Security:	AMM passed security audit Stage 1 by FreeTON ForMet Subgovernance

DefiSpace Overview

Features overview

AMM/liquidity pool based exchange

- Solved user's problems:
 - Earning as Liquidity provider
 - Swapping tokens by user in immediate fashion
 - Swap is performed on existing pair and using liquidity previously allocated in it.
 - New pairs can be added by any user.
- Monetization:
 - Exchange commission per each swap is preset to 0,3% of TokenA (token which is sold by user), but can be adjusted by [Governance Voting](#) later.
 - Part of the commission goes to Liquidity Providers.
 - Part of the commission will go to Referrer, if any.
 - Part of the commission will go to support the DEX token by automated buying.
 - Part of the commission will be burned, see [AMM Money Movement Diagram](#).

- Formulas of economic model:

- $AMM\ price = \frac{reserveA}{reserveB}$
- $AMM\ exchange\ amountOut = \frac{amountInWithFee * reserveOut}{amountInWithFee + 1000 * reserveIn}$
 - where
- $amountInWithFee = 997 * amountIn.$

- Implementation overview:

- Implementation successfully passed security audit by Free TON ForMet Subgovernance (Stage1 [link](#)).

Order book based exchange

- Solved user's problems:
 - Exchange tokens using price limit order.
 - Exchange is performed on existing pairs. Pairs list is the same as for AMM based exchange.
- Monetization:
 - There are two parameters for exchange commission:
 - For market maker (existing order in orderbook), p1
 - For market taker (immediate order), p2.

- They will be adjusted by [Governance Voting](#). For test reasons currently p1 and p2 are zeros.
- Implementation overview:
 - Every limit order is stored in order-book as a smart-contract based on TrueNFT, which makes it possible to execute a search by price range on client-side.
 - Based on the order amount and current reserves on the pair, we calculate the values of reserves after the exchange (using AMM formulas) and determine the range of prices to search for limit orders in a decentralized orderbook.
 - If we find limit orders in this range according to the pair's index and prices, then we make an exchange using them. If not, then we conduct an exchange through AMM.
 - Basically the execution price of a limit order is obtained when two orders meet.
 - The remainder of two limit orders is processed just like the new limit order.
 - Implementation is early alpha and there can be unfixed bugs!

Web-based wallet

- Solved user's problems:
 - Multiplatform compatibility achieved by a web-based wallet provides a way to use wallet from mobile platforms - from mobile browsers (currently Chrome is supported) and accessible from mobile applications (currently Android is supported).
 - Integrated into the DeFi service platform, the wallet makes the user experience more lean.
- Implementation overview:
 - See [architecture](#).

Governance token (DEX)

- Solved user's problems:
 - Decentralization of project's governance.
 - Possibility for every user/partner to participate in the project.
- Monetization:
 - Governance token is freely traded on exchange.
 - Governance token price is constantly pushed up by 2 incentives, see [AMM Money Movement Diagram](#):
 - Buying Governance token for a fraction of Exchange Commission,
 - Burning Governance token by a fraction of Exchange Commission.
- Implementation overview:
 - Governance voting by governance tokens is based on Simple Majority Voting smart-contract system. This means SMV DeBot can be used for voting by users.
 - It uses it's own TIP-3 compatible token (DEX is a preliminary token name). Overall minted amount is 11 mln. DEX tokens.
 - Initial distribution:
 - 65% - Farming and marketing programs.
 - 10% - Mother environment partnership. Implemented in separate proposals with Defi Alliance members and TON Labs.
 - 15% - Development team motivation with vesting for 3 years.
 - 10% - Presale program eligible till 2022Q2 inclusive.
 - All tokens left after the presale program will be transferred to the farming and marketing fund.

Referral/Affiliate program

- Solved user's problems:
 - Business users (for ex. any wallets, DeFi services and other applications) can monetize the usage of swaps on exchange.
 - Governance token holders get the increased value from boost of exchange usage driven by Referral program.
- Monetization:
 - Initial Referral commission is set to 0,05% of TokenA (the token which is sold during swap on exchange).
 - Specific percentage of commission, which returns to Referral, can be changed by governance voting.
- Implementation overview:
 - The list of referrals is fixed as a white-list for tracking only trusted partners and excluding abuse by ordinary users.

Staking into depools

- Solved user's problems:
 - Earn additional tokens long term and short term.
 - The long-term deposit of TON Crystals does not bind the user to wait for the end of term, offering an alternative way of withdrawing funds if necessary.
- Implementation overview:
 - Staking Crystals into Depools with sufficient additional information in a form of profitability calculator.

- All deposits made by a user result in receiving a Deposit certificate (TrueNFT token) in user's wallet which designates the deposit ownership.
- Deposit certificate could be sold, pledged or used in any future DeFi product.

Decentralization:

- Possibility for every user/partner to participate in the project governance through Governance token.
- Secure the process of technical upgrades of smart-contracts. Initially DEX smart-contract deployed and owned by multisignature wallet (SafeMultisig contract). Later the special execution smart-contract for upgrades through SMV decisions will be deployed.

Accordance to General Requirements

Requirements

General contest application requirements

1	Contracts and methods for maintaining liquidity and users (yield farming, remuneration for market-making, or other ways of maintaining).	DONE GitHub Sources
2	Ready-made full-featured user interface for interacting with DEX, viewing information about pools/orders.	DONE GitHub Sources
3	Unloaded, ready for actual use, deployed project on the Free TON mainnet.	DONE trade.defispace.com
4	The basic economic model and description of the movement of money in the system.	DONE

5	The general technical architecture of the stage solution, including all the listed functions from the section of hard evaluation criteria.	DONE
6	Detailed technical description of the proposed implementation with the justification of the chosen approach: smart contracts, interfaces.	DONE
7	Deployed implementation in the FreeTON main network with the ability to test functionality, as well as a rolled-up implementation in the FreeTON main network.	DONE trade.defispace.com

Checklist

Requirements

General criteria by Contest Rules

1	TIP-3 tokens or their extensions as proof of investment.	DONE
2	The system efficiently utilizes storage space and minimizes execution and transaction fees.	DONE
3	The system effectively uses the capabilities of the FreeTON network such as a tick timer, messaging function, sharding.	DONE
4	If there is an off-chain part: maximize the use of decentralized resources to ensure system independence.	DONE
5	Modularity and documentation of the code, ease of support, the openness of developers to changes and additions.	DONE

