

Treasury Proposal: RockX Access Nodes support for Polkadot in 2023

Proponent: RockX

Date: 28 Apr, 2023

Requested allocation: USD \$93,063

Amount in DOT: 15,485 DOT (Rounded to the nearest DOT based on EMA7 price of \$6.01)

Proposer Account: 14tm4js6PgrDGZttNzyy7CM4pnYiPu3LxxZDb1zhJWUc5Wpj

DOT Beneficiary Account: 13jzkGKFrkGJ17rx4sNwP2ZQCN6L9buLXPMG67Jq8FLK1tro

Short Description: Provide free RPC service for the community in 2023 across multiple parachains to encourage growth and development. RockX aims to support multiple communities and reduce challenges facing developers in exploring the Polkadot ecosystem.

Problem Statement

To encourage strong growth on the Polkadot network, it is important that developers have access to reliable, easy-to-use, and affordable RPC nodes. Setting up this infrastructure is simply not an option for the majority of developers due to the cost and expertise required, inhibiting potential new development and innovation.

The Polkadot and Kusama ecosystem is an intricate web with dozens of parachains requiring their own support and APIs. Although there are some node providers available, developers have to search out and implement different processes to connect with them and must spend extensive research understanding their reliability and security. Ultimately, developers are increasing their security risks and costs unnecessarily by connecting with many different providers.

Solution

[RockX](#) currently provides free APIs on Polkadot and Kusama up to 100,000 requests per day¹. However, we would like to accelerate the ecosystem's growth by expanding our offering to eventually include free packages for more parachains.

With the Treasury's support, we plan to **add 3 Parachains every Quarter** from early 2023 until late 2023 for a total of 6, where we will evaluate the current ecosystem status and adjust our processes accordingly. After the initial 6 chains have been onboarded, we aim to conduct an open call with other parachains to understand levels of interest before submitting a new proposal to add more parachains. We will also expand our Polkadot node offering to include a free archive node solution.

¹ According to backend data, an active Dapp developer usually sends 15,000 - 50,000 requests per day per blockchain, any additional request above the range usually belongs to a mature enterprise user, such as a trading company or asset management firm. In order to maintain a fair usage of the node bandwidth and to provide a stable connection for as many community members as possible, we would impose a request limit at 100,000/day for free users. That is to say, most of the Dapp developers that require RPC service can enjoy a free service.

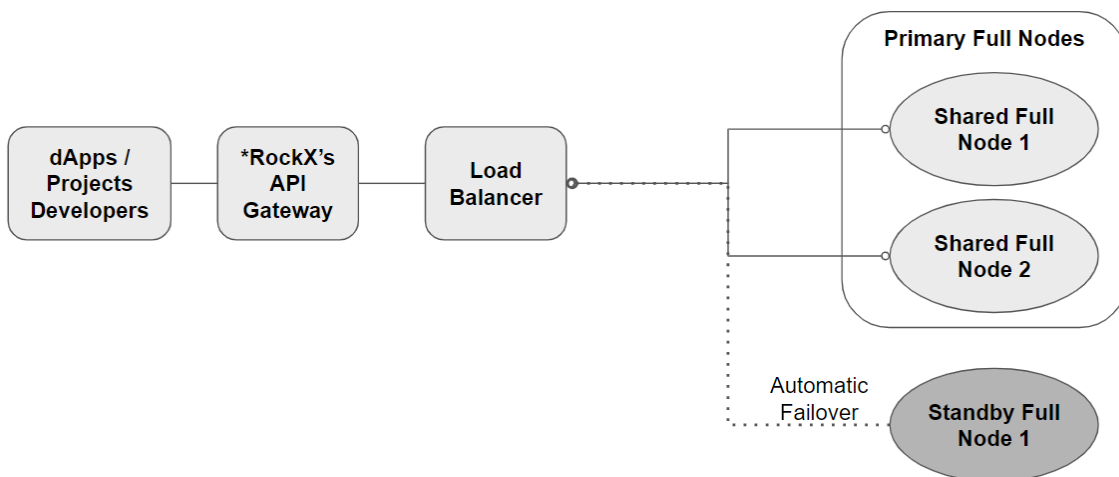
In addition to free API requests, RockX also provides a developer-friendly portal that allows users to set up APIs across all supported chains with just a few clicks, drastically reducing complexity and set-up time. Last but not least, developers can also subscribe to our blockchain maintenance dashboard so that they will be able to receive the latest blockchain update information about Polkadot and its ecosystem.

In summary, we're here to take on all the complexities of node operations and utilize economies of scale and scope to lower the developers' barriers (time and money) to adoption.

Current Status

RockX has been providing RPCs for Polkadot and Kusama since Oct 2021 and has achieved service reliability of **99.9%** for Q4 2022 ([Link](#)).

