NetScaler Product Brief

netscaler™

Red Hat

NetScaler seamlessly integrates with Red Hat solutions to optimize and secure ingress traffic, provide advanced network automation, and deliver highly performant applications.

Overview

NetScaler is the application delivery and security platform of choice for the world's largest companies. Thousands of organizations worldwide rely on NetScaler for high-performance application delivery, comprehensive application and API security, and end-to-end observability. NetScaler provides advanced load balancing capabilities to distribute internet traffic (L3 - L7) efficiently across servers, enhancing application availability and reliability. It offers powerful traffic management features, including content switching and SSL/TLS offloading, empowering organizations to streamline their application delivery while maximizing performance.

Executive summary

To support their business growth, enterprises are modernizing their applications, and they need a simpler, automated way to manage complex application delivery and security across hybrid and multi-cloud environments.

NetScaler has partnered with Red Hat to integrate the capabilities of its application delivery and security platform with Red Hat OpenShift, Red Hat Ansible Automation Platform, and Red Hat Enterprise Linux. The NetScaler integration with Red Hat addresses the needs of key IT stakeholders to accelerate modern application delivery across on-premises and cloud environments to speed business innovation.

Product profile

NetScaler is an application delivery and security platform that provides high-performance application delivery, comprehensive application and API security, and end-to-end observability. NetScaler runs as software in any environment to help enterprises deploy their applications where it is best for them. NetScaler also supports application portability across environments:

- One code base and one dashboard for consistent management across hybrid and multi-cloud environments
- One-pass architecture that simultaneously processes multiple functions—including security inspections—resulting in low latency for super-fast application performance
- Automated application delivery at scale

"IT organizations need to create modern environments to deliver applications in an agile and reliable way while maintaining a consistent operational and security posture. With NetScaler's certified application delivery and multi-cluster routing capabilities on Red Hat OpenShift, we are accelerating our customers' modernization journey."

—Sunit Chauhan, Head of Product Management at NetScaler

As a certified partner for Red Hat OpenShift, Red Hat Ansible and Red Hat Enterprise Linux (RHEL), NetScaler helps you in your digital transformation journey by seamlessly integrating with these Red Hat solutions to optimize and secure ingress traffic, provide advanced network automation, and deliver highly performant applications. NetScaler provides a faster, flexible, and consistent way to develop, test, and deliver applications in Kubernetes environments at scale. It also helps you automate processes for consistent deployments, strengthen your security posture, and leverage your existing RHEL infrastructure and expertise.

NetScaler Ingress Controller:

