

WANCHAIN OFFLINE WALLET

Instruction Manual

DIGEST

This instruction manual describes how to use Wanchain Offline Wallet to sign and send an offline transaction. Wanchain Team

MAR 2019



INDEX

Important notes	2
Installation of Wanchain Offline Wallet, account management	3
1.1 Downloading	3
1.2 Installation and launching of Wanchain Offline Wallet	3
1.3 Switch between main network and test network	4
1.4 Create, import and backup accounts	5
1.5 Manage existing accounts	8
Sign and send offline transactions	9
2.1 Sign offline transactions	9
2.2 Send offline transactions1	4
2.3 Verify offline transactions1	7
Join the conversation1	8



Important notes

Wanchain Offline Wallet allows users to sign offline transactions on Wanchain.

Wanchain Offline Wallet should be used on an <u>always offline computer</u> to avoid exposure of keystore files to the Internet.

We strongly recommend **<u>backing up keystore files</u>** in a safe location before any kind of operation which could potentially impact them, including but not limited to importing and exporting keystore file, upgrading and uninstallation of Wanchain Offline Wallet, to prevent any kind of data loss, though normal usage of Wanchain Offline Wallet will not alter keystore files in any way.

This instruction guide is for Wanchain Offline Wallet in which users can sign offline transactions and later use signature generated by Wanchain Offline Wallet to send offline transactions on Wanchain in tools such as <u>mywanwallet.nl</u>.

Currently Wanchain Offline Wallet supports only WAN token transactions. WRC20 tokens like WBTC, WETH are not supported in this version.

Users can switch between main network and test network of Wanchain in Wanchain Offline Wallet.



Installation of Wanchain Offline Wallet, account management

1.1 Downloading

Download Wanchain Offline Wallet installation file from: https://wanchain.org/products

* Wanchain Offline Wallet supports Linux, Windows, MacOS, please

download corresponding installation file for your OS

* Please verify downloaded installation file's data integrity with SHA256 checksum

tools. You can find SHA256 checksum value along with Wanchain Offline Wallet's download

link on https://wanchain.org/products

1.2 Installation and launching of Wanchain Offline Wallet

Extract the file, install, and click icon below to start Wanchain Offline Wallet





♦ Linux:

Linux setup by CLI: sudo dpkg -i WanOfflineWallet_X.X.X_amd64.deb Linux start application by CLI: wanofflinewallet



1.3 Switch between main network and test network

Wanchain Offline Wallet works with both main network and test network of Wanchain.

Use the menu option below (mainnet/testnet) to switch between main network and test network.



Please be noticed that the choice of mainnet or testnet only impacts "ChainID" information in the transaction signature. All accounts will be shown in the accounts list no matter the choice of network.



- 1.4 Create, import and backup accounts
 - 1) Click "Create" button in the upper-right corner to create new Wanchain account.

🕤 Wan Offline Wallet		
Offline wallet	Please use this application on an offline computer!	Create Import Backup
No Accounts!		
Account:		Clean All Sign
	No signed transactions.	*

Enter a name for this new Wanchain account and set password for it, then confirm

password by re-typing	t again.	
Create Acco	unt	X
* Username	test1	
* Password	•••	
* Confirm	••••	
	Submit Reset Canc	el

Click "Submit" button to confirm creation of new Wanchain account.

Depending on the configuration of your computer, creation process could take up to 30 seconds.



2) Click "Import" button to import existing keystore files of Wanchain accounts.

Wan Offline Wallet	Please use this application on an offline computer!	Create Import Backup
No Accounts!		
Account:		Clean All Sign
	No signed transactions.	*

It will open "Import Account" interface.

Import Acc	ount X	
* Name		lain
* Password		
* Filename	Drag files here	
	Please drag one file	
	Submit Reset Cancel	

Drag keystore file from file manager to the "Drag files here..." box (you can also click



the box, it will open file manager then you can navigate to the file location of keystore file), enter password previously set for the existing keystore file (password must match), enter a name for this account then click "**Submit**" to import Wanchain account of this keystore file.

Import Acc	ount X	
* Name	test2	
* Password		
* Filename	Drag files here Selected file: UTC2018-07-04T02-08-56.634000000Z93 c7b94Dc1DfA83effd080fa85EFE146f04aC484	ain
	Submit Reset Cancel	



3) "Backup" feature opens local keystore files location of Wanchain accounts

managed by Wanchain Offline Wallet.

