

SAFΣW



## SAFEW – Simple And Fast Ergo Wallet

The goal of the project was to provide an opensource wallet built for ergo, secure, simple and fast.

That would allow dApp developer to build project on top of Ergo blockchain with the best level of security and privacy for the users.

SAFEW is now usable, for example on the Ergodex, and changed drastically the user experience compared to old wallet.

No integration was required from the dApp team as the SAFEW dApp connector follows the EIP-12 specification.

It allows to sign Ergo transactions quickly and provides errors messages in case of failure.

SAFEW offers many features that contributes to improve the security and the privacy of dApps on the Ergo blockchain:

- Mnemonics are strongly encrypted in browser extension private area
- "ErgoPay" wallets to be able to use dApp but keep the mnemonic on another device
- Ledger ready (code committed in the ledger branch but the signed transactions are rejected due to an issue in ergo-ledger-app)
- Integration of the ErgoMixer, to be able to mix Ergs or tokens from the wallet UI and to manage the covert addresses
- Explorer and node URL used by the wallet are configurable
- Allow account derivation level to users in expert mode
- Show Json unsigned transactions with expert mode

The code of the project is available at:

<https://github.com/ThierryM1212/SAFEW/>

In terms of specific features, SAFEW:

- Introduced “Hide used empty addresses” option
- Allows to select input addresses when sending funds
- Send multi asset transactions
- Allows a configurable change address for each wallet
- Displays unconfirmed transactions of the wallets with their balances in ERG and tokens, per wallet/account/address
- Displays the transaction history of a wallet with its balance in ERG and tokens
- Offers account and index derivation level for generating unused addresses
- Implemented BIP-44 address discovery
- Provides Backup/Restore feature for the wallet or the full configuration
- Has an EIP-12 compatible dApp connector
- Allows to convert a wallet to “ErgoPay” wallet (delete the mnemonic)



Next:

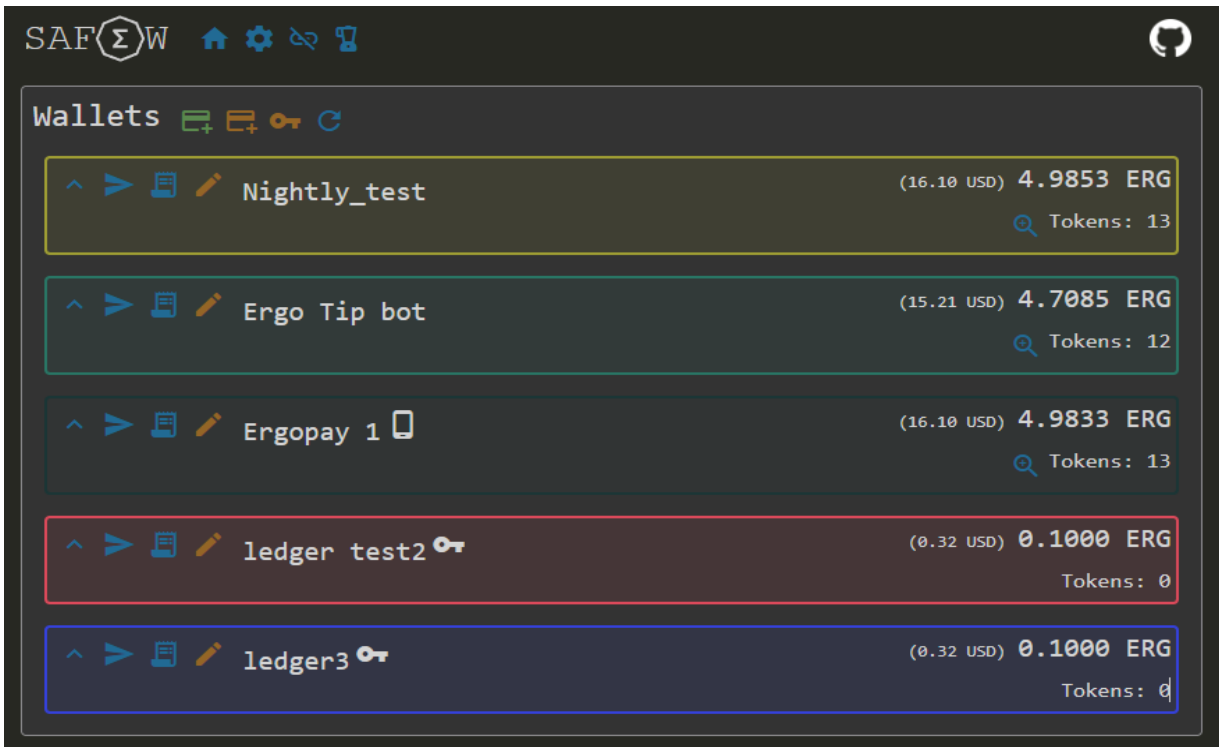
- Opera publication done, SAFEW is available on Opera beta store waiting for approval
- Chrome publication... when manifest v3 bug will be fixed
- Transaction builder integration
- Bug fixing






