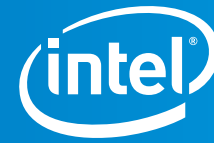


# CITRIX NETSCALER\*: OPTIMIZED PERFORMANCE ON INTEL® PROCESSORS



## Why NetScaler over Other Application Delivery Controllers (ADCs)?

### Better User Experience



- Provides mobile client support and security with Citrix NetScaler MobileStream\*<sup>1</sup>
- Integrates with Desktop Director\* to provide a single location for management and monitoring of Citrix XenApp\* and Citrix XenDesktop\* infrastructure
- Allows administrator visibility into networks and applications to help troubleshoot issues from a single console

### Faster Performance



- Provides up to 5x acceleration for the delivery of web-based applications<sup>1</sup>
- Can handle over 10 million concurrent Secure Sockets Layer (SSL) connections, 75 Gbps of SSL traffic, and 560K transactions per second (TPS) for 2048-bit key certificates<sup>1</sup>
- Improves response times and cuts bandwidth with NetScaler MobileStream<sup>1</sup>
- Citrix NetScaler VPX\* provides a full-featured virtual ADC with on-demand provisioning

### More Cost Effective



- Provides a 5:1 ADC-consolidation ratio
- Can reduce server costs up to 60 percent by helping prevent server sprawl<sup>1</sup>
- Provides exceptional performance for price with over 4x the real-world throughput of F5 BIG-IP\*<sup>1</sup>
- NetScaler MobileStream helps accelerate and secure the delivery of web applications while reducing hosting and operating costs

### Better Scalability



- Enables multi-tenancy, with support for up to 80 Citrix NetScaler\* instances on one appliance<sup>1</sup>
- Citrix TriScale\* allows for scaling clusters of up to 32 units into a single entity<sup>1</sup>
- Scales from the most advanced, fully active high-availability pair to a full-scale cluster with over 3 Tbps of aggregate capacity<sup>1</sup>
- Optimizes the scalability of XenApp, XenDesktop, and Citrix XenMobile\* deployments<sup>1</sup>

### NetScaler Combines

- L4-7 load balancing
- Application and web acceleration
- SSL VPN and secure access control
- Hybrid application firewall
- Application visibility
- Performance monitoring

### Questions to Ask Customers

- What are your plans for high availability or guaranteeing uptime for your mission-critical applications?
- How are you currently balancing the load on your virtual machines?
- How are you managing application security and user access?
- Are you considering adding application infrastructure (such as web servers, application servers, and SQL database servers) to support more applications and users?

### Key Differentiators

- Best performance and price with over 4x the real-world throughput of F5 BIG-IP<sup>1</sup>
- Most scalable ADC with TriScale technology
- The only ADC integrated into Cisco's switch infrastructure

## Optimize NetScaler on the Intel® Xeon® Processor E5 Family

The Intel® Xeon® processor E5-2600/1600 v3 product families offer ideal support for NetScaler VPX virtual appliances.



