

Introduction to Enso

What is Enso?

Enso is financial infrastructure for developers that wish to develop, embed, or utilize DeFi interactions through their application. Whether this may be a wallet, smart wallet, exchange, defi interface aggregator, router, or any other application wishing to interact with the decentralized finance ecosystem. Enso provides the tools to execute and fetch all relevant metadata of DeFi protocols enabling developers to build the next generation of financial applications.

Key points:

1. Native transaction bundling.
2. Enso enables users to execute multiple transactions in one atomic transaction. For example, if a user wishes to swap 10 tokens, lend, borrow, and provide liquidity to a pool all within one transaction, this is possible with Enso.
3. DeFi actions.
4. Enso provides a wide variety of DeFi actions that can be bundled together to create a custom workflows.
5. Best route execution.
6. Enso will fetch the best route for a given desired path taking into account gas execution costs, slippage, and anticipated amount out.
7. Standardization.
8. Enso provides a standardization layer for developers to easily integrate DeFi protocols into their application. This includes standardizing the data format, the transaction format, and the execution format.
9. Metadata.
10. Enso provides all metadata related to a DeFi protocol ranging from APY, balances, logos, urls, and more.

How does Enso work?

Enso is a fully non-custodial aggregation middlelayer between the users, and Decentralized Exchanges, and DeFi protocols.

Enso supports both [Externally Owned Account\(EOA\)\(opens in a new tab\)](#) and [Contract Account\(Smart Wallet\)\(opens in a new tab\)](#) interactions.

High-level Architecture

1. An application
2. wants to offer to their users
3. the ability to swap tokens, lend, borrow, or provide liquidity to a pool.
4. The application
5. will send a request to Enso
6. with the desired [actions](#)
7. and parameters.
8. Enso
9. will fetch the best route for the given [actions](#)
10. and parameters.
11. Enso
12. returns call data back to the application
13. .
14. The application
15. will present the call data to the user
16. .
17. The user
18. will execute on the call data.
19. The user
20. will obtain all the result from the [actions](#)
21. they have chosen.

An example of actions being bundled together can be viewed in the [actions](#) section.

Externally Owned Account(EOA) Interactions

Applications that enable EOAs to interact with their platform can utilize Enso for all [Tokenized Interactions](#) .

All interactions that are done from an EOA account will result in the corresponding tokens being sent to the EOA account. For example, if a user swaps 10 tokens, the 10 tokens will be sent to the EOA account.

Contract Account(Smart Wallet) Interactions

Applications that enable Smart Wallets to interact with their platform can utilize Enso for a [Tokenized Interactions](#) and [Non-Tokenized Interactions](#) .

All interactions that are done from a Contract Account will result in the corresponding tokens and state being stored inside of the Contract Account. For example, if a user borrows on Aave, and then leverages the borrowed tokens then the borrowed tokens, leveraged state will be stored and associated to the Contract Account.

Who can use Enso?

All of these network participants can leverage Enso not only for execution, but also for fetching all relevant metadata of DeFi protocols:

1. Single Chain Routers
2. : Enable best route execution into base tokens and exotic tokens with native transaction batching.
3. Cross-chain Routers
4. : Enabling users to execute a bundle of actions on one chain, and then bridge to another chain and execute another bundle.
5. Wallets
6. : Show DeFi protocols, and enable execution into hundreds of DeFi protocols with a wide variety of primitives available with best route execution.
7. Dashboards
8. : Enable better execution of routes, and provide a better user experience for users through native transaction batching of DeFi interactions
9. Aggregators
10. : Enable best route execution into base tokens and exotic tokens.
11. Yield Farming Funds
12. : Rely upon Enso for providing you all the metadata and execution paths you need to make the best decisions for your fund.
13. DeFi protocols
14. : Offer one-click deposits from any token into your protocol natively on your own interface to increase your TVL.
15. Account Abstraction SDKs
16. : Natively bake within your SDK the ability to not only create Smart Wallets compatible with ERC4337 but also enable Enso API to supercharge your SDK users for building the next generation of DeFi applications.
17. Strategy Platforms
18. : Enso is a highly flexible and versatile framework that allows you to create custom DeFi strategies where you can create your own custom workflows, and build your own interface and full product ontop of Enso! In theory you can replicate many DeFi products that exist as of today through this method and go to market extremely quick to test your product.

Ready to get started? Check out our [Examples](#) guide to start building with Enso today!

[Welcome Get API Key](#)