

Run Pchain (Windows)

Go: <https://golang.org/doc/install>

1、 Install Windows

1.1、 Download

Download link: <https://studygolang.com/dl>

1.2、 Install

Install MSI files or zip compressed package versions to decompress, you need to install or decompress them into the C:\ go directory, otherwise you need to configure environment variables.

1.3、 configure

A. Increase the environmental variable GOROOT = C:\ Go\

B.zip version configuration: add the following directory to the system environment variable PATH, c:\Go\bin

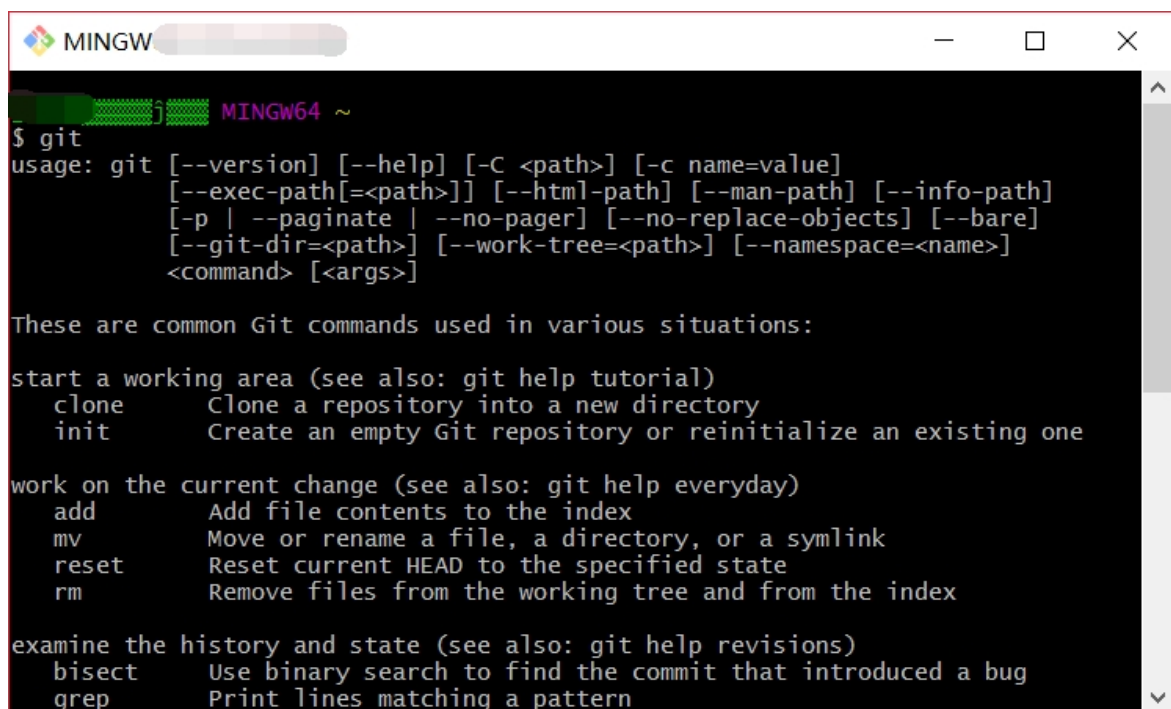
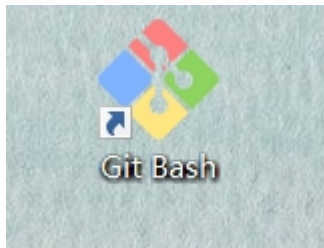
1.4、 go version

```
C:\Users\z...1>go version
go version go1.11 windows/amd64
```

Git download(windows)

Download path: <https://git-scm.com/downloads>

With Git, the desktop shortcut interface is as follows. Open it and use it.

