



 **stakeworld** Typo 

 1 contributor

 75 lines (47 sloc) | 4.86 KB 

Proposal: Stakeworld maintenance of snapshot services and rpc nodes Q1 2023

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Requested KSM: To be calculated on day of submission

Description

This request is for funding maintenace of:

- RPC services for kusama and polkadot
- Snapshot services for kusama and polkadot

Context/problem/solution

RPC nodes

RPC nodes are an essential part of the kusama/polkadot ecosystem since they give the possibility to interact with the chain. Stakeworld started with 2 (pruned) public RPC servers which were originally deployed for internal use. In Q4 2022 we decided to become more active, switched to archive nodes and added two more nodes for balancing/failover. We did some more [research and stress testing](#) and rewrote the [wiki page](#). The service has found public usage (see metrics) and we created a [pull request](#) for inclusion in the polkadot.js app, which unfortunately has not been pushed yet.

Snapshot services

While setting up nodes for Stakeworld's services we often used snapshot services like polkachiu or polkashots. Sometimes for testing or setting up a new node, also in the case of a database corruption or other database problems a quick database restore is needed. While using these services there were sometimes problems like non working links or slow connections. From the ideas of decentralisation and strengthening the ecosystem through multiple providers we thought it would be beneficial to add an extra [snapshot service](#). We started with the paritydb database format and later also added rocksdb format snapshots.

The snapshot service also includes a simple one-line install script which can restore a database, or even can install a complete node including snapshot with a simple command line installer.

```
curl -o- -L https://raw.githubusercontent.com/stakeworld/stakeworld-script
```



```
root@node02 /opt/agg/target/release #
```

Technical

The RPC services are hosted on multiple dedicated servers on different locations with nodes running in archive mode and rpc requests proxied by ssl enabled apache2 instances. For each network (polkadot and kusama for now) there are two nodes active for redundancy which are load balanced by cloudflare services.

The snapshot service is hosted on a dedicated server, with unlimited traffic and a 1 Gbit network link. Every day the databases are compressed and saved with an [open source crontab script](#). Occasionally we start with a freshly synced database to reduce disk space and prevent errors. The script also registers blockheight, full and compressed datasizes, creates a gnuplot image and puts it all on the [website](#).

All servers are monitored with grafana and alert mechanisms are in place. We keep a [statuspage](#). The snapshot service sometimes has some maintenance for rebuilding snapshots, we had no major outages on the rpc or snapshot service.

Metrics

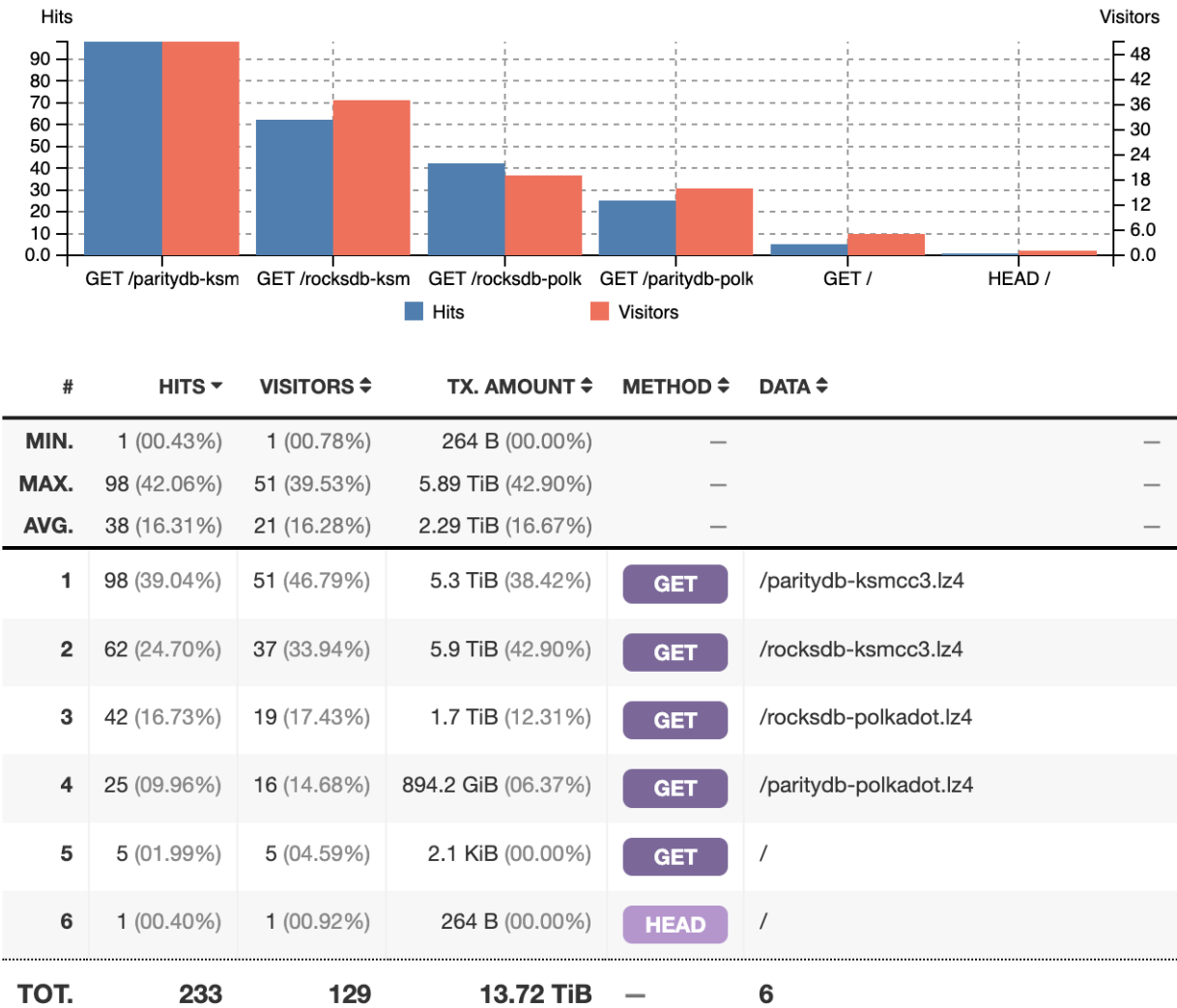
Snapshot service

Excluding bots and our own servers below some statistics about the snapshot service starting from january 2023 until now.