Checklist

Requirements

Hard criterias by Contest Rules

1	Ability to create new pairs, exchange, view information about rates, the composition of pools/orders.	DONE
2	Support for de-bot interface and/or web and/or mobile interface for actual use.	DONE
3	Description and use of mechanisms for maintaining liquidity/order book/users in the system.	DONE
4	The product must be deployed on the FreeTON mainnet.	DONE *

* 0:5d0f5a8cb443e00934d1bb632acadc036a6c41b59308e3a36d809449a5e777d9
- **root contract address on the mainnet** trade.defispace.com

Checklist

Requirements

Soft Criteria

	Criteria	Status/details
1	Mainly everyday English to make technical documentation easier to understand. Additional languages will be a plus.	DONE
2	Completeness and readiness of the product for actual use in the main network.	DONE *
3	Additional interfaces, de-bots, mobile apps, SDK and public APIs will be a plus.	DONE GitHub Sources

* Some added functionality outside of core DEX smart contracts are currently in beta version.

Checklist

Requirements

Artifacts

	Criteria	Status/details
1	Source code of smart contracts in the public repository.	GitHub Sources
2	Source code of DeBots/interfaces in the public repository.	GitHub Sources
3	Smart contracts deployed on the testnet, if any.	0:3ea8825e810a82c9b56ad950f87ab9fb22d9761109b174d5e312ed374c25e011 - root contract address on the testnet
4	Smart contracts deployed on the main network.	0:5d0f5a8cb443e00934d1bb632acadc036a6c41b59308e3a36d809449a5e777d9 - root contract address on the mainnet

5	Link to web interface / mobile application for testing.	trade.defispace.com (mainnet) beta.defispace.com (testnet)
6	DeBot addresses in test and main network, if any.	N/A
7	Link to GitHub/GitLab with the source code and thorough README on how to deploy and run.	GitHub Sources
8	Open-source license.	License link

Checklist

System Requirements

Platform: MS Windows, Mac OS, Linux GUI or compatible, Apple iOS, Android 6+

Web-browser: Google Chrome or compatible, desktop and mobile

Architecture overview

Diagrams and more

We have thoroughly optimized architecture for multithreaded Free TON blockchain. The result is a highly scalable and fast DEX implementation of AMM mechanics combined with order-book mechanics inspired by FLEX exchange ideas. The main optimization focus was to use the peculiarities of Free TON to achieve the fastest possible transactions by packing everything into one blockchain block.

1. Swap operation gas management

When swapping assets on the DefiSpace decentralized exchange user interacts with the pair smart contract to create separate wallets for TIP-3 tokens. This diagram demonstrates this process and movement of funds during it.

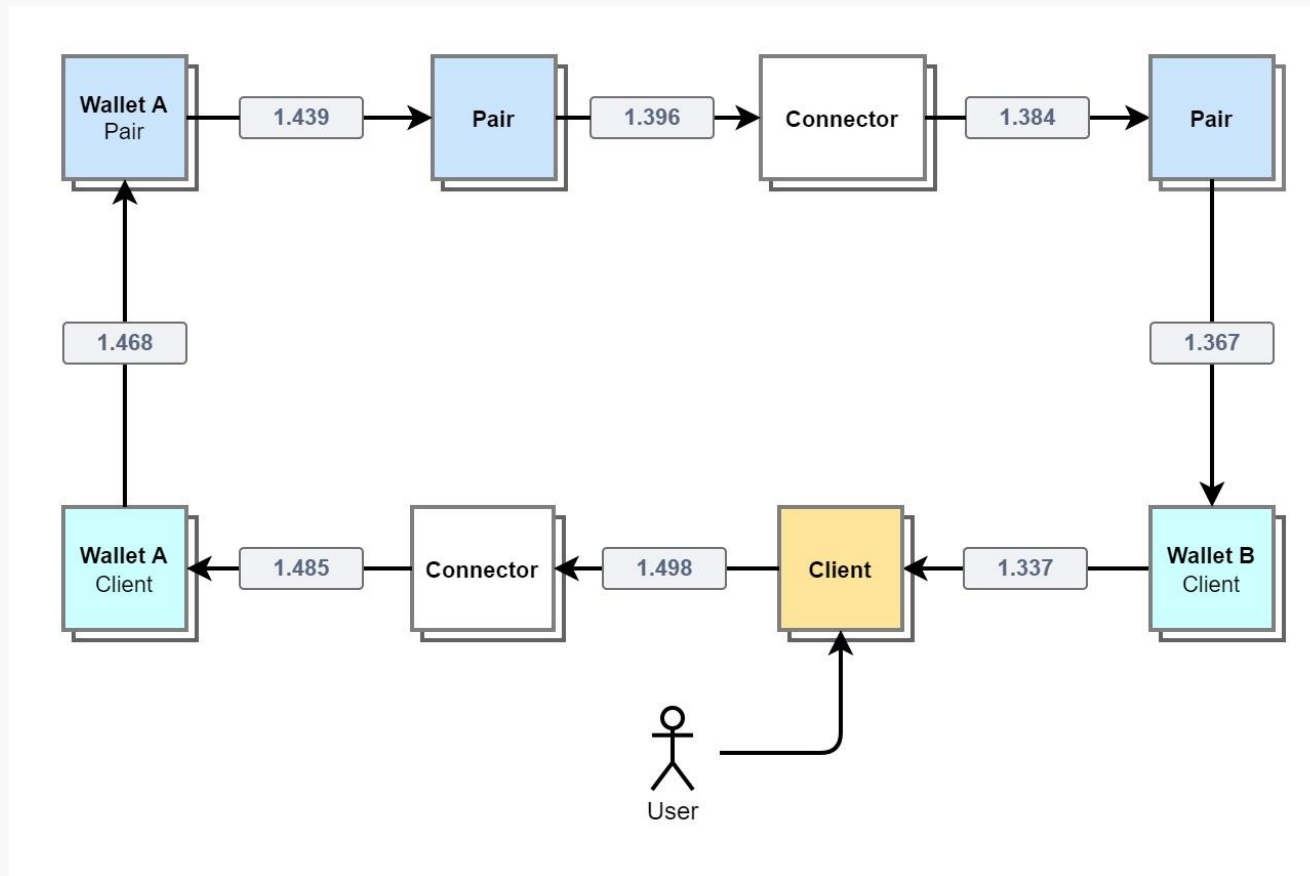


Figure 1. Swap operation gas management. Total gas: 0.22 TON

2. Liquidity providing operation gas management

When providing liquidity users interact with a pair smart contract to move tokens to their respective wallets owned by the pair smart contract and add them to the liquidity pool.

