

# Arista and VMware NSX Integration



## Solution Overview

Arista Networks and its partner VMware, the industry leader in virtualization solutions, are extending their partnership within the network virtualization space. Building on the success of their collaboration in co-authoring and productizing the VXLAN specification, the two companies have developed a joint solution to meet the demands of Software Defined Data Centers (SDDC). The solution delivers Arista L2 Gateway services for simplified management of physical and virtual environments allowing Cloud/Hosting and Enterprise Data Centers to speed service delivery while streamlining operational and cost efficiencies.

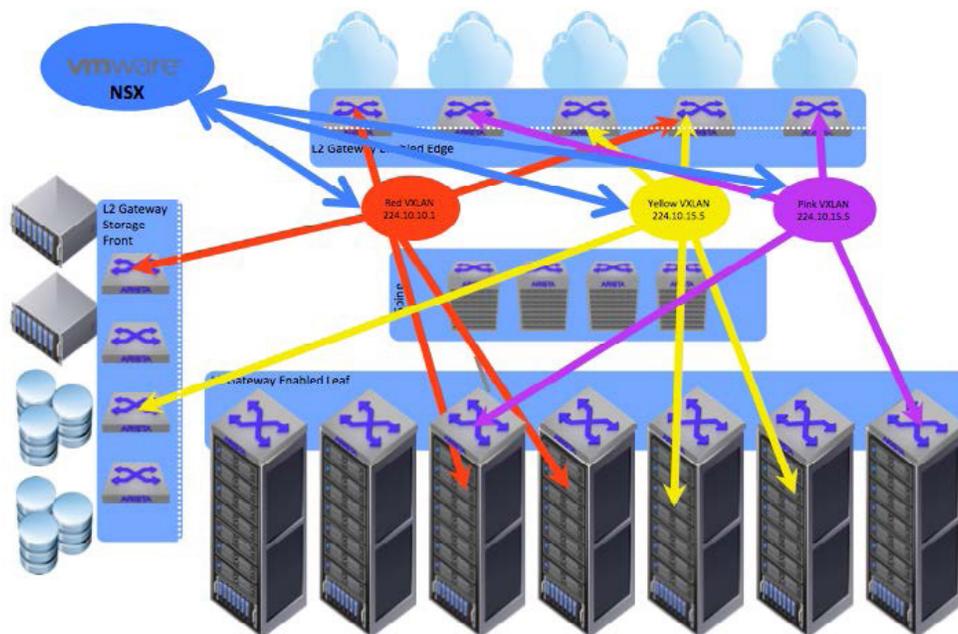
VMware NSX is the industry's leading network virtualization platform that delivers the operational model of a VM for the network. Similar to virtual machines for compute, virtual networks are programmatically provisioned and managed independent of underlying networking hardware. NSX reproduces the entire network model in software allowing diverse network topologies to be created and provisioned in seconds.

The Arista Extensible Operating System (EOS), is the industry's most advanced network operating system. It combines modern-day software and O/S architectures, open platform development, a Linux kernel, and a stateful publish/subscribe database model to providing a completely programmatic network operating system.

Together, Arista EOS and VMware NSX provide the essential integration and programmatic capabilities to offer flexible workload placement and mobility for a true software defined data center.

### Customer Use Case

VXLAN is a major component in customer data centers offering the scalability, multi-tenancy and mobility that legacy VLANs are not providing. Within VXLAN, networks are virtualized and tunneled through a standards based routed network. These logical networks must be programmed and managed throughout the network including virtual/physical servers, networking equipment, and storage devices. VMware offers this functionality through best of breed L2 gateway services including integration with Arista EOS and hardware-based VXLAN.



NSX's L2 Gateway programmability across both VMware and Open V-Switch Data Base (OVSDB)-server environments seamlessly integrates with Arista's hardware-based VXLAN implementation to bridge these logical networks across multi-vendor virtual server environments and physical infrastructure gateways.

Arista EOS devices will register with the NSX controller and share topology information, VXLAN tables, MAC addresses and L2 gateway location. As workloads are brought online and the topology changes, updates will be sent between the NSX controller and EOS. This enables VXLAN deployments to move away from the multicast control plane and provide a holistic view of logical network topology data center.

### Solution Benefits

VMware NSX and Arista EOS integration offer the following benefits to deploying network virtualization within data centers built on the foundation of software defined cloud networking:

- Virtual and physical workloads can be connected on a common logical segment on demand regardless of hypervisor, IP subnet or physical location
- Holistic views of the virtual and physical topology increase operational efficiency
- Network virtualization with NSX does not require IP multicast for learning or forwarding broadcast, unknown unicast or multicast packets
- A single point of management and control (NSX API) can be used for configuring logical networks across hypervisors and physical access switch

#### Santa Clara—Corporate Headquarters

5453 Great America Parkway,  
Santa Clara, CA 95054

Phone: +1-408-547-5500

Fax: +1-408-538-8920

Email: [info@arista.com](mailto:info@arista.com)

#### Ireland—International Headquarters

3130 Atlantic Avenue  
Westpark Business Campus  
Shannon, Co. Clare  
Ireland

Vancouver—R&D Office  
9200 Glenlyon Pkwy, Unit 300  
Burnaby, British Columbia  
Canada V5J 5J8

San Francisco—R&D and Sales Office 1390  
Market Street, Suite 800  
San Francisco, CA 94102

#### India—R&D Office

Global Tech Park, Tower A & B, 11th Floor  
Marathahalli Outer Ring Road  
Devarabeesanahalli Village, Varthur Hobli  
Bangalore, India 560103

#### Singapore—APAC Administrative Office

9 Temasek Boulevard  
#29-01, Suntec Tower Two  
Singapore 038989

#### Nashua—R&D Office

10 Tara Boulevard  
Nashua, NH 03062



Copyright © 2016 Arista Networks, Inc. All rights reserved. CloudVision, and EOS are registered trademarks and Arista Networks is a trademark of Arista Networks, Inc. All other company names are trademarks of their respective holders. Information in this document is subject to change without notice. Certain features may not yet be available. Arista Networks, Inc. assumes no responsibility for any errors that may appear in this document. MM/YY