LANDANO

Cardano Mendix plug-in by the Landano team

Preliminary Testing Documentation

Author: Dorus van der Kroft - dorus@landano.io

Table of contents

Cardano Mendix Plugin – Preliminary Testing Documentation

1. Project Overview

The **Cardano Mendix Plugin** bridges the world of low-code application development and blockchain technology. Built with Mendix 10 and integrated with the **Cardano Client Lib**, the plugin enables developers to embed Cardano blockchain capabilities—such as transactions, NFT minting, and smart contract interactions—directly into Mendix applications.

This approach aims to **dramatically reduce the technical barriers** associated with blockchain development by providing a Mendix-native abstraction layer for common blockchain operations. The plugin is designed to be modular, extensible, and secure, with a strong focus on usability within enterprise environments.

> ⚠️ This document will be published on our official site as part of the Fund 11 milestone deliverables: https://www.landano.io/project-catalyst/fund-11/

---

2. Features Tested

Preliminary testing was performed on the plugin's **core capabilities**. This first round of testing focused on verifying functional correctness, developer usability, and integration with the Mendix runtime environment.

2.1 Simple Transactions

Validated the ability to:

- Initiate and broadcast ADA transfers between wallet addresses
- Confirm inclusion on the blockchain
- Handle and log transaction failures, including improved error reporting ([CMP-39])

2.2 Metadata Transactions

Validated:

- Input and attachment of custom metadata
- Display and popup handling in UI ([CMP-64], [CMP-42])
- Extended support for longer metadata values ([CMP-34])

2.3 Multi-signature Transactions

Confirmed support for:

- Creation of multi-sig policies
- Witness collection flow
- Transaction construction and execution ([CMP-6], [CMP-36])

2.4 NFT Minting and Native Tokens

Included testing of:

- NFT creation and IPFS metadata linking ([CMP-61])
- Support for multiple recipients and token transfers ([CMP-49], [CMP-7])

2.5 Smart Contract Interaction

Successfully demonstrated:

- HelloWorld example ([CMP-58])
- Lock/unlock fund flows ([CMP-8])
- Transaction flow design improvements ([CMP-37])

---

3. Testing Methodology

3.1 Sprint-based Approach

- Two-week sprints under Scrum methodology
- CMP Sprint 4 focused on integration stability, UI/UX, and error handling
- Test cases derived from user stories and issue reports

3.2 Issue Tracking

- All test outcomes and bugs tracked via Jira
- Full sprint export: Jira Export Document

3.3 QA Workflow

- Unit and integration tests performed by dev team
- Exploratory testing by independent testers
- Resolved bugs categorized by severity

---

4. Key Findings and Issues

4.1 UI and Usability

- Improved interface messages and layout clarity ([CMP-36], [CMP-41], [CMP-44])
- Polished wallet views with copy features ([CMP-25])
- Streamlined onboarding and labels ([CMP-46], [CMP-45])

4.2 Error Handling

- Major upgrade in transaction error granularity ([CMP-39])
- Java action outputs now distinguish known error types vs. unknown
- More user-friendly and localizable error messages

4.3 Application Flow

- Metadata and token flows validated
- Smart contract and multi-sig support integrated and working end-to-end
- Logging and balance refresh improvements addressed ([CMP-27])

---

5. Resolution Tracking

All issues resolved during CMP Sprint 4 were tracked and managed using a sprint board with the following columns: To Do, In Progress, Review, Test, and Done. Stories were moved from left to right through these columns as they progressed towards resolution. This workflow ensured a systematic approach to issue tracking and resolution. Details of all resolved issues are documented in the linked Jira export.

All issues resolved during CMP Sprint 4 are documented in the linked export.

This concludes the preliminary testing phase of the Cardano Mendix Plugin. A full testing summary will be made available at: https://www.landano.io/project-catalyst/fund-11/