MATRIX WALLET MANUAL

V 1.5

MATRIX FOUNDATION

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0. Foreword

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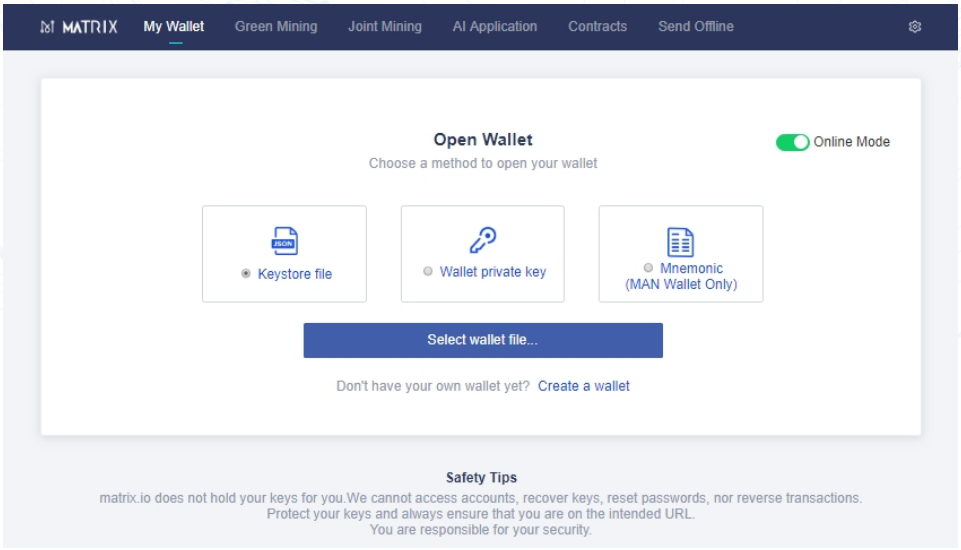
1. Function Overview

The web wallet consists of the following parts:

- My Wallet: You can create a new wallet or open a wallet, then you can use all the functions.
- Online/Offline Mode: Online mode or offline mode can be selected, offline mode can better guarantee wallet safety.
- Green Mining: You can deposit for miners/validators masternodes and set up secondary key.
- Joint Mining: The creators create the mining pool and provide the mining equipment. Other participants only need to stake for mining and earn the mining rewards.
- AI Application: AI processing of pictures to support lung cancer diagnosis, pose recognition and object recognition.
- Contracts: You can deploy smart contracts on the MATRIX mainnet, such as issuing tokens.
- Send Offline: It supports to sign transactions when the network is disconnected. Signed information can also be sent to chain so that your private key or keystore will not be exposed to the network, improving assets security.
- Settings: Wallet Association (Sender/recipient pays gas fee), Address Conversion, Private Key Backup, Keystore Backup, etc.

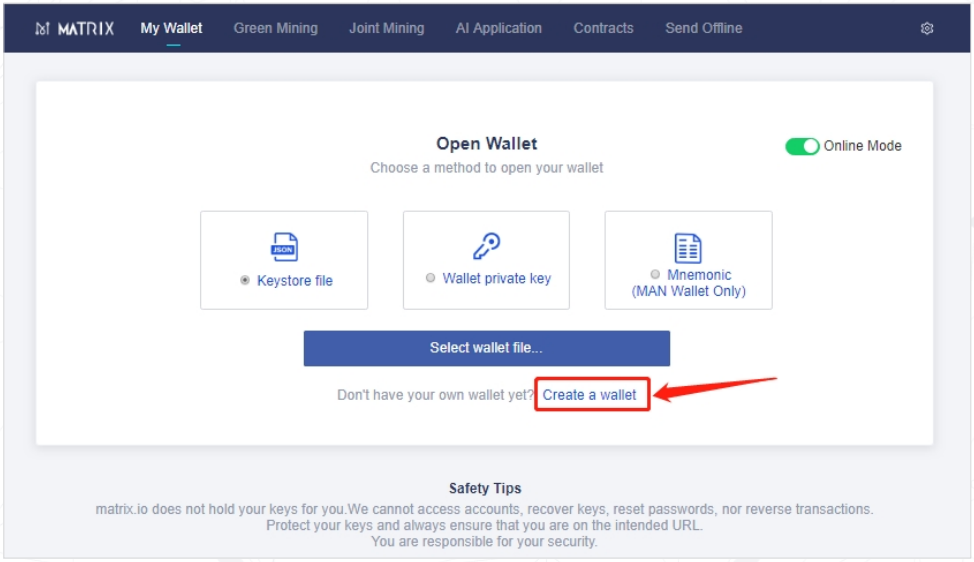


2. Creating a Wallet

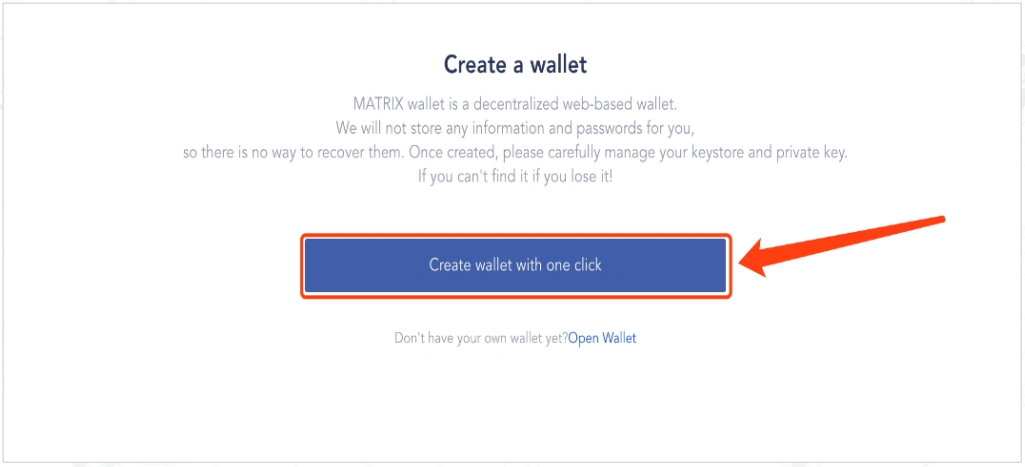
Matrix wallet supports saving wallets through Keystore, private key and mnemonic. When creating a wallet, you can choose a way to save it, and it also can be backed up after successful creation.

Operation Process

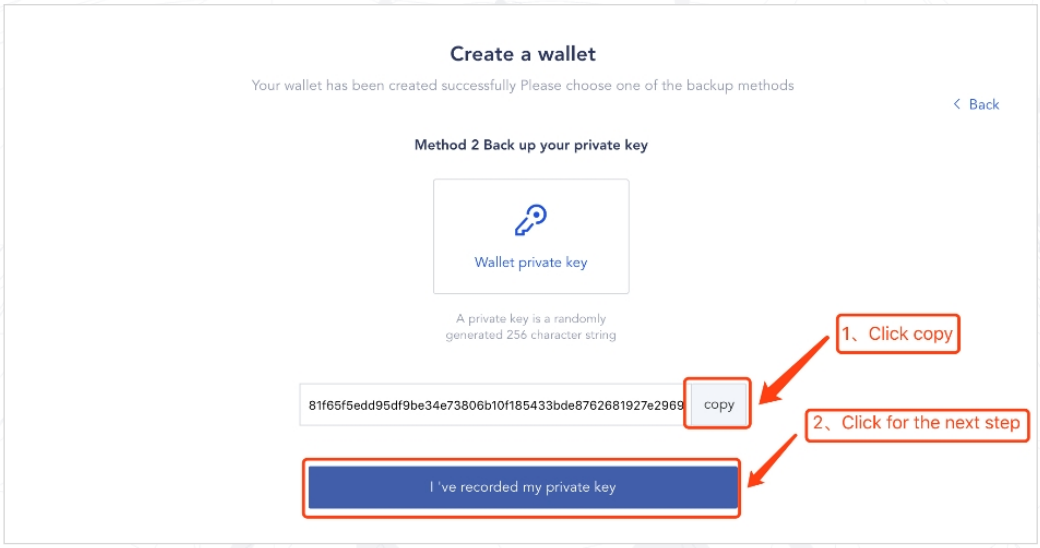
2.1 Go to wallet.matrix.io, click【Create a wallet】



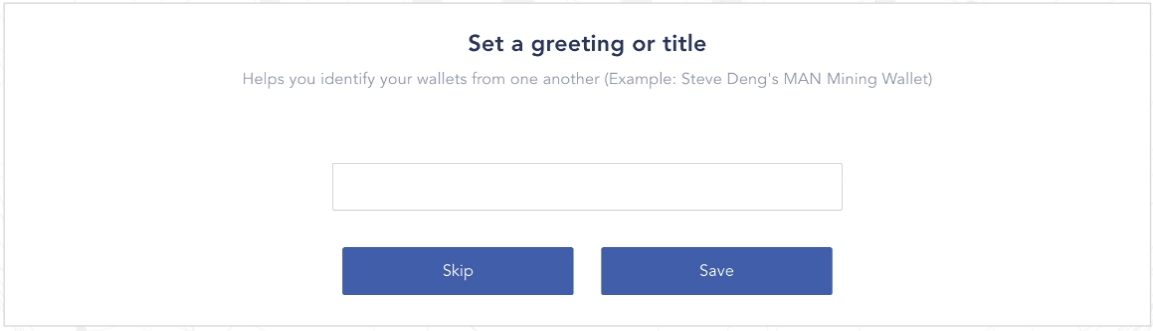
2.2 Click【Create wallet with one click】



2.3 Please choose one of the backup methods.
Here's an example of backing up a private key.
Click【copy】to save private key
Then click【I've recorded my private key】to go next.



2.4 Set a greeting or title.
It helps you identify your wallets from one another, or you can skip.

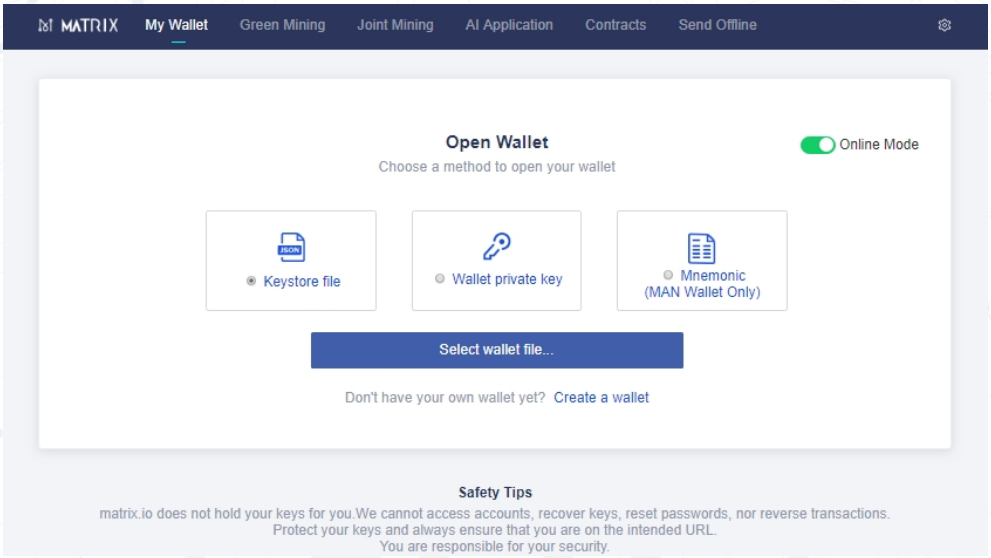


Congratulations to create Matrix wallet successfully.

3. Opening a Wallet

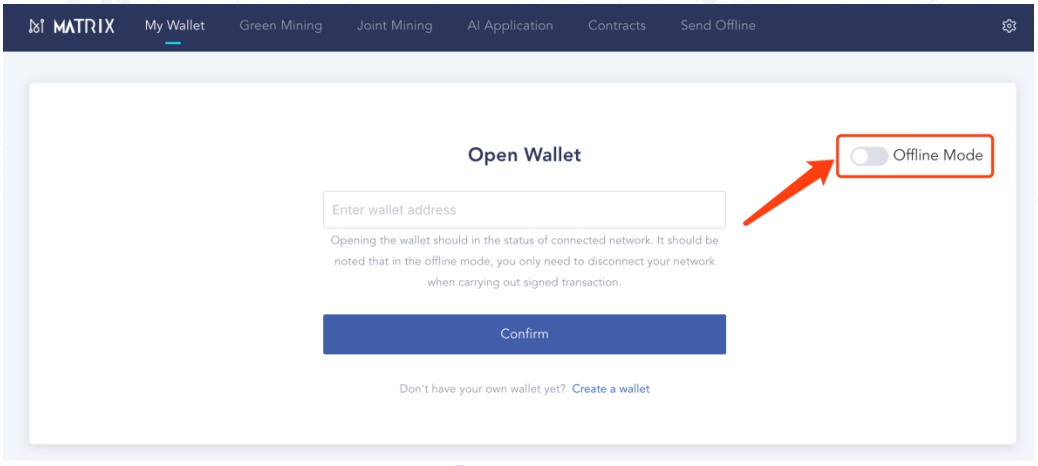
3.1 Online Mode

You need to choose a way to open your wallet,
then you can use all functions.



3.2 Offline Mode

You can open your wallet through your wallet address, then enter the pre-constructed transaction information. When you sign transactions, make sure you are in disconnected network and then send signed information in connected network, ensuring the safety of your wallet account.



