



# Options available to the Verusd coindaeomon.

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# Important General Information

[↑]

Verus Daemon version 1.2.0-1

Usage: `verusd [options]` Start Verus Daemon

The options can be issued from the command line as shown above, but they can also be stored in the `VRSC.conf` file.

The `VRSC.conf` file is loaded on the daemon startup and provides the standard configuration.

Options supplied at the command line will override any conflicting settings in the `VRSC.conf` file.

To use the options in the `VRSC.conf` file, omit the leading `-` character.

Example of a `VRSC.conf` -file:

```
rpcuser=user
rpcpassword=pass
rpcport=27486
server=1
txindex=1
rpccallowip=127.0.0.1
rpchost=127.0.0.1
addnode=195.253.48.236:27485
```

## Verus `Wallet.dat`, Chaindata & `VRSC.conf` standard locations

[↑]

Linux: `~/.komodo/VRSC`

Mac OS: `~/Library/Application Support/Komodo/VRSC`

Windows 10: `%AppData%\Roaming\Komodo\VRSC\`

## Options:

### General Options:

[↑]

`-?`

This help message

`-alerts`

Receive and display P2P network alerts (default: 1)

`-alertnotify=<cmd>`

Execute command when a relevant alert is received or we see a really long fork (%s in cmd is replaced by message)

`-blocknotify=<cmd>`

Execute command when the best block changes (%s in cmd is replaced by block hash)

`-bootstrap`

Removes previous chain data (if present), downloads and extracts the bootstrap archive.

`-checkblocks=<n>`

How many blocks to check at startup (default: 288, 0 = all)

`-checklevel=<n>`

How thorough the block verification of -checkblocks is (0-4, default: 3)

`-conf=<file>`

Specify configuration file (default: komodo.conf)

`-daemon`

Run in the background as a daemon and accept commands

`-datadir=<dir>`

Specify data directory

`-dbcache=<n>`

Set database cache size in megabytes (4 to 16384, default: 450)

`-exportdir=<dir>`

Specify directory to be used when exporting data

`-loadblock=<file>`

Imports blocks from external blk000???.dat file on startup

`-maxorphantx=<n>`

Keep at most unconnectable transactions in memory (default: 100)

`-mempooltxinputlimit=<n>`

[DEPRECATED FROM OVERWINTER] Set the maximum number of transparent inputs in a transaction that the mempool will accept (default: 0 = no limit applied)

`-par=<n>`

Set the number of script verification threads (-4 to 16, 0 = auto, <0 = leave that many cores free, default: 0)

`-pid=<file>`

Specify pid file (default: verusd.pid)

`-prune=<n>`

Reduce storage requirements by pruning (deleting) old blocks. This mode disables wallet support and is incompatible with `-txindex`.

**Warning** Reverting this setting requires re-downloading the entire blockchain. (default: 0 = disable pruning blocks, >550 = target size in MiB to use for block files)

`-reindex`

Rebuild block chain index from current blk000???.dat files on startup

`-sysperms`

Create new files with system default permissions, instead of umask 077 (only effective with disabled wallet functionality)

## Index options:

[↑]

`-addressindex`

Maintain a full address index, used to query for the balance, txids and unspent outputs for addresses (default: 1)

#### `-idindex`

Maintain a full identity index, enabling queries to select IDs with addresses, revocation or recovery IDs (default: 0)

!!! Activating requires reindexing, not compatible with bootstrap!!!

#### `-timestampindex`

Maintain a timestamp index for block hashes, used to query blocks hashes by a range of timestamps (default: 0)

!!! Activating requires reindexing, not compatible with bootstrap!!!

#### `-spentindex`

Maintain a full spent index, used to query the spending txid and input index for an outpoint (default: 1)

#### `-insightexplorer`

If enabled, forces addressindex, spentindex and timestampindex to enabled

If disabled, forces timestampindex to disabled

(default: 0)

!!! Activating requires reindexing, not compatible with bootstrap!!!

