

TL;DR

Technical analysis for the Aave community on the upcoming Optimism Bedrock network upgrade, which should not affect the Aave system.

Bedrock?

Bedrock is the first major upgrade of the Optimism network since its production release. The main focus of Bedrock is maturing/optimizing infrastructural components of the system, improving EVM equivalence, and introducing more modularity in the architecture.

As described on the [official Bedrock documentation](#):

Bedrock improves on its predecessor by reducing transaction fees using optimized batch [compression](#)

and Ethereum as a data availability layer; shortening delays of including L1 transactions in rollups by handling L1 re-orgs more gracefully; enabling modular proof systems through code re-use; and improving node performance by removing technical debt.

How does Bedrock affect Aave?

Block Production

While there are technical differences in regard to block production, the most relevant change for the Aave ecosystem is block frequency. While the current networks produce blocks irregularly, post bedrock optimism will produce blocks every 2 seconds.

As timelocks on the Aave cross-chain-governance and calculations on the liquidity protocol are time-based, AAVE IS NOT AFFECTED

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EIP-1559

Optimism will introduce its own version of 1559 (which behaves similarly but doesn't burn the ETH). While this might positively affect users - by having more predictable transaction costs - it does not impact the protocol in any way.

AAVE IS NOT AFFECTED

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Removal of Opcodes

Bedrock will remove L1BLOCKNUMBER

and the OVM_ETH

contract which were both unused in the Aave ecosystem.

AAVE IS NOT AFFECTED

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Mempool / Reorgs

Derived by the new block production mechanism, Bedrock will introduce a mempool and might do reorgs.

AAVE IS NOT AFFECTED

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Contracts / Pre-deploys

Aave governance relies on [L1CrossDomainMessenger

](<https://github.com/ethereum-optimism/optimism/blob/develop/packages/contracts-bedrock/contracts/L1/L1CrossDomainMessenger.sol>)

and [L2CrossDomainMessenger

](https://github.com/ethereum-optimism/optimism/blob/develop/packages/contracts-bedrock/contracts/L2/L2CrossDomainMessenger.sol)

for arbitrary message passing. These contracts will still be supported/recommended post-bedrock. Address-aliasing will still be applied to deposit transactions(arbitrary message L1→L2 transactions), meaning the cross-chain-forwarder (util on Aave cross-chain governance) will continue to work without adjustments.

Deposits will be faster - from 10-20 to < 2.5 minutes. This means that cross-chain governance proposals might be relayed ~15min faster than they are currently.

AAVE IS NOT AFFECTED (only positively)

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Assets

From a technical perspective, the upgrade should not impact assets listed on Aave v3 Optimism.

AAVE IS NOT AFFECTED

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Downtime

The network upgrade is estimated to take 2-4h during which transactions will not be processed. Given this relatively short period and the [upcoming activation of the Price Oracle Sentinel](#), there should not be a significant risk due to this.

Chainlink price feeds should start being updated shortly after the sequencer is up, within an acceptable margin covered by the Price Oracle Sentinel.

AAVE IS NOT AFFECTED

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Optimism Bridge. Aave cross-chain governance

During the upgrade, message passing (including deposit/withdrawal of assets) will be halted too. This could potentially affect the Aave cross-chain governance system connecting Ethereum and Optimism, but it should not be the case.

The first reason is that all messages submitted via the Ethereum → Optimism bridge before the upgrade will be in practice “queued” until the upgrade finishes and afterward, processed on L2.

Secondly, and even more important, currently there is no Aave governance proposal on voting stage targeting Optimism, so given the time constraints of the system on Ethereum, it is simply impossible to have one for June 6th.

AAVE IS NOT AFFECTED

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Conclusion

The Optimism team has done great work keeping the Bedrock upgrade as impactless as possible in applications of the network.

The Aave protocol will only be affected by unavoidable downtime during the upgrade. However, we don't foresee any potential problem, given its short duration, and the presence of the Aave v3 Price Oracle Sentinel.

In order to avoid any kind of issue, we still encourage users to keep a good Health Factor and/or monitor their positions

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