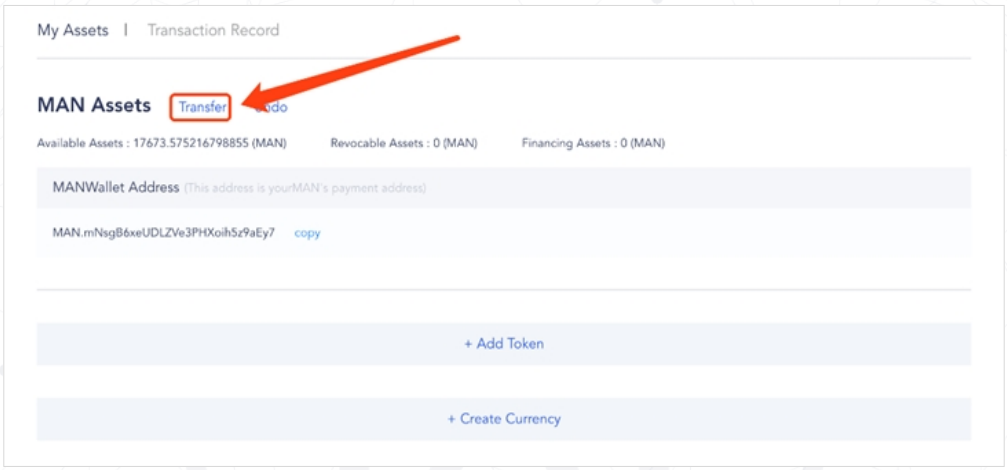
4. Transfer

4.1 Online Mode

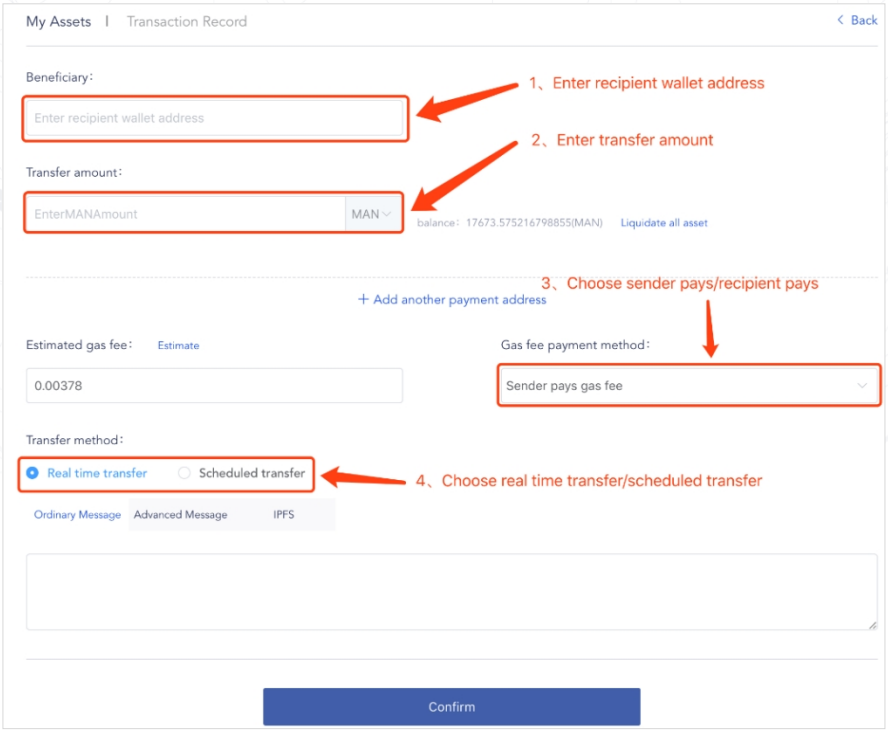
4.1.1 Real time transfer

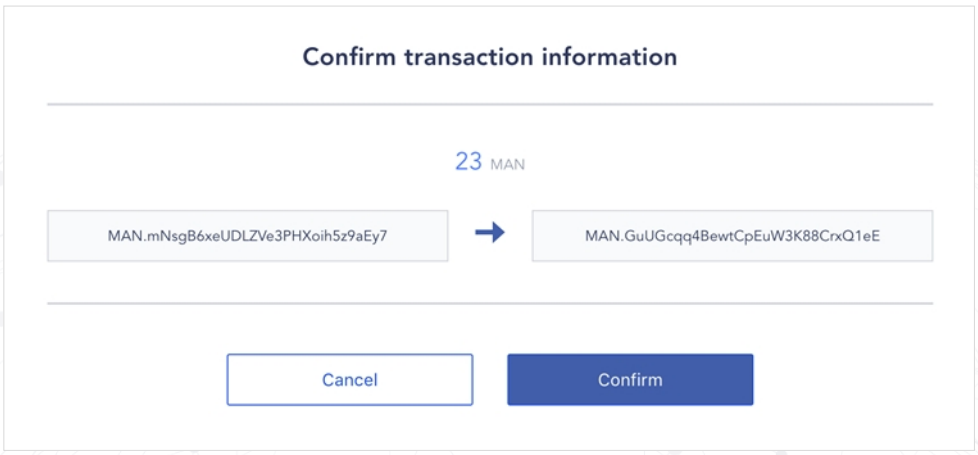
Real time transfer includes one-to-one transfer and one-to-many transfer.

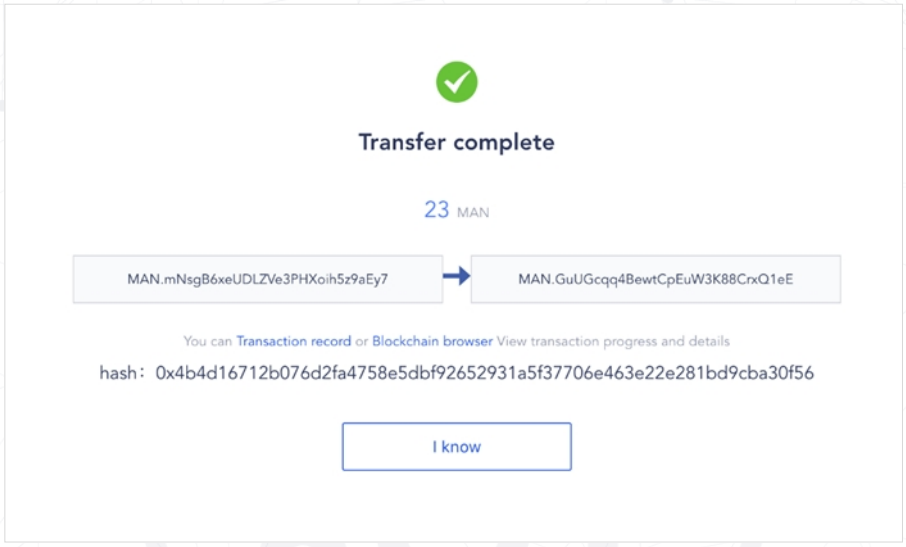
4.1.1.1 Click【Transfer】next to【MAN Assets】.



4.1.1.2 Enter transfer information
(including recipient wallet address, transfer amount, gas fee payment method, and choose real time transfer)
Click【Confirm】.





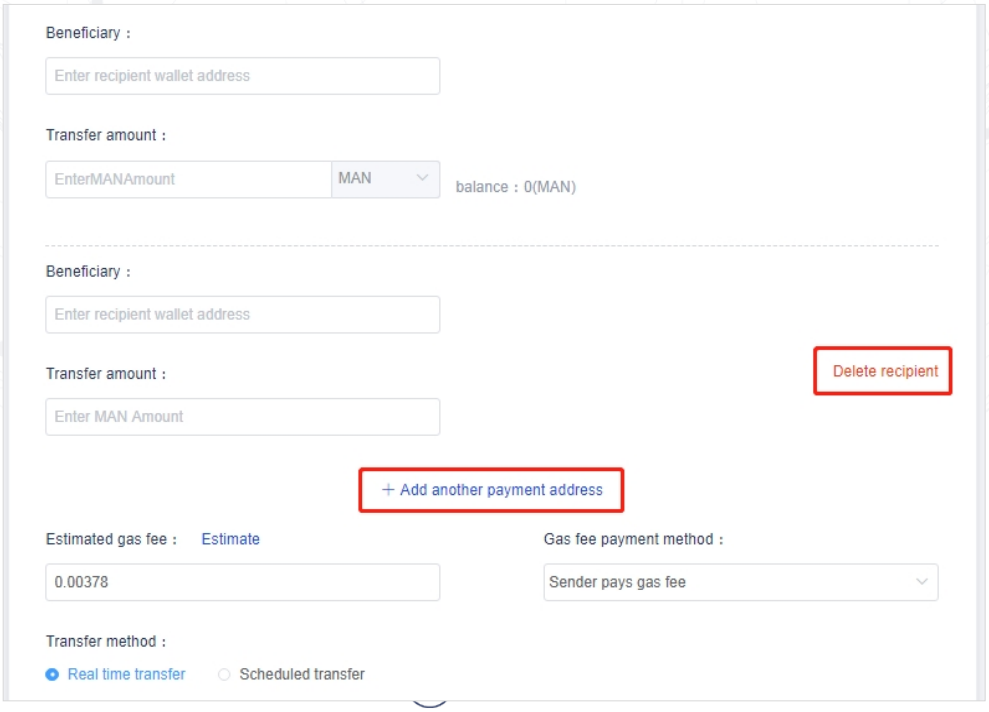


4.1.1.3 The MATRIX wallet supports one-to-many transactions

(clicking on' +Add another payment address ' to add multiple new addresses)

You can transfer to multiple addresses

(the added addresses can also be deleted)

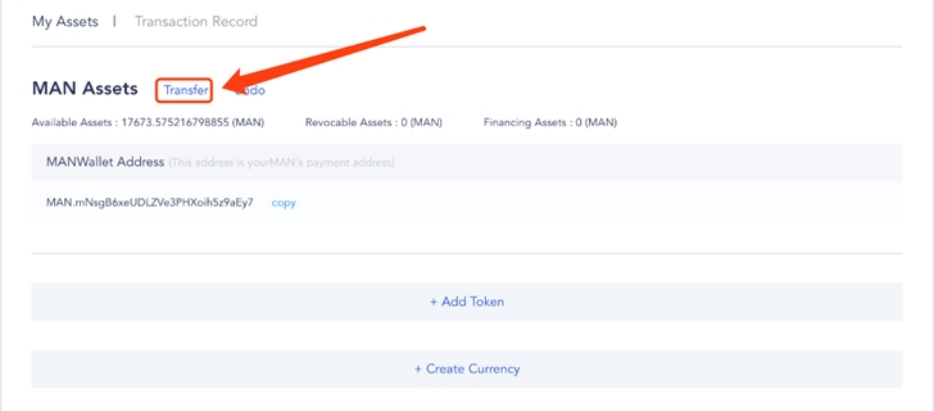


4.1.2 Scheduled transfer

Scheduled transfer means that the transfer time can be set and transfer can be completed automatically at the set time.

When the scheduled transfer succeed, the available assets will decrease and the revocable assets will increase accordingly. If the balance in the revocable asset is not withdrawn before the set time, it will be transferred to the recipient wallet address of the transaction. If it is withdrawn, it will return the available assets.

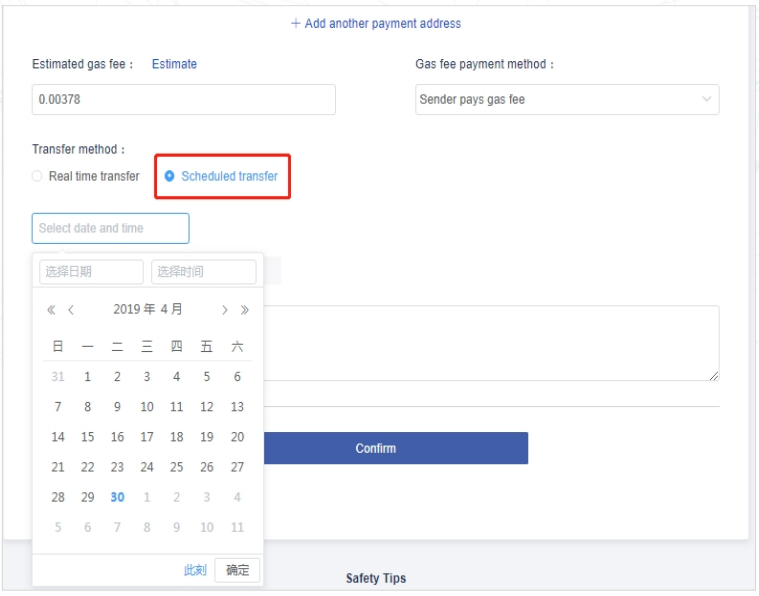
4.1.2.1 Click【Transfer】

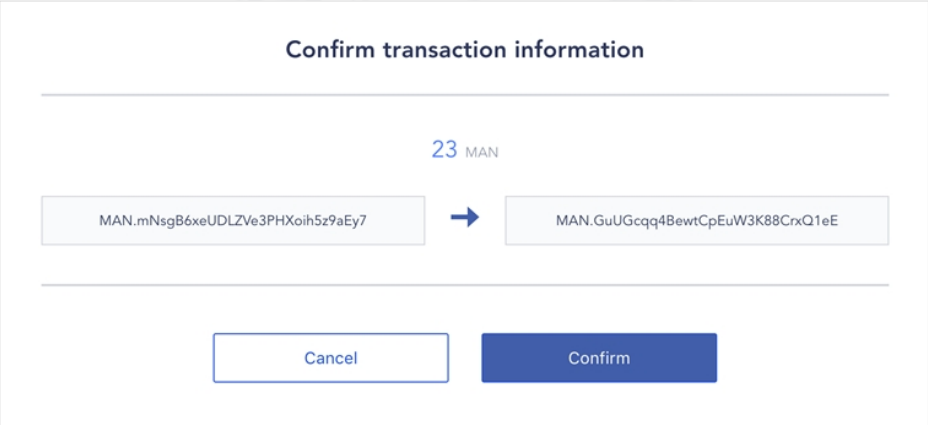


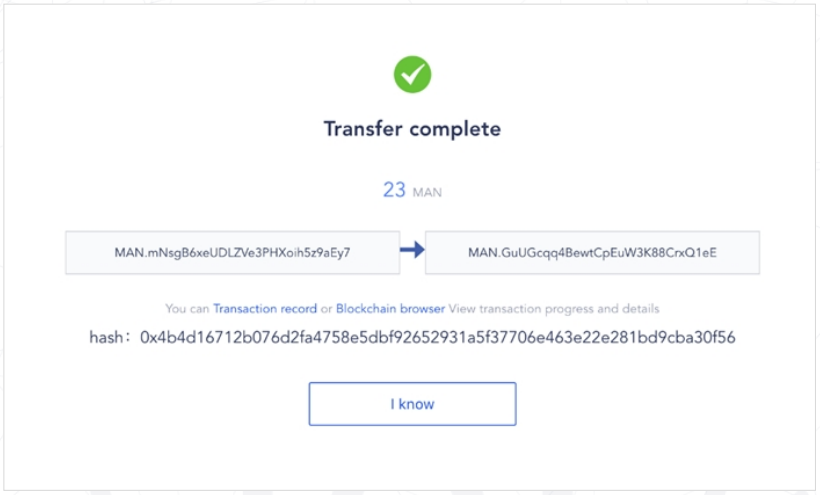
4.1.2.2 Enter transfer information

(including recipient wallet address, transfer amount, gas fee payment method, choose scheduled transfer and select date and time)

Click【Confirm】.





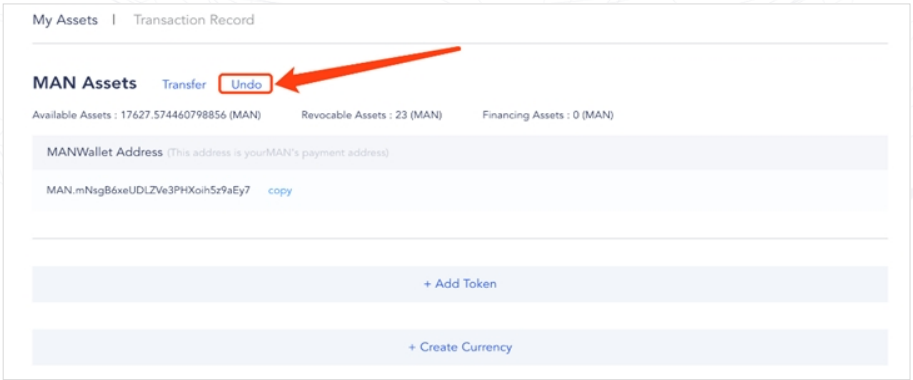


4.1.3 Undo

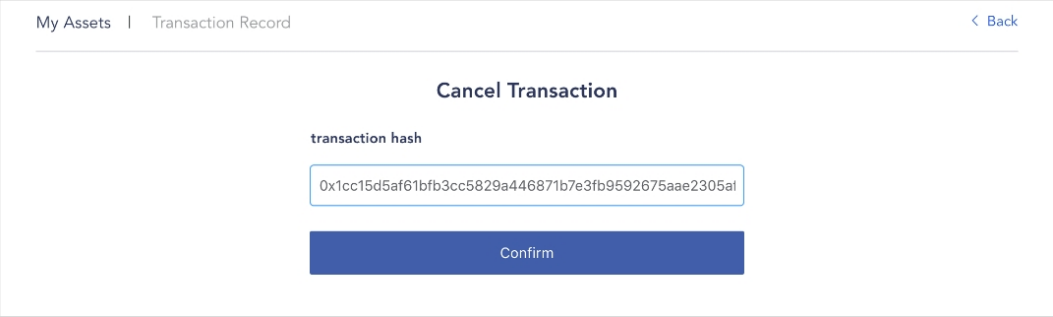
If scheduled transfer is not withdrawn before the set time, the balance of revocable assets will be transferred to the recipient wallet address. If it is withdrawn, it will return the available assets.