A screenshot of a MINGW64 terminal window. The window has a title bar with the text "MINGW" and standard Windows window controls (minimize, maximize, close). The terminal background is black with white text. The prompt is "\$ git". The output shows the usage of the git command, followed by a list of common Git commands and their descriptions. The text is as follows:

```
$ git
usage: git [--version] [--help] [-C <path>] [-c name=value]
       [--exec-path[=<path>]] [--html-path] [--man-path] [--info-path]
       [-p | --paginate | --no-pager] [--no-replace-objects] [--bare]
       [--git-dir=<path>] [--work-tree=<path>] [--namespace=<name>]
       <command> [<args>]

These are common Git commands used in various situations:

start a working area (see also: git help tutorial)
  clone      Clone a repository into a new directory
  init       Create an empty Git repository or reinitialize an existing one

work on the current change (see also: git help everyday)
  add        Add file contents to the index
  mv         Move or rename a file, a directory, or a symlink
  reset      Reset current HEAD to the specified state
  rm         Remove files from the working tree and from the index

examine the history and state (see also: git help revisions)
  bisect     Use binary search to find the commit that introduced a bug
  grep       Print lines matching a pattern
```

3、Pchain download and edit

Create folders:

C:\pchain\bin\

C:\pchain\src\github.com\

Source Code

Notice: source has to be under current directory.









cd C:\pchain\src\github.com\




```
C:\>cd C:\pchain\src\github.com\  
C:\pchain\src\github.com>_
```

git clone https://github.com/pchain-org/pchain.git

```
C:\pchain\src\github.com>git clone https://github.com/pchain-org/pchain.git  
Cloning into 'pchain'...  
remote: Enumerating objects: 722, done.  
remote: Counting objects: 100% (722/722), done.  
remote: Compressing objects: 100% (502/502), done.  
remote: Total 22934 (delta 414), reused 403 (delta 207), pack-reused 22212  
Receiving objects: 100% (22934/22934), 56.34 MiB | 1.72 MiB/s, done.  
Resolving deltas: 100% (13676/13676), done.  
Checking out files: 100% (5263/5263), done.  
C:\pchain\src\github.com>_
```

Copy build.bat to directory C:\pchain:

C:\pchain\src\github.com\pchain\restore	
 build.bat	2019/1/16 15:22
 build.sh	2019/1/16 15:22
 pchain.iml	2019/1/16 15:22
 pchain-plan.txt	2019/1/16 15:22
 readme.txt	2019/1/16 15:22
 run.bat	2019/1/16 15:22
 run.sh	2019/1/16 15:22
 run_debug.sh	2019/1/16 15:22

C:\pchain	
 bin	2019/1/16 15:16
 src	2019/1/16 15:17
 build.bat	2019/1/16 15:22

build.bat

```
C:\pchain>build.bat
github.com/pchain/vendor/github.com/tendermint/ed25519/edwards25519
github.com/pchain/vendor/golang.org/x/crypto/openpgp/errors
github.com/pchain/vendor/golang.org/x/sys/cpu
github.com/pchain/vendor/github.com/ethereum/go-ethereum/common/fdlimit
github.com/pchain/vendor/github.com/hashicorp/golang-lru/simplelru
github.com/pchain/vendor/golang.org/x/crypto/poly1305
github.com/pchain/vendor/golang.org/x/crypto/salsa20/salsa
github.com/pchain/vendor/github.com/ethereum/go-ethereum/common/hexutil
github.com/pchain/vendor/github.com/ethereum/go-ethereum/crypto/sha3
github.com/pchain/vendor/github.com/ethereum/go-ethereum/common/math
github.com/pchain/vendor/github.com/ethereum/go-ethereum/rlp
github.com/pchain/vendor/github.com/go-stack/stack
github.com/pchain/vendor/github.com/mattn/go-isatty
github.com/pchain/vendor/github.com/ethereum/go-ethereum/crypto/secp256k1
github.com/pchain/vendor/github.com/syndtr/goleveldb/leveldb/util
github.com/pchain/vendor/github.com/syndtr/goleveldb/leveldb/comparer
github.com/pchain/vendor/github.com/syndtr/goleveldb/leveldb/storage
github.com/pchain/vendor/github.com/golang/snappy
github.com/pchain/vendor/gopkg.in/karalabe/cookiejar.v2/collections/prque
github.com/pchain/vendor/github.com/mattn/go-colorable
github.com/pchain/vendor/github.com/ethereum/go-ethereum/common
github.com/pchain/vendor/github.com/syndtr/goleveldb/leveldb/cache
github.com/pchain/vendor/github.com/syndtr/goleveldb/leveldb/filter
github.com/pchain/vendor/github.com/syndtr/goleveldb/leveldb/errors
github.com/pchain/vendor/bls/bn256
github.com/pchain/vendor/github.com/ethereum/go-ethereum/log
github.com/pchain/vendor/golang.org/x/crypto/sha3
github.com/pchain/vendor/github.com/btcsuite/btcd/btcec
github.com/pchain/vendor/github.com/syndtr/goleveldb/leveldb/opt
github.com/pchain/vendor/github.com/syndtr/goleveldb/leveldb/iterator
```

