Samos Storage Node Test Run Manual (For Providers)

Hello and welcome on board.

Samos (samos.io) is committed to building a future-oriented, AI-driven infrastructure network (PADIN).

This network is essential for the development of DAPP as well as improving the whole application ecosystem of any other public block-chains.

The Samos network consists of various types of nodes, such as storage nodes, blockchain node, tracker node, search nodes, audit nodes, and scheduling nodes.

The Samos Node Project is the collective title for the node construction process. We are currently in the Samos Storage Node construction phase, which is our first milestone of Samos project.

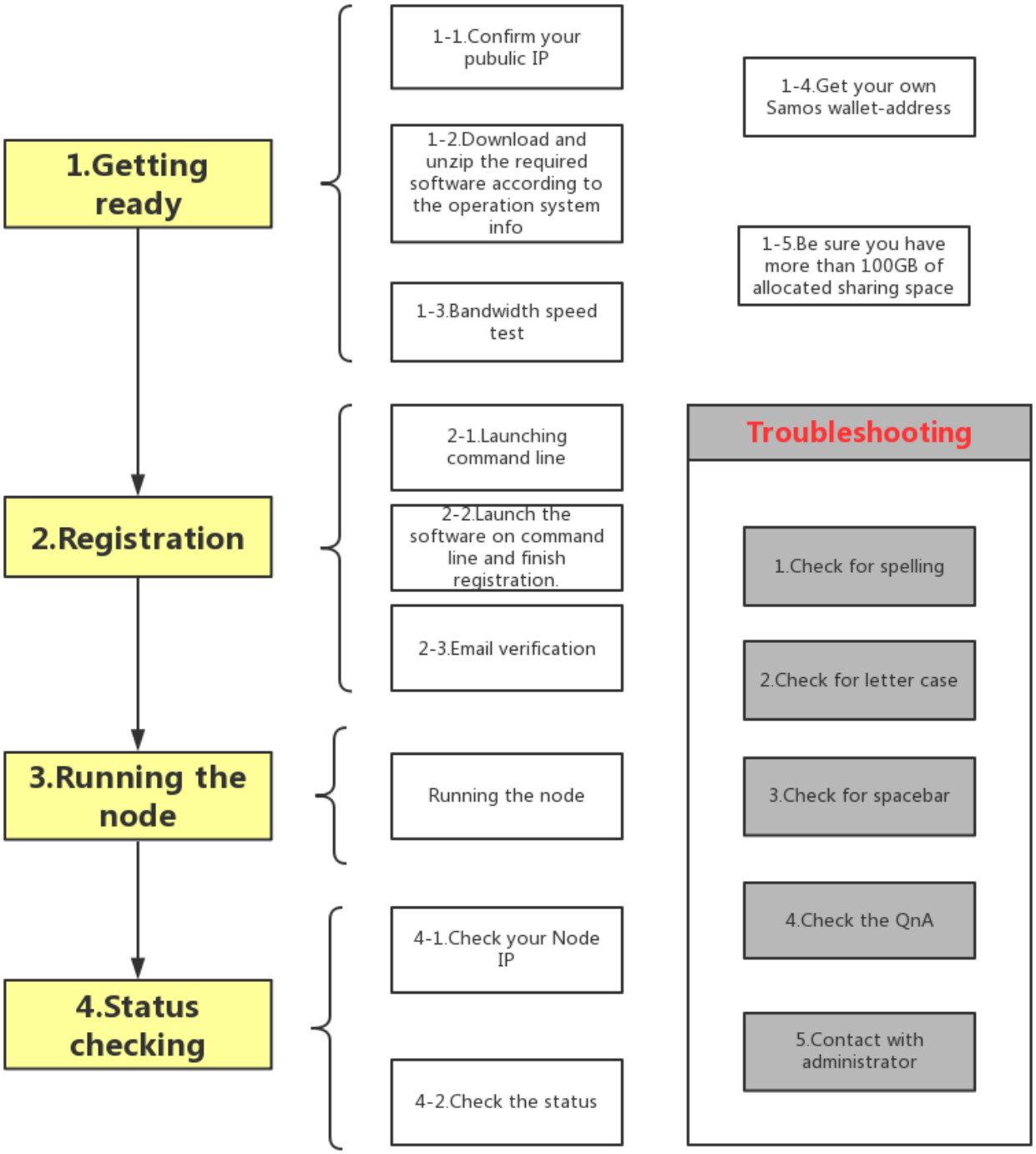
It is my pleasure to have you here.
Together, we construct the Samos Node Project, for the future.