Note: You can only undo the scheduled transfer sent by yourself.

4.1.3.1 Click【Undo】.



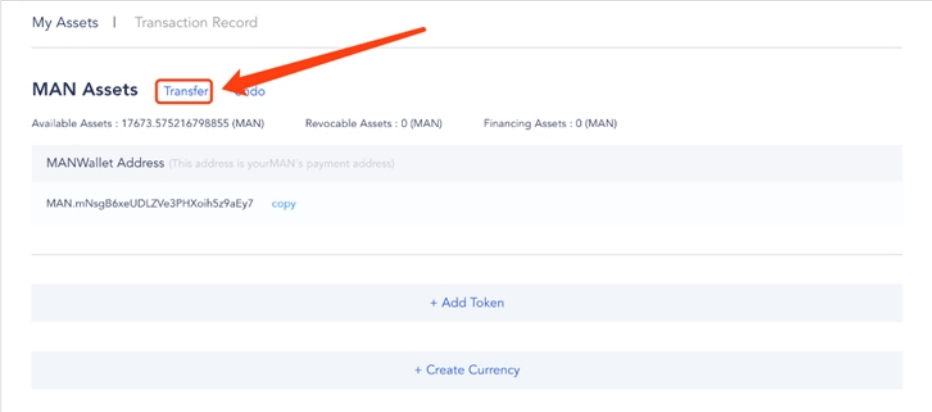
4.1.3.2 Enter the hash of scheduled transfer
Click 【Confirm】to undo transactions.



4.2 Offline Mode

The operation process of transfer function in offline mode is basically the same as that in online mode, but after entering the transfer information, signing transaction should be in connected network.

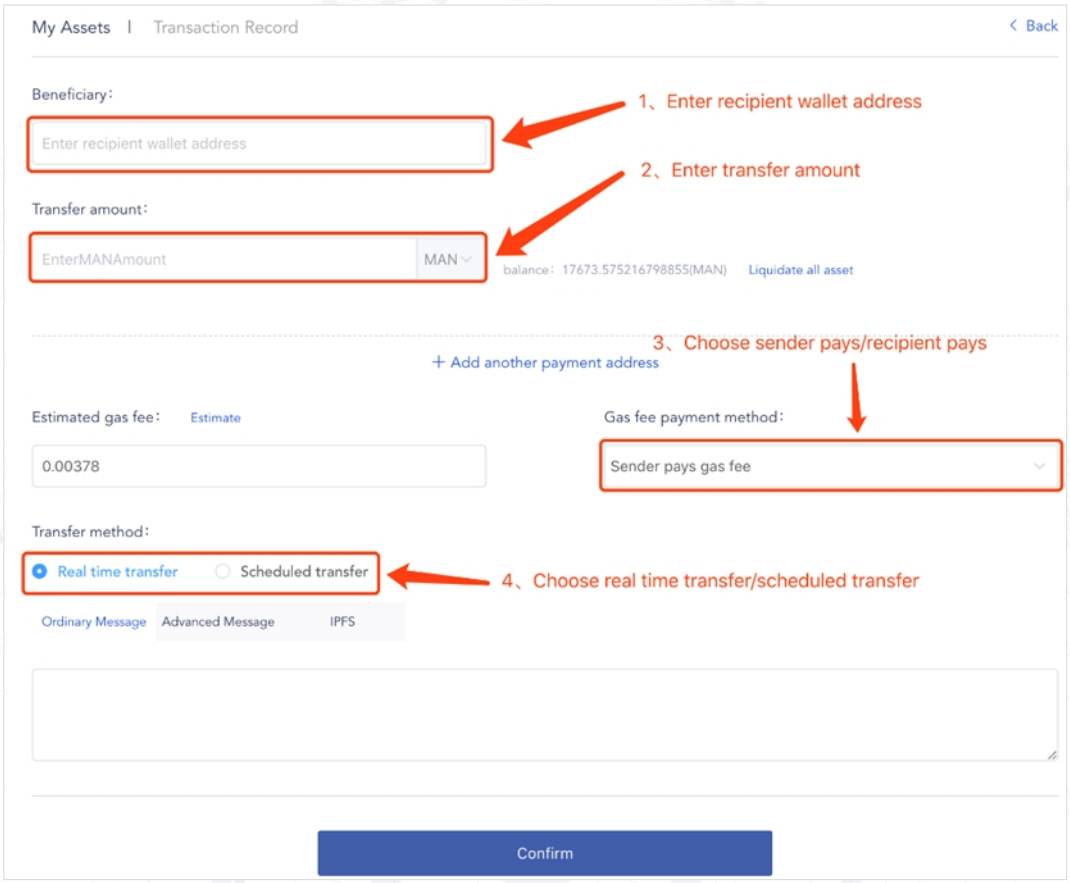
4.2.1 Click【Transfer】



4.2.2 Enter transfer information

(including recipient wallet address, transfer amount, gas fee payment method, transfer method, etc)

Click【Confirm】.

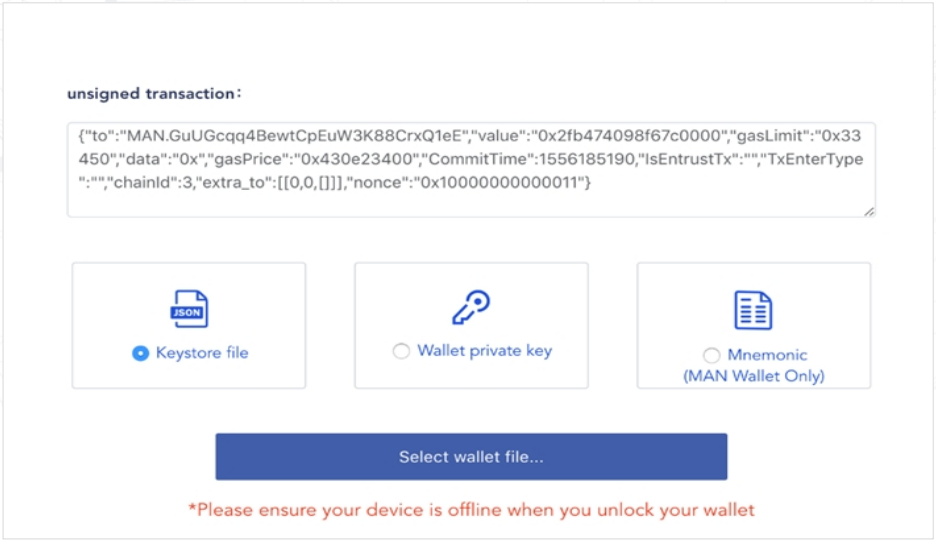


4.2.3 Choose the way of signing transaction

(Keystore file or Wallet private key or Mnemonic)

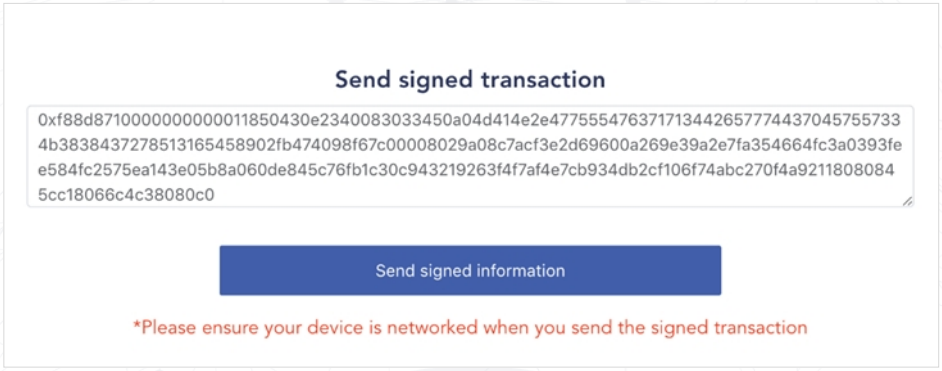
After signing, the signed information will be generated.

It should be noted that this step should be in a state of disconnected network to ensure the safety of wallets.



4.2.4 After signing successfully, there will be “signed information” generating, and then send signed information to chain.

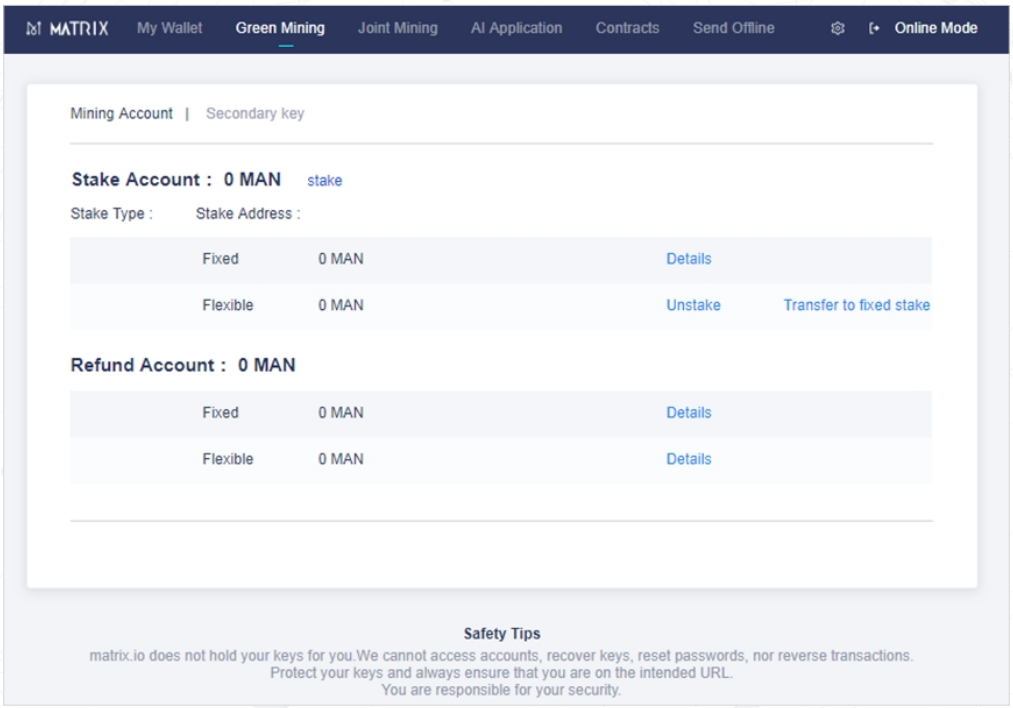
It should be noted that this step should be in a state of connected network.



5. Green Mining

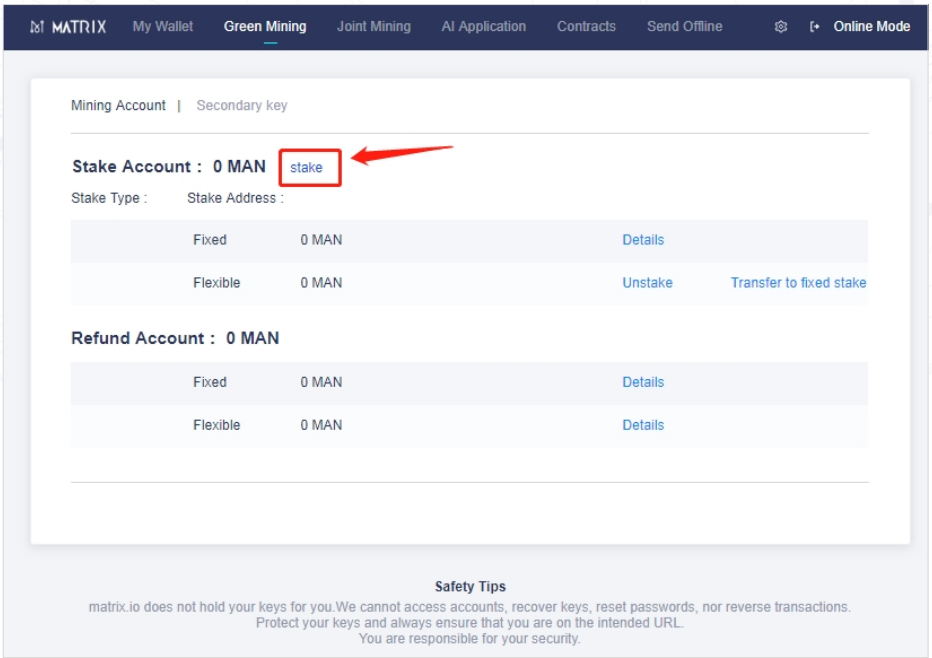
5.1 Mining Account

In the "Mining Account", you can view the stake account, refund account, and carry out the operations of "stake" and "unstake".



5.1.1 Stake

a. Click 【Stake】 in “Mining Account”.



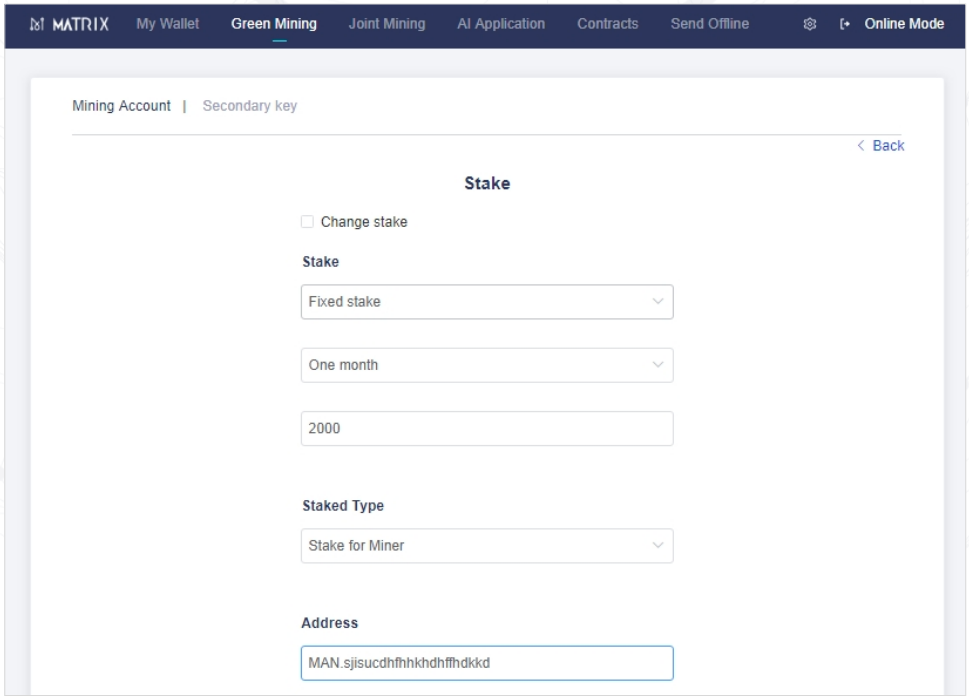
b. Choose fixed/flexible stake; enter the amount of stake; confirm stake for miners/validators (miners' stake need to be greater than 10 000 MAN, validators' stake need to be greater than 10 0000 MAN) and mining address.

