

Crystal Wallet

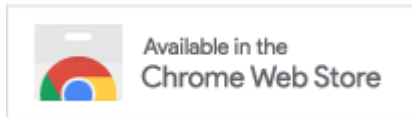
The famous name in a new form

Submission to the contest
“Free TON wallet as a Chrome extension. Stage 1”

Abstract

Crystal Wallet is well-known to all community members of FreeTON. The Broxus team has remastered it from scratch and is proud to present it to you in the form of a browser extension.

You don't need to have any technical knowledge to use Crystal Wallet - just install it from the Chrome Store and let it guide you.



Key features

For users

Crystal Wallet is a Google Chrome extension that lets you manage your seed phrases, private and public keys, and wallets securely without leaving your favorite browser.

Import existing keys or create new ones; choose popular wallet contracts to use and deploy them at the convenient moment; accept and send transactions with memos or encoded payload; add and remove tokens; manage permissions you provide to dApps (DEXes, bridges, multisig wallets, etc.); protect your data with encrypted local key storage.

Crystal Wallet extension is a thoroughly remastered version of the famous desktop Crystal Wallet created by the Broxus team. Enjoy a new convenient interface with the same speed and security!

For dApps

Crystal Wallet injects the Free TON API into every website's DOM context so that the distributed applications can read from the blockchain and interact with smart contracts. Be it a decentralized exchange, browser game, cross-chain bridge, or multi-signature wallet; Crystal Wallet will serve you as a lightweight, configurable, and reliable Free TON client.

Privacy and permissions

The extension does not and will not collect any data from you.

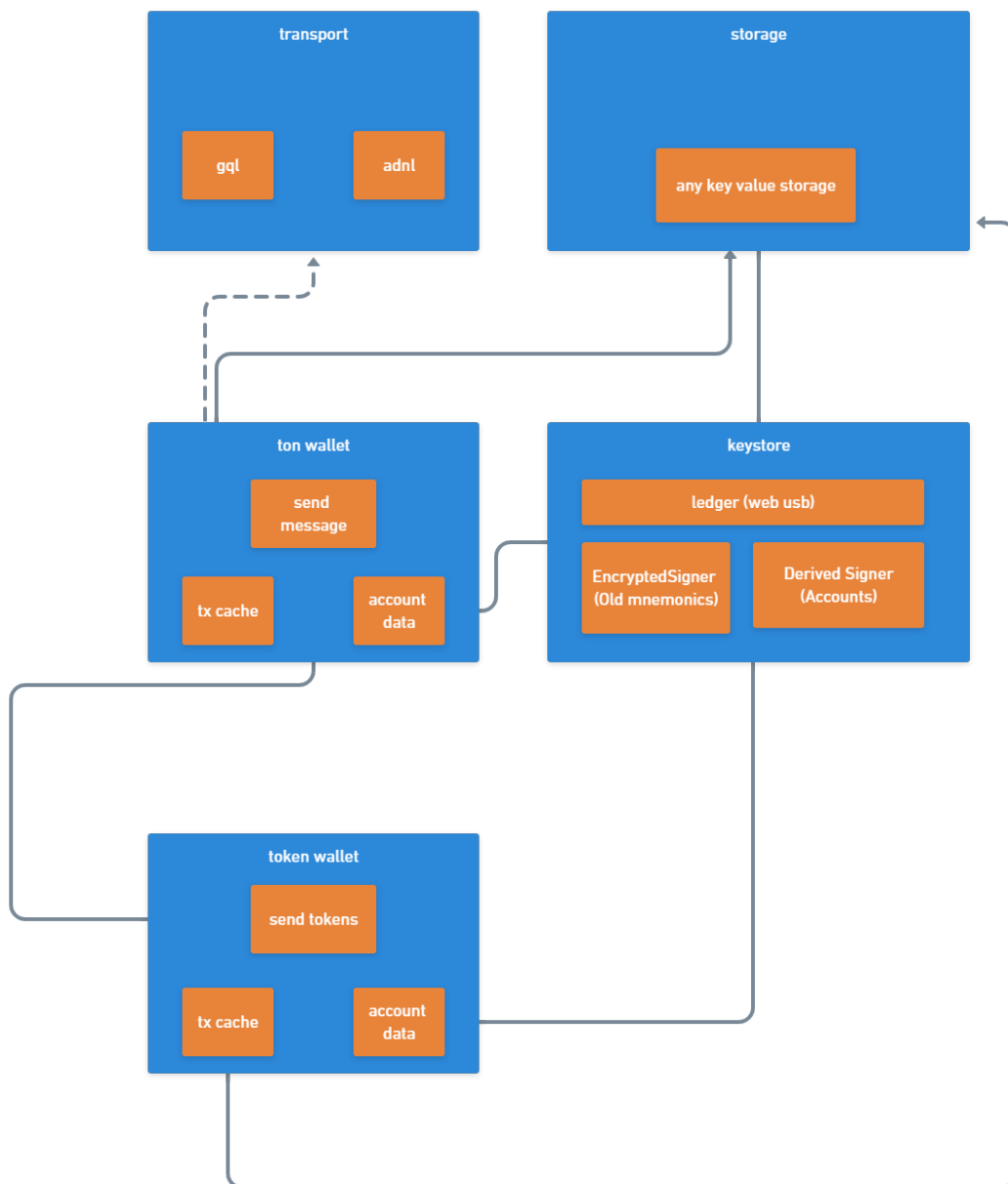
However, it will require your permission to read and write to any webpage, as it enhances the functionality of the standard browser context. You can always view the source code of Crystal Wallet on Github.

