

Tetrate Enterprise Gateway for Envoy

The enterprise-ready distribution of Envoy Gateway, the cloud native service gateway.



Key Functionality

Envoy Gateway is the next generation of cloud-native Ingress, implementing and extending the Kubernetes Gateway API.

- 1 Manage traffic.** Route traffic to targets both inside and outside of Kubernetes. Effectively manage application traffic with rate-limiting and making configuration-based routing. Enable canary releases and failovers for reliable and secure operation of your services.
- 2 Secure applications & APIs.** Leverage WAF-based security at the ingress point of your cluster. Configure token validation, IP allow/deny lists, mTLS, OIDC, and more. Ensure only authorized traffic gets to your applications.
- 3 Observe traffic.** Collect observability data in OTEL format and monitor traffic coming through the gateway. Troubleshoot and trace traffic.

Get the Most Out of Envoy Gateway

Tetrate Enterprise Gateway (TEG) for Envoy is a support and enablement product offered by Tetrate. It enables you to successfully use Envoy Gateway to manage, secure, and observe your ingress traffic.

When using TEG, you deploy Envoy Gateway, a Kubernetes native Gateway control plane that deploys and configures a fleet of Envoy Proxies to handle your Kubernetes ingress traffic. Optionally, you can also enable the Coraza WAF deployment to enforce WAF rules at the point of Kubernetes ingress.

Envoy Gateway makes it easier than ever to use Envoy Proxy as a Kubernetes ingress gateway. It is part of the Envoy project, a multi-company, open-source CNCF project to which Tetrate is the leading contributor.

Get Started

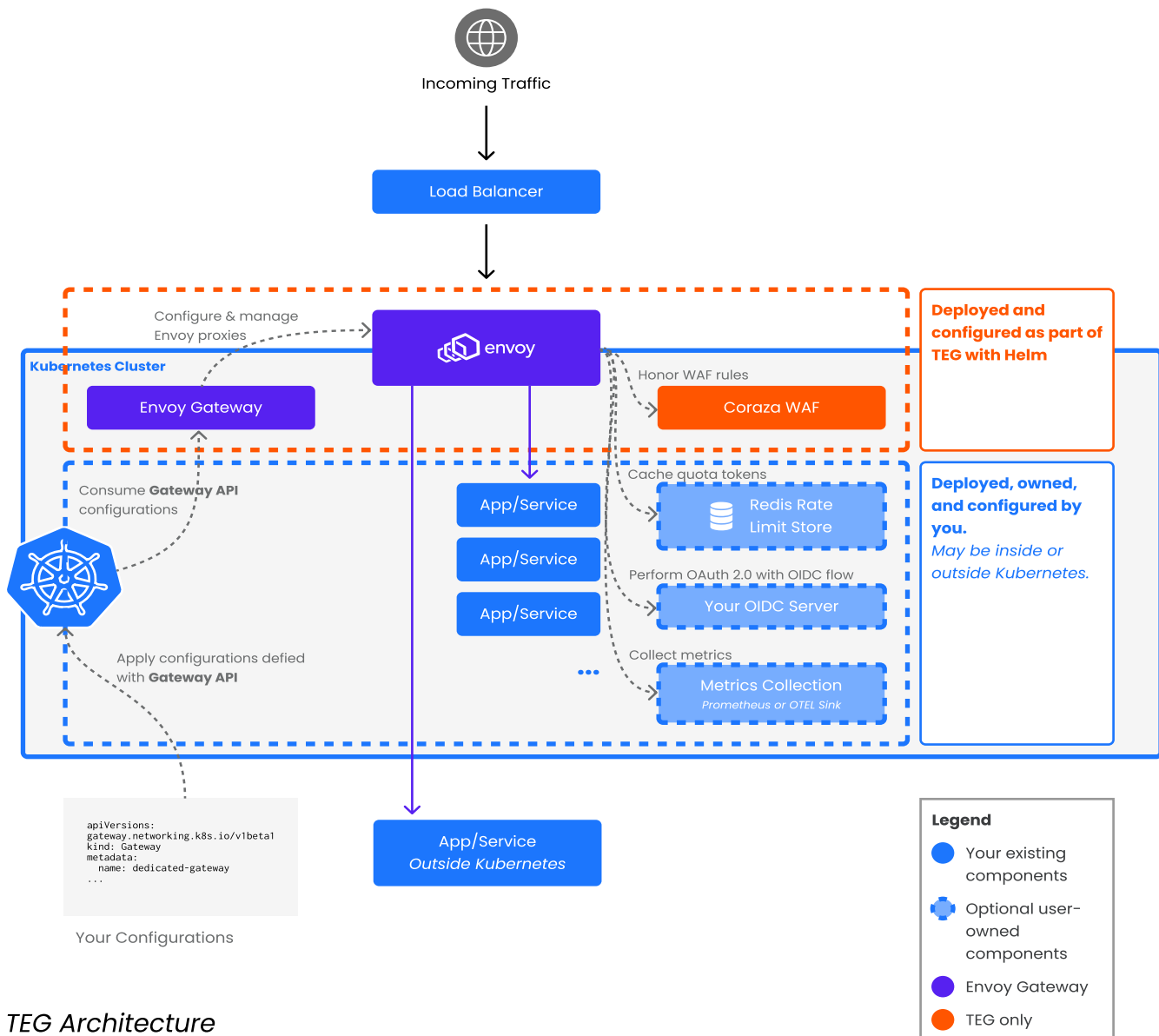
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Why Choose Tetrade Enterprise Gateway for Envoy?