## Connection options:

[↑]

#### `-addnode=<ip>`

Add a node to connect to and attempt to keep the connection open

#### `-banscore=<n>`

Threshold for disconnecting misbehaving peers (default: 100)

#### `-bantime=<n>`

Number of seconds to keep misbehaving peers from reconnecting (default: 86400)

#### `-bind=<addr>`

Bind to given address and always listen on it. Use [host]:port notation for IPv6

#### `-connect=<ip>`

Connect only to the specified node(s)

#### `-discover`

Discover own IP addresses (default: 1 when listening and no -externalip or -proxy)

#### `-dns`

Allow DNS lookups for -addnode, -seednode and -connect (default: 1)

#### `-dnsseed`

Query for peer addresses via DNS lookup, if low on addresses (default: 1 unless -connect)

#### `-externalip=<ip>`

Specify your own public address

#### `-forcednsseed`

Always query for peer addresses via DNS lookup (default: 0)

`-listen`

Accept connections from outside (default: 1 if no -proxy or -connect)

`-listenonion`

Automatically create Tor hidden service (default: 1)

`-maxconnections=<n>`

Maintain at most connections to peers (default: 384)

`-maxreceivebuffer=<n>`

Maximum per-connection receive buffer, \* 1000 bytes (default: 5000)

`-maxsendbuffer=<n>`

Maximum per-connection send buffer, \* 1000 bytes (default: 1000)

`-onion=<ip:port>`

Use separate SOCKS5 proxy to reach peers via Tor hidden services (default: -proxy)

`-onlynet=<net>`

Only connect to nodes in network (ipv4, ipv6 or onion)

`-permitbaremultisig`

Relay non-P2SH multisig (default: 1)

`-peerbloomfilters`

Support filtering of blocks and transaction with Bloom filters (default: 1)

`-port=<port>`

Listen for connections on (default: 7770 or testnet: 17770)

`-proxy=<ip:port>`

Connect through SOCKS5 proxy

`-proxyrandomize`

Randomize credentials for every proxy connection. This enables Tor stream isolation (default: 1)

`-seednode=<ip>`

Connect to a node to retrieve peer addresses, and disconnect

`-timeout=<n>`

Specify connection timeout in milliseconds (minimum: 1, default: 5000)

`-torcontrol=<ip>:<port>`

Tor control port to use if onion listening enabled (default: 127.0.0.1:9051)

`-torpassword=<pass>`

Tor control port password (default: empty)

`-tlsdisable=<0 or 1>`

Disable TLS connections. (default: 0)

`-tlsenforcement=<0 or 1>`

Only connect to TLS compatible peers. (default: 0)

`-tlsfallbacknontls=<0 or 1>`

If a TLS connection fails, the next connection attempt of the same peer (based on IP address) takes place without TLS (default: 1)

`-tlsvalidate=<0 or 1>`

Connect to peers only with valid certificates (default: 0)

`-tlskeypath=<path>`

Full path to a private key

`-tlskeypwd=<password>`

Password for a private key encryption (default: not set, i.e. private key will be stored unencrypted)

`-tlscertpath=<path>`

Full path to a certificate

`-tlstrustdir=<path>`

Full path to a trusted certificates directory

`-uacomment=<string>`

Set a User Agent to your daemon. (default: disabled/none)

Shows as appended text in the "subver" string on connected nodes

Using this option has implications on your anonymity!

`-whitebind=<addr>`

Bind to given address and whitelist peers connecting to it. Use [host]:port notation for IPv6

`-whitelist=<netmask>`

Whitelist peers connecting from the given netmask or IP address. Can be specified multiple times. Whitelisted peers cannot be DoS banned and their transactions are always relayed, even if they are already in the mempool, useful e.g. for a gateway

## Wallet options:

[↑]

`-arbitragecurrencies`

Either a JSON array or a comma separated list of currency names.

`-arbitrageaddress`

A valid wallet address or identity controlled by this wallet that will hold the arbitrage currencies to use.

`-cheatcatcher=<sapling-address>`

same as "-defaultzaddr"

`-defaultid=<i-address>`

VerusID used for default change out and staking reward recipient

`-defaultzaddr=<sapling-address>`

sapling address to receive fraud proof rewards and if used with "-privatechange=1", z-change address for the sendcurrency command

`-disablewallet`

Do not load the wallet and disable wallet RPC calls

`-keypool=<n>`

Set key pool size to (default: 100)

`-maxtxfee=<amt>`

Maximum total fees (in VRSC) to use in a single wallet transaction; setting this too low may abort large transactions (default: 0.10)

**-migration**

Enable the Sprout to Sapling migration

**-migrationdestaddress=<zaddr>**

Set the Sapling migration address

**-paytxfee=<amt>**

Fee (in VRSC/kB) to add to transactions you send (default: 0.0001)

**-privatechange**

directs all change from sendcurency or z\_sendmany APIs to the defaultzaddr set, if it is a valid sapling address

**-rescan**

Rescan the block chain for missing wallet transactions on startup

**-salvagewallet**

Attempt to recover private keys from a corrupt wallet.dat on startup

**-sendfreetransactions**

Send transactions as zero-fee transactions if possible (default: 0)

