

VeChainThor Wallet Manual

■ **Android V1.4**

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1. Basic wallet

The following terms are necessary to understand in order to secure and protect your wallet.

Please understand them before creating your wallet in the mobile wallet application:

Wallet Name is the name you give the newly created wallet in your phone's mobile wallet application. You choose and enter the name when setting up the wallet.

Wallet Password is a password you create, enter, and verify to lock and unlock the wallet on your mobile device. Anyone who has your unlocked phone and this password can access your wallet and associated tokens, including transferring them out to another wallet. The wallet password can not be used to restore a wallet.

Mnemonic is the 12 word phrase generated by the mobile application during the setup of the wallet. This 12 word phrase is used to restore your wallet in the event you lose your phone. Anyone who has this 12 word phrase, with or without your phone, can restore your wallet on another device. The mnemonic is not used to access the wallet in daily use once the wallet setup is completed. You should follow best-practices for keeping this mnemonic safe and private.

Keystore File is an exportable text file that is a secondary method of restoring the wallet. Anyone with access to this keystore file can restore your wallet, so keep it safe following best-practices.

1. 1. Begin to use wallet

- 1.1.1. Download and open VeChainThor wallet APP on your mobile device. The VeChainThor Mobile Wallet application will be available for download in the Apple App Store and the Android App Market as early as July 9th, 2018.
- 1.1.2. Read and understand the "VeChainThor Wallet User Service Agreement" and "Privacy Policy". When you have finished reading it, and are sure you understand the policy, click "Accept and set login password".

5:46 PM

...

Agreement

VeChainThor Wallet User Service Agreement

Dear User:

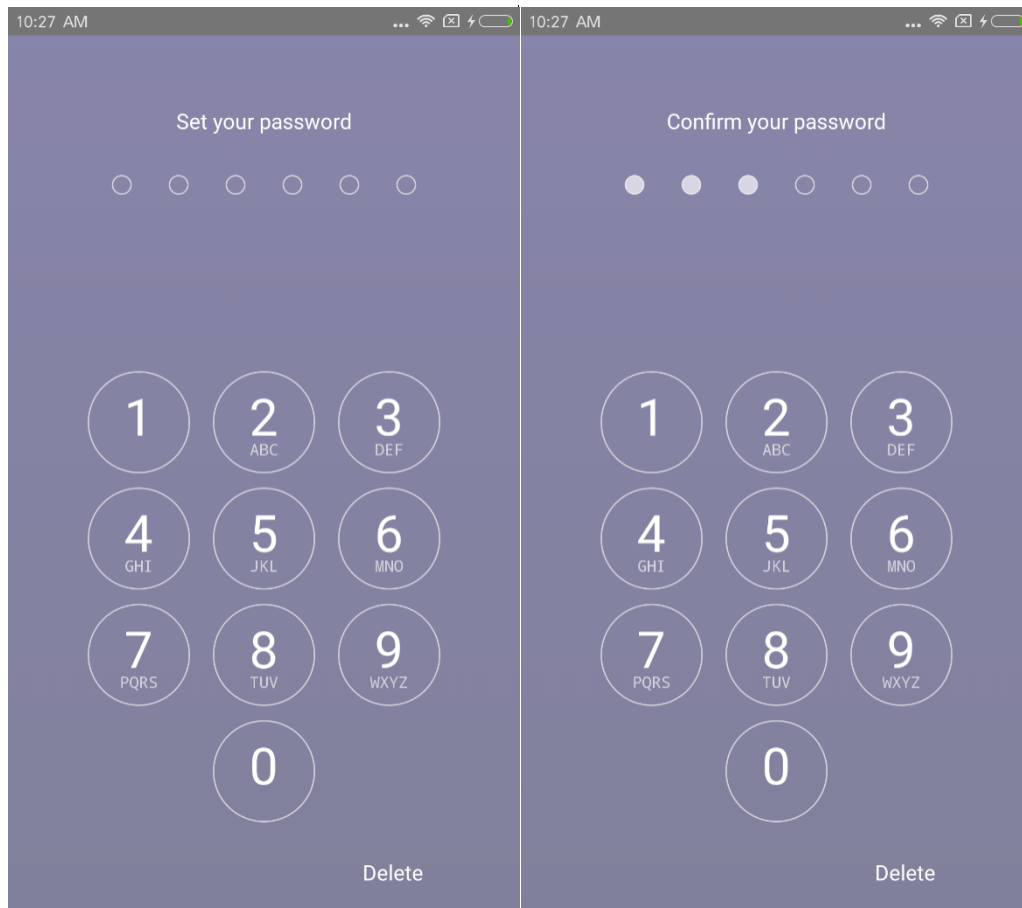
Thank you for choosing the VeChainThor Wallet (hereinafter referred to as the 'Wallet'). In order to receive a better service from the Wallet, please read *VeChainThor Wallet User Service Agreement* (hereinafter referred to as this 'Agreement') in details. This Agreement is signed by and between VeChain Technology SEA PTE.LTD (hereinafter referred to as the 'Company') and the User. Both parties are bound by this Agreement. In this Agreement, 'we' and 'us' refer to the Company and 'you' refers to the User. Each of you and the Company shall hereinafter be referred to as a 'Party', and collectively, you and the Company shall hereinafter be referred to as the 'Parties'.

Please be sure to read carefully and fully understand the contents of this Agreement, especially the terms of exemption or limitation of liability, governing law and

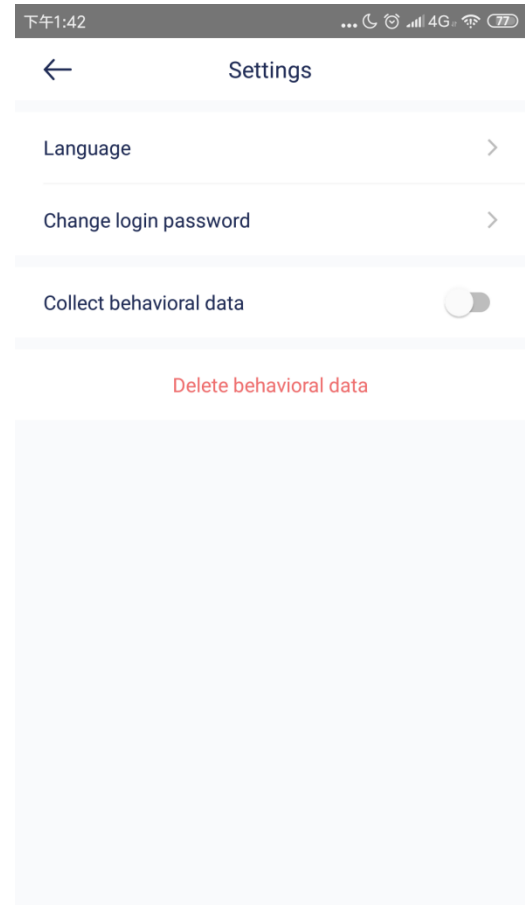
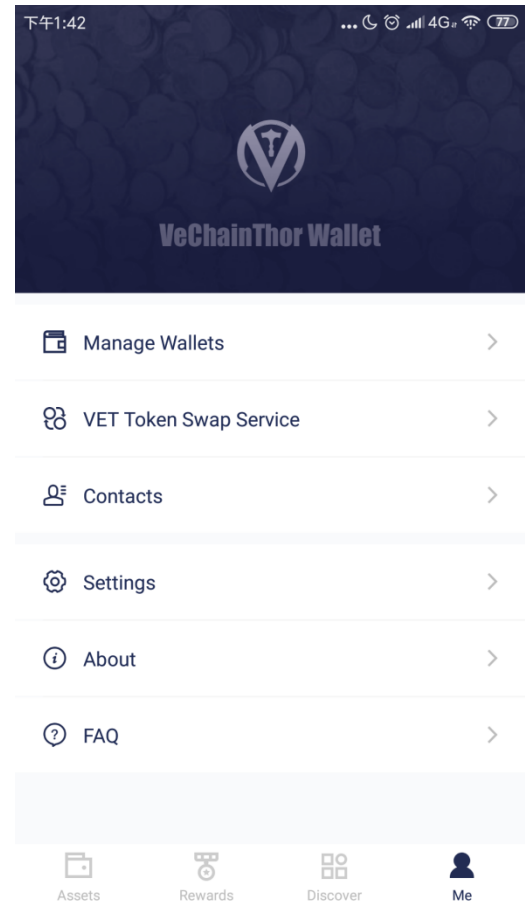
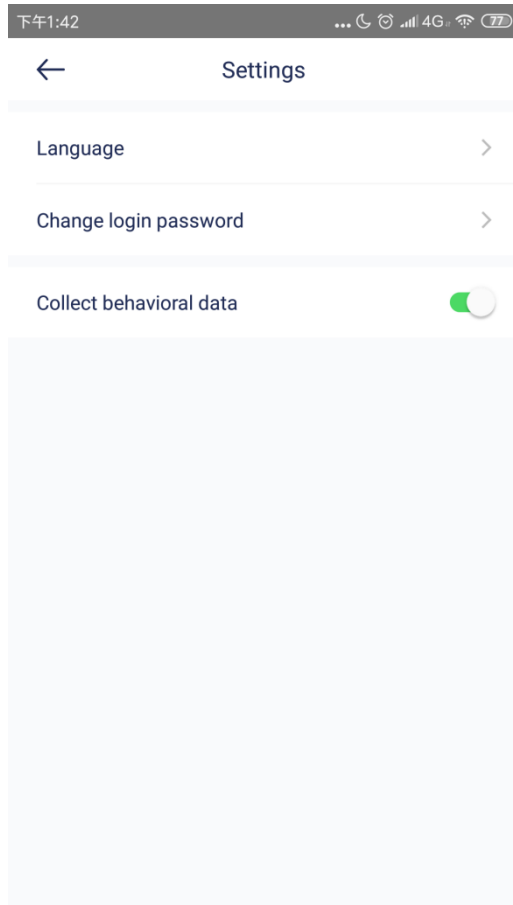
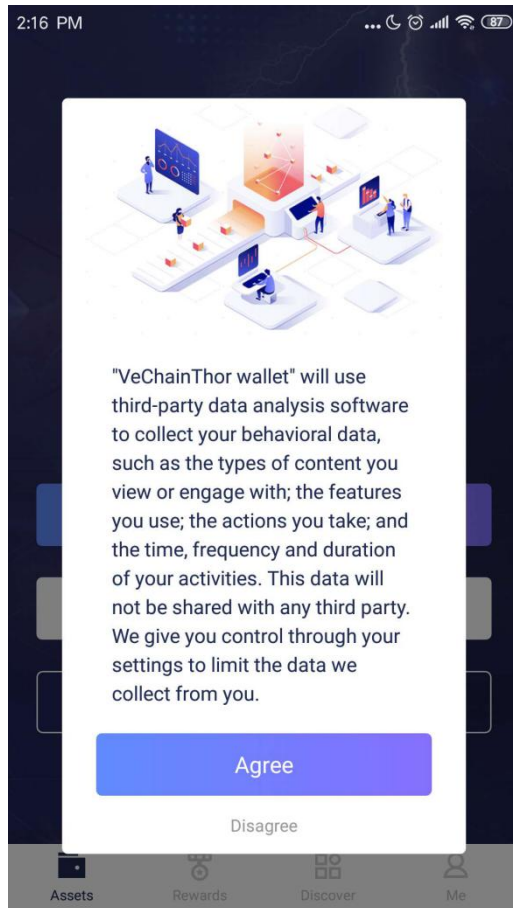
☐ I have carefully read and agree on <VeChainThor wallet user service agreement>, <VeChainThor wallet privacy policy>

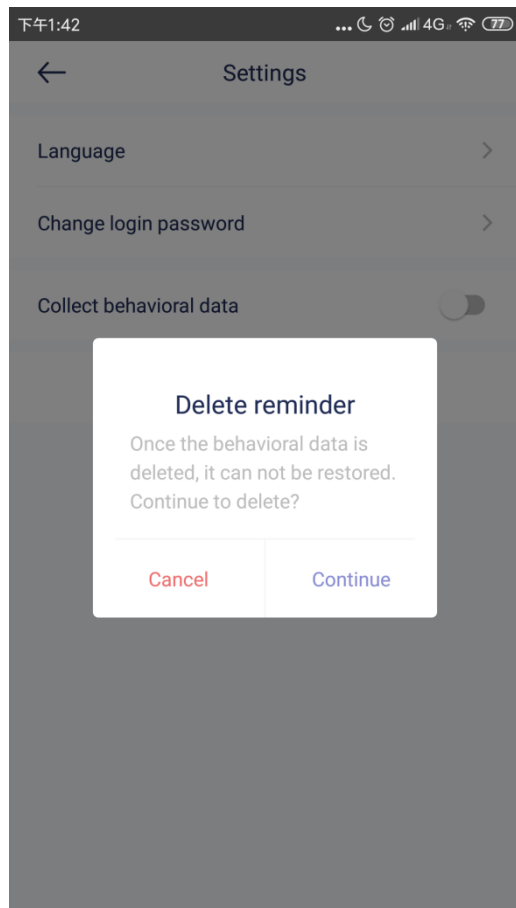
Accept and set login password

- 1.1.3. Set a 6 digit login password. If your phone supports it, you may also choose to setup Touch ID/Face ID for wallet login.

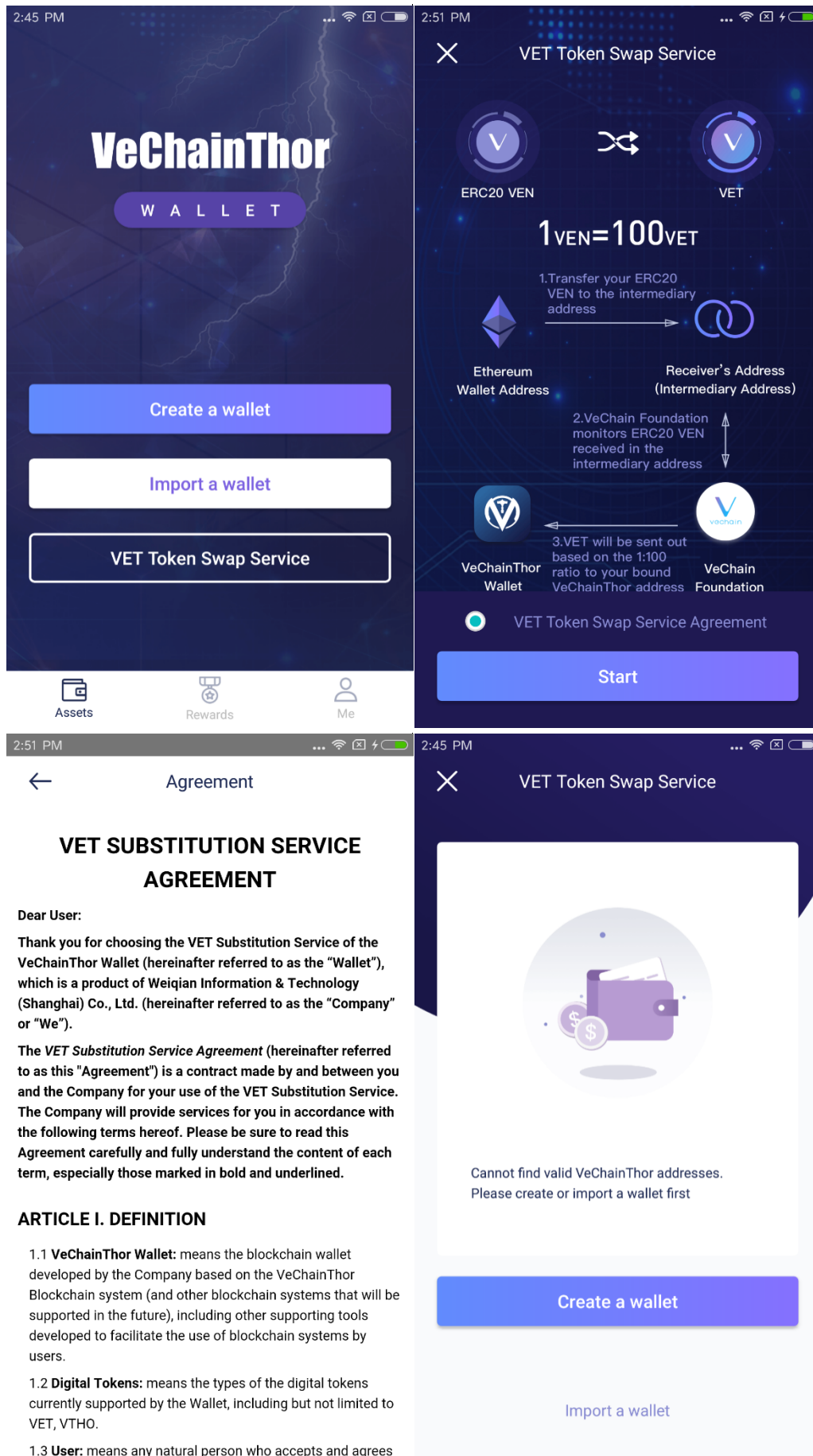


- 1.1.4. After finishing setting password, please read the reminder of behavioral data collection. You can choose “Agree” or “Disagree”, and modify the setting during use in “Settings”. If you agree to collect data, click “Me-Settings” and turn on the function of “Collect behavioral data”. If you do not agree, turn off the function, furthermore, click “Delete behavioral data”, once the behavioral data is deleted, it cannot be restored.





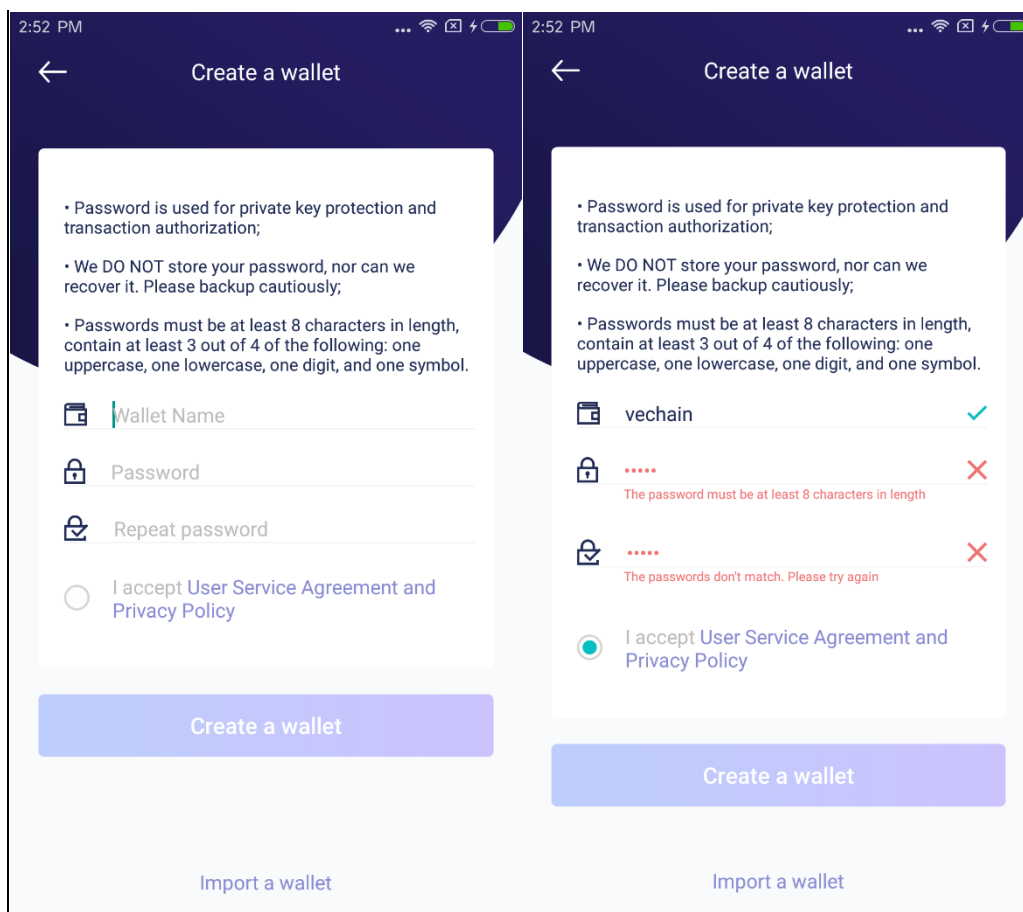
- 1.1.5.** After set password and enter homepage without wallet. There are 3 operations on homepage are create wallet, import wallet, and VET Token Swap Service. When click VET Token Swap Service first, page shows the flow chart of VET Token Swap. Check the agreement and click start, system requires create wallet or import wallet first (no wallet in new APP). **We recommend create wallet when first time use APP, or import wallet if you have VeChainThor wallet.**

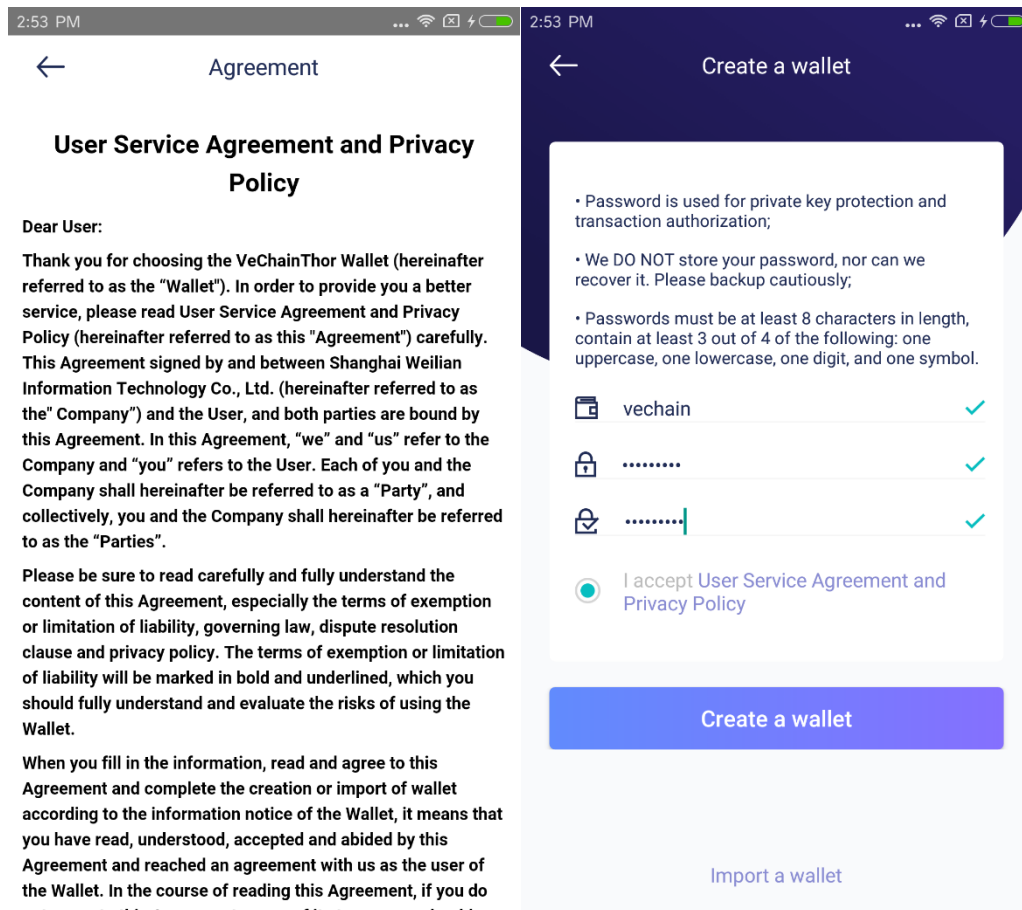


1. 2. Create wallet

1. 2. 1. Click “[Create Wallet](#)”, Follow the instructions to input your wallet name and setup the wallet password. The wallet name is a name of your choosing, to distinguish this wallet from other wallets you might create. The wallet password is a password entered on this mobile device to access the contents of the wallet. The password is specific to this device, and is not used to restore the wallet. Read and accept 《Terms of Service and Privacy Policy》, then click [Create a wallet](#).

