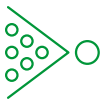




NGINX GATEWAY FABRIC

Secure, Fast, and Reliable Data Plane for the Gateway API

WHY USE NGINX GATEWAY FABRIC?



Simplify Operations

Ensure fast, reliable, and secure Kubernetes app connectivity with built-in, self-service governance



Unlock Capabilities

Implement advanced use cases out of the box with additional flexibility to enable unique data plane features



Integrate Seamlessly

Deliver extended interoperability with a Kubernetes-native design and Gateway API conformance

Future-Proof Kubernetes App Connectivity

A traditional method frequently used to expose applications and services running in Kubernetes clusters is through Ingress objects. However, even with various options for Ingress controller implementations, many users still deal with limitations of the Ingress resource.

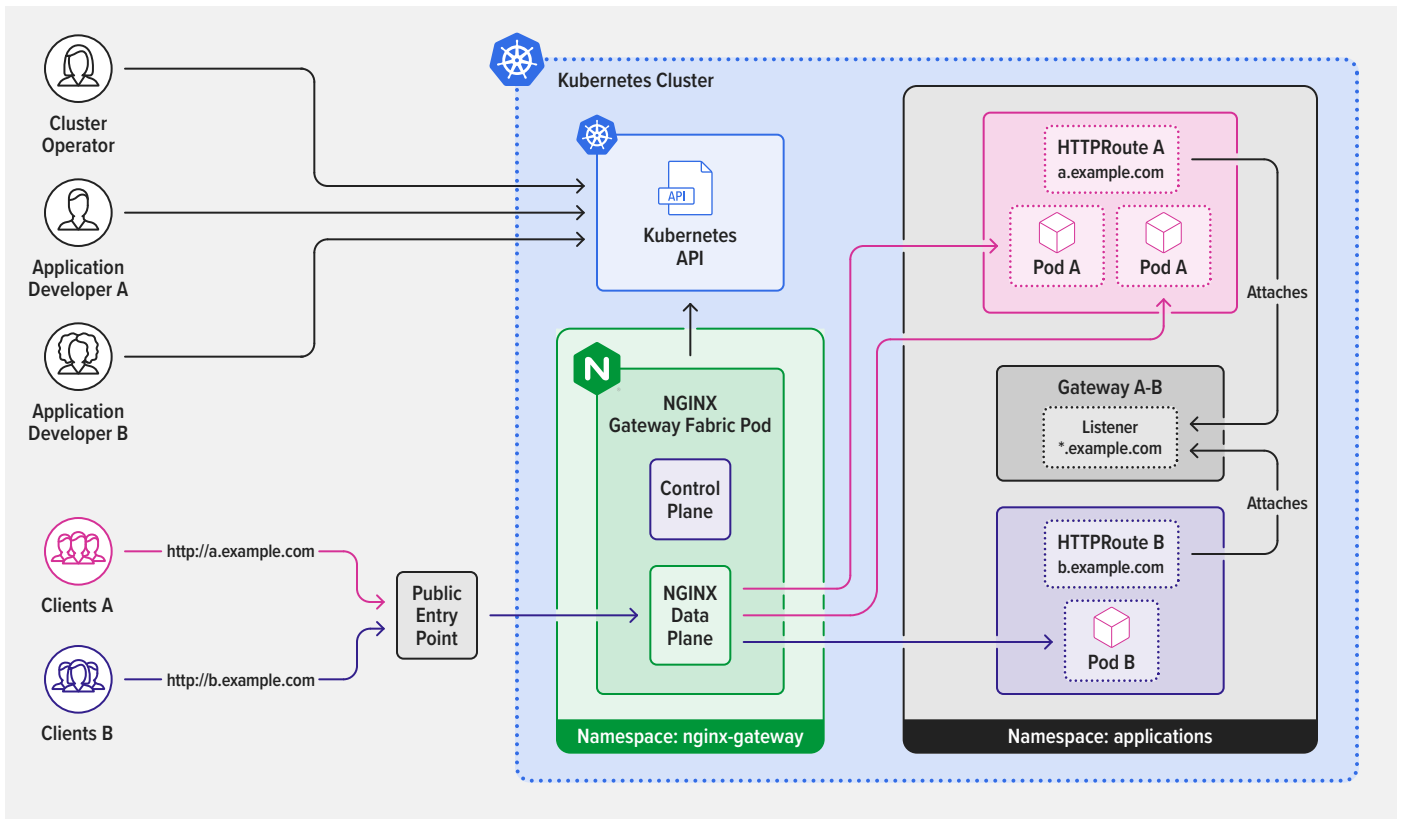
These limitations include:

- Insufficient capabilities to implement advanced use cases, such as security policies or blue-green and canary deployments.
- Difficulties in enabling data plane features lead to complex, error-prone configurations and proliferation of vendor-specific custom resources.
- Complexity, lack of isolation, and error proneness for multiple teams (e.g., developers, platform engineers, or security) to control necessary aspects of the Ingress configuration for app development and delivery.

To solve limitations of the Ingress resource in production environments, the Kubernetes community established a new open source, cross-vendor API project – the Gateway API, an evolution of the Kubernetes Ingress API. The Gateway API intends to improve and standardize app and service networking in Kubernetes.

NGINX Gateway Fabric is a Gateway API-conformant implementation of these specifications that provides fast, reliable, and secure Kubernetes app connectivity leveraging one of the most widely used data planes in the world – NGINX.

With its built-in support for advanced use cases, role-based API model, and extensibility to unlock the true power of the NGINX data plane, NGINX Gateway Fabric is architected to deliver future-proof connectivity for apps and services to, from, and within a Kubernetes cluster.



Benefits of NGINX Gateway Fabric

Increase uptime and reduce complexity for your Kubernetes apps – from edge to cloud – with the Gateway API-conformant NGINX Gateway Fabric.

Data Plane

Built on one of the world’s most popular data planes, NGINX Gateway Fabric provides fast, reliable, and secure connectivity for Kubernetes apps. It simplifies and streamlines Kubernetes platform deployment and management by leveraging the same data and control planes across any hybrid, multi-cloud Kubernetes environment, reducing complexity and tool sprawl.

Extensibility

Unlike Kubernetes Ingress resources, many use cases are readily available with NGINX Gateway Fabric, including blue-green and canary deployments, A/B testing, and request/response manipulation. It also defines an annotation-less extensibility model with extension points and policy attachments to unlock advanced NGINX data plane features that are not supported by the API itself.

Interoperability

NGINX Gateway Fabric is a dedicated and conformant implementation of the Gateway API, which provides high-level configuration compatibility and portability for easier migration across varying setups. Its Kubernetes-native design ensures seamless ecosystem integration with other Kubernetes platform tools and processes like Prometheus and Grafana.

Governance

NGINX Gateway Fabric features a native role-based API model that enables self-service governance capabilities to share the infrastructure across multi-tenant teams. As an open source project, it operates in compliance with established community governance procedures, delivering full transparency in its development process, features roadmap, and contributions.

To discover how NGINX can help you, visit nginx.com/k8s