Extension architecture

Wallet core

It is powerful yet elegant:

- **Transport** is used to interact with the blockchain through GraphQL (default method) or ADNL;
- **Keystore** contains encrypted data and keys generation methods;
- **Storage** keeps data caches;
- **TON and token wallets** wrap methods for working with different asset types.



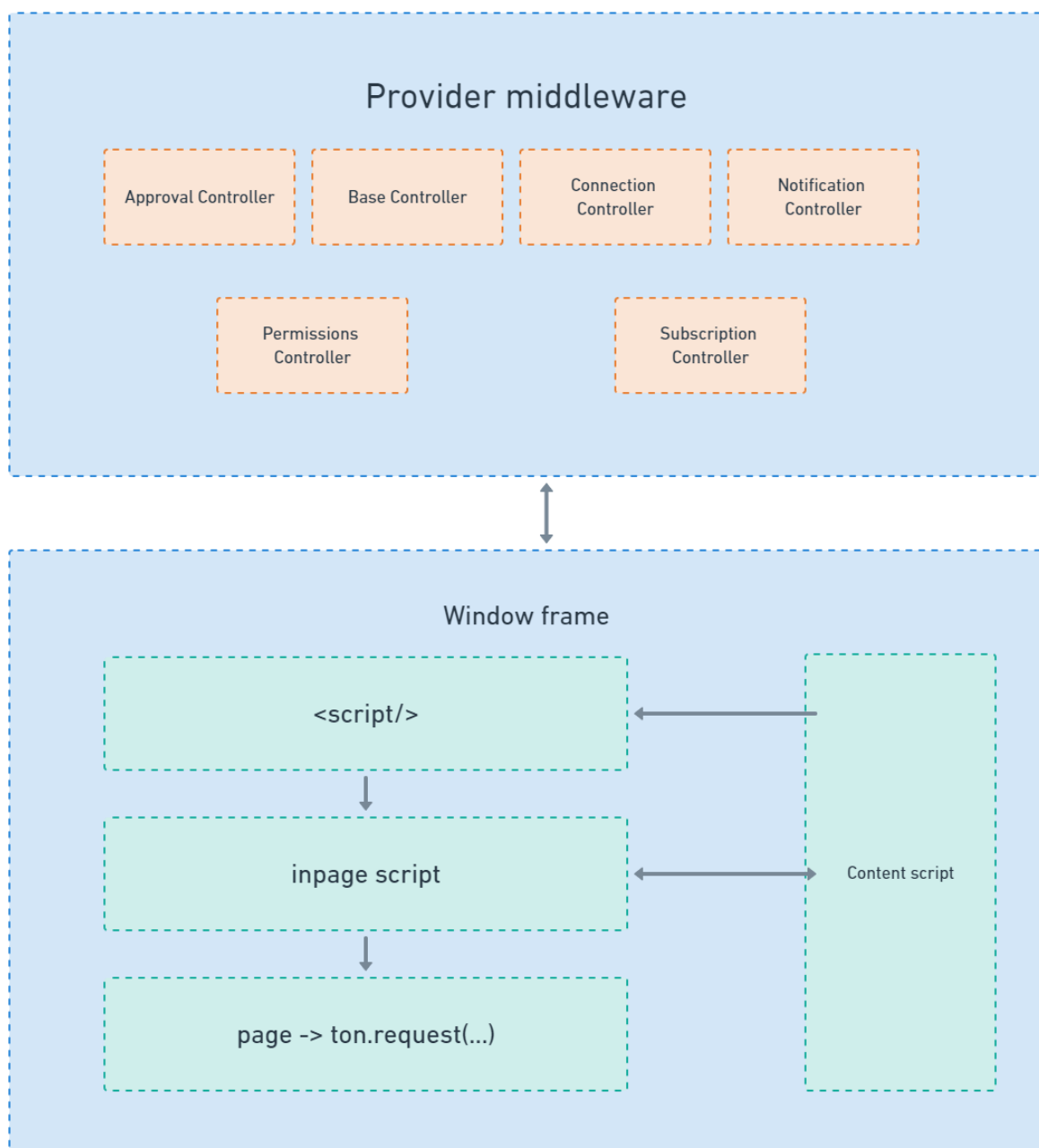
Extension UI

This is what a user sees. It contains the popup window and browser notifications you receive once Crystal Wallet finds any incoming or outgoing transaction.