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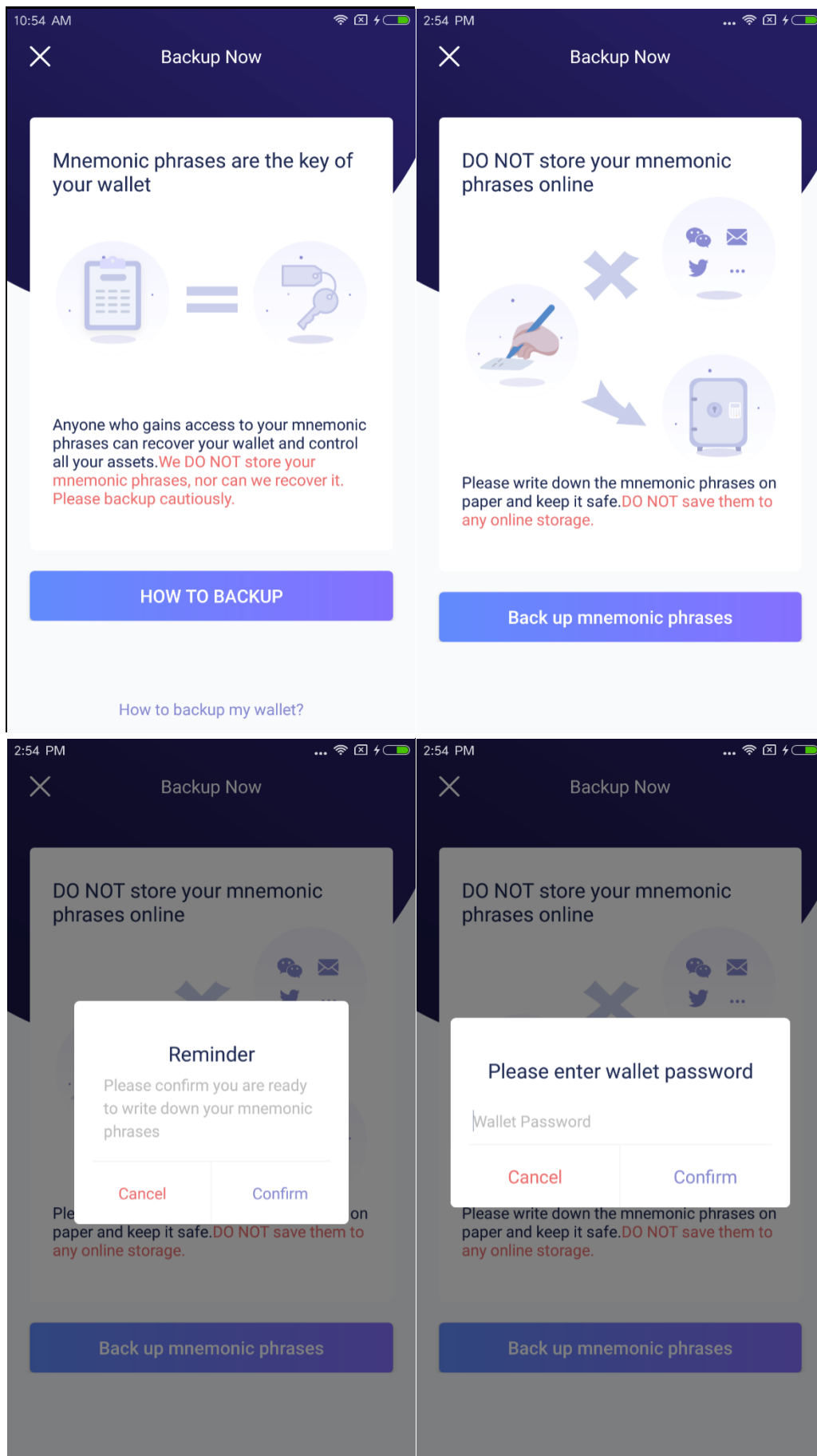




1. 2. 2. Backup wallet

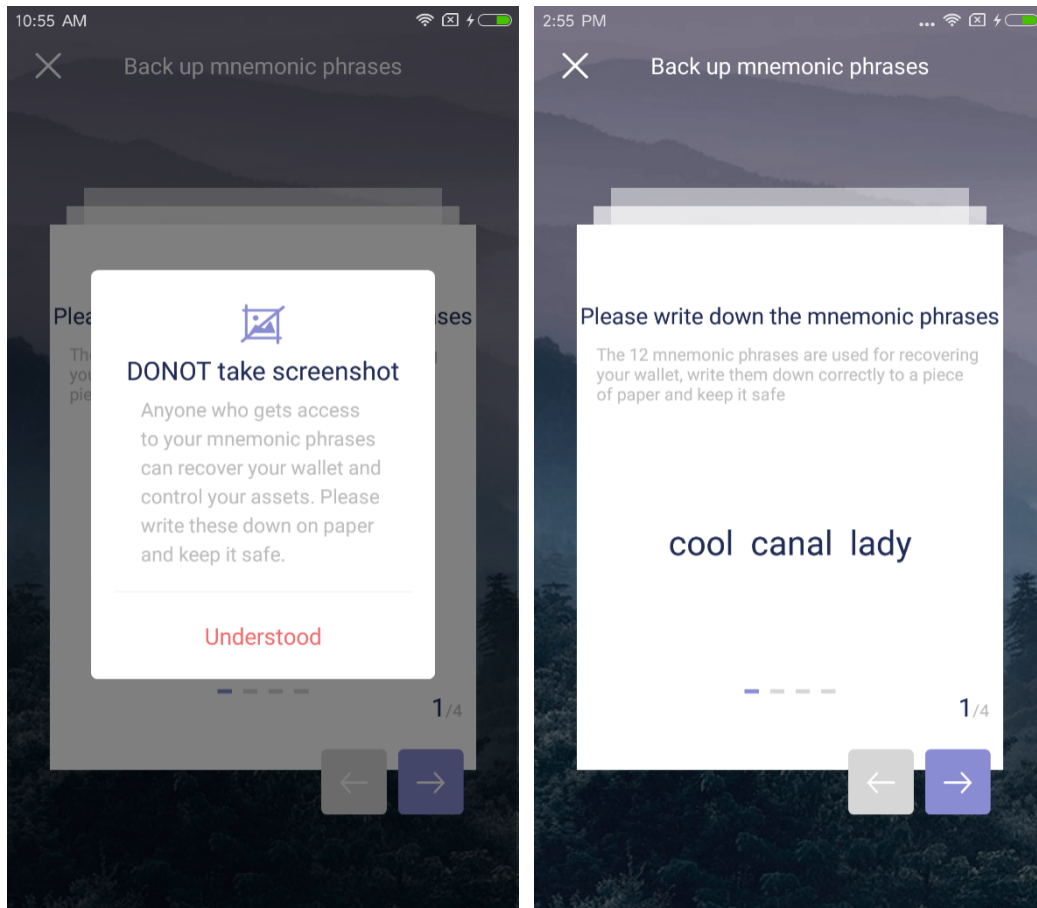
Backup wallet after created. Click how to backup, then click back up mnemonic phrases, system remind "please confirm you are ready to write down your mnemonic phrases". Click confirm and enter password, then confirm and enter to mnemonic phrases writing page.

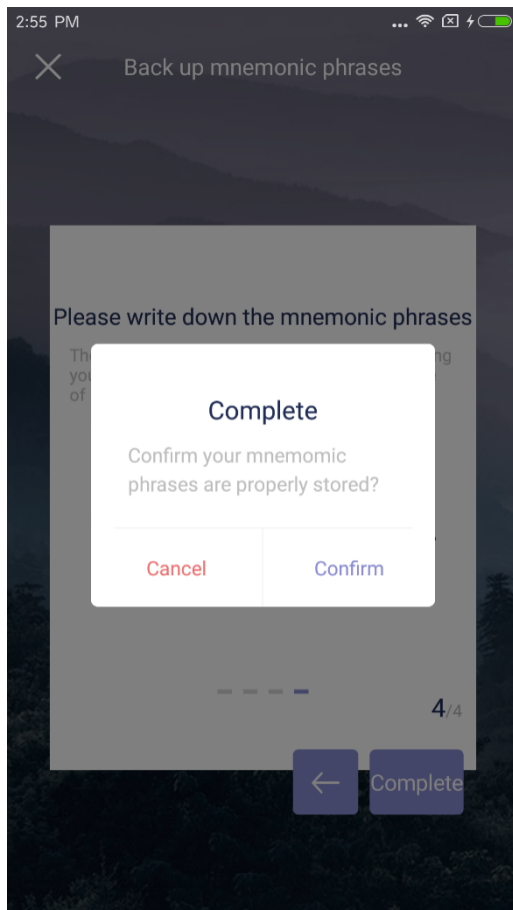
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1. 2. 3. Write down your mnemonic phrase on a piece of paper, and keep it safe. There are 12 mnemonic phrases show in 4 pages. Mnemonic phrases are your private key, the most significant part of wallet, and cannot leak out. For Android, for security reasons do not take a screenshot, photo, or other digital copy of this phrase. If system detect screenshot operation, it will be terminated.

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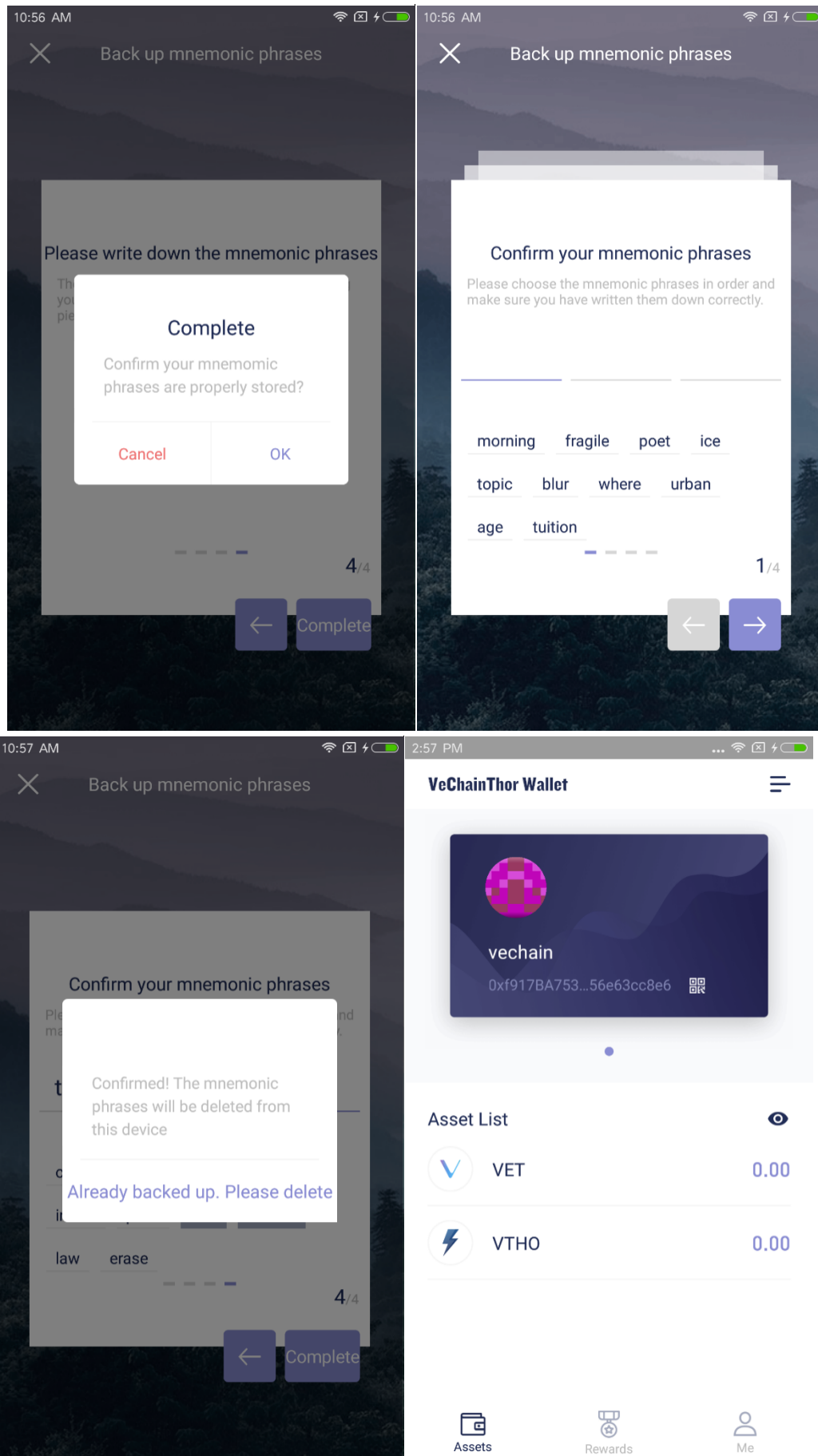




1. 2. 4. When complete mnemonic phrases, click “confirm” to enter to mnemonic phrases confirming phase, or click “cancel” to write and check mnemonic phrases again. After confirmation, your mnemonic phrases will be removed from the device’s memory. Once you have completed the steps above, the VeChainThor Wallet creation is completed. It is not retrievable, so please ensure it is secure and accessible to you in the event you need to restore your wallet.

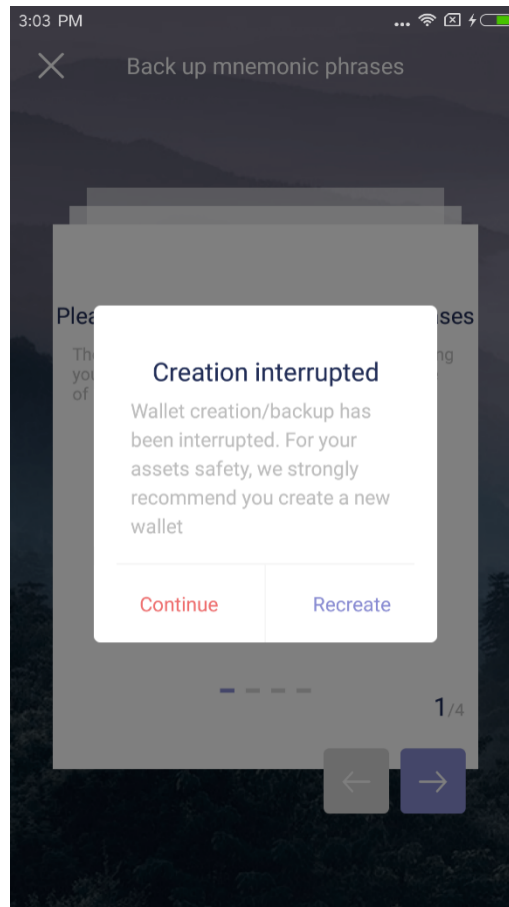
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Special note for X Node holders: if you lose both the mnemonic and keystore file, you will have no way to restore the wallet and will need to create a new wallet, in which case you would lose your X Node status.



1. 2. 5. In mnemonic phrases writing and confirming phase, if quit wallet to do other operation, when back to wallet, system will remind, “creation interrupted”, users can decide whether to continue or recreate wallet. If quit wallet for a long time, system will quit wallet creation.

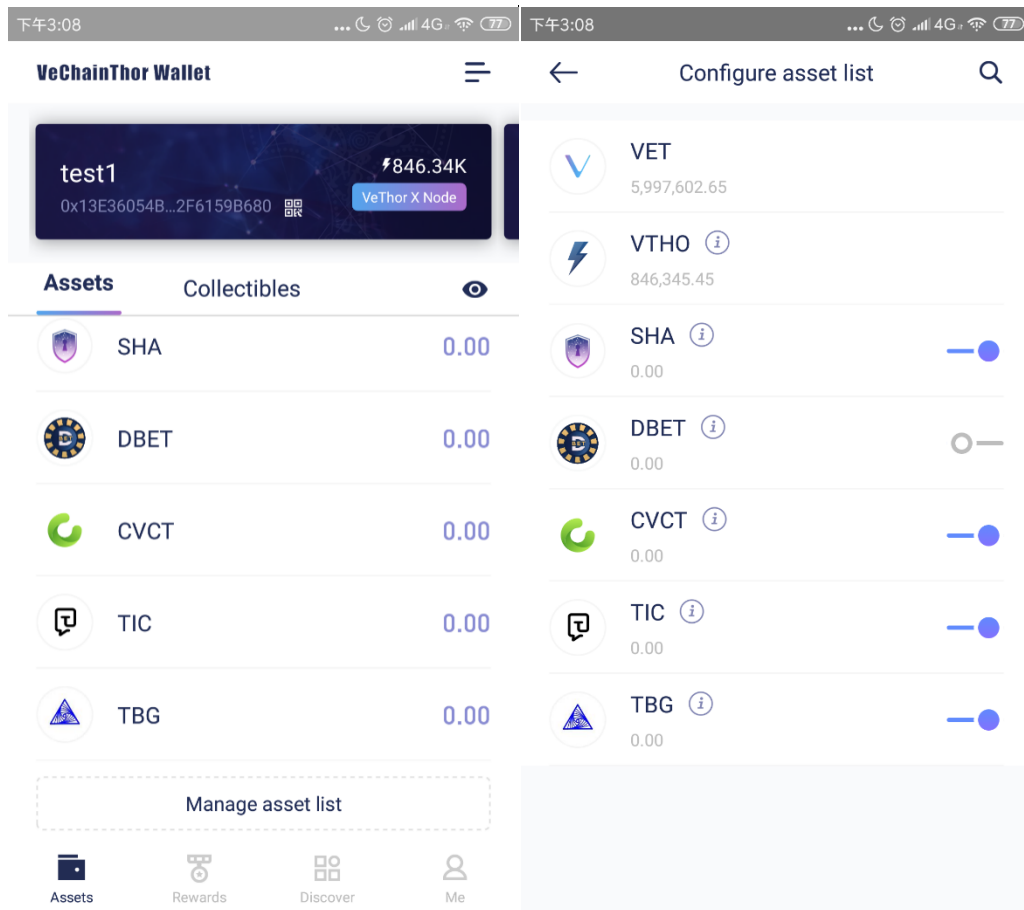
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1. 3. Page introduction in wallet

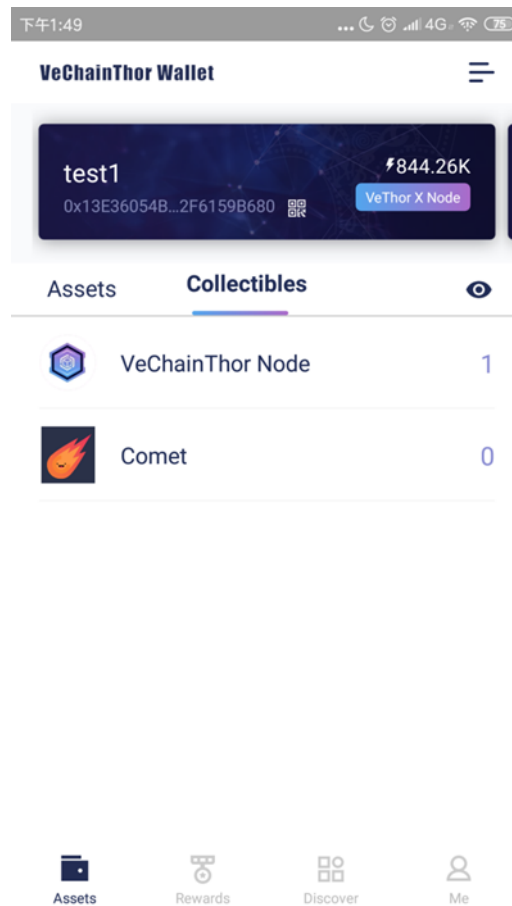
1. 3. 1. Asset list

Swipe left and right to view the wallets' assets list. Click “Manage asset list” to configure assets displayed in the Asset list page, turn the button into gray if you do not want it to display in the Asset list page. And VTHO is also not in the asset list.



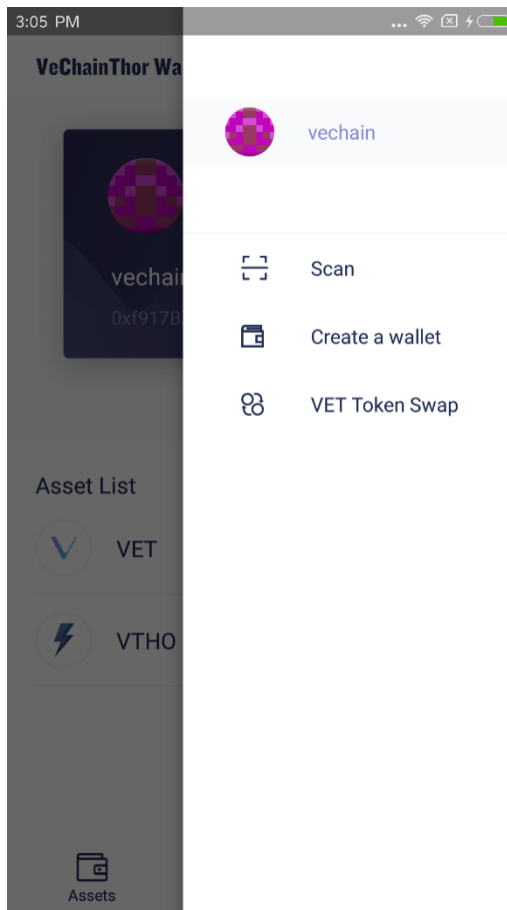
1. 3. 2. Collectibles

The Collectibles page displays tradable nodes and token of DAPP developed by third-party.



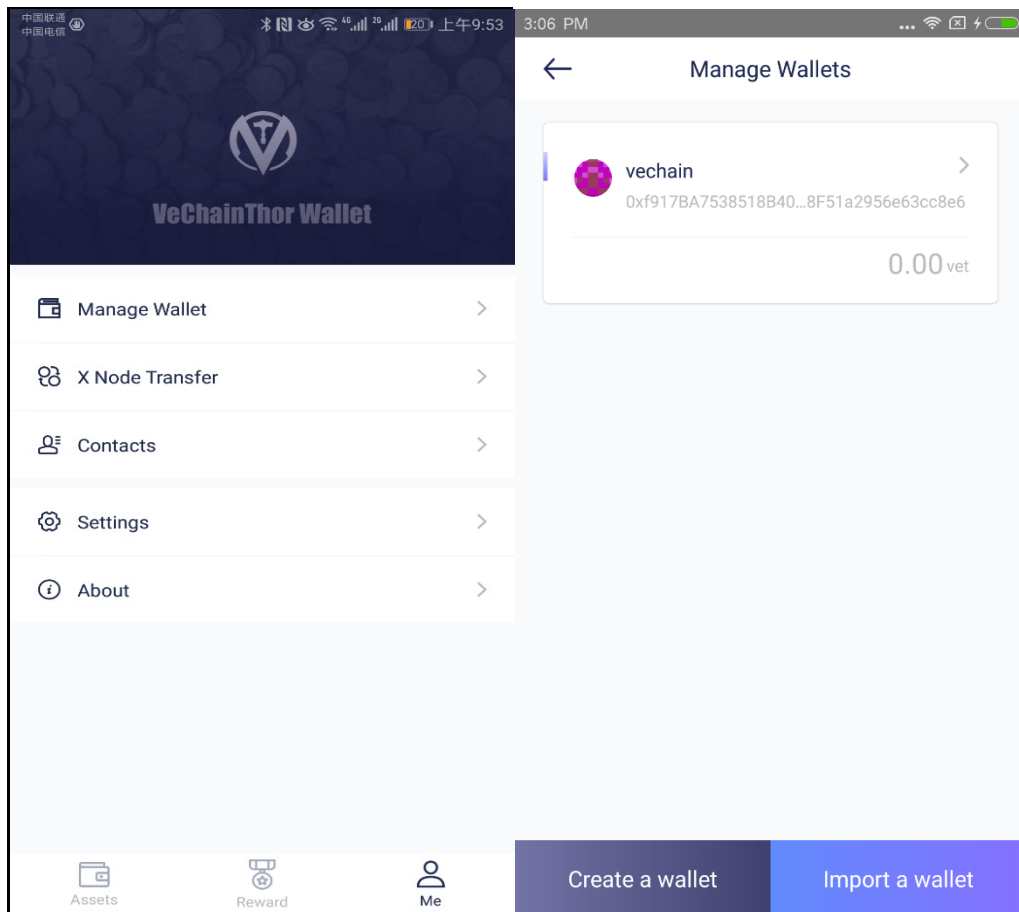
1. 3. 3. Right menu bar

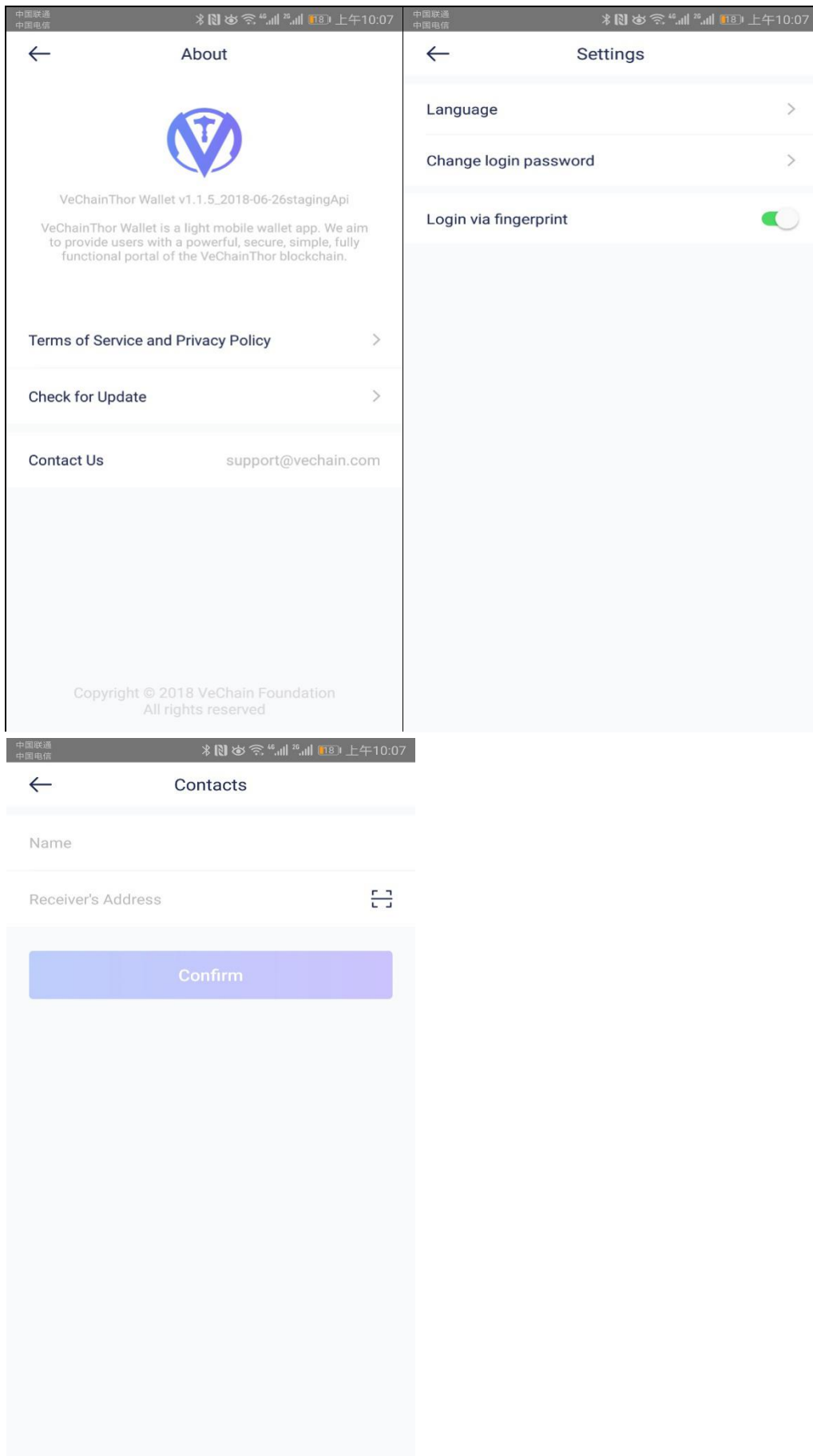
The right menu of wallet is as follow, the upper part of menu is wallet list, and the bottom half is wallet function. You can scan wallet address to transfer or add contact, and create new wallet or X node transfer (in transfer phase) or VET token swap service (in swap phase).



1. 3. 4. “Me” menu

The “Me” menu is as follow, functions including “manage wallet”, “X node transfer” (node transfer phase) or “VET token swap” (swap phase), add contacts, change settings, and view APP edition. “Manage wallet” and “ X node transfer” or “VET token swap will be introduce in details later.