Up to

# 1.7x

increase in virtual-machine density\*\*<sup>2,3,4</sup>



Up to

# 50%

boost to virtualization performance\*\*<sup>2,5</sup>



Up to

# 3x

performance improvement over previous-generation processors<sup>2,3,6</sup>

\*\*As compared to previous-generation Intel Xeon processor-based servers

# Three NetScaler Platforms to Serve Customers

Citrix NetScaler MPX* Hardware	Multi-tenant Citrix NetScaler SDX*	Citrix NetScaler VPX*
<b>Physical appliance</b>	<b>Physical appliance</b>	<b>Virtual appliance</b>
A full portfolio of hardware-based appliances delivering from 500 Mbps to 120 Gbps of performance	Hardware-based appliances with advanced virtualization to consolidate up to 80 independently managed Citrix NetScaler* instances with up to 120 Gbps of overall performance	Software-based virtual appliances that are easy to install and run on widely deployed hypervisors, and which support performance levels from 10 Mbps to 3 Gbps
<b>Featured Use Cases</b>		
<ul style="list-style-type: none"> <li>• High-traffic web apps</li> <li>• Small-enterprise load balancing</li> <li>• High-performance web-app security</li> <li>• Flex tenancy</li> </ul>	<ul style="list-style-type: none"> <li>• Advanced virtualization</li> <li>• Data-center consolidation</li> <li>• Multi-tenancy with tenant isolation</li> <li>• Cloud data-center build outs</li> </ul>	<ul style="list-style-type: none"> <li>• Cloud infrastructures</li> <li>• Test-dev or staging environments</li> <li>• Scalable multi-tenant infrastructures</li> <li>• App delivery for smaller businesses</li> </ul>
<b>Powered by Intel® Processors</b>		
<ul style="list-style-type: none"> <li>• Intel® Xeon® processor E3 family</li> <li>• Intel Xeon processor E5 family</li> <li>• Intel Xeon processor 5600 series</li> </ul>	<ul style="list-style-type: none"> <li>• Intel Xeon processor E3 family</li> <li>• Intel Xeon processor E5 family</li> <li>• Intel Xeon processor 5600 series</li> </ul>	<ul style="list-style-type: none"> <li>• Intel® Xeon® processor E3-1200 v3 product family</li> <li>• Intel Xeon processor E5-2600/1600 v3 product families</li> <li>• Intel® Virtualization Technology (Intel® VT-x)</li> <li>• Intel® SSD DC S3500 Series helps optimize performance for servers running Citrix NetScaler VPX</li> </ul>

<sup>1</sup> Citrix NetScaler\* product reference card.

<sup>2</sup> Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark\* and MobileMark\*, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.

<sup>3</sup> Intel does not control or audit third-party benchmark data or the web sites referenced in this document. You should visit the referenced web site and confirm whether referenced data are accurate.

<sup>4</sup> (E5 v3 up to 1.7x VM density) Source as of September 8, 2014. New configuration: Hewlett-Packard Company ProLiant DL360 Gen9\* with two Intel® Xeon® processor E5-2699 v3, SPECvirt\_sc2013 score: 1614 @ 95 VMs. Source: <http://www.spec.org/>. Baseline: IBM System x3650 M4\* platform with two Intel Xeon processor E5-2697 v2, SPECvirt\_sc2013 score: 947.0 @ 53 VMs. Source: [http://www.spec.org/virt\\_sc2013/results/res2013q3/virt\\_sc2013-20130820-00004-perf.html](http://www.spec.org/virt_sc2013/results/res2013q3/virt_sc2013-20130820-00004-perf.html).

<sup>5</sup> (E5 v2 Virtualization Performance) Previous-generation baseline configuration and SPECvirt\_sc2013 benchmark score: platform with two Intel® Xeon® processor E5-2690, 256 GB memory, RHEL® 6.4 (KVM). Source as of July 2013: [http://www.spec.org/virt\\_sc2013/results/res2013q3/virt\\_sc2013-20130730-00003-perf.html](http://www.spec.org/virt_sc2013/results/res2013q3/virt_sc2013-20130730-00003-perf.html). Score: 624.9 @ 37 VMs. New-generation new configuration and SPECvirt\_sc2013 benchmark score: IBM System x3650 M4\* platform with two Intel Xeon processor E5-2697 v2, 512 GB memory, RHEL 6.4 (KVM). Source: Submitted to SPEC for review/publication as of Sept. 10, 2013: <http://www.spec.org/>. Score: 947.9 @ 57 VMs.

<sup>6</sup> Source as of September 8, 2014. New configuration: Hewlett-Packard Company HP ProLiant ML350 Gen9\* platform with two Intel® Xeon® processor E5-2699 v3, Oracle Java Standard Edition 8 update 11\*, 190,674 SPECjbb2013-MultiJVM max-jOPS, 47,139 SPECjbb2013-MultiJVM critical-jOPS. Source: <http://www.spec.org/jbb2013/results/res2014q3/jbb2013-20140902-00101.html>. Baseline: Cisco Systems Cisco UCS C240 M3 platform with two Intel® Xeon® Processor E5-2697 v2, Oracle Java Standard Edition 7 update 45, 63,079 SPECjbb2013-MultiJVM max-jOPS, 23,797 SPECjbb2013-MultiJVM critical-jOPS. Source: <http://www.spec.org/jbb2013/results/res2014q1/jbb2013-20140121-00050.html>.

Intel technologies' features and benefits depend on system configuration and may require enabled hardware, software or service activation. Performance varies depending on system configuration. No computer system can be absolutely secure. Check with your system manufacturer or retailer or learn more at [intel.com](http://intel.com).

Intel, the Intel logo, and Xeon are trademarks of Intel Corporation in the U.S. and/or other countries.

\*Other names and brands may be claimed as the property of others.

