Proposal: High Performance Public Infrastructure (Q4 2022 and Q1 2023)

Proponent: XhjGfuq5T1KoEFp2k5TEDaKBe6o2nFdo8JRXL3UYb1vZySW

Date: 20th December 2022

Requested ASTR: 597,413.0734 ASTR

Short description: Ongoing costs for the running of high performance, scalable, and reliable public infrastructure for Astar and Shiden.

Raw Data: Astar/Shiden - Oct-Nov 2022 Treasury Data

Original Motivation

Setting up blockchain infrastructure is difficult, time consuming, and expensive:

- It requires a level of server development expertise that many do not have
- It's costly to run a full node nearly continuously, especially when your dApp's traffic is low and inconsistent.
- Running production level infrastructure is especially tricky. You need to autoscale quickly to handle bursty traffic, and you want to provide services in different regions around the world to provide low latency services - all of this is incredibly costly, but comes with significant economies of scale for a provider.
- DevOps requires constant attention - time that would be better spent elsewhere building.

A shared node API service helps mitigate these barriers of entry to trying accessing a new protocol by reducing all these costs to near zero. We distribute all nodes around the world on different cloud providers (with intelligent routing) to achieve global scalability from day 1, we monitor each node and ensure that they meet certain service levels, and we have the expertise and scale to handle production workloads and high peak traffic.

In summary, we try to reduce the pain of getting started on your and minimise the costs of accessing secure nodes while traffic from your dApp is low. When you grow, you can continue to use our shared API service, or we also provide access to one click deploy dedicated Astar/Shiden Alpha nodes to any cloud of your choosing.

Service Details

During Q4 of 2022, we've made a large number of stability improvements to our Ultimate API service. We've finished significant work on advanced rate limiting on behalf of our customers. This means that we can continue to provide generous public API endpoints for over 40 different networks for common-good applications, but restrict access to high volume users that abuse this free service. We've been able to manage our costs significantly on behalf of our customers as a result.

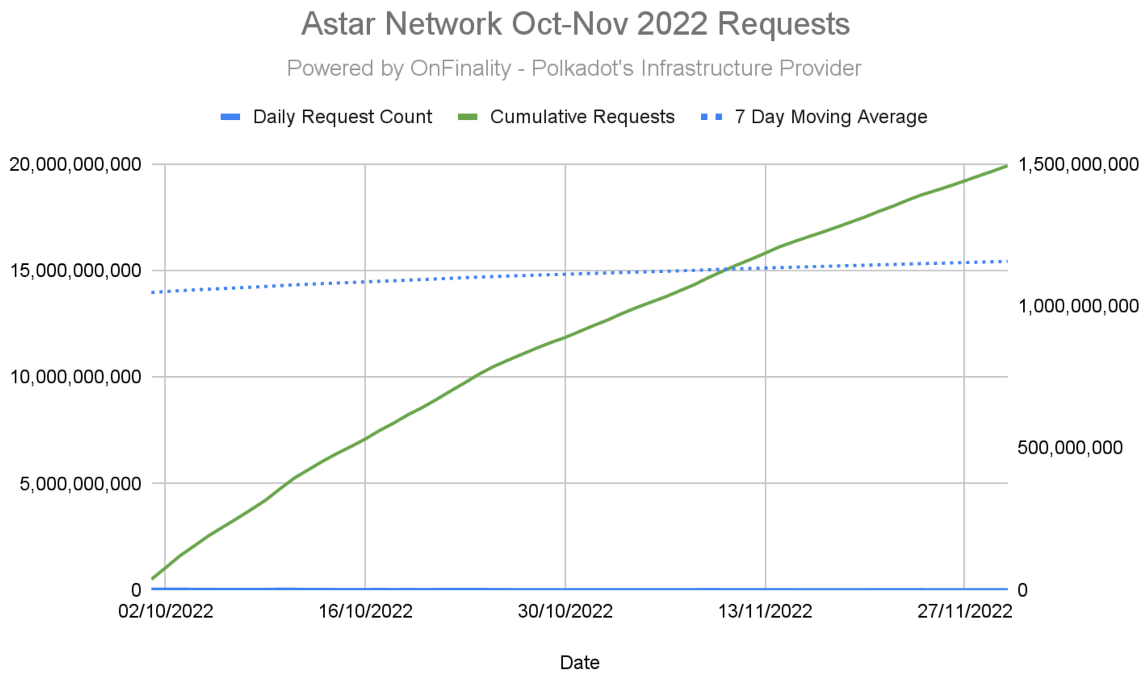
For customers that do sign up for paid API keys, we've been adding more and more features to provide a better experience. API access restrictions allow our customers to restrict their API keys to work only from 'Allowed' origins and/or IP addresses, preventing unauthorised consumption of their service. We also provide more detailed monitoring of failed requests through our service to help customers identify and fix bugs before they get to production.

