INNOVATOR AWARDS: NETWORKING

SECOND HALF 2017

EMA

An Enterprise Management Associates
Research Report Summary

Prepared for Arista Networks
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The EMA Innovator Awards recognize vendors that demonstrate true innovation in the IT industry. On a rolling basis throughout the year, EMA analysts present these awards to vendors that have advanced their respective industries and solved pressing problems for their customers.

This report recognizes Arista Networks' Any Cloud Platform, a solution for multicloud and hybrid cloud networking. EMA bases its award selection upon its original research on enterprise networking trends, interaction with the industry, and conversations with network practitioners.

MULTICLOUD AND HYBRID CLOUD NETWORKING
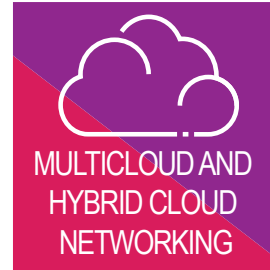
2017 EMA INNOVATOR: ARISTA NETWORKS

SECOND HALF 2017

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ARISTA

CATEGORY:
Multicloud/hybrid cloud networking

TECHNOLOGY:
Arista Any Cloud Platform

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Arista Networks: Any Cloud Platform With vEOS Routing

Technology Category: Multicloud and Hybrid Cloud Networking

The Arista Networks Any Cloud Platform enables enterprises to build and operate multicloud and hybrid cloud networks with the same Extensible Operating System (EOS) that powers Arista's data center switches.

Arista Any Cloud has two key components. The first component is a virtual router based on an EOS that is supported in leading public cloud environments, including Amazon Web Services (AWS), Microsoft Azure, Google Cloud, and Oracle Cloud. It's also supported in Equinix cloud exchanges.

The second component is CloudVision, Arista's software platform that collects and monitors network state data from every EOS-based node on a network and acts as a central point of integration, management, and automation for Arista-based networks. CloudVision provides visibility and control across the Arista Any Cloud Platform, from physical switches deployed in an enterprise data center to the virtual EOS routers in the public cloud.

Arista also introduced Cloud Tracer, an integrated CloudVision feature that traces network paths across an EOS-based Any Cloud Platform. Cloud Tracer gives network operators enhanced visibility into the performance, throughput and latency of the WAN links that interconnect a hybrid cloud or multicloud environment.

Enterprises can use EOS-based virtual routers to build multicloud or hybrid cloud architectures that interconnect multiple cloud regions and cloud providers with EOS routers deployed in private data centers. IT organizations can also use the virtual routers to create complex network topologies inside of an IaaS provider's data center, such as a virtual leaf-and-spine network or interconnections between multiple virtual private clouds. These two latter architectural approaches allow enterprises to apply more sophisticated traffic engineering and network policy controls to their IaaS-based application architectures.

By replacing the limited native network functionality offered by cloud providers, Arista Any Cloud Platform allows enterprises to adopt a consistent, proven networking platform across multiple clouds, simplifying network engineering and operations. It will be especially appealing to enterprises that have built Arista-based network fabrics in their data centers. These IT organizations will be able to extend that data center network, and the tools and processes they use to design, build, and operate it, to the public cloud.

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EMA Innovator: Arista Networks

EMA Perspective

EMA research has found that enterprises are increasingly interested in deploying hybrid cloud and multicloud networks. In fact, 32% of data center network transformation projects are primarily driven by multicloud and hybrid cloud initiatives.[1] These enterprises are adopting network virtualization, SDN, network automation software, and more to enable a data center that can participate in a hybrid cloud.

The innovative approach Arista has taken with its Any Cloud Platform addresses many of the network challenges enterprises encounter when building hybrid cloud and multicloud architecture. For instance, the platform can reduce the complexity involved in

provisioning interconnections between public and private clouds and orchestrating network services across multiple clouds. The visibility provided by Arista CloudVision can also give network operations end-to-end visibility across the network for monitoring

and troubleshooting. As seen in **Figure 1**, all of these capabilities address top challenges associated with hybrid cloud (and by extension, multicloud) networking.

