Testing plan

Team introduction

Our team is called Xinji Rongwei, base in Chengdu, China. We have already deployed six IDCs distributed in Chengdu, Xian, Wuhan, Shanghai, Guangzhou, and Chongqing, with different Networking Operators. Configuring 5PB+ storage pool for each IDC, high-performance CPU of Intel,378GB RAM, and 10 Gigabit networking. We will also add new high-performance servers to achieve the optimal configurations and maximum efficiency of the cluster.

We currently have a team of 15 people including R & D, hardware and software engineering and maintenance personnel for Filecoin. So, we have adequate resources to participate in the PB-scale miner test, and we are willing to provide real valuable testing data.
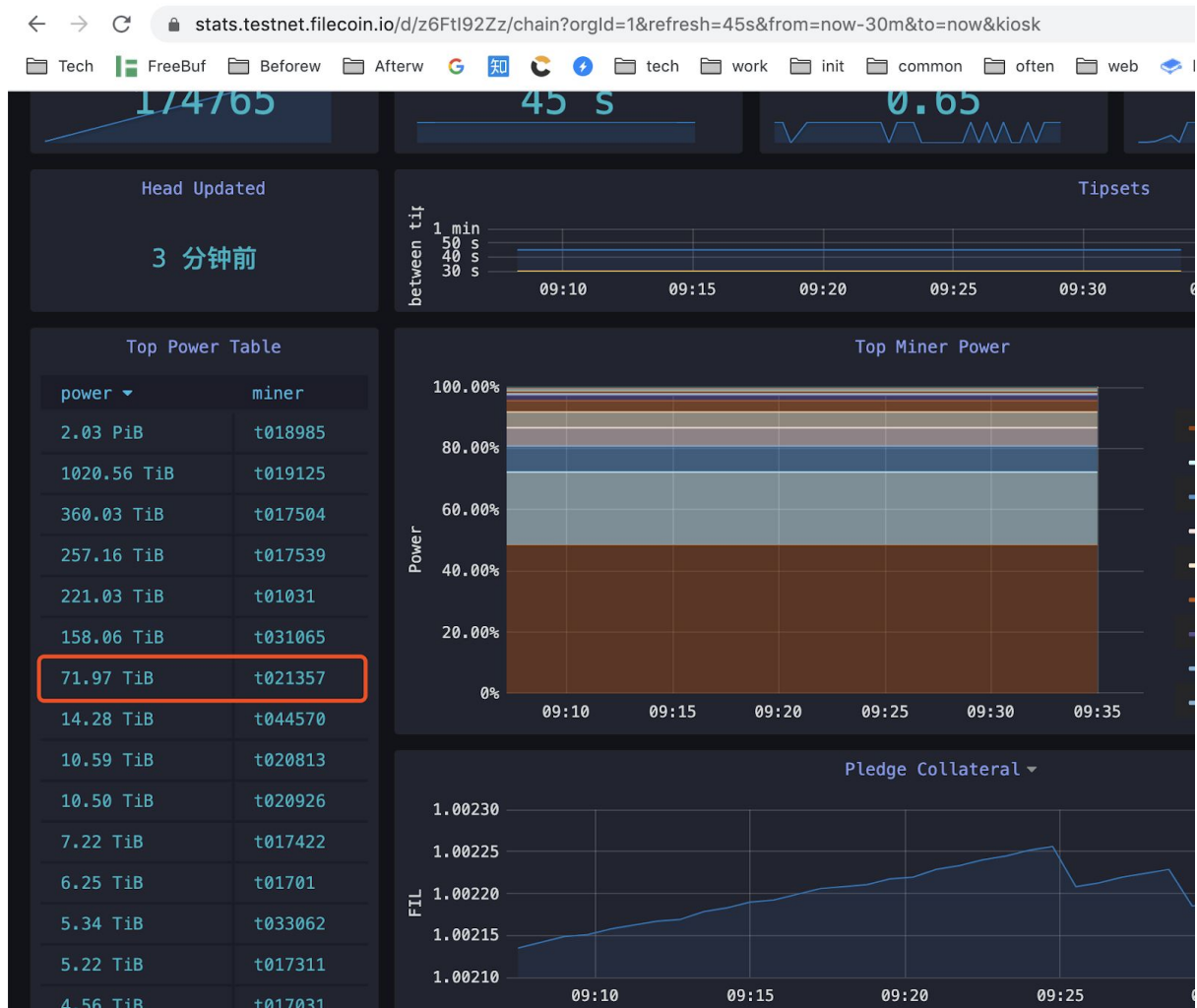
Test list

- Sealing rates and Proofs metrics
- Sector loss monitoring and sector failed rates
- Daemon - Miner configurations
- Blockchain metrics(including get ticket latency and committing wait time)
- Mined block and committed block metrics
- Seal Worker configurations(divided by different jobs that are based on the job which is needs resources and consumption time, different configurations do a different job, maximum efficiency)
- Seal speed per US Dollar (GB/h) metrics（36.3$/GB/h on Testnet phase 1, located in Wuhan, costs including hardware, cabinet, and networking, except stuffing cost）
- Performance of ePoSt on 5 PB+ of sealed data metrics
- Find out performance bottlenecks if we could found