Greetings to:





- SoCool, for its contribution in the ErgoPay wallets and design
- Nautilus team for the help in the ledger integration
- Anon\_br for the help with Ledger setup and advices
- ErgoHack organizers for making the event happens

SAFEW to be pronounced "SAY FEW", stopping here 😊

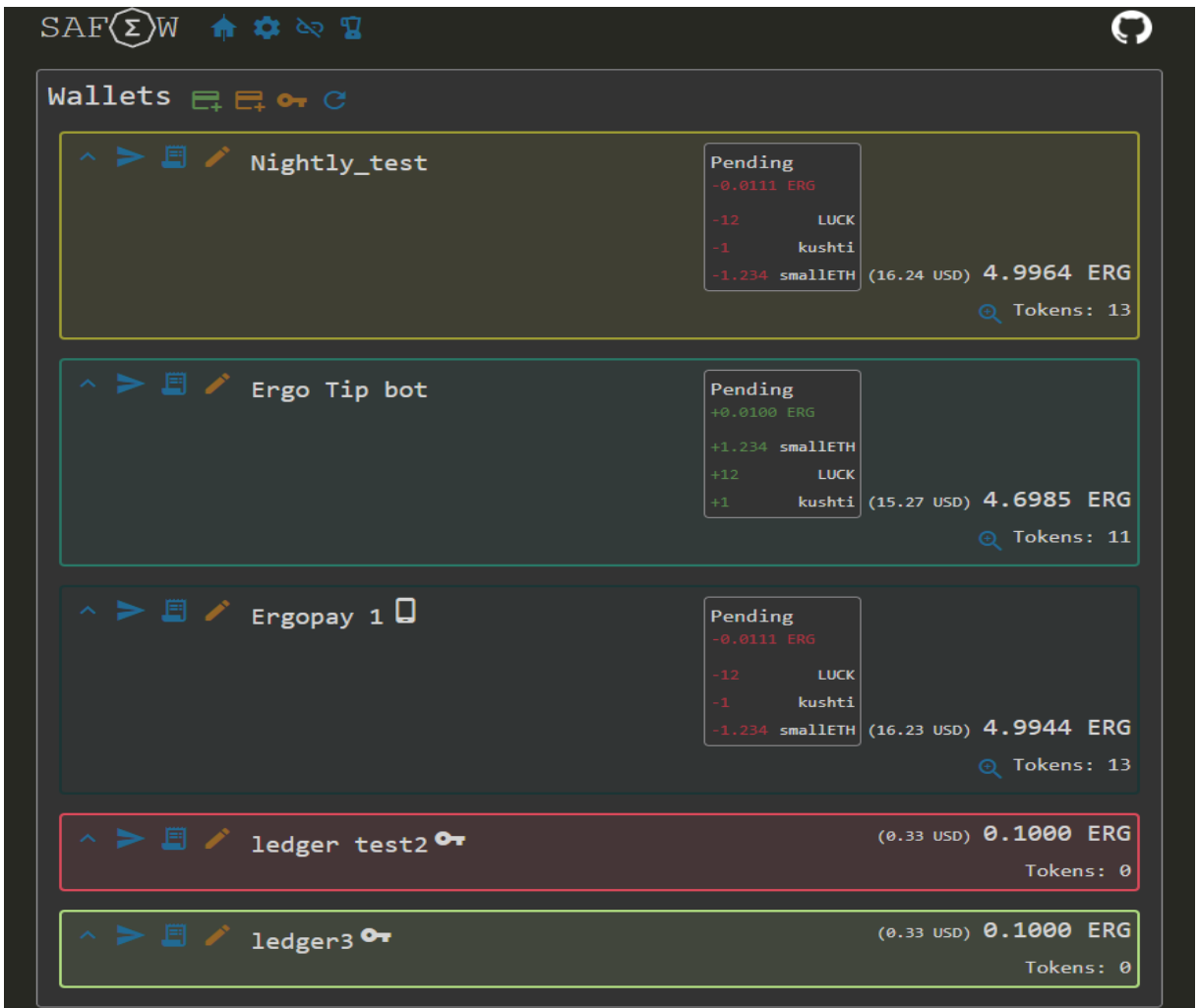
### Wallet list












SAFEW     

Wallets    

Wallet Name	Value (USD)	Value (ERG)	Tokens
Nightly_test	(16.10 USD)	4.9853 ERG	13
Ergo Tip bot	(15.21 USD)	4.7085 ERG	12
Ergopay 1	(16.10 USD)	4.9833 ERG	13
ledger test2	(0.32 USD)	0.1000 ERG	0
ledger3	(0.32 USD)	0.1000 ERG	0



SAFEW     

Wallets    

Wallet Name	Pending Transactions	Value (USD)	Value (ERG)	Tokens
Nightly_test	Pending -0.0111 ERG -12 LUCK -1 kushti -1.234 smallETH	(16.24 USD)	4.9964 ERG	13
Ergo Tip bot	Pending +0.0100 ERG +1.234 smallETH +12 LUCK +1 kushti	(15.27 USD)	4.6985 ERG	11
Ergopay 1	Pending -0.0111 ERG -12 LUCK -1 kushti -1.234 smallETH	(16.23 USD)	4.9944 ERG	13
ledger test2		(0.33 USD)	0.1000 ERG	0
ledger3		(0.33 USD)	0.1000 ERG	0



## Wallet account and addresses

**Nightly\_test**

Accounts +

Account\_0 Account 0  
(16.15 USD) **4.9853 ERG**  
Tokens: 13

Addresses +

Account\_1 Account 1  
(0.00 USD) **0.0000 ERG**  
Tokens: 0

Addresses +

9fRLaM3pjHC84pedSymsCprRhrJaNyitC9u3nKTDnQdNmquELHS Copy Share QR  
(0.00 USD) **0.0000 ERG**  
Tokens: 0