After compile, you will find the binary executable file `pchain.exe` under `pchain/bin/`

Run Pchain

Enter the current directory









C:\pchain\bin






1) Init the local account:

```
pchain.exe --datadir .pchain init_eth_genesis "{10000000000000000000,100}"
```

```
C:\pchain\bin>pchain.exe --datadir .\pchain init_eth_genesis " {1000000000000000000000000,100} "
INFO [01-16 15:31:13.210] this is init_eth_genesis
INFO [01-16 15:31:21.569] createPriValidators          account:=0xfFa08a5D78c8DE02EC8B66b4B920104
3e943fCA  pwd:=pchain
```

Check

C:\pchain\src\github.com\pchain\restore	
名称	修改日期
 build.bat	2019/1/16 15:22
 build.sh	2019/1/16 15:22
 pchain.iml	2019/1/16 15:22
 pchain-plan.txt	2019/1/16 15:22
 readme.txt	2019/1/16 15:22
 run.bat	2019/1/16 15:22
 run.sh	2019/1/16 15:22
 run_debug.sh	2019/1/16 15:22

C:\pchain\bin	
名称	修改日期
 .pchain	2019/1/16 15:55
 log	2019/1/16 15:55
 pchain.exe	2019/1/16 15:28
 pchain.log	2019/1/16 15:57
 run.bat	2019/1/16 15:54

1) Edit run.bat

```

@echo off
set PWD=%~dp0
%PWD%\pchain.exe --datadir .pchain --networkid=10000 --port=30201 --syncmode "full" --mine --rpc --rpcport 6969 --rpcaddr=0.0.0.0
--rpccorsdomain=* --mine --rpcapi "eth,web3,personal,net,admin,tdm,miner,personal,chain,txpool" --verbosity=4 > pchain.log 2>&1

```

```
C:\pchain\bin>more pchain.log
C:\pchain\bin>more pchain.log
[32mINFO [0m[01-16 16:16:57.359] Starting PChain...
[32mINFO [0m[01-16 16:16:57.388] PChain supports large scale block-chain app
[36mDEBUG[0m[01-16 16:16:57.388] Maximum peer count
[32mINFO [0m[01-16 16:16:57.389] Create peer-to-peer node
[32mINFO [0m[01-16 16:16:57.389] ethereum.MakeSystemNode
[36mDEBUG[0m[01-16 16:16:57.390] Maximum peer count
[36mDEBUG[0m[01-16 16:16:57.390] FS scan times
[32mINFO [0m[01-16 16:16:57.397] Allocated cache and file handles
pchain\geth\chaindata [32mcache[0m=768 [32mhandles[0m=1024
[32mINFO [0m[01-16 16:16:57.423] Initialised chain configuration
24160843454325667600331855523506733810605584168331177014437733538279768116753
EIP150: 0 EIP155: 0 EIP158: 0 Byzantium: 0 Constantinople: <nil> Engine: tende
[32mINFO [0m[01-16 16:16:57.441] Tendermint (backend) Protocol, add logic he
[32mINFO [0m[01-16 16:16:57.441] Initialising Ethereum protocol
[32mINFO [0m[01-16 16:16:57.441] Loaded most recent local header
[32mINFO [0m[01-16 16:16:57.442] Loaded most recent local full block
[32mINFO [0m[01-16 16:16:57.443] Loaded most recent local fast block
```