Supporting software configurations

- Storage layer(RAID6 on Dell storage pool via FC-SAN, and there is another strategy: shared-block storage, OCFS2. it already working on Testnet II)
- Gigabit and 10 Gigabit networking
- Firewall and Fortress machine
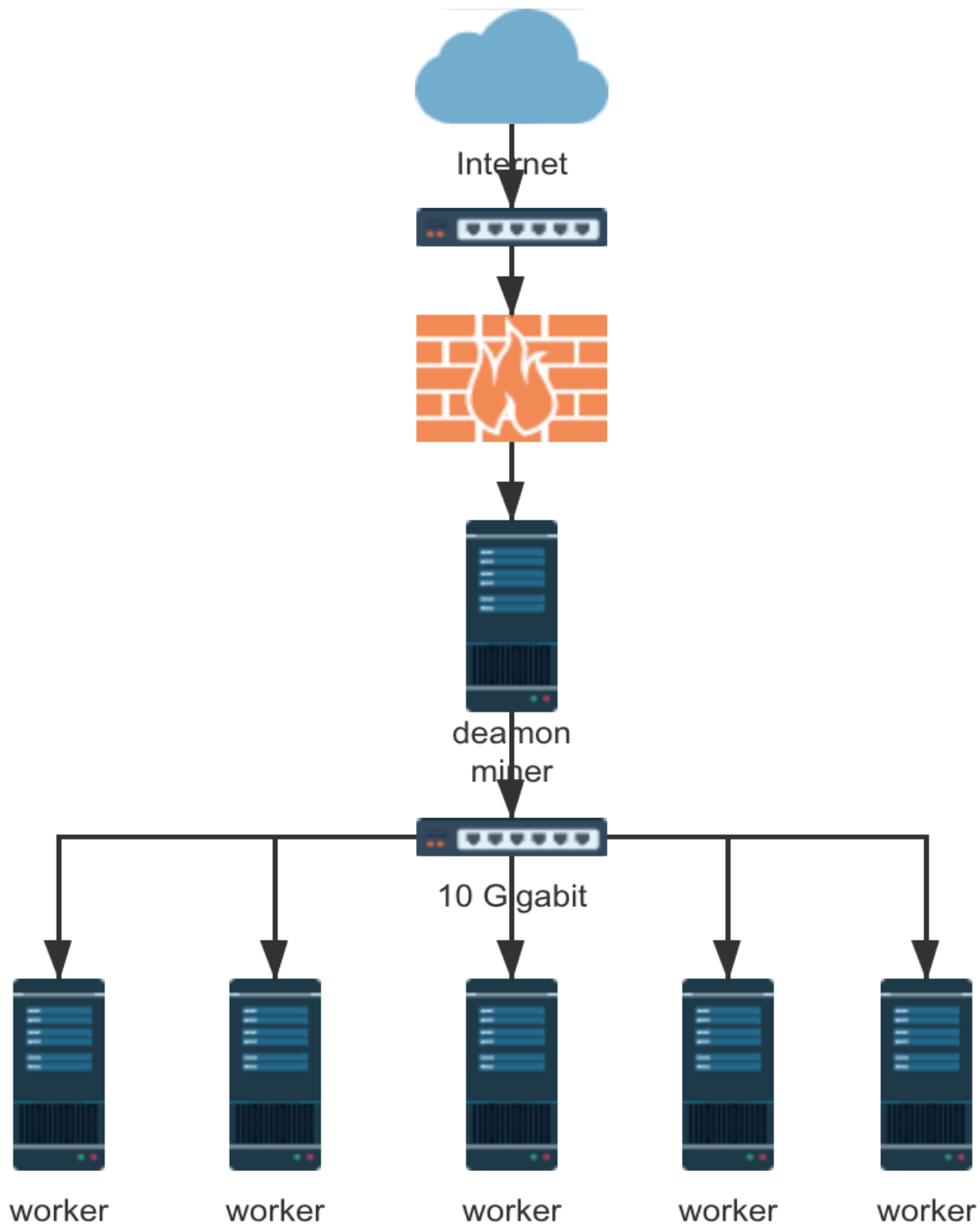- Operation and maintenance tools developed by ourselves

- Configurations(for precommit1: AMD EPYC 7402, 512~1024GBRAM, for precommit2 and commit: Intel 4216, 378GB RAM, 2TBNVMe, and for miner: AMD EPYC 7702, 512GBRAM, 2TBNVMe)

Power validation(Testnet II)


```
[root@wh_node01 ~]# lotus-storage-miner info
Miner: t021357
Sector Size: 32 GiB
Power: 72 TiB / 4.18 PiB (1.6818%)
        Committed: 72 TiB
        Proving: 72 TiB
Worker use:
        Local: 1 / 1 (+1 reserved)
        Remote: 43 / 44
Queues:
        AddPiece: 1
        PreCommit: 0
        Commit: 0
        Unseal: 0
PoSt Submissions:
        Previous: Epoch 174680 (92 block(s), ~69m 0s ago)
        Fallback: Epoch 174710 (in 122 blocks, ~91m 30s)
        Deadline: Epoch 174880 (in 292 blocks, ~219m 0s)
Sectors:  map[CommitFailed:66 Committing:23 PackingFailed:3 Proving:2305 SealCommitFailed:66 Total:2484 Unsealed:21]
[root@wh_node01 ~]# date
2020年 04月 14日 星期二 09:39:40 CST
[root@wh_node01 ~]#
[root@wh_node01 ~]#
```

Topology

There are not be enough details about our mining operation, some due to we add new high-performance servers. We apply **8000 Dollars** to do this plan. If our plan accepted, and more details will be delivered. And the test list as above we listed will be strictly performed and get the conclusions of each test item to help you figure out the pearls and bottlenecks.