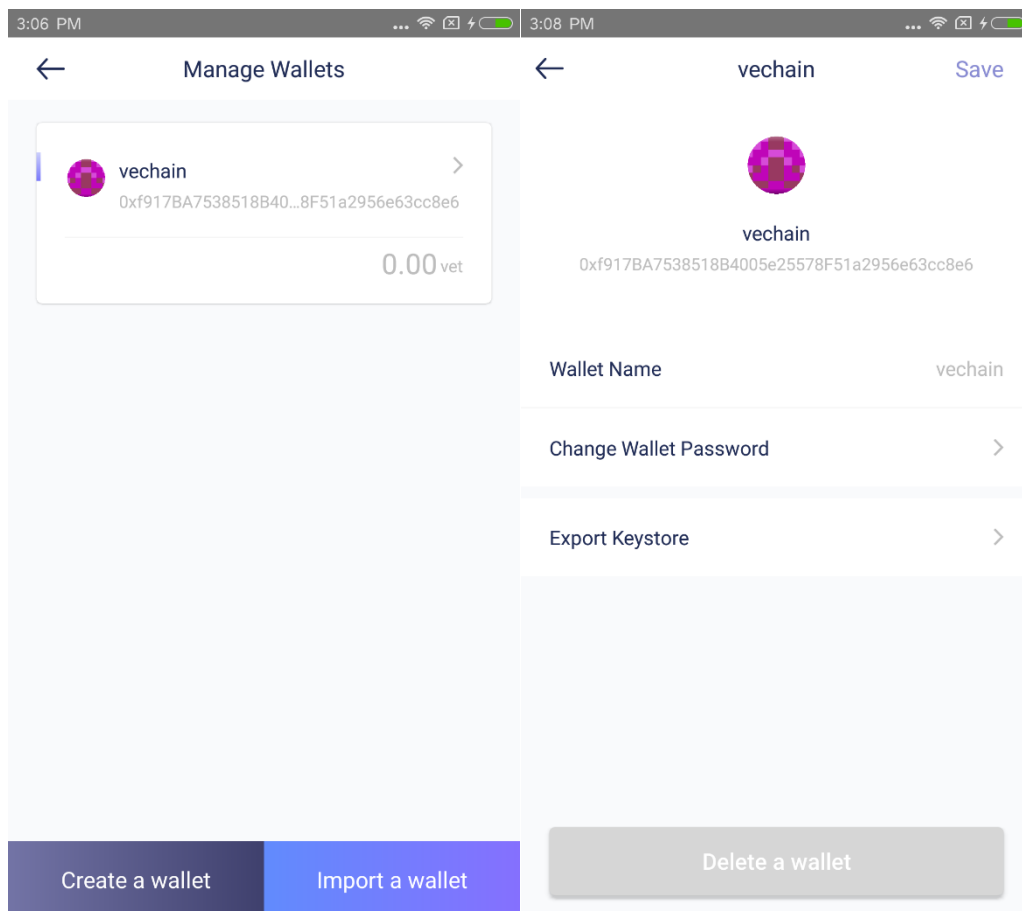


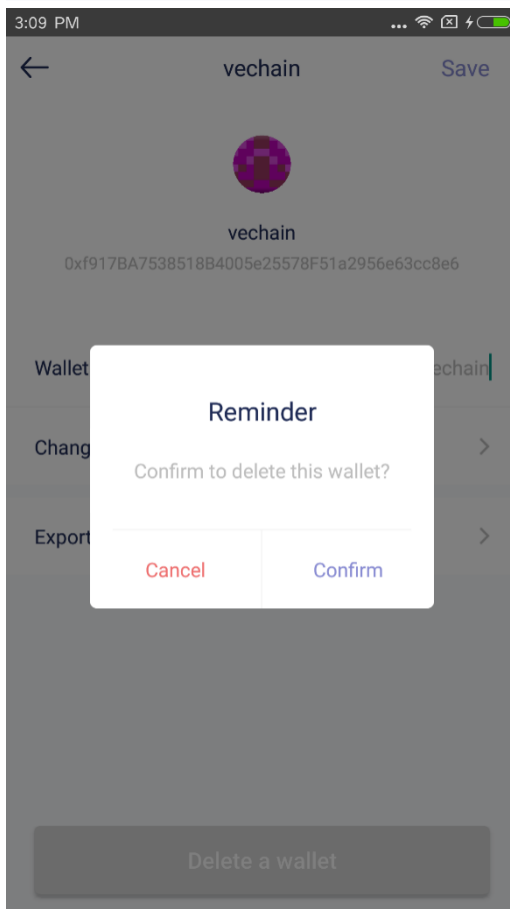
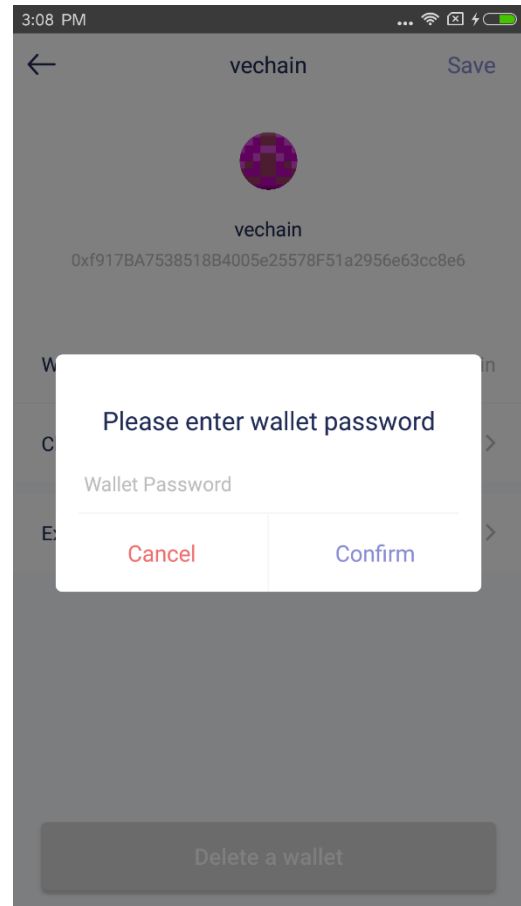
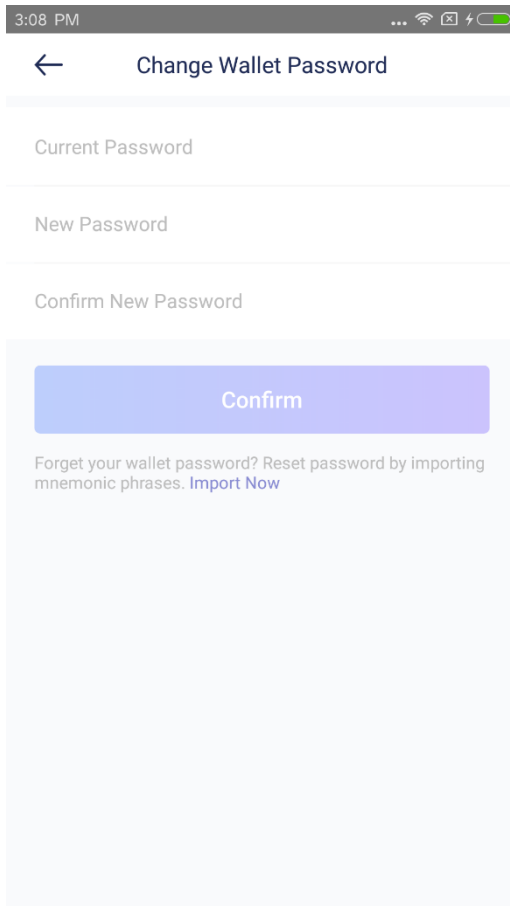


1. 4. Manage wallet

1. 4. 1. Click “[Manage Wallet](#)” in “[Me](#)”, select one wallet to manage. You can modify wallet name, change wallet password, export keystore and delete wallet. Password is required when export keystore and delete wallet. When delete wallet, system also remind whether to delete the wallet after enter password and need users to confirm.

Cannot take screenshot in formal environment.

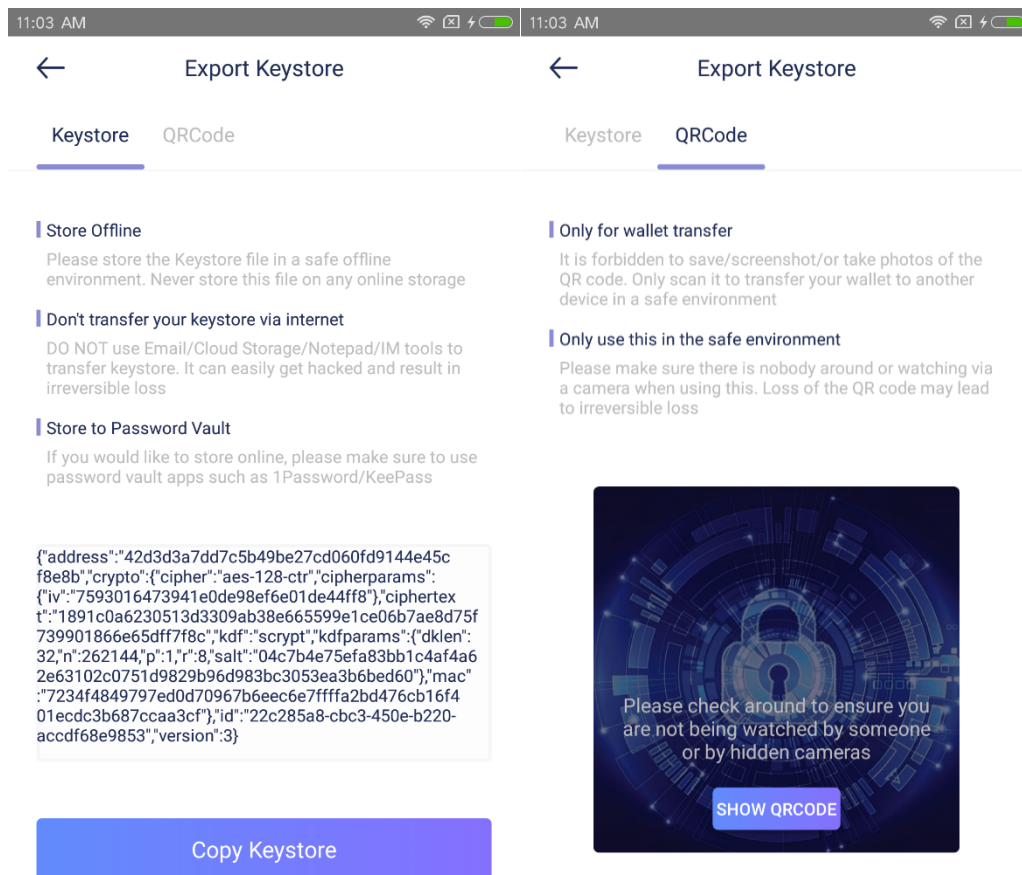




1.5. Export keystore

- 1.5.1. Export keystore directly, copy and save keystore to local, and import wallet with wallet password to recover wallet.
- 1.5.2. Keystore QRCode apply to transfer wallet to another device in safe environment, scan QRCode and enter wallet password to recover wallet.

Cannot take screenshot in formal environment.



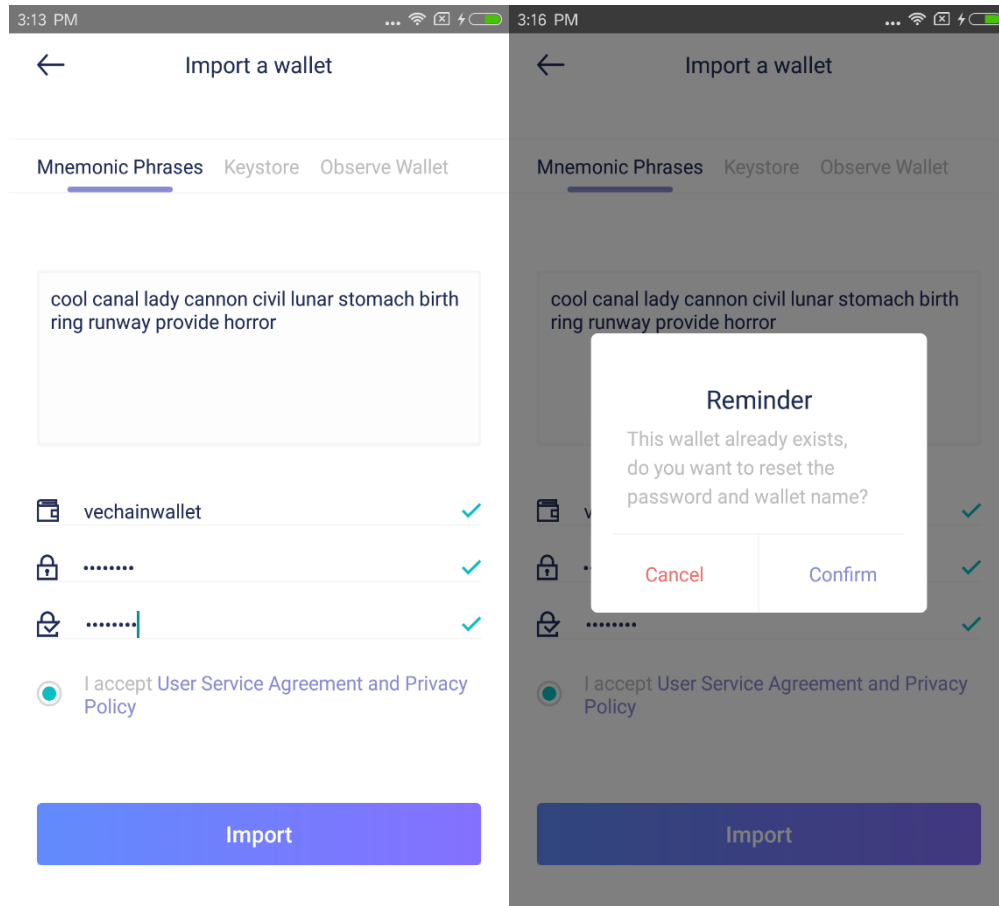
1.6. Import wallet

There are three ways to import wallet. Import wallet with mnemonic phrase or keystore, or only input address to perform balance check, X node transfer, VET token swap, but do not own the assets in the address.

- 1.6.1. Import wallet with mnemonic phrase: input mnemonic phrase, wallet name (randomly set, different with other wallet name in this APP), new password, read and accept terms, then click "Import". Once the mnemonic phrase is

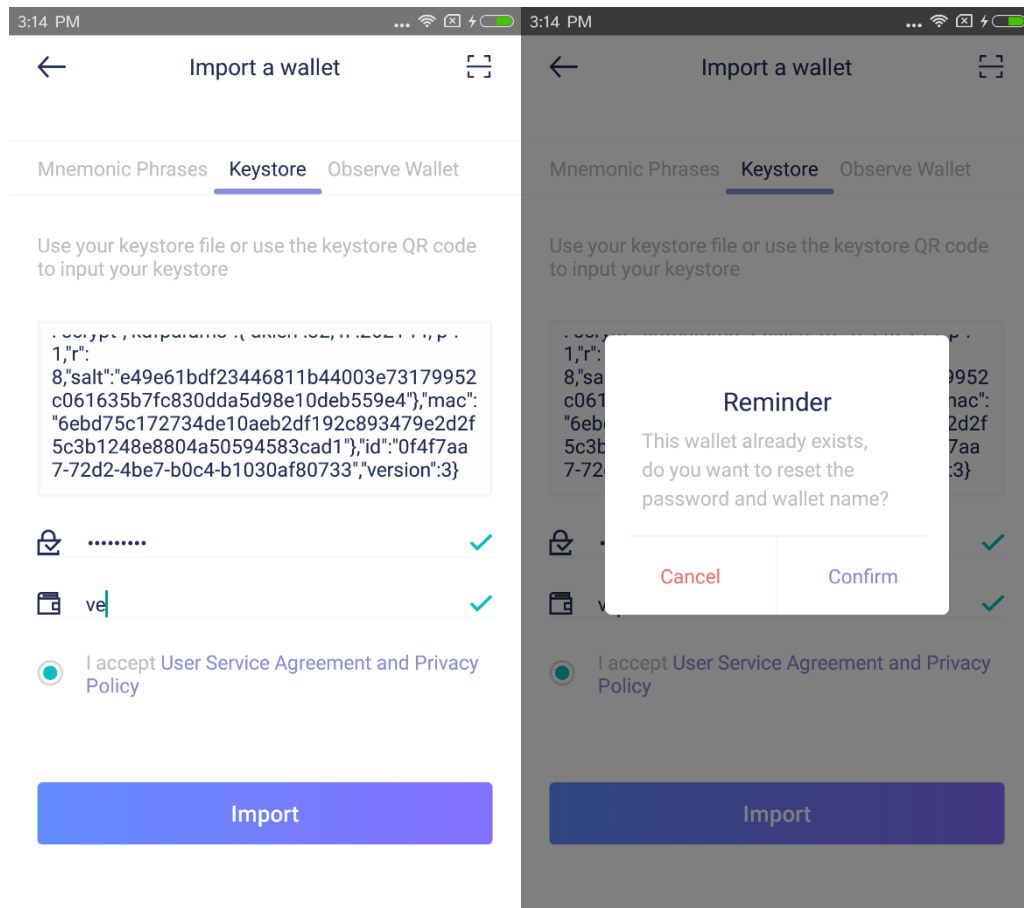
correct, and two passwords are the same, wallet can be imported successfully, and the wallet use new password to trade. If the wallet already exists, system remind you whether to reset the password and wallet name.

Cannot take screenshot in formal environment.



1. 6. 2. Import wallet with keystore: input keystore exported (keystore changes when export wallet with mnemonic phrase), input wallet name, original wallet password, read and accept terms, then click “[Import](#)”. Only when the keystore and password are both correct can the wallet be successfully imported. You can also import your wallet by scanning the keystore QRCode of wallet by another phone. If the wallet already exists, system remind you whether to reset the password and wallet name.

Cannot take screenshot in formal environment.

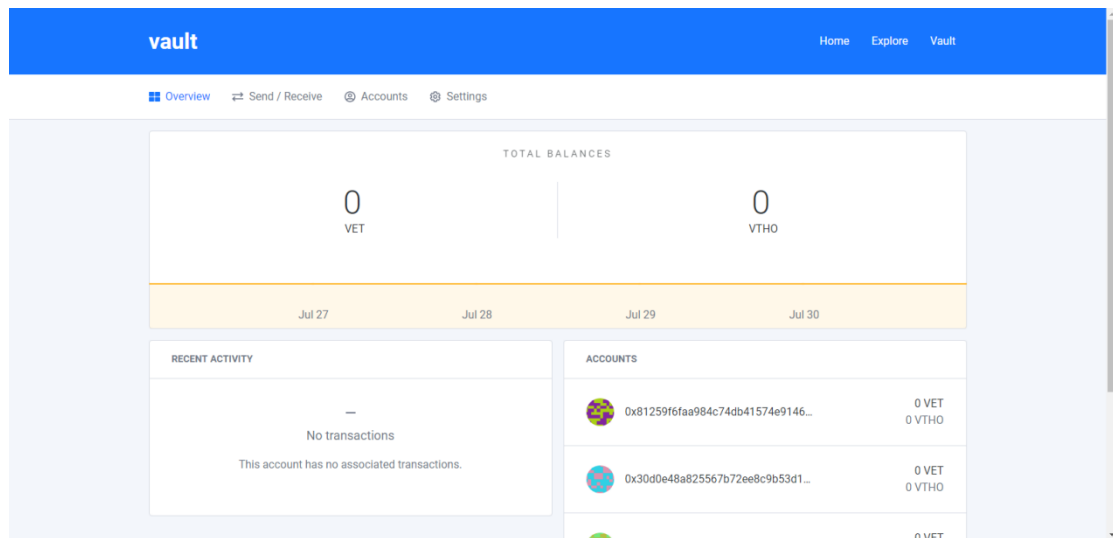


1. 6. 3. Observe wallet does not require the private key, this function shall be used with cold storage or hardware wallet to better manage your assets. Main functions include balance check, X node Binding, VET token swap and VTHO rewards claim. These functions are the same with common wallet and please refer the following introductions.

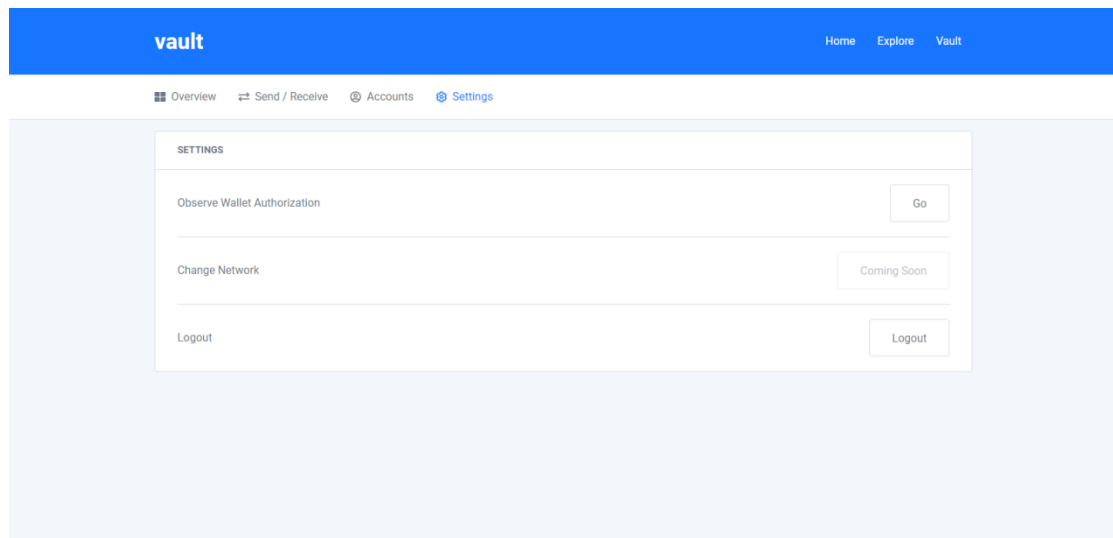
1. 6. 3. 1. observe ledger wallet

If you want to observe your ledger on VeChainThor wallet, please do as follow steps.

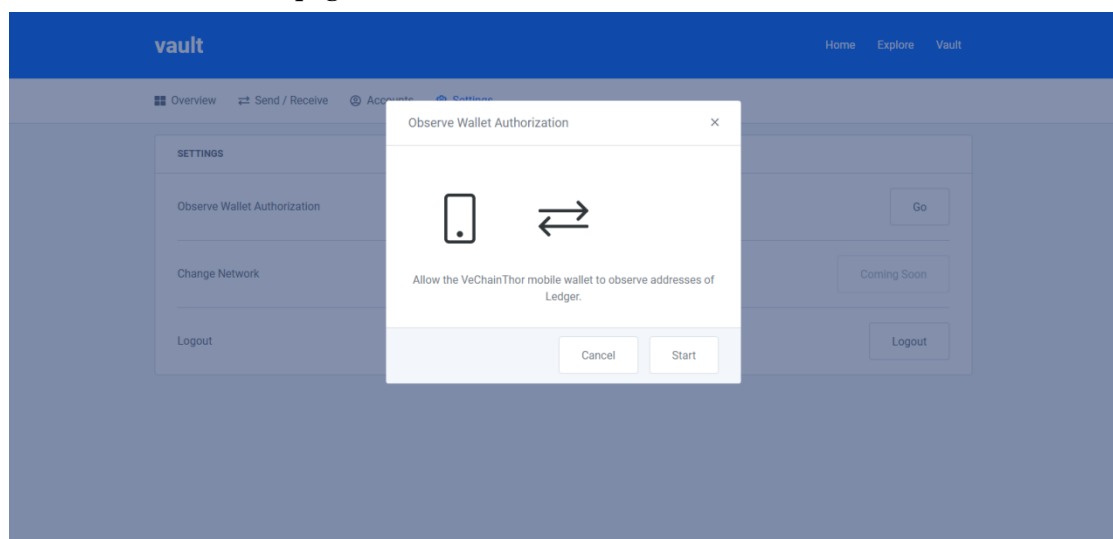
- a. Connect ledger with computer, open APP website, enter password on ledger to log in ledger on website, then click "Setting"



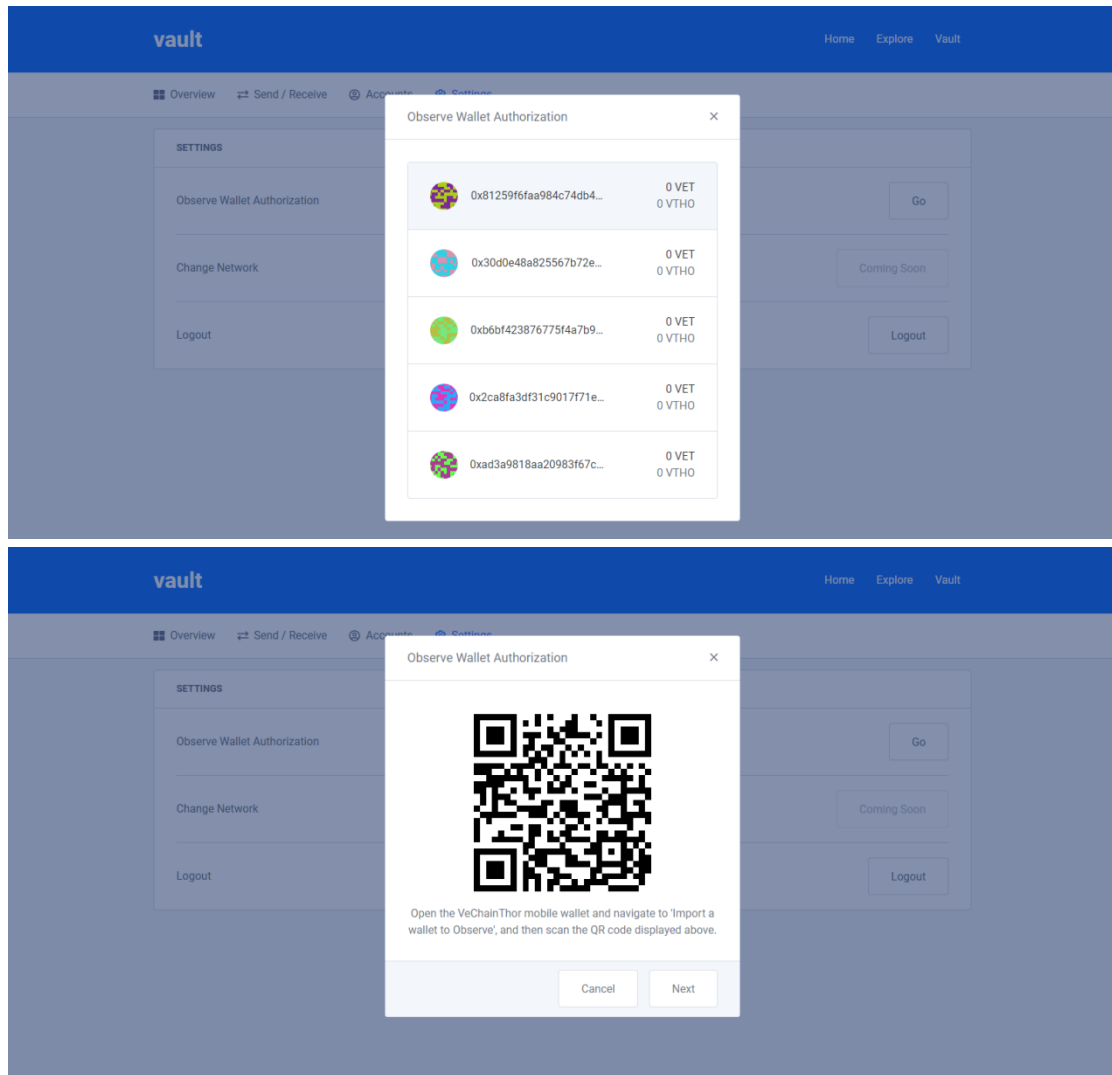
b. Choose “Observe Wallet Authorization”, and click “Go”.



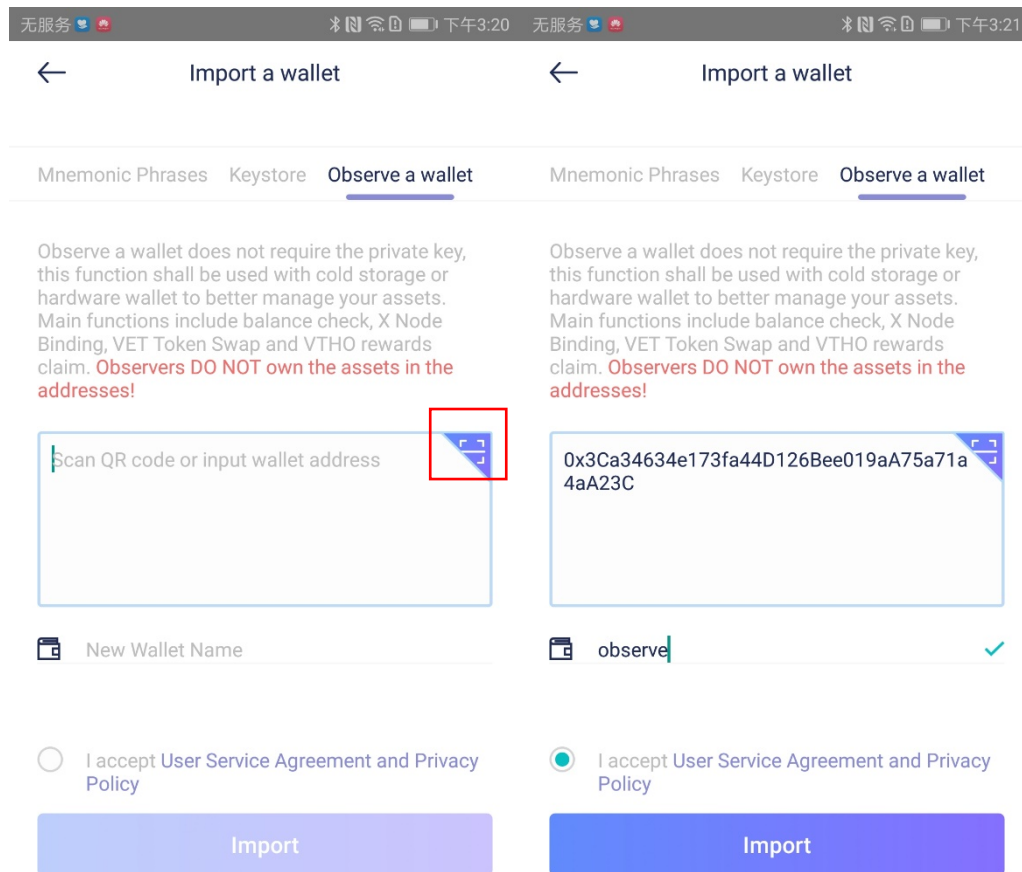
c. Click “start” in this page.