We are also pleased to announce that the next Samos node:
The Samos Object Node(Samos Object System), which we have prepared for the DAPP developers, has already entered into the internal research and development stage.

Thank you for your continued support.

Minimum Requirements

- Public IP address is necessary
- At least 100GB of available hard drive space



1.Getting ready

1-1. Confirm your public IP:

Turn to page8 (of this manual)
OR run the software.

1-2. Download the software & Unzip the file(Don't run the software) :

https://github.com/samoslab/nebula/releases/tag/0.8

1-3. Test your bandwidth speed by speedtest.net:

http://www.speedtest.net/apps/desktop

1-4. Get your Samos wallet-address

Download Samos wallet http://www.samos.io
Register and get your Samos wallet-address

2.Registration: Essential Configuration

2-1. Launching Command Line

2-2. Launch the software on command line & Finish the registration

You can run it as follow:
./nebula-provider register -availability 99% -billEmail youremailaddress@domain.com -downBandwidth 100 -upBandwidth 20 -walletAddress yourwalletaddress -mainStoragePath /your/storage/path/for/provider -mainStorageVolume 800GB

Example:

```
pi@raspberrypi:~ $ ./nebula-provider register -availability 99% -billEmail dsdd1@samos.io
 -downBandwidth 100 -upBandwidth 40 -walletAddress 7JWhwCxgTnNF4vDCFZeURuNpWvDBiq8yuo -ma
inStoragePath /data1/ -mainStorageVolume 1000G
```

Finish the red square according to your individual information

```
pi@raspberrypi:~ $ ./nebula-provider register -availability 99% -billEmail dsdd1@samos.io
 -downBandwidth 100 -upBandwidth 40 -walletAddress 7JWhwCxgTnNF4vDCFZeURuNpWvDBiq8yuo -ma
inStoragePath /data1/ -mainStorageVolume 1000G
```

A spacebar on each red square

```
pi@raspberrypi:~ $ ./nebula-provider register -availability 99% -billEmail dsdd1@samos.io
 -downBandwidth 100 -upBandwidth 40 -walletAddress 7JWhwCxgTnNF4vDCFZeURuNpWvDBiq8yuo -ma
inStoragePath /data1/ -mainStorageVolume 1000G
```

1.If you receive:

Register failed, ping 11.22.33.44:6666 failed, You may not have a public network IP, error message:...

It means that we cannot connect to your provider port, it could be the router does not support UPNP, or you do not have a public IP

2.If successful, you will see the following:
Register success, please get verify-code email to verify bill email and backup your config file: /xxx/yyy/config.json

3. If successful, but you have mistaken your email address. Or you get the following:

```
config file is adready exsits: /home/pi/.samos-nebula-provider
```

Then you will need to remove the config file ,and re-register.

Remove the config file as the following:
1. cd .samos-nebula-provider/
2. rm config.json

Example:

```
pi@raspberrypi:~ $ cd .samos-nebula-provider/
pi@raspberrypi:~/.samos-nebula-provider $ ls
config.json
pi@raspberrypi:~/.samos-nebula-provider $ rm config.json
```

Please make a copy of the .json file for backup

KEYWORDS

-availability string
  promise availability, must more than 97%, eg: 98%, 99%, 99.9%

-billEmail string
    billing email address

-downBandwidth uint
  download bandwidth, unit: Mbps, eg: 100, 20

-mainStoragePath string
  main storage path

-mainStorageVolume string
  main storage volume size, unit TB or GB, eg: 2TB or 500GB

-upBandwidth uint
    upload bandwidth, unit: Mbps, eg: 100, 20, 8, 4

 -walletAddress string

2-3.Email Verification

Please check your inbox for the verification code and then use the following command to verify your email address:

./nebula-provider verifyEmail -verifyCode *verifyCodeCopyFromEmail*

Example :

```
pi@raspberrypi:~ $ ./nebula-provider verifyEmail -verifyCode jdjmx6dv
```

Fill the red square with your own verification code

```
pi@raspberrypi:~ $ ./nebula-provider verifyEmail -verifyCode jdjmx6dv
```

A spacebar on each red square

```
pi@raspberrypi:~ $ ./nebula-provider verifyEmail -verifyCode jdjmx6dv
```

If successful, you will see the following:
verifyEmail success, you can start daemon now.

