Report & Proposal: High Performance Public Infrastructure (Q3, 2021 - Q1, 2022)

Proponent: a3byawr54JPxf1RpvnbLZPkZN2Q9Ry7gg5CXiqcvEtgPWvQM8

Date: 20th April, 2022

Requested KINT: 498.86 KINT

Short description: Ongoing costs for the running of high performance, scalable, and reliable public infrastructure for Interlay's Kintsugi Network.

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.
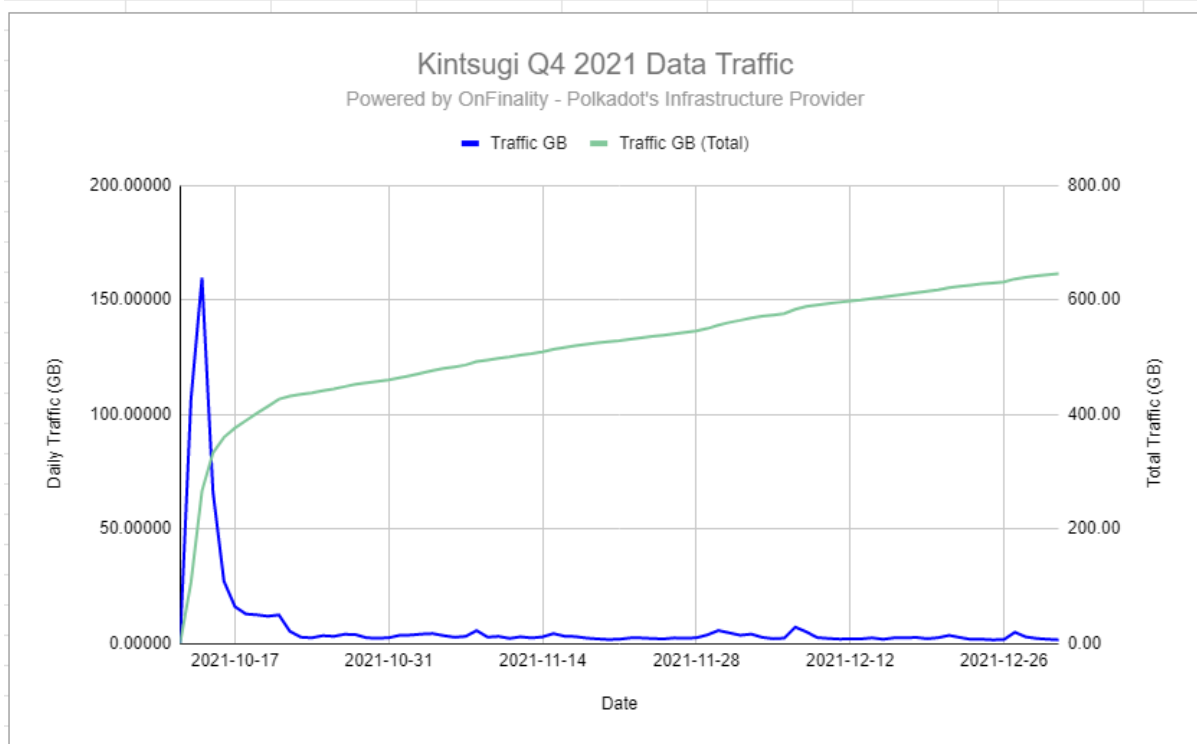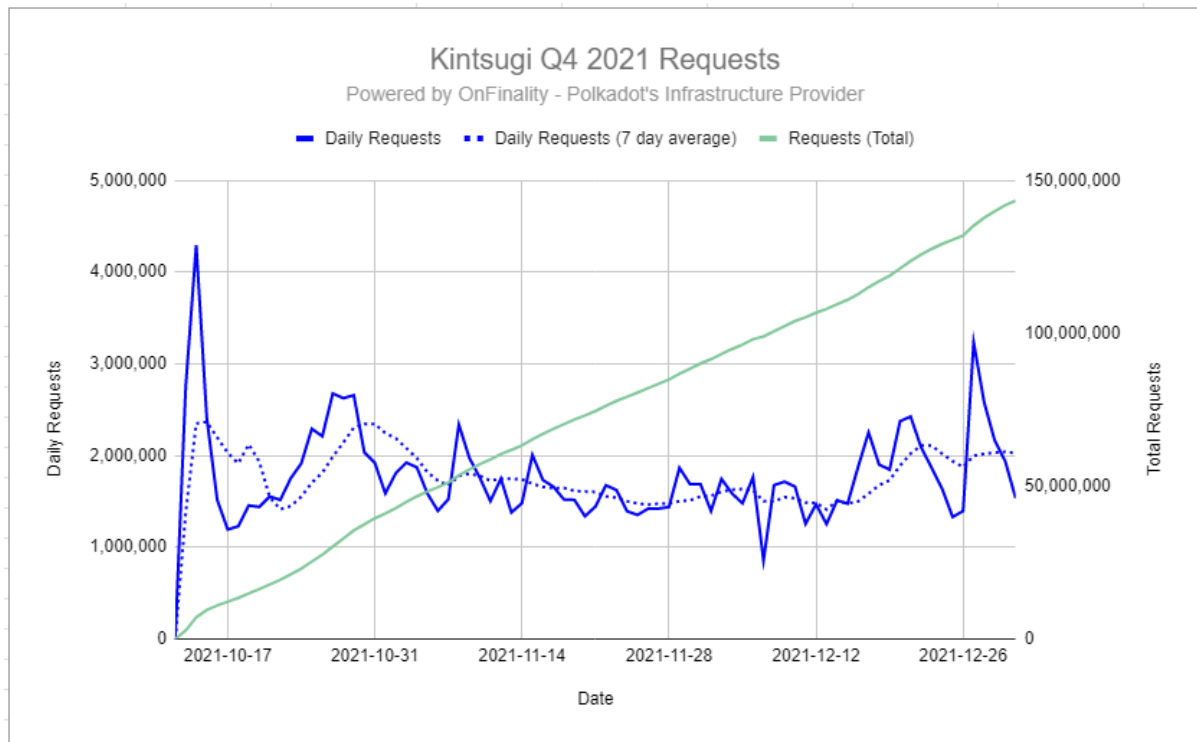- DevOps requires constant attention - time that would be better spent elsewhere building.

