The Hop protocol provides a trustless and scalable rollup-to-rolllup bridge. The protocol aims to:

1. Allow tokens to be quickly and easily sent from one rollup to the next
2. Enable fast-exits from rollups
3. Eventually support cross-rollup contract calls

We believe this is a viable solution to cross-rollup composability for the majority of use cases. The Hop protocol achieves this using a two-pronged approach:

1. Create a cross-network bridge token that can be quickly and economically moved from rollup to rollup or claimed on layer-1 for its underlying asset.
2. Use an Automated Market Maker to swap between each bridge token and its corresponding Canonical Token on each rollup in order to dynamically price liquidity and incentivize the rebalancing of liquidity across the network.

Looking for constructive feedback around the design and to discuss future areas of exploration.

Paper: https://hop.exchange/whitepaper.pdf

@miguelmota @shanefontaine and I have put together a fully functional demo that bridges Arbitrum's and Optimism's rollups and the Kovan testnet.

Contracts: https://github.com/hop-exchange/contracts

Demo: https://hop.exchange