

Overview

OP Labs maintains development networks (devnets) to test new OP Stack features. There are two different kinds of public devnets: alphanets and betanets, which serve different purposes and are deployed on different timelines.

Network types

Alphanets

Alphanets are monthly devnets that include production-bound protocol upgrades that are ready for testing. We rely on alphanets to move faster while improving the reliability of upgrades. If a feature is ready by the monthly deployment date (typically the third Wednesday of the month), the feature will be included in that month's devnet. Otherwise, the feature must wait for the next alphanet. Features must be included on an alphanet before they can be deployed on a betanet.

Alphanets decouple feature development and testing from hardfork scheduling, allowing teams to test and iterate on features well in advance of their release on mainnet.

They're designed to stay fresh: Each one is deployed monthly and replaced, so they won't be usable as long-term networks. Each alphanet is launched from genesis, meaning that new features are encoded in genesis rather than undergoing a network upgrade from a preexisting version. The alphanet is then tested, with an emphasis on acceptance testing for new features followed by fault injection testing and performance / load testing. After five weeks, the alphanet is spun down and a new alphanet takes its place, with whatever new features have been developed in that time.

Alphanets are named after animals and ordered alphabetically.

Betanets

Betanets are devnets that are deployed on an as-needed basis, typically ahead of an upcoming hardfork. Features are activated using hardfork timestamps, mimicking the production upgrade process.

Betanets are used to solidify the scope of the next hardfork before deploying to the production testnet (e.g., OP Sepolia). A betanet includes the exact set of features planned for inclusion in the next network upgrade. Features must be included on a betanet before they can be deployed on a testnet.

Devnet comparison

Network type	Alphanet	Betanet	Purpose
Early testing of production-bound features			Final validation for the next hardfork
Deployment	Monthly	As-needed	Feature activation Included and activated at genesis Activated through a network upgrade
Lifecycle	5 weeks	Until replaced by the next betanet	

Current devnets

A full list of active alpha and betanets is available at <https://devnets.optimism.io/> (opens in a new tab).