WEB3

The most interesting and complex part of the wallet allows various dApps to interact with FreeTON directly from the browser.

The extension injects a content script into the page, which interacts with the background script through the inpage one.



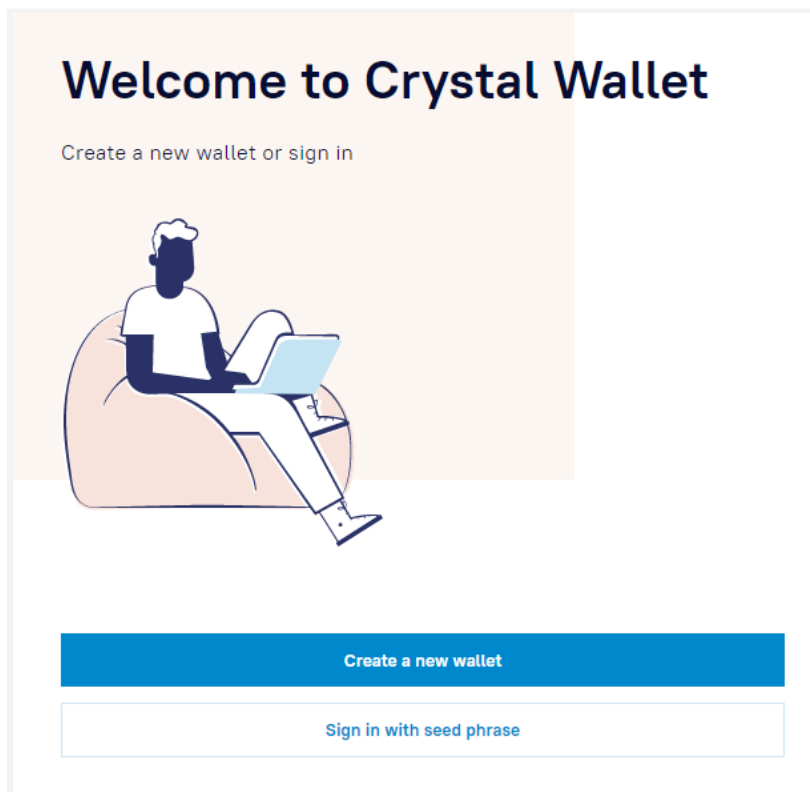
Supported wallet contracts

- Wallet V3 (legacy) - to let users of the old version of Crystal Wallet quickly move to the new one.
- SafeMultisig
- SafeMultisig24
- SetCodeMultisig
- Surf

