Citrix NetScaler Application Delivery Controller

Datacenter Transformation and Citrix NetScaler

The datacenter is undergoing a fundamental transformation, with virtualization, cloud, mobility and new delivery services models. Citrix® NetScaler® enables this IT transformation and helps customers build next-generation networks.

Citrix NetScaler boosts business productivity by accelerating application performance for all users, while lowering datacenter costs by offloading server functionality. Citrix TriScale™ technology brings cloud-like network scalability and maximizes use of datacenter resources.

NetScaler brings to enterprise IT leaders multiple advanced technologies that were previously available only to large public cloud providers — helping organizations build enterprise cloud networks that embody the characteristics and capabilities that define public cloud services, such as elasticity, expandability and simplicity.

As an undisputed leader in service and application delivery, Citrix NetScaler is deployed in thousands of enterprises, service provider networks, and public cloud infrastructures to deliver applications, desktops and data. They deliver 100 percent application availability, application and database server offload, acceleration and advanced attack protection. Deployed directly in front of web and database servers, NetScaler delivers scalable solutions that combine L4-7 load balancing, high-speed data compression, content caching, SSL acceleration, application flow visibility and a powerful application firewall into a single, easy-to-use platform.

Revolutionary Citrix TriScale Technology

Citrix TriScale drives unprecedented network scalability, enabling IT teams to build enterprise cloud networks that can scale up performance 10x, scale out capacity by 32x, and scale in consolidation by running up to 115 appliances in a single platform.

- **Scale up** elasticity with 10x faster performance on-demand using NetScaler Pay-As-You-Grow
- **Scale in** for greater simplification by consolidating up to 115 appliances into a multi-tenant NetScaler platform
- **Scale out** for expanded capacity with powerful Citrix TriScale clustering

Flexible Deployment Options

NetScaler is available as high-performance network appliances and software-based virtual appliances. Unlike competitive appliances and chassis-based systems, each NetScaler appliance is capable of running all features simultaneously with no limits.

- **NetScaler MPX** is a hardened network appliance that offers up to 160 Gbps performance.
- **NetScaler SDX** is a high-density consolidation platform combining Xen-based virtualization and advanced MPX architecture to run up to 115 NetScaler instances simultaneously without sacrificing performance or security.
- **NetScaler VPX** virtual appliances run as virtual machines on popular hypervisors allowing NetScaler to be provisioned on demand using inexpensive, industry-standard servers.

Beyond having the widest array of service delivery platforms, NetScaler is available in three feature editions (Standard, Enterprise, and Platinum) providing the right set of advanced capabilities to meet all application delivery requirements.

<table>
<thead>
<tr>
<th>Virtual Appliance Software</th>
<th>VPX</th>
<th>10 Mbps - 40 Gbps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Enterprise</td>
<td>MPX</td>
<td>5 Gbps - 15 Gbps</td>
</tr>
<tr>
<td>Mid Range</td>
<td>MPX / SDX</td>
<td>20 Gbps - 100 Gbps</td>
</tr>
<tr>
<td>Enterprise</td>
<td>MPX / SDX</td>
<td>40 Gbps - 120 Gbps</td>
</tr>
<tr>
<td>High End Enterprise</td>
<td>MPX / SDX</td>
<td>100 Gbps - 160 Gbps</td>
</tr>
<tr>
<td>FIPS</td>
<td>MPX</td>
<td>3 Gbps - 15 Gbps</td>
</tr>
</tbody>
</table>
“Partnering with Citrix was an easy decision... It’s clear they are listening to enterprises — their solutions exceed the needs of this rapidly evolving IT segment.”

Nathan Day | Softlayer Chief Technology Officer

100% Availability for Apps and Data

The proven layer 4-7 load balancing of NetScaler delivers 100 percent application uptime and no single point of failure by directing users to the right application resource. Its powerful load balancing is extended worldwide with integrated Global Server Load Balancing (GSLB) to efficiently and intelligently distribute application traffic across multiple datacenters, enabling a resilient disaster recovery solution.

NetScaler with DataStream delivers intelligent SQL connection multiplexing, significantly reducing the number of SQL connections to backend database servers, and optimizing database infrastructure by enabling database servers to effectively scale up to host more databases. The ability of NetScaler to offload SQL connection management provides cost-effective database server consolidation and virtualization.

NetScaler accelerates application performance with high-speed data compression that reduces the amount of data sent to users, resulting in significantly faster response times for all web applications and reduced network bandwidth requirements. NetScaler also integrates powerful web caching to serve static and dynamically generated content immediately to application users, avoiding the expense and delay incurred when web applications handle repetitive requests for the same information. Innovative TCP optimizations accelerate application traffic over network links, including those with large delays and significant packet loss that otherwise would compromise application performance.

Front-end for Desktop Virtualization

To gain the greatest benefit from desktop virtualization, users must always have access to essential desktop resources. NetScaler helps ensure the availability of critical components with a combination of robust load balancing, health monitoring and GSLB capabilities. Custom health checks for Citrix® XenDesktop® environments proactively determine the status of key components, such as the web interface and desktop delivery controller to ensure that the necessary resources are available to serve users. GSLB capabilities provide seamless disaster recovery for desktop virtualization. If a site becomes unavailable for any reason, NetScaler automatically directs users to an alternate datacenter, to help ensure continuity of access to their desktops.

Improved Server Efficiency

NetScaler server offload capabilities take the load off overburdened networks and servers, reducing server costs by up to 60 percent or more. NetScaler offloads tasks from servers that don’t do well, including compute-intensive tasks such as data compression, TCP connection management and SSL encryption. NetScaler provides more efficient management of these functions, enabling organizations to deliver more applications to more users with a reduction in servers and network devices.

Intuitive Policy-based Management

NetScaler policies are defined and managed using Citrix AppExpert management framework, which provides a single, consistent environment for all NetScaler features and functional modules. All policy expressions and rules are common for all NetScaler functionality, making it simple to bring new capabilities online. To fully optimize popular enterprise applications, such as Oracle® E-business Suite and Microsoft® SharePoint®, AppExpert templates encapsulate complete configuration policies that can quickly be imported into NetScaler so that new applications can be delivered within a matter of minutes.

Greater Application Visibility

All NetScaler ADC solutions include support for AppFlow, an innovative, open standards-based technology that transforms the data collected by existing networking devices, including ADCs, into powerful operational and business intelligence. Using AppFlow, NetScaler generates and exports detailed application flow records. This AppFlow information is then collected, correlated and analyzed by popular performance monitoring and business intelligence tools for rich reporting and analysis.

Visit www.citrix.com/netscaler to learn more.