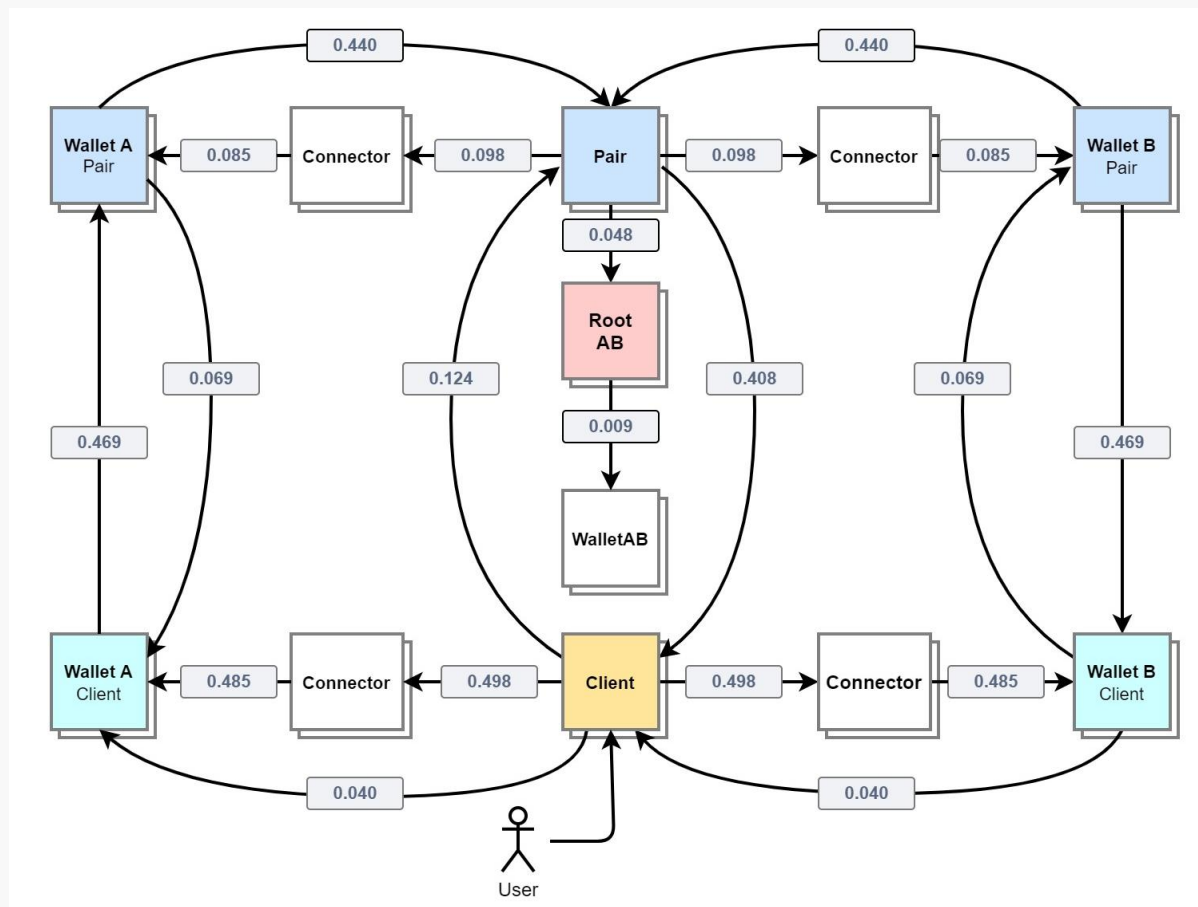


Figure 2. Liquidity providing operation gas management. Total gas: 0.388 TON.

3. Liquidity withdrawal operation gas management

When users withdraw liquidity they interact with a pair smart contract to get the assets back to their wallets from the liquidity pool.