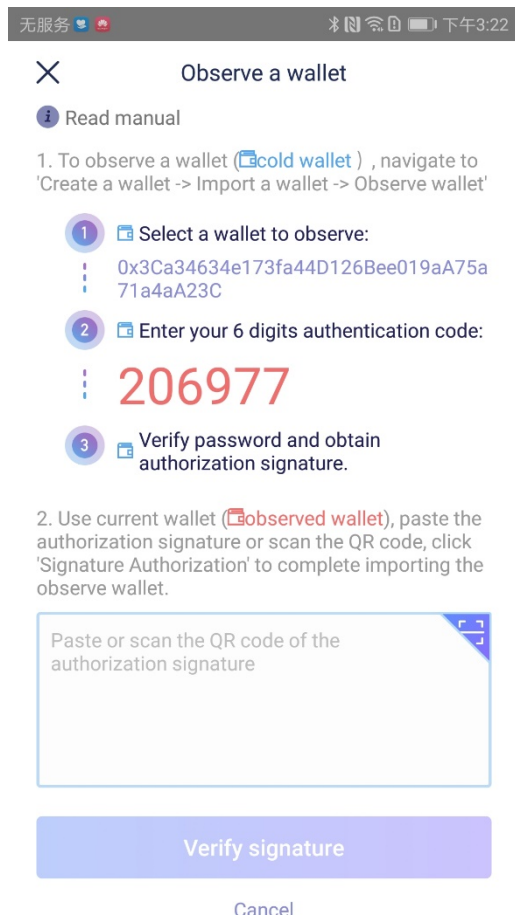
d. Choose one address for observing.



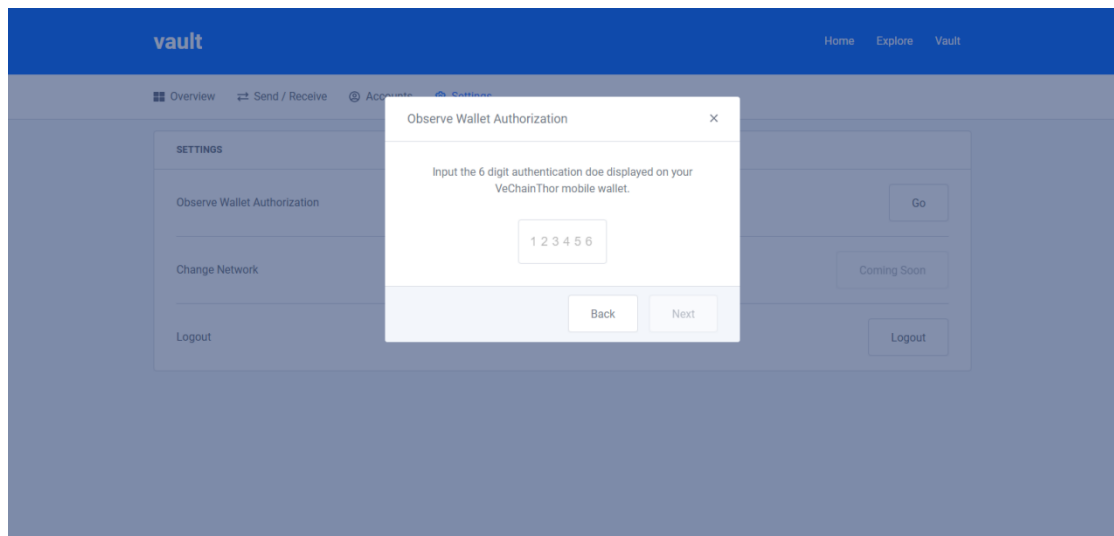
- e. In the VeChainThor wallet, navigate to create a wallet-> import a wallet -> observe wallet. Input or scan QR code of the ledger wallet address as above. Input wallet name, read and accept agreement and policy, then click “import”.



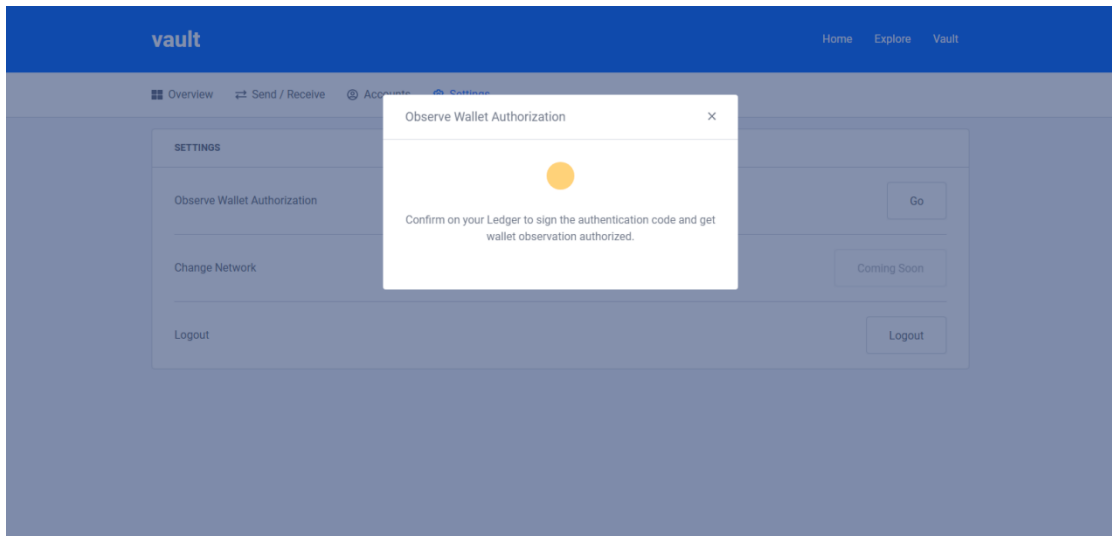
- f. Page shows 6 digits authentication code that need to be input on ledger.



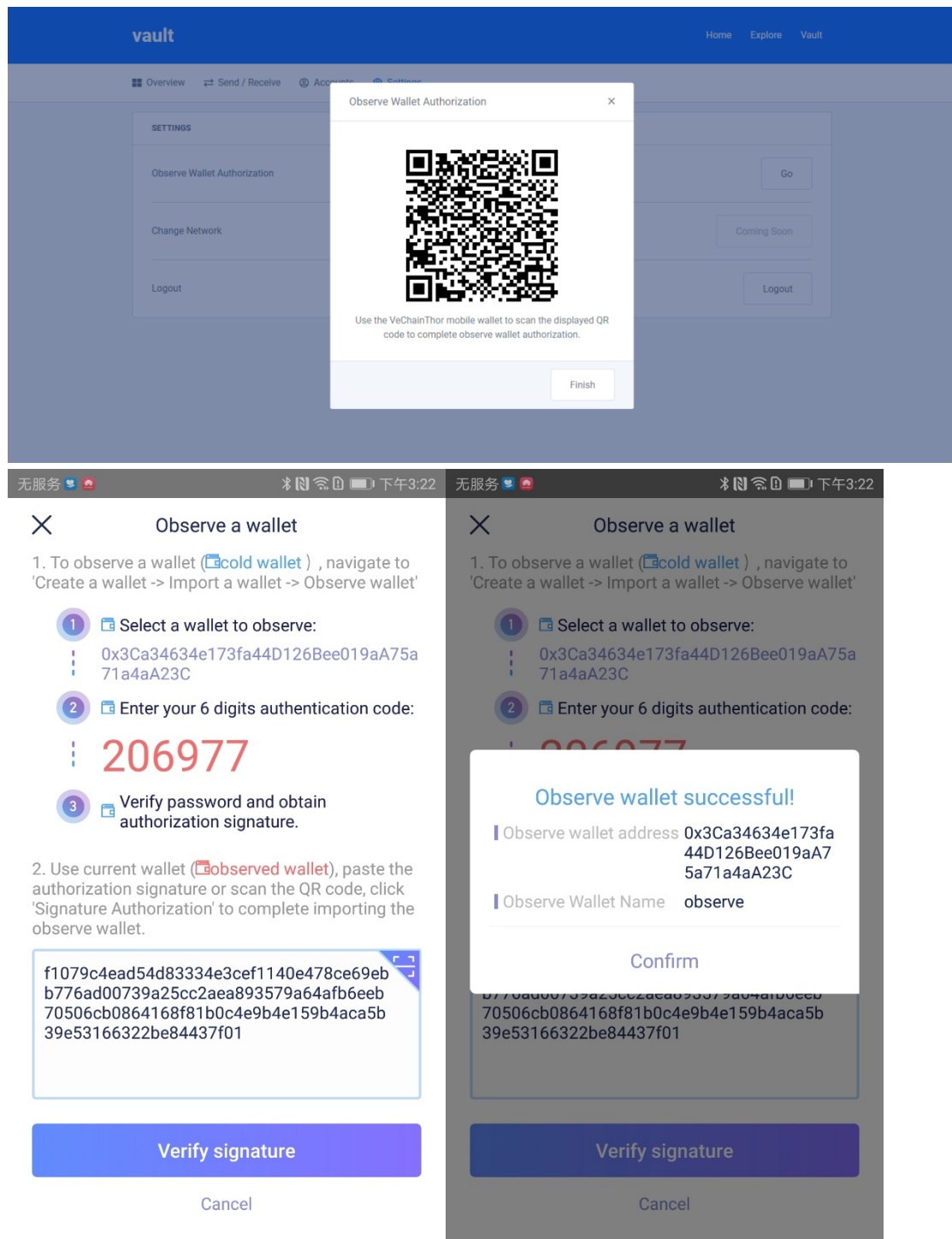
g. Enter 6 digits authentication above on the ledger wallet and click “Next”.



h. Confirm on your ledger to sign authentication code and get wallet observation authorized.



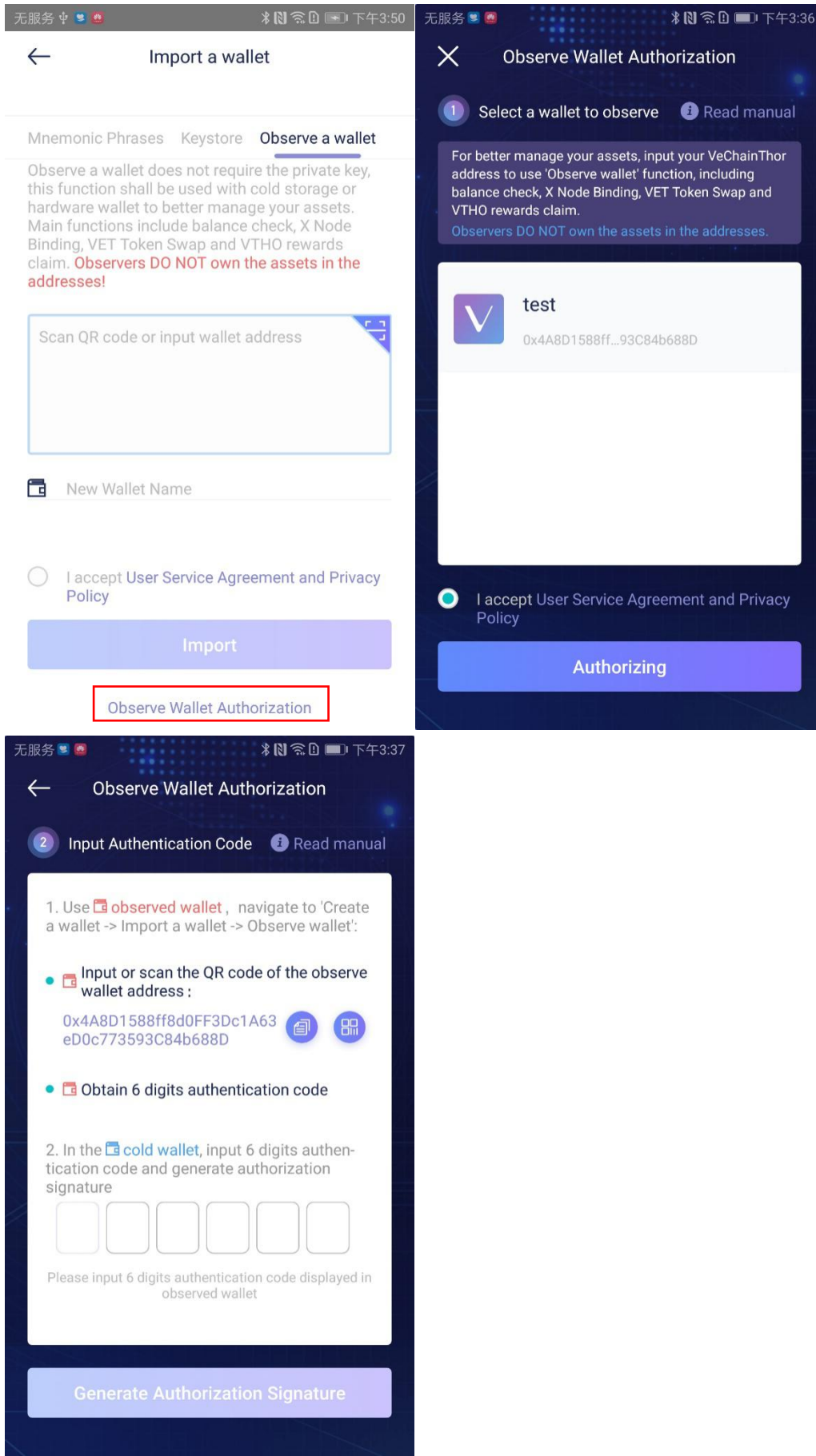
- i. After sign the message on ledger, the ledger website will generate an authorization signature with QR code version. Scan the QR code in VeChainThor observed wallet and verify signature. If the 6 digits authentication and signature are both right, the observe wallet will be imported successfully. Click confirm to finish observing.



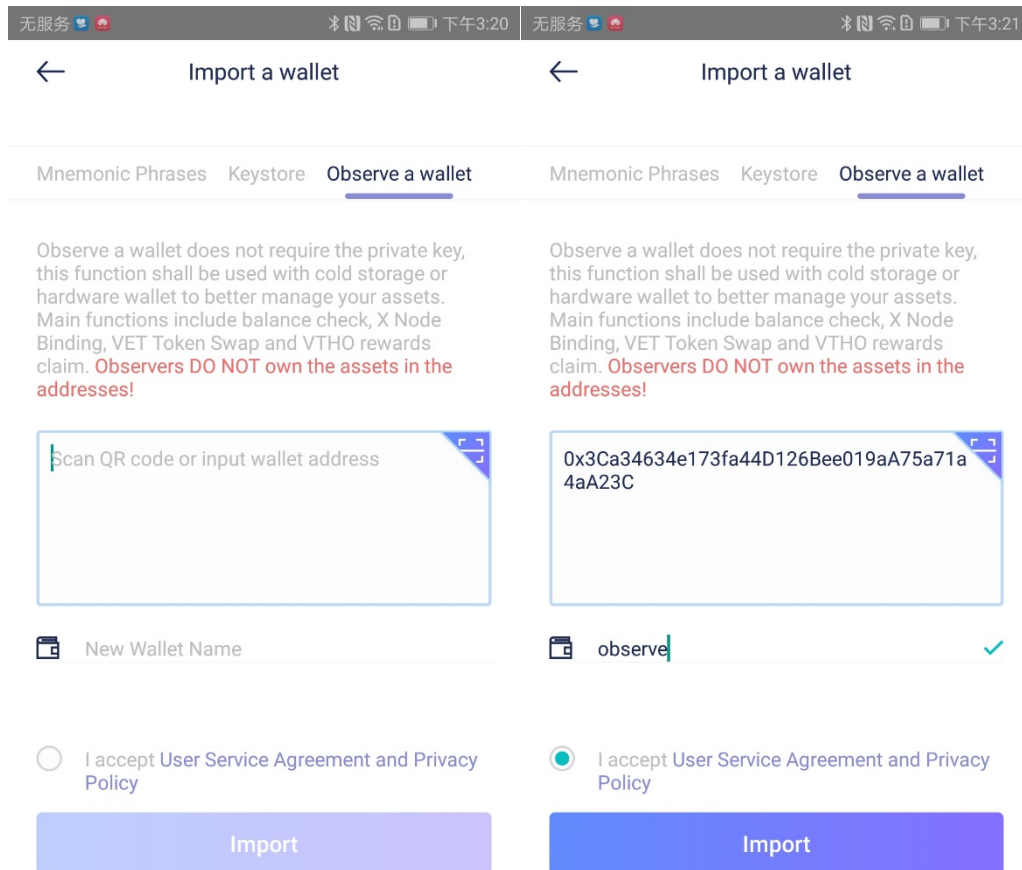
1. 6. 3. 2. observe VeChainThor cold wallet

If you want to authorize another VeChainThor wallet to observe current VeChainThor wallet (e.g. your cold wallet), please do as follow steps.

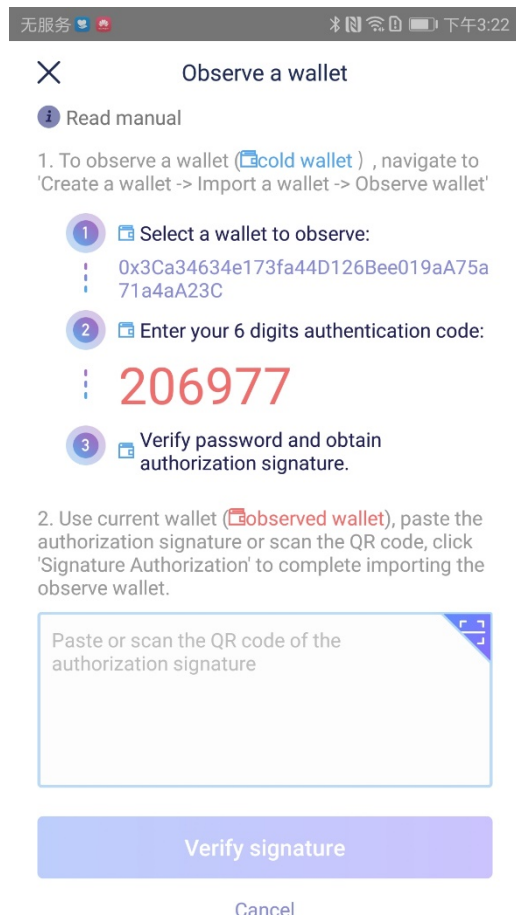
- a. In the VeChainThor cold wallet, navigate to create a wallet-> import a wallet -> observe wallet. Click “Observe Wallet Authorization”, select a wallet for observing and accept agreement and policy, click “Authorizing”, 6 digits authentication should be input in this page.



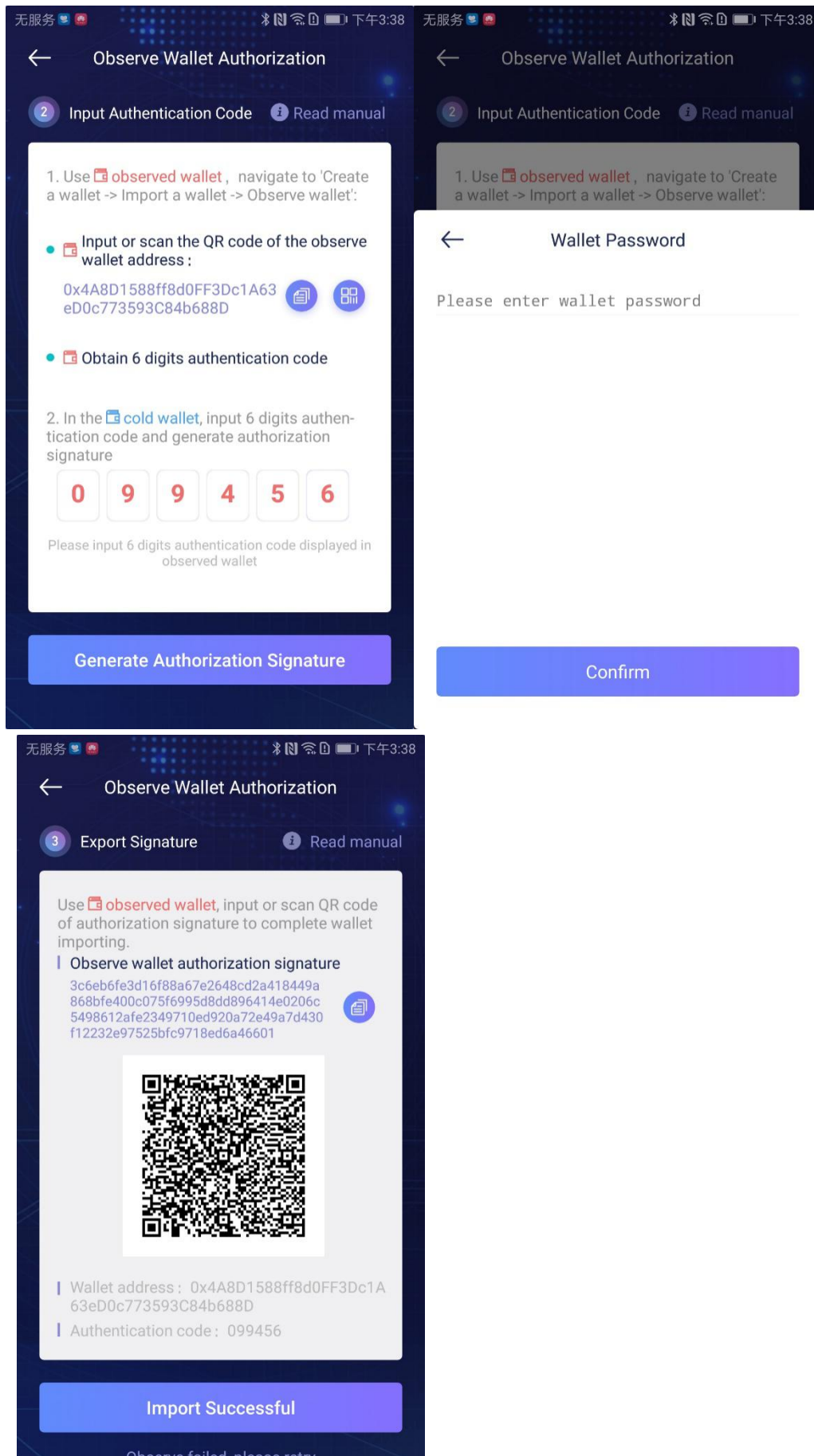
On another VeChainThor wallet, navigate to create a wallet-> import a wallet -> observe wallet. Input or scan QR code of the ledger wallet address as above. Input wallet name, read and accept agreement and policy, then click “import”.



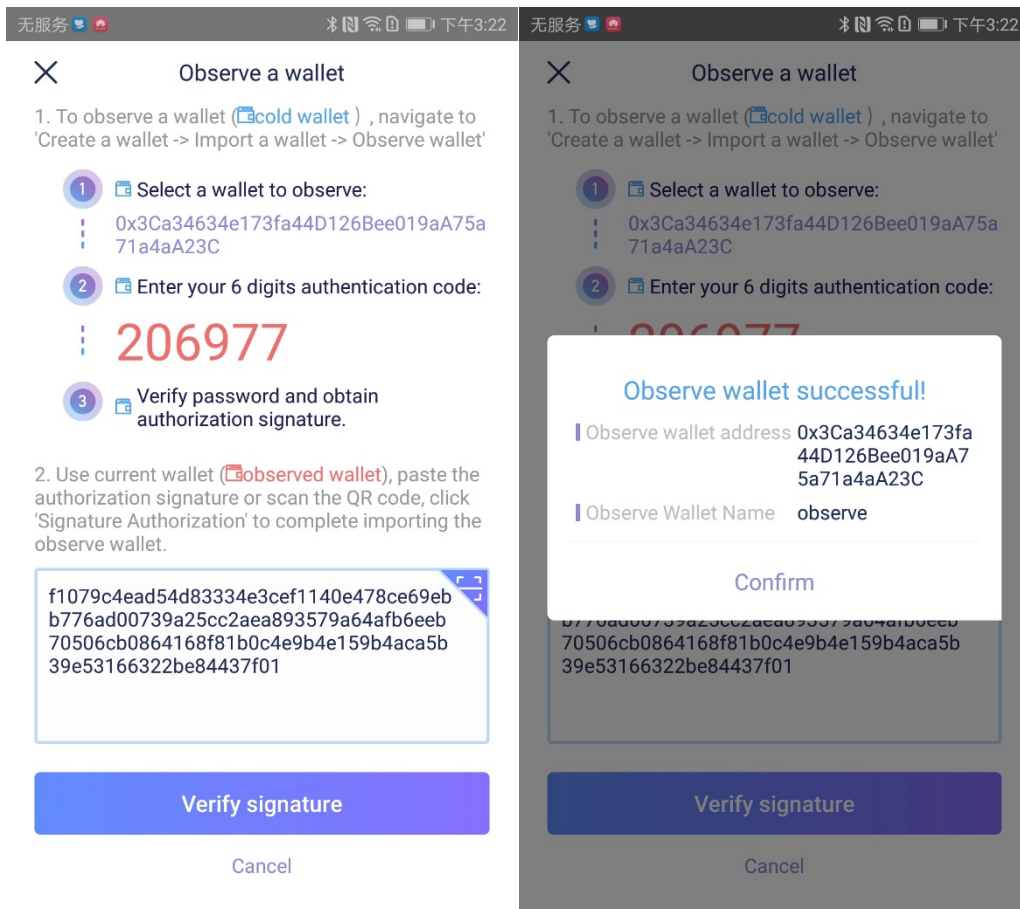
b. Page shows 6 digits authentication code



- c. On you cold wallet, input 6 digits authentication obtained from your observe wallet and click “Generate Authorization Signature”, input wallet password to confirm and generate authorization signature. Use observe wallet, input or scan QR code of the authorization signature to complete wallet import.

