Distributed Security for Software-Defined Networks

Deliver end-user flexibility with enterprise-grade controls through a secure, self-service private cloud from vArmour and Nuage Networks.

Features of Nuage Networks and vArmour

Policy-driven controls

Nuage Networks and vArmour provide consistent, policy-driven networking and security controls that can easily scale out and operate independently on any infrastructure. These security policies can be tied to business-level logic and automated as a part of real-time resource provisioning, even in self-service implementation models.

Micro-segmentation

Nuage Networks and vArmour provide micro-segmentation of data center and cloud assets from Layer 2 to 7 - the ability to separate infrastructure topology from the security topology, allowing workloads at different security levels to share common infrastructure. Each request to communicate (even between VMs on the same hypervisor), each packet, and each flow can be inspected.

Rich data context and analytics

Spanning from Layer 2 to 7, every network event, policy response, security event, workload communication and resulting status data are stored and accessible in Nuage Networks' Hadoop® data store as well as vArmour Analytics. Leveraging this rich data store, vArmour Analytics or other reporting tools can evaluate network traffic and identify any suspicious activities that could indicate an attack.

At-a-Glance Overview: Nuage Networks and vArmour provide virtualized network and security resources with L2 to L7 controls for enterprise private clouds.

Why Nuage Networks and vArmour?

Comprehensive security controls from layer 2 to 7

Nuage Networks and vArmour go beyond the standard traffic steering of most SDN implementations. By securing applications, virtual machines, and bare metal servers at the first network and virtual network attachment point, Nuage Networks and vArmour provide out-of-the-box private cloud security at every layer. This comprehensive coverage eliminates gaps that can be exploited by hackers.

Advanced micro-segmentation and threat analytics

By abstracting networking from hardware, Nuage Networks provides a pool of network resources that can be segmented into logical groups and then protected with vArmour micro-segmentation policies. In addition, vArmour provides application-layer visibility and threat analytics to deliver a comprehensive data center security solution for Nuage Networks private cloud environments.

Heterogeneity for any private cloud deployment

The vArmour and Nuage Networks API-driven architecture can run across various physical, virtual, and cloud environments - providing a single set of controls for multi-cloud environments, regardless of the underlying infrastructure.

Self-service capabilities with IT control

End-users are demanding a self-service experience that is similar to public cloud and businesses also want to benefit from cloud cost efficiencies. Nuage Networks enables full network controllability driven from the CMS, from a custom portal, or from an application. Automated policy provisioning from vArmour eliminates the security gap during resource provisioning and keeps IT in control of even full, self-service approaches.

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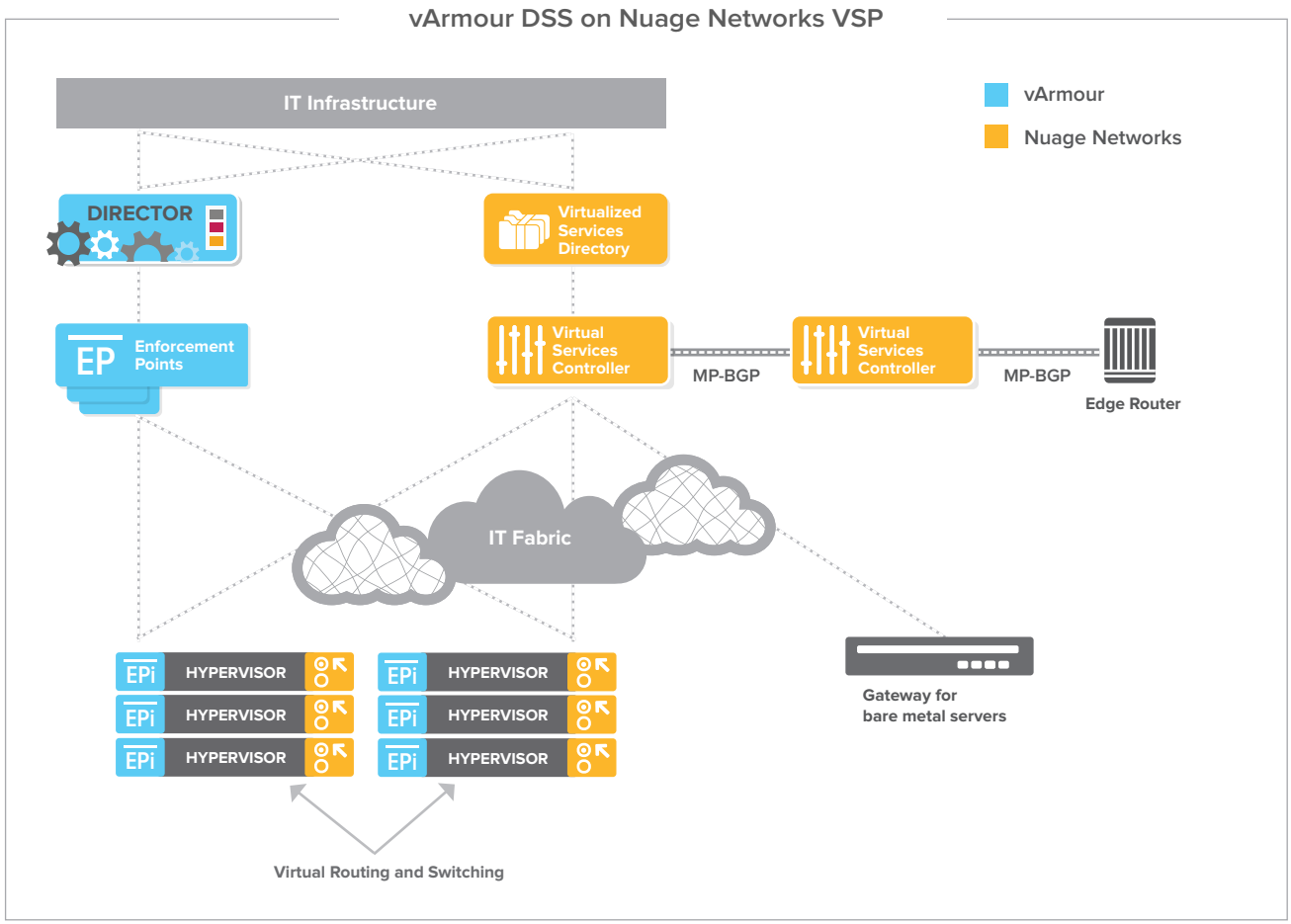
Technology Powering Secure Private Clouds