Van Offline Wallet				
🛕 wancha	ain mainnet	Please use		Create Import Backu
Offline wallet		on an offi	ine computer!	
test1	2	>test2	20	
0x68d48b1ff0658 4056e1bfc8268f4	6f0076d71600 [copy]	0x93c7b94Dc1DfA 5EFE146f04aC484	A83effd080fa8 [copy]	
Account: tes	t2 0x9	93c7b94Dc1DfA83eff	d080fa85EFE146f04a0	C484 Clean All Sign
		No signe	ed transactions.	

Please be noticed that Wanwallet (full feature online wallet) and Wanchain Offline

Wallet have separate keystore file locations.

1.5 Manage existing accounts

You can rename or delete accounts by clicking corresponding buttons.

Van Offline Wallet	mainnet	Please up on an of	se this application fline computer!	Create	Backup
> test1 0x68d48b1ff06586f00 4056e1bfc8268f4 [cop	∠ [™] 76d71600 py]	test2 0x93c7b94Dc1D 5EFE146f04aC48	く fA83effd080fa8 4 [copy]		•
Account: test1	0x (58d48b1ff06586f007	76d716004056e1bfc826	8f4 Clean All	Sign



Sign and send offline transactions

2.1 Sign offline transactions

To access offline transactions signing feature, choose correct network (mainnet vs testnet) and choose one Wanchain account as "From account", then click on "**Sign**" button.





Sign using te	st2	×	
From: 0x93	c7b94Dc1DfA83effd080fa85EFE146f04aC484	1	
* Nonce:			
* To:			
* Gas limit:	21000		2
* Gas price:	1800000000	Win	
* Value:		Wan	
Data:			hir
	Maximum gas fee: 0.00378 Wan		
	Sign Ca	incel	2

To obtain "**Nonce**" information, please use another computer that is online and visit: <u>https://mywanwallet.nl/#offline-transaction</u>

Enter the "From address", choose correct network (Mainnet vs Testnet)



DON'T GET PHISHED, pleased & Thank you I 1. BOOKMARK <u>MYWANWALLETNI.</u> This site is still Beta Softwarel Please use a hardware wallet and if not a local copy to po	srevent problems! Read our <u>Disclaimer!</u>	
💫 wanchain	10.1 Gas Price: 182 Gwei 👻 Network WAN Testnet (mywanwallet.nl)	i) •
New Wallet Send Wancoins & Tokens Send Offline Contracts WNS DomainSale Check TX Status View Wallet Info	Sign Message Help	
Generate & Send Offline Transaction		
Step 1: Generate Information (Online Computer)		
From Address		
0x93c7b94Dc1DfA83effd080fa85EFE146f04aC484		
Generate Information		

Then click "Generate Information" button

This site is still Beta Software! Please use a hardware wallet and if	not a local copy to prevent problems! Read our <u>Disclaiment</u>
	Gas Price: 182 Gwei - Network WAN Testnet (mywanwallet.nl)
	WAN Mainnet (mywanwallet.nl) WAN Testnet (mywanwallet.nl)
ew Wallet Send Wancoins & Tokens Send Offline Contracts WNS DomainSale Check TX Status	View Wallet Info Sign Message Help Add Custom Network / Node
	4 · · · · ·
enerate & Send Offline Transaction	
enerate & Send Offline Transaction	
Step 1: Generate Information (Online Computer)	
ienerate & Send Offline Transaction Step 1: Generate Information (Online Computer)	
Senerate & Send Offline Transaction Step 1: Generate Information (Online Computer) From Address	
Senerate & Send Offline Transaction Step 1: Generate Information (Online Computer) From Address 0x93c7b94Dc1DfA83effd080fa85EFE146f04aC484	•
Senerate & Send Offline Transaction Step 1: Generate Information (Online Computer) From Address 0x93c7b94Dc1DfA83effd080fa85EFE146f04aC484	•
Senerate & Send Offline Transaction Step 1: Generate Information (Online Computer) From Address Ox93c7b94Dc1DfA83effd080fa85EFE146f04aC484 Generate Information	
Generate & Send Offline Transaction Step 1: Generate Information (Online Computer) From Address 0x93c7b94Dc1DrA83effd080fa85EFE146f04aC484 Generate Information Gas Price Nonce	

It will query the Wanchain network and display Nonce value.

Go back to the offline computer, fill necessary information in the signing interface (fields marked with "*") then click "**Sign**" button.



