

Fnode Full node client

The Fnode full-node client is divided into two main programs: fnnoded and fnnodecli.

The main functions of the Fnnoded full-node client are:

- (1) All blocks are automatically synchronized to the local and managed.
- (2) Users can use it to create wallet addresses, manage wallets, send transfers, view mining status, etc. (required via RPC).
- (3) The RPC (Remote Procedure Call) interface is provided by the user to program the call.

Fnnodecli serves as a tool for the user to provide a user interface and call fnnoded via RPC to implement various functions.

This tutorial is based on the miner version v1.1.5.

1. FNNode full node client details

1.1 Start the server program.

To run the full-node client, you must first open the server program, open the "fnnodecli_win.bat" file, and type "fnnoded_win.exe -start" to start the service program. Where -dir is the storage location of the specified block. "fnnoded_win.exe -h" can be found in the help file of the server. The screenshot of this document is the execution of the window. All commands entered by Linux "fnnodecli_win.exe" need to be changed to "./fnnodecli". For example, the command to view the help file is "./fnnoded -h".

```
C:\fnnoded_wind0.23\fnnoded_wind>fnnoded_win.exe -start
2018/11/25 22:18:46 RPC Server is listening
complete synchronized block: 203848
complete synchronized block: 203849
complete synchronized block: 203850
```

1.1 Run the client program.

To run the client program, you need to reopen a new window. Enter fnnodecli_win.exe -h to view the client's help file, which includes all the operation commands of the full-node client. The password set by this client must be unique.

```
C:\fnode\fnode_win>fnnodecli_win.exe -h
Usage of fnnodecli_win.exe:
-creatAccount
    Create wallet address.

-exportAccount
    Export wallet. Need the following parameters:
    -target Wallet file storage path
    -wallet Export wallet's wallet address

-from string
    Transfer account.

-getMinerStatus
    Get mining status.
```

1.3 Creating a wallet

```
C:\fnode\fnode_win>fnnodecli_win.exe -creatAccount
insert your password: 123456
the result is: OK
```

1.4 List all wallets

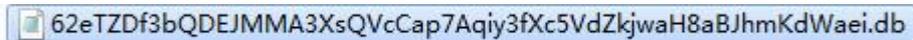
```
C:\fnode\fnode_win>fnnodecli_win.exe -listAccounts
insert your password: 123456
the result is:
address: 3c1THVVRhhj1kEmnNoac4P5VeuqzD3f4jVozT9UuSkrKTGSESDSRk8
privateKey: 6f52e85f35710188439ca36c3982bd283b748a8d0a4fcf51efcde838126ccee
publicKey: 04c895cf5bc70aa86eb03c059e1a54e53804fc4cf5d9c27c1df0b71fd9d08d4852d023ad46359d53a3c05235045cca989004cf6c991f2f2943acha24ac77120
balance: 0
timestamp: 0
```

1.5 Export wallet

"-target" is the location where the exported file is stored, and "-wallet" is the address of the wallet that needs to be exported. After successfully exporting, you can see a file named ".db" in the corresponding

path.

```
C:\fnnode\fnnode_win>fnnodecli_win.exe -exportAccount -target=../ -wallet=62eTZDF3bQDEJMMa3XsQVcCap7Aqiy3fXc5VdZkjwaH8aBJhmKdWaei
insert your password: 123456
the result is: OK
```



1.6 Import wallet

Currently, only files with a .db format are supported, and the password set when exporting needs to be the same as the password of the imported file. -source is the original address of the imported wallet file (the .db file is encrypted when needed, because the password is 123456 when exporting, so the import password must be 123456, otherwise it will report an error).

```
C:\fnnode\fnnode_win>fnnodecli_win.exe -importAccount -source=c:\5vtALH1w8hc57Gn6oEUPcF4N9EzSoU0evAifANErposAm7nHCYDU57v.db
insert your password: 123456
the result is: OK

C:\fnnode\fnnode_win>fnnodecli_win.exe -listAccounts
insert your password: 123456
the result is:

address: 5vtALH1w8hc57Gn6oEUPcF4N9EzSoU0evAifANErposAm7nHCYDU57v
privateKey: 119d237a22hd314e10457ef600aac27e7adca3c83Fee039471cdee1799e7f48d
publicKey: 04eb3b2bba8ef9d6bd9bbc67ec49a7a0d3b45cf5405505344b4265b5ecb5f5fea63d4ab7a204b01e5ef210fa992c85eaca7f5b953e81ac00bbeb10bd0e1a32650b
balance: 0
timestamp: 0
```

1.7 Get block information

"-getBlock" can get the block information, "-height" is to view the block information through the block height, and "-hash" is to view the block information through the hash value.

```
C:\fnnode_win0.39\fnnode>fnnodecli_win.exe -getBlock -height=206068
the result is:
height:206068
hash:297f36f19e57d9f9c063bad48de867a6dfa6d64de5d7b810ac71c9ecb9585cff
prevHash:287862a54c1ebe6831b38e949bdbc8533693d934596a92982b492f8d6b816401
timestamp:1543225807
miner:0000000000000000000000000000000000000000000000000000000000000000
reward:0
total:200069875000000000
```

1.8 Get the balance

"-getBalance" can get the balance of the wallet, "-wallet" is the wallet address.

```
C:\fnnode_win0.39\fnnode>fnnodecli_win.exe -getBalance -wallet=3TN1i7UGgo9E9HFFDqcKquPxT6mgtp1yuUDKGF4jFSouUHwejqDZ
the result is:
wallet:3TN1i7UGgo9E9HFFDqcKquPxT6mgtp1yuUDKGF4jFSouUHwejqDZ
balance:2fn
```

1.9 Transfer

"-sendTransaction" can be transferred, "-from" is the outgoing wallet address ("-from" must be the local wallet, otherwise the transfer fails), "-to" is the transferred wallet address, "-Moun" is the number of Fn transferred out.

```
C:\fnnode_win0.39\fnnode>fnnodecli_win.exe -sendTransaction -from=3QRBUEnCYzBT0eFF2EHSjTi3Z8nDDtjKJg4dtCjsUqayPw57s97xbPe -to=3TN1i7UGgo9E9H
T6mgtp1yuUDKGF4jFSouUHwejqDZ -nount=1
insert your password: *****
OK
```