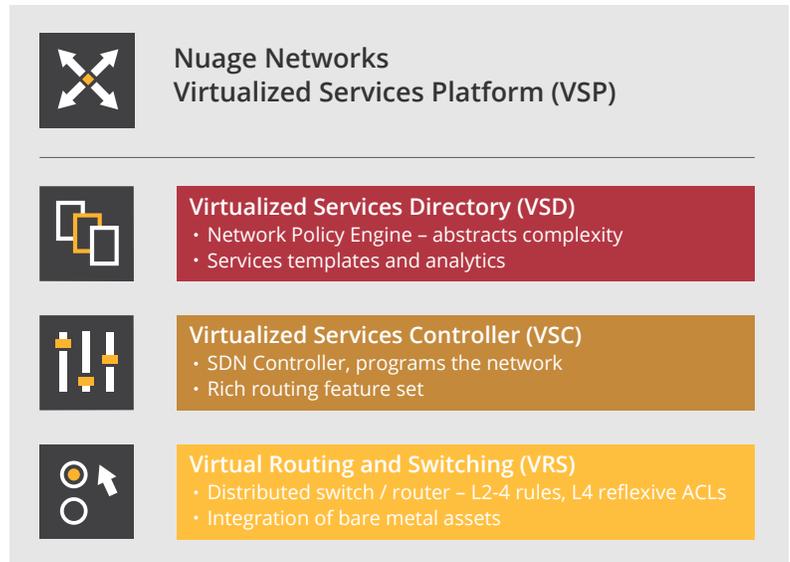


# Nuage Networks Virtualized Services Platform (VSP) with Cumulus Networks

## Nuage Networks VSP

Nuage Networks Virtualized Services Platform (VSP) is an SDN overlay networking solution that delivers policy-based automation of both network and security operations for cloud environments. As an open, vendor-agnostic platform, Nuage Networks delivers virtual networking and cloud automation consistently across all leading hypervisor environments, Docker-style containers, as well as bare metal deployments. Nuage Networks VSP also supports leading open source cloud management systems, such as OpenStack and Cloudstack, for infrastructure-wide cloud automation. With Nuage Networks VSP, customers can realize the benefit of abstracting network resources for on-demand cloud services, while retaining visibility to their physical network infrastructure for easier analysis and troubleshooting.



## Cumulus Linux, the Network Operating System for Open Networking

Many organizations today are limited by complex infrastructure and long feature development cycles on closed networking platforms.

Cumulus Networks Open Networking ecosystem provides an alternative. Disaggregation of networking hardware and software combined with a robust ecosystem, including Nuage Networks, provides automation, accelerated innovation, consistent tools across the data center, and cost savings spanning both CapEx and OpEx. Cumulus Networks unleashes the power of Open Networking with hardware-accelerated Linux networking that supports layer 2, layer 3, and overlay network architectures.

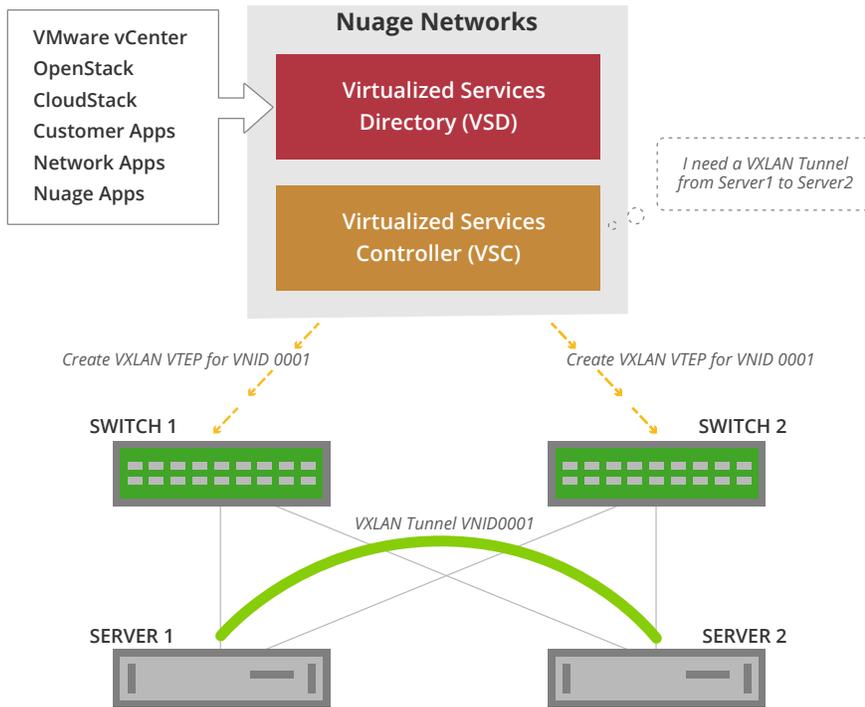
When deployed as the operating system for a VXLAN gateway (a VXLAN tunnel endpoint, or VTEP), Cumulus Linux enables physical workloads to be seamlessly connected into any overlay solution, extending the reach of the solution across physical and virtual applications and networks.