**-spendzeroconfchange**

Spend unconfirmed change when sending transactions (default: 1)

**-txconfirmtarget=<n>**

If paytxfee is not set, include enough fee so transactions begin confirmation on average within n blocks (default: 2)

**-txexpirydelta**

Set the number of blocks after which a transaction that has not been mined will become invalid (min: 4, default: 20 (pre-Blossom) or 40 (post-Blossom))

**-upgradewallet**

Upgrade wallet to latest format on startup

**-wallet=<file>**

Specify wallet file (within data directory) (default: wallet.dat)

**-walletbroadcast**

Make the wallet broadcast transactions (default: 1)

**-walletnotify=<cmd>**

Execute command when a wallet transaction changes (%s in cmd is replaced by TxID)

**-zapwallettxes=<mode>**

Delete all wallet transactions and only recover those parts of the blockchain through -rescan on startup (1 = keep tx meta data e.g. account owner and payment request information, 2 = drop tx meta data)

## ZeroMQ notification options:

[↑]

**-zmqpubhashblock=<address>**

Enable publish hash block in

`-zmqpubhashtx=<address>`

Enable publish hash transaction in

`-zmqpubrawblock=<address>`

Enable publish raw block in

`-zmqpubrawtx=<address>`

Enable publish raw transaction in

## AMQP 1.0 notification options:

[↑]

all AMQP support options require `-experimentalfeatures` .

`-amqppubhashblock=<address>`

Enable publish hash block in

`-amqppubhashtx=<address>`

Enable publish hash transaction in

`-amqppubrawblock=<address>`

Enable publish raw block in

`-amqppubrawtx=<address>`

Enable publish raw transaction in

## Debugging/Testing options:

[↑]

`-debug=<category>`

Output debugging information (default: 0, supplying is optional). If is not supplied or if = 1, output all debugging information. can be: addrman, alert, bench, coindb, db, estimatefee, http, libevent, lock, mempool, net, partitioncheck, pow, proxy, prune, rand, reindex, rpc, selectcoins, tor, zmq, zrpc, zrpcunsafe (implies zrpc).

`-experimentalfeatures`

Enable use of experimental features

`-help-debug`

Show all debugging options (usage: --help -help-debug)

`-logips`

Include IP addresses in debug output (default: 0)

`-logtimestamps`

Prepend debug output with timestamp (default: 1)

`-minrelaytxfee=<amt>`

Fees (in VRSC/kB) smaller than this are considered zero fee for relaying (default: 0.000001)

`-printtoconsole`

Send trace/debug info to console instead of debug.log file



# Node relay options:

[↑]

`-datacarrier`

Relay and mine data carrier transactions (default: 1)

`-datacarriersize`

Maximum size of data in data carrier transactions we relay and mine (default: 10000)

# Block creation options:

[↑]

`-blockminsize=<n>`

Set minimum block size in bytes (default: 0)

`-blockmaxsize=<n>`

Set maximum block size in bytes (default: 2000000)

`-blockprioritysize=<n>`

Set maximum size of high-priority/low-fee transactions in bytes (default: 1000000)

# Mining options:

[↑]

`-defaultid=<i-address>`

VerusID used for default change out and staking reward recipient

`-equihashsolver=<name>`

Specify the Equihash solver to be used if enabled (default: "default")

`-gen`

Mine/generate coins (default: 0)

`-genproclimit=<n>`

Set the number of threads for coin mining if enabled (-1 = all cores, default: 0)

`-mineraddress=<addr>`

Send mined coins to a specific single address

`-minetolocalwallet`

Require that mined blocks use a coinbase address in the local wallet (default: 1)

`-miningdistribution={"addressorid":<n>,...}`

destination addresses and relative amounts used as ratios to divide total rewards + fees

`-mint`

Mint/stake coins automatically (default: 0)

`-pubkey=<hexpubkey>`

If set, mining and staking rewards will go to this address by default

# PBaaS options:

[↑]

`-acceptfreeimportsfrom=<i-address>,<i-address>,...`

"%s" no spaces - accept underpaid imports from these PBaaS chains or networks - default is empty

`-allowdelayednotarizations`

Do not notarize in order to prevent slower notarizations (default = %u, notarize to prevent slowing down)

`-alwayssubmitnotarizations`

Submit notarizations to notary chain whenever merge mining/staking and eligible (default = %u, only as needed)

`-approvecontractupgrade=<0xf09...>`

When validating blocks, vote to agree to upgrade to the specific contract. Default is no upgrade.