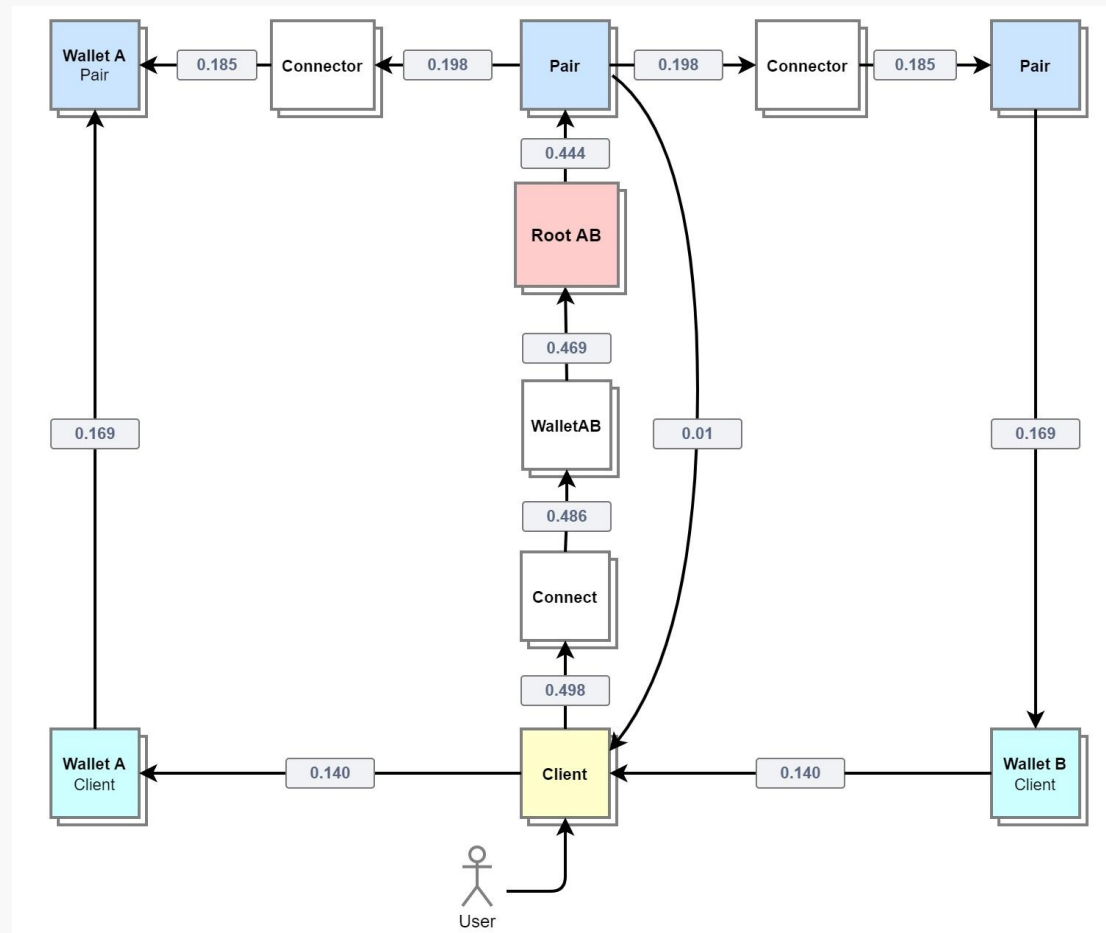


Figure 3. Liquidity withdrawal operation gas management. Total gas: 0.21 TON.

4. Sharding optimization scheme for AMM

FreeTON's Sharding mechanism is utilized to achieve high speed and low cost of transactions.

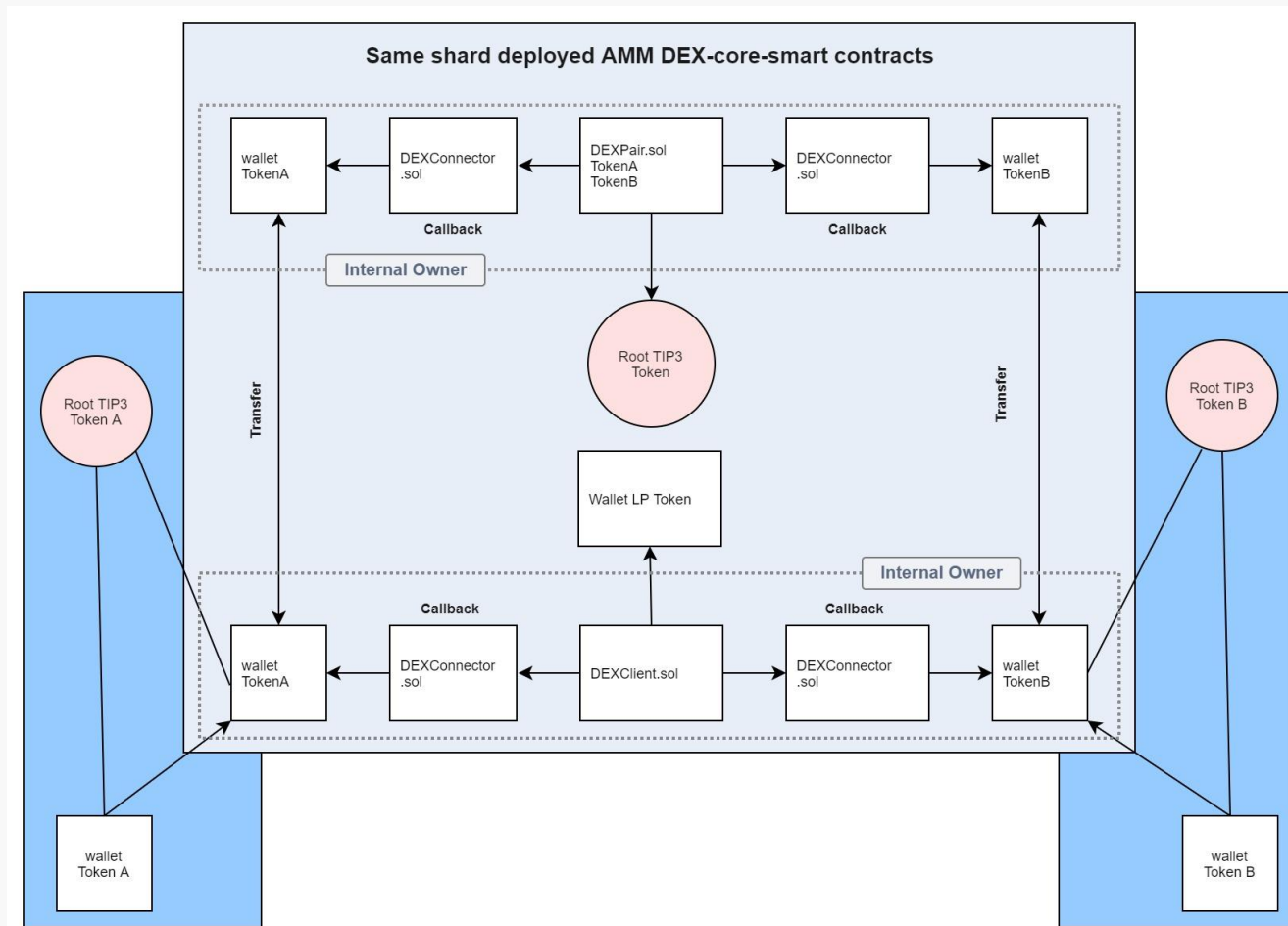


Figure 4. Sharding optimization scheme for AMM.