(If you haven't launched masternode yet, refer to MATRIX NODE DEPLOYMENT FILES AND GUIDE https://www.matrix.io/downloads_cn/).

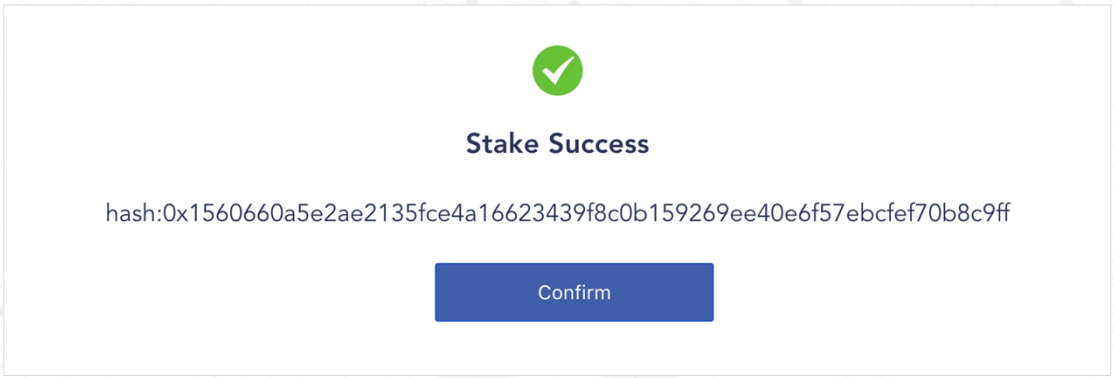
Fixed Stake: Choose the time of stake(1 month, 3 months, 6 months, 12 months). If you carry out unstake operation before the expiration of the period, the staked tokens will reach the "refund account" within 2 hours after the expiration. If you don't carry out unstake operation before the term expires, it will continue to restart the stake after the term expires according to the previous stake time.

Flexible Stake: You can carry out "unstake" at any time, and the amount of stake will reach the "refund account" within 7 days after unstake.

Address: the wallet address used for starting nodes;
Wallet with 0 MAN is recommended for mining address when you use the third party for mining. (Whatever wallets are used for mining addresses, rewards for mining will go to the staking one.)

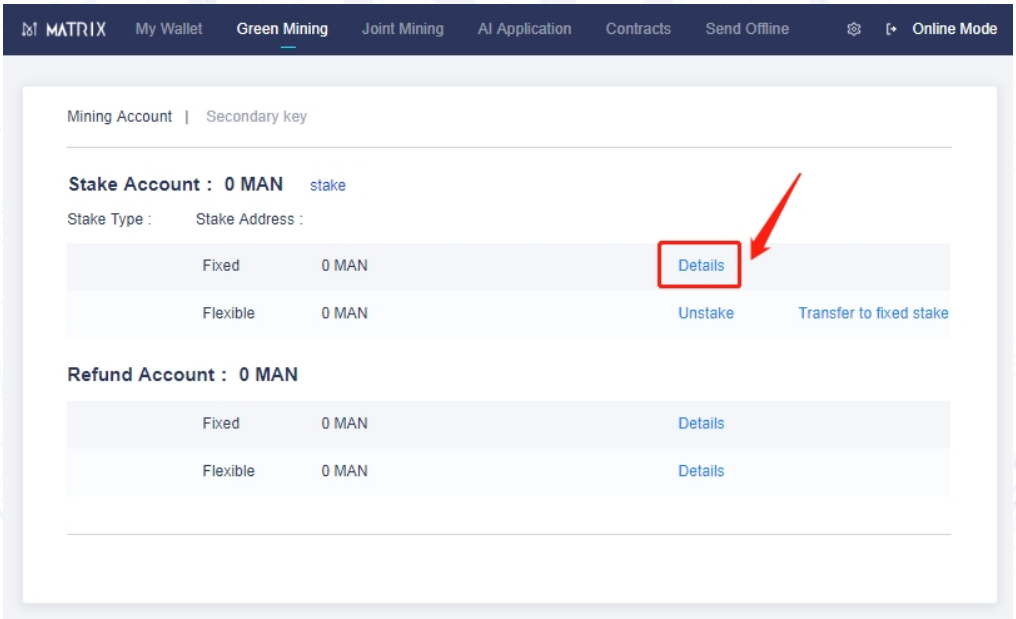


c. You can copy transaction hash after successful stake and query process in browser（tom.matrix.io）.

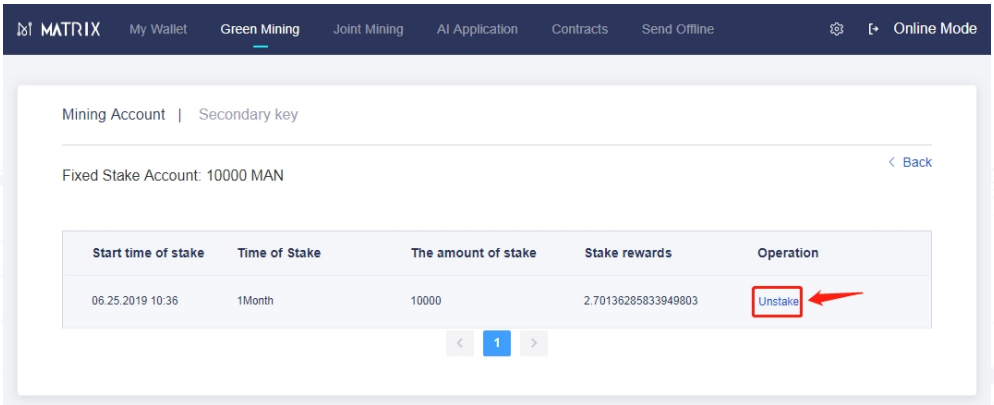


5.1.2 Unstake Fixed Stake

a. Click “Details” of fixed stake.

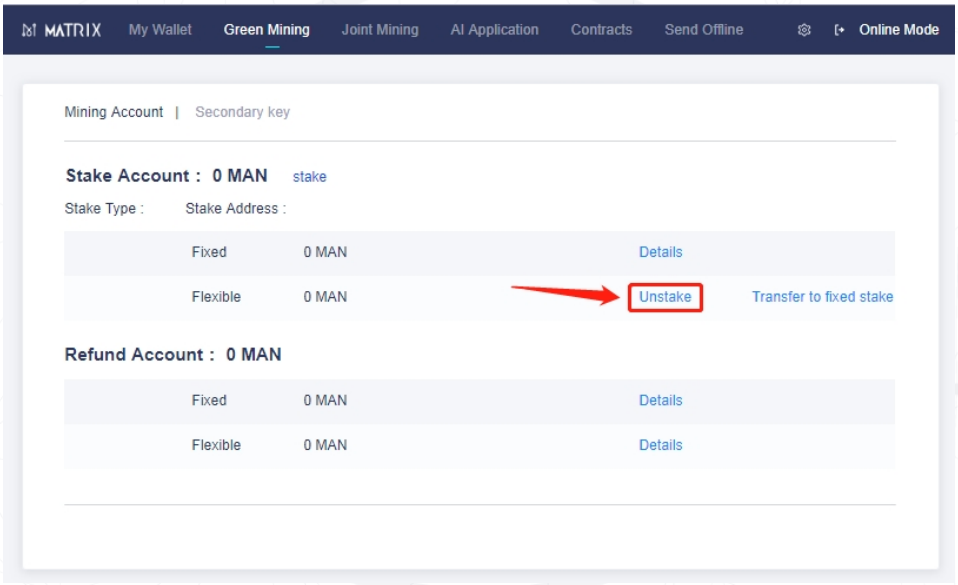


b. Choose one fixed stake that you want to unstake, click “Unstake”.

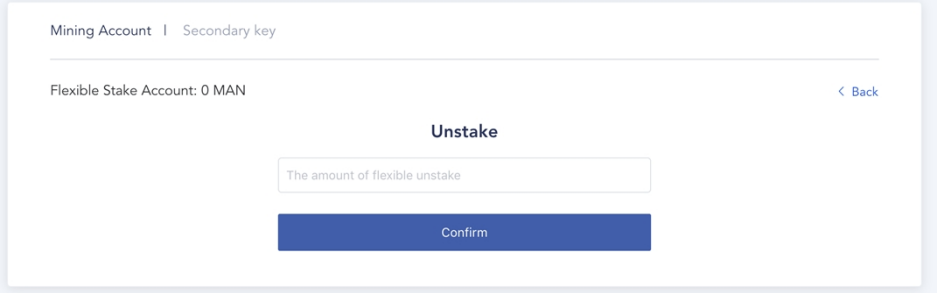


5.1.3 Unstake Flexible Stake

a. Click “Unstake” of flexible stake.

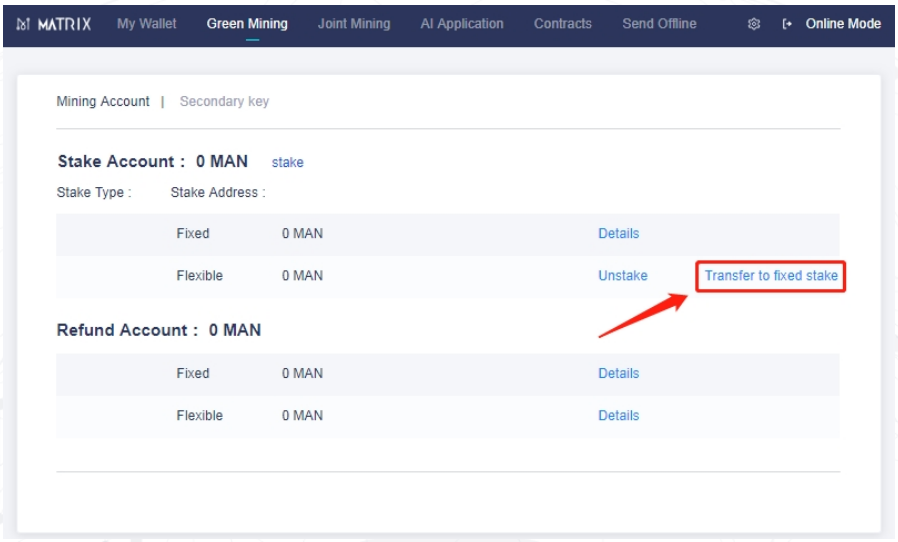


b. Enter the amount of unstake.

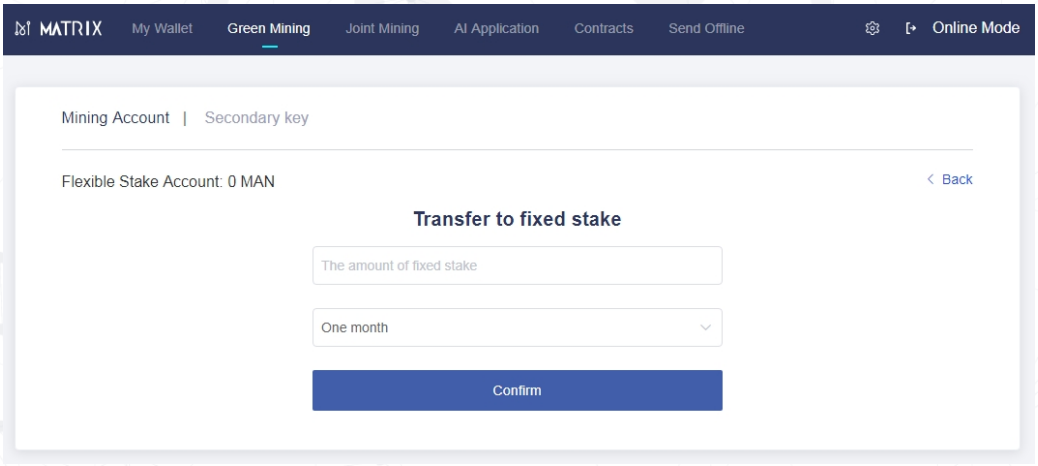


5.1.4 Transfer flexible stake to fixed stake

a. Click “Transfer to fixed stake” in flexible stake.

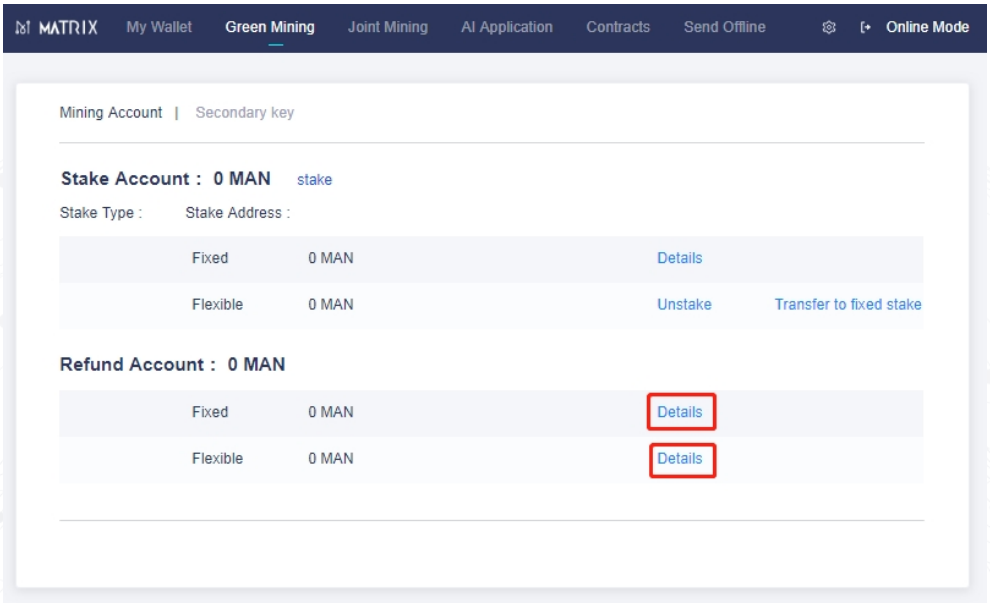


b. Enter the amount of stake,
select the time of fixed stake and then click【Confirm】

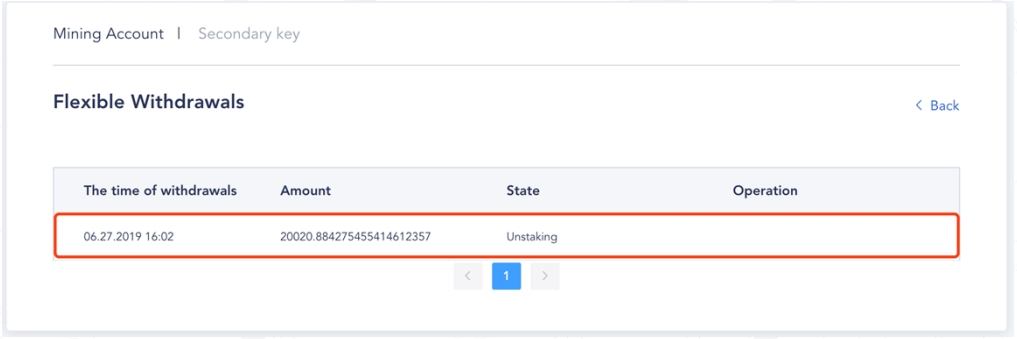


5.1.5 Refund

a. Click【Details】in the “Refund Account”.