User flows

Create new account

1. User selects "Create a new wallet"



2. Signs the Decentralization policy

Sign the decentralization policy to proceed



☒ I accept the decentralization policy of Crystal Wallet

Submit

Back

3. Selects the wallet type from one of the popular contracts

Select wallet type

☒ SafeMultisig (default)

☐ SafeMultisig24

☐ SetcodeMultisigWallet

☐ Surf

Next

Back

4. Saves the seed phrase securely

Save the seed phrase

- | | |
|------------|-------------|
| 1. fog | 7. choice |
| 2. dust | 8. remove |
| 3. near | 9. diagram |
| 4. agent | 10. special |
| 5. culture | 11. rocket |
| 6. guard | 12. exact |

I wrote it down on paper

Copy all words

Back

5. Confirms they saved it correctly

Let's check the seed phrase

1. fog

2. dust

7. choice

11. rocket

Confirm

Back

6. Sets the password to encrypt the local storage

Password protection

So no one else, but you can unlock your wallet.

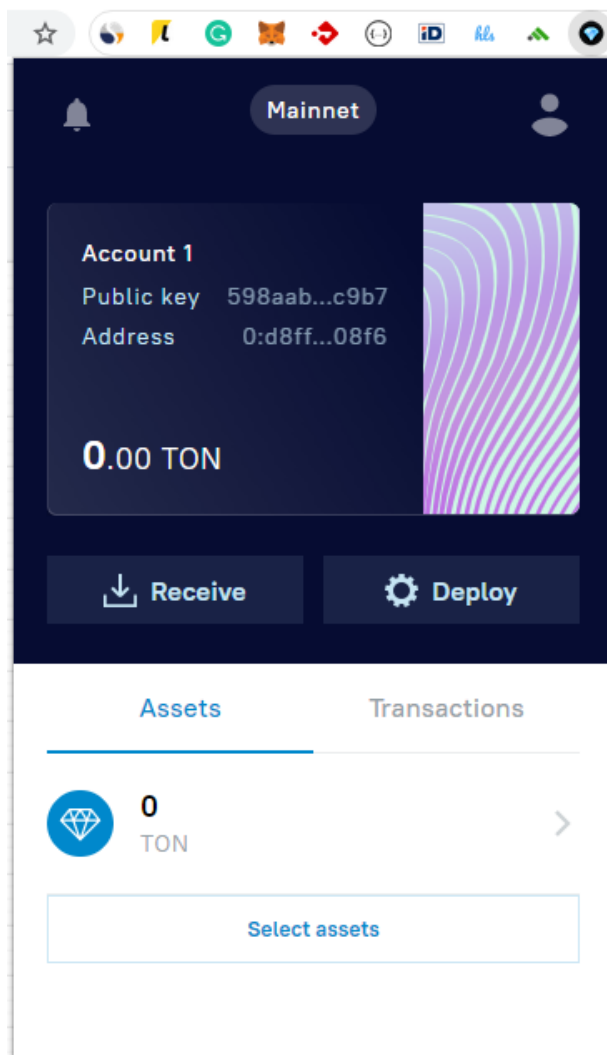
.....

.....|

Sign in the wallet

Back

7. Voila! The wallet is ready to accept funds.




The user may use this wallet already to accept funds or sign transactions with its key. However, once they decide to withdraw funds, they will need to first deploy the wallet contract by pressing the “Deploy” button.

Restoring the wallet

1. User selects “Sign in with seed phrase”

Welcome to Crystal Wallet

Create a new wallet or sign in



Create a new wallet

Sign in with seed phrase

2. Signs the Decentralization policy

Sign the decentralization policy to proceed



☒ I accept the decentralization policy of Crystal Wallet

Submit

Back

3. Selects the type of the wallet

Select wallet type

☐ SafeMultisig (default)

☐ SafeMultisig24

☐ SetcodeMultisigWallet

☐ Surf

☒ WalletV3 (legacy)

