

Begin Wallet - Milestone 1

Voting (dApp Rating) Integration in Begin Wallet

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1. Introduction

The Begin Wallet team has successfully integrated a decentralized application (dApp) rating system in version 1.21.2. This integration enables users to rate dApps within the wallet's ecosystem while ensuring transparency and integrity through an on-chain proof-of-record mechanism.

The key objectives of this implementation include:

- Providing a seamless mechanism for users to rate dApps.
 - Storing and indexing ratings efficiently using both off-chain and on-chain components.
 - Allowing any wallet or dApp to retrieve and display rating results from on-chain data.
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2. Acceptance Criteria

This milestone is considered successfully achieved if a user of the Begin Wallet (Chrome) can:

1. **Register for Voting:** Register as a voter within the app.
 2. **Cast Votes:** Participate in the voting process by casting votes on at least two items, with each vote being recorded.
 3. **View Voting Results:** Access and view results of the votes.
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3. Technical Solution

3.1 Off-chain Implementation

To ensure efficiency and ease of access, a set of APIs has been developed to:

- Store and index dApp ratings.
- Compute the average rating for each dApp.
- Ensure that each dApp receives only one rating per user, while allowing users to update their ratings over time.
- The basic dApp information is provided by Cardano Cube via API.

3.2 On-chain Implementation

To maintain transparency and allow for interoperability across wallets and dApps, the following on-chain mechanisms were implemented:

- **Metadata Label 1668:** Reserved to store proof of rating (vote) on-chain.
- **Batch Voting Support:** Users can rate multiple dApps within a single transaction to optimize network fees.
- **Interoperability:** The rating format enables any wallet or dApp to retrieve and display results from on-chain data.

Sample On-chain Rating Data Structure

```
{
  "type": "dapp-rating",
  "uuid": "e9a6237d-e9e6-4fa1-befe-989ac68843e5",
  "origin": "Begin Wallet",
  "ratings": [
    {
      "logo": "https://cdn.cardanocube.com/9592ckvwmp8jmbm3i6xacsrtmuxi",
      "name": "SingularityNET",
      "dappId": "singularitynet",
      "rating": 2,
      "category": "AI"
    },
    {
      "logo": "https://cdn.cardanocube.com/868hamwcp4kqlsfqlm7lgzg1euw3",
      "name": "Pavia",
      "dappId": "pavia",
      "rating": 3,
      "category": "Metaverse"
    }
  ],
  "voterId": "stake1u986aacj5hrl6suhv2zn06zk0pgp8zvjkt7tc38y4nu6fzcsg3cxt"
}
```

4. Results & Verification

The successful implementation of the dApp rating system was validated through the following:

- **Demo Video:** Demonstrating the rating process and on-chain recording.
YouTube Demo
- **On-chain Transaction:** Verifying recorded ratings on-chain.
Cardano Explorer Transaction
- **CIP-10 Compliance:** Reserved Metadata Label 1668 merged into CIP-10.

- **Open-source Repository:** Implementation details and source code available at GitHub.
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5. Conclusion

The dApp rating system integration in Begin Wallet 1.21.2 successfully enhances the user experience by allowing transparent and verifiable ratings. With the combination of off-chain APIs for indexing and on-chain metadata for immutability, this implementation ensures efficiency, cost-effectiveness, and interoperability across the Cardano ecosystem.

Also included:

- Enhanced UI for rating visualization.
- Sort by ranking and filtering options based on category.
- Integration with broader ecosystem partners for increased adoption.

This milestone marks a significant step in decentralized governance and user-driven reputation systems in the Cardano ecosystem.

End of Report