2) run pchain.exe

```
C:\pchain\bin>pchain.exe --datadir .pchain --networkid=10000 --port=30201 --syncmode "full" --mine --rpc --rpcport 6
969 --rpcaddr=0.0.0.0 --rpccorsdomain=* --mine --rpcapi "eth,web3,personal,net,admin,tdm,miner,personal,chain,txpool"
--verbosity=4 > pchain.log 2>&1
```

login to another console and run this command to check the log

more pchain.log

```
C:\pchain\bin>more pchain.log
[32mINFO [0m[01-16 15:57:32.871] Starting PChain...
[32mINFO [0m[01-16 15:57:32.901] PChain supports large scale block-chain applications with multi-chain
[36mDEBUG[0m[01-16 15:57:32.901] Maximum peer count [36mETH[0m=25 [36mLES[0m=0 [36mtotal[0
m=25
[32mINFO [0m[01-16 15:57:32.902] Create peer-to-peer node [32minstance[0m=pchain/windows-amd64/gol.1
1
[32mINFO [0m[01-16 15:57:32.902] ethereum.MakeSystemNode
[36mDEBUG[0m[01-16 15:57:32.902] Maximum peer count [36mETH[0m=25 [36mLES[0m=0 [36mtotal[0
m=25
[36mDEBUG[0m[01-16 15:57:32.903] FS scan times [36mlist[0m=0s [36mset[0m=0s [36mdiff[0
m=0s
[32mINFO [0m[01-16 15:57:32.910] Allocated cache and file handles [32mdatabase[0m=C:\pchain\bin\pchain\
pchain\geth\chaindata [32mcache[0m=768 [32mhandles[0m=1024
[32mINFO [0m[01-16 15:57:32.933] Initialised chain configuration [32mconfig[0m="{PChainId: pchain ChainID:
24160843454325667600331855523506733810605584168331177014437733538279768116753 Homestead: 0 DAO: <nil> DAOsupport: false
EIP150: 0 EIP155: 0 EIP158: 0 Byzantium: 0 Constantinople: <nil> Engine: tendermint}"
[32mINFO [0m[01-16 15:57:32.948] Tendermint (backend) Protocol, add logic here
[32mINFO [0m[01-16 15:57:32.948] Initialising Ethereum protocol [32mversions[0m=[64] [32mnetwork[0m=3030
8
[32mINFO [0m[01-16 15:57:32.948] Loaded most recent local header [32mnumber[0m=92 [32mhash[0m=b07443欵 2
f1da [32mtd[0m=1116
[32mINFO [0m[01-16 15:57:32.949] Loaded most recent local full block [32mnumber[0m=92 [32mhash[0m=b07443欵 2
f1da [32mtd[0m=1116
[32mINFO [0m[01-16 15:57:32.949] Loaded most recent local fast block [32mnumber[0m=92 [32mhash[0m=b07443欵 2
f1da [32mtd[0m=1116
[36mDEBUG[0m[01-16 15:57:32.949] Reinjecting stale transactions [36mcount[0m=0
```

Run mining mode:

```
pchain.exe --datadir .pchain --networkid=10000 --port=30201 --syncmode "full" --mine --
rpc --rpcport 6969 --rpcaddr=0.0.0.0 --rpccorsdomain=* --rpcapi
"eth,web3,personal,net,admin,tdm,miner,personal,chain,txpool" --verbosity=4 >
```


pchain.log 2>&1

Non-mining mode:

```
pchain.exe --datadir .pchain --networkid=10000 --port=30201 --syncmode "full" --rpc --  
rpcport 6969 --rpcaddr=0.0.0.0 --rpccorsdomain=* --rpcapi  
"eth,web3,personal,net,admin,tdm,miner,personal,chain,txpool" --verbosity=4 >  
pchain.log 2>&1
```