Bridging Basics

OP Mainnet is a "Layer 2" system and is fundamentally connected to Ethereum. However, OP Mainnet is also a distinct blockchain with its own blocks and transactions. App developers commonly need to move data and tokens between OP Mainnet and Ethereum. This process of moving data and tokens between the two networks is called "bridging".

Sending Tokens

One of the most common use cases for bridging is the need to send ETH or ERC-20 tokens between OP Mainnet and Ethereum. OP Mainnet has a system called the <u>Standard Bridge</u> that makes it easy to move tokens in both directions. If you mostly need to bridge tokens, make sure to check out the <u>Standard Bridge</u> guide.

Sending Data

Under the hood, the Standard Bridge is just an application that uses the OP Mainnetnessage passing system to send arbitrary data between Ethereum and OP Mainnet. Applications can use this system to have a contract on Ethereum interact with a contract on OP Mainnet, and vice versa. All of this is easily accessible with a simple, clean API.

Next Steps

Ready to start bridging? Check out these tutorials to get up to speed fast.

- Learn how to bridge ERC-20 tokens with the Optimism SDK
- · Learn how to bridge ETH with the Optimism SDK
- Learn how to create a standard bridged token
- Learn how to create a custom bridged token

Troubleshooting The Standard Bridge