

# Account Abstraction

note: Please note that this section is under active development.

## Overview

The Ethereum blockchain network has two central types of accounts: externally owned accounts (EOAs) and contract accounts. EOAs are controlled by users; meanwhile, contract accounts are managed by smart contract code. Both account types are essential for the Ethereum ecosystem. However, EOAs are required to interact with the network, as they are the only way for you to initiate transactions and execute smart contracts.

The problem with EOAs is their limitation to basic operations. And this restricts your options for interacting with the Ethereum blockchain. For example

- Poor Security: EOAs are secured by private keys, which are vulnerable to theft and loss.
- Lack of customization: We must initiate transactions from EOAs, which means that we can't customize the transaction flow. For example, we can't set up automatic payments or multi-factor authentication or define custom rules.
- Gas Payment: Account must hold ETH to pay for gas fees. This is a significant barrier to entry for new users.

## What are the benefits of Account Abstraction?

- Increased Security: We manage conventional Ethereum accounts using seed phrases and private keys. This can be problematic if a user loses their seed phrase or accidentally leaks their private key. With account abstraction you're given more opportunities to implement additional options for both account recovery and authentication.
- Improved User Experience: With account abstraction, we can create smart contract wallets that can be used to implement a wide range of features. For example, we can create wallets that automatically pay for gas fees, wallets that require multi-factor authentication, and wallets that can be recovered using a social recovery mechanism.