

# VMware vCloud Networking and Security

Efficient, Agile and Extensible Software Defined Networks and Security

## AT A GLANCE

VMware vCloud® Networking and Security is the leading software defined networking and security solution that enhances operational efficiency, unlocks agility and is extensible to rapidly respond to business needs. It provides a broad range of services in a single solution, including virtual firewall, VPN, load balancing and VXLAN extended networks. Management integration with VMware vCenter™ and vCloud Director™ reduces the cost and complexity of datacenter operations and unlocks the operational efficiency and agility of virtual datacenters and private cloud deployments.

## KEY BENEFITS

- Lowers cost and complexity with a virtualized networking and security solution
- Efficiently manages compute resources across cluster and subnet boundaries
- Scales and moves virtual workloads without physical network or security constraints or the need for specialized appliances
- Enables integration of third-party network and security solutions through open architecture and standard APIs
- Streamlines operations through vCenter and vCloud Director integration
- Provides scalable networking and security while simplifying compliance

## Datacenter Networking and Security Challenges

Current network and security solutions are rigid and complex, and they create a costly barrier to realizing the full agility of private clouds. Limitations of physical networking and security tie an increasingly dynamic virtual world back to inflexible, dedicated hardware, creating artificial barriers to optimizing network architecture and capacity utilization.

Manual provisioning, dedicated physical appliances and fragmented management interfaces reduce efficiency and limit the ability of enterprises to rapidly deploy, move, scale and protect applications and data according to business needs.

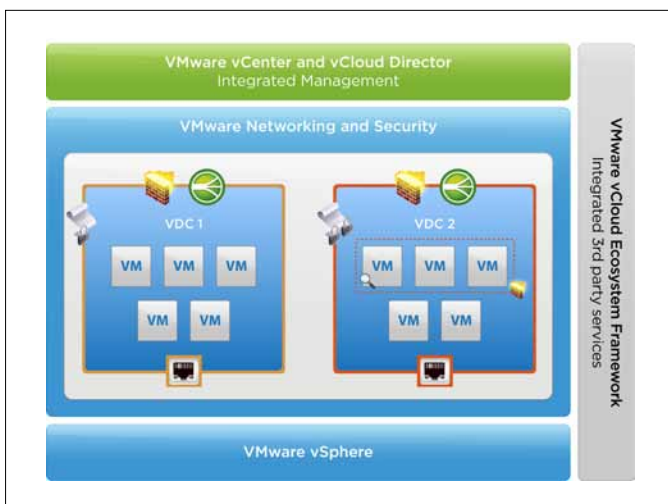
## vCloud Networking and Security(vCNS)

VMware vCloud Networking and Security(vCNS) solves these datacenter challenges by virtualizing networks and security to create efficient, agile, extensible logical constructs that meet the performance and scale requirements of virtualized datacenters.

## Key Features of vCloud Networking and Security

- **Edge** – Provides a rich set of integrated networking and security gateway services for protecting virtual datacenters and optimizing resource utilization. This virtual appliance includes services such as firewall, network address translation (NAT), load balancing and VPN. Edge High Availability protects against network, host and software failures.
- **App Firewall** – Protects and isolates critical applications with security applied immediately to surround a virtual machine. vCenter integration streamlines management and improves operational efficiency.
- **VXLAN** – Enables technology for network virtualization, providing network abstraction, elasticity and scale across the datacenter. VXLAN provides an architecture for scaling your applications across clusters and pods without any physical network reconfiguration.
- **Management and Reporting** – Through seamless integration with VMware vCenter Server™ and vCloud Director, provides a central point of control for deploying, managing, reporting, logging, and integrating security and gateway services. Role-based access control enables separation of duties and compliance.
- **vCloud Ecosystem Framework** – Integrates partner services at either the virtual network interface card (vNIC) or virtual edge through REST APIs.

vCNS improves operational efficiency and optimizes resource utilization, enabling you to reduce costs. It increases IT agility and flexibility by simplifying operations while also extending the platform to include third-party networking and security services.



vCloud Networking and Security Solution

## How It Is Used?

vCNS is typically used in the following scenarios

### Secure Virtualization of Business-Critical Applications

- Protect and isolate critical applications with adaptive security groups.
- Move security dynamically with the workload for continuous protection and compliance.
- Increase visibility and control over inter-virtual machine communication.

### Build an Agile and Trusted Private Cloud Infrastructure

- Secure the edge of the virtual datacenter with the integrated firewall, load balancer and VPN.
- Reduce manual networking provisioning and simplify deployment.
- Optimize management and consumption of compute resources across physical network boundaries.

### Secure VMware View Virtual Desktop Deployments

- Limit network access for remote or third-party users, and protect sensitive data from unauthorized staff or hackers.
- Limit the spread of malware among virtual machines.

## How Does It Work?

vCNS provides software defined networking and security built into the virtual infrastructure. Just as VMware vSphere® abstracts compute capacity from the server hardware to create virtual pools of resources that can be consumed as a service, vCNS abstracts networking and security into a generalized pool of capacity and separates the consumption of these services from the underlying physical infrastructure.

This unified pool of network capacity can be optimally segmented into logical networks supporting specific applications. When the network is associated with an application, it can move, grow or shrink along with it.

VXLAN networks can span physical boundaries, optimizing compute resource utilization across noncontiguous clusters and pods. Because logical networks are decoupled from physical topology, you can scale VXLAN networks without reconfiguring the underlying physical hardware. This solves the problem of time-consuming planning for VLAN provisioning and managing VLAN sprawl.

As networks are virtualized, security, load balancing and other gateway services are fully aligned and integrated with the new paradigm. You can load-balance across clusters, pods and metro-clusters. Greater visibility into traffic flows makes security more effective. As the application is moved or scaled, it maintains effective internal isolation and perimeter security.

The product integrates network and security provisioning and operations with the management of virtual datacenters, reducing operational cost and complexity. You get a central point of control for managing, deploying, reporting and logging, as well as integrating

third-party services. What's more, you can continue to use your existing infrastructure to build virtual networks and security.

The result is dramatically simplified operations, efficient resource utilization and greater agility to scale in response to business needs—all delivered through an integrated and extensible platform.

## How to Buy

vCNS is available as part of VMware vCloud Suite, where it is licensed on a per-processor basis. You can also purchase it as a standalone product with a per-virtual machine licensing model. When you purchase the product as part of vCloud Suite, you can leverage per-processor licensing for lower costs as your consolidation ratios grow.

vCloud Networking and Security is available in two editions:

- **vCNS Standard Edition** – Provides essential software defined networking and integrated security.
- **vCNS Advanced Edition** – Builds on Standard Edition to provide high availability and cloud load balancing for business-critical applications, virtual desktop infrastructure (VDI) deployments and cloud computing.

## vCNS Editions

	VCNS STANDARD	VCNS ADVANCED
Firewall	•	•
Virtual Private Network (VPN)	•	•
VXLAN	•	•
vCloud Ecosystem Framework	•	•
Network Address Translation (NAT)	•	•
Dynamic Host Config. Protocol	•	•
High Availability (HA)		•
Load Balancing		•
Data Security		•
Endpoint	(Bundled in vSphere 5.1)	

## Find Out More

For detailed vCloud Networking and Security specifications and system requirements, visit [www.vmware.com/go/vcns](http://www.vmware.com/go/vcns).

For additional information on vCloud Suite, visit [www.vmware.com/go/vcloud-suite](http://www.vmware.com/go/vcloud-suite).

For information or to purchase VMware products, call 877-4-VMWARE (outside North America, +1-650-427-5000), visit <http://www.vmware.com/products>, or search online for an authorized reseller.