5. Transaction fees management, description of the movements of money

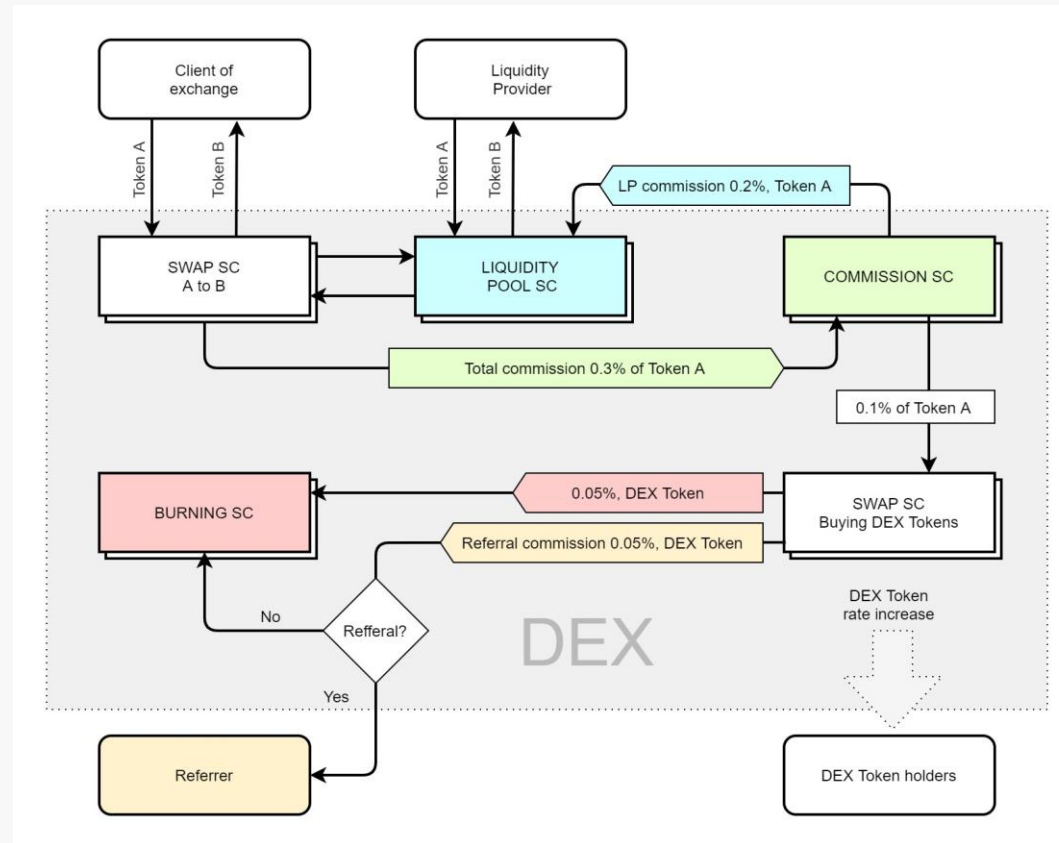


Figure 5. Money Movement (*)

* Token A swap operation for 0.1% commission is not yet implemented.

6. Internal logic of Limit Orders

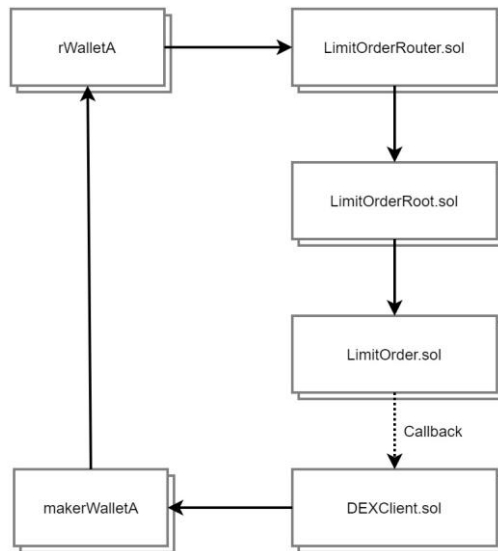


Figure 6. Internal logic of Limit Orders Makers.

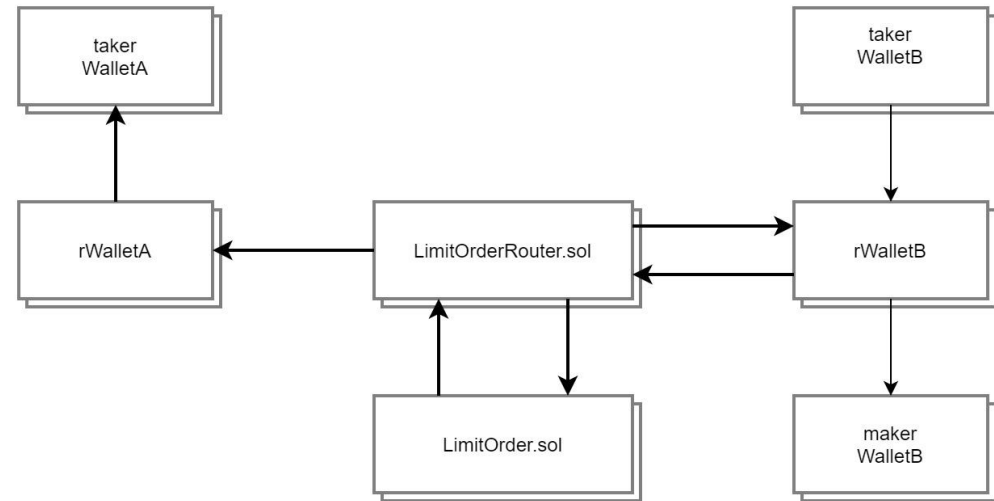
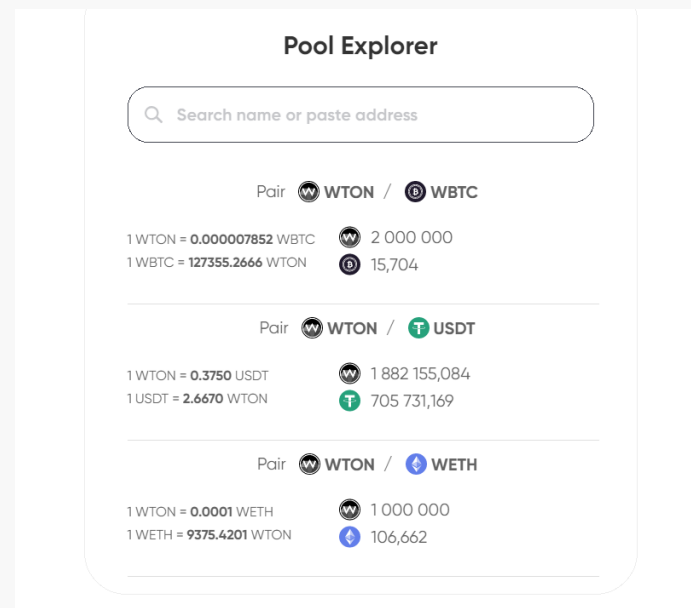


Figure 7. Internal logic of Limit Orders Taker

7. Viewing information, statistics and API

DefiSpace has a built-in tool to display liquidity pair statistics. To access it click on “Pool Explorer” in DefiSpace interface.



