



## A new community run testnet, by developers, for developers

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**Timeline:** 12 months

**Request DOT:** 125,018

**Requested USD:** \$850,000

**DOT 7d EMA:** \$6.799

### Paseo - Developer Testnet

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# 1. Context of the proposal:

Every product, regardless of Web2 or Web3, needs a development environment to test code before being deployed to production. As more developers contribute to a product, effective management of testing environments (testnets) becomes progressively crucial. Now take into consideration Polkadot, each team is building their own product stack, in a shared environment, where the relay chain and system parachains are also receiving constant updates and changes.

Currently, there are two testnets in the Polkadot ecosystem, both being paid for, serviced, and run by Parity: Westend, and Rococo. As a result of the decentralization of Parity, Rococo will be decommissioned in 2024 leaving a gap in Polkadot testnet offering. This gave us a chance to reimagine how a community run testnet would operate, who would maintain it, and what support would be available for new and existing developers building in Polkadot.

A dedicated group of ecosystem agents from Portico, Amforc, Dwellir, Paradox, ROGUE, StakePlus, and Zondax played a key role in the testnet's development, spending 2+ months of personal costs in late 2023, leading to its launch on December 22nd, 2023. Portico and ROGUE are made up of individuals from the Parity "Delivery Services" team who have had vast experience running Rococo over the last 2+ years.

The new developer testnet, 'Paseo' has subsequently launched in late 2023 and is seeking 125,018 DOT (\$850,000 USD) from the treasury to operate and run for 1 year (Jan 2024 to Dec 2024). These funds will be managed via a bounty and paid to individuals quarterly in advance, over the 12-month funding period.

This testnet is planned to receive updates just before Polkadot, rather than earlier than Kusama - conceptually making it more stable than Westend and closer to Polkadot in terms of code. It will allow new teams an easy environment to build and deploy, where the development environment of the testnet closely matches production (Polkadot). For dapp teams building on existing Parachains, these parachains can test and run their chains on Paseo, giving them greater confidence to deploy to Polkadot, offering greater stability to the dapp teams. Anyone can deploy here, not just parachain teams, opening up the ability for new builders and teams wanting to build their own appchain.

There was a public post on the Polkadot forum detailing the testnet and the strategy: <https://forum.polkadot.network/t/the-new-polkadot-community-testnet/4956> and a post on Twitter: [https://x.com/itsbirdo\\_/status/1729426311150784697?s=20](https://x.com/itsbirdo_/status/1729426311150784697?s=20) that both received positive feedback, with many parachain teams committing to deploy on the new testnet in early 2024.

All work in 2023 to launch the testnet has been at the individual's own cost, including configuring the runtimes and bootstrapping the initial validator set. All of this work has

been done in good faith and this proposal doesn't cover retroactive funds for these efforts - we truly believe in the testnet and want to make it successful!

This proposal outlines a bounty to manage the following:

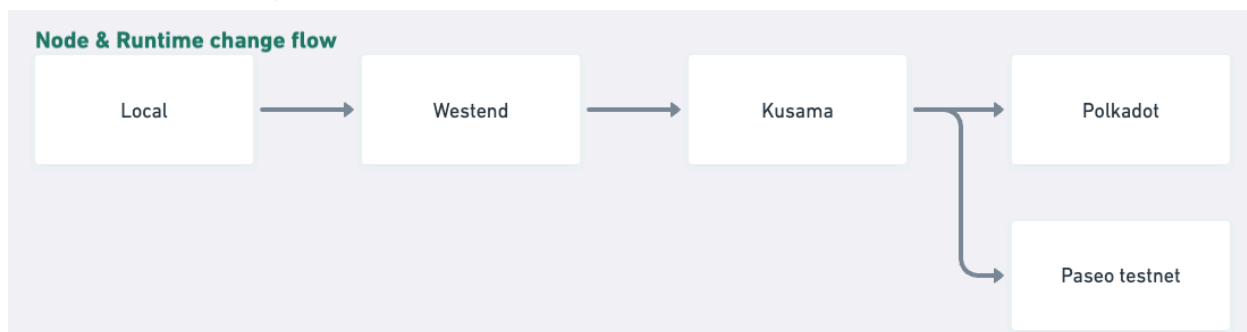
1. Setting up and maintaining the testnet - including upgrading the testnet relay chain runtime as per updates from the fellowship. Please see: <https://github.com/paseo-network/paseo-rfcs/issues/5>
2. Maintaining required system chains and upgrading the runtime as per updates from the fellowship. The system chains managed will be Assethub, Coretime, and Bridgehub for the initial launch.
3. Developer community management and technical support
4. Hardware to run the network - collators for system chains, validators, RPC services, logging, etc