## Integrated Solution

Nuage Networks VSP and Cumulus Linux deliver an integrated networking solution for public and private clouds with support for the largest multi-tenant data centers. Cumulus Linux-based switches can perform the VXLAN encapsulation/tunneling for bare metal applications, as well as VXLAN to VLAN mapping for integration with external and WAN networks, while Nuage Networks VRS forms the VTEP for virtual applications as the hypervisor-resident virtual switch.

The combined Cumulus Networks and Nuage Networks infrastructure is managed under the common SDN controller (VSD and VSC) and a single cloud networking policy model. When integrated into OpenStack or CloudStack, the Nuage Networks and Cumulus Networks infrastructure can be integrated into the cloud management system seamlessly.

Nuage Networks VSP provides cloud users with the ability to create feature-rich, multi-tenant environments that can be deployed seamlessly without any requirement or configuration changes in the underlying physical network infrastructure, thanks to the use of overlay technologies.



## Solution Benefits

### Business

- Creation of agile, open, scalable physical network infrastructure with unprecedented cost savings
- Creation of virtual network infrastructure on demand, with any hardware and the greatest level of deployment simplicity
- Operational simplicity, consistency of features and tools, and advanced visibility across physical and virtual workloads

### Technical

- High performance VXLAN-based virtual networks that can span virtual and physical workloads
- Seamless integration with various cloud management systems for infrastructure-wide automation
- Single point of configuration for the overlay network (hardware VTEPs and hypervisor-resident virtual switches) via Nuage Networks VSP

Cumulus Linux enables the overlay solution to extend to bare metal workloads with support for VXLAN gateways. By implementing layer 2 hardware VTEP features, Cumulus Linux can terminate a VXLAN tunnel in hardware, which enables:

- Bare metal workloads to be integrated into the overlay solution.
- Generic north-south gateway functionality (interconnecting the cloud with external networks such as the Internet) to be offloaded to hardware.

## Summary

The emergence of cloud architectures has benefited greatly from the rapid adoption of virtual networking technologies, standards, and SDN automation platforms. But many cloud solutions need to satisfy the requirements of existing applications, running on bare metal servers and requiring hardware-accelerated performance. Together, Cumulus Networks and Nuage Networks deliver on this common vision, integrating cloud architectures with legacy application environments and networks, managed under a common SDN controller, for an open, flexible, cost-effective IT automation platform.

### About Cumulus Networks®

Cumulus Networks demystifies the complexity of networking and enables better, faster, easier networks to support your business. Our network operating system, Cumulus® Linux®, allows you to build and operate your network with the mindset of web-scale pioneers like Google and Amazon, radically reducing the costs and complexities of modern data center networks. More than 400 organizations, including some of the largest-scale data center operations in the world, run Cumulus Linux. Cumulus Networks has received venture funding from Andreessen Horowitz, Battery Ventures, Sequoia Capital, Peter Wagner and four of the original VMware founders. For more information visit [cumulusnetworks.com](http://cumulusnetworks.com) or follow [@cumulusnetworks](https://twitter.com/cumulusnetworks).

### About Nuage Networks

Nuage Networks ([www.nuagenetworks.net](http://www.nuagenetworks.net)) brings a unique combination of groundbreaking technologies and unmatched networking expertise to the enterprise and telecommunications industries. The Silicon Valley-based start-up has applied radically new thinking to the problem of delivering massively scalable and highly programmable SDN solutions with the security and availability required by business-critical environments. Nuage Networks, backed by the rapidly growing IP division of Alcatel-Lucent (Euronext Paris and NYSE: ALU), has the pedigree to serve the needs of the world's biggest clouds. The cloud has made promises: the mission of Nuage Networks is to help you realize them. Discover more at [www.nuagenetworks.net/partners](http://www.nuagenetworks.net/partners) and follow Nuage [@nuagenetworks](https://twitter.com/nuagenetworks)

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## Get Started!

- Learn, Prototype and Develop for free with Cumulus VX: [cumulusnetworks.com/cumulus-vx/](http://cumulusnetworks.com/cumulus-vx/)
- Download the latest version of Cumulus Linux: [cumulusnetworks.com/downloads/](http://cumulusnetworks.com/downloads/)
- Learn more about Nuage Networks: <http://www.nuagenetworks.net/>