REQUESTED FILES (URLS)

Panel Options

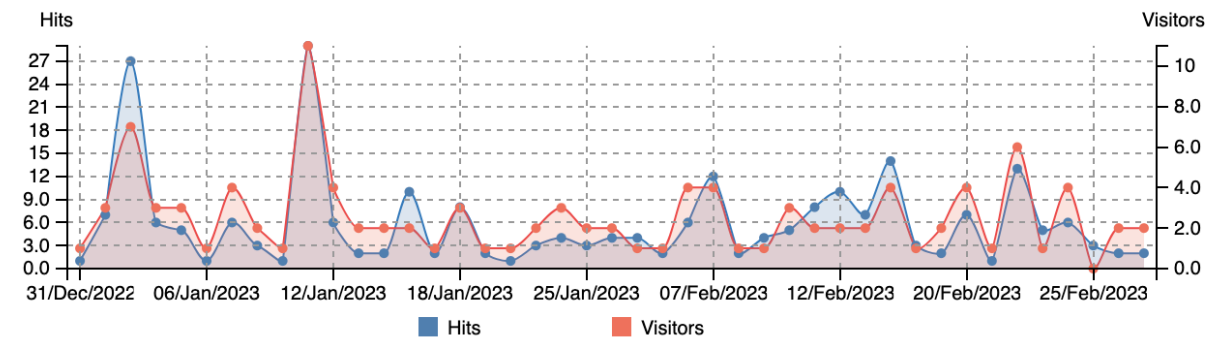
TOP REQUESTS SORTED BY HITS, AVGTS, CUMTS, MAXTS, MTHD, PROTO



UNIQUE VISITORS PER DAY

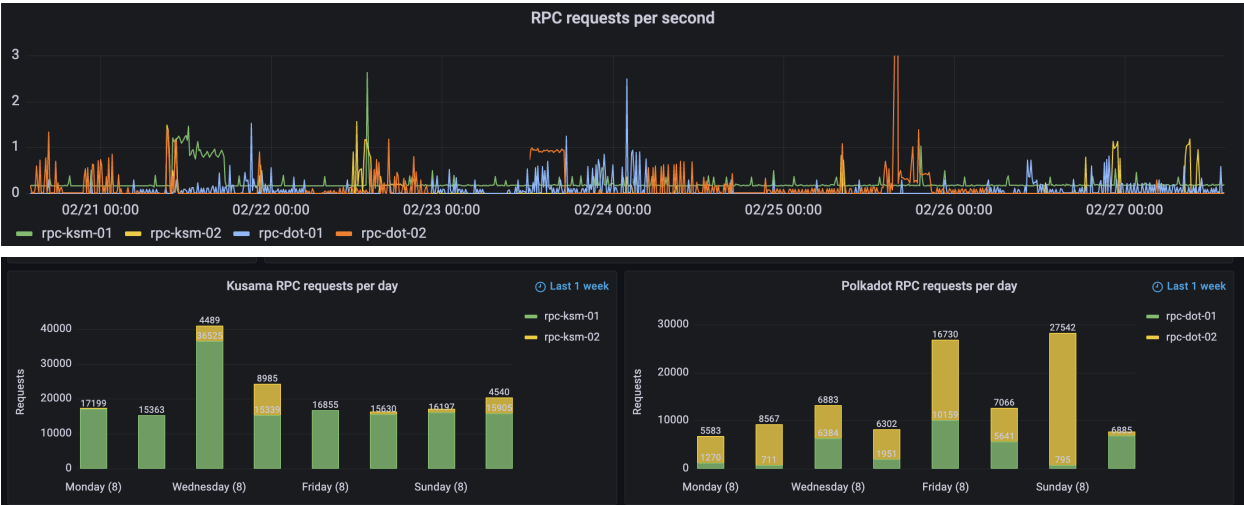
Panel Options

HITS HAVING THE SAME IP, DATE AND AGENT ARE A UNIQUE VISIT.



Rpc

Below some usage of our rpc service. Unfortunately older data usage was lost as a result of a changed retention policy in an updated prometheus binary. We are now mirroring our data to a secondary prometheus instance with explicit long retention so older data will stay available. Live data can be seen on our [webpage](#).



Publicity

There is some exposure through the kusama and polkadot validator pages on element and we are trying to include the rpc on the polkadot.js website ([pull request](#)).

Financial

Expenses

This request is for 3 months of maintenance in Q1 2023.

Hours are included at a 80 EUR/hour rate.

Item	Cost
RPC nodes	
Maintenance	3 months x 5 h x 80 EUR = 1200 EUR
Hosting	3 months x 560 EUR = 1680 EUR
Snapshot service	
Maintenance	3 months x 4 h x 80 EUR = 960 EUR
Hosting	3 months x 160 EUR = 480 EUR
TOTAL	EUR 4320
REQUEST	To be calculated on day of submission

For simplicity treasury requests for our services will only be done on kusama.