The duplicate Polkadot nodes setup and the automatic failover system ensure the stability of the Polkadot node. In case of a node failure incident or during the Polkadot mainnet upgrade period, the automatic failover system directs users' requests to a backup node, ensuring continuous network operation. The mechanism is illustrated in the following diagram.



Q3/22 enhancement

- Twitter announcement for free Polkadot full node to contribute to the web3 developer community ([Link](#))
- Upgraded analytics dashboard to provide users more visibility on API usage ([Link](#))
- Uploaded videos about "How to build on a blockchain with Access Node" ([Link](#))
- Launched IP whitelist, origin whitelist feature to enhance user's security when using the RPC services ([Link](#))

Q4/22 enhancement

- Wrote blog post to introduce Polkadot staking. In this post, RockX delves into the details of how staking Polkadot works, and why it's important for the success and

growth of the Polkadot network. RockX will continue to create new and educational content across the Polkadot ecosystem. [\(Link\)](#)

- Launched maintenance notification dashboard to keep users informed as soon as possible on any blockchain upgrades [\(Link\)](#)
- Launched an incognito mode that will not store user's IP address or browser information to further protect user's privacy [\(Link\)](#)

Q1/23 planned/launched enhancements

- Wrote blog post to highlight the benefits of building on Kusama. The article also discusses upcoming developments in Kusama, including parachain scalability, relay-chain governance, cross-chain communication, common-good parachains, bridging to other ecosystems, and staking. [\(Link\)](#)
- Plan to support WebSocket endpoint for Polkadot and Kusama
- Plan to improve user's security by improving password setting mechanism

Total request count for Polkadot per month this year

Month	Requests
June	1.67M
July	1.74M
Aug	1.71M
Sept	1.61M
Oct	1.74M
Nov	1.68M
Dec	1.90M
Jan	1.91M
Feb	1.97M

Roadmap

In late 2022, we looked at all current parachains and compared their activeness on socials, GitHub, grants, and general overview to identify

Quarter	Chain	Comments
Q2 2023	Statemint	<ul style="list-style-type: none">• Systems Parachain
	Polkadex	<ul style="list-style-type: none">• Proven building history: Launched since 2020 Sep, received 1 grant• Strong development around sharding, security and privacy• Strong social media influence: 62K Twitter followers, recommended by community members
	Moonbeam	<ul style="list-style-type: none">• Proven building history: Launched since 2020 Feb, received 2 grants (completed)• Very active across the Polkadot ecosystem• Strong social media influence: 280K Twitter followers, recommended by community members
Q3 2023	Acala	<ul style="list-style-type: none">• Proven building history: Launched since 2019 Oct, received 3 grants (completed)• Good spread of DeFi products and support for the industry• Strong social media influence: 270K Twitter followers, recommended by community members
	Litentry	<ul style="list-style-type: none">• Proven building history: Launched in 2021 Feb, received a grant for Identity modules and corresponding UIs (Completed)• Focused on on-chain identity management• Strong social media influence: 70K Twitter followers, recommended by community members
	Astar	<ul style="list-style-type: none">• Proven building history: Launched since 2019 Feb, received 6 grants (4 completed)

		<ul style="list-style-type: none"> ● Strong development around sharding, security and privacy ● Strong social media influence: 360K Twitter followers, recommended by community members
Q4 2023*	TBC	
	TBC	
	TBC	
Q1 2024*	TBC	
	TBC	
	TBC	

(archive node)												
Kusama* (full node)												
Statemint (full node)												
Polkadex (full node)												
Moonbeam (full node)												
Acala (full node)												
Litentry (full node)												
Astar** (full node)												

**Kusama nodes are not included in this proposal as RockX will look to submit a separate proposal to Kusama. They are shown here for visibility purposes only.*

***Astar node is scheduled to launch in Aug in order to allow for at least 1 full month of monitoring before the review period.*

To support the development of the Polkadot ecosystem, RockX will be offering free plans for developers that include 100K requests per day (or **3 million requests per month**) for each blockchain supported above. This will be sufficient for most developers and users.

Developers can access this free API service by creating their own API Key on the RockX portal and using the provided tools to optimize their development efforts.

Up to 10 API keys can be generated for free for each blockchain. If any customization is needed, RockX can also assist with setting up custom archive nodes or full nodes.

Every quarter, RockX strives to improve and enhance our product offerings and infrastructure for developers in the Polkadot ecosystem, including front-end UI, connectivity, security, and reliability. New product releases can be found on RockX's Twitter page. [\(Link\)](#)

Costs

RockX is only seeking a portion of the total costs for setting up and maintaining any parachain in this proposal. We will be requesting 85% of the total cost for setting up and running all nodes included in this proposal. We will only be requesting support for 33% of any parachain set up and running.

