ONE WALLET - MULTISIG AND MULTICHAIN WALLET

AUTHORS

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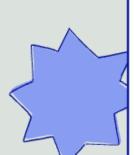
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Abstract

Our project aims to implement secure multi-signature and multi-chain transactions on the Ethereum blockchain using smart contracts. By using smart contracts, multiple parties can securely authorize and execute transactions across multiple chains, which can reduce the risk of fraudulent activities. We have developed a user-friendly frontend using Next.js, a popular React-based framework, to manage these transactions. Through this project, we demonstrate the benefits of using multi-signature and multi-chain transactions on the Ethereum blockchain, and how they can be integrated with Next.js to create a reliable and easy-to-use application.

Findings

The One Wallet project's characteristics and features provide several significant conclusions about smart contract multisig wallets. Multisig wallets increase security by requiring approval from multiple signature owners, reducing the risk of theft or security breaches. Integrating the wallet with other blockchain ecosystems can maximize its potential user base and functionality. To ensure stability and dependability, managing external library dependencies and testing for security flaws is crucial. Prioritizing user experience with intuitive features is also important for promoting wallet adoption. These findings should be considered during the development of the One Wallet project to maximize its potential success and impact.

Methodology

Our approach to implementing multi-signature and multi-chain transactions on the Ethereum blockchain involves a combination of smart contract programming and web development techniques. We will research the technical aspects of multi-signature and multi-chain transactions on Ethereum and use Solidity to write the necessary smart contracts. We will also integrate web3.js to connect the frontend with the Ethereum blockchain and use Next.js to create a user-friendly interface. Our methodology ensures a secure and user-friendly application.

Conclusion

To summarize, the One Wallet project provides a significant improvement in the development of flexible and secure multisig smart contract wallets. It offers advanced features such as the ability to add or remove owners, transfer currency, and deploy on EVM compliant networks. The wallet's stability and reliability are enhanced through the use of tools like scaffold-eth 2, Next.js, Wagmi, EtherJS, and RainbowKit. Although there are limitations and areas for improvement, the project team can ensure its success by managing dependencies, conducting testing and debugging, and prioritizing user experience. By addressing these issues and expanding on the benefits of the One Wallet initiative, the team can make significant contributions to the development of blockchain-based financial products and services.

Future Work

Incorporating NFTs into the wallet will give users direct access to all of their digital assets on a single platform. Furthermore, it is also possible to add the capacity for NFT transfers. The One Wallet project's future development will place a high priority on user experience and accessibility as a key area of focus. It will become more crucial to create and build tools that are simple to use and available to a wide variety of consumers, regardless of their level of technical ability, as the use of blockchain technology continues to rise.