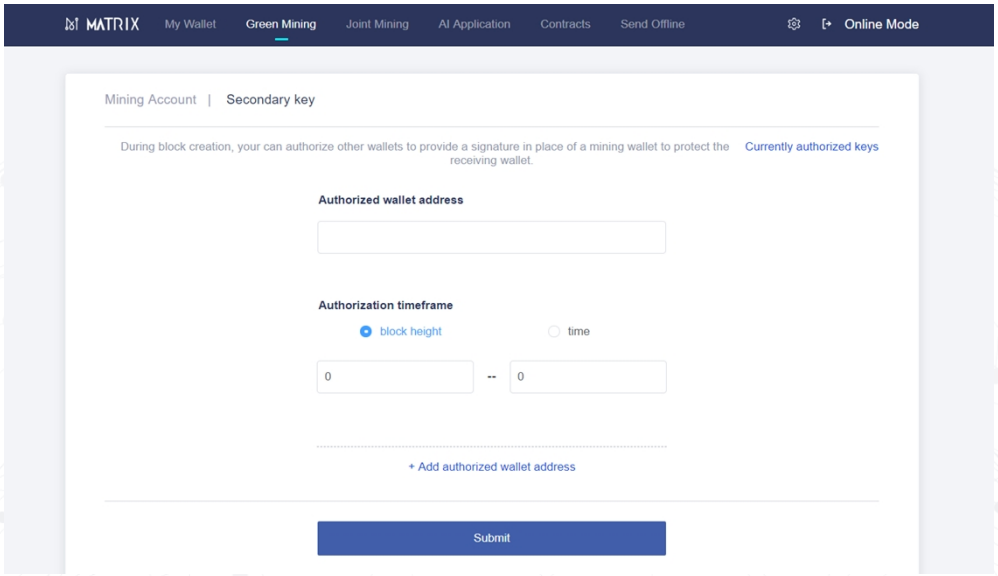


b. You can view the state of refund and withdrawal the tokens to available assets.

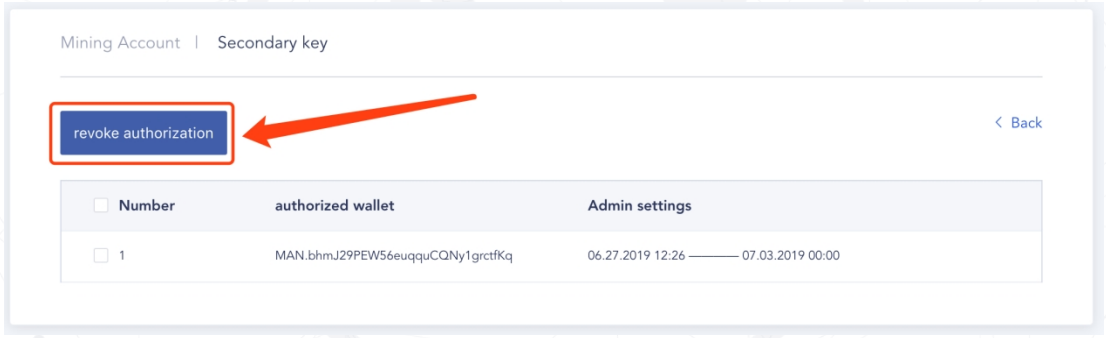


5.2 Secondary key

You can authorize other wallet replacing mining wallet to sign when packing blocks, to ensure the safety of wallet that receives rewards.



In Currently authorized keys, you can revoke authorization.

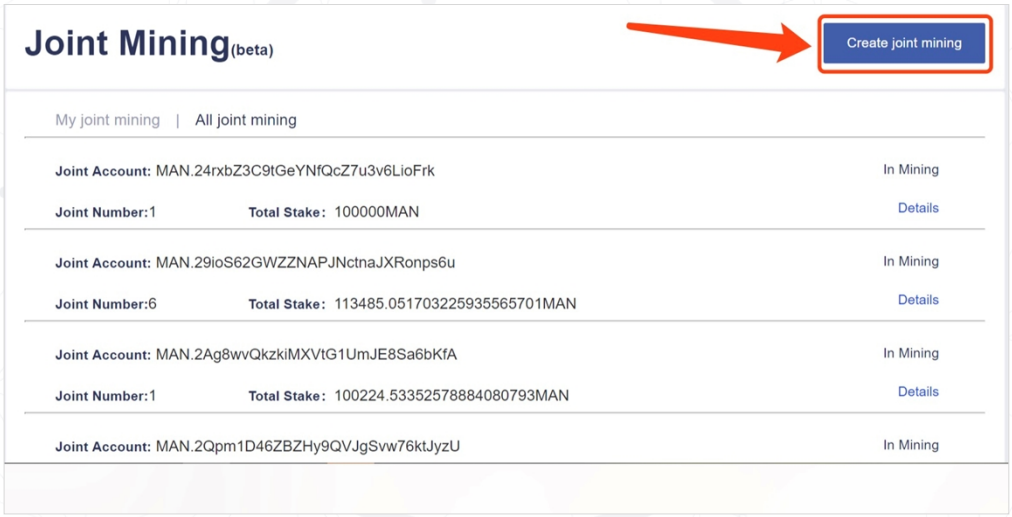


6. Joint Mining

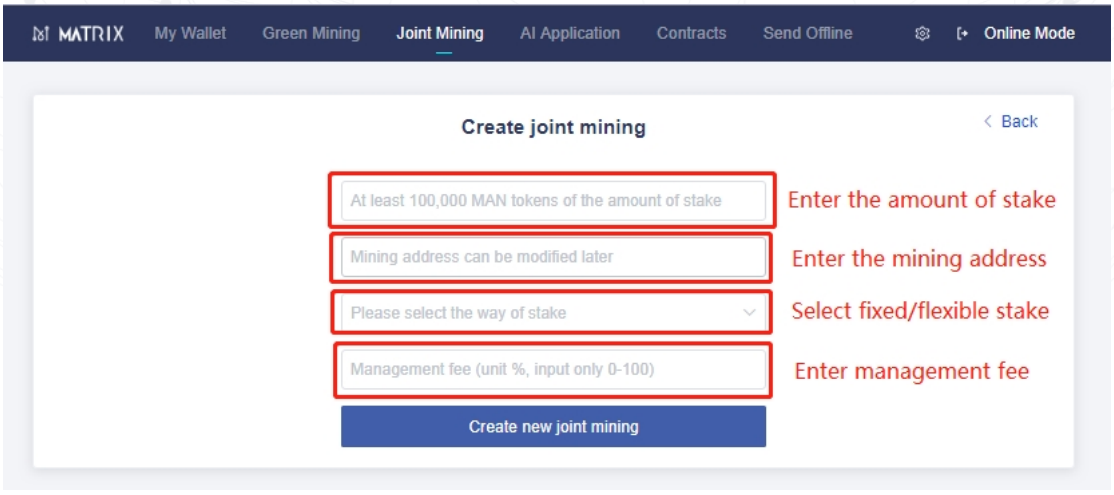
In the joint mining, there are the creators and participants of the mining pool. The creators of the mining pool need to do mining, while the participants of the mining pool do not need to launch the equipment, only need to choose the mining pool and participate in the stake.

6.1 Create Joint Mining

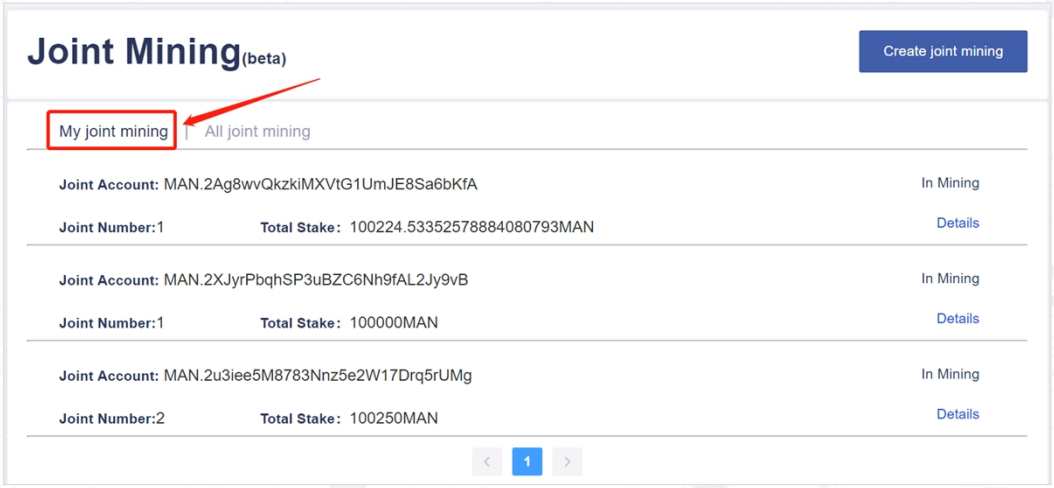
6.1.1 Click 【Create joint mining】



6.1.2 You can stake step by step, click【Create new joint mining】

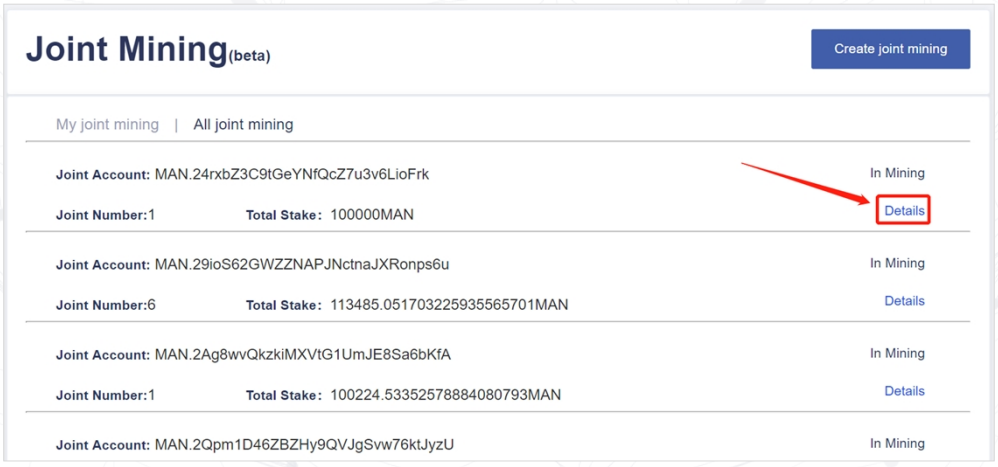


6.1.3 You can view your joint mining in “My joint mining” after creating successfully.



6.2 Participate in Joint Mining

6.2.1 Choose the mining pool you want to be involved in【All joint mining】,
pay attention to selecting the one in the "In Mining" state, and click "Details".

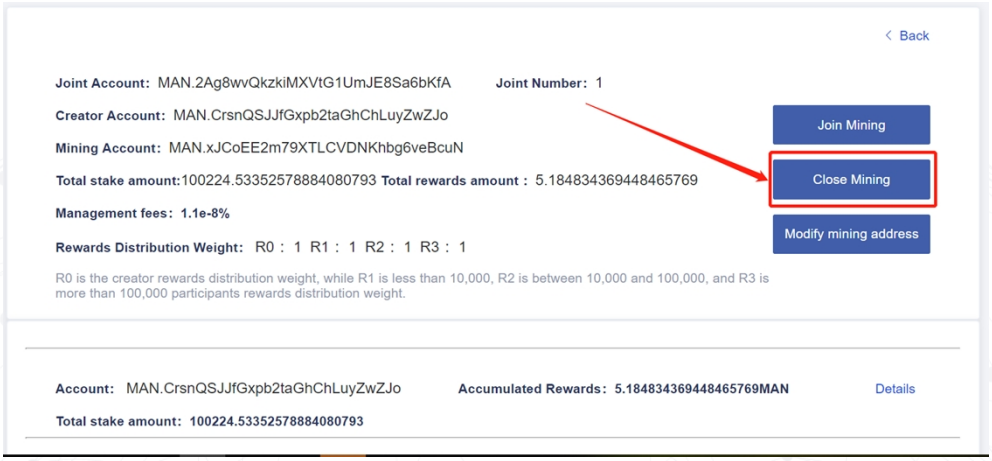


6.2.2 Click【Join Mining】

6.2.3 Select fixed/flexible stake, and enter the amount of stake. Click【Joint Mining】

6.3 Exit Joint Mining

6.3.1 If you are the creator, you can choose to【Close Mining】. After closing mining, all flexible stake in the mining pool will automatically return to the refund account within 7 days, while the fixed stake will reach refund account within 2 hours after the expiration.

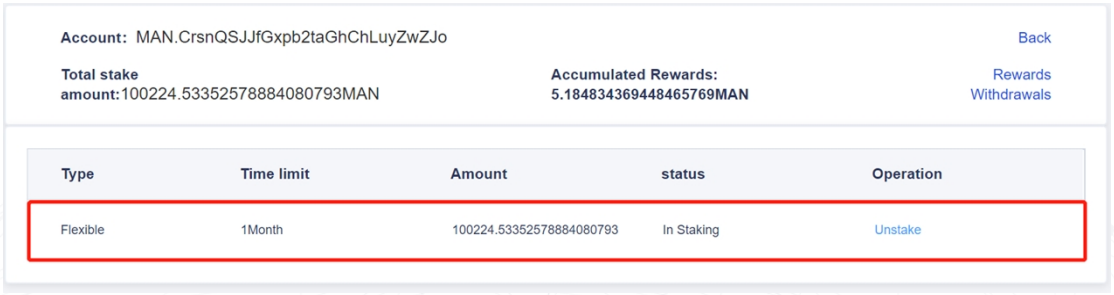


6.3.2 If you are a participant, you can click【Details】in the mining pool where you have staked your tokens.

Click on 【Unstake】

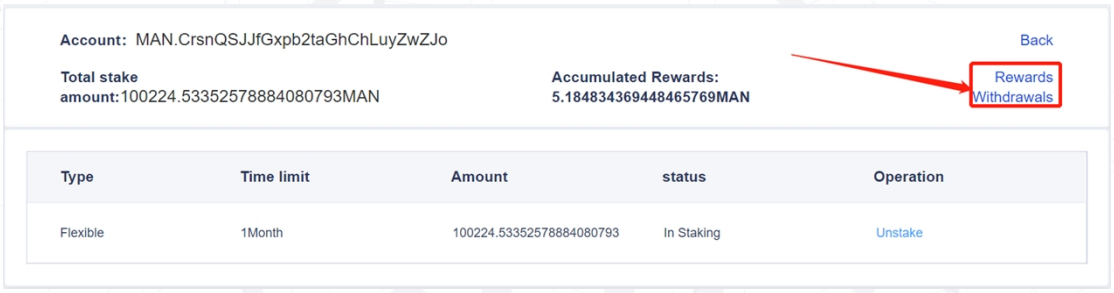
Within 7 days after the unstake of the flexible stake, you can carry out the "withdrawal" operation on the current page. After successful withdrawal, the amount of the flexible stake will be transferred to the "Accumulated Rewards".

After the unstake of fixed stake, you can carry out the "withdrawal" operation on the current page within 2 hours after the expiration date. After successful withdrawal, the amount of the fixed stake will be transferred to the "Available assets".