It gathers information from the pair smart-contract that can be accessed by third party applications and services. **Instructions on how to access this API can be found in DefiSpace github page here:**

<https://github.com/radianceteam/dex3/tree/main/DEX-core-smart-contracts/api>

8. Governance implementation

SMV governance is integrated into DefiSpace DEX root contract. Here are the addresses of the SMV voting contracts:

Voting for contract —

0:205f80e1758ab8fc34de0b6ae98cea199881472a0589e50d0674abce869e7783

Voting against contract —

0:ba69f80c173c65bb92dfd4edea250ed3e2eead2aa803265a5b5dd4576814bed1

How to use

Video explanation

1. How to Use Wallet

<https://youtu.be/HdCgoWowv08>

2. How to Swap Assets

<https://youtu.be/KpKlIFag1Jo>

3. How to Provide and Withdraw Liquidity

https://youtu.be/XO3qb5aK_Xc

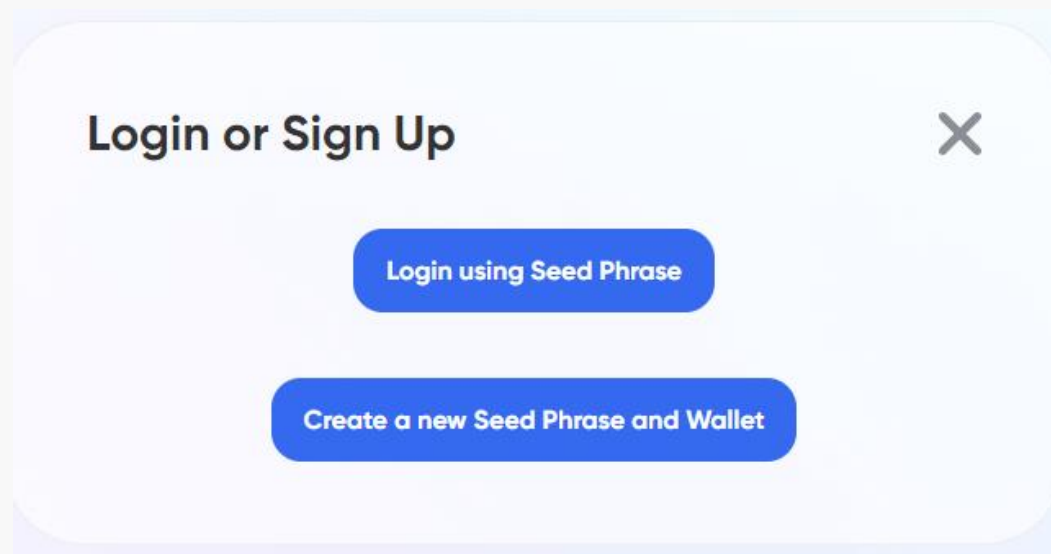
4. How to Earn with TON Crystals Staking

<https://youtu.be/C4c2CX4uZRM>

How to use

Manual

1. How to Use Wallet



If you're new to DefiSpace click on "**Login**", then "**Create a new Seed Phrase and Wallet**" to create your own DefiSpace wallet.

How to create wallet:
Step 1/3: Please back up your seed phrase safely ✕

Word 1 six ▼	Word 2 quit ▼	Word 3 maple ▼
Word 4 vendor ▼	Word 5 give ▼	Word 6 vital ▼
Word 7 orient ▼	Word 8 dove ▼	Word 9 perfect ▼
Word 10 journey ▼	Word 11 better ▼	Word 12 pipe ▼

⚠ Important information
It is very important to keep the seed phrase. It cannot be restored. The DefiSpace service does not store the seed phrase, and will not be able to help if it is lost. Remember this.

[Re-create seed phrase](#) [Continue](#) [Copy](#)

A new **seed phrase** will be generated for you. **Please copy** it to a safe place, this is the only way to restore access to your wallet in case of loss. Press "**Continue**".

Step 2/3: Enter seed phrase from the previous step

Word 1
six

Word 2
quit

Word 3
maple

Word 4
vendor

Word 5
give

Word 6
vital

Word 7
orient

Word 8
dove

Word 9
perfect

Word 10
journey

Word 11
better

Word 12
pipe

Seed phrase valid
Seed phrase valid. You can create DexWallet

Check doesn't started
When you enter twelve words of the seed phrase, we will automatically run a check. If you doesn't save Seed Phrase, you can back.

Back

Generate wallet

Enter the previously generated seed-phrase. If you have the whole seed phrase copied to your buffer you can enter it whole in the first field and it will get copied automatically to all the other fields for convenience. When you have entered the seed phrase correctly, click "**Generate wallet**".

Step 3/3: Top up your wallet for activation

Please send 2 or more TON to this address:

**0:5a56cad474fe2ba10793f8bd2a02c246e84380463d14bf8d0a
b048036b7c5431**, and click "Create wallet".

[Back](#)[Copy address](#)[Create wallet](#)

