Why LayerZero

LayerZero is an immutable, permissionless, and censorship-resistant protocol to connect blockchains.

Problem Statement

Stitching the advantages of blockchains together such that the users of applications do not care about the chains underneath is what will truly make the “crypto” industry worthy of the “Web3” moniker. However, this is a very difficult problem to solve, as evidenced by themultitude of bridge hacks .

Solution Statement: LayerZero

LayerZero was created as an immutable, permissionless, and censorship-resistant protocol to connect blockchains.

Using LayerZero, developers cansend arbitrary data ,external function calls , andtokens across chains while preserving full control over their applications.

LayerZero enables developers to create and configure unified applications, tokens, and data primitives, regardless of chain.

This concept of unified cross-chain development is encapsulated in the word“omnichain” and is what LayerZero envisions the future of crypto moving towards.

Like TCP/IP standardized internet development, LayerZero’s goal is to standardize application development across all chains.

Core Principles

Permissionless. Censorship Resistant. Immutable.

Crypto is a space built to bepermissionless , to allow anyone to interact with financial applications. Crypto should be censorship-resistant, to facilitate the movement of data packets without judgement. Crypto aims to exist forever, to make systems immutable and provable, unchanging.

LayerZero’s design mirrors these core principles:

- Permissionless
- : Anyone may run the systems necessary to verify and execute messages. Anyone can build and interact with LayerZero.
- Censorship-Resistant
- : Messages are verified in order and can be configured to execute in order too.
- Immutable
- : Endpoints on each chain exist in the form of smart contracts. These are non-upgradeable and cannot be changed by any party, providing a safe and predictable interface to interact with.

Transportation Layer

LayerZero sits at the transport layer of the blockchain economy, whereas other “cross-chain” solutions battle for the right to verify messages.

This means LayerZero can act as a quasi-aggregator of verification methods. Any type of verification method – be it bridge, oracle, or attestation service – can be used as aDecentralized Verifier Network (DVN) . Application owners building on LayerZero may choose and combine DVNs based on their project’s security needs.

At launch, teams likeGoogle Cloud ,Polyhedra ,Tapioca ,Animoca ,LayerZero Labs , andBlockdaemon will be running independent DVNs. In addition to those entities, “adapters” for third-party bridges likeCCIP andAxelar are available. This design is the antithesis of vendor lock-in, as it gives developers the ability to choose, modify, and combine different types of verification methods. Edit this page

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