

Introduction

Ambient mesh is a new pattern for managing and securing communication between microservices in a distributed system. It builds on the concepts of a traditional service mesh, but with a simpler, lighter architecture that removes the need for sidecar proxies.

In a traditional service mesh, each microservice typically runs a sidecar – a dedicated proxy that intercepts communication to enforce security policies, control traffic, and provide observability.

By contrast, an ambient mesh operates at the platform layer, without the need for sidecar proxies. Instead, a shared proxy running on each node handles zero-trust security, and optional proxies for each class of workloads provide additional features when required. As a result, an ambient mesh simplifies deployment, reduces resource usage, and lowers the operational burden, providing all the same benefits as a traditional service mesh at a substantially reduced cost.