Joint Solution Brief

Automated Traffic Visibility for the Software-Defined Data Center

The Challenge

Current network and security solutions are rigid, complex, and often vendor-specific. This creates a costly barrier to data center agility, efficiency and scale.

Integrated Solution

Software Defined Data Centers (SDDC) provide a different approach to enable fast provisioning of networking and security services, simplified operations and fundamentally better security for data centers. Gigamon and VMware have developed an integrated solution that leverages Gigamon's GigaSECURE® Security Delivery Platform (SDP) enabled by the Unified Visibility Fabric™ and VMware NSX network virtualization. This solution delivers pervasive and automated visibility of traffic traversing both physical and virtual workloads and networks.

Key Benefits

- Automate traffic visibility for securing the micro-segmented SDDC
- Enable SecOps and NetOps teams to automate the selection, filtering and forwarding of the ever growing east-west virtual traffic for security and monitoring analytics
- Gain operational efficiency through automation using VMware NSX and NetX APIs and Gigamon's GigaVUE-VM Visibility in Motion policy migration
- Deploy over existing physical networks or next generation topologies without disrupting the production network
- Achieve tenant-level isolation and security using data center micro-segmentation
- Use pervasive visibility into virtual and physical network traffic to offload intelligent and scalable filtering policies to Gigamon's Visibility Fabric while optimizing operational tool infrastructure

Introduction

Limitations of physical networking and traditional security in an increasingly dynamic virtual world create artificial barriers to fast provisioning of networking and security services and simplified network operations. Manual provisioning and fragmented management interfaces reduce efficiency and limit the ability of enterprises to rapidly and securely deploy, move, and scale applications and data to meet business demands.

Paramount to securing and monitoring the SDDC infrastructure is the ability to have an immediate and rich understanding of activity in your end-to-end network. To accomplish this, security, application and network monitoring solutions require traffic visibility of both virtual and physical infrastructure. This requirement can be challenging.

Pervasive visibility into the data center network requires this information to be readily accessible so that network, application and security monitoring tools can leverage the physical and virtual data flows to analyze congestion points, security threats, and application behavior to help automate, secure, and optimize the data center network.

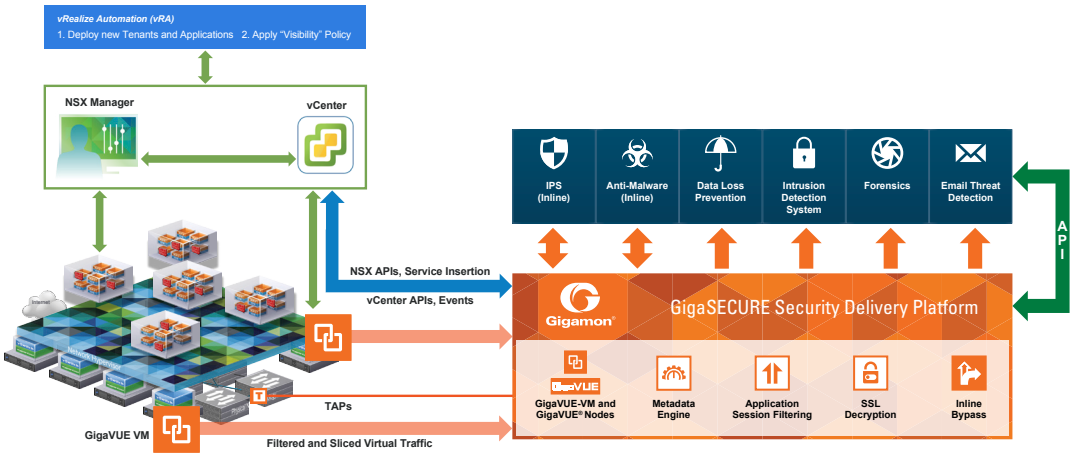
The Gigamon and VMware Joint Solution Overview

Using the Software Defined Data Center approach, Gigamon, a leader in traffic visibility solutions and VMware, the leader in server and network virtualization, are extending their joint product offerings to provide pervasive and intelligent visibility into the physical and virtual networks by integrating the Gigamon Visibility Fabric with VMware NSX platform.