Sign using <mark>te</mark>	st2	×	
From: 0x93	c7b94Dc1DfA83effd080fa85EFE146f04aC484		
* Nonce:	17		
* To:	0x68d48b1ff06586f0076d716004056e1bfc826	58f4	
* Gas limit:	21000		
* Gas price:	18000000000	Win	
* Value:	0.07	Wan	
Data:			
	Maximum gas fee: 0.00378 Wan		
	Sign Ca	ncel	

- Please notice that "**Gas price**" should not be lower than 18000000000 Win (180 Gwin, default value), otherwise the transaction will not be accepted by the blockchain.
- As for "Gas limit", default value is 21000, it is sufficient for normal transactions (transactions to normal Wanchain addresses). Transactions with "To" addresses being Smart Contract should have a higher Gas limit, for example 80000.
- The "Maximum gas fee" value does not represent the actual gas fee value, actual value could be lower than "Maximum gas fee" displayed here.



Sign using te	st2	×
Please inpu	ut	×
Password:		
	ОКС	ancel
* Gas price:	18000000000	Win
* Value:	0.07	Wan
Data:		
	Maximum gas fee: 0.00378 Wan	C L
	Sign	Cancel

Enter password of From account, then click "**OK**" button.

Offline Wallet will now generate "Signature" information for this offline transaction.



Wanchain Offline Wallet Instruction Manual

test1 0x68d48b1ff06586f0076d71 4056e1bfc8268f4 [copy] Account: test2 From: 0x93c7b94Dc1DfA83effc	net Please use on an offi		Create Import Backup
Account: test2 From: 0x93c7b94Dc1DfA83effc	▲ 面 > test2 1600 0x93c7b94Dc1Df/ 5EFE146f04aC484	▲ 10 2000 2000 2000 2000 2000 2000 2000	 ▲ ✓
From: 0x93c7b94Dc1DfA83effc	0x93c7b94Dc1DfA83eff	d080fa85EFE146f0	O4aC484 Clean All Sign
Namaa, 17	d080fa85EFE146f04aC484	To: 0x68d48b1ff0	6586f0076d716004056e1bfc8268f4
Nonce: 17		ChainID: testnet ((3)
Gas Limit: 21000		GasPrice: 180000	000000
Value: 0.07		Time: 2019-03-21	20:15:24
Data:		Operation: Delet	e this entry
Signature: 0xf86c01118529e 5579d92dfc0515f b64a706c5a65eee	8d608008252089468d48b1ff06 e7cfafed4318c0195a73b35570b e014dd0b2eace966 [copy]	586f0076d71600405 o337a78ac3223aa8b	56e1bfc8268f487f8b0a10e4700008029a02984 f5a03b5c510401e73bdbb9ce588a843508bd77
From: 0x93c7b94Dc1DfA83effc	d080fa85EFE146f04aC484	To: 0x68d48b1ff0	6586f0076d716004056e1bfc8268f4
	First < F	Page 1 of 1 > Last	

Please verify "ChainID" information here (mainnet vs testnet).

Click "**copy**" button to copy the signature of transaction, then paste it into a text file, or write it down on a piece of paper.

2.2 Send offline transactions

Transfer the text file including signature information from offline computer to online computer with a USB drive, or just bring the piece of paper with signature information on it to the online computer.

Visit <u>https://mywanwallet.nl/#offline-transaction</u> on the online computer.



Verify it's set to the correct network (Mainnet vs Testnet).

Enter same information of transaction on this webpage.