## 2. Why and who is this important for?

The testnet will be used by:

1. New teams building chains on Polkadot. We need to make sure it's as easy as possible holistically for a new team to buy coretime and launch their chain on the testnet to give them the confidence to launch on Polkadot. The testnet is a stepping stone to deploying on production.
2. Existing parachain teams building on Polkadot - building their core offering and product. These teams need a stable environment to build, test, and iterate - this environment should be very similar if not the same to how the Polkadot environment is set up.
3. New and existing dapp teams building on existing parachains. These teams need a stable version of the parachain which closely mirrors how the parachain will behave on Polkadot. This includes testing products such as the Asset hub, Bridge hub, and XCM.
4. 3rd party services and product teams outside the Polkadot ecosystem, wanting to test their integrations into the Polkadot stack. CEXs, Bridges, custodial products, stablecoin providers etc.

The other testnet in the Polkadot Ecosystem is Westend, which serves the purpose of being an early testnet for code changes (see below). Westend will be used for early protocol testing, for when teams want to test new code (coretime, async backing, BEEFY, etc) before it's ready for a production release.



### 3. The bounty structure

#### Bounty

We believe the best way to handle this request, where multiple parties will have funds distributed to them, is a bounty. We are proposing a bounty to manage paying the costs in [Finances breakdown](#)

The costs and payment structure is also documented below.

#### Curators

There will be 4 proposed curators with a 3/4 threshold.

Curator members are: Birdo, Chaosdao Multisig (2/3), Erin Grasmick (Parity Devops), Wil Wade (Frequency).

The ChaosDao Multisig is made up of three key members from ChaosDao - they have been selected for their excellent participation in Polkadot governance and with other bounties like the events bounty. All child bounties to be paid will be voted on within ChaosDao governance and enacted by the multisig signers.

It is proposed that there is a curator fee of \$50 USD worth of DOT for each signer on the bounty. It is expected this will equal a total of \$10,800 calculated by the below schedule.

#### Runtime maintainers - 12 payments

1 payment per quarter to three teams to manage the runtime maintenance. \$1800

#### Validators - 40 payments

1 payment per quarter to up to 10 teams to manage node services. \$6000

#### Logging / RPCS / Misc payments - 20 Payments

1 payment per quarter to up to 5 teams to manage additional infrastructure. \$3000

### 4. What if this proposal doesn't pass?

If this proposal doesn't pass, we will work with the community feedback (again, we have received only positive feedback so far), and we will resubmit a follow up proposal. If this also fails due to community sentiment then only one testnet will be maintained, Westend - unless another team wants to maintain a community testnet at their cost.

If this proposal doesn't pass, we believe this will have a tremendous negative impact on the ecosystem, as there will be no fit-for-purpose environment to build in, for the majority of parachain and dapp teams before deploying to Polkadot.

## 5. Validator structure

To run the testnet we need validators to secure the testnet and provide computational resources to run the parachains that want to participate. We have a goal of 100 parachain teams using the testnet by the end of the year, meaning at a minimum we'll need 200 validators. It's planned to ramp up the validators as demand for the testnet increases.