9ebZGxSpzZRav3zqG47gnDjaNc9ptdRREQ3mVusNDaEbj2Nm2Uv Copy Share QR  
Unused

9gcMDLa5xBJMxsPVpLLRy7x66fr72xu44EXhNRqaRVdKw3Db5Bv Copy Share QR  
Unused

9iP3BAhFAJtJWRuPGWuSXbZBPpTDPoML96f9ddhYcTcW4eYx4K5 Copy Share QR  
Unused

Account\_2 Account 2  
(0.00 USD) **0.0000 ERG**  
Tokens: 0

Addresses +

## Transaction list

SAFEW








### Transactions list for Nightly\_test

Number of transactions: 282
(16.15 USD) 4.9853 ERG

🔍 Tokens: 13

<p>75849a456de7a02...6b5e79b44bb12bd <a href="#">🔗</a> ✓✓</p> <p>Feb 14, 2022, 2:42:09 AM GMT+1</p>	<p>-0.0111 ERG</p> <p>-12 LUCK</p> <p>-1 kushti</p> <p>-1.234 smallETH</p>
<p>7f25ff500f801af...e731e28826ea6b3 <a href="#">🔗</a> ✓✓</p> <p>Feb 14, 2022, 1:57:32 AM GMT+1</p>	<p>-0.0021 ERG</p> <p>+10,000 TOKMINTEST3</p>
<p>e36e0de556fb268...b4d202189655236 <a href="#">🔗</a> ✓✓</p> <p>Feb 14, 2022, 1:48:09 AM GMT+1</p>	<p>-0.0021 ERG</p> <p>+10,000 TOKMINTEST2</p>
<p>4295ce3ce2e1d94...c4f8642fc7ab360 <a href="#">🔗</a> ✓✓</p> <p>Feb 14, 2022, 1:37:57 AM GMT+1</p>	<p>-0.0021 ERG</p> <p>+10,000 TOKMINTEST</p>
