Preface

Lido dev team would like to share an architecture decision record on rewards distribution after The Merge (i.e. ‘Ethereum phase 1.5’) to shed a little light on the considered options publicity and get community feedback.

Context and Problem Statement

The Merge event is expected to happen in March-April 2022. We have to have a working, tested, and audited solution by the 15th of March 2022.

At the moment the Lido protocol collects only Beacon chain staking rewards (i.e. ETH2-side rewards) and pays protocol fee (10%) by [minting new stETH

token shares](https://github.com/lidofinance/lido-dao/blob/816bf1d0995ba5cfdfc264de4acda34a7fe93eba/contracts/0.4.24/Lido.sol#L553). After the mainnet merge activation, validators will start receiving another two types of the rewards: transaction priority fees and an extracted MEV which would be paid on the execution layer (ex. ETH1-side) while staking rewards still would be collected on the consensus layer (ex. ETH2-side). The new rewards would be initially gained directly by validators and nominated in ether.

How can we distribute the new execution level rewards after the merge?

Decision Drivers

Primary:

- capital efficiency of the new reward distribution scheme (better APR and TVL values)
- delivery time — we have to perform Lido migration before or just after the first bunch of the merge hardfork blocks appears

Secondary:

- the current contracts codebase shouldn’t change much
- the new scheme should work even if the merge would be postponed further
- there may be only implicit and automated motivation/demotivation levers (with a minimum amount of governance interrogation and dispute resolution)
- it’s better to keep the existing stETH rebase period (~24h) as it is, due to integrations that rely on it

Considered Options

- should we continue to pay the stakeholders’ rewards and protocol fee to NOs and Lido DAO only in stETH

or switch to ether for the new rewards branch

- should we distribute the protocol fee (to Lido and NOs) under the slashing conditions or not
- should we implement an ETH-stETH auction to restore the peg when it’s down

Decision Outcome

The currently selected options: “re-stake all collected on a dedicated vault contract ether-nominated EL rewards to Lido while minting only the protocol fee (10%) stETH as part of the beacon chain rewards distribution run, and don’t mint/distribute any protocol fee on the non-profitable Lido oracle report

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Primary support points: the selected options provide compounding and have a fast shipment time due to little impact on the existing distribution scheme.

Secondary support points: the proposed decision reasonably automated and self-governed, and fallbacks to the already adopted solution in case of some frictions with the Merge hardfork schedule.

Further reading

Full ADR text (with decision consequences, notes, links, pros/cons of the considered options) is availablehere.