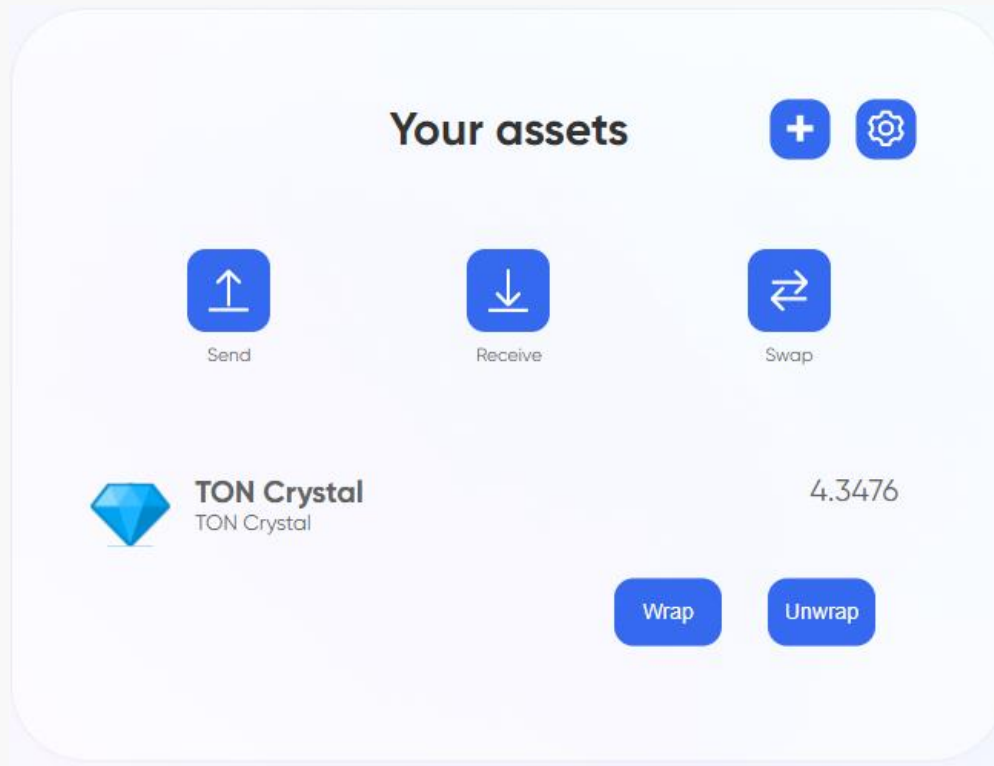
Decryption password

.....


[Set Password for your Wallet](#)

After clicking "**Generate wallet**" you'll see a wallet address that you need to fill up with some TON Crystals to pay for network fees in the future. Copy the provided address and send some TON Crystals to your wallet.

Set your **password** to protect your local seed phrase storage in this browser. It can contain numbers and letters. After setting up a password you'll enter your wallet. At this point you only have the native TON Crystals that you sent on it.



To use the exchange functionality you need to exchange your native TON Crystals into their TIP-3 token equivalent. To do that go to your **“Assets”** and press on **“TON Crystal”**, then press the **“Wrap”** button.




Wrap Tons

Amount

2.5

Balance: 4.3476

 TON Crystal

Confirm wrap

Choose how many TON Crystals you need and push “**Confirm**”. You will receive your WTON tokens in less than a minute.


2. Swap (AMM, limit orders)

Swap


From

0

MAX


 WTON

Balance: 34



To

0

 WETH

Balance: 0

Connect pair

Slippage tolerance:

0.10%


Your transaction will revert if the price changes unfavorably by more than this percentage

Auto

Price 0.0001 WETH per 1 WTON

Choose a pair of tokens and click the "**Connect pair**" button. The first time you perform a swap you need to pay less than 1 TON Crystal and connect your wallet smart-contract to the pair smart-contract.


Swap




From

10

MAX


 WTON

Balance: 34



To (estimated)

0.0011

 WETH

Balance: 0

Swap

Slippage tolerance:

0.10%

Your transaction will revert if the price changes unfavorably by more than this percentage

Auto

Price 0.0001 WETH per 1 WTON

0.0011 WETH	2.00%	0.0300 WTON
Minimum received	Price Impact	Liquidity Provider Fee

After the pair is connected, select the same pair and enter the amount you want to exchange. After the pair is connected, enter the amount and click **“Swap”**. Then, **“Confirm the swap”** and wait a little. You'll see a notification below when the swap is complete.

Limit order

From

Balance: 10000

123

MAX

WTON

To (estimated)

Balance: 3749.7

36.9

T

USDT

Price

0.3

T

USDT

Set to market

Create limit order

Price 0.3000 USDT per 1 WTON

You can exchange your assets using **Limit orders**. It works similarly to regular exchanges, but is non-custodial and completely open-source. Using a limit order you can exchange assets with a specific rate. The limit order will execute an exchange when the market price corresponds to the price in the order.

At any time you can cancel your limit order.

**USDT - WTON**

Limit order

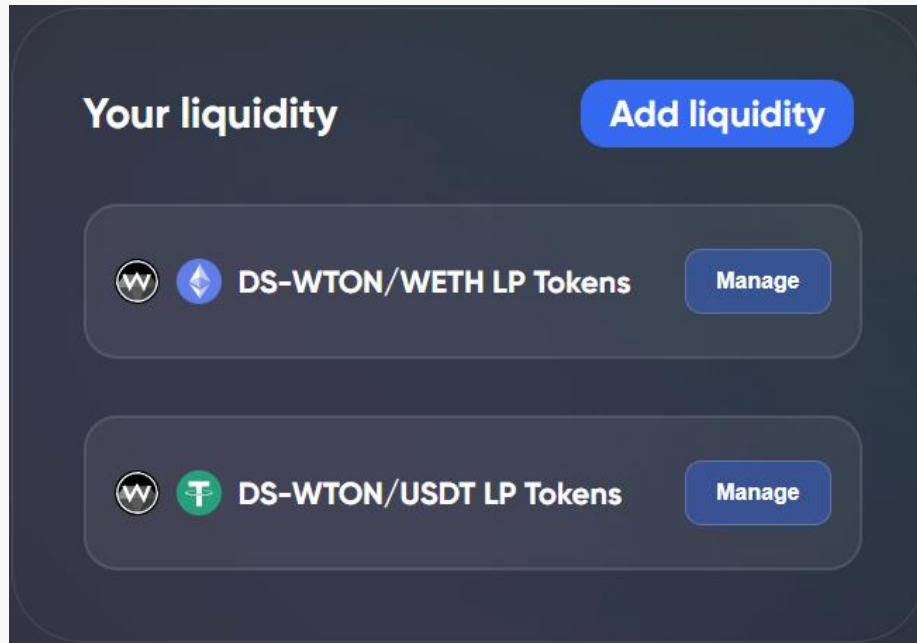
50 WTON

Price

5000 USDT**250000 WTON**

After you create a limit order you will be able to see it in your "Assets"

3. Liquidity (add, withdraw)



When you have different tokens in your **DefiSpace** wallet you can start earning profit by becoming a liquidity provider. Simply go to "**Provide liquidity**" and click "**Add liquidity**".