Q1 - 100 validators

Q2 - 150 validators

Q3 - 200 validators

Q4 - 200 validators

Of course, this is subject to change and it will depend heavily on how many teams want to join the testnet and the rate of new teams coming onboard. This can always be modified and changed as the project progresses.

## 6. Team & Budget

The proposed team was discussed on the [forum post](#) with a call to action for anyone to join. We will be looking to add more teams to various roles as the network develops and grows.

The multisig operators will have access to sudo for the chain, any sudo changes will also require a 3/5 signed transaction to pass.

Please see details here: <https://github.com/paseo-network/paseo-rfcs/issues/6>

The total ask for this treasury proposal is 125,018 DOT (\$850,000 USD) which will be managed as a bounty.

<b>61,773 DOT</b>	(\$420,000 USD)	is allocated for 3x full time resources
<b>44,609 DOT</b>	(\$303,300 USD)	is allocated for nodes and management of them
<b>3,309 DOT</b>	(\$22,500 USD)	is allocated for open source validator logging
<b>4,353 DOT</b>	(\$29,600 USD)	is allocated for block explorers
<b>1,588 DOT</b>	(\$10,800 USD)	is allocated for curation fees
<b>9,383 DOT</b>	(\$63,800 USD)	is allocated for <b>contingency</b> for node and bounty costs

**Any funds not spent from the bounty will be sent back to the treasury**

This funding is proposed for running the testnet for 12 months.

Role	Who	FTE	Cost	Tasks
Runtime maintainers	Portico, Rogue, Zondax*	<b>2</b> Portico 0.75 Rogue 0.75 Zondax 0.5	<b>\$280,000</b>	<ul style="list-style-type: none"> <li>* Runtime upgrades</li> <li>* Code conflict resolution</li> <li>* Rococo → Paseo migration</li> <li>* Release management &amp; announcements</li> </ul>
Support	Portico, Rogue, Zondax*	<b>1</b> Portico 0.25 Rogue 0.25 Zondax 0.5	<b>\$140,000</b>	<ul style="list-style-type: none"> <li>* First line support</li> <li>* Github issue creation</li> <li>* Monitoring communication channels</li> </ul>
Client release coordination	Parity (Will P)	0.1 (funds covered by Parity)	<b>\$0</b>	
Validator & Collator providers	Amforc, Dwellir, Paradox, Portico, ROGUE, StakePlus, Will Wade, and Zondax*	As per bounty	<b>\$297,300</b>	
RPC & Archive node providers & Boot nodes	Amforc, StakePlus, Will Wade, Zondax*	Covered by IBP	<b>\$0</b>	
Open Source Logging		As per bounty	<b>\$22,500</b>	<ul style="list-style-type: none"> <li>* Running centralised open source log aggregation</li> </ul>
Dev Tooling (faucet etc)	Parity (Integrations)	As required (Funds covered by Parity)	<b>\$0</b>	<ul style="list-style-type: none"> <li>* Setup and maintenance of the faucet</li> <li>* Tooling for faucet management</li> </ul>
Change / Project management	Parity (Success)	0.2 (funds covered by Parity)	<b>\$0</b>	<ul style="list-style-type: none"> <li>* Github issue management</li> <li>* Process creation / management</li> </ul>
Block explorer	Subscan		<b>\$29,600</b>	<ul style="list-style-type: none"> <li>* Index, query, and display blocks, extrinsics, events, and accounts.</li> <li>* Open API service and API documents.</li> <li>* Customized UI theme in line with Paseo brand.</li> </ul>

\* The Zondax team has subsidized some of the costs and rates outlined in the proposal to enhance its affordability and financial viability.

