


Running a Guardian Node on the Google Cloud Marketplace

Deploying

First off we are going to launch the VM. Simply go to the following page:

<https://console.cloud.google.com/launcher/config/theta-marketplace-public/theta-guardian-node>. On the dashboard, click on the "Launch" button



theta-guardian-node

Theta Labs, Inc

Estimated costs: \$0.00/month

Secure the Theta blockchain by running a Theta Guardian Node

LAUNCH

Runs on
Google Compute Engine

Type
Single VM

Last updated
5/10/20, 6:32 PM

Category
[Developer tools](#)
[Networking](#)

Version
default-version

Operating system
Ubuntu LTS 18.04

Package contents
go 1.14.2
Docker 19.03.6
Python 3.6.9

Overview

Running a Guardian Node on the Theta blockchain is now easier than ever, with a turnkey node solution on Google Cloud Platform. In minutes you can set up a Guardian Node on GCP, stake your Theta tokens to the node, and start participating in Theta blockchain's consensus and block production. In return for staking Theta tokens and contributing to the Theta blockchain, you will earn Theta Fuel tokens, which are the payment token of Theta protocol. In Theta blockchain's Multi-Level BFT consensus method, Guardian Nodes participate in consensus by finalizing newly-produced blocks at 100 block intervals. They make up a "second line of defense" of up to 1,000s of community-run nodes that download and examine the Theta blockchain and try to reach consensus on finalized checkpoints. With thousands of nodes, it is substantially more difficult for attackers to compromise blockchain integrity, and thus the blockchain has a much higher level of security. We believe this mechanism achieves a good balance among transaction throughput, consistency, and level of decentralization, the three corners of the so-called "impossible triangle". For more information, please also see "Scalable BFT Consensus Mechanism Through Aggregated Signature Gossip" by Theta CTO Jieyi Long at <https://github.com/thetatoken/theta-protocol-ledger/blob/master/docs/multi-level-bft-tech-report.pdf>

[Learn more](#) 

About Theta Labs, Inc

Theta Labs, Inc. pioneered the next generation Esports entertainment platform, THETA.tv, and Theta Network, the leading video delivery network powered by blockchain technology. Theta rewards anyone to restream video and enables video platforms to deepen engagement and drive incremental revenues.

You can take the default settings or customize them. When complete click "Deploy"

⚠ Your current project may have limited quota. If your deployment fails, change the 'project' query parameter in this page's URL to a project with a higher quota.

Deployment name
theta-guardian-node-1

Zone ⓘ
us-west2-b

Machine type ⓘ
8 vCPUs 30 GB memory [Customize](#)

Boot Disk
Boot disk type ⓘ
Standard Persistent Disk

Boot disk size in GB ⓘ
100

Networking
Network interfaces
default default (10.168.0.0/20) 

+ Add network interface

ⓘ You have reached the maximum number of one network interface

Deploy



theta-guardian-node overview

Solution provided by Theta Labs, Inc.

Software

Operating System	Ubuntu LTS (18.04)
Software	go (1.14.2) Docker (19.03.6) Python (3.6.9)

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That's it! Your guardian node is now deploying.

Deployment Manager

Deployments

Type registry

theta-guardian-node-1

DELETE

theta-guardian-node-1 has been deployed

Overview - theta-guardian-node-1

theta-guardian-node theta-guardian-node.jinja

theta-guardian-node-vm-tmpl vm_instance.py

theta-guardian-node-1-vm vm instance

theta-guardian-node

Solution provided by Theta Labs, Inc

Instance

Instance zone

Instance machine type

MORE ABOUT THE SOFTWARE

Get started with theta-guardian-node

SSH

Suggested next steps

Assign a static external IP address to your VM instance

Documentation

Theta Guardian Node setup

Support

SHOW SUPPORT ID

Support is not yet active

Stake to the Guardian Node

Next, we need to stake your THETA to the node to make it a Guardian node. First let us connect to the VM via ssh as highlighted in the image below

