



Polkawatch

Polkadot Decentralization Analytics

Project Delivery Report

Polkadot
Treasury Proposal

[#1132 Polkawatch, Decentralization Analytics, Continued Operation and Development](#)

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About This Document

This report contains information about the execution of actions and milestones agreed in the referenced Treasury proposal, the deliverables, community engagement and potential next steps.

Executed Actions and Milestones

Development Actions

Polkadot Sidecar Integration

Polkawatch used blockchain events to trace when rewards events took place. After Rewards events were processed, payout events were traced and the whole staking reward set reconstructed.

This represented certain challenges, for example, validators pay rewards once they are claimed, which can happen several eras after the actual reward took place. It was not straight forward to trace rewards to the actual payout they belong to.

On the other hand, the archiving processes based on subquery, was the component in our operational cluster requiring most maintenance.

Since the release of sidecar, which includes the re-computation of the staking rewards we decided to migrate to the sidecar which allows us to deliver the data following the “accounting model”, recognizing the rewards at the eras in which they are earned.

The Sidecar itself is a recent project that is undergoing some optimization tasks. We currently operate a 5 node cluster per relay chain, that constantly recalculates all the staking process, which basically equals to 24x7 stress testing of the sidecar. We see some instability that we are [addressing with the project](#).

IPFS dataset publishing

IPFS is very [inefficient when publishing datasets](#) (CAR files) with multiple small files. Our datasets are made of nearly 70K small files, published daily.

In practice, the performance of the IPFS cluster degrades very rapidly, and publishing starts failing, regardless of garbage collection.

The IPFS project finally mitigated some of the performance issues and we applied some heuristics for faster data on-boarding, which improved stability of the dataset publishing process run daily.



Continued Operation and Project Management

The system has been operated according to the agreed model with some issues during the period.

IPFS publishing became difficult and until we could address the issue effectively, publishing would often fail. This resulted in dataset drifting at times.

Polkawatch Promotion

We continue to engage the community in X and with [our blog](#) while most accesses are referred from other community projects, staking dashboard being the most relevant.

Project Next Steps

Short term priorities

Regarding foreseeable incremental developments we expect:

- Complete Staking Dashboard integration: Remaining features such as Pool Decentralization will be added to the staking dashboard.
- Anonymous usage reporting from integration with community projects.

Mid Term Priorities

Our main mid term goal is to provide JAM with the same capability as Polkadot relay chains to analyze and raise awareness of decentralization.

Long Term Priorities

The publishing method needs to be redesigned. While it is convenient to publish datasets using a decentralized network, IPFS has shortcomings that make it far from ideal.

Marketing Activities

Integration with ecosystem projects (The Dashboard) is bringing the awareness Polkawatch needs. Complemented with X and Blog is more than sufficient. So we don't expect any additional tasks in this front.