<p>a8de09c11c61d5c...74424f9f07edcee <a href="#">🔗</a> ✓✓</p> <p>Feb 14, 2022, 1:36:41 AM GMT+1</p>	<p>-0.0111 ERG</p>
<p>131dc7ebd8ba7e4...467ba67ce5a66c0 <a href="#">🔗</a> ✓✓</p> <p>Feb 14, 2022, 1:21:20 AM GMT+1</p>	<p>-0.0111 ERG</p>
<p>fa1a72875faf2cc...e219d6e085c49ee <a href="#">🔗</a> ✓✓</p> <p>Feb 12, 2022, 11:08:24 PM GMT+1</p>	<p>-0.1011 ERG</p>
<p>14fcd6a0df716f8...d3cfea0d43e8382 <a href="#">🔗</a> ✓✓</p> <p>Feb 11, 2022, 9:49:45 AM GMT+1</p>	<p>+1.0000 ERG</p>
<p>a4aebdf318cb467...698196ac4dc9980 <a href="#">🔗</a> ✓✓</p> <p>Feb 11, 2022, 9:38:03 AM GMT+1</p>	<p>+1.0000 ERG</p>
<p>81922b6f32c55b2...adef8426c83b4c8 <a href="#">🔗</a> ✓✓</p> <p>Feb 11, 2022, 9:31:01 AM GMT+1</p>	<p>+0.1000 ERG</p> <p>+2 smallETH</p> <p>+0.841 BTC</p> <p>+1 LUCK</p>

## Send asset

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### Send ERGs and tokens - Wallet Ergo Tip bot

Send to

✕

Select assets

▼ Wallet addresses

9eYtuDups24XXqzbYTn3qHoknh65EqbcFJhFU7pRNoXZo3hGish

(8.75 USD) **2.7085 ERG**

🔍 Tokens: 12

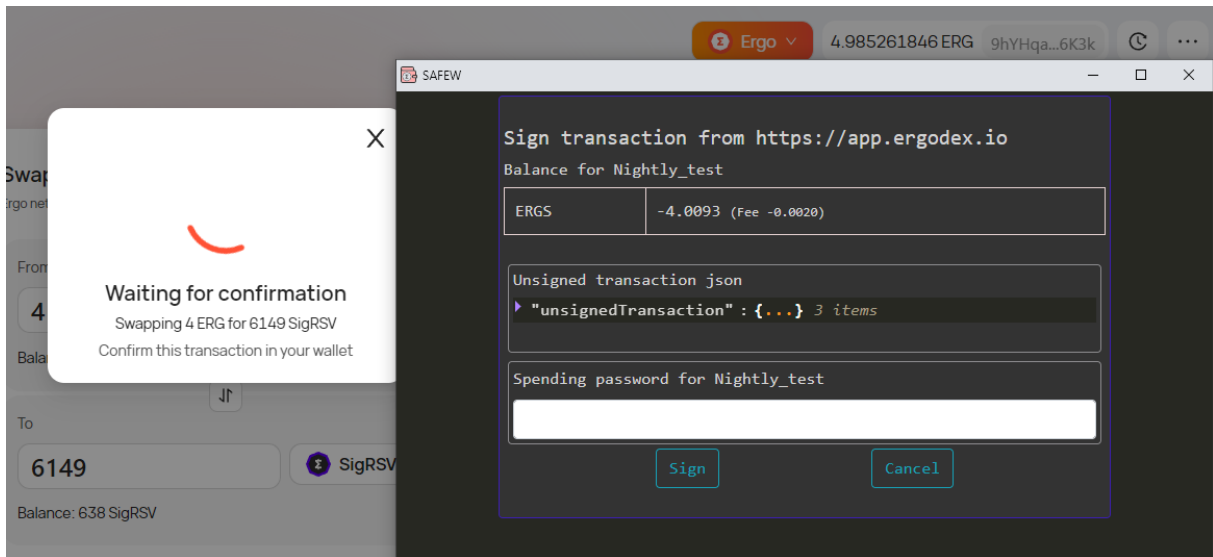
9g5YnadyUCX5gQDZjc2SKD4YHshzWqV6fyUu3qhySxiG1iykVXJ