Deployment Manager

theta-guardian-node-1

DELETED

theta-guardian-node

EXIT PREVIEW

Deployments

Type registry

theta-guardian-node-1 has been deployed

Overview - theta-guardian-node-1

theta-guardian-node theta-guardian-node.jinja

theta-guardian-node-vm-tmpl vm_instance.py

theta-guardian-node-1-vm vm instance

theta-guardian-node

Solution provided by Theta Labs, Inc

Instance [theta-guardian-node-1-vm](#)

Instance zone us-west2-b

Instance machine type n1-standard-8

MORE ABOUT THE SOFTWARE

Get started with theta-guardian-node

SSH

Suggest

- Open in browser window
- Assist: Open in browser window on custom port
- Assist: Open in browser window using provided private SSH key
- Assist: Use another SSH client

Documentation

- [Theta Guardian Node setup](#)

Support

Additional setup instructions for the Theta Guardian Node can be found at <https://github.com/thetatoken/guardian-testnet-guide>, or by contacting Theta Labs at support@thetatoken.org. [Go to Theta Labs, Inc support](#)

SHOW SUPPORT ID

Support is not yet active

After you have logged onto the machine, first run the following command to check if the node is synchronized with the network.

```
thetaccli query status
```

Wait until the return says "syncing": false as shown below. It might take 10 to 15 mins for the node to synchronize with the network.

```
Linux theta-guardian-network-gn1 4.9.0-11-amd64 #1 SMP Debian 4.9.189-3+deb9u1 (2019-09-20) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Mon May 11 01:43:57 2020 from 12.199.204.162
ubuntu@theta-guardian-network-gn1:~$ thetaccli query status
{
  "address": "0x214e7f42a8783e3db5a997e39bf77562cF30A0a",
  "chain_id": "testnet_sapphire",
  "current_epoch": "2542317",
  "current_height": "1221090",
  "current_time": "1589161493",
  "latest_finalized_block_epoch": "2542315",
  "latest_finalized_block_hash": "0x4f33baf9597168a15c75834c9915adadd91a4795061a4c02323dffe18420dedb",
  "latest_finalized_block_height": "1221090",
  "latest_finalized_block_time": "1589161484",
  "peer_id": "0x214e7f42a8783e3db5a997e39bf77562cF30A0a",
  "syncing": false
}
```

After the node is in-sync with the network, we can query its guardian summary in preparation for the staking. Please run the following command to query the guardian summary.

```
thetaccli query guardian
```

```
ubuntu@theta-guardian-network-gn1:~$ thetaccli query guardian
{
  "Address": "0x214e7f42a8783e3db85a997e39bf77562cf30A0a",
  "BlsPubkey": "8baa514f99e0aa6914806ba9237a4e2c2c4c00dfe0ad9c7fe611ce0fbdbf386dbe5aae58793bef98f1d3d1370e3f261e",
  "BlsPop": "a29cf5bf56040dfc6d30fcd8b977d9cfae133c985190566e0e3bedd35ed498e784b6f49674b48a52459b4e234b1d1cd70a5190812429b124aedff68a123d3859a38bdf93b25436e3f5ed47003645ea721687b0f8cdab72476d7c821ff22678dc",
  "Signature": "93780d89d966ba3953dd92a42f80638278aca3e600969ed49cebb3ab267bd0672c1bfe2a10426a0c32c1bc5bc9565dbb733af423ae7886af74342bb85747c9c800",
  "Summary": "0x214e7f42a8783e3db85a997e39bf77562cf30A0a8baa514f99e0aa6914806ba9237a4e2c2c4c00dfe0ad9c7fe611ce0fbdbf386dbe5aae58793bef98f1d3d1370e3f261ea29cf5bf56040dfc6d30fcd8b977d9cfae133c985190566e0e3bedd35ed498e784b6f49674b48a52459b4e234b1d1cd70a5190812429b124aedff68a123d3859a38bdf93b25436e3f5ed47003645ea721687b0f8cdab72476d7c821ff22678dc93780d89d966ba3953dd92a42f80638278aca3e600969ed49cebb3ab267bd0672c1bfe2a10426a0c32c1bc5bc9565dbb733af423ae7886af74342bb85747c9c800"
}
```

Now, copy the "Summary" field from the return, and we can proceed to [stake to the guardian node](#).