

NetScaler VPX

Virtualizing the power of advanced web and application delivery and remote access services

NetScaler VPX provides the complete NetScaler web and application load balancing, secure and remote access, acceleration, security and offload feature set in a simple, easy-to-install virtual appliance. IT organizations, cloud and telecom service providers of any size can deploy NetScaler VPX on industry standard hypervisors—on demand—anywhere in the data center.

Deploying applications can be time consuming, complex and costly. Applications need to be continually deployed for new users and new devices. This can overwhelm the ability of IT departments and service providers to deliver applications on demand, provide an adequate user performance, and ensure the availability of applications and security. IT organizations are embracing virtualized infrastructure as a means to facilitate device consolidation, reduce costs and shuffle resources on demand to rapidly respond to business needs.

Key Benefits

- Reduces hardware server costs by 60%
- Accelerates application performance by 5x
- Provides consolidation of remote access infrastructure with one URL
- Improves application security with centralized policy management, and security at the edge of the data center
- Provides SSL VPN-based remote access
- Ensures high availability
- Provides monitoring of application and network traffic

Enable a virtual infrastructure

NetScaler VPX converges and consolidates networking infrastructure. It makes functionality typically only offered on specialized, high-end network devices available as a virtual appliance that can be easily and dynamically deployed on a single server or across entire enterprise data centers. The simplicity and flexibility of NetScaler VPX makes it easy and cost effective to fully optimize every application type. For example:

- Provide secure remote access and high availability for any application type like Citrix apps, web and enterprise apps, cloud and SaaS apps, and mobile apps
- Provision and de-provision NetScaler on demand in test and lab environments, telecom service and cloud provider environments
- Cost effectively deploy full NetScaler functionality in front of applications, such as Microsoft SharePoint and Office Communication Server

Provide secure remote access

NetScaler Unified Gateway¹⁰ is part of NetScaler Enterprise and Platinum editions and offers secure remote access to any application whether it be web, legacy client-server, SaaS, mobile or Citrix apps. In addition to basic and advanced ICA proxy functionalities offered, NetScaler Unified Gateway also provides

- One URL for remotely accessing any application on any device type
- SAML 2.0 federated identity for enabling single sign-on across all application types
- Centralized policy management for XenApp and XenDesktop using SmartControl
- Anywhere access on iOS⁵ and Android⁶ mobile devices
- Support for Linux⁷, MacOS⁸, and Windows⁹ operating systems

For more information on Unified Gateway, please refer to the Unified Gateway [product overview](#).

Leverage in-place processing capacity

With NetScaler VPX, IT and service providers can take full advantage of virtualized servers and associated resources that are already in place and deploy application delivery controllers and remote access SSL VPN gateways on-demand anywhere in any network or data center. NetScaler VPX is not dependent on specific server hardware, which enables enterprises to exploit low-cost, commodity server platforms. In addition, multiple NetScaler instances can be deployed on a single physical server to maximize utilization of hardware infrastructure. At the other end of the spectrum, service providers now have the option to utilize whatever special-purpose hardware—for example, NEBS compliant or DC-powered systems—from whatever source best meets their needs or internal standards.

Protect infrastructure investments

The ability to easily upgrade NetScaler VPX licenses and swap out underlying hardware platforms to up-size or down-size an implementation as needed represents a considerable degree of investment protection, especially relative to fixed form-factor alternatives. In addition, a broad range of price-performance combinations ensures that there is a good fit for every use case, from small-to-medium and departmental implementations to those typical of larger enterprises and service providers.

Provision infrastructure ondemand

NetScaler VPX enables organizations to dynamically provision crucial application delivery and remote access services in support of dynamically provisioned applications. With NetScaler VPX, individual applications and the functionality required to ensure their availability, performance and security can be spun up, spun down and even migrated as conditions dictate. Responsiveness is enhanced at the same time that the use (and re-use) of computing resources is optimized, further improving operational efficiency and automation.

