Testing apps for OP Stack chains

For the most part, running applications on OP Stack chains is identical to running them on Ethereum, so the testing is identical too. In this guide, you learn the best practices for OP Stack testing where there are differences.

Unit tests and single layer integration tests

The vast majority of tests do not involve any OP Stack-specific features. In those cases, while youcould test everything on an OP Stack chain or a test network, that would normally be inefficient. Most Ethereum development stacks include features that make testing easier, which normal Ethereum clients, such as geth (and our modified version,op-geth) don't support. Therefore, it is a good idea to run the majority of tests, which do not rely on OP Stack-specific features, in the development stack. It is a lot faster.

It is a best practice to design and run thorough tests across an OP test network, either in yourlocal development environment or onthe test network , depending on your use case. Running proper testing is key to identifying fringe cases where the equivalence between OP Stack chains and Ethereum breaks down (or where Ethereum mainnet itself and the development stack may be non-equivalent in a production environment).

Multilayer integration tests

Some apps need OP Stack-specific features that aren't available as part of the development stack. For example, if your decentralized application relies oninter-domain communication , the effort of developing a stub to let you debug it in a development stack is probably greater than the hassle of having the automated test go toa local development environment each time.

Integration with other products

In many cases a decentralized application requires the services of other contracts. For example,Perpetual v. 2(opens in a new tab) cannot function withoutUniswap v. 3(opens in a new tab).

If that is the case you can usemainnet forking(opens in a new tab) . It works with OP Stack chains. Alternatively, you can connect to ourtest network if those contracts are also deployed there (in many cases they are).