(6.46 USD) **2.0000 ERG**

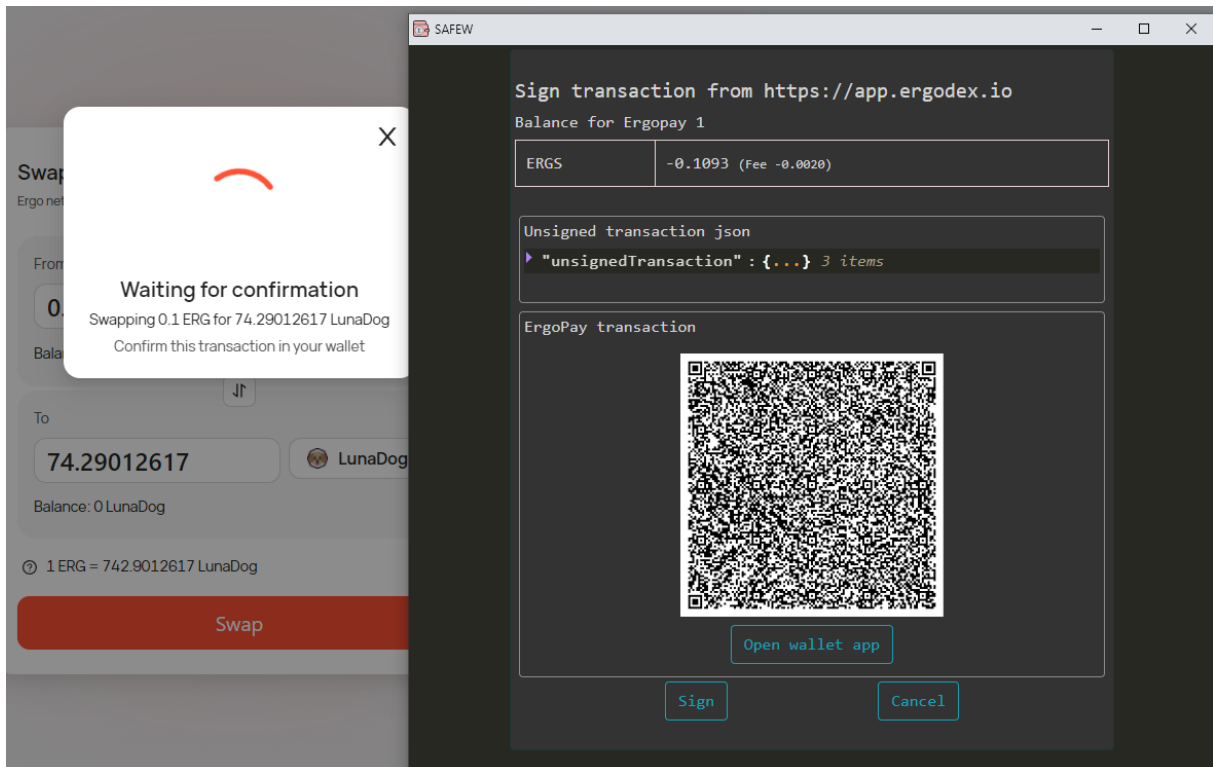
Tokens: 0

Asset name	Available	Selected
ERG	4.7085	<input style="width: 80%; border: none; border-bottom: 1px solid #ccc;" type="text"/> <span style="float: right; color: red;">✕</span>
SigRSV	1,000	<input style="width: 80%; border: none; border-bottom: 1px solid #ccc;" type="text"/> <span style="float: right; color: green;">✓</span>
SigUSD	0.90	<input style="width: 80%; border: none; border-bottom: 1px solid #ccc;" type="text"/> <span style="float: right; color: green;">✓</span>
smal1ETH	259.352000000	<input style="width: 80%; border: none; border-bottom: 1px solid #ccc;" type="text"/> <span style="float: right; color: green;">✓</span>
BTC	409.000000000	<input style="width: 80%; border: none; border-bottom: 1px solid #ccc;" type="text"/> <span style="float: right; color: green;">✓</span>
NETA	70.000000	<input style="width: 80%; border: none; border-bottom: 1px solid #ccc;" type="text"/> <span style="float: right; color: green;">✓</span>

