

CONNECT, SECURE, AND SCALE MICROSERVICES WITH NGINX PLUS AND RED HAT OPENSIFT

SOLUTION BRIEF

“As we’ve moved to microservices, we’ve realized that we needed a much smarter way of routing pages to our applications...NGINX Plus allowed us to get to the final mile.”

JOHN CLEVELEY
SENIOR ENGINEERING MANAGER
AT BUZZFEED

“With NGINX Plus, OpenShift customers can have access to a commercial ingress controller for traffic management and load balancing of services running in OpenShift.”

ASHESH BHADANI
VICE PRESIDENT AND GENERAL
MANAGER, OPENSIFT, RED HAT

MANAGING MODERN APPLICATIONS

Lately, a great deal of attention has been focused on modern application development processes that are being used to fuel innovation. New technologies, such as containers, Kubernetes, and microservices, as well as continuous deployment and DevOps, enable organizations to quickly deliver new applications, responding rapidly to changing business requirements.

To achieve these gains, it is critical to have the right application services in place. Load balancing, encryption, and monitoring help to ensure scalable, secure, and high-performance application delivery across a modern, distributed infrastructure. For customers using Red Hat® OpenShift, the NGINX Plus Ingress controller solution provides these advanced application services and more. NGINX Plus integrates with the Kubernetes orchestration framework built into OpenShift, giving customers a proven, flexible, and cost-effective solution for connecting, securing, and scaling microservices applications.

DELIVERING MICROSERVICES AT SCALE

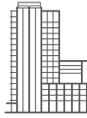
Running and managing microservices applications at scale is a challenging task. Red Hat OpenShift helps you meet this challenge by giving you a powerful solution, built on the widely adopted, open source Kubernetes container management system for container orchestration. Kubernetes includes important features, such as rolling updates, storage, fault tolerance, service discovery, and autoscaling.

For applications running in Kubernetes to access the outside world, an Ingress controller is required to enable Kubernetes to interface with the load balancer that provides external access. The NGINX Plus Ingress controller solution routes external traffic to the services in the Kubernetes cluster with enterprise reliability and performance.

FEATURES AND BENEFITS

NGINX Plus provides the following benefits when used with Red Hat OpenShift:

- **Advanced load balancing.** Support for session persistence, WebSockets, and URL rewrites to address the needs of complex microservices applications. Support for on-the-fly reconfiguration to adapt to resource changes within the Kubernetes cluster.
- **Security.** Secure sockets layer (SSL) and transport layer security (TLS) termination with configurable encryption for applications within Kubernetes to maximize performance and privacy. Supports JSON web tokens (JWTs) for authentication.
- **Real-time statistics.** Advanced real-time statistics about traffic flow through the cluster provide detailed insights into how NGINX Plus and your applications are performing.
- **24x7 support.** The NGINX Plus Ingress controller solution is fully supported by NGINX.



ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

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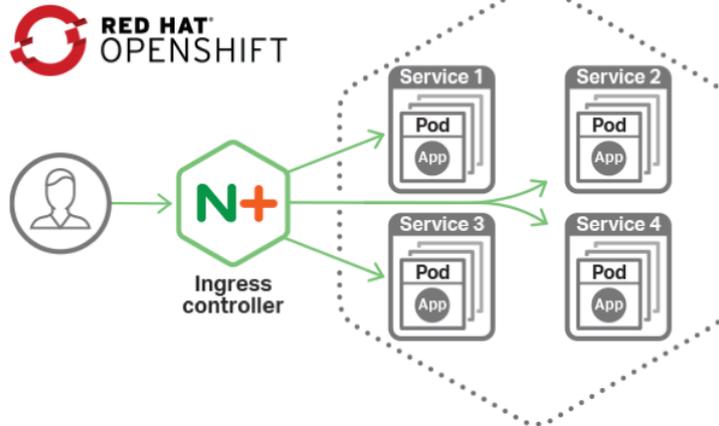


Figure 1. Red Hat OpenShift with NGINX Plus Kubernetes Ingress controller

Using NGINX Plus as an application delivery controller provides a host of customer benefits, including:

- **Cost reduction.** Save more than 80% compared to the cost of a hardware solution. Removes artificial caps on throughput or SSL connections, which increase costs.¹
- **Shortened time-to-market.** Scale instantly when needed. Avoid long hardware procurement cycles.
- **Flexible deployment.** Run in any public, private, or hybrid cloud, on bare metal, and in containers, all with no restrictive proprietary hardware.
- **Modern IT infrastructure.** Move to microservices and DevOps with a fully automated software application delivery controller designed for modern application architectures.

RED HAT OPENSIFT

Red Hat OpenShift is a container application platform that brings docker and Kubernetes to the enterprise. This platform helps you develop, deploy, and manage new and existing applications across physical, virtual, or public cloud infrastructures, providing elastic compute resources for performance scalability. It accelerates application development and deployment with automated workflows that make it easy to move source code from version control into docker-formatted container images for deployment. Built on open source code and made enterprise-ready, Red Hat OpenShift is a secure, proven, and reliable platform for businesses of any size.

INNOVATION FOR BUSINESS GROWTH

Using the NGINX Plus Ingress controller solution gives you the control you need to manage and scale your applications running in Kubernetes. NGINX Plus offers a complete, software-based application delivery platform that load balances HTTP and transmission control protocol (TCP) applications at a fraction of the cost of hardware solutions. It allows you to maximize the availability and reliability of your site and application, while increasing customer satisfaction and enabling growth.

NEXT STEPS

To learn more about NGINX Plus and Red Hat OpenShift, visit www.nginx.com/partners/red-hat/.

ABOUT NGINX

NGINX is the heart of the modern web, powering more than half of the world's busiest sites and applications. The company's comprehensive application platform combines web serving, load balancing, content caching, security controls, and monitoring in one easy-to-use software package.

¹ NGINX internal testing <http://www.nginx.com/f5>