Next

Back

4. Inputs the seed phrase

Enter your seed phrase

Enter your seed

abandon ×

ability ×

able ×

about ×

above ×

absent ×

absorb ×

abstract ×

absurd ×

abuse ×

access ×

accident ×

account ×

accuse ×

achieve ×

acid ×

acoustic ×

acquire ×

across ×

act ×

action ×

actor ×

actress ×

actual ×

24/24 words

Confirm

Back

5. Sets the password to encrypt the local storage

Password protection

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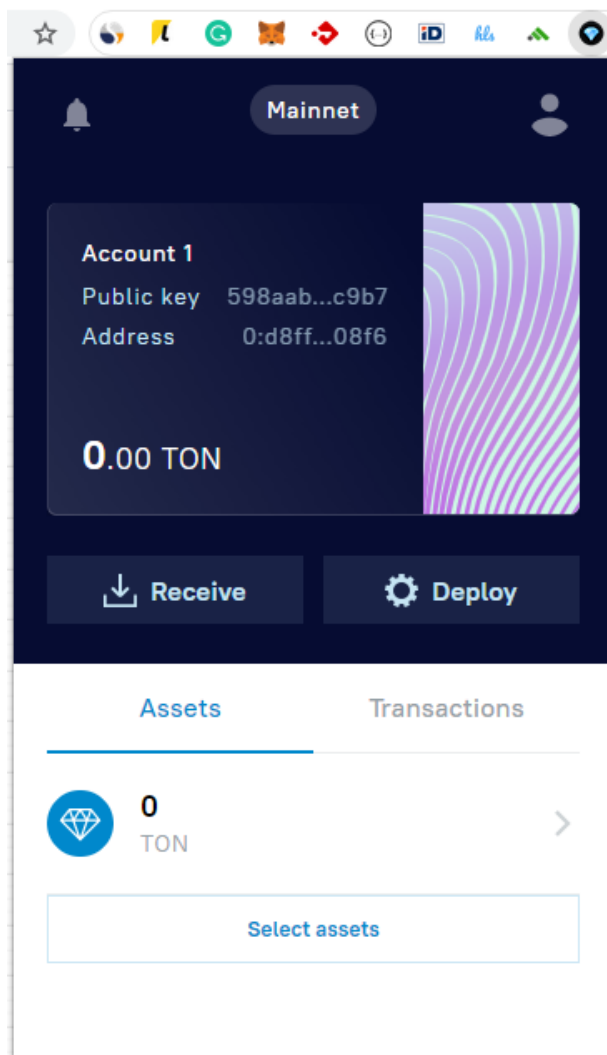
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Sign in the wallet

