GLOO | MESH

Service connectivity done right

Connecting, securing, controlling, and observing microservice communication is tough. We make it accessible to all. Untangle the service mess with Gloo Mesh.

Why Gloo Mesh

Gloo Mesh simplifies the complexity and operational overhead of mesh technology across any environment, including multi-cluster and multi-cloud. Built on the popular open source project Istio, Gloo Mesh enables platform engineering teams to boost their productivity at scale with improved observability, performance, and security. Whether you choose traditional sidecars or Istio Ambient sidecarless, Gloo Mesh streamlines service mesh adoption for the enterprise.

Fundamentals of service connectivity

When it comes to service connectivity, choosing the right pattern matters. Service mesh is the right pattern.
Let's look at the anti-patterns:

✕ Do it yourself

Time spent developing and supporting networking infrastructure is time you lose in creating differentiated value for your own customers. DIY approaches to service connectivity waste time and produce inconsistent, error-prone results.

✕ L3 firewall

L3 firewalls are heavyweight and inflexible to deploy for every service-to-service interaction. Ticket-based workflows for network admins to create new firewall rules kill velocity and result in partial solutions to service connectivity concerns.

✕ Hairpinning

Routing internal network traffic through your existing centralized gateway might seem like an easy win for security and observability. In reality, hairpinning traffic through a legacy gateway slows down traffic, increases cost, and introduces a single point of failure into your distributed architecture.

✕ Container network interface (CNI)

CNI implementations address L3 and L4 policy, but are deeply flawed at L7 and lack core security features such as mTLS. A comprehensive approach to service connectivity combines Network Policy with a service mesh to establish defense-in-depth.

Leading organizations trust Gloo Mesh

NetApp

CONFLUENT

FICO

GRAINGER

Domino's

coinbase

trust

INTESA SANPAOLO

Gloo Mesh Capabilities

Multi-cluster & multi-cloud
- Peer-based multi-cluster support for sidecar and sidecarless Istio
- Unified Istio control plane across Kubernetes clusters, VMs, and cloud environments
- Global service discovery and routing between workloads in different locations

Advanced security & zero trust
- mTLS encryption of service-to-service communication
- Authentication and authorization via external identity providers (OIDC, LDAP, SPIFFE)
- Granular RBAC and security policy enforcement
- Federated identity and workload security across multiple clusters and VMs

Traffic management & resilience
- Intelligent load balancing, failovers, and retries to prevent service disruptions and ensure resiliency
- Traffic shaping (canary, blue-green, etc.) for safer rollouts
- Advanced circuit breaking and rate limiting

Observability & monitoring
- Integration with your OTel stack
- Centralized control plane and Gloo UI with service graphs to expose insights into the health of services and identify misconfigurations
- Real-time traffic insights and anomaly detection to improve reliability

Lightweight & scalable
- Production-ready Istio Ambient for sidecarless mesh deployments to simplify application onboarding, improve security and scalability, while reducing infrastructure costs
- Simplified Istio lifecycle management for installation, upgrades, and version control

Enterprise Istio and support from the leaders of the Istio community and creators of Ambient mesh

#1 Corporate contributor to Istio

#1 Individual contributor to Istio

25+ Individual contributors to Istio

3 Technical Oversight Committee members

2 Steering Committee Members

Learn more at **solo.io/products/gloo-mesh**.

What customers are saying

"Gloo has enabled us to rethink our approach to authentication and authorization. We've improved OAuth, basic auth, and MTLS, giving us better security and operational efficiency.

Ambient Mesh is another exciting area we're exploring with Solo. It has the potential to further reduce costs and improve performance, which aligns perfectly with our long-term goals."

Aaron Davis,
Head of Platform Engineering

GRAINGER

"We benefited from a highly effective Solo support team on Slack. Whenever issues arose, it was invaluable to have the team available, allowing us to collaboratively and promptly solve the problems."

Patrick Hyland,
Head of Engineering

Domino's