Expert support and best practices. Gain access to our always-on expert support and best practices from maintainers and committers of Envoy. This ensures that your Envoy Gateway deployment is not only functional but also optimized for success, giving you the confidence that you're making the right choice.

CVE protection. Get continuous and extended protection from open-source components such as Common Vulnerabilities and Exposures (CVEs), so you can rest easily, knowing your environment is safeguarded against potential threats.

Commitment to open source. Tetrade is dedicated to investing in and driving the evolution of Envoy Gateway for the benefit of its users. We engage with users and contributors, offering our clients an enterprise-ready solution.



TEG Architecture

TEG Key Capabilities

Traffic Management

Next-generation Kubernetes ingress.

Leverage the Kubernetes Gateway API to manage traffic handling configurations.

Protect underlying services from overload.

Rate limit traffic, use balancing strategies, and automatic fallbacks.

Granular traffic splitting and mirroring.

Split or mirror traffic to test features or monitor new deployments safely.

Route beyond Kubernetes.

Route traffic to your services, wherever your services run.

Add custom logic.

Integrate your own code into the traffic flow to handle your bespoke business needs.

Access Control

Control client API consumption. Configure rate limits per API Client, IP, or any other attribute in the request.

Authorize and authenticate. Authorize requests based on token claim values. Authenticate user via OIDC.

Use custom authorization.

Integrate your bespoke authorization service to allow/deny requests.

Operational Efficiency

Run on or off Kubernetes.

Leverage Envoy, configured via the Gateway API, both on and off Kubernetes.

Update routes with no downtime.

Update configurations without restarts.

Support multi-tenant environments.

Allow to manage their own routes and traffic policies with isolation.

Consistent traffic and security policies.

Apply and reuse common policies across Gateways and Routes.

Centralized observability and metrics.

Monitor and trace traffic with tools like Prometheus, Grafana, and Jaeger.

Integrate with your service mesh.

Integrate Envoy Gateway to send requests to services on your service mesh.

EG/TEG Features and Benefits	EG	TEG
Traffic		
Broad protocol support, including HTTP/1.x, HTTP/2, gRPC, and TCP	✓	✓
Advanced load-balancing algorithms	✓	✓
Rate limit traffic, with global or route-based conditions	✓	✓
Route traffic to services and apps, inside and outside Kubernetes	✓	✓
Observability		
Integrate with Grafana, view both gateway and proxy performance	✓	✓
Zipkin integration for request tracing	✓	✓
Datadog integration	✓	✓
Security		
Basic auth for caller authentication	✓	✓
mTLS for caller authentication	✓	✓
JWT token-based authorization	✓	✓
Put apps behind login with OIDC IdP integrations	✓	✓
WAF-based features with Coraza WAF	DIY	✓
Operations		
Zero downtime configuration with Kubernetes Gateway API	✓	✓
Deploy shared or dedicated gateways for teams	✓	✓
Kubernetes service discovery integration	✓	✓
Enterprise Enablement		
Lifecycle management		✓
CVE protection		✓
Enterprise support		✓