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 manage all the nodes for our users and distribute them across the world (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.
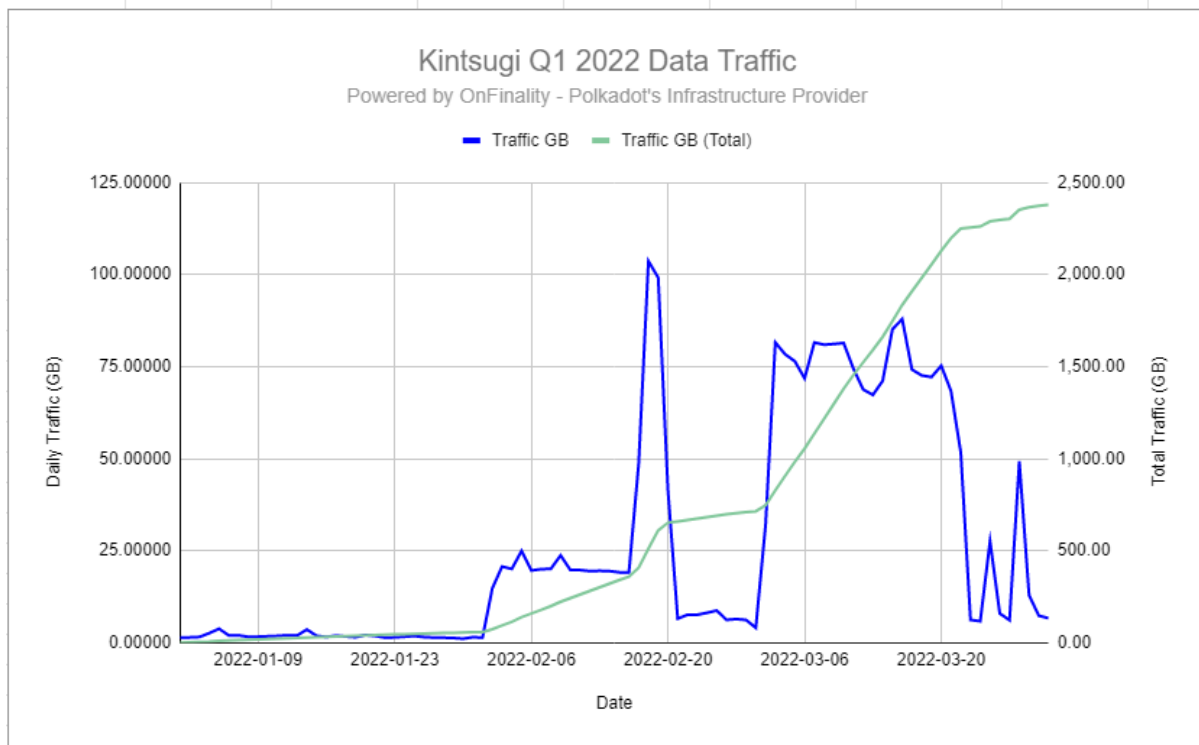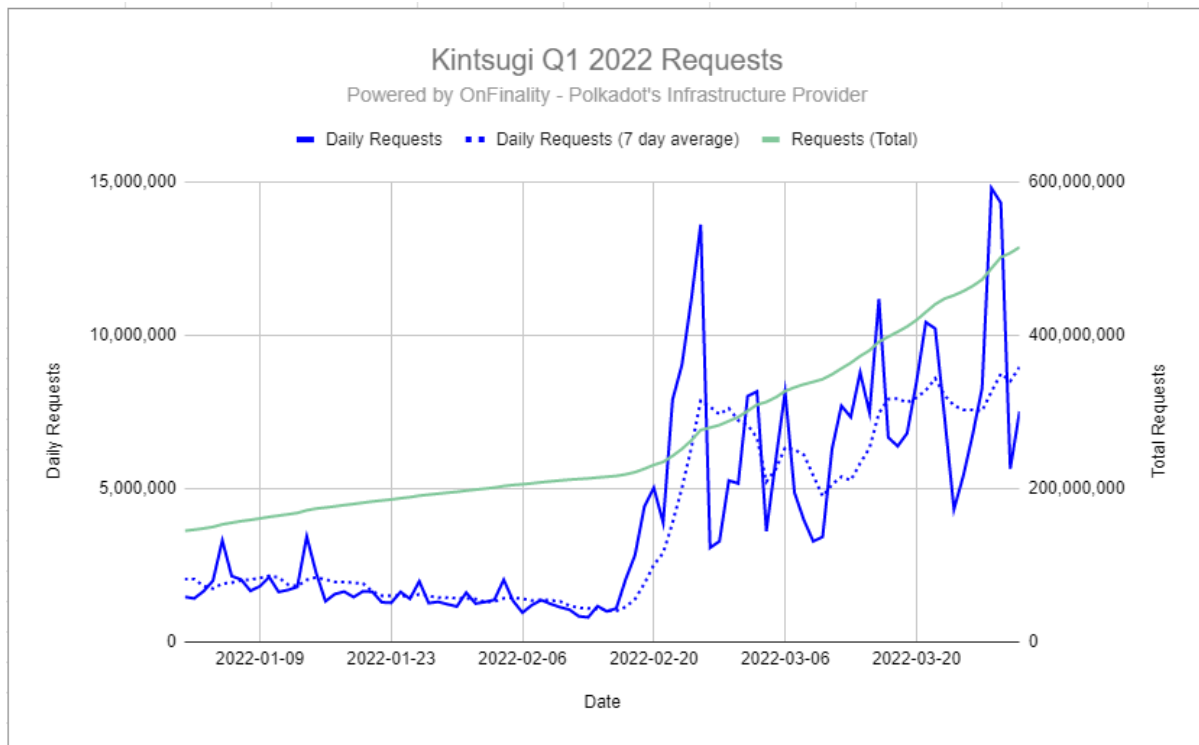
In summary, we try to reduce the pain of getting started on Kintsugi Network and minimise the costs of accessing secure nodes while traffic from your dApp is low. When you grow, you can continue to use our shared API service, or we also [provide access to one click deploy dedicated Kintsugi nodes](#) to any cloud of your choosing.

