

The logo for NIX Platform features the word "NIX" in a bold, white, sans-serif font. The letter "X" is stylized with two overlapping, semi-transparent blue bars that cross each other. Below "NIX" is the word "PLATFORM" in a smaller, white, all-caps, sans-serif font.

# NIX PLATFORM

NIX Bridge

Connecting Privacy to Decentralized Finance

Outline v.1.0  
August 26, 2020



A Trustless Privacy Provider for Decentralized Finance Applications

## 1. Purpose

This proposal consists of a privacy and scalability enhancement system for ERC20 tokens: a bridge-like mechanism that extends NIX's blockchain embedded privacy layers to Ethereum and ERC20 tokens transactions in a permissionless decentralized approach. This is achieved by a modular framework that allows users to securely tokenize and mirror ERC20 assets from the Ethereum network into NIX Platform's Proof of Stake secured chain; as such assets are minted into NIX Ghost Tokens (NGT), they are placed into tokens-categorized global zero-knowledge accumulators, which privatize transactions and amounts transferred to the NIX chain.

The NIX Bridge design will not be limited to the Ethereum network, instead, its modular architecture becomes a major foundation for the bridge to connect to multiple ecosystems, such as Polkadot, Cardano and Tezos, with the final target of offering privacy solutions for Decentralized Finance applications.

## 2. Privacy Proposition

Apart from the scaling benefits that NIX Bridge offers to Ethereum and ERC20 token holders, the privacy value is the central use case. The way NIX Bridge proposes to solve privacy layers for different ecosystems greatly outweighs any time-based coin mixer via the Ethereum chain, the next in line technology would be Ethereum's native on-chain privacy.

Most on-chain privacy based layers are time reliant accumulators that mix all participants into one transaction, in this scenario anonymity set is fixed to the participants amount of that specific transaction.

NIX Bridge differs from above's method by creating zero-knowledge mixers of its own when ERC20 assets are tokenized into NGT's, and also by allowing countless on-NIX-chain transactions. To achieve so, NIX adds a new zero-knowledge system<sup>1</sup> to its privacy protocol, one that is a matured version of burn and redeem that requires no trusted setup nor fixed denominations and offers a top anonymity set of about 100,000.

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<sup>1</sup> Lelantus protocol currently being considered.

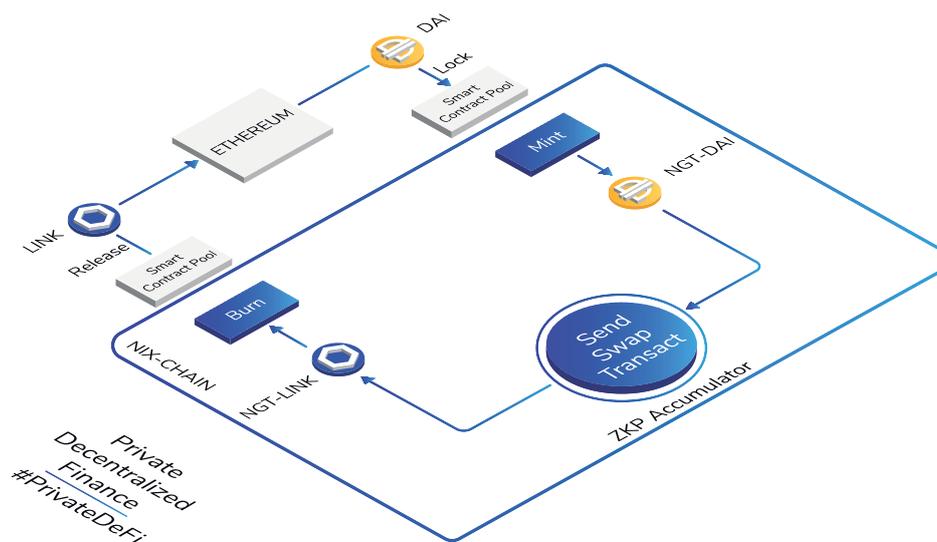
### 3. Elements and Use Case

Below there is a NIX Bridge element-centered process explanation that depicts how private transactions function. The case specifies an operation where 100 DAI tokens are privately traded for LINK in the Ethereum network using NIX Platform structure.

- Input: Smart contracts are used to lock DAI tokens in the Ethereum chain, which are controlled by the NIX Bridge; as this occurs, a one to one amount of DAI are converted into NGT-DAI, since the latter are supported by NIX Platform, they are transferred and minted in NIX chain accumulators.

- NGT-DAI Accumulator: This point is where privacy is added; users are capable of trading unlimited amounts of NGT-DAI for any other NGT-ERC20 token (NGT-LINK in this case) using NIX's zero-knowledge protocol, which accounts for anonymity and confidentiality of the transactions. This protocol also permits the partial redemption of coins on quantities less or equal to the sum originally minted.

- Output: Once the user decides to redeem their minted coins for ERC20 tokens (LINK), the desired amount of NGT-DAI are traded for NGT-LINK, which are finally burnt on the NIX chain and redeemed as LINK tokens from the Ethereum smart contract pool controlled by NIX Bridge.



### 4. Incentives and Economics

Ghostnodes play a vital role in the NIX Bridge architecture as they endorse the NGT creation process, meaning that they back and control the smart contract pool in the ETH network.

The issuance of NIX NGT from an ERC20 token involves a minting fee of 50 NIX<sup>2</sup>, this incentive is then distributed as a reward to Ghostnode operators who participate in the NIX Bridge ecosystem.

The other reward for Ghostnode operators is a flat 0.1 NIX<sup>3</sup> fee that covers all transactions made once users own NGT in the NIX network. Both minting and transaction fees are equally allocated to NIX Bridge operating node holders on a daily basis.

<sup>2</sup> Amount subject to change in the future.

<sup>3</sup> Amount subject to change in the future.

Although NIX Bridge's fees are stated as fixed amounts, their ultimate value is evidently subject to market conditions; to confront this scenario, NIX Platform foresees the possibility to engage on third party services, such as Oracles, that provide a link between NIX fees and off-chain assets that are considered stable; this way, fees remain stable and pegged to a fixed amount of a steady resource.

## **5. Requirements**

Ghostnode holders who aspire to participate in the NIX Bridge system are required to run Geth light nodes. This may or may not increase the performance requirements for a Ghostnode VPS.

## **6. Future**

NIX Bridge's structure looks forward to connecting to Ethereum chain at first, but its purpose is to be designed in a modular way so that any tokenized platform can be added to the bridge without much development. In the long run, the proposal sets a much more ambitious goal: the development of a full zero-knowledge based swap DEX on NIX, where users can easily and privately trade their tokens - think of a uniswap type dApp based on NIX that sets the foundation to provide privacy for decentralized finance applications.

## **7. Conclusion**

NIX Bridge ecosystem aims to privatize tokens in a seamless, secure and fast manner, while providing anonymity to decentralized finance applications. It consists of an external infrastructure pegged to tokenized chains that relies on a) Tokenized networks, b) NIX's Ghost Tokens and blockchain, and c) zero-knowledge privacy mixers to provide a never seen level of anonymity and confidentiality.

NIX BRIDGE