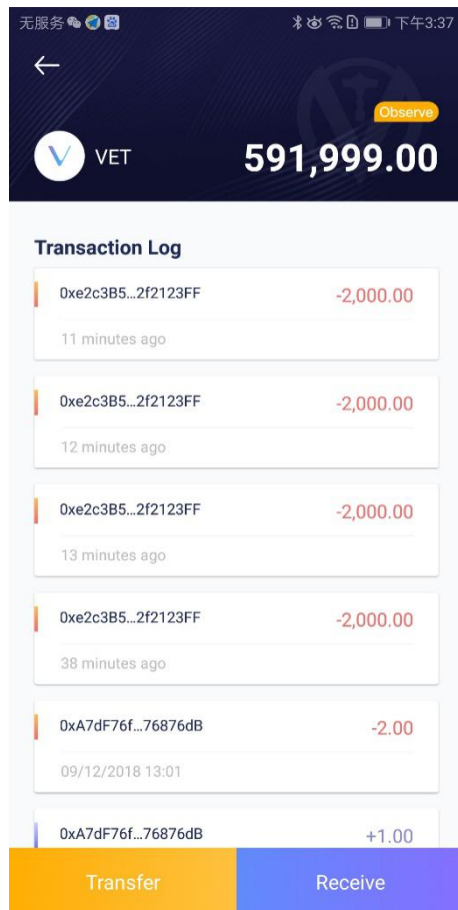


- d. On the observe wallet, paste the authorization signature or scan the QR code, click “Signature Authorization” to complete importing the observe wallet.

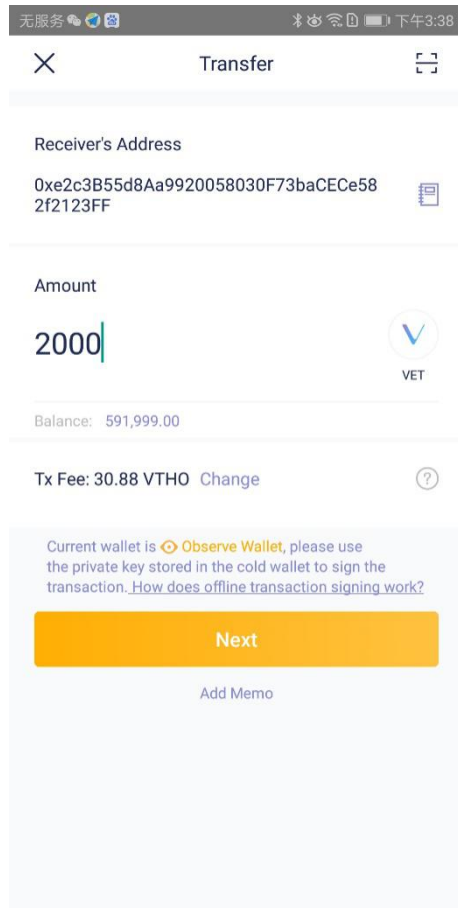


1. 6. 3. 3. Offline transaction signing in cold wallet

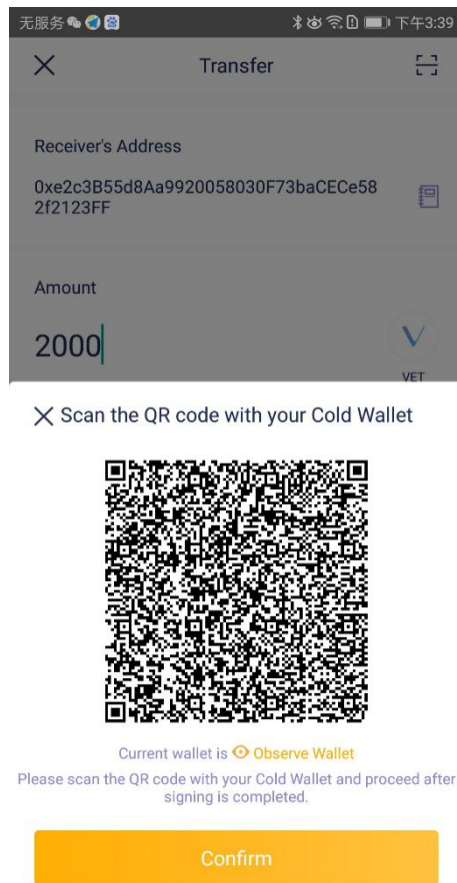
- a. Access your online observe wallet, select the asset and click “Transfer”.



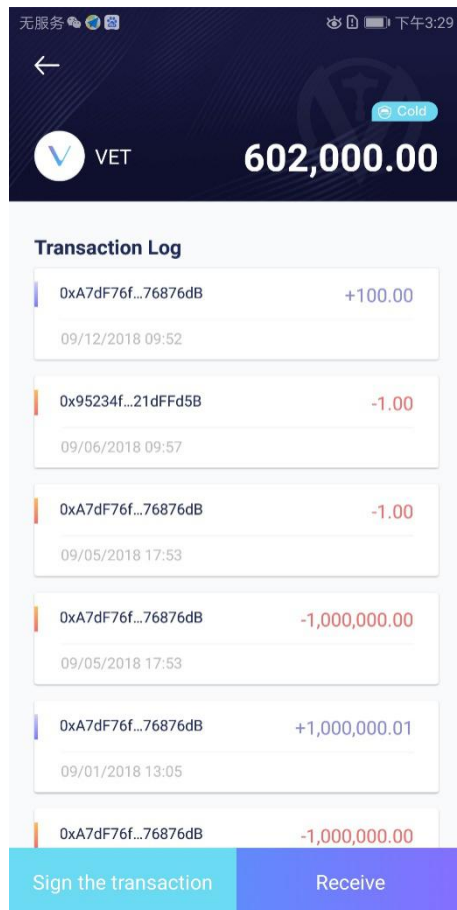
- b. Input transaction information in observe wallet and click “next”. Click “How does offline transaction signing works?” to get manual for offline transaction signing.



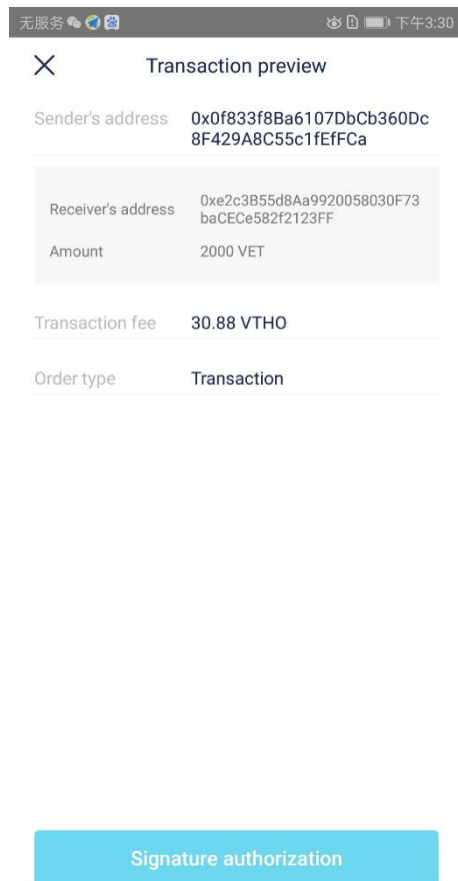
- c. Obtain the transaction QR code to be scanned by Cold Wallet.



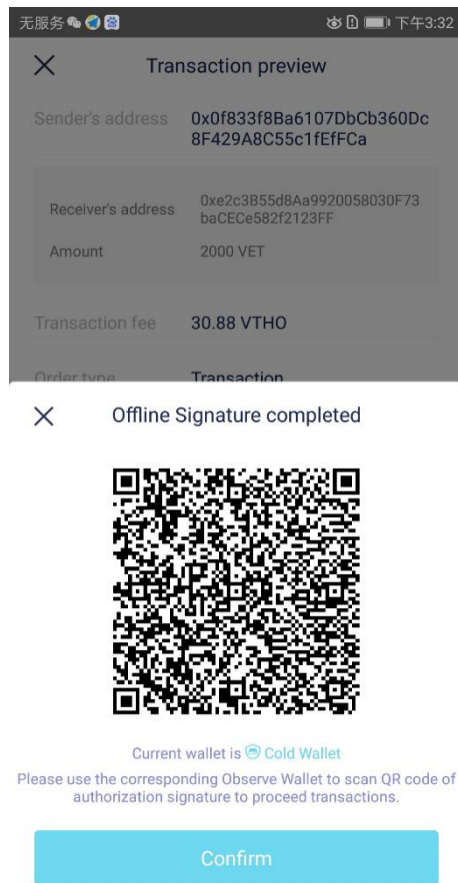
- d. Open the offline Cold wallet. Click “Scan the transaction” on asset page or click ‘Scan’ in the ‘More’ menu on the top right corner of the homepage. Scan the QR code generated in the Observe wallet.



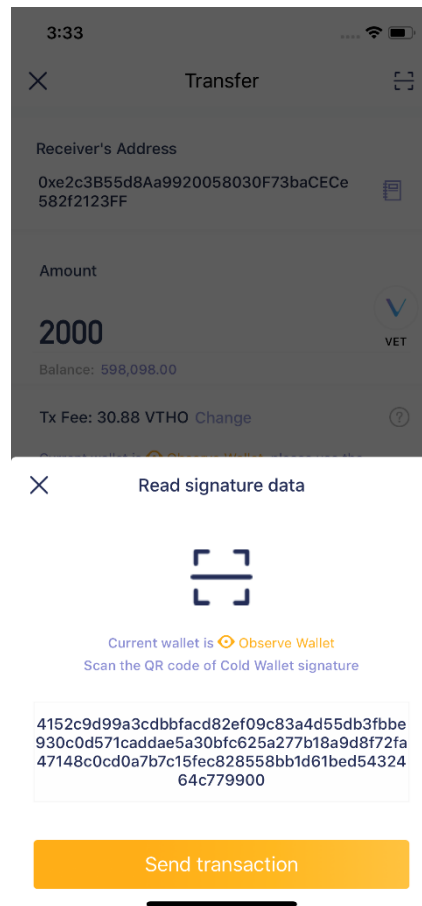
- e. Check and confirm the transaction details to be signed in Cold wallet, click 'Signature Authorization'.



- f. Enter wallet password and obtain QR code. Use Observe Wallet to scan the generated QR code to send transaction.



- g. Go back to Observe wallet, and scan the QR code generated in the Cold wallet. Click 'Send' to complete the transaction.



1. 6. 3. 4. Other functions in observe wallet

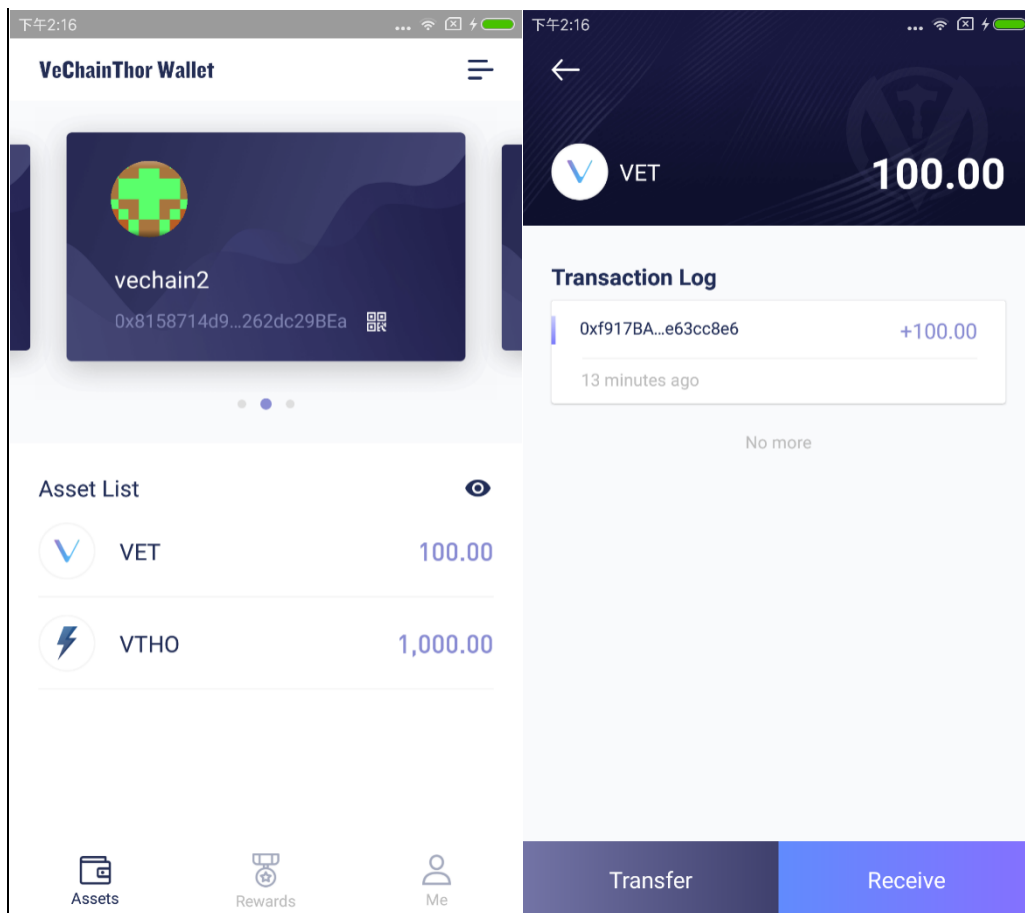
In observe wallet, you can view balance and transaction log, binding X node,. VET swap and vethor reward claims. Operation procedures please refer common wallet.

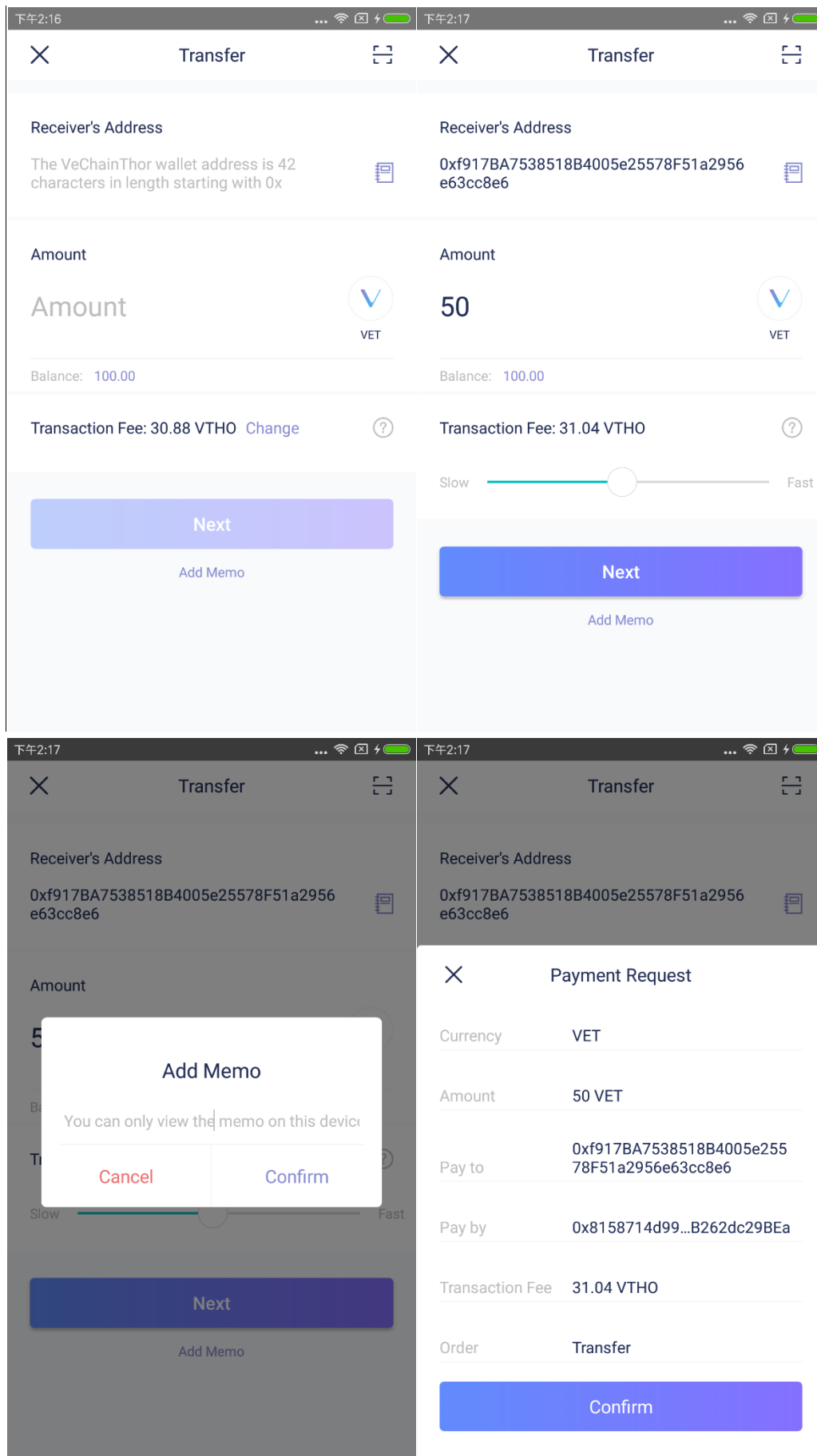
1. 7. Transfer

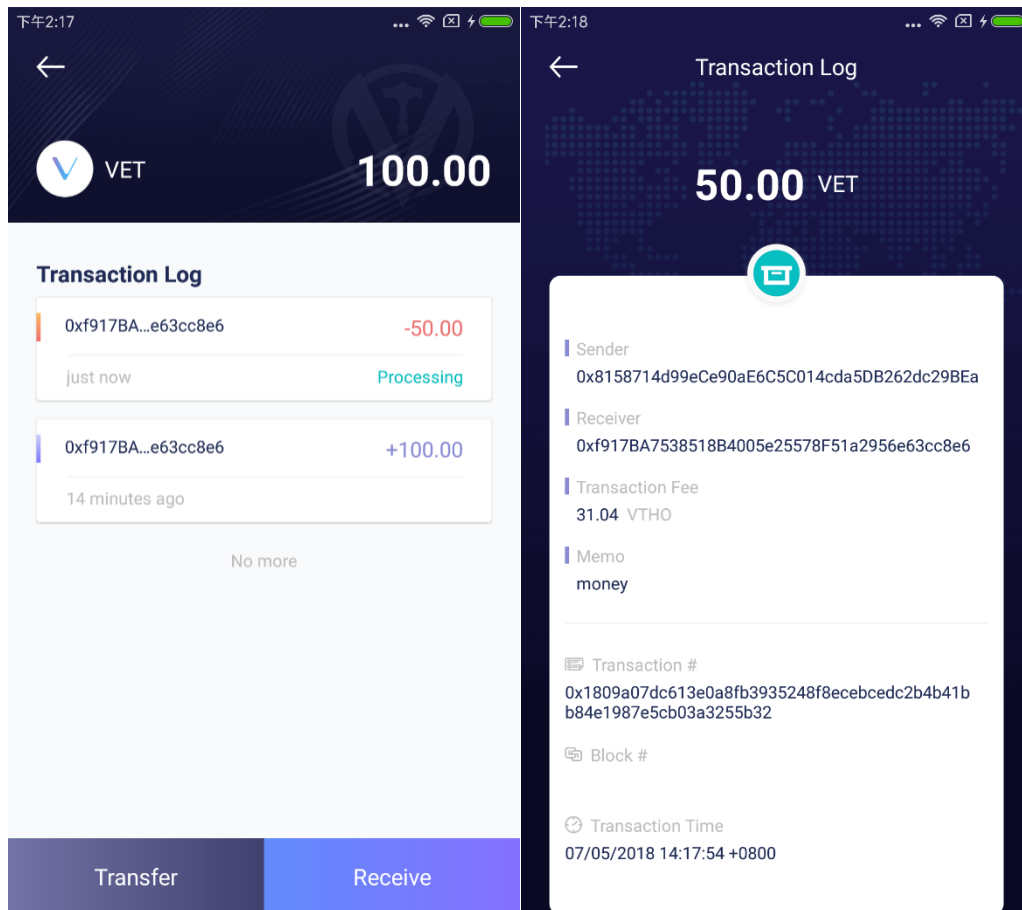
Click “VET” on asset list to view the transaction logs and balance. Click “transfer” and enter transfer page. Input receiver’s address (you can also select address from contacts or scan receiver’s QR code) and amount, adjust transaction fee (21 VTHO at least and 42 VTHO most). Memo can be added. Then click “NEXT”, system shows payment details for confirmation, click “CONFIRM” next and enter wallet password. The log will be recorded in transaction logs, click this log to view sender, receiver, transaction fee, memo, transaction ID, block number and transaction time.

The transfer process is the same for VTHO with only difference in transaction fee.

Cannot take screenshot in formal environment.

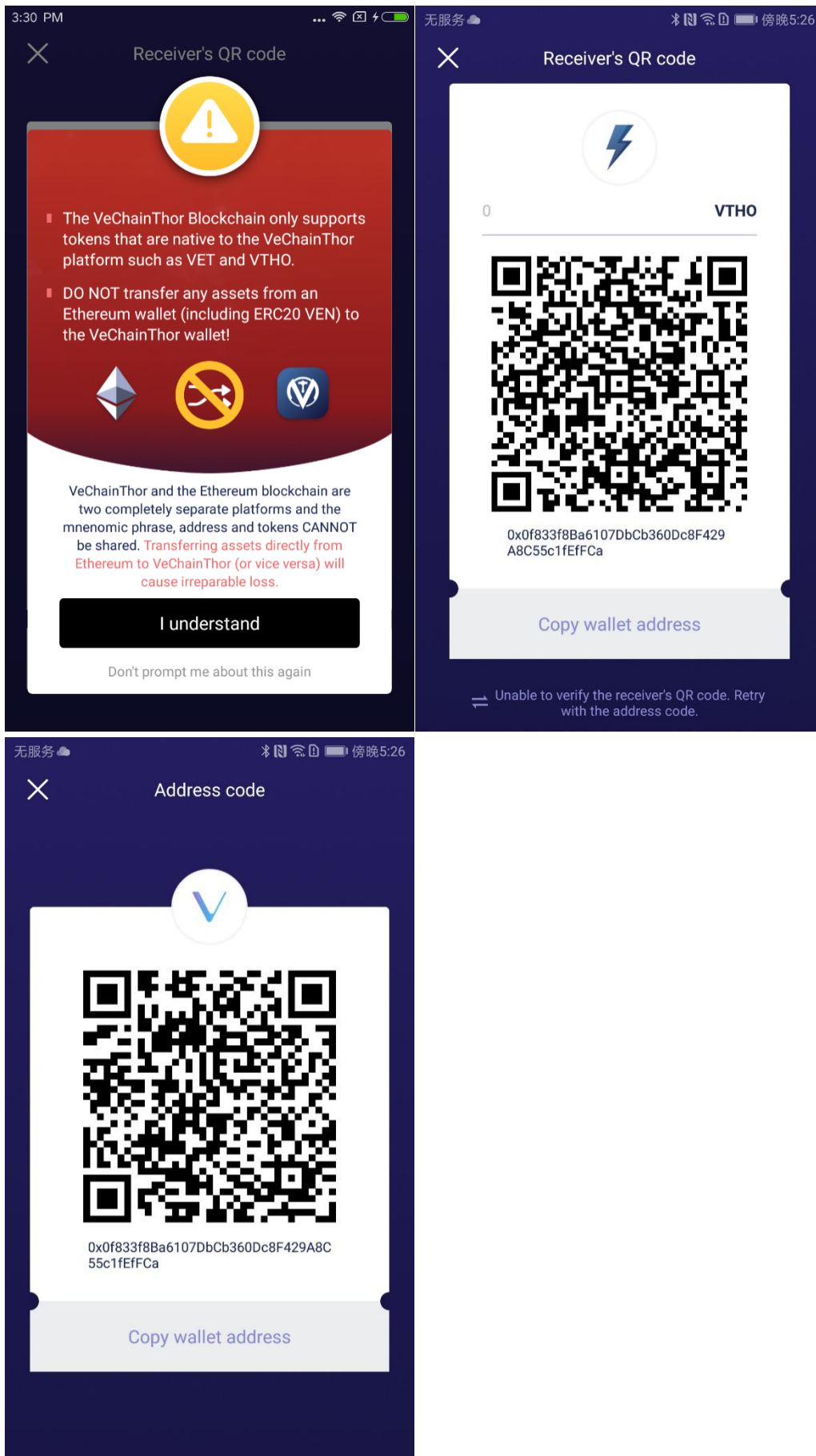






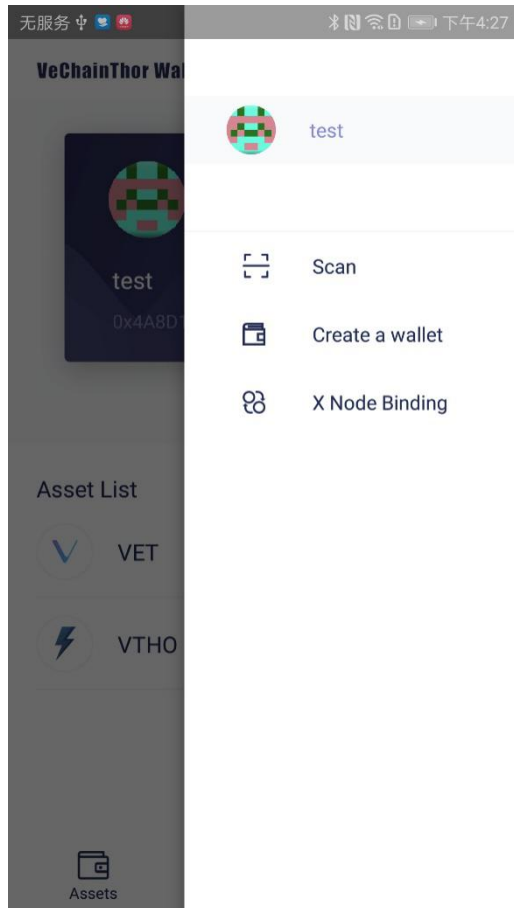
1.8. Receive

In asset details page, click “receive” and system pop up reminder, click “I understand”. Page displays receiving code and address. You can copy receive address for others to pay or let others scan QR code directly to pay. The addresses of VET and VTHO are the same, but QR code are different. Please select the right account when receive money with QR code, you can also enter amount and receive.



1. 9. Binding wallet

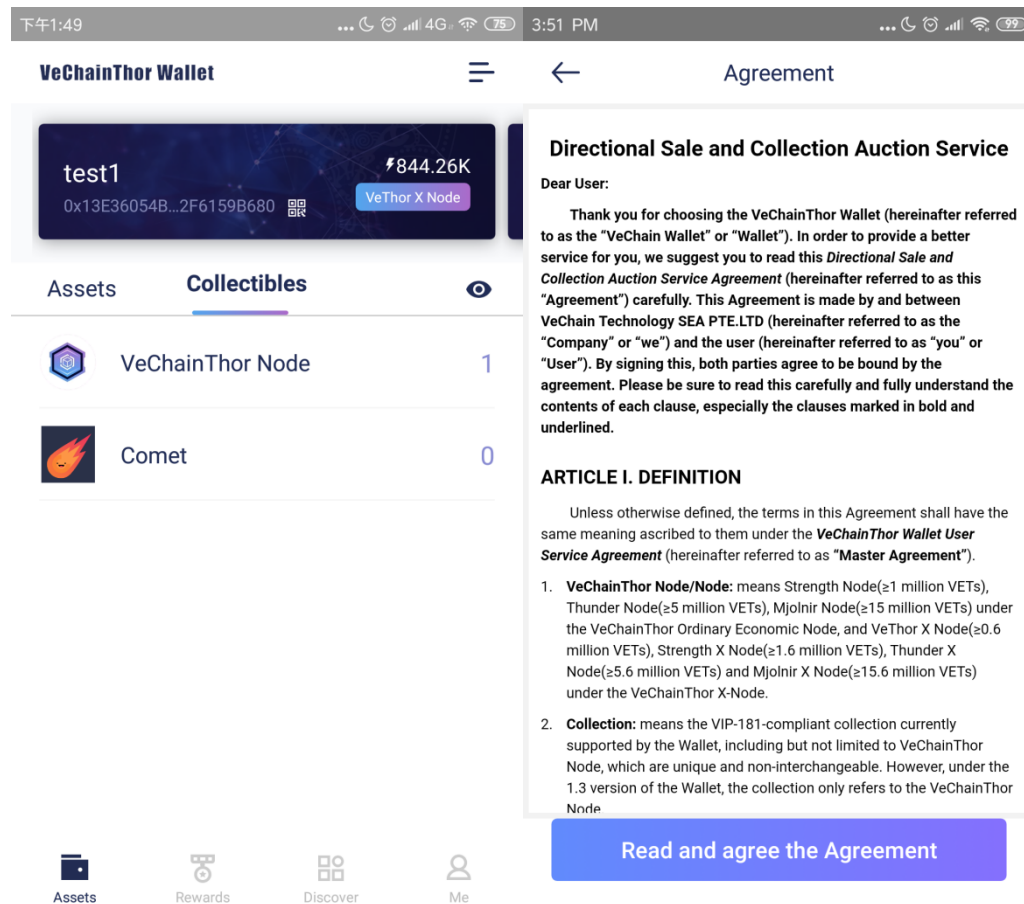
According to actual requirement, such as KYC, binding wallet address with KYC account to complete the authentication of wallet's owner.



