



ANASTASIA LABS

Proof of Achievement – Milestone 4

Bug Identification and Resolution

Project Number 1100024

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Project Name: Lucid Evolution: Redefining Off-Chain Transactions in Cardano

URL: [Catalyst Proposal](#)

Evidence Definition

Document with records of bug resolution activities, including bug fixes implemented, code changes made, and testing/validation of fixes. Verification reports confirming the successful resolution of identified bugs or issues

Governance Era Bugs and our experience

At Anastasia Labs, we maintain an active presence in our Discord channel, where we engage daily with Cardano developers to address their challenges and concerns with Lucid Evolution. This direct communication channel has proven invaluable in identifying and resolving issues in real-time, ensuring that our library continues to meet the diverse needs of the ecosystem's developers.

During the critical transition period of the first hard fork, we provided extensive support to numerous dApps and individual developers, helping them adapt their applications to maintain compatibility and functionality which has helped us ourselves to identify further issues we have not encountered ourselves too. This hands-on approach demonstrates our commitment to not just developing tools, but actively supporting the broader Cardano developer community through significant protocol changes.

Bug Tracking and Issues

We deliberately address all outstanding issues via our [Issues section](#) of our repository. As it can be observed we have investigated and closed over 50+ issues to date, each of them containing varying depths of complexity. Our solutions and discussion for each of these issues can be tracked by anyone through the Issues section. We are continuously working on making the evolution library better, faster and smoother thanks to our team and active developer community.

Bug Identification and Resolution

Bug Resolution Activities

During our development cycle, we identified and resolved several issues through major pull requests for example ([PR 195](#), [PR 225](#)).

Technical Infrastructure

A significant portion of our bug fixes addressed core infrastructure challenges.

We implemented precise reference script fee calculations for the Conway era, including fixes like script size calculations that involved CBOR length handling. (Cost model JSON parsing improvements)

Increased network compatibility by implementing specific feature handling between Preview and Preprod networks for consistent behavior across different environments.

Performance and Reliability

For improved system reliability, we implemented Blockfrost rate limit handling and refined our dependency injection system.

The introduction of custom fee calculation capabilities through `setMinFee` provided more flexible transaction handling.

These improvements were complemented by transaction builder issues/refinements that enhanced general performance and tackled `TxBUILDER` issues.

Technical Debt and Code Quality

Our quality assurance efforts included updating the Cardano Multiplatform Library (CML) to version 5.3.1-3 and implementing more robust error handling through `Effect.orDie`.

Our documentation improvements included the addition of sample environment configuration files and enhanced error messaging, making the library more accessible to developers. We have an integrated changeset for better version management.

Ongoing Development

The governance features in Lucid Evolution are in a state of continuous development and refinement. As the Conway era and its associated governance mechanisms continue to evolve, our library adapts to keep pace with the latest community discussions and protocol changes.

Our codebase is designed to be easily adaptable to changes in the governance protocol. We maintain an extensive suite of on-chain tests to ensure reliability across different scenarios, while closely following constitutional workshops and governing body elections to align our features with the community's needs.