3. Running the node

The registration process is completed after your email is verified. You can start the provider service by running the following command：

./nebula-provider daemon

Example :

```
pi@raspberrypi:~ $ ./nebula-provider daemon
```

Remarks: There is a spacebar on each red square

```
pi@raspberrypi:~ $ ./nebula-provider daemon
```

1.On Unix-like operating systems such as Linux, it is recommended to run in the background in nohup mode.
2.If the command line was shuttled down, It means that the provider is in fact off-line
3.To reconnect your node, all you need to do is preform “ Running the node” again
4. Similarity, If the software was updated, you would need to preform “ Running the node” again to reconnect the node.

4.Status checking

4-1. Check your Node IP

Mac linux and unix like os（Check with a new command-line window）:

cat $HOME/.samos-nebula-provider/config.json

Windows（Check with a new command-line window）:

type %HOMEPATH%/.samos-nebula-provider/config.json

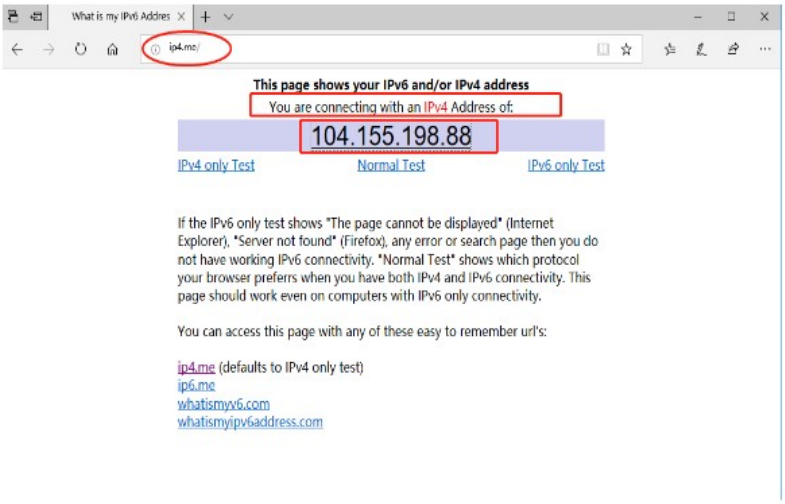
4-2. Check the status

You can check your status:

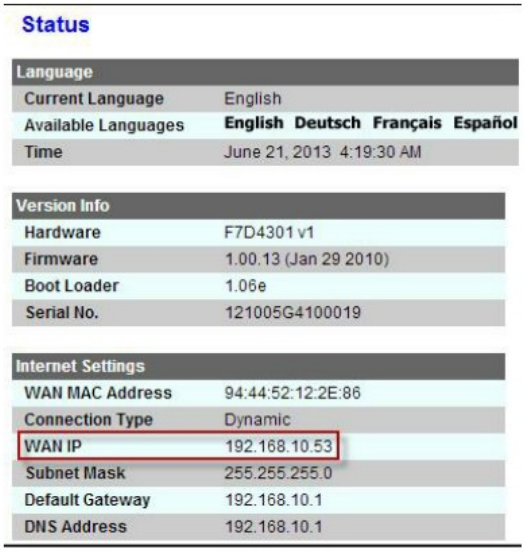
http://storage.samos.io/

How to check if you have a public IP?