2. Collectables

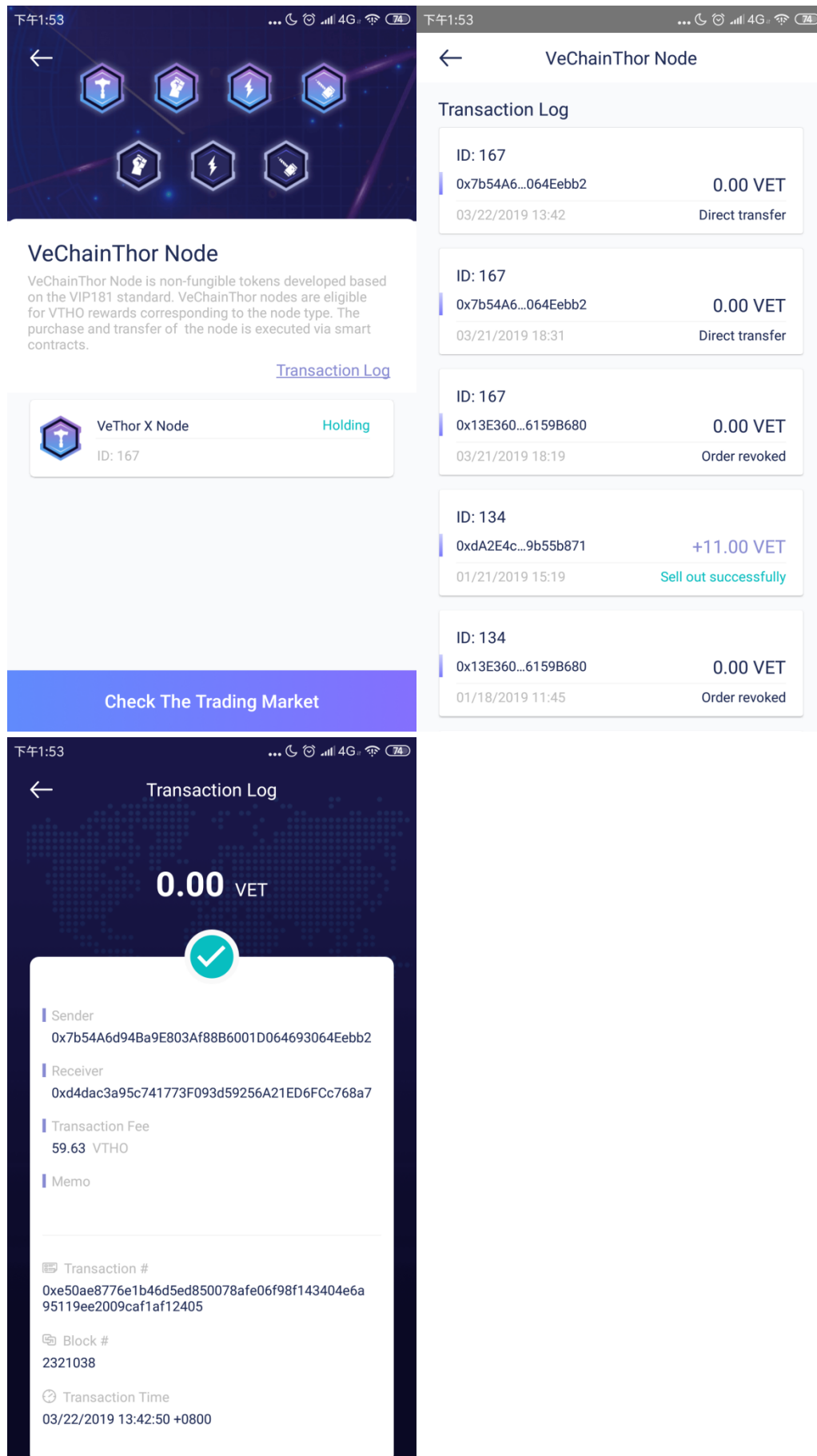
2. 1. Node transaction

Click the “VeChainThor Node” in Collectibles page, carefully read and agree the agreement.



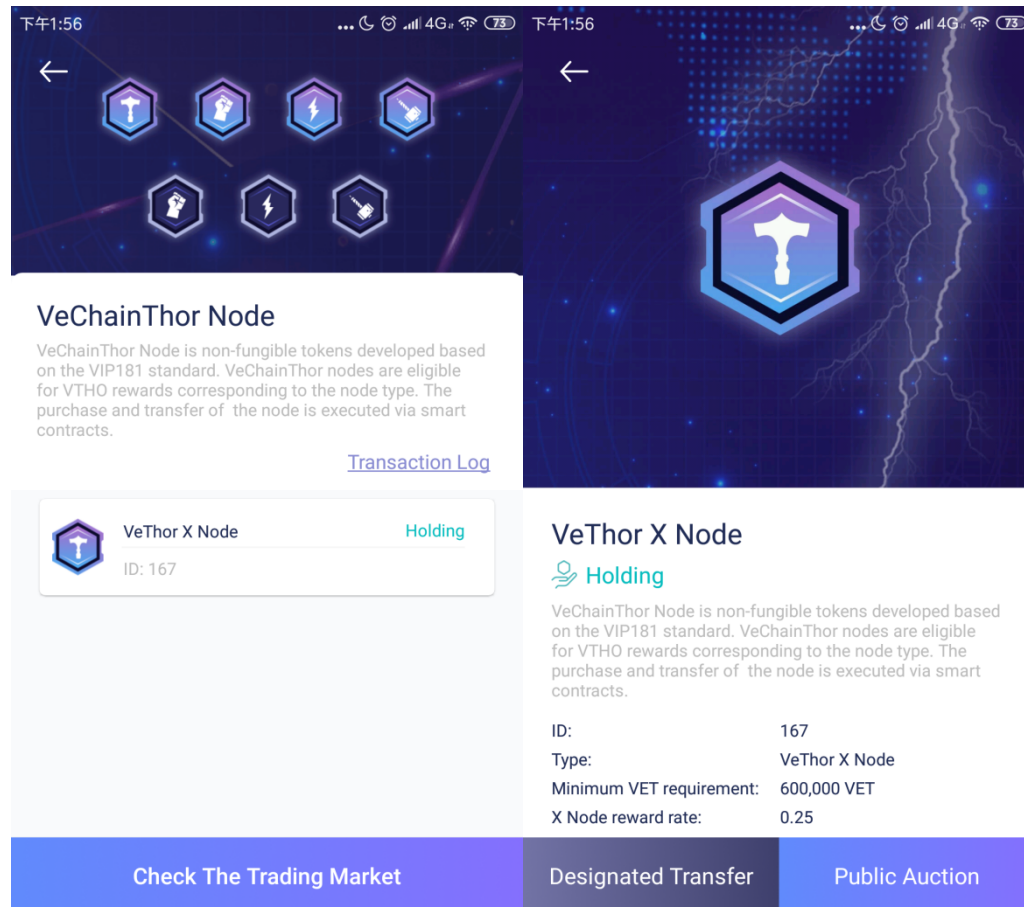
2. 1. 1. Node transaction log

Enter the VeChainThor node page, click “Transaction log” to view history transaction logs of node. All node transactions are automatically dealt by smart contract.

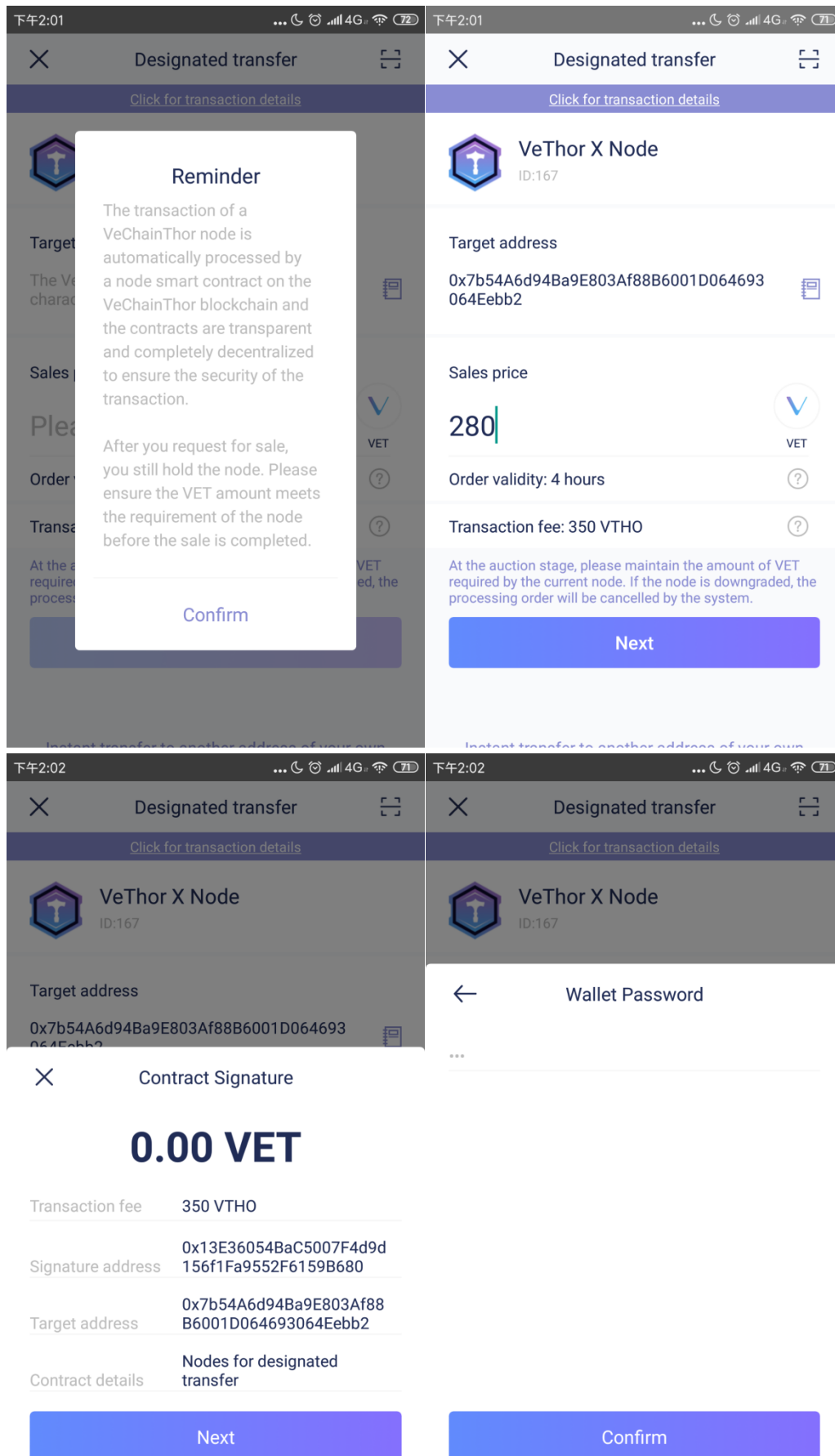


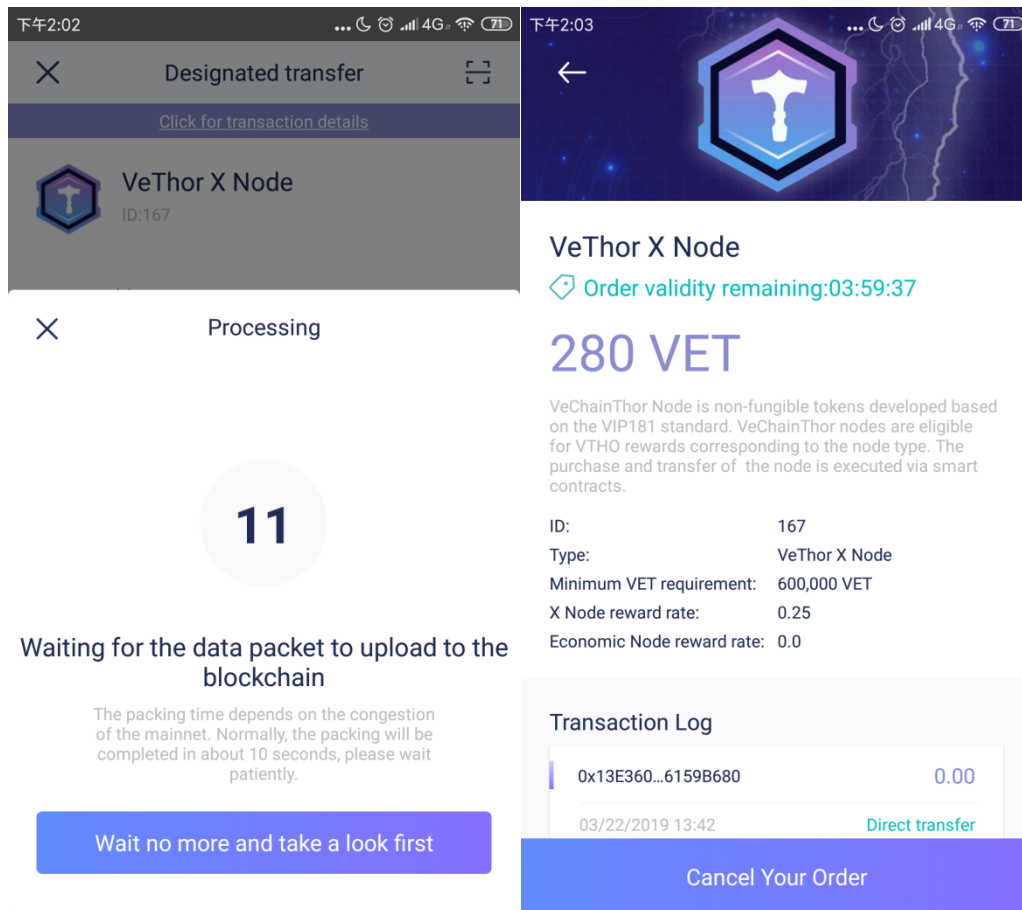
2. 1. 2. Node transfer

Click the node you want to transfer - “VeChainThor X Node” and select transfer mode, including “Designated Transfer” and “Public Auction”. The “Designated Transfer” including designated transfer to other address or instant transfer to another address in the APP.

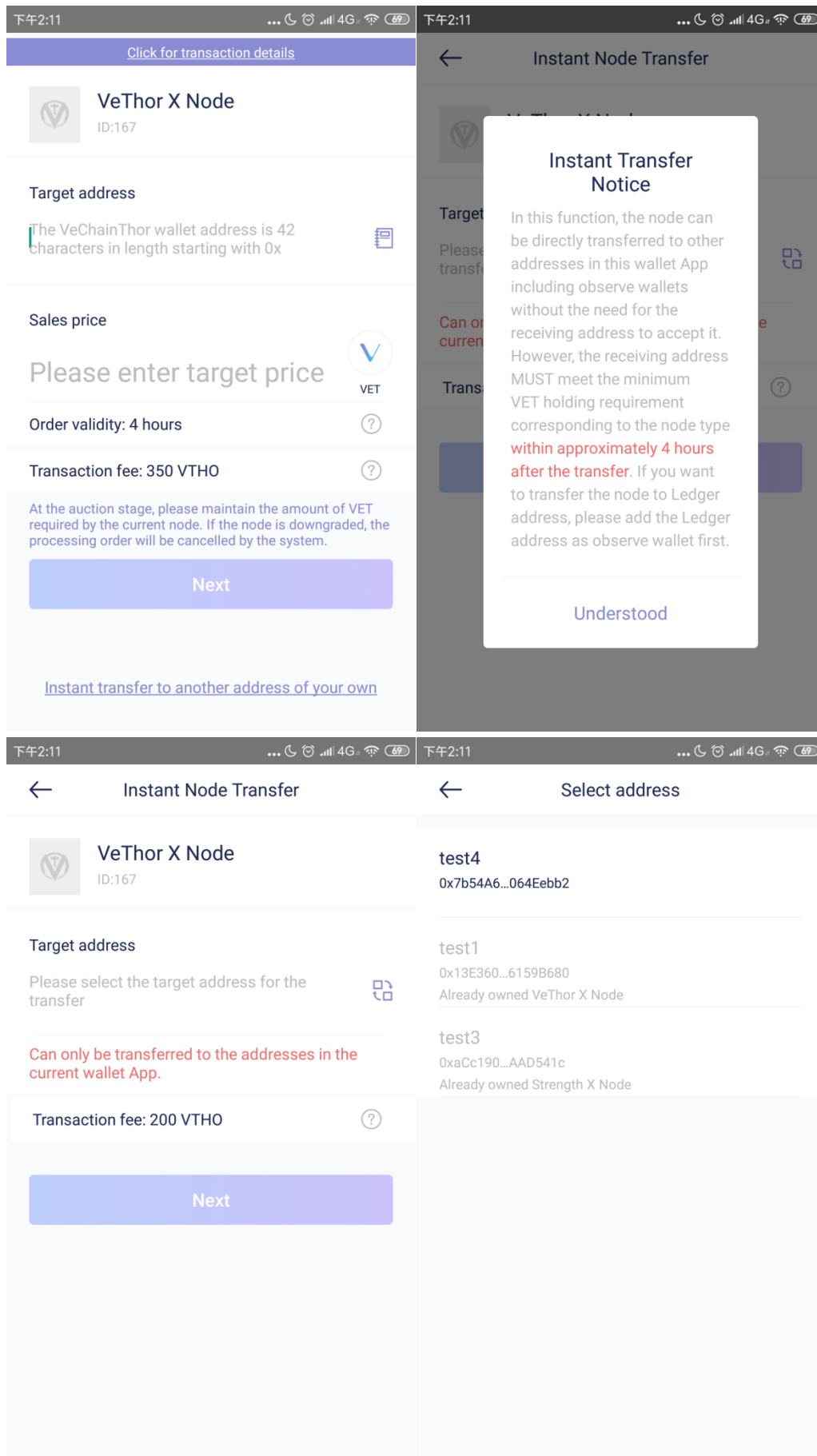


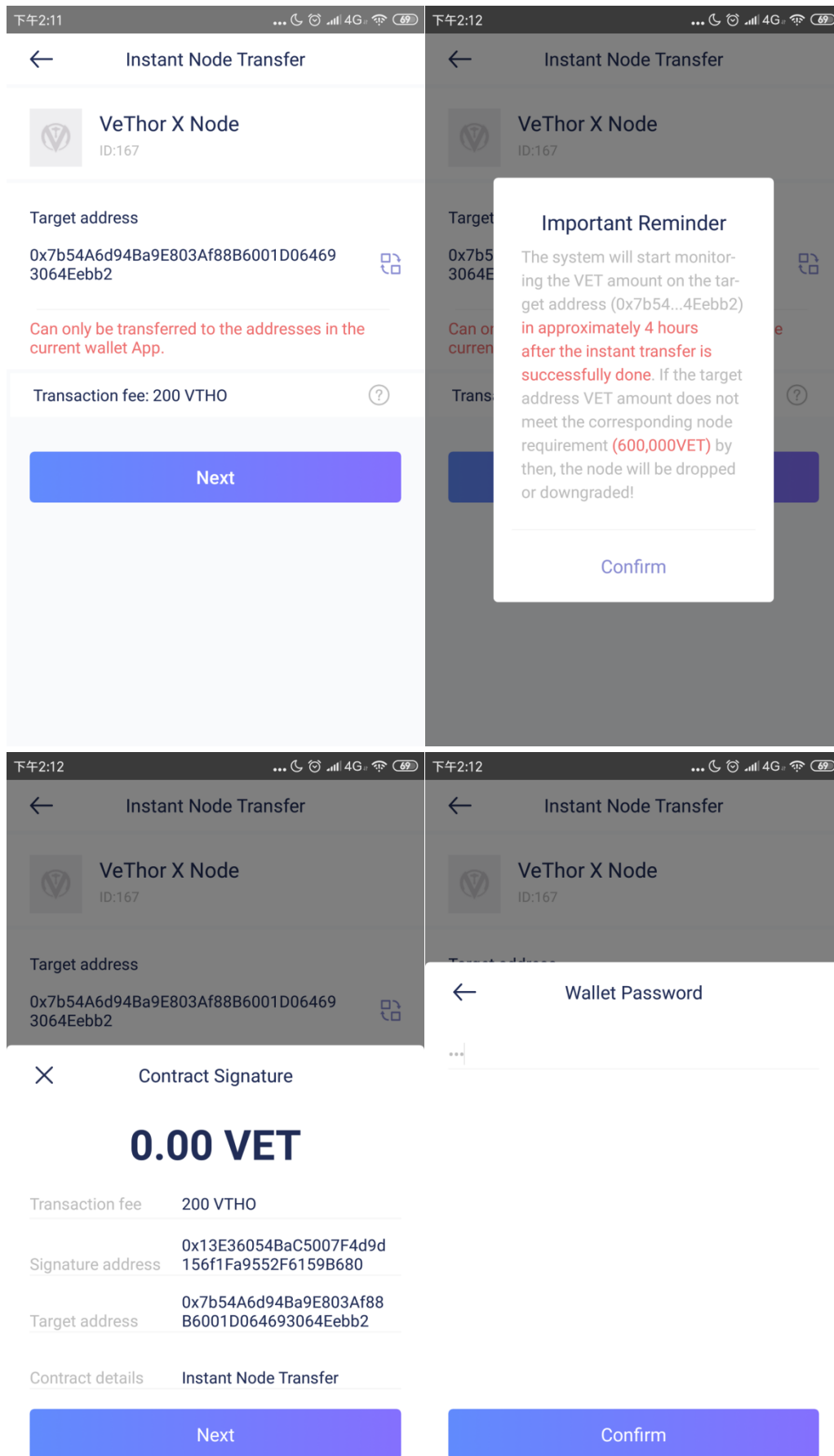
- a) Click “Designated Transfer”, carefully read and confirm the reminder to enter Designated Transfer page, input target address and sales price and confirm. Click “Next” to initiate contract signature. Check information of “transaction fee”, “signature address”, “target address”, “contract address”. Then click “Next” and input transaction password to initiate the request of Designated Transfer of node to the VeChainThor Blockchain. If you want to cancel the request, please click “Cancel Your Order”. The receiver do not need to do any operations, but only receive the transfer messages and the countdown of the node requirement monitoring.

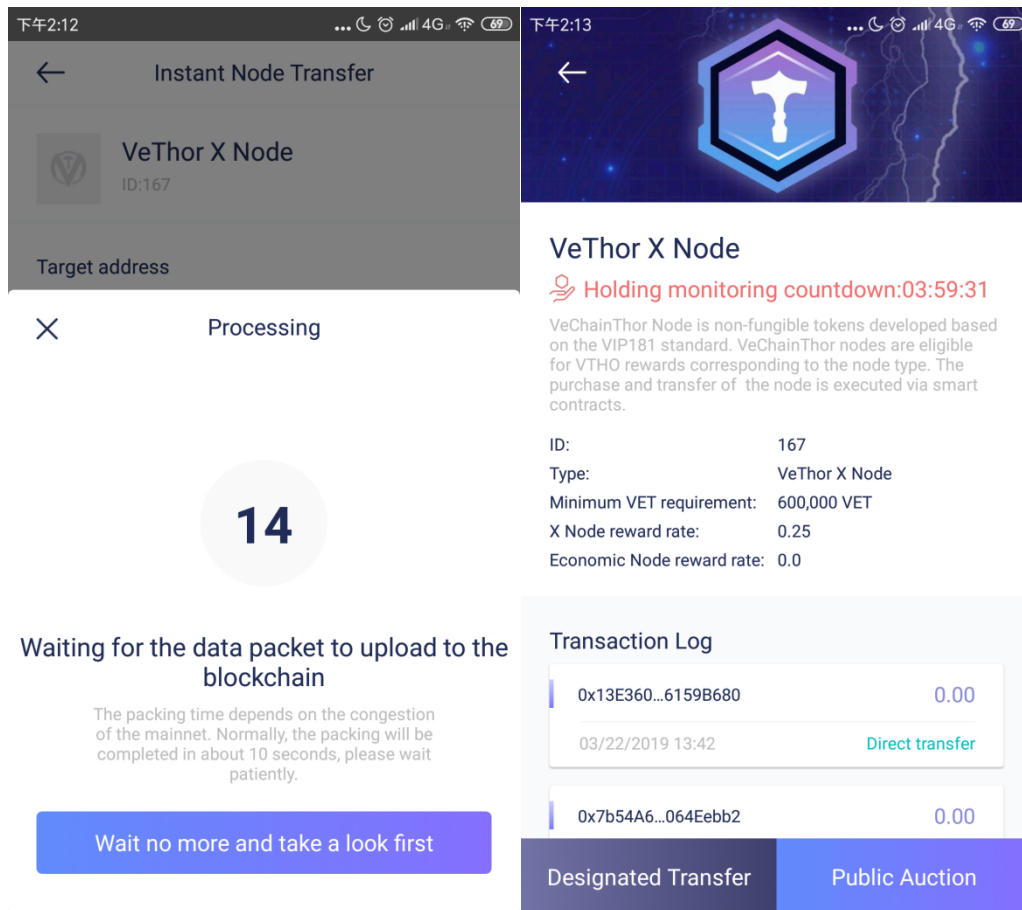




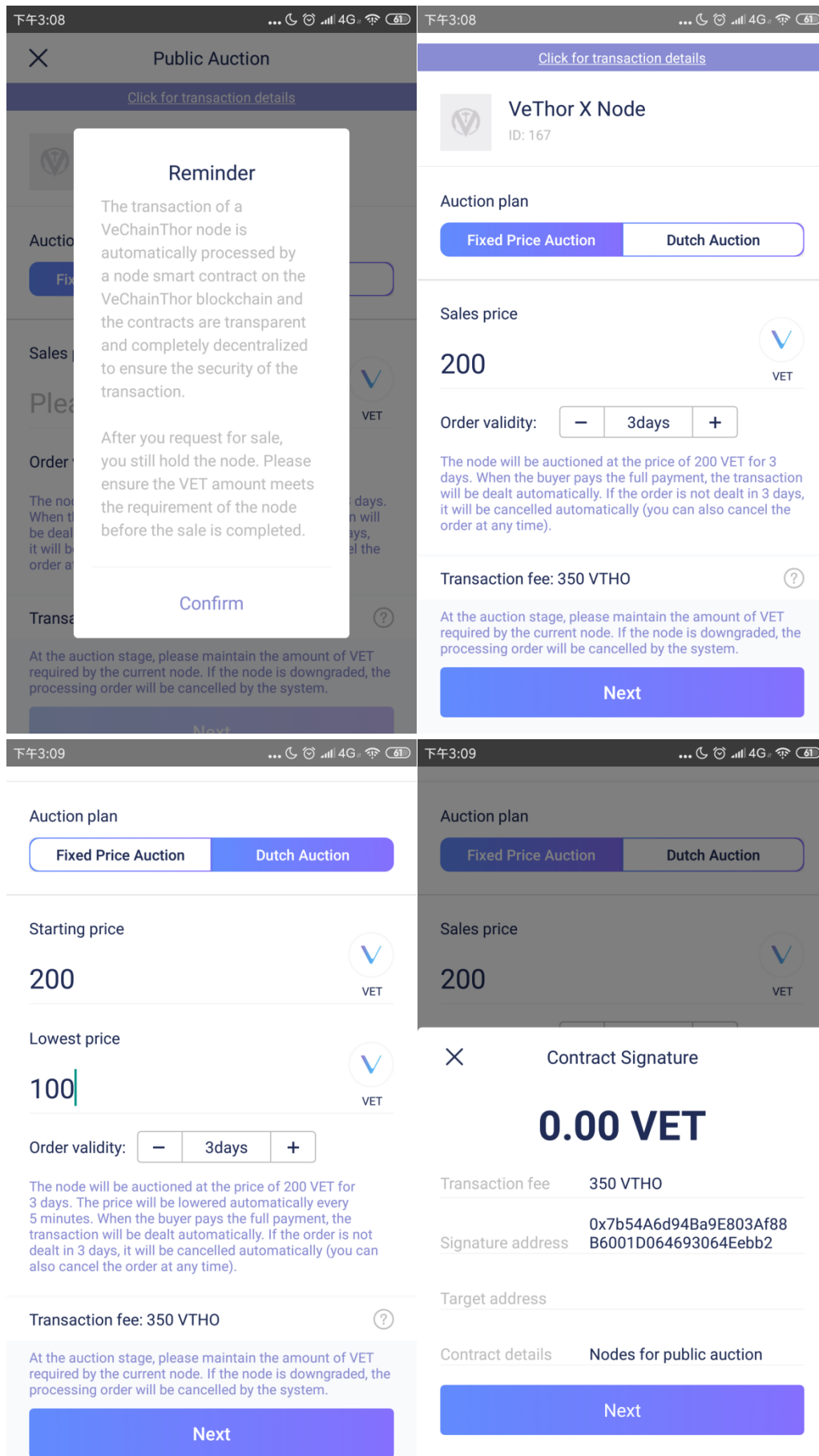
- b) Click the “Instant transfer” in the Designated Transfer page, carefully read and confirm the instant transfer reminder and enter Instant node transfer page. Select another wallet address in this APP and click “Next”, read the “reminder” and confirm to initiate contract signature. Check information of “transaction fee”, “signature address”, “target address”, “contract address”. Then click “Next” and input transaction password to initiate the request of instant Transfer of node to the VeChainThor Blockchain. The system will start monitoring the VET amount on the target address in approximately 4 hours after the instant transfer is successfully done. And the target address do not need to do any operations.