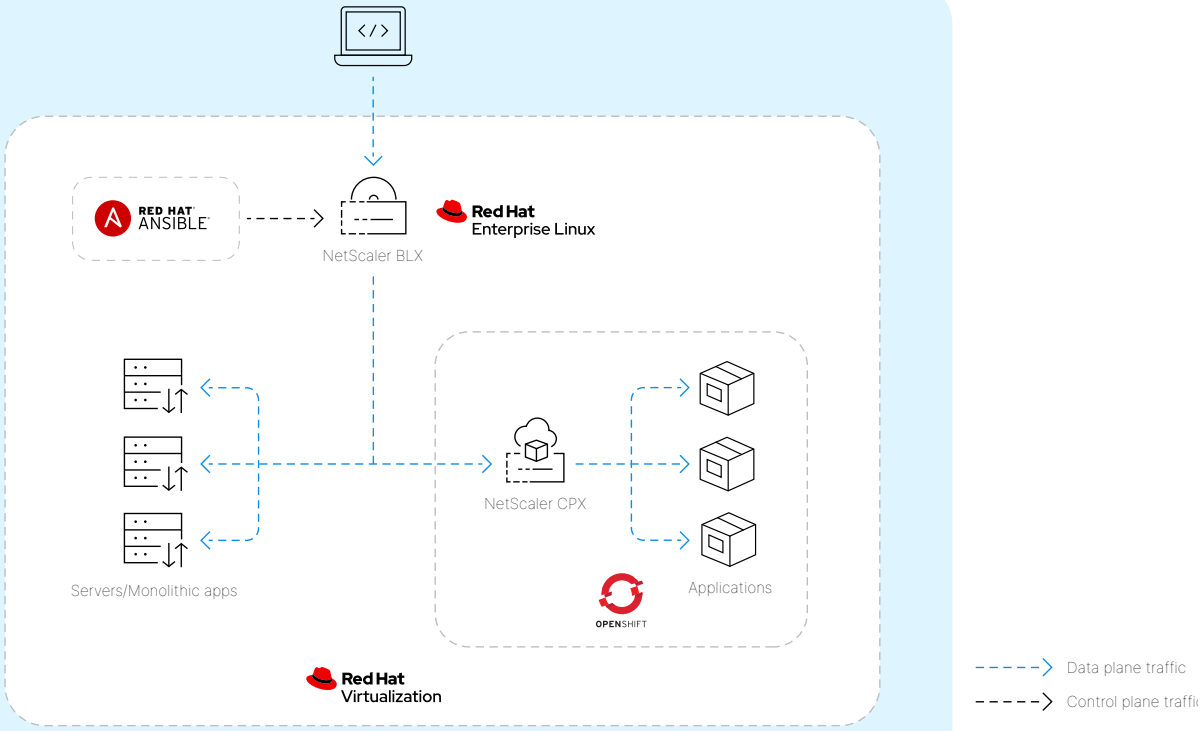
NetScaler Ingress Controller exposes Kubernetes services outside OpenShift clusters and provides advanced traffic management capabilities such as SSL offloading, load balancing, and content switching. Unlike other solutions, NetScaler Ingress Controller and NetScaler ADCs provide a clean separation of the management and data planes. With NetScaler's Kubernetes ingress capabilities, you can secure and accelerate ingress traffic for one or multiple OpenShift clusters.

NetScaler CPX:

NetScaler CPX is a containerized software application delivery controller (ADC) that provides load balancing and traffic management for your containerized microservices applications. You can deploy one or more NetScaler CPX instances in your Kubernetes environment to route traffic between containers inside OpenShift clusters. The free version of NetScaler CPX (CPX Express) enables DevOps and application teams to try out NetScaler for various stages of the application development lifecycle prior to production deployment.

NetScaler BLX:

NetScaler BLX is a lightweight software ADC for application delivery that runs as a Linux process on your preferred hardware. With no hypervisor or container overhead, NetScaler BLX delivers exceptionally fast performance. Additionally, it eliminates the need to purchase hypervisor software. NetScaler BLX on RHEL enables you to meet the extensive demands of modern application workloads, and allows for greater flexibility and freedom to operate on bare metal servers or virtual machines. NetScaler BLX can be deployed in public cloud or private data centers faster and more easily through Ansible, increasing efficiency and reducing operational costs.



A modern and secure platform for application delivery and security NetScaler integration with Red Hat

Product benefits

Only NetScaler enables you to deliver and manage traditional and microservices applications across on-premises and public cloud in a consistent way.

High-performance load balancing

Automated global server load balancing (GSLB): Distribute traffic across multiple instances of an application to ensure high availability and scalability with low latency. For load balancing microservices in Kubernetes environments, you can upgrade OpenShift clusters without impacting production traffic and move traffic between clusters without downtime.

Continuous application monitoring: NetScaler contains various built-in monitors like HTTP, TCP, and DNS to help in checking the performance and availability of traditional and microservices applications. In addition to built-in monitors, NetScaler also allows you to create custom monitors to track the health of customized applications and protocols that the NetScaler appliance does not support.

Content switching: Route traffic to different server pools using such criteria as URL, HTTP headers, and cookies so that you can distribute traffic to different servers depending on priority user requests or application requirements.

Delivery optimization: Ensure a faster application response time using caching, compression, and HTTP protocol optimization.

Comprehensive application and API security

Enterprise-grade security: Achieve comprehensive application and API security with an integrated application firewall (WAF), bot and API protection, and zero trust network access (ZTNA) to streamline security management and eliminate the need for multiple security solutions.