6.4 Rewards Withdrawals

Accumulated rewards are the mining rewards earned in the mining pool, and can be withdrawal to available assets.

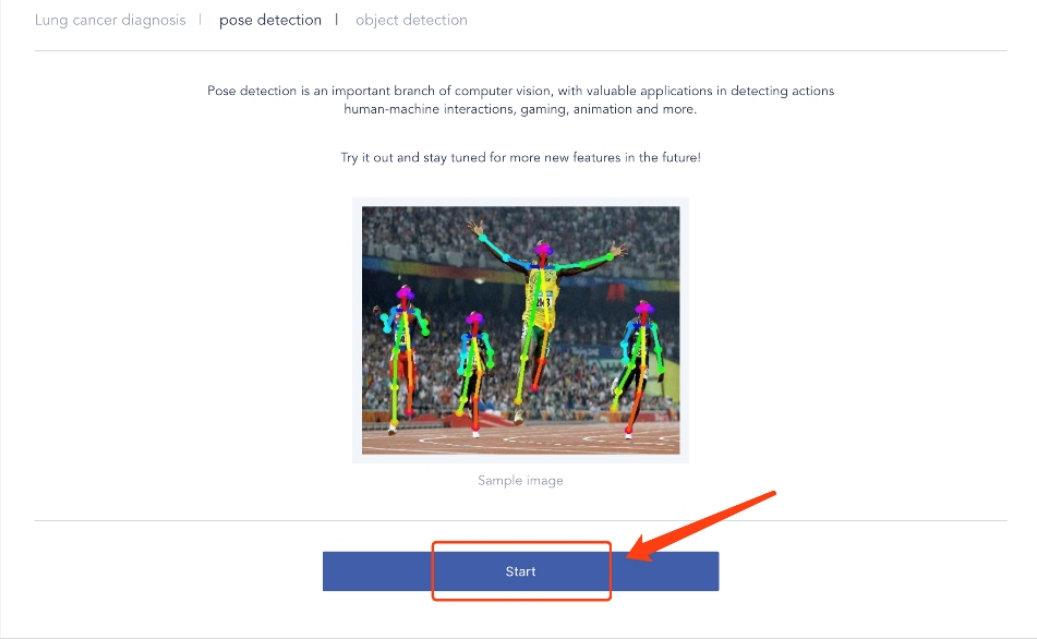


7. AI Application

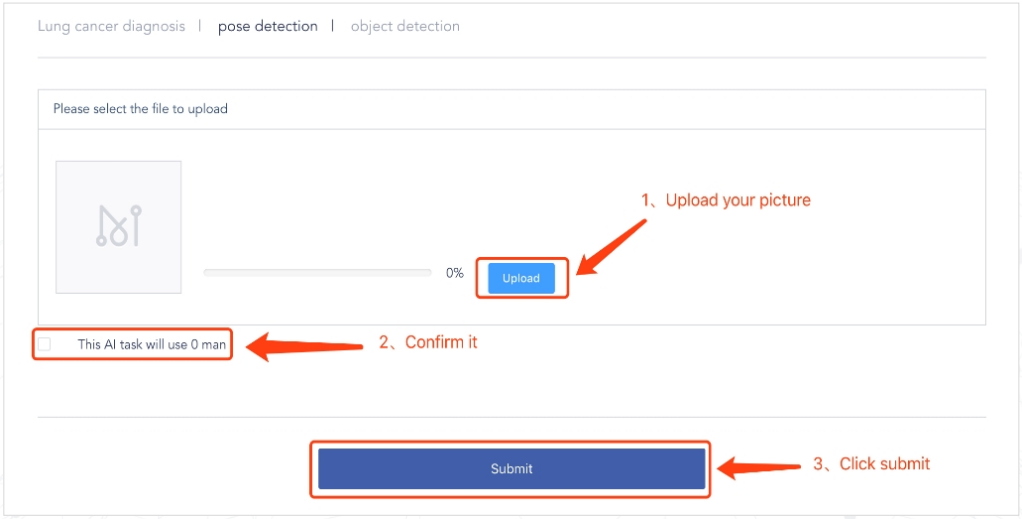
Users upload their own pictures or medical images in their wallets. After paying gas fees, the wallet will automatically process through the AI server. Then users can view the transaction and the results of AI analysis in the block chain browser.

AI applications now provide three main functions, namely, Lung cancer diagnosis, pose detection and object detection, which will be updated in the future. Here, we take the pose detection as an example to explain the operation process.

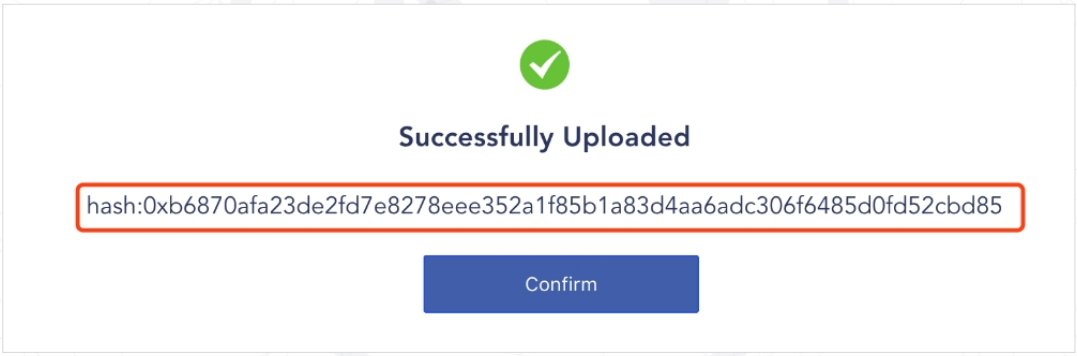
7.1 Click【Start】



7.2 Enter information.
Upload the picture that needs to be detected
Confirm consumed MAN
Then click【Submit】



7.3 After upload successfully
You can copy the hash to view the result of AI process in browser (tom.matrix.io)



7.4 The transaction hash can be queried in the browser, and the processed image is implemented by another automatically triggered transaction.

The "from" address of this transaction is the uniform address of the AI server, and the "to" address is the "from" address of the original transaction.

Transaction Information

Home | Transaction Information

TxHash:	0x327f40c5e8cedef9570ee10196a5cf94e898eee0de6d473291cff7bea7756990
Block Height:	131928
TimeStamp:	2019-01-09 17:30:39 +0800 (13 mins, 29 seconds ago)
From:	MAN.pfLeoExi3fjmSjixhadF4SFKjzUA
To:	MAN.bjHU5ZCpKwg6k1nUCNG1vJKxVeBU
Value:	0 MAN
nonce	4503599627371333
Input Data	matrix{"type": "20", "length": 89, "data": " "}

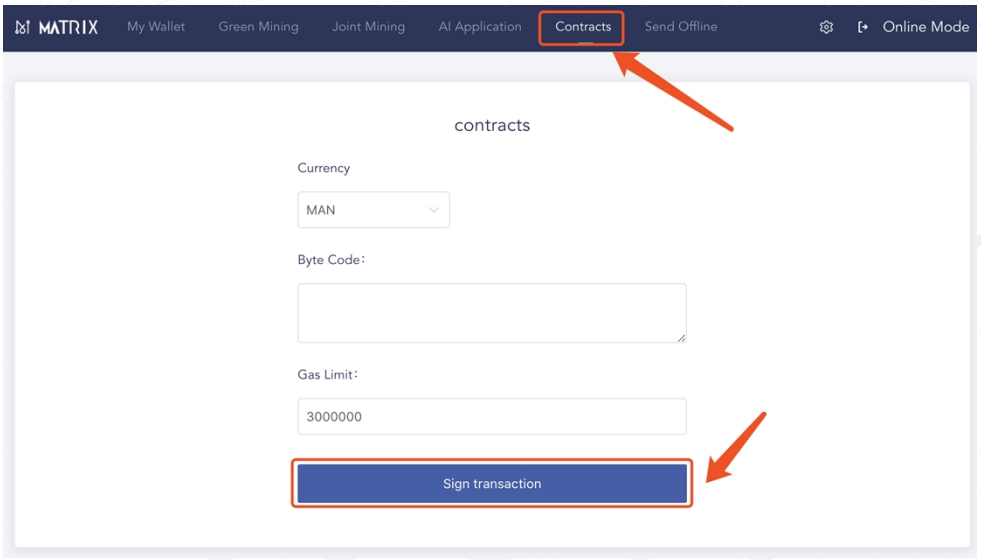
UTF-8 | Original | Html

xHash:	0x10e28f800d1c6b78d47864b43339fce15f0c6eaff93e518dcdb6f6d10970c8fc
lock Height:	132020
imeStamp:	2019-01-09 17:42:39 +0800 (38 seconds ago)
rom:	MAN.2Uoz8g8jauMa2mtnwxrschj2qPJrE
o:	MAN.pfLeoExi3fjmSjixhadF4SFKjzUA
alue:	0 MAN
once	4503599627930329
nput Data	matrix{"type":"2","length":256,"data":"

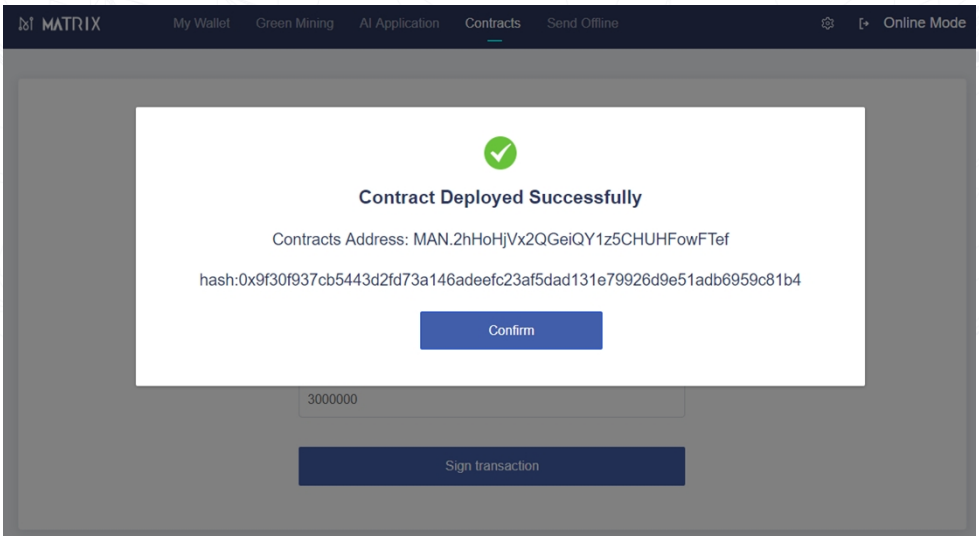
8. Contracts (Creating Token)

Through Contracts, you can create token on MATRIX mainnet.

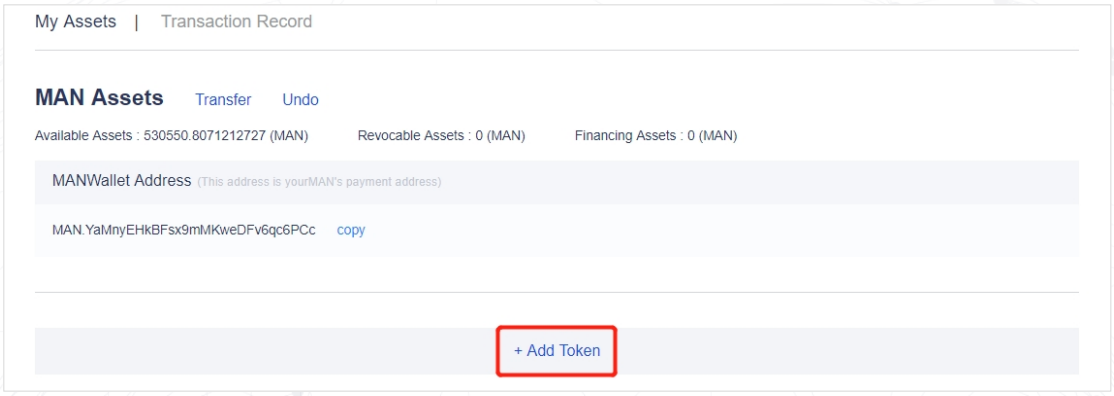
8.1 Go to the "Contracts"
Copy the byte code from your pre-compiled contract code
Paste it into the Byte Code
(Because the data attached to the contract transaction is a lot, the gas limit should be set to be larger)



8.2 After the transaction succeed
A contract address will be returned.
Please save this address.



8.3 Back to home and click【+Add token】

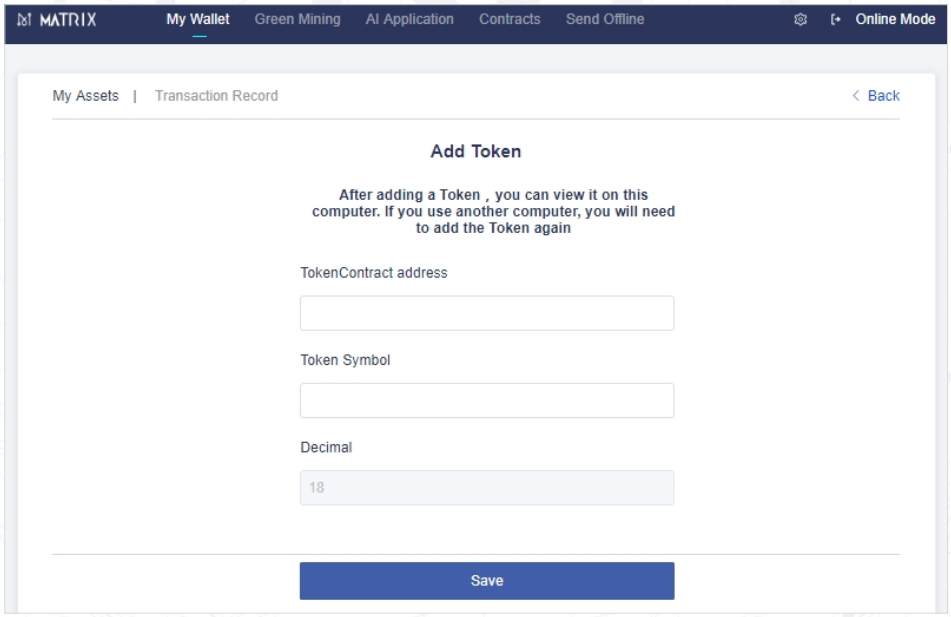


8.4 Enter Token Contract address, Token Symbol, Decimal

(Default value is 18)

