

Intro to EigenLayer

What is EigenLayer?

EigenLayer is a protocol built on Ethereum that introduces restaking, a new primitive in cryptoeconomic security. This primitive enables the reuse of ETH on the consensus layer. Users that stake ETH natively or with a liquid staking token (LST) can opt-in to EigenLayer smart contracts to restake their ETH or LST and extend cryptoeconomic security to additional applications on the network to earn additional rewards.

Why Build with EigenLayer?

With EigenLayer, Ethereum stakers can help secure many services by restaking their staked ETH and opting-in to many services simultaneously, providing [pooled security](#). Reusing ETH to provide security across many services reduces capital costs for a staker to participate and significantly increases the trust guarantees to individual services.

Anyone building a new decentralized service for Ethereum must bootstrap a new trust network to secure their system, fragmenting security. EigenLayer solves this problem by enabling any service, regardless of its composition (e.g. EVM-compatibility), to tap into the pooled security of Ethereum's stakers, creating an environment for permissionless innovation and free-market governance.

EigenLayer Architecture Overview

- Restaking
- enables stakers to restake their Native ETH or Liquid Staking Tokens (LST) to provide greater security for services in the EigenLayer ecosystem, known as Actively Validated Services (AVSs).
- Operators
- are entities that help run AVS software built on EigenLayer. They register in EigenLayer and allow stakers to delegate to them, then opt in to provide various services (AVSs) built on top of EigenLayer.
- Delegation
- is the process where stakers delegate their staked ETH to operators or run validation services themselves, effectively becoming an operator. This process involves a double opt-in between both parties, ensuring mutual agreement. Restakers retain agency over their stake and choose which AVSs they opt-in to validate for.
- Actively Validated Services (AVSs)
- are services built on the EigenLayer protocol that leverage Ethereum's shared security.* Operators perform validation tasks for AVSs, contributing to the security and integrity of the network.
- - AVSs deliver services to users (AVS Consumers
- -) and the broader Web3 ecosystem.

To learn more about EigenLayer please read the [Whitepaper](#) or visit the [Learn](#) section of the EigenLayer website. [Next Key Terms](#)