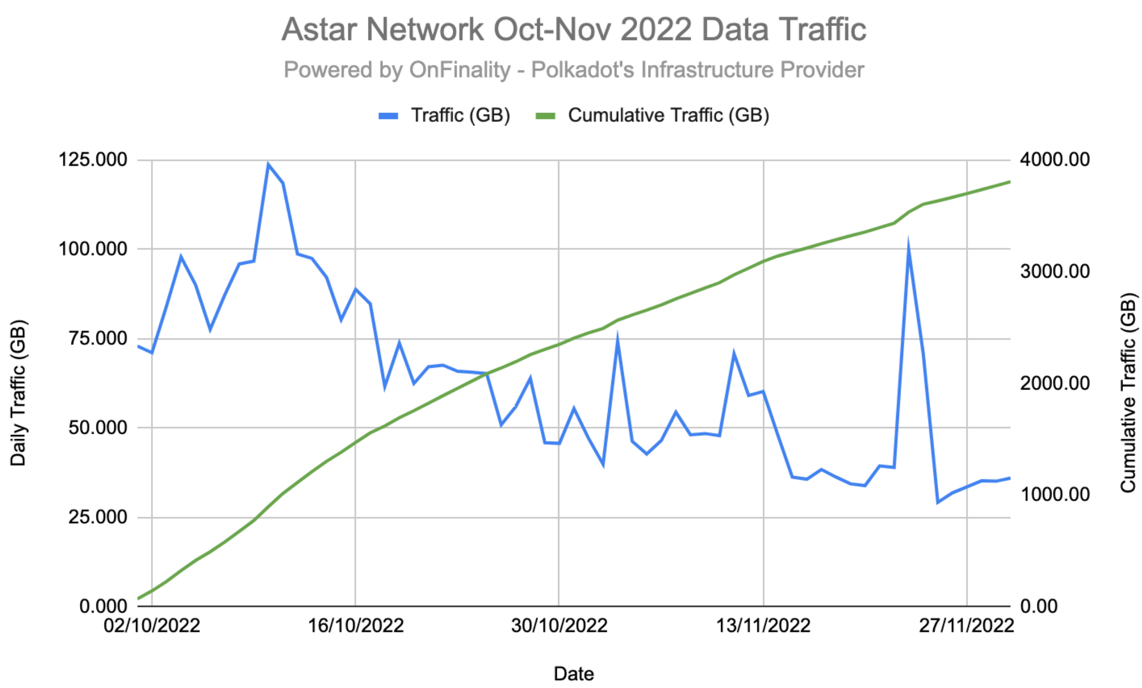
Our customers are building cross-chain wallets, running some of the largest block explorers, and are indexing multiple networks - they've all benefited from these API access restrictions, improved monitoring, and the larger number of supported Polkadot chains.

Over October and November, OnFinality has (for Astar only):

- Served 1,494,296,151 responses
- Provided 3806.94 GB of egress data
- Averaged 24,496,658 responses each day
- Handled surges to 41,890,686 responses in a single day

Raw data can be found here Astar/Shiden - Oct-Nov 2022 Treasury Data





Enhancements

Additionally, we are proud to have delivered some key service enhancements that benefit the Polkadot ecosystem in the last quarter. This includes:

- API Access Restrictions—a new security feature to help you securely manage access to your OnFinality API endpoints

- Detailed Error type breakdowns on your API Insights dashboard
- A new Integration tab to help you get connected quickly
- Support for every single active Polkadot Parachain
- New enhanced deployment automation processes to allow our network partners to automate deployment of their networks with OnFinality
- Support for Ethereum
- A variety of improvements to our health metric collection tools and automated recovery scripts to ensure our 99.9% SLA is exceeded.
- Scale improvements to our team, processes, and systems to allow us to provide this same service to any substrate team

You can always see live data on our API service on our public status page and network analytics page.

Costings

As per our fixed priced arrangement we are requesting **$5,000 USD per month** of service less the amount of rewards earned via dAppStaking.

We are requesting costs for the previous quarter's service plus the upcoming quarter in advance.

Period	**Costs**
Quarter 4, 2022	$15,000.00
Quarter 1, 2023	$15,000.00
Subtotal	**$30,000.00**
ASTR Rate	**$0.040473**
ASTR Total	**ASTR 741,233.3773**
Minus DApp Staking Claimed Rewards between eras 195 and 239 (inclusive)	**ASTR 143,820.3039**
ASTR Total	**ASTR 597,413.0734**

Astar rate retrieved from CoinMarketCap on 19th December 2022 using the 30 day time weighted average price. Raw data is here Astar/Shiden - Oct-Nov 2022 Treasury Data

About OnFinality

OnFinality is a SaaS platform providing infrastructure services for the Polkadot/Substrate community. Our mission is to support all blockchain developers in the world by providing core infrastructure so they can focus on building the next dApp.

We continue to reaffirm our dedication to providing free support of 500,000 responses to our API service each day for users around the world. You can access our public API service by connecting to it using Polkadot.js or via the endpoints listed below. You can also create your own free API key in our application and track metrics and statistics.

- https://astar.api.onfinality.io/public
- wss://astar.api.onfinality.io/public-ws
- https://shiden.api.onfinality.io/public
- wss://shiden.api.onfinality.io/public-ws

Our mission remains to support all blockchain developers in the world by providing core infrastructure so they can focus on building the next dApp.