## dApp connector sign with mnemonic



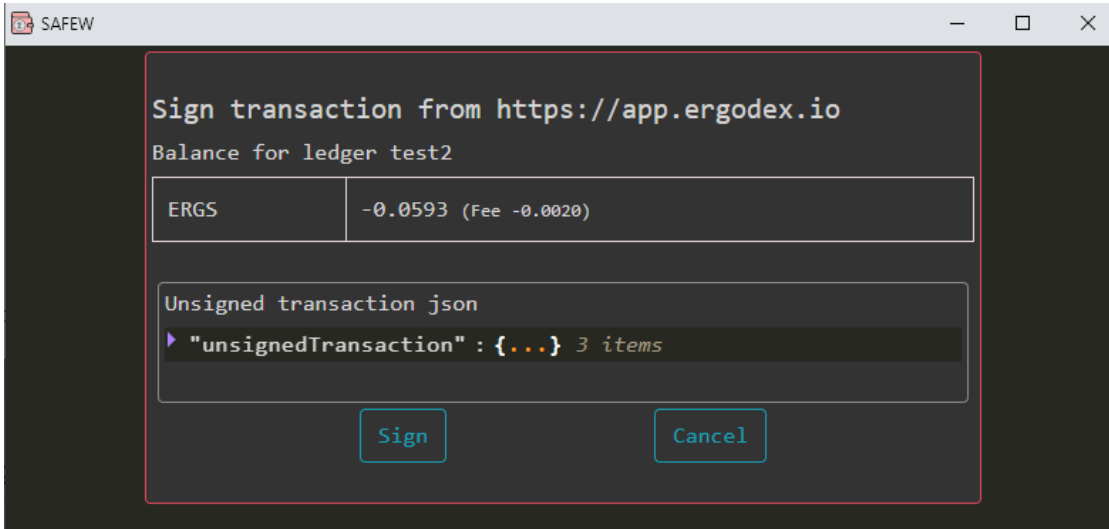
## dApp connector sign with ergopay







### dApp connector sign with ledger



### Mix ERGs or tokens

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🏠 ⚙️ 🔍
🔄

Nightly\_test
🔄

ErgoMixer available at: <http://localhost:9000/>

#### Mixes

▼ Available mixes +

Mix id: 6b28fe20-6f4f-43bc-8b5d-9b1120a28df7 🕒

Creation date: Feb 4, 2022, 11:36:16 AM GMT+1

Token to mix: 3.0000 ERG

Deposit address: 9gju2wqJYJ...m9RNbS5JMN 📄

Token to deposit: 3.3840 ERG (done 0.0000 ERG) ▶

Withdraw Addresses

9hxXkU6cJ8VBR8kHX	iRLDoMkXveX1hLTsj	✓ 1.0000 ERG
9i3BbGK2wbUnExom9f	oavsvAVgVXsP6e6cW	✓ 1.0000 ERG
9gk6HXQ1WeQzV4fTod	iunERN8KWaYESq	✓ 1.0000 ERG