Customize web and application delivery

IT organizations and service providers can mix physical and virtual appliances to create a web and application delivery fabric. Specifically, NetScaler MPX appliances can be deployed at the datacenter edge to address high-capacity network-wide actions, while NetScaler VPX can be deployed ondemand deeper within the data center core to handle application-specific processor intensive actions—all managed via Citrix Command Center. This provides the lowest TCO and greatest flexibility. By exploiting the specific strengths of both physical and virtual appliances, the resulting web and application delivery fabric enables maximum functionality and flexibility at minimum cost. Further key advantages of this approach include:

- Tuning advanced delivery capabilities to meet the requirements of each specific application
- Separating and isolating application delivery services along different organizational boundaries

VPX models	Minimum Memory ¹	vCPUs ²	AWS	Azure	ESXi	KVM	XenServer	Hyper-V	Recommended Network Driver
VPX 100G	2 GB	2 - 20			•	•			PCI pass-through
VPX 40G	2 GB	2 - 20			•	•	•		SR-IOV
VPX 25G	2 GB	2 - 16			•	•	•		
VPX 15G	2 GB	2 - 12			•	•	•		
VPX 10G	2 GB	2 - 10			•	•	•		VMXNET3 ⁴ or SR-IOV*
VPX 8000	2 GB	2 - 6			•	•	•		
VPX 5000	2 GB	2 - 6	•		•	•	•		
VPX 3000	2 GB	2 - 4	•	•	•	•	•	•	VMXNET3 ⁴ or Paravirtualization
VPX 1000	2 GB	2 - 4	•	•	•	•	•	•	
VPX 200	2 GB	2	•	•	•	•	•	•	
VPX 25	2 GB	2	•	•	•	•	•	•	
VPX 10	2 GB	2	•	•	•	•	•	•	

Performance ³	Minimum	Maximum
System throughput	10 Mbps	100 Gbps
SSL transactions/sec (2K key certificates)	1100	20,000
SSL ECDHE transactions/sec (2K key certificates)	880	17,280
SSL throughput	10 Mbps	30 Gbps
SSL VPN/ICA proxy concurrent users	15	9000

Hypervisor Versions

ESXi: All VPX appliances are supported on versions 5.5, 6.0, 6.5. VPX 10, 25, 200, 1000 & 3000 can be supported on 5.1.

Hyper-V: Designated VPX appliance models supported on version 2012, 2012 R2, 2016.

XenServer: Designated VPX appliance models supported on version 6.5. VPX 10, 25, 200, 1000 & 3000 can be supported on 6.2.

* Performance validated for XenServer using SR-IOV only.

- For standard license, VPX minimum memory requirement is 2GB for up to 2 vCPUs. For enterprises or platinum license, VPX minimum memory requirement is 4GB for up to 2 vCPUs. For the optimal performance, irrespective of the license, we recommend 4GB memory per vCPU. E.g., for a VPX with 6vCPU, we recommend to have 6 x 4GB = 24GB memory allocated.
- Processors supported: Intel VTx or AMD-V.
- Citrix NetScaler performance with HP ProLiant DL360p Gen8 with Intel® Xeon® CPU E5-2690 v2 @3.00 GHz. Expected ECDHE performance is 880 per vCPU.
- VMXNET3 is supported on ESXi versions only.
- Requires iOS 7.1 or later. Compatible with iPhone, iPad and iPod touch.
- Requires Android 4.1.x & 4.2.x (Jelly Bean), 4.4.x (KitKat), 5.x (Lollipop).
- Ubuntu 14.04 32bit/64bit, Ubuntu 12.04 32bit/64bit.
- OS X 10.9 (Mavericks), OS X 10.10 (Yosemite).
- Windows 7, 8, and 8.1 (32bit/64bit).
- Below NetScaler 11.1, Standard and Enterprise Editions include (5) Universal licenses. Platinum Edition includes (100) Universal licenses. Starting NetScaler 11.1, Standard includes 500 Universal licenses, Enterprise Editions include (1000) Universal licenses and there are no Universal license requirements with Platinum Edition. Universal license entitlements are per HA pair or per cluster depending on how you deploy NetScaler.



About Citrix

Citrix (NASDAQ:CTXS) is leading the transition to software-defining the workplace, uniting virtualization, mobility management, networking and SaaS solutions to enable new ways for businesses and people to work better. Citrix solutions power business mobility through secure, mobile workspaces that provide people with instant access to apps, desktops, data and communications on any device, over any network and cloud. With annual revenue in 2014 of \$3.14 billion, Citrix solutions are in use at more than 330,000 organizations and by over 100 million users globally. Learn more at www.citrix.com

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