Infrastructure teams that already have Arista switches installed will especially benefit from the Any Cloud Platform since they can extend a single operating environment across internal infrastructure and public clouds.

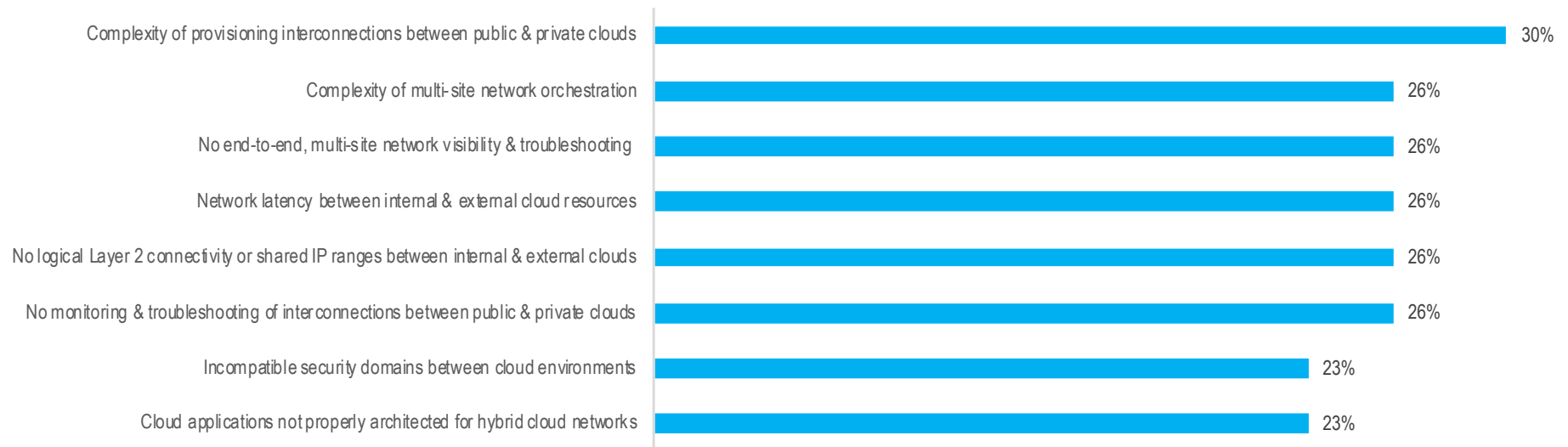[1] EMA, "Data Center Network Transformation," September 2017.

Challenge	%
Complexity of provisioning interconnections between public & private clouds	30%
Complexity of multi-site network orchestration	26%
No end-to-end, multi-site network visibility & troubleshooting	26%
Network latency between internal & external cloud resources	26%
No logical Layer 2 connectivity or shared IP ranges between internal & external clouds	26%
No monitoring & troubleshooting of interconnections between public & private clouds	26%
Incompatible security domains between cloud environments	23%
Cloud applications not properly architected for hybrid cloud networks	23%

Figure 1. Enterprise network managers identified their top challenges with hybrid cloud networking.

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EMA Recommendations

- Existing Arista customers should consider the Any Cloud Platform as an opportunity to extend their private cloud and on-premises data center fabrics into the public cloud.

- Enterprises that diversify their public cloud consumption should consider Arista Any Cloud. While several data center networking vendors have introduced comparable multicloud and hybrid cloud networking solutions, Arista is the first to debut on the market with such a broad ecosystem of supported cloud providers, including AWS, Microsoft Azure, Google Cloud Platform, and Oracle Cloud.

- Organizations that want to experiment with virtual leaf-and-spine fabrics in IaaS environments will find that Arista's vEOS routers are a good option, capable of creating network fabrics with the depth of functionality that IT organizations are accustomed to building in private data centers.

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About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help EMA's clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise line of business users, IT professionals, and IT vendors at www.enterprisemanagement.com or blogs.enterprisemanagement.com. You can also follow EMA on Twitter, Facebook, or LinkedIn.

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