Introduction

Following our recent GHO Development Update, we wanted to provide more insight into the work we have been doing as a development contributor to the DAO at Aave Companies over the last few months.

This update will outline a few key highlights, from helping develop a new version of Aave V3 (V3.0.1) to the Staked aToken Primitive referenced in this proposal. However, this update isn't intended as an exhaustive list of our development work but rather an overview to some of the recent highlights of our work for the Aave community.

New version of Aave V3 - V3.0.1

Since the release of the Aave V3 in Q1 of 2022 the community has actively engaged in discussions ideating on various improvements to the Aave V3. As a result of the community engagement, changes to the code were introduced, resulting in a new version of the protocol (V3.0.1). This version includes some patches of low-severity issues, optimizes some parts of the code, and adds minor features.

The codebase is now being used for deployments of the Aave Protocol.

The work led by BGD Labs, was a great joint community effort involving a wide variety of contributions. You can track the work that went into the upgrade in this PR.

Our contribution to the development of the new deployment of the Aave Protocol on Ethereum Mainnet to be V3.0.1 consisted of the following efforts:

- Gathering all the initial information relating to the changes that needed to be made (Known issues of previous versions, repository issues, integrator's feedback, etc).
- Implementation of multiple items:
- Adding a flashloanable flag in a reserve configuration so it is possible to disable flashloans of specific reserves (e.g. governance tokens).
- Fixing the emission of events in aToken and DebtToken contracts. V2 and V3 contracts were emitting wrong values on BalanceTransfer, Transfer, Mint and Burn events.
- Fixing the calculation of interest rates where the Portals feature is active. The values were assuming that the unbackedMintCap is the maximum amount of unbacked ATokens a Pool could have.
- Adding the onBehalfOf parameters to a hook that the Repay function has, in order for the custom aToken's to work smoother and add logic to the repayment action.
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- Adding the onBehalfOf parameters to a hook that the Repay function has, in order for the custom aToken's to work smoother and add logic to the repayment action.
- Reviewing and addition of necessary tests to PRs.
- Working with the Aave community security service providers SigmaPrime and Certora for the audit and PeckShield for an additional audit.
- Working with BGD Labs to adapt the migration tool.

stkAAVE Upgrade

We contributed to the work of BGD Labs on the development of their upcoming stkAAVE upgrade which is referencedhere.

The upcoming upgrade of the Aave Staking Module (stkAAVE) consists of 2 main changes:

- Introduction of the slashing mechanism.
- Addition of logic to the stkAAVE transfer hook.

The work on the stkAAVE upgrade is integral to the launch of GHO. The importance of the addition of the transfer hook is introduced by the GHO technical paper. As the technical paper explains, holders of stkAAVE are eligible for a discount when borrowing GHO. Therefore, the discount should refresh every time a user's stkAAVE balance changes.

Our work here:

- Analysis of the hook to ensure an optimal implementation.
- Completing the review of the new code.
- Reviewing the AIP (pending).

GHO

We recently launched GHO on Testnet and shared this development update in conjunction. You can find the GHO testnet landing page here, the interface here and GHO's deployed smart contracts here. If you have any feedback, please feel free to share it on Github.

Some highlights of our recent development work for GHO:

- Implementation for the V3 Pool.
- Gas optimizations on GhoAToken and GhoToken.
- The introduction of a FlashMint facilitator.

We continue to be invigorated by community feedback on GHO and are excited to see it on mainnet in the near future pending its' final approval by Aave Governance. We were happy to hear positive feedback from the community on the GHO testnet interface, and always welcome further community insights.

VeBAL

Since the announcement of the Staked ATokens Primitive we have been working on the implementation of Balancer Provider Tokens (BPT) as collateral.

Some highlights of our work here:

- Meetings with community contributors to gather feedback.
- Design of the Rewards Centre, and how users would claim multiple reward tokens at once.

Work on app.aave.com

Our development work has also included front-end development and UI improvements.

A highlight here has been Aave Governance UI improvements. There are currently several updates in progress to the Aave governance page. Search functionality is now live, and big changes are coming to the delegation feature. Stay tuned.

There has also been a recent effort to revamp the user experience of approving transactions within the app. We are looking into replacing more and more approval transactions with free and instant signatures. The usage of signatures for approval has currently been expanded to:

- V3 Pool actions with supported assets.
- V2 → V3 migration.
- Repay with collateral.
- Collateral swap.
- Staking AAVE.

Conclusion

Development of the Aave Protocol is one of the many ways we contribute to the DAO and this update gives an insight into some of the work our engineering team has been recently contributing towards in this realm.

We are excited to see much of this work come to fruition over the coming months, and to continue to update the community on our work moving forward!