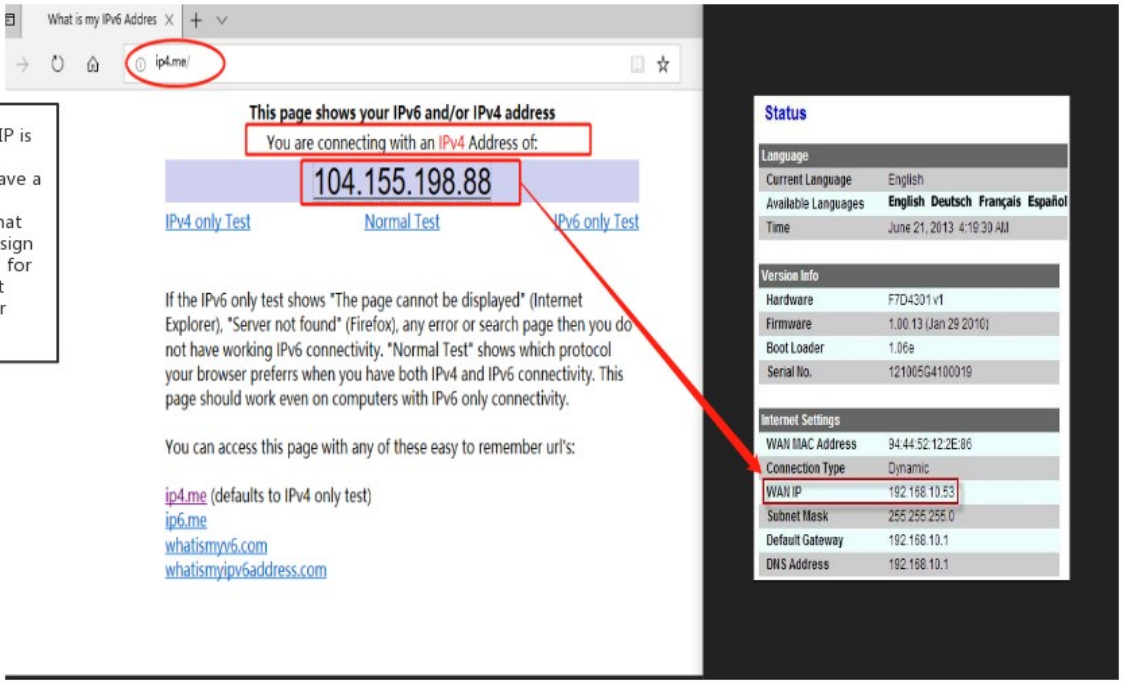
1.Visit ip4.me with your broser.
2.Find your Current IP under "You are connecting with an IPv4 Address of"



1.Log into your router via the web
2.Go to the "WAN status"page or "Status page".
3.Get your WAN IP



1.Check if Current IP is equal to WAN IP
2.If yes,then you have a public network IP
3.If not ,it means that your ISP did not assign a public network IP for you ,please contact your ISP for further support.



Advanced Settings

All Usage Parameters:

usage: ./nebula-provider <command> [<args>]

The most commonly used commands are:

register [-configDir config-dir] [-trackerServer tracker-server-and-port] [-collectorServer collector-server-and-port] [-listen listen-address-and-port] [-host outer-host] [-dynamicDomain dynamic-domain] [-port outer-port] -walletAddress wallet-address -billEmail bill-email -downBandwidth down-bandwidth -upBandwidth up-bandwidth -availability availability-percentage -mainStoragePath storage-path -mainStorageVolume storage-volume -extraStorage extra-storage-string

-availability string
  promise availability, must be greater than 97%, eg: 98%, 99%, 99.9%

-billEmail string
    billing email address

-configDir string
  config director (default "/home/samos/.samos-nebula-provider")

-downBandwidth uint
  download bandwidth, unit: Mbps, eg: 100, 20

-dynamicDomain string
  dynamic domain for client to connect, eg: mydomain.xicp.net

-extraStorage string
  extra storage, format:path1:volume1,path2:volume2, path can not contain comma, eg: /mnt/sde1:1TB,/mnt/sdf1:800GB,/mnt/sdg1:500GB

-host string
  outer ip or domain for client to connect, eg: 123.123.123.123

-listen string
  listening address and port, eg: 111.111.111.111:6666 or :6666 (default ":6666")
-mainStoragePath string
  main storage path

-mainStorageVolume string

main storage volume size, unit TB or GB, eg: 2TB or 500GB

-port uint
outer network port for client to connect, eg:6666 (default 6666)