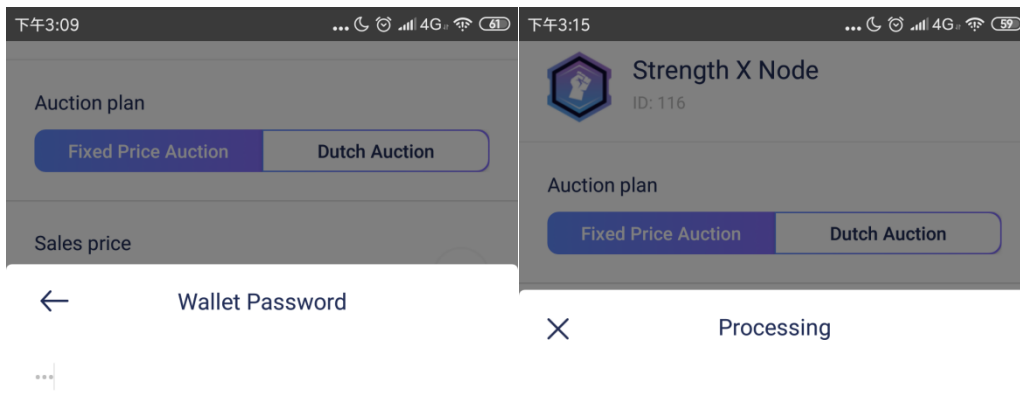






- c) Click “Public Auction”, carefully read and confirm the “reminder” and enter public auction page. There are two auction mode, one is “Fixed Price Auction” and another one is “Dutch Auction”. The price of “Fixed Price Auction” is fixed, and for “Dutch Auction” node, it should set starting price and lowest price. Enter price and confirm. Click “Next” to initiate contract signature. Check information of “transaction fee”, “signature address”, “target address”, “contract address”. Then click “Next” and input transaction password to initiate the request of public auction of node to the VeChainThor Blockchain. If you want to cancel the auction, please click “Cancel Your Order”.





17

Waiting for the data packet to upload to the blockchain

The packing time depends on the congestion of the mainnet. Normally, the packing will be completed in about 10 seconds, please wait patiently.

Confirm

Wait no more and take a look first



VeThor X Node

Order validity remaining: 71:59:27

200 VET

ID: 167
Type: VeThor X Node
Minimum VET requirement: 600,000 VET
X Node reward rate: 0.25
Economic Node reward rate: 0.0

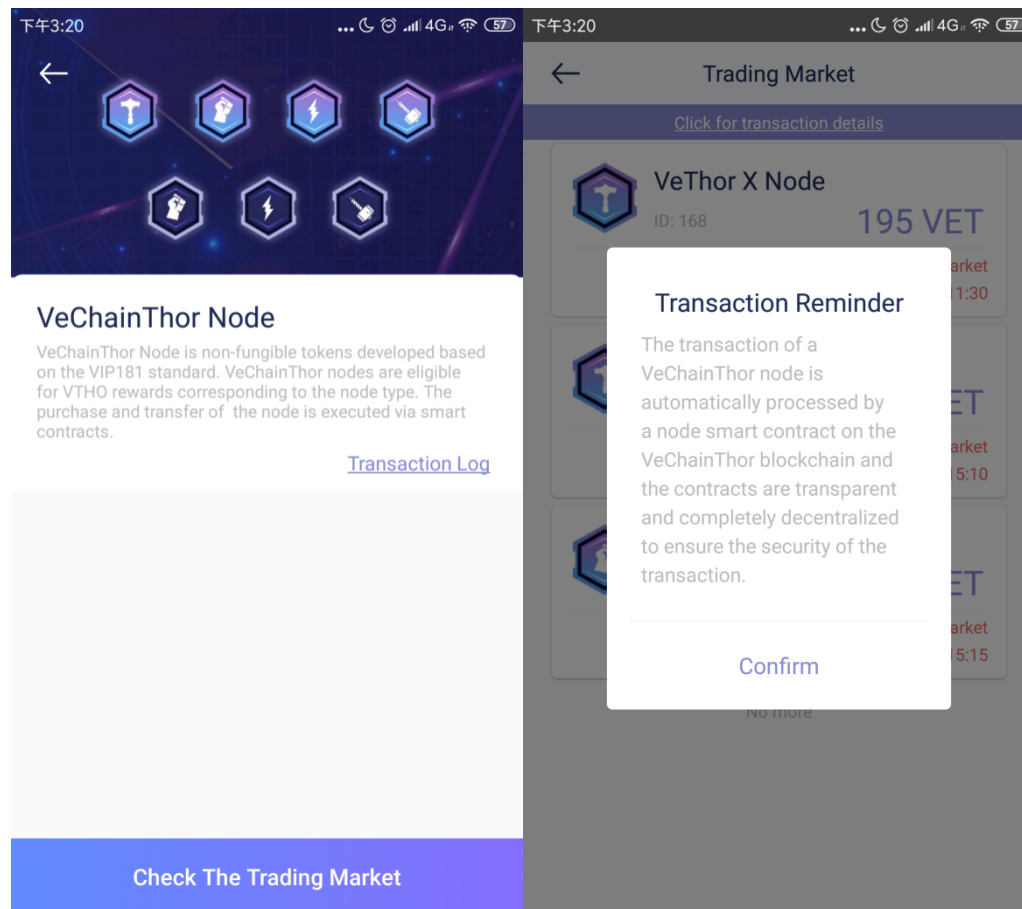
Transaction Log

0x7b54A6...064Eebb2	0.00
57 minutes ago	Direct transfer
0x13E360...6159B680	0.00
57 minutes ago	Direct transfer

Cancel Your Order

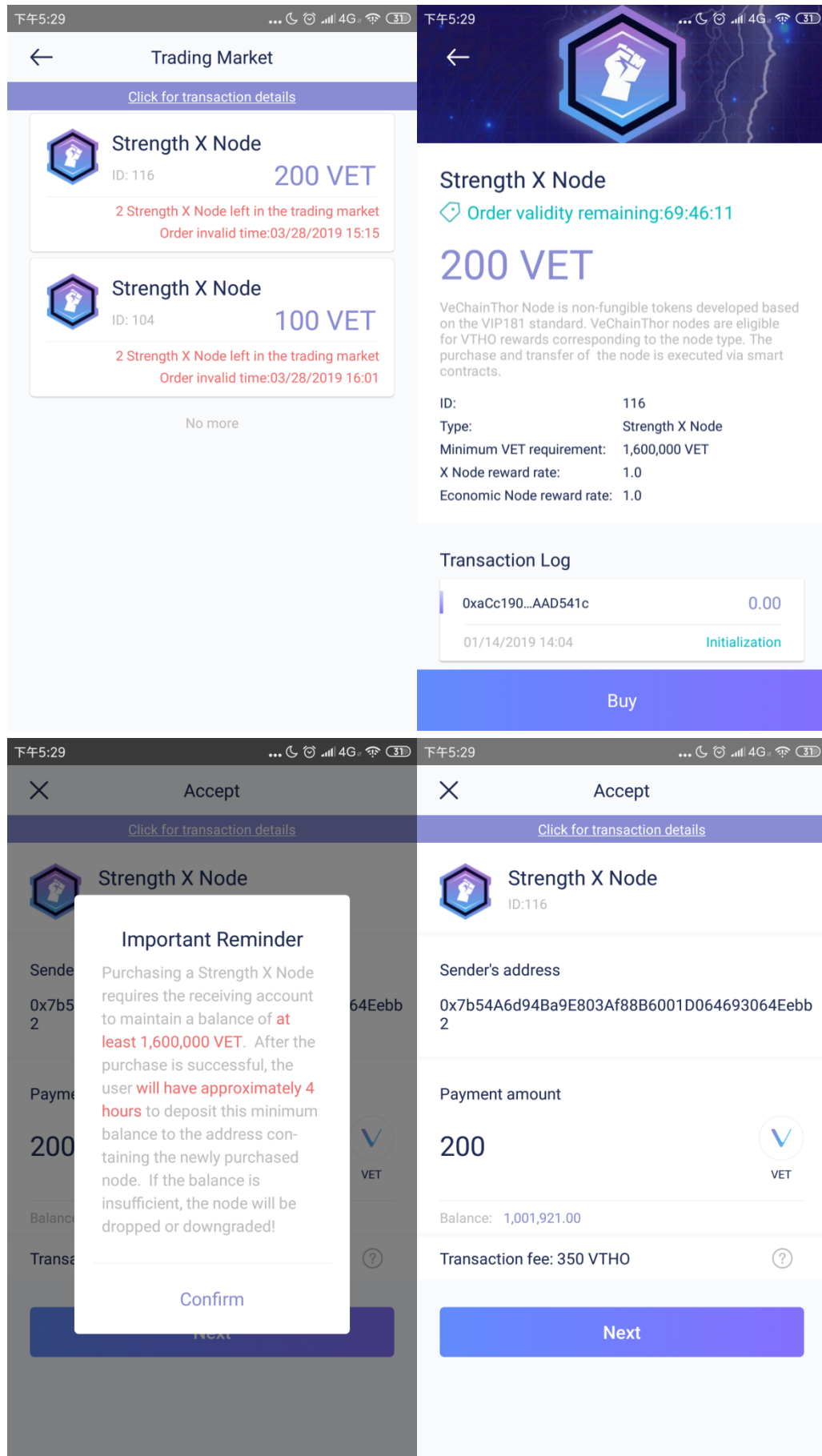
2. 1. 3. Trading market

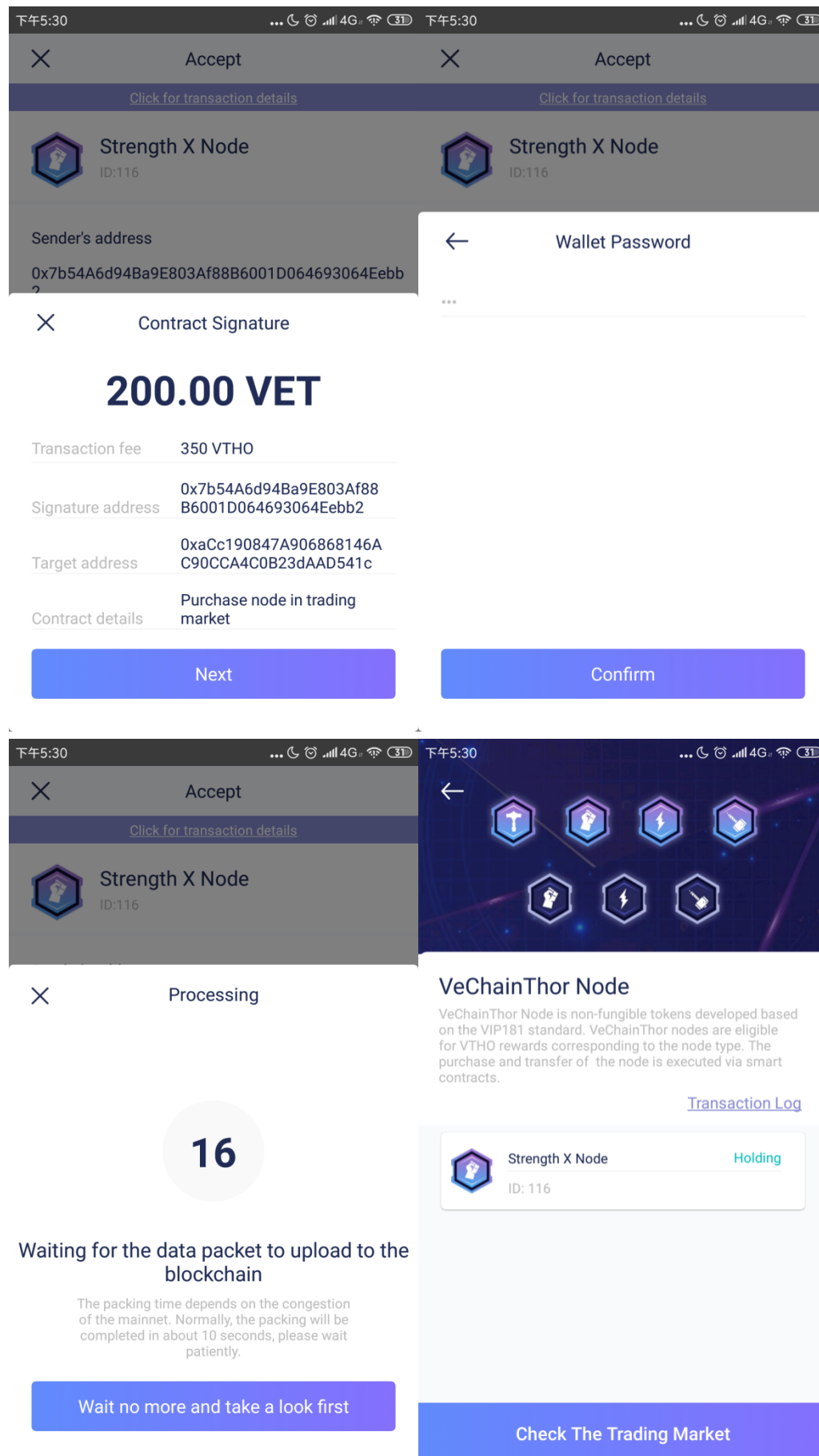
Click “Check the trading market”, carefully read and confirm the “Transaction reminder” to view all nodes publicly auctioned on the VeChainThor Blockchain.



2. 1. 4. Buy a node

In the trading market, select the node you want to buy, and click “Buy”. Read the “important reminder” and confirm, click “Next” to initiate contract signature. Check information of “transaction fee”, “signature address”, “target address”, “contract address”. Then click “Next” and input transaction password to confirm. After the transaction is packaged and uploaded to the blockchain, which means successfully bought the node. System starts to monitor the VET amount after 4 hours later. You must make your VET amount meet the requirement of the node can you truly own the node, or you will lost the node.





3.VET Token Swap

VeChain will swap the VET every Tues and Thurs, the service stopped date shall be announced via the official Twitter.

3. 1. VET Token Swap

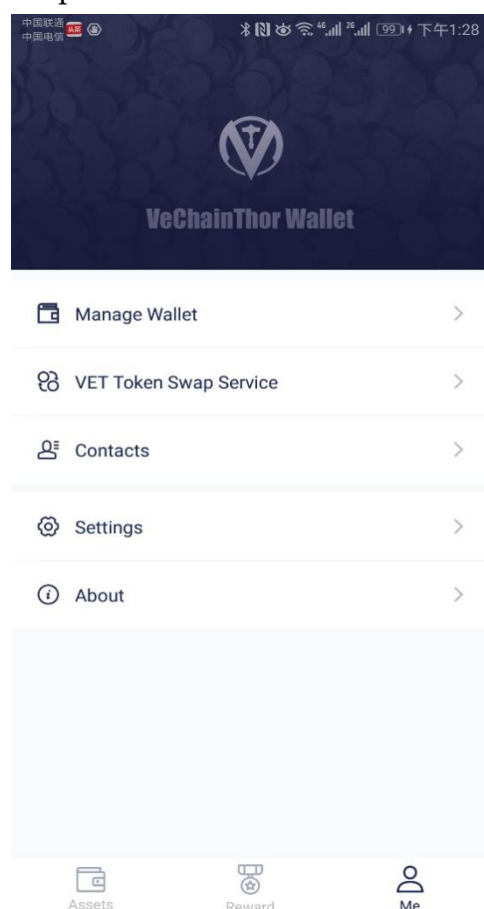
3. 1. 1. VET Token Swap via exchanges

Users can transfer ERC20 VEN to participating exchanges. The exchanges will start providing token swap services in approximately mid-July.

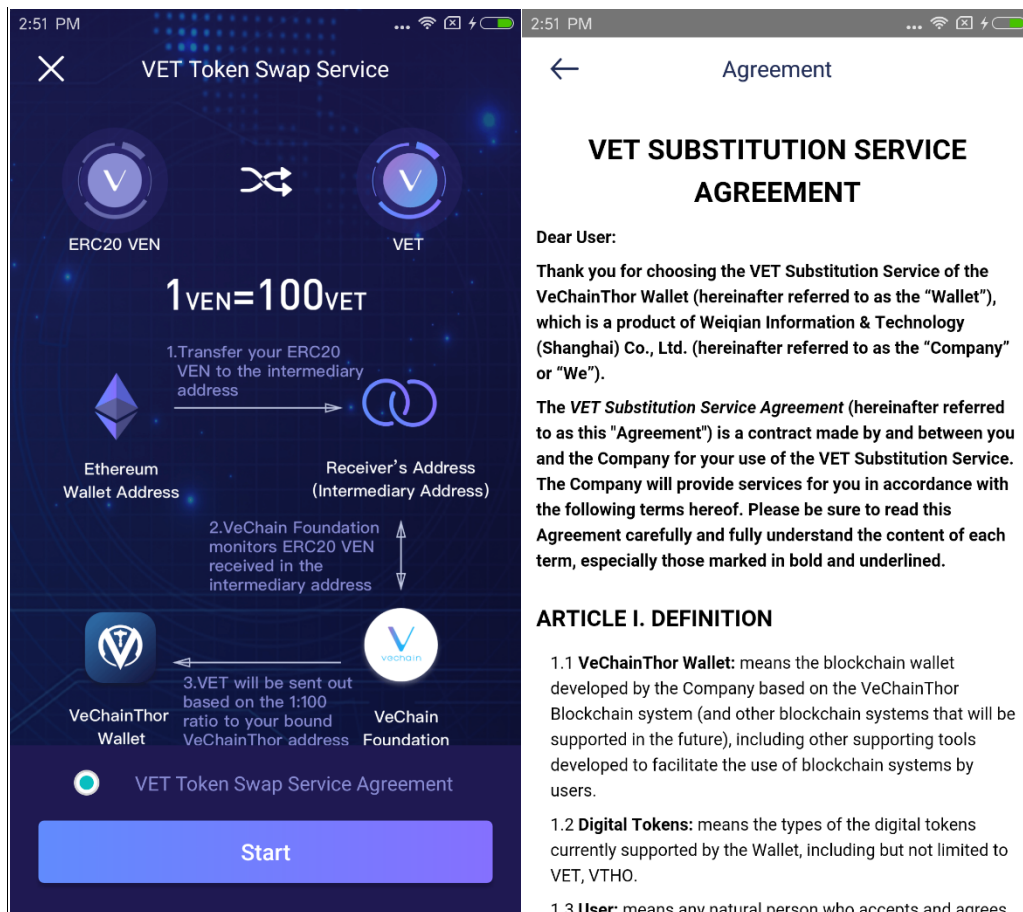
3. 1. 2. VET Token Swap via VeChainThor Wallet

This section assumes you have already created a wallet. If you have not please check section 1.

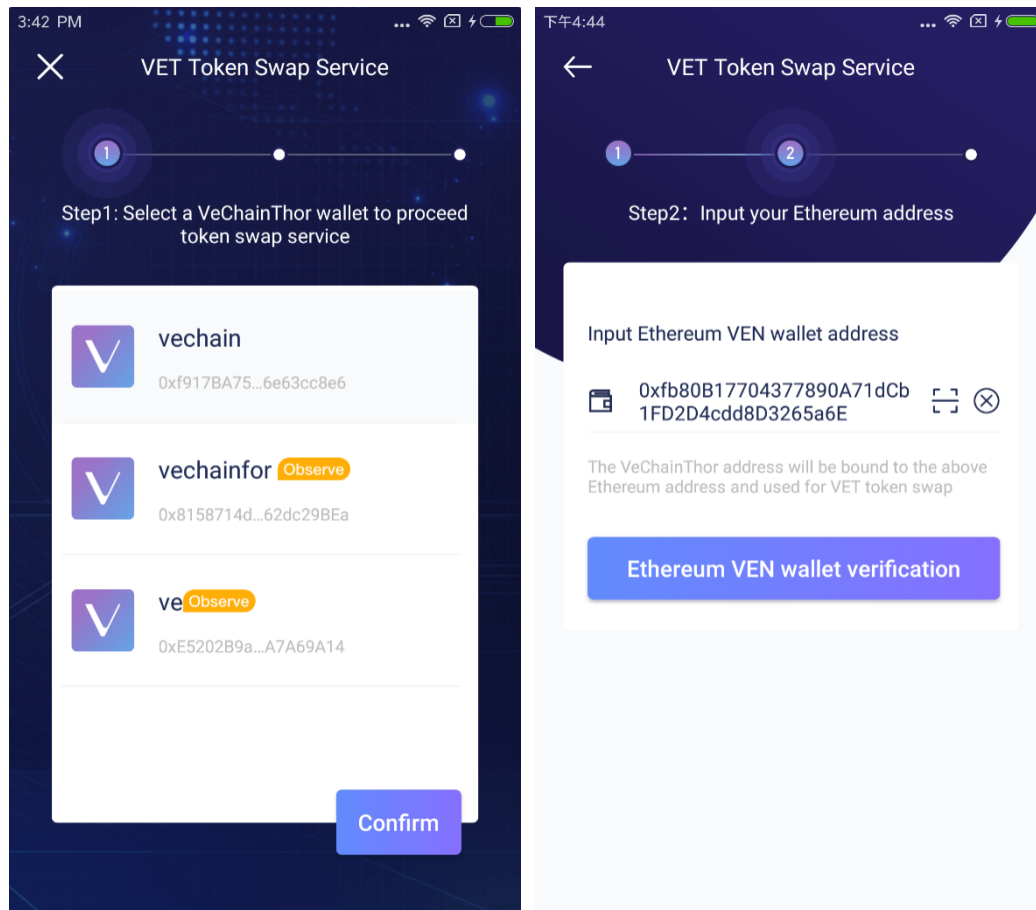
Step1: Click “VET token swap service” in wallet right menu bar or “Me” and start VET swap service.



Step2: Read and comprehend the “Token Swap Service Agreement” and click “start”.



Step3: Select one address had not bond Ethereum address and confirm. Input Ethereum address and verify to enter token swap manual page, and swap token according to manual.



Token swap manual is as follow, click “Understood, start binding”:

下午4:37

← VET Token Swap Manual

Please complete wallet binding by transferring 0.01 ERC20 VEN from Ethereum wallet to your intermediary address. VET token swap service will be available after binding successfully. Intermediary address is a unique address generated by cryptographic algorithm based on your selected VeChainThor wallet and Ethereum address, no one owns the private key.

1/3 Copy intermediary address

Understood, start binding(6S)

Please complete wallet binding by transferring 0.01 ERC20 VEN from Ethereum wallet to your intermediary address. VET token swap service will be available after binding successfully. Intermediary address is a unique address generated by cryptographic algorithm based on your selected VeChainThor wallet and Ethereum address, no one owns the private key.

1/3 Copy intermediary address

In next page, copy your intermediary address by clicking 'copy' button.

Transfer 0.01 ERC20 VEN from your Ethereum wallet to the intermediary address to complete the binding.

