Custom Bridges

Custom token bridges are any bridges other than the Standard Bridge . You may find yourself in a position where you need to build a custom token bridge because the Standard Bridge doesn't completely support your use case. This guide provides important information you should be aware of when building a custom bridge.

Custom bridges can bring a significant amount of complexity and risk to any project. Before you commit to a custom bridge, be sure that the Standard Bridge definitely does not support your use case Building a custom bridged token is often sufficient for projects that need more flexibility.

Guidelines

Custom bridges can use any design pattern you can think of. However, with increased complexity comes increased risk. Consider directly extending or modifying the StandardBridge (opens in a new tab) contract before building your own bridge contracts from scratch. Doing so will provide you with an audited foundation upon which you can add extra logic.

If you choose not to extend the StandardBridge contract, you may still want to follow the interface that the StandardBridge provides. Bridges that extend this interface will be compatible with the OP Mainnet Bridge UI (opens in a new tab) . You can read more about the design of the Standard Bridge in the guide on Using the Standard Bridge .

The Superchain Token List

The Superchain Token List exists to help users and developers find the right bridged representations of tokens native to another blockchain. Once you've built and tested your custom bridge, make sure to register any tokens meant to flow through this bridge by making a pull request against the Superchain Token List repository (opens in a new tab) . You must deploy your bridge to OP Sepolia before it can be added to the Superchain Token List.

Next Steps

You can explore several examples of custom bridges for OP Mainnet:

- NFT Bridge (opens in a new tab)
- L2 DAI Token Bridge (opens in a new tab)
- and deployed addresses (opens in a new tab)
- SNX Bridge (opens in a new tab)

The Standard Bridge Sending Data Between L1 and L2