Citrix NetScaler Application Delivery Controller

The world's most advanced cloud network platform.

Citrix NetScaler enables the datacenter network to become an end-to-end service delivery fabric to scale, optimize and secure the delivery of all web applications, cloud-based services, virtual desktops, enterprise business apps and mobile services.
Today the information technology landscape is undergoing a monumental disruption caused by two main nexus of technologies:

- **Cloud Adoption**—Virtualization has enabled data center consolidation of compute and storage and also hastened the movement of infrastructure to the cloud. Moving and deploying applications in the cloud promises to provide a platform for outsourcing and offering the ability to scale as the business grows.

- **Mobility**—proliferation of smart mobile devices is driving the consumerization of IT and the need to securely access applications and services from anywhere at any time from any device.

As a result of the above, organizations want:

- To easily and affordably scale the datacenter network to meet the inevitable and seemingly endless growth in application traffic—just like the cloud

- 100% full-time availability for all applications and services

- Accelerate the performance of all applications to drive exceptional user experience

- Secure data and applications against all security threats.

- Reduce TCO and improve ROI for all applications and services

- Visibility to collect, analyze and gain business insights from network and application data from both inside and outside their organization

**What is NetScaler?**

Citrix NetScaler is a service and application delivery platform that optimizes, secures and controls the delivery of all enterprise and cloud services and maximizes the end user experience for all users including mobile clients. As a single, easy-to-use platform NetScaler provides 100 percent application availability, advanced load balancing and content switching, application and database server offload, application acceleration, advanced attack protection, application flow visibility and a powerful application firewall.

**Cloud Scale**

NetScaler TriScale Technology drives unprecedented network scalability, enabling IT teams to build enterprise cloud networks.

- **Scale Up for cloud elasticity** – Pay as you grow delivers up to a 5X performance increase based on a simple software licensing scheme

- **Scale In for greater simplicity** – consolidation by running up to 40 instances in a single NetScaler SDX platform to end appliance sprawl. NetScaler SDX is an advanced virtualized architecture that supports multiple NetScaler instances
on a single hardware appliance, while an advanced control plane unifies provisioning, monitoring and management to meet the most demanding multi-tenant requirements. Full resource isolation supports guaranteed performance SLAs as well as high availability, software version control, data separation and independent policy management. Providing a foundation for the consolidation of services in the enterprise, NetScaler SDX is also optimized to deliver next-generation cloud-based services.

- **Scale Out for expanded capacity** – Start small and grow forever. Citrix TriScale clustering provides the ability to scale out NetScaler capacity to massive levels by enabling up to 32 NetScaler appliances, physical or virtual, to work in unison to deliver one or more applications.

**Availability**
NetScaler L4-7 load balancing brings 100% availability to all applications and services, while improving the efficiency of expensive server and network resources. NetScaler load balancing capabilities include:

- Advanced load balancing is a comprehensive L4-7 traffic management for web, application and database servers. NetScaler provides application and database server health checks that monitor the ability of the server infrastructure so that requests are only directed to healthy application and database resources capable of completing the user’s request.

- Powerful session persistence ensures that each user’s web connection is directed to the same server so that the application behaves properly during the entire duration of each session.

- Content switching or L7 load balancing is essentially an extension of the traffic distribution, health monitoring, and session persistence capabilities of layer 4 load balancers. The advantage is that load balancer decisions can also be based on application layer data.

- DataStream Technology – NetScaler is the first platform to extend the benefits of scalability, availability and security for the web tier to the data tier. Citrix DataStream Technology enables NetScaler to offload SQL connections from database servers (MySQL and MS SQL), intelligently load balance SQL traffic, improve the scale and performance of databases and to perform SQL traffic analysis.

**Accelerate performance**
Acceleration capabilities, such as AppCache, AppCompress and TCP optimizations, improve the user experience by making applications faster and more responsive. NetScaler accelerates web application performance through advanced web compression that reduces the amount of data that is sent to users, resulting in significantly faster response times for all varieties of web applications and reduced network bandwidth requirements. NetScaler AppCache provides high performance caching of both static content and dynamically generated web content. The innovative TCP optimizations of NetScaler accelerate application traffic over network links, including those with large delays and significant packet loss that otherwise would punish application performance.
SPDY Gateway, especially important for mobile devices, support expedites Page Load Times (PLT) over HTTP by leveraging content compression. NetScaler also supports modern protocols such as Westwood TCP and Multi-Path TCP (MPTCP) to unplug traffic slowdowns in HTTP that effect mobile and wireless devices and enable exceptional and predictable user experience.

**Next generation security**

NetScaler secures applications and networks from a wide variety of threats and attacks, prevents the leakage of confidential data, and protects sensitive communications with SSL and SSL VPN capabilities. Application Firewall blocks 100% of attacks targeting vulnerabilities in web and web services applications such as SQL injection, cross-site scripting and buffer overflow threats. By efficiently scanning thousands of HTTP signatures, the Application firewall expands on the positive security technique that enforces proper application behaviors. Secure Remote Access, a fully integrated SSL VPN protects mobile users. NetScaler appliances are also available with FIPS and NEBS certifications.

NetScaler can also front end and optimize virtualized environments such as XenApp/XenDesktop infrastructures by strengthening security leveraging SmartAccess and providing the best end user experience from any device anywhere. SmartAccess allows you to control access to published XenApps and XenDesktops on a server through the use of NetScaler Gateway session policies.

**Reducing TCO and improving ROI**

NetScaler server offload capabilities take the load off overburdened networks and servers, reducing server costs by up to 60 percent or more. NetScaler offloads from servers things they don’t do well, including compute-intensive tasks such as data compression, TCP and SQL connection management and SSL encryption.

NetScaler policies are defined and managed using Citrix AppExpert management framework, which provides a single, consistent environment for all NetScaler features and functional modules. 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.
Visibility

NetScaler Insight Center delivers unprecedented visibility and enables real-time control in response to network traffic from a variety of services such as cloud, mobile and virtual desktops. Based on the popular industry standard AppFlow, Insight Center leverages existing NetScaler platforms already in place in the application fabric. AppFlow provides the same visibility to application services that NetFlow provides to networking services. NetScaler Insight Center provides unmatched visibility for XenApp and XenDesktop through HDX Insight. For the first time, desktop and network administrators can ensure optimal user experience, employee productivity, and maintain SLAs for any user, anywhere, on any device. NetScaler Action Analytics provides integrated real-time performance analysis capabilities and adaptive policy controls for on-the-fly NetScaler policy optimization. It complements NetScaler AppFlow with real-time insight into full web application and SQL environment.