Sender's Address:	0xc3b5-549b1869A84 9AF332FA7A9E973b b4f44f5f	Swap
Receiver's Address (Intermediary Address):	0x0000000000000000 0000012998799b8b f5d7724	Copy
Amount:	0.01VEN	
(DO NOT TRANSFER MORE THAN 0.01VEN)		

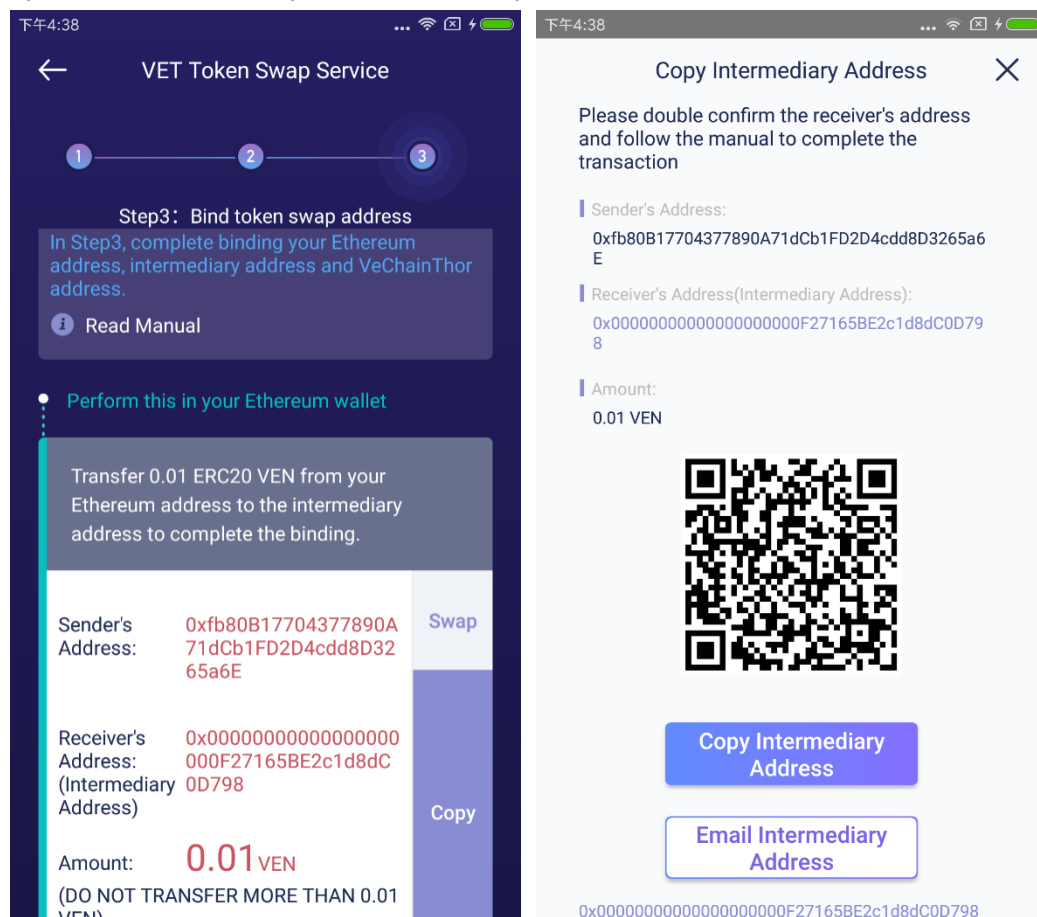
2/3 Complete ERC20 VEN transaction in any Ethereum wallet

2.1 Access your Ethereum wallet (e.g. M-EW), choose the SAME Ethereum address you used to generate the intermediary address, initiate VEN transfer.

3/3 Verify the binding status in VeChainThor wallet

Wait 10 minutes for the Ethereum transaction to be processed. Click "Transaction Completed, next" to verify your binding status. Transaction monitor in process, please wait. Token swap service will be available once the binding transaction is completed. Once ERC20 VEN is received in your intermediary address, VET will be sent out based on the 1:100 ratio to your VeChainThor wallet.

Step4: Once you begin the swap process, a unique Intermediary Address is generated based on your Ethereum and VeChainThor addresses. Copy this address and transfer VEN to this intermediary address in Ethereum wallet (**It is heavily recommended that you send a test transaction of 0.01 VEN to the intermediary address first. Upon seeing its success in the explorer, you can transfer the rest.**). Do not send to your VET wallet, only the intermediary address.



- **Sender's address:** Your Ethereum address;
- **Receiver's address:** Your intermediary address;
- **Amount:** Input the token swap VEN amount.

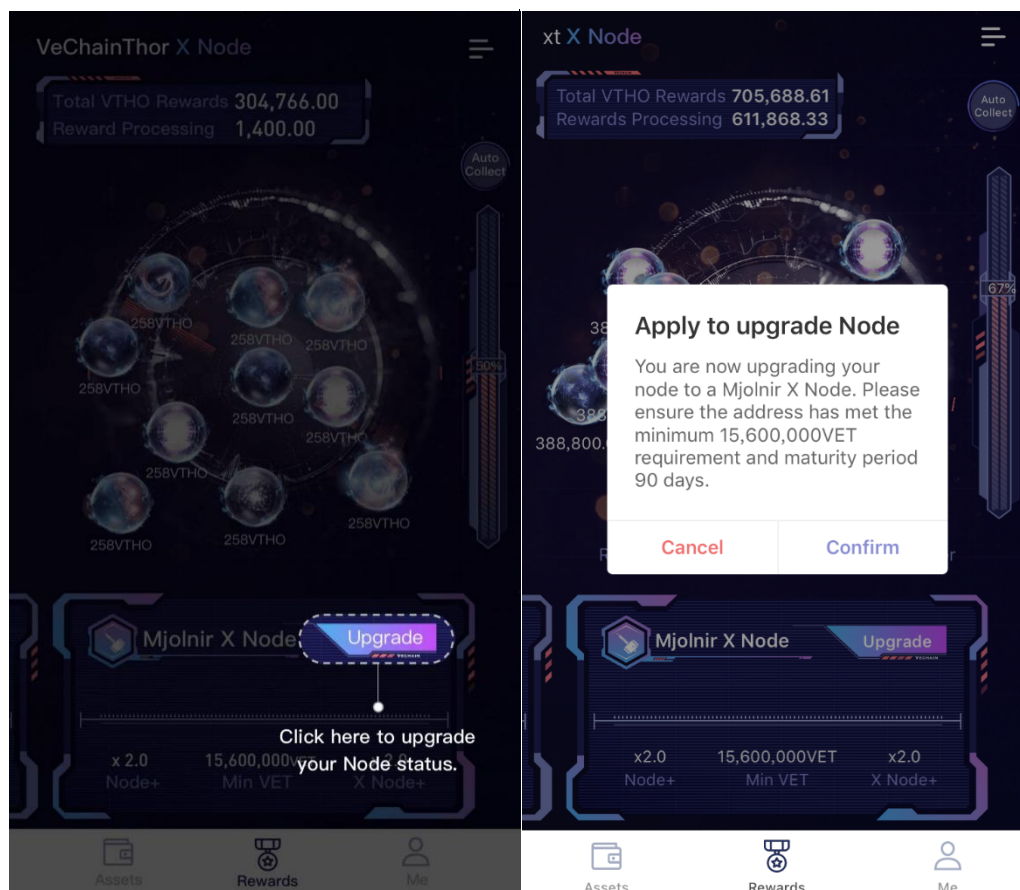
Step 4: From your Ethereum ERC20 wallet (e.g., MyEtherWallet), transfer the rest of your ERC20 VEN to the receiver intermediary address that you copied (pictured above).

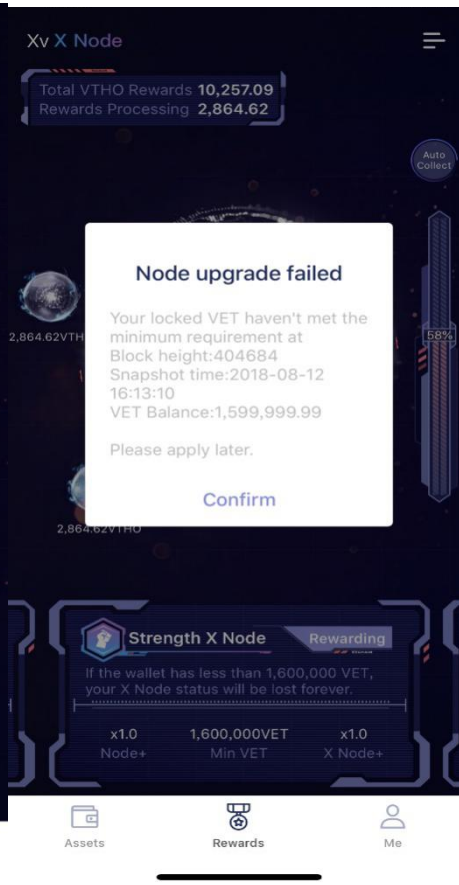
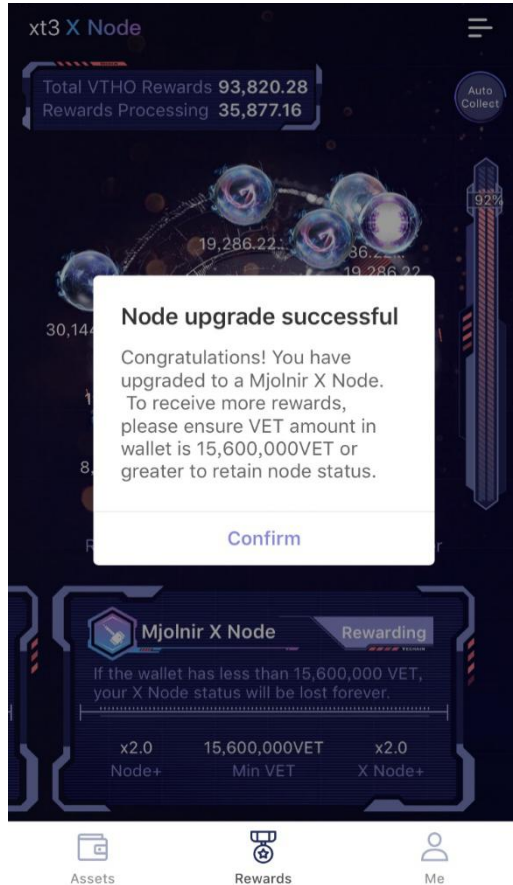
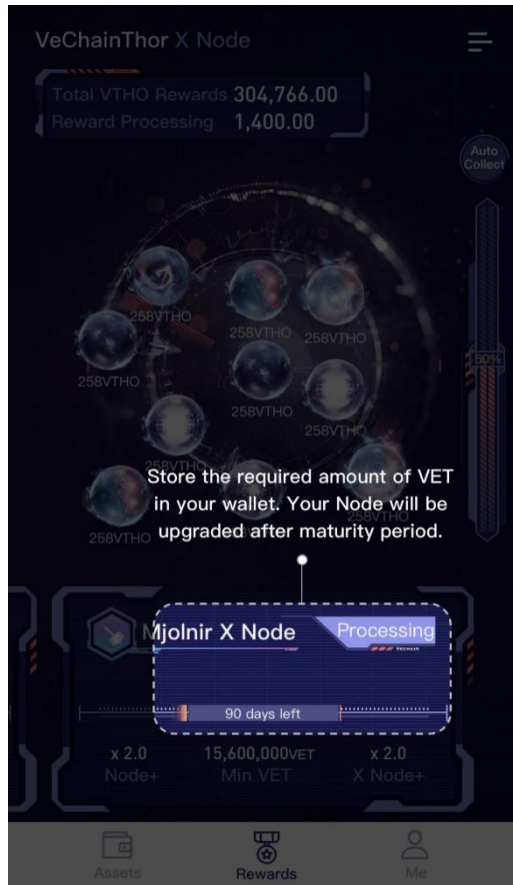
4. VTHO reward

On reward page, read and accept reward service agreement, click “start”. Prompt will appear on the page for operations such as upgrading and reward claims.

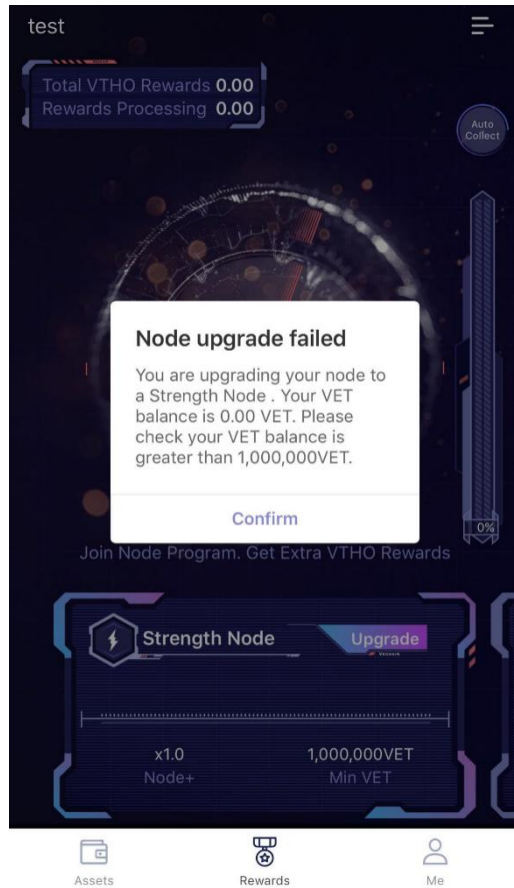
4. 1. Node Upgrade

- Click “Upgrade” to upgrade your node status when you meet the upgrade requirement, store the required amount of VET in your wallet during maturity period. Your Node will be upgraded after maturity period. If your VET amount haven’t met the minimum requirement of current node, node upgrade failed.



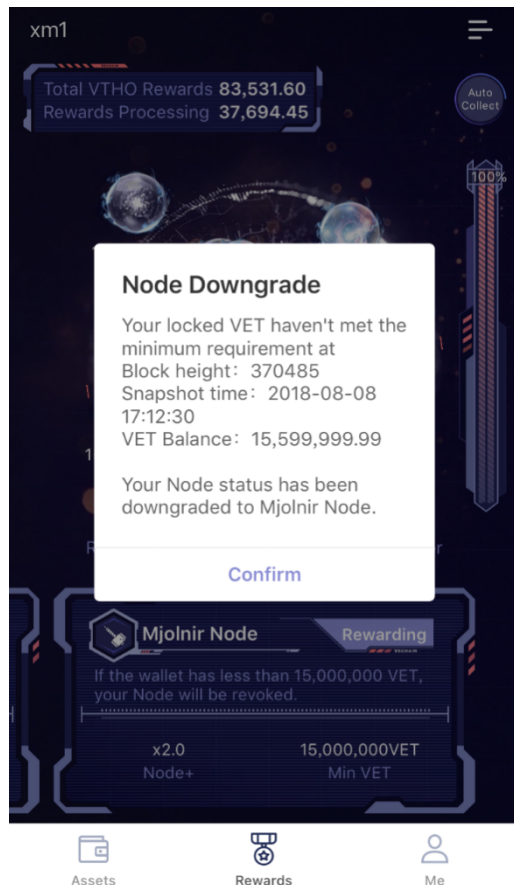


- To Non-economy node, “upgrade” bottom shows on strength node page whether your VET balance met requirement or not. If your balance have not met the node requirement, system will pop up the prompt. On other node’s page, “upgrade” bottom will not show until your VET balance met the node requirement. Node can only be upgraded by sequence.

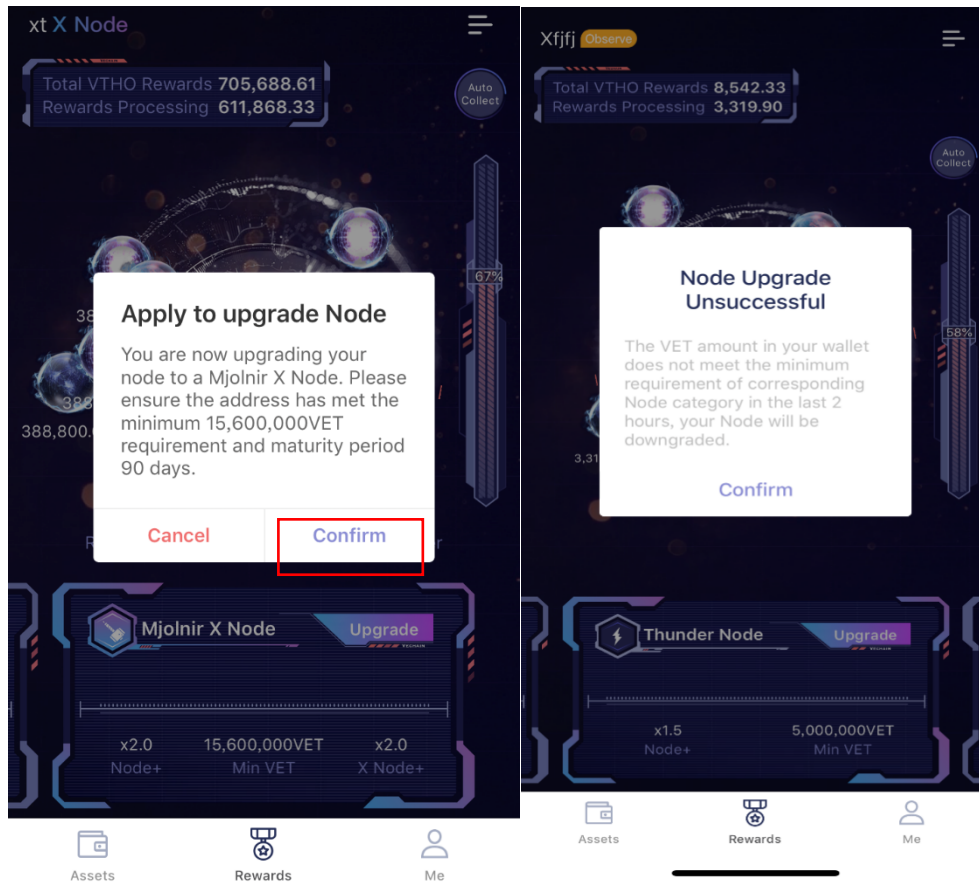


4. 2. Node Degrade

When your locked VET have not met the minimum requirement, your node status will downgrade (downgrade rules).

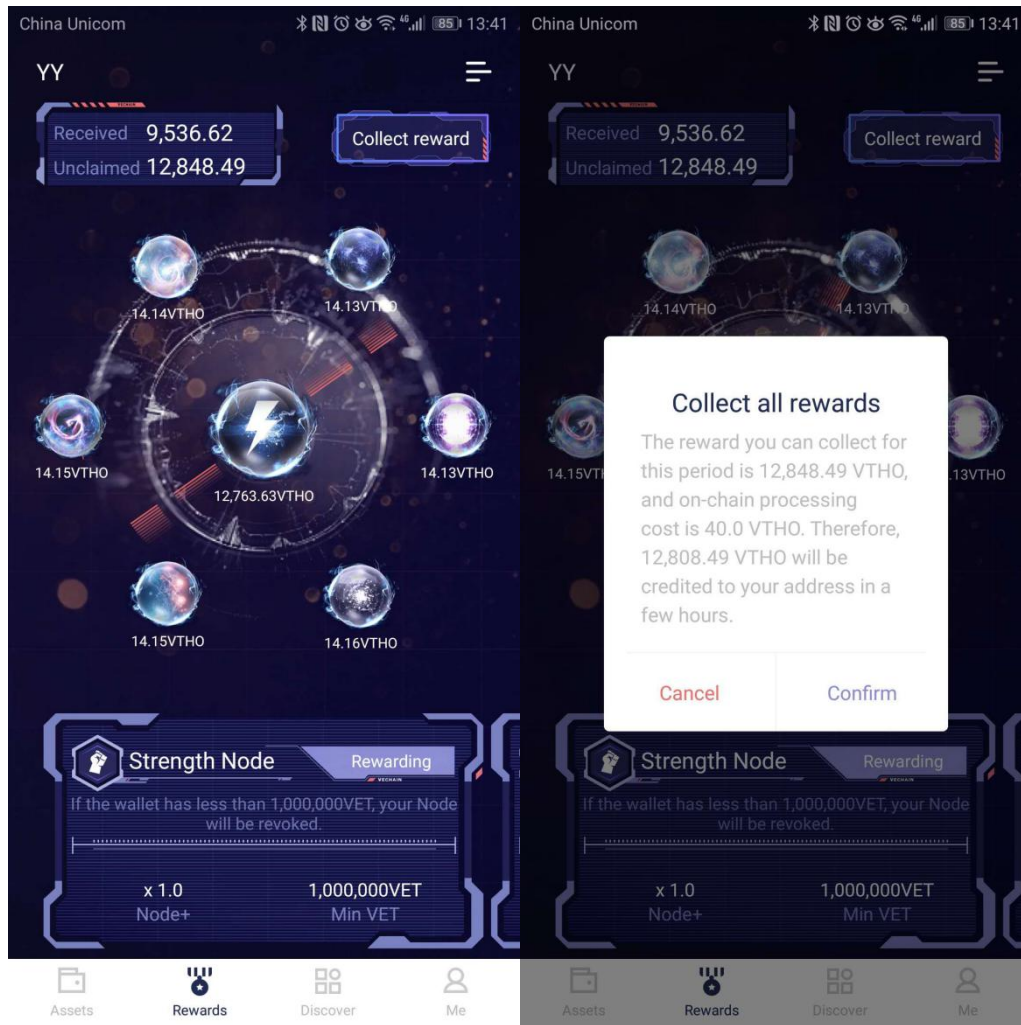


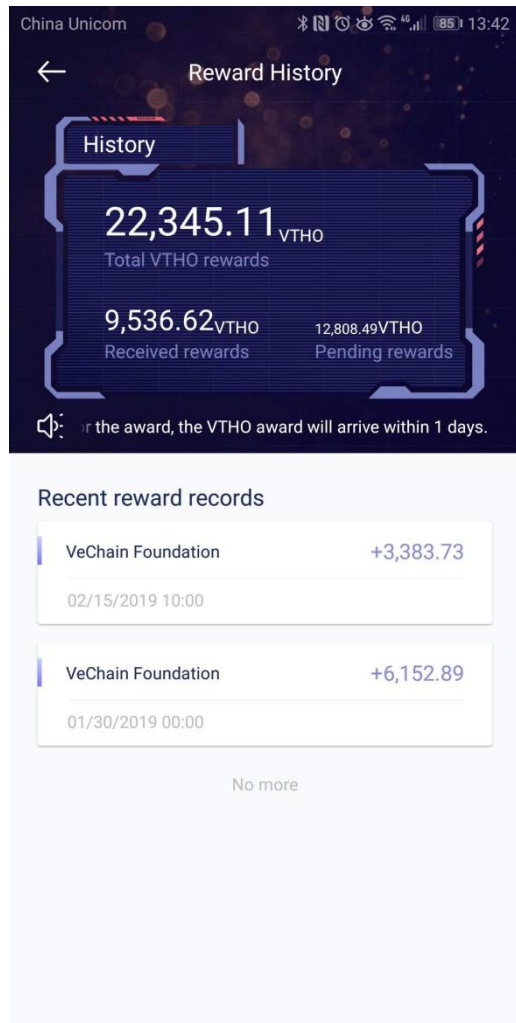
If your VET amount met the node requirement, but system monitored your VET amount does not meet the minimum requirement of corresponding Node category in the last two hours, your node will be downgraded: page of “Apply to upgrade node” shows first when you click “upgrade”, then you click “confirm”, system show “Node upgrade Unsuccessful” and node downgrade.



4. 3. Reward claims

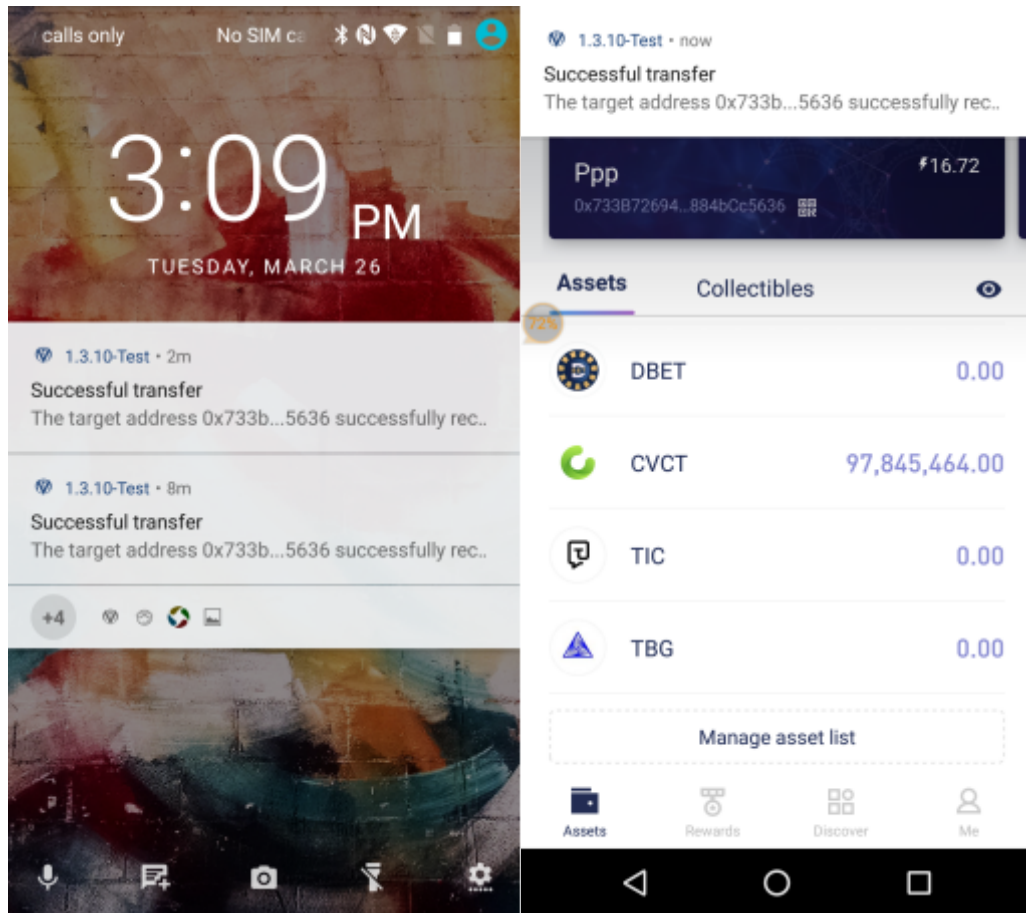
You can click the VTHO orbs to or click “Collect reward” to collect your VTHO rewards.. A certain processing cost will be deducted and the remaining VTHO reward will be deposit into the address. The upper left corner shows the received and unclaimed VTHO rewards, you can also click here to view rewards history.

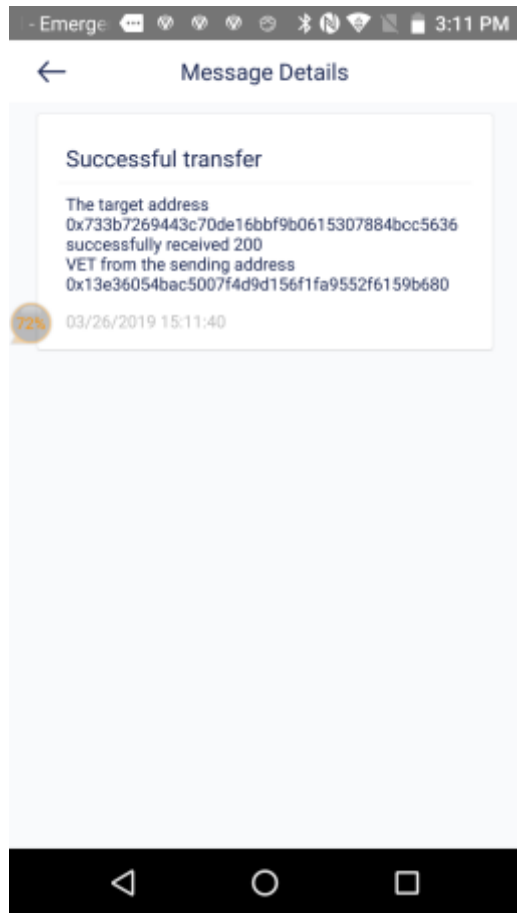




5. Message pops

When transfer VET, trade node, instantly transfer node, apply or cancel node upgrade and collect reward, there will be message pops. There are two kinds of pops including foreground pop and background pop. When the APP is running in the foreground, it appears the foreground pop which only lasts for 3 seconds and will disappear automatically if you do not click it. When the APP is running in the background, it appears the background pop and remains until you click and read it. In addition, Android phones need to install Google service and use an VPN proxy to receive the message pops.





6. Discover

In “Discover”, there all different kinds of Dapps which are developed by the third parties, please carefully read the tips before use the Dapps.