`-blocktime=<n>`

Set target block time (in seconds) for difficulty adjustment (default: 60)

`-chain=pbaaschainname`

loads either mainnet or resolves and loads a PBaaS chain if not vrsc or vrsctest

`-miningdistributionpassthrough`

uses the same miningdistribution values and addresses/IDs as Verus when merge mining

`-notarizationperiod=<n>`

Set minimum spacing consensus between cross-chain notarization, in blocks (default: 10, min 10 min)

`-notaryid=<ID@>`

VerusID used for PBaaS and Ethereum cross-chain notarization

`-notificationoracle=<i-address>`

VerusID monitored for network alerts, triggers, and signals. Current default is "Verus Coin Foundation@" for Verus and the chain ID for PBaaS chains

`-powaveragingwindow=<n>`

Set averaging window for PoW difficulty adjustment, in blocks (default: 45)

`-testnet`

loads PBaaS network in testmode

# RPC server options:

[↑]

`-server`

Accept command line and JSON-RPC commands

`-rest`

Accept public REST requests (default: 0)

`-rpcbind=<addr>`

Bind to given address to listen for JSON-RPC connections. Use [host]:port notation for IPv6. This option can be specified multiple times (default: bind to all interfaces)

`-rpcuser=<user>`

Username for JSON-RPC connections

`-rpcpassword=<pw>`

Password for JSON-RPC connections

`-rpcport=<port>`

Listen for JSON-RPC connections on (default: 7771 or testnet: 17771)

`-rpccallowip=<ip>`

Allow JSON-RPC connections from specified source. Valid for are a single IP (e.g. 1.2.3.4), a network/netmask (e.g. 1.2.3.4/255.255.255.0) or a network/CIDR (e.g. 1.2.3.4/24). This option can be specified multiple times

`-rpcthreads=<n>`

Set the number of threads to service RPC calls (default: 4)

## Metrics Options (only if `-daemon` and `-printtoconsole` are not set):

[↑]

`-showmetrics`

Show metrics on stdout (default: 1 if running in a console, 0 otherwise)

`-metricsui`

Set to 1 for a persistent metrics screen, 0 for sequential metrics output (default: 1 if running in a console, 0 otherwise)

`-metricsrefreshtime`

Number of seconds between metrics refreshes (default: 1 if running in a console, 600 otherwise)

## Additional debug options:

These are options for developers to debug/test the chain or daemon. These options are **not** for general use on users daemons.

## General options:

[↑]

`-enforcenodebloom`

Enforce minimum protocol version to limit use of Bloom filters (default: 1)

## Debugging/Testing options:

[↑]

`-checkpoints`

Disable expensive verification for known chain history (default: 1)

`-dblogsize=<n>`

Flush database activity from memory pool to disk log every megabytes (default: 100)

`-disablesafemode`

Disable safemode, override a real safe mode event (default: 0)

`-testsafemode`

Force safe mode (default: 0)

`dropmessagestest=<n>`

Randomly drop 1 of every network messages

`-fuzzmessagestest=<n>`

Randomly fuzz 1 of every network messages

`-flushwallet`

Run a thread to flush wallet periodically (default: 1)

`-stopafterblockimport`

Stop running after importing blocks from disk (default: 0)

`-nuparams=hexBranchId:activationHeight`

Use given activation height for specified network upgrade (regtest-only)

`-limitfreerelay=<n>`

Continuously rate-limit free transactions to \*1000 bytes per minute (default: 15)

`-relaypriority`

Require high priority for relaying free or low-fee transactions (default: 0)

`-maxsigcachesize=<n>`

Limit size of signature cache to MiB (default: 40)

`-maxtipage=<n>`

Maximum tip age in seconds to consider node in initial block download (default: 86400)

`-printpriority`

Log transaction priority and fee per kB when mining blocks (default: 0)

`-privdb`

Sets the DB\_PRIVATE flag in the wallet db environment (default: 1)

`-regtest`

Enter regression test mode, which uses a special chain in which blocks can be solved instantly. This is intended for regression testing tools and app development.

## Node relay options:

[↑]

`-blockversion=<n>`

Override block version to test forking scenarios (default: 4)

## RPC options:

[↑]

`-rpcworkqueue=<n>`

Set the depth of the work queue to service RPC calls (default: 16)

`-rpcservertimeout=<n>`

Timeout during HTTP requests (default: 30)

compiled by Oink.vrsc@.

Note: last revision date 2024-01-15.