Based on community feedback it was recommended that some of the costs should be born by the individual parachains, and as such, RockX will put in similar proposal applications with each individual parachain grants program. There will be some residual costs not covered by either proposal. These will be born by RockX.

Q4/22 Costing for Polkadot full + archive node

Service	Cost Per Unit	Usage	Cost
Compute Unit	\$0.28 /Hour	32,850	\$9,198.00
SSD Storage	\$0.125 /GB	12,288	\$1,536.00
Backup Storage	\$0.125 /GB	4,608	\$576.00
Data Egress	\$0.12 /GB	4,200	\$504.00
Regional Kubernetes Cluster	\$3.20 /Day	90	\$288.00
DevOps administration (optimization, bug fixes, runtime upgrades etc.)	\$400/month	3 months	\$1,200
		Grand Total	\$13,302.00

Q1/23 Estimated Costing for Polkadot full + archive node

Service	Cost Per Unit	Usage	Cost
Compute Unit	\$0.28 /Hour	36135	\$10,117.00
SSD Storage	\$0.125 /GB	13,516	\$1,689.00
Backup Storage	\$0.125 /GB	5,068	\$633.00
Data Egress	\$0.12 /GB	4,620	\$554.00
Regional Kubernetes Cluster	\$3.20 /Day	90	\$288.00
DevOps administration (optimization, bug fixes, runtime upgrades etc.)	\$400/month	3 months	\$1,200
		Grand Total	\$14,481.00

Future Costs

Estimated Q2/23 Costing for Polkadot full+archive node, Statemint, Polkadex, and Moonbeam full nodes

Service	Cost Per Unit	Usage	Cost
Compute Unit	\$0.28 /Hour	72,270	\$20,235.60
SSD Storage	\$0.125 /GB	22,528	\$2,816.00

Backup Storage	\$0.125 /GB	9,216	\$1,152.00
Data Egress	\$0.12 /GB	25,200	\$3,024.00
Regional Kubernetes Cluster	\$3.20 /Day	180	\$576.00
DevOps administration (optimization, bug fixes, runtime upgrades etc.)	\$700/month	3 months	\$2,100
		Grand Total	\$29,903.60

Total amount from this quarter included in this proposal: **\$ 26,000**

The requested amount is only 33% of the total estimated costs for the Polkadex and Moonbeam parachains as RockX and each individual parachain will cover most of the costs. However, there is some portion of this infrastructure that will add value and support the wider ecosystem, thus including these nodes in the proposal.

Estimated Q3/23 Costing for Setting Up and Running Polkadot full+archive node, Statemint, Polkadex, Moonbeam, Acala, Litentry, & Astar full nodes

Service	Cost Per Unit	Usage	Cost
Compute Unit	\$0.28 /Hour	128,444	\$35,964.18
SSD Storage	\$0.125 /GB	32,768	\$4,096.00
Backup Storage	\$0.125 /GB	13,824	\$1,728.00
Data Egress	\$0.12 /GB	88,200	\$10,584.00
Regional Kubernetes Cluster	\$3.20 /Day	270	\$864.00
DevOps administration (optimization, bug fixes, runtime upgrades etc.)	\$900/month	3 months	\$2,700
		Grand Total	\$55,936.18

Total amount from this quarter included in this proposal: **\$39,280**

The requested amount is only 33% of the total estimated costs for the Polkadex, Moonbeam, Acala, Litentry, and Astar parachains as RockX and each individual parachain will cover most of the costs. However, there is some portion of this infrastructure that will add value and support the wider ecosystem, thus including these nodes in the proposal.

Grant Conditions

Total amount: USD \$93,063 (previous proposal requested \$100,000 USD and has been reduced based on community and council feedback and to align with the new timeline)

DOT amount: 15,485 DOT (Rounded to the nearest DOT based on EMA7 price of \$6.01)

DOT Beneficiary address: 13jzkGKFrkGJ17rx4sNwP2ZQCN6L9buLXPMG67Jq8FLK1tro

Contact information: inquiry@rockx.com

DOT Price: To be calculated at time of submitting proposal onchain

About RockX

Rockx is a global blockchain node network and gateway for users to seamlessly access web3, offering institutional grade solutions and a full suite of developer tools for users to stake and build on all major Proof-of-Stake blockchains.

With its foundation in staking, protocol research, and infrastructure design, RockX has built countless access nodes for users to interact with across over 20 layer 1 and 2 protocols.

RockX is always looking for ways to support, educate, and grow the communities we are involved in. We are developing a new proposal to raise funds for educational content and community events. We are also in talks with people at Parity and the Polkadot Foundation to develop new strategies for outreach and onboarding.