Nuage Networks and vArmour are software-defined, vendor-agnostic systems that deliver networking and security resources as an on-demand private cloud. Both Nuage Networks Virtualized Services Platform (VSP) and vArmour DSS Distributed Security System are built on a three-tier architecture to support scale-out demands of dynamic cloud environments.

A key component of Nuage Networks VSP is the Nuage Networks Virtual Routing and Switching (VRS) module that provides security from the initial network connection point, such as the hypervisor. vArmour Enforcement Point interceptors (EPis) are placed side-by-side the Nuage Networks VRS components in a fully distributed manner. As traffic is forwarded by the Nuage Network VRS modules, vArmour EPis apply the appropriate policy to workloads, and can maintain this policy as the workload moves throughout a private cloud environment.

Additionally, the joint Nuage Networks and vArmour solution can flex dynamically in response to orchestration from cloud platforms, such as OpenStack. For example, when OpenStack requests a virtual machine be instantiated or undergo live migration, Nuage Networks VRS detects the event and automatically applies the relevant network policy as vArmour applies the appropriate security controls.



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Key Benefits of Nuage Networks and vArmour

Enterprises experience the combined benefits of next-generation security and network delivery models for private clouds from Nuage Networks and vArmour.

KEY BENEFITS

Reduced Risk

vArmour and Nuage Networks improve security posture by providing a hardened networking platform with granular security alongside every packet - eliminating coverage gaps and reducing attack surfaces that can be exploited by hackers, such as east-west traffic within a hypervisor.

Maximized Asset Value

Nuage Networks and vArmour seamlessly operate on top of existing data center resources, removing the need for equipment upgrades while increasing the utilization and ROI of these assets.

Ease of Management:

Nuage Networks and vArmour detect key events or potential security incidents – such as instantiating a VM or identifying anomalous behavior – and provide a fully programmatic response of security policies.

"Our goal at BigTec is to help our customers find vendors that provide new cloud architectures and virtualized data center functions that are web-scale and software-defined," said Jason Dance, Managing Director at BigTec. "Nuage Networks and vArmour fit this profile perfectly by providing an innovative combination of distributed security on software-defined networking to meet the demands of modern cloud environments."

About vArmour

vArmour delivers the first distributed security system that transforms how organizations protect their virtualized and cloud assets in a world without perimeters. vArmour micro-segments every application in the data center by wrapping protection around every workload, delivering fine-grained visibility and control in dynamic cloud environments. vArmour Distributed Security System is a single logical system composed of multiple autonomous, distributed sensors and enforcement points that are connected by an intelligent fabric. Learn more about www.vArmour.com.

About Nuage Networks

Nuage Networks brings a combination of technologies and networking expertise to the enterprise and telecommunications industries. The Silicon Valley-based startup has applied new thinking to the problem of delivering massively scalable and highly programmable SDN solutions within and across the datacenter and out to the wide area network with the security and availability required by business-critical environments. Nuage Networks, backed by Alcatel-Lucent's (Euronext Paris and NYSE: ALU) rapidly growing IPR&T division, 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. Learn more at http://www.nuagenetworks.net.

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