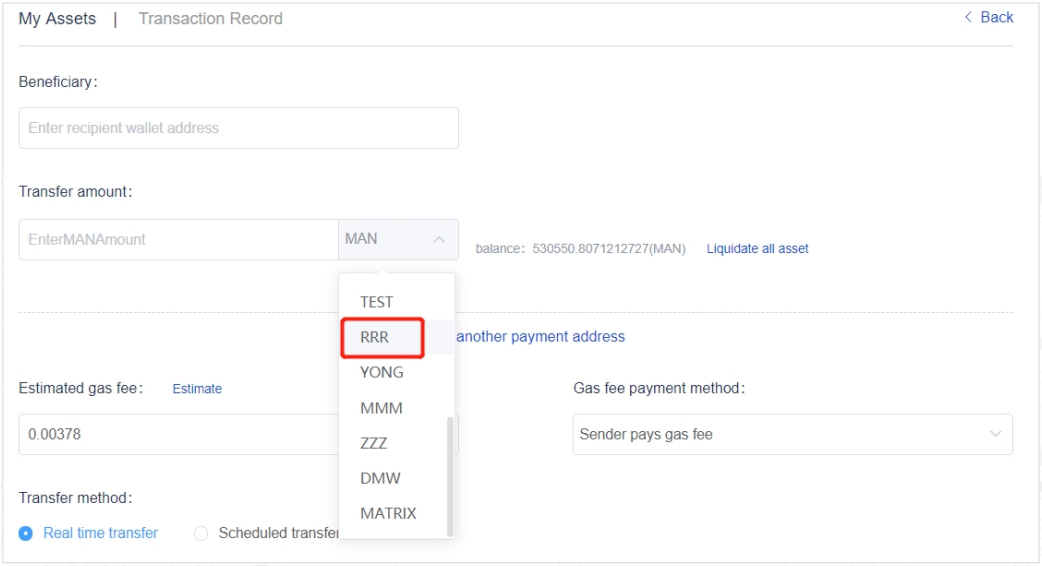
Click 【Save】

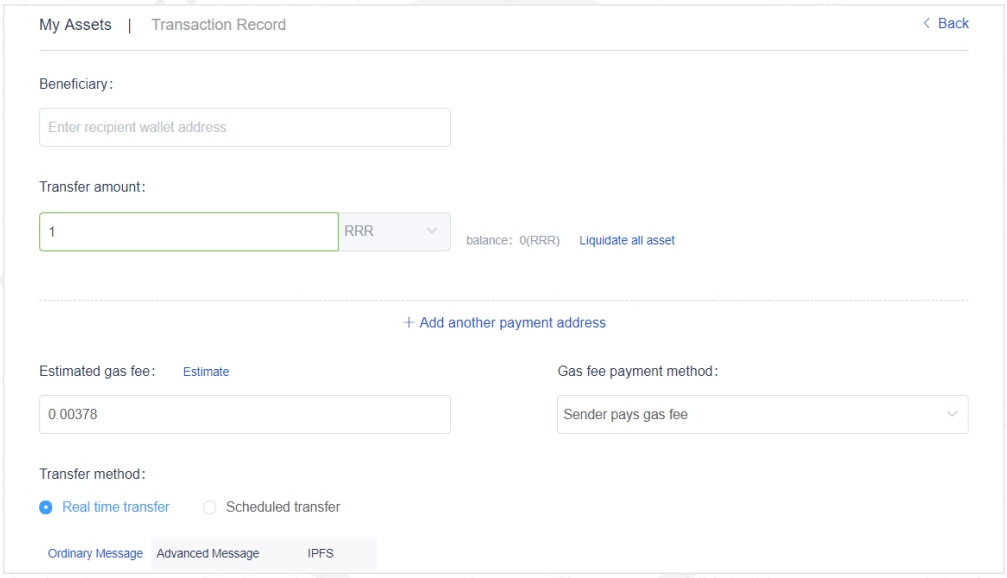
(It will prompt the token to be added successfully)



8.5 Go to Transfer page

You can select the token you just added.


My Assets | Transaction Record
Back
Beneficiary:
Enter recipient wallet address
Transfer amount:
EnterMANAmount
MAN
balance: 530550.8071212727(MAN)
Liquidate all asset
TEST
RRR
YONG
MMM
ZZZ
DMW
MATRIX
another payment address
Estimated gas fee:
Estimate
Gas fee payment method:
0.00378
Sender pays gas fee
Transfer method:
Real time transfer
Scheduled transfer

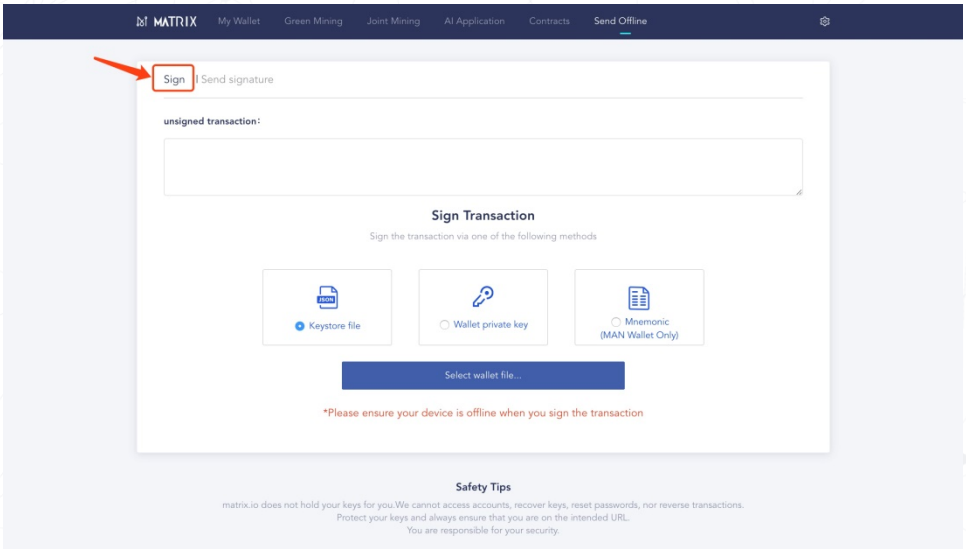

My Assets | Transaction Record
Back
Beneficiary:
Enter recipient wallet address
Transfer amount:
1
RRR
balance: 0(RRR)
Liquidate all asset
+ Add another payment address
Estimated gas fee:
Estimate
Gas fee payment method:
0.00378
Sender pays gas fee
Transfer method:
Real time transfer
Scheduled transfer
Ordinary Message
Advanced Message
IPFS

9. Send Offline

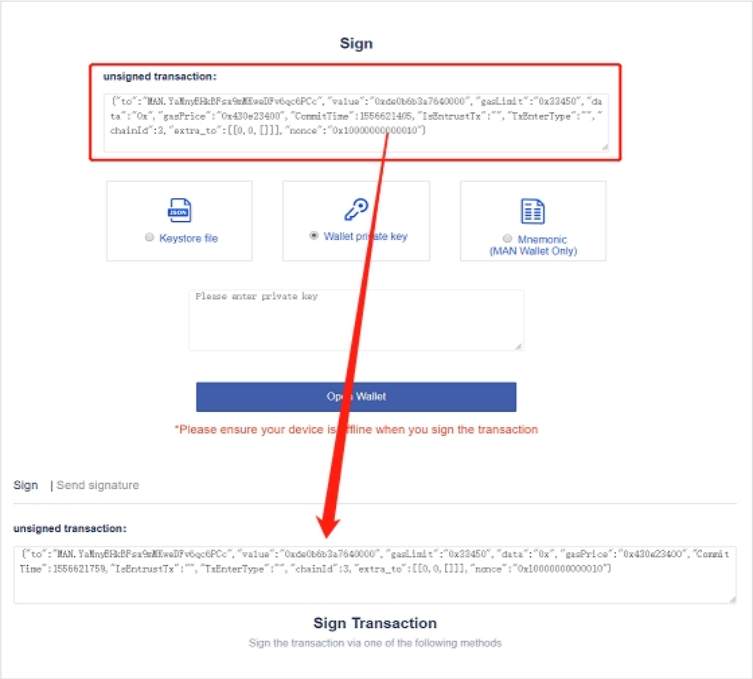
9.1 Sign

An offline transaction is to sign a transaction on a computer that is disconnected from the network, then will generate a signed transaction, and copy it to a network-connected computer for sending to chain.

9.1.1 Click【Sign】

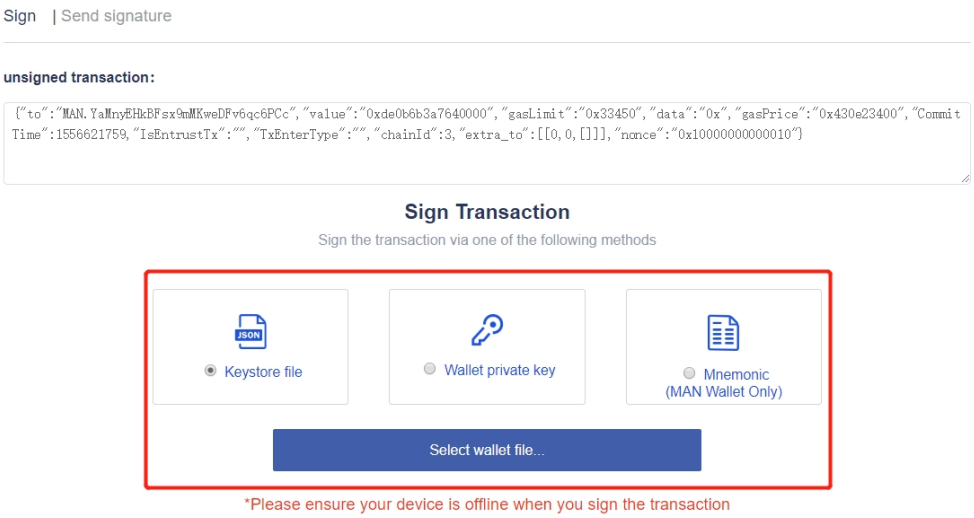


9.1.2 Paste the constructed unsigned transaction information into the input box.



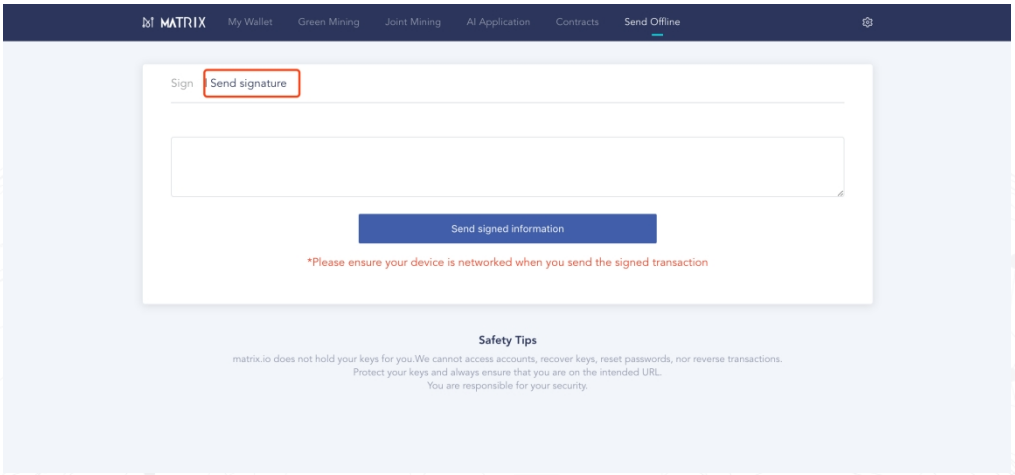
9.1.3 Choose a way to open your wallet with Keystore file, Wallet private key or Mnemonic to sign.

At this time, when you sign transaction, make sure you are in the state of disconnected network to ensure the security of your wallet.

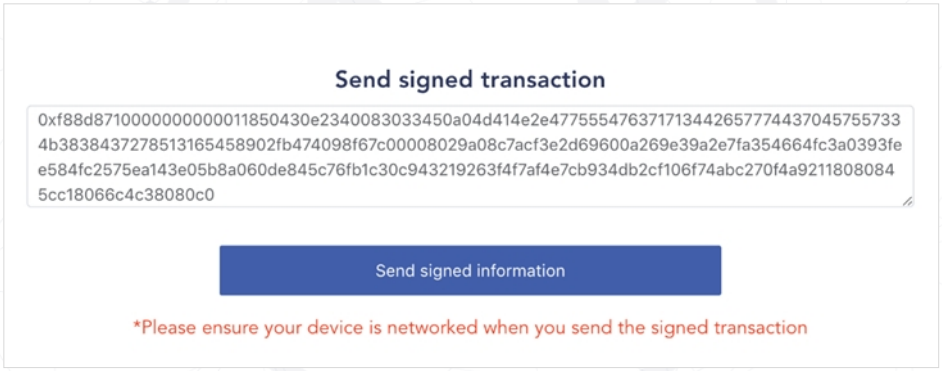


9.2 Send signature

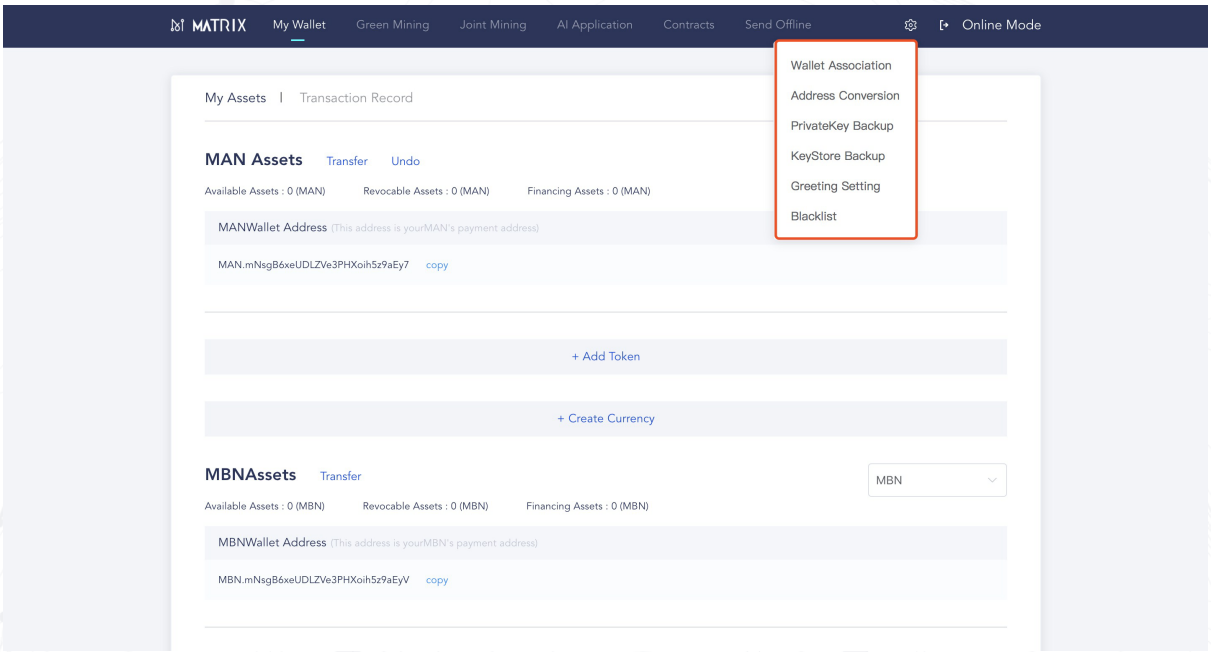
9.2.1 Click【Send signature】



9.2.2 Paste the signed information into the input box of this function when the network is disconnected.
Click on【Send Signature Information】
(It should be noted that this step should be in the state of connected network)



10. Settings



10.1 Wallet Association

Wallet Association is a kind of entrusting behavior, that is, the transaction initiated by the associated wallet under specified conditions will be paid gas fee by the related party.

Note: When a transfer transaction is initiated by an associated wallet, it is necessary to choose "Recipient pays gas fee".