Comprehensive SSL support with TLS 1.3: Define, enforce, and manage the strongest encryption for all application types in any environment.

Adaptable authentication, authorization, and auditing (AAA): Add adaptable authentication capabilities to existing applications that don't support them and manage access control based on user personas.

One-pass architecture: Benefit from NetScaler's Better application performance, lower latency, more efficient CPU resource utilization and fewer devices for lower TCO.

End-to-end observability

Built-in observability capabilities for application health, performance, and behavior: Troubleshoot faster by proactively detecting and resolving issues for consistent uptime, including mean time to detect (MTTD) and mean time to remediate (MTTR).

Advanced analytics: Get granular data on application and API performance, application and API security, and the health of your network infrastructure in addition to core observability insights with metrics, events, logs, and traces.

Persona-based insights: Assign role-based access to all IT team members to put the right data in front of the right people at the right time.

Integration with third-party data visualization tools: Use NetScaler with your preferred data visualization tool, including Splunk, Prometheus, Grafana, Elasticsearch, and more.

Use cases

NetScaler and OpenShift

NetScaler operators for Kubernetes ingress: Getting requests into and out of an OpenShift cluster can be challenging. NetScaler solves this problem with operators that use Kubernetes constructs for providing ingress control into OpenShift clusters as well as automating the lifecycle management of NetScaler hardware and software application delivery controllers (ADCs).

Canary deployments: NetScaler supports canary deployments for Kubernetes applications by providing easy upgrades and the flexibility to introduce new versions of an application or new OpenShift clusters. Using NetScaler for canary deployments minimizes the risk of introducing new versions of applications and new OpenShift clusters and has no impact on existing workloads. NetScaler seamlessly upgrades OpenShift without any downtime for mission-critical applications.

Cloud native and Kubernetes support: NetScaler enhances the delivery of microservices applications deployed in Kubernetes clusters by seamlessly managing traffic for cloud native applications. NetScaler with OpenShift ensures continuous code updates, while also providing advanced load balancing, service discovery, traffic management, and security, and analytics capabilities without disrupting the application end-user experience.

Routing and optimizing application traffic: Route traffic between containers inside the Red Hat OpenShift platform using NetScaler CPX and leverage NetScaler observability to not only alert you that something is wrong, but to also help you pinpoint application issues so you can fix them faster.

Legacy application support: NetScaler helps integrate legacy TCP-based applications with its ingress controller seamlessly, eliminating the need for application rewriting.

Troubleshooting microservices: Interactive service graphs with web transaction insights data help identify errors and latency issues easily and quickly.

NetScaler and Ansible

Workflow automation to release applications faster: Using Ansible with NetScalerto define NetScaler configurations as infrastructure as code in playbooks and integrate with your existing CI/CD tools to automate the networking and security configurations for your applications, eliminating repetitive, manual work.

Day 0 to Day N operations: NetScaler seamlessly integrates with Ansible playbooks to provide network automation for Day 0 - N operations for faster application deployment.

NetScaler for application portability: Ansible playbooks for NetScaler enable repeatable deployments across distributed environments, enabling version control and code portability across on-premises and cloud.

No additional installation required: Using Ansible with NetScaler is agentless and there's no need to install or maintain additional software

NetScaler and RHEL

High-performance application delivery: NetScaler BLX is a software ADC for bare-metal deployments that is powered by the open source Data Plane Development Kit (DPDK) technology to deliver high performance on RHEL. On a 10 G NIC, the line-rate performance of a NetScaler BLX can handle data at the maximum speed of 10 Gbps without any slowdown or packet loss.

Application portability across hybrid cloud: NetScaler BLX on RHEL for bare-metal deployments is ideal for hybrid cloud environments because it works the same on-premises and in public cloud.

Faster time to value and reduced operational costs: Easily deploy NetScaler BLX using Ansible, Terraform, or NetScaler's native automation capabilities to achieve faster time to value and reduce operational costs

About Red Hat

Red Hat helps customers standardize across environments, develop cloud-native applications, and integrate, automate, secure, and manage complex environments with award-winning support, training, and consulting services.

Learn more

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