Mix id: 084c8b59-e299-4433-9db8-ea56d9e6b9ba 🕒

Creation date: Feb 4, 2022, 12:06:34 PM GMT+1

Token to mix: 3,000 kushti K

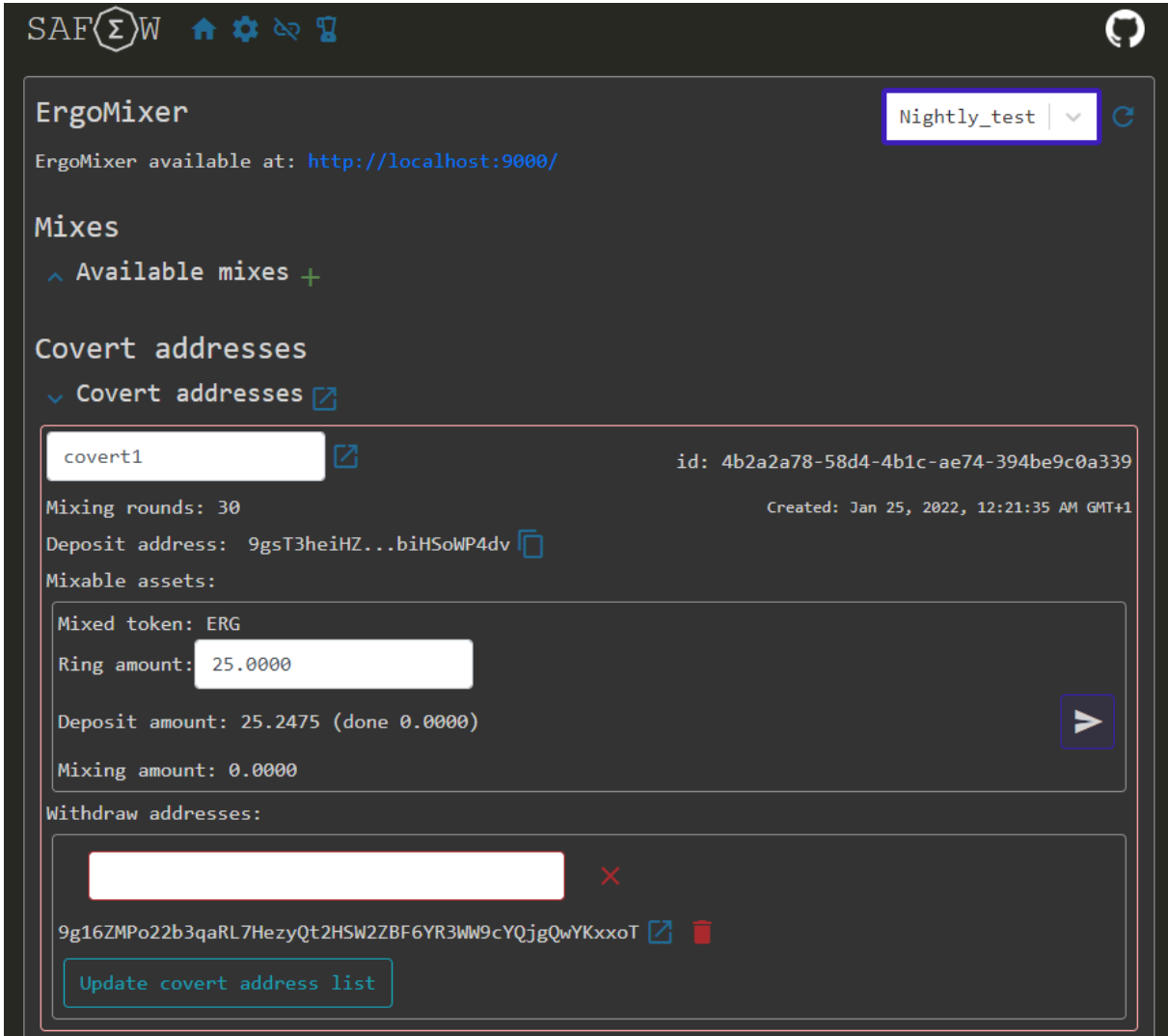
Deposit address: 9h1d5hhJVt...pNy2JyLNZX 📄

Token to deposit: 0.3720 ERG (done 0.0000)  
3,015 kushti (done 0) ▶

Withdraw Addresses

9ebZGxSpzZRav3;	3mVusNDaEbj2Nm2Uv	✓ 1,000 kushti
9gcMDLa5xBJMx	KhNRqaRVdKw3Db5Bv	✓ 1,000 kushti
9iP3BAhFAJtJWR	idhYcTcW4eYx4K5	✓ 1,000 kushti

## Manage covert addresses



SAFEW

ErgoMixer

ErgoMixer available at: <http://localhost:9000/>

Nightly\_test

### Mixes

^ Available mixes +

### Covert addresses

✓ Covert addresses

covert1 id: 4b2a2a78-58d4-4b1c-ae74-394be9c0a339

Mixing rounds: 30 Created: Jan 25, 2022, 12:21:35 AM GMT+1

Deposit address: 9gsT3heiHZ...biHSoWP4dv

Mixable assets:

Mixed token: ERG

Ring amount: 25.0000

Deposit amount: 25.2475 (done 0.0000)

Mixing amount: 0.0000

Withdraw addresses:

9g16ZMPo22b3qaRL7HezyQt2HSW2ZBF6YR3WW9cYQjgQwYKxxoT

Update covert address list