Service Details and Enhancements

OnFinality has been running API service resources for Interlay since the 1st of September 2021 - this proposal covers this period from the 1st/September 2021 to 31st/March 2022. Over this period we

served a total of 514,371,649 responses through our API service and over 3 TB of data egress. Our highest day saw over 14 million responses in a single 24 hour period and at the end of the period the 7 day average is 8,955,955 responses.

Kintsugi Q1 2022 Requests
Powered by OnFinality - Polkadot's Infrastructure Provider

Kintsugi Q1 2022 Data Traffic
Powered by OnFinality - Polkadot's Infrastructure Provider

[You can read more about our infrastructure and how we scale our services in this article here](#), but in summary our focus is on global performance, scalability, and reliability/redundancy over short term costs. We always prioritise performance and stability, and are proud to aim for a 99.9% SLA to our customers.

Enhancements

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

- An improved dedicated node deployment process so that a user can deploy their own archive, full, or validator node in only a few minutes
- Additional improvements to our routing strategies and scale enhancements to our load balancer with the goal of scaling to a Billion daily responses.
- A variety of improvements to our health metric collection tools and automated recovery scripts to ensure our 99.9% SLA is met.
- Scale improvements to our team, processes, and systems to allow us to provide this same service to **every** parachain team at launch

You can always see live data on our API service on our public [status page](#).

Costings

This proposal includes combined running costs for our infrastructure for Kintsugi Network. The total combined running cost is USD $6,847.98

Description Q3,2021	Price (USD)	Billable Units	Cost
Compute Costs	US$0.15 / Compute Unit / Hr	2,883.50	US$432.53
Storage Costs	US$0.0005 / GB / Hr	43,746.00	US$21.87
Backup	US$0.0005 / GB / Hr	0.00	US$0.00
Data Traffic	US$0.15 / GB	0	US$0.00
		Subtotal	US$454.40
		USD Total	**US$454.40**
		KINT Conversion Rate	US$14.74
		Q3 Total	**KINT 30.83**
Description Q4,2021	**Price (USD)**	**Billable Units**	**KINT 30.83**
Compute Costs	US$0.15 / Compute Unit / Hr	29,226.70	US$4,384.01
Storage Costs	US$0.0005 / GB / Hr	605,988.00	US$302.99
Backup	US$0.0005 / GB / Hr	263,234.00	US$131.62
Data Traffic	US$0.15 / GB	601.9	US$90.29
		Subtotal	US$4,908.90
		USD Total	**US$4,908.90**
		KINT Conversion Rate	US$14.74
		Q4 Total	**KINT 333.03**
Description Q1,2022	**Price (USD)**	**Billable Units**	**KINT 363.86**
Compute Costs	US$0.15 / Compute Unit / Hr	11,904.0	US$1,785.60

Storage Costs	US$0.0005 / GB / Hr		320,396.0	US$160.20
Backup	US$0.0005 / GB / Hr		72,086.0	US$36.04
Data Traffic	US$0.15 / GB		53.9	US$8.09
		Subtotal		US$1,989.93
		USD Total		**US$1,989.93**
		KINT Conversion RaNe		US$14.74
		Q1 Total		**KINT 135.00**
		Total KINT Due		**KINT 498.86**

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://kintsugi.api.onfinality.io/public
- wss://kintsugi.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.

Payment Conditions

The total ongoing running costs for high performance, scalable, and reliable public infrastructure.

- Amount in USD: $7,353.23

- TOKEN Rate: $14.74 per KINT

- Amount in KINT: 498.86 TOKEN

- Beneficiary address: a3byawr54JPxf1RpvnbLZPkZN2Q9Ry7gg5CXiqcvEtgPWvQM8