< Add liquidity

From

1

MAX

WTON

Balance: 34

To (estimated)

0.3748

USDT

Balance: 2.2365

0.3749

You will receive LP tokens

0.0001 %

Your share of pool

2.668

WTON per 1 USDT

1975129.5793

WTON pooled

0.3748

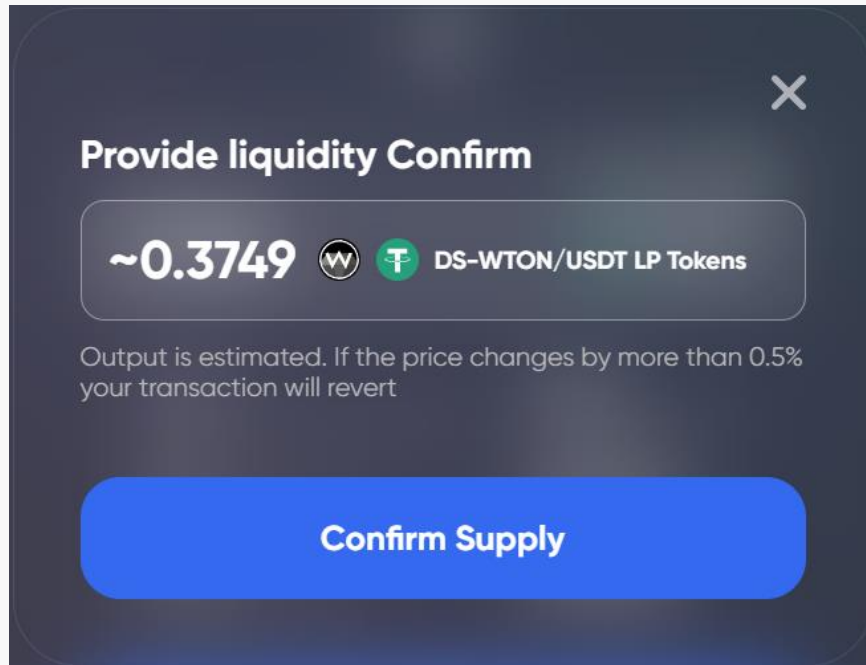
USDT per 1 WTON

740305.4272

USDT pooled

Supply

Select a pair of tokens that you want to deposit in a liquidity pool, enter the amount you'd like to deposit and click "**Supply**".







You'll see how many liquidity tokens you will receive if you confirm this deposit. You will get a notification when the action is complete.



4. Viewing Statistics (trades, pools, voting results, rates)



Pool Explorer



Search name or paste address



Pair  **WTON** /  **WBTC**

1 WTON = **0.000007852** WBTC  2 000 000
1 WBTC = **127355.2666** WTON  15,704

Pair  **WTON** /  **USDT**

1 WTON = **0.3750** USDT  1 882 155,084
1 USDT = **2.6670** WTON  705 731,169

Pair  **WTON** /  **WETH**

1 WTON = **0.0001** WETH  1 000 000
1 WETH = **9375.4201** WTON  106,662

If you're interested to learn more about providing liquidity there's a **"Pool explorer"** that lets you see the liquidity stats for each pair on the exchange. You can see the amount of tokens in pairs and their respective rates.

User acquisition

Traders and liquidity providers

01 Affiliate/referral programs

DefiSpace team is going to start a special affiliate program for webmasters, media and other traffic providers based on CPA, CPL, and Revenue share models. Preliminary starting commission will be 0.05% of each trade of the user who was sent by a partner.

03 Conferences

DefiSpace team is going to use conferences about IT, Finance, Crypto, Affiliate marketing to attract new partners and users. Our team members participated in Bitcoin 2021 Miami Conference and World Affiliate Show 2021.

05 Press releases

PR submissions via the world's best PR Wire services with full coverage of top media — Bloomberg, Market Watch, Business Insider, Yahoo.Finance and hundreds of others.

02 Farming programs

We are going to attract liquidity providers by yield farming program in collaboration with DeFi SG. Upon mutual agreement, some part of the governance tokens of the DefiSpace platform can be distributed to main actors of the Free TON / DeFi SG community.

04 Financial organizations

DefiSpace team is currently communicating with financial companies for cross-platform integration between our DefiSpace and their trading applications.

06 Pay-per-click ads

14 years of experience with Google Ads, Facebook, Yahoo, Yandex.Direct, MarketGid and many 2-tier ad networks. We understand very well how to run Audience-targeted ads.

07 TV promotions

Short educational videos: “What is Defi?”, “How to trade at decentralized exchanges?”, “How to earn money with liquidity providing?”. We have an experience with some US media like BloombergTV, NewWatchTV and others.

08 Influencer marketing

Popular influencers on platforms like YouTube and TikTok with a large number of followers will help to maximize business value for DefiSpace.com by showcasing its positives.

Completed Road Map

7 months

March 2021

- Finalist of DEX Stage 1 contest

April 2021

- Major architecture overhaul
- Product concept
- Frontend design

May 2021

- Gas management completion
- Frontend implementation
- Debot re-work
- Wallets integration

June 2021

- Publishing first beta for DEX Stage 2
- Onboarding process design
- Tests implementation
- Finalist of DEX Stage 1 contest

July 2021

- **Started security audit by ForMet SG Team**

August 2021

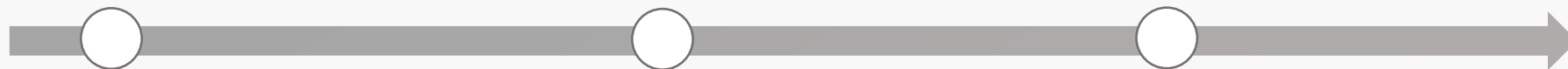
- Web- based wallet implementation

September 2021

- **Completing 1 stage of security audit**
- Integrated wrapping of TON Crystals
- Limit orders support
- Governance/Voting support (basic functionality)
- Mainnet deployment

Future Road Map

3 months



October 2021

- Bug-bounty mainnet program
- Farming program web-UI
- Affiliate programs support: stage 1

November 2021

- Farming program engagement by DeFi SG
- Enhanced web-UI based on the usability A/B test
- User acquisition tests
- Affiliate programs support: stage 2

December 2021

- Gamification for users
- Affiliate programs support: stage 3

Contacts

Telegram: <https://t.me/UltraNihilist>

Wallet:

0:e989bda452d7276ec42cce90307dc3ed1d828205c304776322c8df2e2350780d

