# **CITRIX**®

# **Citrix ADC VPX**

### **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

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

Citrix ADC VPX, formerly Citrix NetScaler ADC VPX, provides a complete 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 and cloud and telecom service providers of any size can deploy Citrix ADC VPX on industry standard hypervisors—on demand—anywhere in the data center.

Deploying applications can be time consuming, complex, and costly. The need to continually deploy applications for new users and devices can overwhelm IT departments and service providers, making it difficult for them to ensure application availability, performance, 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.

## **Enable a Virtual Infrastructure**

Citrix ADC 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 Citrix ADC 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 deprovision Citrix ADC on demand in test and lab environments, telecom service, and cloud provider environments
- Cost-effectively deploy full Citrix ADC functionality in front of applications, such as Microsoft SharePoint and Office Communication Server

### Provide Secure Remote Access

Citrix Gateway<sup>10</sup> is part of the Advanced and Premium 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, Citrix 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 applications
- Centralized policy management for Citrix apps
- Virtual Apps and Desktops using SmartControl
- Anywhere access on iOS<sup>5</sup> and Android<sup>6</sup> mobile devices

• Support for Linux<sup>7</sup>, MacOS<sup>8</sup>, and Windows<sup>9</sup> operating systems

For more information on Citrix Gateway, please refer to the <u>Citrix Gateway</u> <u>Product Overview</u>.

#### Leverage in-place Processing Capacity

With Citrix ADC 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 in any network or data center. Citrix ADC VPX is not dependent on specific server hardware, which enables enterprises to exploit low-cost, commodity server platforms. In addition, multiple Citrix ADC 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 Citrix ADC 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-tomedium and departmental implementations to those typical of larger enterprises and service providers.

#### **Provision Infrastructure on Demand**

Citrix ADC VPX enables organizations to dynamically provision crucial application delivery and remote access services in support of dynamically provisioned applications. With Citrix ADC 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 reuse) 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, MPX appliances can be deployed at the data center edge to address high-capacity network-wide actions, while Citrix ADC VPX can be deployed on demand 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 <sup>1</sup>	vCPUs <sup>2</sup>	AWS <sup>11</sup>	Azure	ESXi	KVM	Citrix Hypervisor (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	•		•	•	•		VMXNET3 <sup>4</sup> or SR-IOV*
VPX 10G	2 GB	2-10	•		•	•	•		
VPX 8000	2 GB	2-6	•		•	•	•		
VPX 5000	2 GB	2-6	•		•	•	•		
VPX 3000	2 GB	2-4	•	•	•	•	•	•	
VPX 1000	2 GB	2-4	•	•	•	•	•	•	VMXNET3⁴ or Paravirtualization
VPX 200	2 GB	2	•	•	•	•	•	•	
VPX 25	2 GB	2	•	•	•	•	•	•	
VPX 10	2 GB	2	•	•	•	•	•	•	

Performance	Minimum	Maximum
System throughput	10 Mbps	100 Gbps
SSL transactions/sec (2K key certificates)	1,100	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	9,000

Hypervisor Versions

For details on hypervisor support visit the <u>Support Matrix and Usage Guidelines</u> page on the Citrix website.

\* Performance validated for Citrix Hypervisor using SR-IOV only.

<sup>1</sup> For Standard license, VPX minimum memory requirement is 2GBfor up to 2 vCPUs. For Advanced or Premium, 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.) <sup>2</sup> Processors supported: Intel VTx.

<sup>3</sup> Citrix ADC performance with HP Proliant DL360p Gen8 with Intel<sup>®</sup> Xeon<sup>®</sup> CPU E5-2690 v2 @ 3.00 GHz. Expected ECDHE performance is 880 per vCPU.

<sup>4</sup> VMXNET3 is supported on ESXi versions only.

<sup>5</sup> Requires iOS 7.1 or later. Compatible with iPhone, iPad and iPod touch.

<sup>6</sup> Requires Android 4.1 or later.

<sup>7</sup> Ubuntu 14.04 32bit/64bit,Ubuntu 12.04 32bit/64bit.

<sup>8</sup> OS X 10.9 (Mavericks) or later

<sup>9</sup> Windows 7, 8, 8.1, and 10

<sup>10</sup> For ADC versions after 11.1, the Standard edition includes (500) Universal licenses, Enterprise or Advanced editions include (1000) Universal licenses, and there are no Universal license requirements with Platinum or Premium editions. For versions previous to Citrix ADC 11.1, the Standard and Enterprise editions include (5) Universal licenses, and the Platinum edition includes (100) Universal licenses. Universal license entitlements are per High Availability (HA) pair or per cluster depending on how you deploy Citrix ADC <sup>11</sup> VPX 8000, VPX 10G, VPX 15G, and VPX 25G are only available via BYOL on AWS and require 5th generation EC2 instance types (C5, M5, and C5n). With larger BYO licenses, VPX can achieve up to 30 Gbps throughput.



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