

An Introduction to Aave Arc

Background

Since its launch in January 2020, the Aave protocol— an open source, decentralized, non-custodial liquidity protocol— has grown exponentially¹. The Aave protocol, a set of smart contracts running autonomously on the Ethereum, Avalanche and Polygon blockchains, allows users to supply cryptoassets to a "pool" and borrow cryptoassets against the supplied assets.

A second, updated version of the Aave protocol ("V2") was deployed on the Ethereum network in December 2020. All liquidity pools on the Aave protocol across various blockchains are governed by the Aave DAO, a group of over 100,000 unique Ethereum wallet addresses (also referred to herein as "Aave Governance"). Through Aave Governance, community members have the ability to make proposals ("proposal power"), to improve the Aave protocol ("proposition power"), and to vote on such proposals ("voting power"). Community members can also delegate these powers to any Ethereum wallet address, if they so choose. The ability to delegate creates an open, democratic, diverse and decentralized system of governance, allowing anyone in the Aave community to contribute to the growth and development of the Aave ecosystem.

As demand for decentralized finance ("DeFi") infrastructure has grown, so too has the profile of users of DeFi protocols—including but not limited to the Aave protocol. As the protocol built a reputation of security and reliability through 2020, several high net-worth individuals, family offices and certain crypto-aware hedge funds started to utilize the Aave protocol. Throughout 2021, other institutional market participants have expressed interest in using the Aave protocol or related source code.

Introducing Aave Arc

Aave Arc— a version of the software underlying V2 of the Aave protocol with additional smart contracts that allow for the "whitelisting" of users— is introduced to meet this new institutional market participant demand. Aave Arc will allow for the same transactions as on V2 of the Aave protocol, but only with and among "whitelisted" users— i.e., those users that have undergone uniform know your customer ("KYC") or know your business ("KYB") onboarding procedures. This whitelisting process will, subject to the processes and procedures employed by the whitelisters themselves, allow for a uniform AML/CFT (anti-money laundering and countering the financing of terrorism) compliance as well as transaction monitoring employed by those whitelisters².

¹This paper assumes familiarity with the operations and functions of V2 of the Aave Protocol. For more information, a copy of the whitepaper relating to V2 is available here.

 $^{^{2}}$ Over time, there may be more than one version of Aave Arc deployed in order to account for differences in regulatory and compliance requirements across and among jurisdictions.



Figure 1: Aave ARC Ecosystem

Whitelisting and Whitelisters

As noted, Aave Arc is a separate and independent deployment of the Aave protocol smart contracts in which each user must be onboarded by a whitelister— a regulated entity that is authorized to conduct the requisite level of KYC/KYB for users.

Whitelisting refers to the process of:

- 1. Conducting KYC/KYB checks on any potential user;
- 2. Onboarding the user with appropriate disclosures, terms and conditions; and
- 3. Granting specific permissions (e.g., borrow, supply, liquidate) to the Ethereum wallet address(es) provided by the user³.

Whitelisters will also be responsible for: :

- Maintaining KYC and customer due diligence documentation for such users to ensure continued compliance; and
- Conducting any other necessary compliance checks as required by (i) the jurisdiction for a particular deployment of Aave Arc; or (ii) the standard operating procedures that whitelisters employ.
- Any deployment of Aave Arc will have AML/CFT and other regulatory and compliance standards applied by the whitelisters for that deployment, including KYC requirements to permit users to engage in transactions on the protocol.

Whitelisters will be chosen by Aave Governance, through the typical governance process of reviewing Aave Requests for Comment ("ARC"), providing feedback and then voting on an Aave Improvement Proposal ("AIP") to grant the technical whitelisting permissions.

 $^{^{3}}$ Over time, there may be more than one version of Aave Arc deployed in order to account for differences in regulatory and compliance requirements across and among jurisdictions.

Ultimately, it is up to the whitelisters of a particular Aave Arc deployment to determine the standards or licensing arrangements that will be sufficient to be approved by Aave Governance as a whitelister; whitelisters also will define and specify these standards and their attendant implementation. The specific terms and conditions of whitelisting and granting permissions for Aave Arc will be set by the whitelisters in relation to the users they onboard.

While Aave Governance will ultimately decide on each of the whitelisters for any Aave Arc deployment, whitelisters are likely to be regulated entities that (a) employ KYC/KYB principles in accordance with FATF guidelines to identify and accept their clients; (b) have robust AML/CFT compliance programs; and (c) are currently in good standing with an active license/registration in the entity's operating jurisdiction will be accepted as "whitelisters" on deployments of the Aave Arc.

Permissions

In any deployment of Aave Arc, the following entities will have permissions:

- Whitelisters. Only certain entities will have permission to whitelist Ethereum wallet addresses for participation in any deployment of Aave Arc. Such entities are the "whitelisters" referred to throughout this document. As discussed, these whitelisters will conduct KYC/KYB on the entities or individuals associated with the wallet address.
- Entities enabled to participate in protocol transactions. Only those users with Ethereum wallet addresses that have been whitelisted to act as suppliers, borrowers or liquidators have permission to participate in Aave Arc pools. These entities are "permissioned" to use the protocol through the whitelisters.
- Owner of Permissions Manager contract. A separate wallet address belonging to Aave Governance will have the ability to grant whitelister status or the permissions associated with being a whitelister to various entities. Because the entity which grants permissions to the whitelisters is simply an Ethereum address, it is possible to have a smart contract in this role, such that a DAO or governance system controls this type of permission.
- Market Admin. The permissioned protocol also has a Market admin, who will have full permissions on the protocol, which permissions will overlap with both Whitelisters and Owner of Permissions Manager, because, by updating the smart contract, they can be replaced. Aave Governance will hold the Market Admin permissions.

Governance of Aave Arc

Aave Governance will have ultimate responsibility over each deployment of Aave Arc. Aave Governance will be responsible for approving new whitelisters—whether through an independent, third-party proposal or through its own proposal.

Aave Arc, however, enhances Aave Governance to ensure that white listers and whitelisted users have the ability to comply with their regulatory obligations such that white listers have a "guardian" role similar to the Aave protocol V2 community guardian role.

With this guardian role, whitelisters that participate in Aave Arc are able to collectively veto decisions made by Aave Governance relating to that deployment of Aave Arc. This veto will continue to protect adherence to AML/CFT standards for each deployment— it will ensure consistency of the AML/CFT, and risk standards applied by whitelisters in a particular deployment. It will also protect the continuing "risk level" acceptable to the whitelisters.

Any veto by the whitelisters should be motivated by regulatory or compliance concerns only and should be enacted by a whitelister only to ensure the safety and compliance of the relevant Aave Arc deployment.

Conclusion

This introduction to Aave Arc sets forth a brief overview of the initial deployment of Aave Arc. As of the date of this whitepaper, Fireblocks LLC has submitted an ARC to be the first whitelister for the initial deployment of the Aave Arc smart contracts.

As with all DeFi protocols, Aave Arc will continue to progress and grow and whitelisters will be in the unique position to address and shepherd this new evolution of the DeFi ecosystem.