Step 1: Generate Information (Online Computer)		
From Address		
0x93c7b94Dc1DfA83effd080fa85EFE146f04aC484		
Generate Information		
Step 2: Generate Transaction (Offline Computer)		
To Address		
To Address 0x68d48b1ff06586f0076d716004056e1bfc8268f4		
To Address 0x68d48b1ff06586f0076d716004056e1bfc8268f4 Value / Amount to Send		
To Address 0x68d48b1ff06586f0076d716004056e1bfc8268f4 Value / Amount to Send 0.07	WAN -	0
To Address 0x68d48b1ff065586f0076d716004056e1bfc8268f4 Value / Amount to Send 0.07 Gas Limit	WAN •	
To Address 0x68d48b1ff06586f0076d716004056e1bfc8268f4 Value / Amount to Send 0.07 Gas Limit 21000	WAN -	e
To Address 0x68d48b1ff06586f0076d716004056e1bfc8268f4 Value / Amount to Send 0.07 Gas Limit 21000 Gas Price	WAN -	
To Address 0x68d48b1ff06586f0076d716004056e1bfc8268f4 Value / Amount to Send 0.07 Gas Limit 21000 Gas Price 18000000000	WAN -	
To Address 0x68d48b1ff06586f0076d716004056e1bfc8268f4 Value / Amount to Send 0.07 Gas Limit 21000 Gas Price 18000000000 Nonce	WAN -	
To Address 0x68d48b1ff06586f0076d716004056e1bfc8268f4 Value / Amount to Send 0.07 Gas Limit 21000 Gas Price 18000000000 Nonce 17	WAN -	
To Address 0x68d48b1ff06586f0076d716004056e1bfc8268f4 Value / Amount to Send 0.07 Gas Limit 21000 Gas Price 18000000000 Nonce 17 Data	WAN -	

Then go to "Step 3", paste signature information transferred from offline computer.

igned Transaction	
0xf86c01118529e8d608008252089468d48b1ff06586f0076d716004056e1bfc8268f487f 8b0a10e4700008029a029845579d92dfc0515fe7cfafed4318c0195a73b35570b337a78ac	
3223aa8bf5a03b5c510401e73bdbb9ce588a843508bd77b64a706c5a65eee014dd0b2eac e966	
Send Transaction	

Click "Send Transaction" button.





You will be prompted by a pop-up window as shown above, please verify transaction information, then click "**Yes, I am sure! Make transaction**." button to send transaction.

A brief pop-up bar will show on the bottom of the page to notify that the transaction has been sent.





2.3 Verify offline transactions

Visit Wanchain Explorer on the online computer:

https://www.wanscan.org (mainnet)

https://testnet.wanscan.org (testnet)

Commence to the token	IS STOREMAN STAKING TRANSACTIONS * DOCS * O GITHUB		Height, Tattash or Address, Taken Address 🔍
LATEST TRANSACTIONS		I LAST BLOCK	
Transaction Hash		Height	
From 0x93c7b94Dc1DfA83effd080fa To 0x68d48b1fF06586F0076D716	Amount 0.07 Wan © 6 mins ago	Timestamp	
Transaction Hash		Size	
From 0x317277f273A56f78A202665b	Amount 1 Wan		
To 0x620b168aD1c8aE2bF69f117	◎ 60 mins ago	Gas Used	
Transaction Hash From 0x3172775273A56678A202665b To 0x620b168a01c8a62bF69f117	0x9e13a22b635518c567e40b6b6cb04bfa9958a2cdcdf51af Amount 1 Wan © 1 hrs 2 mins ago	nonce	0x4120a22dca8857ab
Transaction rissh From ox12777273ASM78A202463b To ox420b166b01c8b2bF69H17 Transaction Hash From ox17277273ASM78A202465b To ox420b168b01c8b12bF69H17	Amourt 1 Wan Ø 1 hrs 2 mins app	Size Gas Used nonce	0x4120a22dca8857

Search by From address or To address.

COMPACTANE HOME TOKENS STOREMAN STAKING TRANSACTIONS	и Docs и 🔿 сітнив		Height, Tsthash or Addres	s, Token Address, Lockhash Q
Address 0x68d4851f706586F007607716004055e1bFc8268f4				• Total 1 Transctions under this address
General Information				
No. of Public Transactions	1	No. of Private Transactions		0
Balance	0.07 WAN	WETH		0
WBTC	0			
Transactions Ethereum o Wanchain Bitcoin o Wanchain				
No TxHash Block © Age	E From	. То	Type 🗟 Value	Tx Fee
1 0xc0f8a31714f1bcc 3081355 9 mins ago	0x93c7b94Dc1DfA8	■ 0x68d48b1fF06586	public 0.07 WAN	0.00378

If all steps are done correctly, the offline transaction will be displayed in transaction history page of both From and To addresses, so the offline transaction is sent successfully.

Join the conversation

Official website : www.wanchain.org

Email : info@wanchain.org

Twitter : https://twitter.com/wanchain_org

Facebook : <u>https://www.facebook.com/wanchainfoundation/</u>

Reddit : <u>https://www.reddit.com/r/wanchain/</u>

Telegram :

Announcement Channel: https://t.me/WanchainANN

Chat Group: https://t.me/WanchainCHAT

Wechat:

