Best-of-breed Open Networking for the Cloud Data Center

Highlights

Arista and Nuage Networks deliver a tightly integrated joint solution that combines a Software Defined Networking (SDN) overlay with a highly programmable and efficient network infrastructure underlay. Key capabilities:

- Full and consistent automation across both virtualized and bare metal resources

- Arista EOS® CloudVision® provides a single point of integration via open APIs for seamless orchestration of the underlay network

- Unified network within and across data centers

- Full network visibility and problem resolution

New Network Demands

Software Defined Networking (SDN) is becoming mainstream for high-technology enterprises and service providers. To maximize the agility of application deployment and service delivery, cloud data center networks must:

- Provide automation to respond in real-time to application demands.

- Manage virtualized and bare metal resources consistently.

- Embed openness and customization to surpass legacy approaches.

Cloud Networking — No Forklift Required

Arista and Nuage Networks created a joint solution for companies that are gaining competitive advantage through cloud-based approaches. This best-of-breed solution provides consistent policy-based automation for virtual and physical assets within and across data centers. And, it utilizes what's in place today — no upgrades needed.

Looking at the diagram, the Virtual Routing & Switching (VRS) component of Nuage Networks VSP is installed into the virtualization hypervisor or Container host. This creates an overlay virtual network for the datacenter.

Cloud Networking powered by Nuage Networks and Arista CloudVision
- Unified, Fully Automated, Programmable, Open Network
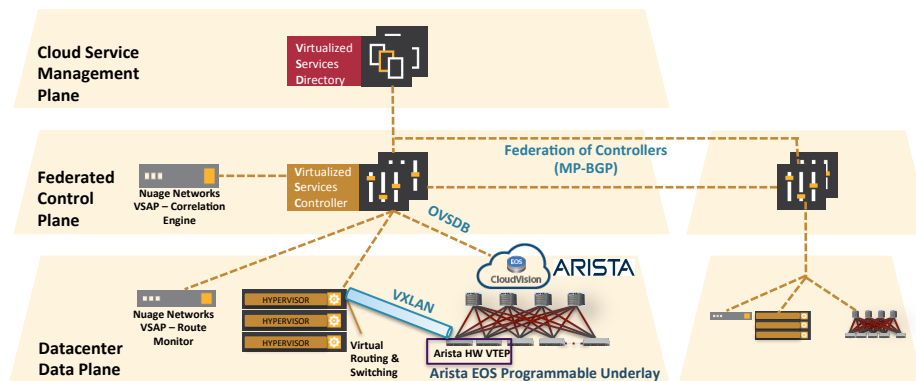
Arista EOS CloudVision dynamically discovers and transfers workload information (such as MAC address) to the Nuage Networks Virtualized Services Controller (VSC) via an open protocol – OVSDB. The dynamic exchange of information between CloudVision and the Nuage Networks VSC provides automated discovery of all hosts across the overlay network regardless of whether they are virtualized or bare metal resources. The Arista Hardware Virtual Tunnel End Point (HW VTEP) ensures that non-virtualized ("bare metal") network traffic can be seamlessly and consistently connected into the virtual network via encapsulation into VxLAN tunnels.

The Nuage Networks Virtualized Services Directory (VSD) unifies (also known as "federates") multiple datacenter networks into a manageable single network via a standard protocol — BGP. Nuage Networks Virtualized Service Assurance Platform (VSAP) and Arista's programmable EOS provide a consolidated topology view at overlay level plus drilldown into the underlay for statistics or troubleshooting.

Benefits

Frees applications from legacy networking limitations

Arista's universal cloud architecture powered by EOS with large scale Layer 3 ECMP and CloudVision framework in conjunction with Nuage Networks' distributed routing capabilities provide cloud-scale, high performance networking that frees applications from the limitations of legacy networking.

Breaks architectural constraints and lock-in

By leveraging the same process, security profile, and network profile across both virtualized and bare metal resources and across data centers, the solution overcomes architectural constraints. The solution breaks lock-in by leveraging industry standards, by being hypervisor agnostic, and by Cloud Platform integration.

Provides investment protection

Via its overlay approach, the solution can be fully implemented on existing infrastructure without forklift upgrades. By extending the life of existing assets, the solution provides investment protection from day one.

About

Arista Networks (www.arista.com) was founded to deliver software-driven cloud networking solutions for large data center and computing environments. Arista's award-winning 10/40/100 GbE switches redefine scalability, robustness, and price-performance, with over 4,000 customers and more than three million cloud networking ports deployed worldwide. EOS and CloudVision are registered trademarks and Arista Networks is a trademark of Arista Networks, Inc. All other company names are trademarks of their respective holders.

Nuage Networks (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 high programmable SDN solutions with the security and availability required by business-critical environments.