In a previous post, we gave a comprehensive overview ofStride, the largest liquid staking protocol in the Cosmos Ecosystem, and outlined the numerous benefits of liquid staking for the dYdX chain, including increasing the chain's economic security, organically decentralizing the validator set, and increasing token efficiency. Since that time, Stride and dYdX contributors have worked together to bring the interchain accounts module to the dYdX chain in order to make liquid staking available to the community.

With the launch of liquid staking just around the corner, this post will outline the implementation details of stDYDX and seek community feedback on the initial set of validators to which Stride will delegate DYDX tokens staked with the protocol.

Overview of stDYDX

stDYDX will be dYdX's first liquid staking token (LST). At launch, token holders on the dYdX chain can liquid stake their DYDX with Stride using https://app.stride.zone/.

In exchange, holders will receive stDYDX, which will allow them to continue to earn staking rewards while keeping tokens liquid. This will allow users the flexibility to simultaneously earn staking rewards and use these tokens in DeFi protocols, or to exit their position instantly without waiting for dYdX's 30 day unstaking period.

stDYDX Implementation

As with all of Stride's stTokens, the stDYDX token is non-rebasing, meaning that the number of stDYDX in an individual's wallet does not increase as staking rewards are earned. Instead, the redemption rate of 1 stDYDX token increases over time as staking rewards accrue and Stride permissionlessly compounds those rewards. DYDX holders need only stake their tokens with Stride once, and the protocol handles the rest.

The novel feature of stDYDX is its compounding mechanism. Because DYDX has no inflation, and earns staking rewards in USDC from trading fees, rewards are first swapped to DYDX before being compounded into the existing DYDX position. This helps ensure that additional stake is continuously added to the dYdX chain, thereby increasing economic security of the protocol while providing for a continuous source of purchasing power for the DYDX token. Here's how it works:

- Step 1: DYDX is transferred from the user's dYdX wallet to the user's Stride wallet, where the tokens are deposited in a module account on the Stride chain. The user receives stDYDX tokens in return.
- Step 2: Every epoch (6 hours), Stride stakes all tokens stored in the module account to a preselected set of validators on the DYDX chain.
- Step 3: Additionally, every epoch Stride claims rewards from staked tokens and stakes them with the host chain validator set, effectively compounding them. All USDC trading fees collected as staking rewards by Stride are transferred to Osmosis, where they are swapped for DYDX and returned to Stride to be staked with the rest of the collected tokens.

This entire process is handled fully in-protocol and in a non-custodial manner thanks to interchain accounts. DYDX stakers who don't liquid stake through Stride would have to execute these swaps to DYDX and re-stake manually, which comes with the potential for tax consequences and results in a lower-overall yield.

stDYDX holders can similarly elect to redeem their tokens and the collected rewards at any time by either unstaking with Stride (subject to the unstaking period) or by trading stDYDX on a DEX like Osmosis or Astroport (no unstaking period).

Host-chain Validator Set

As mentioned above, DYDX tokens liquid staked with Stride are delegated to a set of validators on the dYdX chain, which Stride calls its "host-chain validator set." Normally, when Stride launches liquid staking for a new chain, it launches with a default host-chain validator set composed of the top 30 validators, to whom it delegates its tokens according to existing stake weight. In the case of dYdX, which is in the process of bootstrapping economic security and diversifying stake weight, this mechanism is suboptimal as it would contribute additional stake to the top 33% of vote power.

Instead, the Stride Association, with feedback from the dYdX foundation and several members of the dYdX and Stride communities, has curated an initial set of host chain validators that aims to optimize for factors that are most important to the health of the protocol in this bootstrapping phase. These factors were inspired heavily by the dYdX Foundation's published guidelines on best practices for dYdX validators and stakers. A few non-exclusive examples include:

- The validators' respective contributions to dYdX in testnet and mainnet so far, including node and infrastructure operation, testing, maintenance, bug reporting, engineering contributions, dashboard and tooling maintenance, and more.
- Validator operations and security, to the extent that this is easily discoverable using publicly available means.
- Position in the active set. Because 33% of vote power is currently concentrated in the top 2 validators, no stake will be delegated to the top 33% of vote power at launch. The initial host-chain validator set selected at launch is composed of a diverse subset validators representative of the bottom 66% of vote power

- Node performance and latency. Note that for now this does not include uptime / missed blocks, as the shorter blocktimes for the dYdX chain tend to result in more missed blocks on average than other chains.
- Governance participation.

The composition of the dYdX active validator set continues to fluctuate on a frequent basis, with validators falling out of the active set due to inadequate stake weight. In order to best serve dYdX chain, stDYDX will launch with an initial host-chain validator set of 10 validators, to whom it will delegate equally. Periodically thereafter (every 1-2 weeks), new validators will be added to the set 3-4 at a time until there are 32 validators in the set, utilizing the same criteria listed above. This method minimizes the likelihood that one or more host-chain validators will fall out of dYdX's active set and ensures the best UX and value accrual for stDYDX holders.

Choosing to add validators to the host-chain validator set is usually the responsibility of STRD stakers, who have the final say on protocol governance. A governance proposal will be going live on the Stride DAO's governance forum shortly to temporarily delegate this responsibility to the Stride Association for the dYdX Chain. If passed, this will allow for validators to be added to the set more quickly.

The proposed initial host-chain validator set at launch is:

- Imperator
- Polkachu
- Kingnodes
- PRO Delegators
- Crosnest
- Strangelove
- Cryptocrew x Defi Dojo
- Enigma
- ECO Stake
- Smart Stake

The nascency of the dYdX chain means that there are insufficient data points to run Stride's traditionahost chain validator selection process at this time. Once enough time has elapsed and the default validator set has been put in place the Stride community will choose a host-chain validator set in a manner that continues to align with the dYdX community's goals and values. Ultimately, the Stride DAO and STRD stakers will have the final say in this process.

Looking Ahead

In the days, weeks, and months following the launch of stDYDX, Stride contributors will look to take a number of steps aimed at increasing the proliferation of DYDX liquid staking throughout the Cosmos Ecosystem and beyond, including:

- An airdrop to stDYDX holders
- DeFi integrations with AMMs like Osmosis and Astroport (Day 1)
- Collateral integrations with UX, Inter Protocol, Mars Protocol, and others
- Implementation of an auction module to allow for compounding of DYDX rewards using alternative sources of liquidity
- And much more

Keep an eye on the Stride twitter page for an announcement of the stDYDX launch date. If you want to learn more about Stride and Cosmos liquid staking, check out our website or join our discord server and introduce yourself! Liquid staking is set to supercharge dYdX's Cosmos migration, and the Stride community is thrilled to join the dYdX ecosystem and be a part of that journey.