The Problem

Liquid staking is a groundbreaking solution that has revolutionized the way we perceive staking in the Ethereum ecosystem. It has not only reinforced the Ethereum blockchain's security but also ensured that these users are not left out of the vibrant world of DeFi protocols built on Ethereum.

Lido emerges as a vanguard in this domain with stETH. However, while stETH has been a significant advancement, the potential of wrapped versions of these tokens remains largely untapped, especially in a Web3 world where horizontal scaling is demanded more than ever before.

The Solution

To unlock the potential of stETH, it needs to be bridged to other chains. The concept of wstETH, or wrapped stETH, offers exciting possibilities, especially when you consider the broader Web3 landscape. While Ethereum remains a dominant force, the emergence of the Inter-Blockchain Communication (IBC) protocol and its connected application chains (app-chains and rollups) presents a broader, multi-functional universe.

Now, imagine the power wstETH could command if it could move seamlessly between Ethereum and these IBC-connected appchains. The fluid bridging of wstETH across these ecosystems could unleash unparalleled liquidity and open doors to novel DeFi opportunities.

What is Union?

Union just came out of the stealth mode to become the first fully trustless, hyper-efficient interoperability project using zero-knowledge proofs to connect appchains, L1s and L2s. Our expertise lies in consensus verification, BLS signatures and complex distributed systems. We envision a massively horizontally scaled future where thousands of chains can permissionless connect and access accounts, funds and contracts across chains.

Union Labs is composed of builders. We are core contributors to CosmWasm who implemented IBC within DotSama and created the first trustless bridge between Kusama and Polkadot. Our founders include ex-Composable Finance, ConsenSys and US Navy veterans.

Why Union + Lido?

- Our philosophy is: code is law. We don't rely on multisigs, oracles, or trusted parties. We simply rely on consensus verification. We believe that true decentralization can only be pioneered through a trustless and permissionless framework. Given Lido's commitment to true decentralization and trustlessness, a collaboration between two trustless parties becomes not just strategic but also ideological.
- We are the frontrunner in all metrics. As a general message passer, Union outperforms the competition by a landslide across three key metrics.

Security

Speed

Operating Cost

Union (CometBLS)

High

12s

Low

PolymerDAO (ZkMint)

High

77s*

High

Axelar

Medium

n/a**

Low

LayerZero

Low

n/a**

Low

*ZkMint cannot effectively scale to 64 and 128 validators. Comparisons are made for 32 validators here.

**Axelar and LayerZero do not use consensus verification, thus proving times are not applicable. This also reduces their security significantly since they are not trustless.

Why IBC?

Cosmos ecosystem pioneered structured interactions between blockchains based on light clients and state proofs. Although code flaws can still result in security risks in bridges, IBC has shown to be the most secure bridging protocol, supported by its longevity and continually increasing adoption. Extending this protocol to new ecosystems not only brings security improvements over centralized bridging providers but also opens up a completely new world of integrations between some of the deepest liquidity reserves and promising projects like Lido.

Solution Framework

By leveraging IBC, we can build new cross-chain DeFi primitives using a standard interface, which allows successful aggregators such as Quasar to interoperate. Since Union's underlying security model is not based around oracles or multi-sigs, the bridging risk is extremely low.

- Aggregators like Quasar can expose yield opportunities from all IBC enabled chains on Ethereum. Users just need to interact with Ethereum mainnet to get started.
- Union is the transport layer, doing the low level bridging, GMP and light client updates.
- Parties like Skip Protocol can perform routing and MEV protection.
- Range and Groomlake perform additional security monitoring and circuit breaking.
- The final locations of stETH benefit from increased TVL.
- Lido adds significant yield opportunities to their assets, making staking with Lido more desirable.
- Since IBC is an open protocol, we prevent vendor-lock in and liquidity fragmentation for stETH

Other IBC enabled protocols can connect to this network to build further products and yield opportunities.

Conclusion

Lido's mission to redefine Ethereum's staking ecosystem finds a natural ally in Union Labs. Both entities are bound by a shared ethos: the belief that true decentralization can be pioneered through a trustless and permissionless framework.

Union Labs, with its proven research on consensus verification, BLS signatures, and intricate distributed systems, can offer the technical backbone of a cross-chain liquid staking framework that can provide a fast, efficient and secure transmission of stETH to IBC.

Ask from Lido community:

We are seeking your support to get a grant from and turn this into a reality. Please let us know your thoughts in the comments below.

More about Union: docs.union.build