Service-to-Service Management of North-South and East-West Traffic

Secure, Strengthen, and Scale Your Kubernetes Apps

Kubernetes is the de facto standard for managing containerized apps, as evidenced by the Cloud Native Computing Foundation (CNCF)'s 2020 survey, which found that 91% of respondents are using Kubernetes, 83% of them in production.

However, running Kubernetes in production is fraught with business-critical issues, the most serious of which are culture, complexity, and security.

When your Kubernetes apps have grown beyond the level of complexity and scale that basic tools can handle, you need a service mesh for even finer-grained traffic management and security of app services within the cluster.

But not all service meshes are production-grade, and they have the potential to cause more problems than they solve. Your service mesh needs features that:

- Streamline security
- Increase resiliency
- Enable rapid scalability

Lightweight and seamless by design, NGINX Service Mesh is free and scales from open source projects to a secure, and scalable enterprise-grade solution, no matter where you are in your microservices journey. Take control of Kubernetes with our turnkey, secure, service-to-service solution featuring a unified data plane for ingress and egress management in a single configuration.

Why Use NGINX Service Mesh?

Feel confident with a stable, reliable service mesh developed and tested by NGINX.

Developer-Friendly

Self-service and so easy to use that it doesn't require an infrastructure team to deploy and manage it
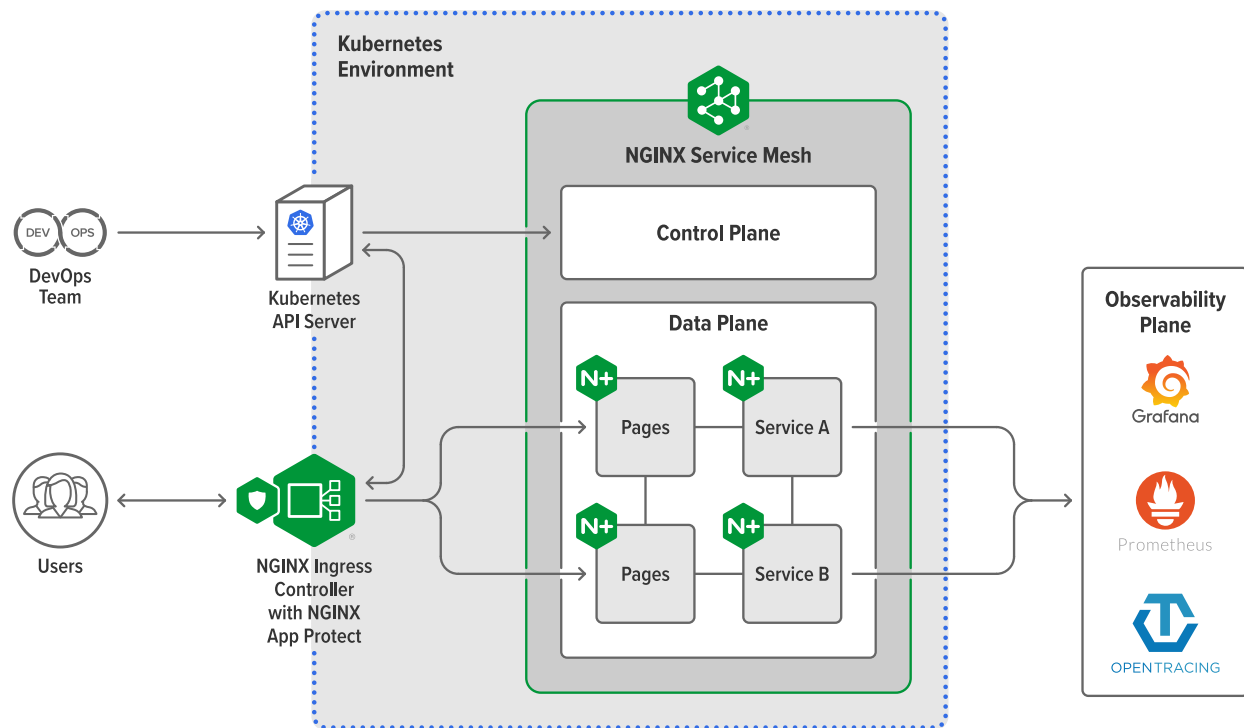
Powerful and Efficient

The fastest, lightest way to get mutual TLS and traffic management in your microservices environment

NGINX Plus Sidecars

A fully integrated, high performance data plane for highly available and scalable containerized environments

Reduce Complexity

NGINX Service Mesh is easy to use and infrastructure agnostic. It uses SMI specification to inform a standard configuration language for Kubernetes and NGINX Service Mesh resources, making it possible to roll out a new app version with minimal effort and interruption to production traffic. It also integrates natively with NGINX Ingress Controller, creating a unified data plane where you can centralize and streamline configuration of ingress and egress (north-south) traffic management at the edge with service-to-service (east-west) reverse proxy sidecar traffic management. And unlike other meshes, NGINX Service Mesh doesn't need to inject a sidecar into NGINX Ingress Controller, so it doesn't add latency and complexity to your Kubernetes environments.

Improve Resiliency

With our intelligent management of container traffic, you can specify policies that limit traffic to newly deployed service instances and slowly increase it over time. Capabilities like rate limiting and circuit breakers give you full control over the traffic flowing through your services. You can leverage a robust range of traffic distribution models, including rate shaping, quality of service (QoS), service throttling, blue-green deployments, canary releases, circuit breaker pattern, A/B testing, and API gateway features.

Get Traffic Insights

NGINX Service Mesh supports OpenTracing with the NGINX OpenTracing module and supports a Prometheus server that uses the NGINX Plus API to scrape metrics from NGINX Service Mesh sidecars and NGINX Ingress Controller pods. Use the official Grafana dashboard to visualize metrics with detail down to the millisecond, day-over-day overlays, and traffic spikes.

Secure Containerized Apps

Extend mTLS encryption and Layer 7 protection all the way down to individual microservices and leverage access controls to define policies about which services can talk to each other. NGINX Service Mesh enables advanced security features including configuration gating and governance, allowlist support for ingress and egress, default blocking of north-south traffic to internal services*, and edge firewalling with NGINX App Protect*.

*with the NGINX Plus-based version of NGINX Ingress Controller

To discover how NGINX can help you, visit nginx.com.

NGINX
Part of F5

Are You Ready for a Service Mesh?

Use our 6-point checklist to determine your readiness – the more statements are true for you, the more a service mesh will add value.

01

You are fully invested in Kubernetes for your production environment.

02

You require a zero-trust production environment and need mutual TLS (mTLS) between services.

Your app is complex in both number and depth of services.

03

04

You have a mature, production CI/CD pipeline.

05

You are deploying frequently to production — at least once per day.

Your DevOps team is ready to rock and start using the right tools for ultra-modern app deployment!

06

NGINX Service Mesh®

Click here to learn more at nginx.com.