Introduction

StarkWare proposes the deployment of wstETH (Wrapped staked ETH) to Starknet, with the ultimate goal of recognition of the wstETH bridge endpoints as canonical by the Lido DAO.

Starknet's Growth and Ecosystem

We believe in the potential of wstETH on Starknet to bring new opportunities within the DeFi ecosystem and boost the demand for wstETH across various platforms.

Since Nov '21, developers worldwide have worked tirelessly to build and develop Starknet's Mainnet, the first Turing-complete Validity Rollup on Ethereum. As a result, Starknet is now the largest developer ecosystem among all L2s, having grown 14% over the past year to become the [8th largest](#) blockchain developer community and the leader in the L2 landscape.

References: [Developers Report](#).

High Demand for wstETH

Lido's (w)stETH has secured its position as a leading DeFi protocol on Ethereum mainnet. Starknet, as a leading Ethereum scaling solution, is seeing significant demand for the adoption of the wstETH as it opens up opportunities for users to utilize stETH holdings in various DeFi protocols. Launching wstETH on Starknet supports the missions of Lido, Ethereum, and Starknet, making Ethereum scalable, decentralized, and approachable. Therefore, major ecosystems such as Starknet have significant demand for wstETH as it opens up opportunities for users to utilize stETH holdings in various DeFi protocols.

Implementation

Currently, wstETH is bridged to Starknet via StarkGate, the canonical bridge of Starknet developed by StarkWare. All the bridge components, both L1 and L2, are upgradeable. Starkware will enable a cross-chain governance solution that will enable Lido to govern the bridge's wstETH. We estimate that the feature will be available by the end of Q2 2024.

Next Steps

The relevant source code and audits will be made available after the development of the cross-governance future is finished. These will be published to provide full transparency and accessibility to the Lido community. In addition to the cross-governance feature, we will propose upgrading the wstETH bridge to the latest version of StarkGate, StarkGate 2.0. This version is already live on Goerli and will soon be launched on Mainnet (For other tokens). The community will be encouraged to review the code and raise any questions or concerns they might have before the mainnet launch.

Conclusion

The recognition of wstETH bridge endpoints as canonical of the bridging components by Lido DAO will represent a significant step toward enhancing the DeFi ecosystem within Starknet and the continued adoption of wstETH.The importance of this initiative is underscored by the steady growth and high potential of Starknet, together with the strong demand for wstETH.

We invite the Lido community to engage in discussions and provide feedback as we move forward with this exciting development.

Audits

- Current wstETH bridge and L2 ERC20: [External - StarkGate Final Report .pdf - Google Drive](#)

- StarkGate 2.0 bridge and L2 ERC20 (Currently on Goerli): [External - StarkGate - Zellic Audit Report Draft.pdf - Google Drive](#)

Mainnet Contracts (StarkGate 1.0)

- L1 wstETH token address: "0x7f39C581F595B53c5cb19bD0b3f8dA6c935E2Ca0",

- L1 bridge address: "0xBf67F59D2988A46FBFF7ed79A621778a3Cd3985B",

- L2 bridge address: "0x0088eedbe2fe3918b69ccb411713b7fa72079d4eddf291103ccbe41e78a9615c",

- L2 wstETH token address: "0x42b8f0484674ca266ac5d08e4ac6a3fe65bd3129795def2dca5c34ecc5f96d2"

Testnet (Goerli) Contracts (StarkGate 2.0)

- L1 wstETH token address: "0x6320cD32aA674d2898A68ec82e869385Fc5f7E2f",

- L1 bridge address: "0x190c98506a5396A30CA759A139F3Fb59EF519A5D",

- L2 bridge address: "0x0399a6011b666888d647665fd65d6dcc7c2690c72d4c4454cae987f19f6ef609",

- L2 wstETH token address: "0x0335bc6e1cf6d9527da4f8044c505906ad6728aeeddfba8d7000b01b32ffe66b"

Levers setup wstETH StarkGate bridge (suggested):

L1 Ethereum

- governance_admin - StarkWare extreme cold wallet (Lido DAO agent):

- Assign governance_admin

- Assign upgrade_governor

- Assign app_role_admin

- Assign governance_admin

- Assign upgrade_governor

- Assign app_role_admin

- upgrade_governor - StarkWare cold wallet (Lido DAO agent):

- Can upgrade the bridge contract on L1.

- Can upgrade the bridge contract on L1.

- app_role_admin - StarkWare cold wallet (Lido DAO agent):

- Assign app_governor

- Assign token_admin

- Assign app_governor

- Assign token_admin

- app_governor - StarkWare cold wallet (Lido DAO agent):

- Change Max TVL limit.

- Change Max TVL limit.

- token_admin - StarkWare cold wallet (Lido DAO agent):

- Register token.

- Register token.

L2 Starknet

- governance_admin - StarkWare extreme cold wallet (Lido DAO agent through gov. feature):

- Assign governance_admin

- Assign upgrade_governor

- Assign app_role_admin

- Assign governance_admin

- Assign upgrade_governor

- Assign app_role_admin

- upgrade_governor - StarkWare cold wallet (Lido DAO agent through gov. feature):

- Can upgrade the bridge contract on L1.

- Can upgrade the bridge contract on L1.

- app_role_admin - StarkWare cold wallet (Lido DAO agent through gov. feature):

- Assign app_governor

- Assign token_admin

- Assign app_governor

- Assign token_admin

Source code and Documentation

- Source code [repo](#) for StarkGate (Live on Mainnet).

- Source code [repo](#) for StarkGate 2.0 (Live on Goerli).

- StarkGate [Documentation](#).