-trackerServer string
tracker server address, eg: tracker.store.samos.io:6677 (default "tracker.store.samos.io:6677")

-upBandwidth uint
upload bandwidth, unit: Mbps, eg: 100, 20, 8, 4

-walletAddress string
Samos wallet address for receiving rewards

verifyEmail [-configDir config-dir] [-trackerServer tracker-server-and-port] -verifyCode verify-code

-configDir string
config director (default "/home/samos/.samos-nebula-provider")

-trackerServer string
tracker server address, eg: tracker.store.samos.io:6677 (default "tracker.store.samos.io:6677")

-verifyCode string
verify code from verify email

resendVerifyCode [-configDir config-dir] [-trackerServer tracker-server-and-port]

-configDir string
config director (default "/home/samos/.samos-nebula-provider")

-trackerServer string
tracker server address, eg: tracker.store.samos.io:6677 (default "tracker.store.samos.io:6677")

daemon [-configDir config-dir] [-trackerServer tracker-server-and-port] [-listen listen-address-and-port] [-disableAutoRefreshIp]

-collectorServer string
collector server address, eg: collector.store.samos.io:6688 (default "collector.store.samos.io:6688")
-configDir string
config director (default "/home/samos/.samos-nebula-provider")

-disableAutoRefreshIp
    disable auto refresh provider ip or enable auto refresh provider ip

-listen string
  listening address and port, eg: 111.111.111.111:6666 or :6666 (default ":6666")

-trackerServer string
  tracker server address, eg: tracker.store.samos.io:6677 (default "tracker.store.samos.io:6677")

addStorage [-configDir config-dir] [-trackerServer tracker-server-and-port] -path storage-path -volume storage-volume

-configDir string
  config director (default "/home/samos/.samos-nebula-provider")

-path string
  add storage path

-trackerServer string
  tracker server address, eg: tracker.store.samos.io:6677 (default "tracker.store.samos.io:6677")

-volume string
    add storage volume size, unit TB or GB, eg: 2TB or 500GB

Appendix

You can check your network speed by speedtest.net:

https://github.com/sivel/speedtest-cli
(Linux and other Unix-like operating systems)

http://www.speedtest.net/apps/desktop
(Windows or macOS)

China Unicom broadband connection example:
Settings for China Unicom broadband

1.Starting up with command line

./nebula-provider register -availability 99% -billEmail info@samos.io -downBandwidth 100 -upBandwidth 10 -walletAddress 27JWhwCxgTnNF4vDCFZeURuNpWvDBiq8yuo -mainStoragePath /data1/ -mainStorageVolume 1600GB

use upnp port mapping failed: *No gateway device was found*
use upnp get outer ip failed: *No gateway device was found*
not specify host and dynamic domain, will use: 123.119.189.51
ping failed, error: rpc error: code = DeadlineExceeded desc = context deadline exceeded
The public network was shutted down

2.In the advance NAT setting of the fiber router provided by China Unicome, map the public ip to the internal miner

3.Again,with command line

./nebula-provider register -availability 99% -billEmail info@samos.io -downBandwidth 100 -upBandwidth 10 -walletAddress 27JWhwCxgTnNF4vDCFZeURuNpWvDBiq8yuo -mainStoragePath /data1/ -mainStorageVolume 1600GB

use upnp port mapping failed: *No gateway device was found*
use upnp get outer ip failed: *No gateway device was found*
not specify host and dynamic domain, will use: 123.119.189.51
Register success, please recieve verify code email to verify bill email and backup your config file: /root/.samos-nebula-provider/config.json
Configuration file was generated

4. View configuration file

more /root/.samos-nebula-provider/config.json


```
{
 "NodeId": "80edb92c94a618059a5fa237c2042df7a1079d29",
```

"WalletAddress": "27JWhwCxgTnNF4vDCFZeURuNpWvDBiq8yuo",
"BillEmail": "info@samos.io",
...

5.Email verification

./nebula-provider verifyEmail -verifyCode r7fe7x68
verifyEmail success, you can start daemon now.

6.Start up
nohup ./nebula-provider daemon &