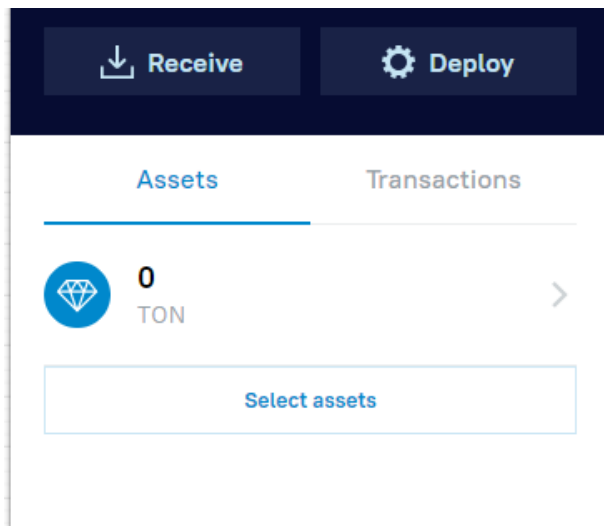
Back

6. Voila! The wallet is ready to accept funds.

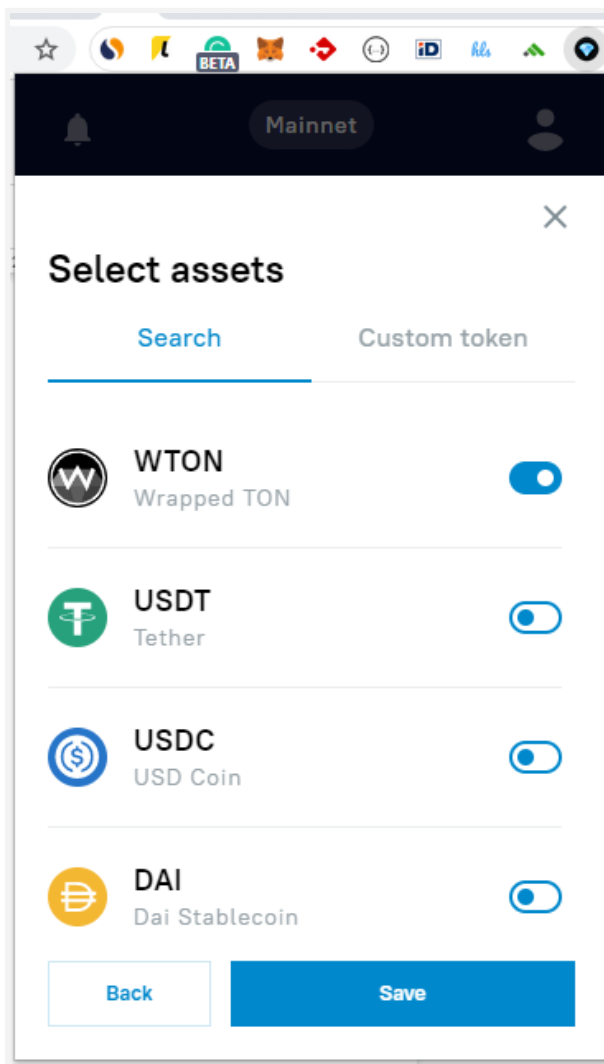


Adding new assets

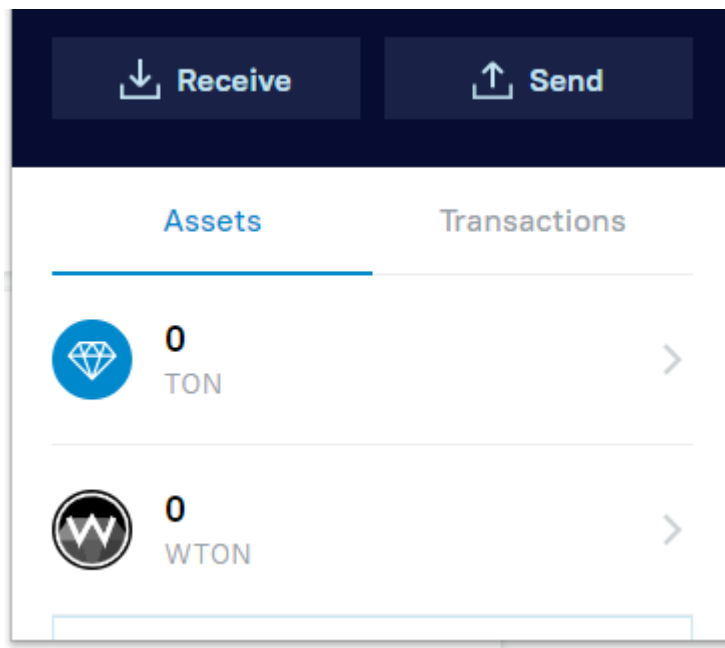
1. User clicks "Select assets"



2. Selects assets of their choice



3. That's it! Assets are shown in the wallet.



Links

Sources

- **Wallet front:** <https://github.com/broxus/ton-wallet-crystal-browser-extension>
- **Wallet core:** <https://github.com/broxus/nekoton>
- **In-page library:** <https://github.com/broxus/ton-inpage-provider>

Build manual

<https://github.com/broxus/ton-wallet-crystal-browser-extension#how-to-build>

Chrome store

<https://chrome.google.com/webstore/detail/ton-crystal-wallet/cgeeodpfagjceefieflmdfphpkenlfk>

Contact information

Telegram: https://t.me/broxus_chat

Email: hello@broxus.com

Wallet: [0:3f5bf06393c69462d0488f658d28be6062b66d8d7986da743286ad01837e517c](https://tonscan.org/address/0:3f5bf06393c69462d0488f658d28be6062b66d8d7986da743286ad01837e517c)