The bounty for nodes (validators, collators, archive nodes, boot nodes etc) has been calculated at \$150 USD per node, per month. This is calculated monthly by:

- Hardware costs: \$70-100 for hardware (\$50 for cpu & memory, \$20-50 for disk & transfers)
- Maintenance, support and upgrades: \$50

### **Validators**

Q1 - 100 validators: \$45,000

Q2 - 150 validators: \$67,500

Q3 - 200 validators: \$90,000

Q4 - 200 validators: \$90,000

### **Collators**

2x nodes per system chain (Asset Hub, People Chain, Bridge Hub, Broker Chain)

Q1 - 8 collators: \$1,200

Q2 - 8 collators: \$1,200

Q3 - 8 collators: \$1,200

Q4 - 8 collators: \$1,200

### **Logging**

Logging is to cover open source logging across the validators, helping teams to troubleshoot quicker and easier.

Q1 - \$4500

Q2 - \$4500

Q3 - \$6000

Q4 - \$7500

### **Block Explorer**

Subscan will be providing the block explorer service, the costs are broken down below:

One time setup - \$10,000

Monthly cost - \$800 per month (\$9,600)

Storage costs - \$10/GB, approx \$10,000 per year

## 7. Q & A

### **Q. Why can't we just keep maintaining Rococo with decentralised funding?**

A. There are several reasons why we believe Rococo is no longer fit for purpose for the best experience of a testnet.

1. Rococo being a POA chain, is built differently from Polkadot (nPOS) meaning there are differences in how the chain is structured.
2. As Rococo is several years old, the time it takes a developer to sync the chain to start building is over 24h, for a developer they want to get started asap, and having a fast syncing chain is incredibly important. This is one of the reasons why ETH testnets are cycled through every 2-3 years.
3. Building on Rococo is currently permissioned and handled by Parity with strict limitations, also, the team that are managing this are leaving Parity to start their own company, this service will no longer be managed.
4. Rococo receives updates prior to Kusama, meaning we don't currently have an environment which is close to production for teams to build and test on.

We believe this opportunity has given us time to take stock of our testnet offering and make a change for the better for 2024.

### **Q. Will there be a new token for the testnet?**

A. Yes, \$PAS will be created and distributed as part of the testnet launch.

### **Q. Will the token have any value? Will it be tradeable?**

A. No, the token will never have any value. It will not be tradeable and exists as a utility token only. The token will never be bought / sold on any market.

### **Q. How will you get the token to use the network?**

A. There will be a public faucet that anyone can access to obtain the token to begin building.

### **Q. Do I need an existing parachain on Rococo, Kusama or Polkadot to receive a slot on Paseo?**

No, access to a slot on Paseo will be permissionless with the launch of Coretime and until then, any team is able to leverage the development environment to start tinkering and coding their project.

### **Q. Can anyone run a validator for the testnet?**

~~A. No, the validator set will be permissioned to maintain control and a quick SLA to incidents / changes that need to be made to the network.~~

### **Q. Will all existing parachains and projects running on Rococo need to migrate to Paseo?**

A. Yes, Rococo will be decommissioned early 2024 (more details to follow), teams will need to launch on Paseo with no chain state (preferred) or, migrate their Rococo chainstate to Paseo to continue operation of their testnet environment.



**Q. What is the migration path from Rococo to Paseo?**

A. A full migration path guide will be published in the future.

**Q. When will coretime launch on Paseo?**

A. Coretime on Paseo will launch just before Polkadot. If you are wanting to test or build applications for Coretime before it ships on Polkadot, we suggest testing this on Westend.

**Q. I want to test new Polkadot features that aren't yet on Polkadot, can I do this on Paseo?**

A. No, you should test new bleeding edge features on Westend.

**Q. Who is managing Paseo and what experience do they have running a testnet?**

Two core contributors to the Paseo testnet, the teams Portico and ROGUE are ex-Parity with two years of experience running Rococo, so they are very experienced. They are also joined by Zondax who have substantial web3 experience and are building on their substrate expertise and will be assisting in managing Paseo.

**Q. Are there any SLAs for incident management?**

Yes, this is something we are currently working out and we will propose it as an RFC in the Paseo github.

**Q. Will it be possible to access the logs from the Relay and System chains?**

Yes, all logging will be made publicly available to help with development and troubleshooting efforts.