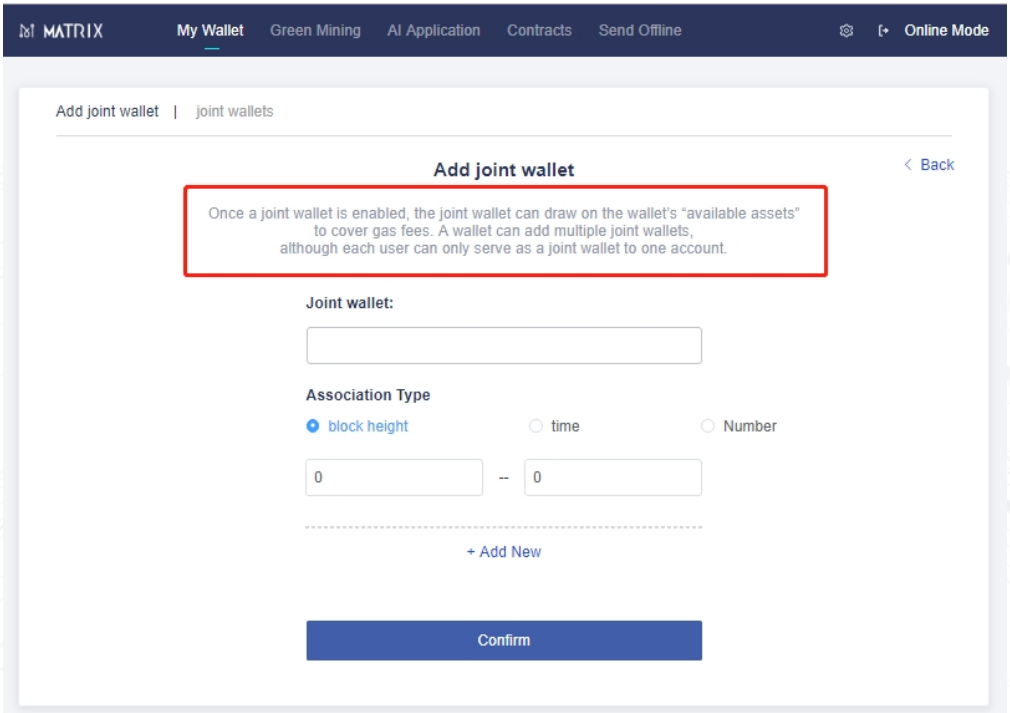
10.1.1 Enter the joint wallet address

Choose an association type:

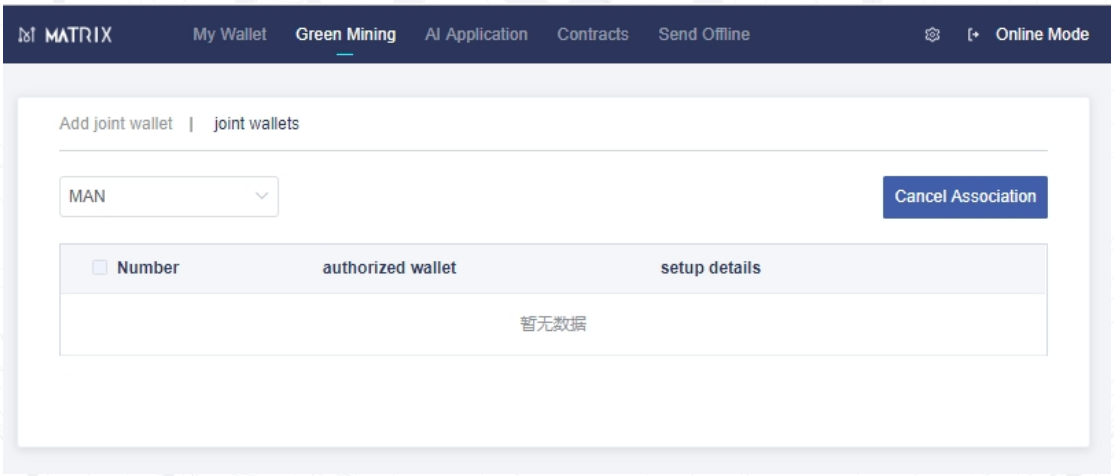
Block height: The association is valid within the specified block height range

Time: The association is valid within a specified time range

Number of times: Number of times authorized

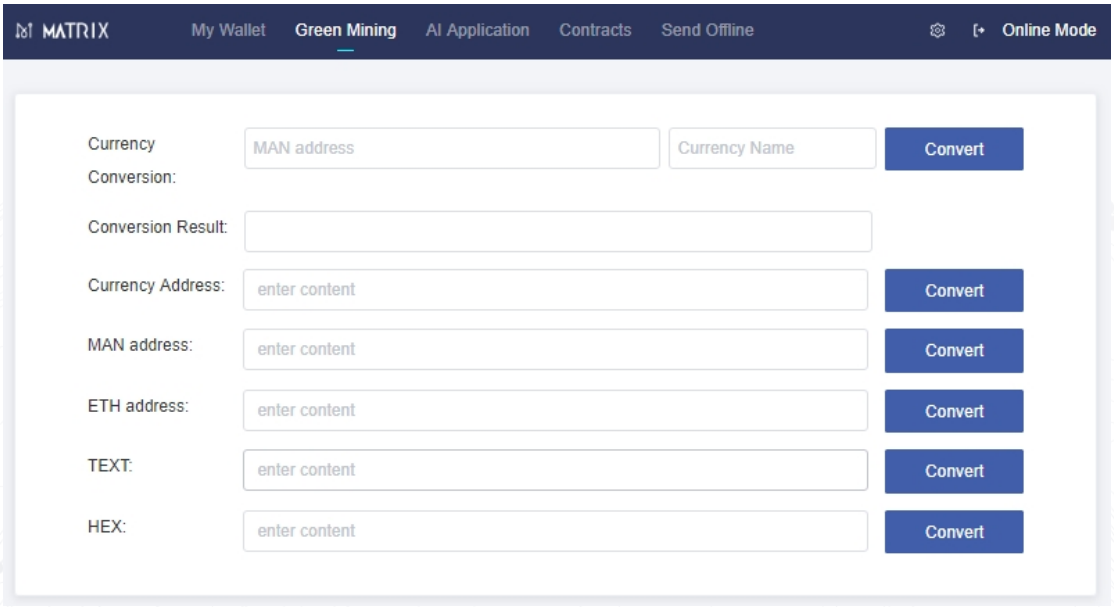


10.1.2 You can view joint wallets in 【joint wallets】



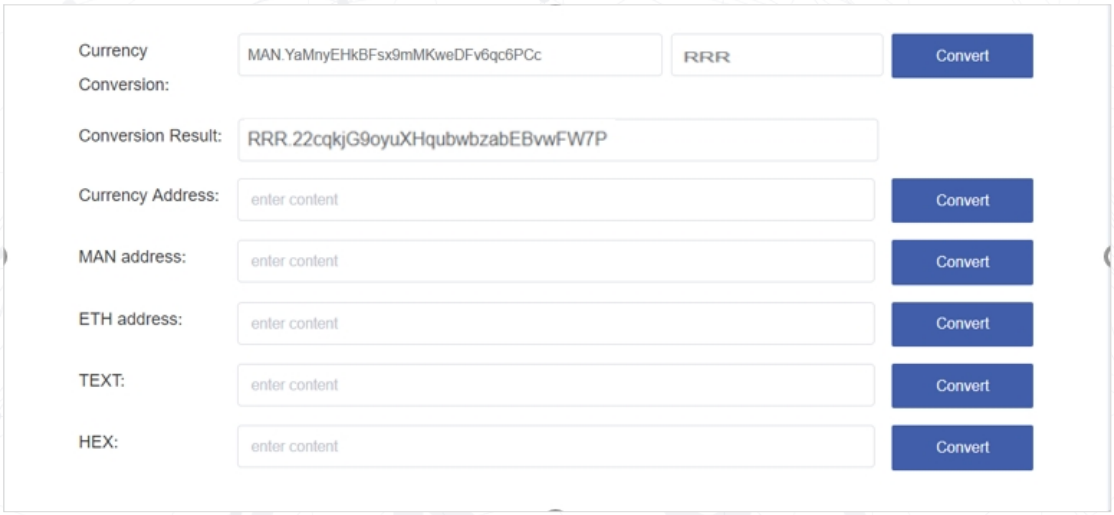
10.2 Address Conversion

Click【Address Conversion】to convert ETH address to MAN address.

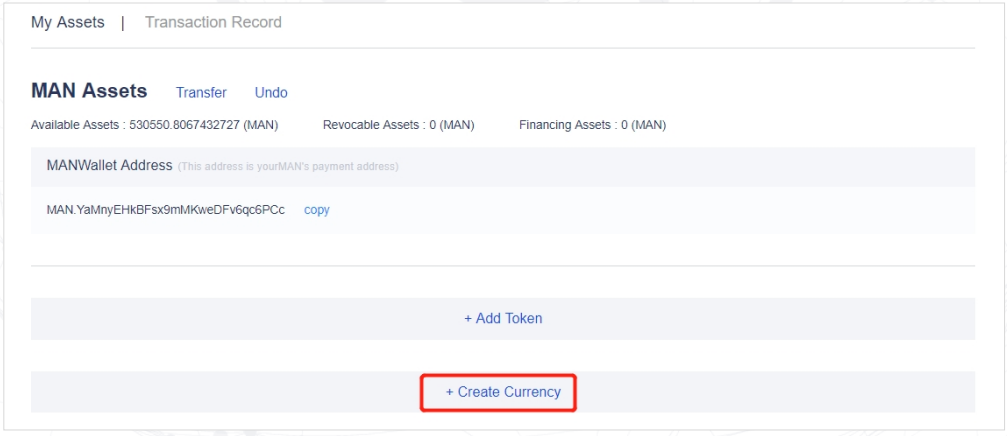

MATRIX
My Wallet
Green Mining
AI Application
Contracts
Send Offline
Online Mode
Currency Conversion:
MAN address
Currency Name
Convert
Conversion Result:
Currency Address:
enter content
Convert
MAN address:
enter content
Convert
ETH address:
enter content
Convert
TEXT:
enter content
Convert
HEX:
enter content
Convert

11. Creating Multi-currency

11.1 Enter MAN address and Currency name
Click 【Convert】

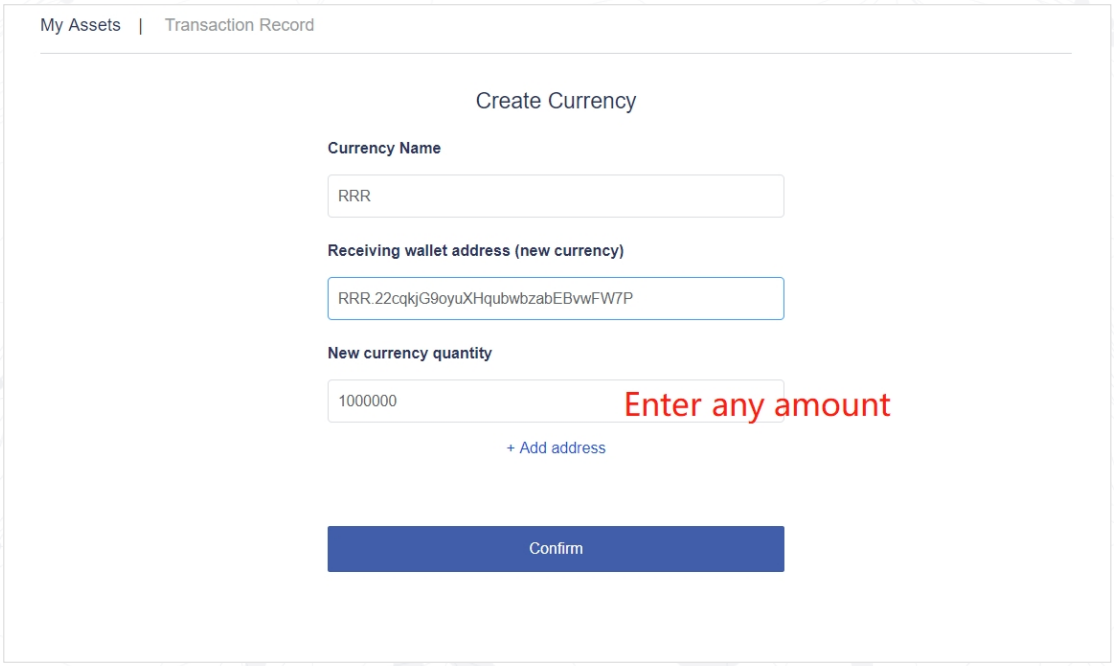


11.2 Record the generated new currency address
Click【Create Currency】in My Assets page.

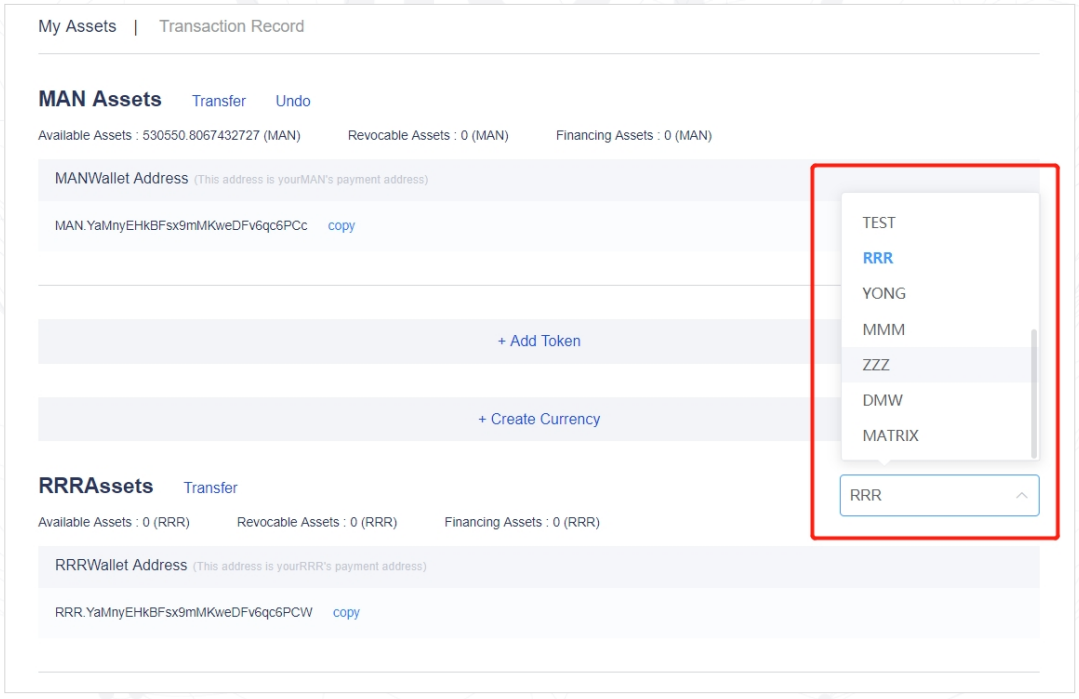


11.3 After entering the information
Click 【Confirm】

To create a currency, the balance of wallet address should be more than 100,000 MAN (if the system has more than 100 currencies, then 95,000 MAN), and 100,000 MAN will be automatically transferred to the designated account.



11.4 Once created, you can see the currency you just generated in the currency drop-down list in My Assets page.



MATRIX WALLET MANUAL