VMware NSX is the leading network virtualization platform that delivers the operational model of a virtual machine for the network. Similar to virtual machines for compute, virtual networks are programmatically provisioned and managed independent of underlying hardware. NSX reproduces the entire network model in software, enabling any network topology—from simple to complex multi-tier networks—to be created and provisioned in seconds.

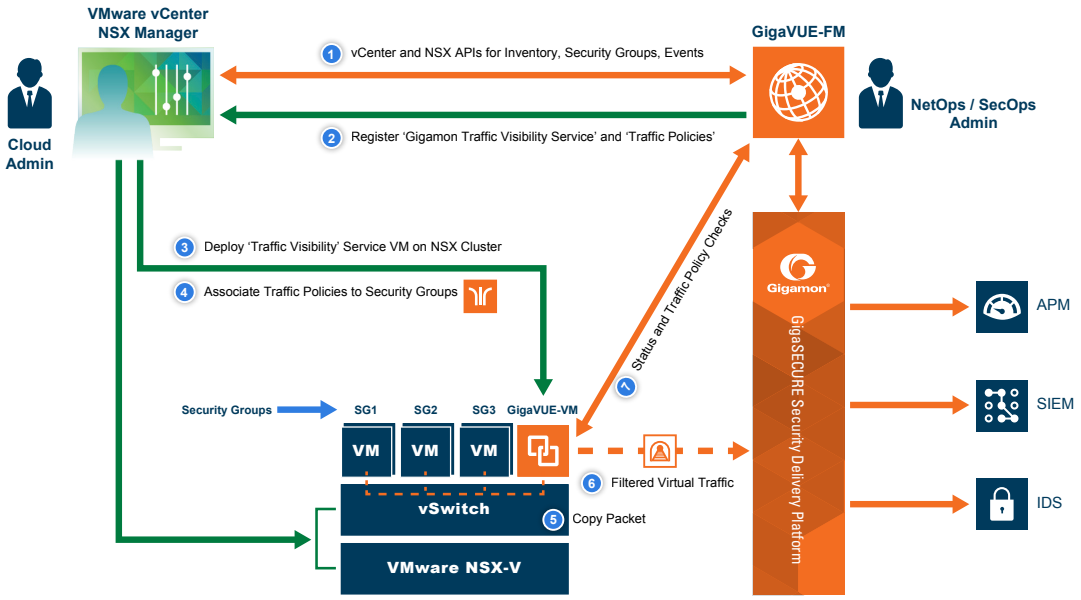
Gigamon's GigaSECURE Security Delivery Platform enabled by the Unified Visibility Fabric is an innovative solution that delivers pervasive and dynamic visibility of traffic traversing communication networks. The Unified Visibility Fabric significantly improves network flexibility by enabling static tools to connect to dynamic, virtualized applications, so users can efficiently and securely address their business needs.

The Visibility Fabric consists of distributed physical nodes (GigaVUE H Series platforms) and virtual (GigaVUE-VM) nodes that provide an advanced level of filtering intelligence. At the heart of the fabric is Gigamon's patented Flow Mapping® technology that identifies and directs incoming traffic to single or multiple tools based on user-defined rules implemented from a centralized fabric management console, GigaVUE-FM.



How the Joint Solution Works

- Using GigaVUE-FM, discover the inventory of the SDDC managed by vCenter and NSX Manager using NSX APIs
- Insert Traffic Visibility Service using the GigaSECURE platform's virtual visibility component, GigaVUE-VM
- Define and associate traffic policies to NSX Security Groups using NSX APIs
- VMware NetX APIs and Copy Packet feature, filters and copies the tenant's virtual traffic to GigaVUE-VM
- VMware NetX automates the traffic visibility for new VMs in the Security Groups as n-tier applications scale-out
- GigaVUE-VM adds additional L2-L4 filtering and packet slicing optimizations and forwards the traffic to the Gigamon SDP
- For better traffic insight and inspection, additional filtering and L4-L7 optimizations, NetFlow/metadata generation or SSL decryption can be enabled on SDP before delivering to the security and monitoring tools



Learn More

For more information on the VMware and Gigamon solution, visit:

vmware®
www.vmware.com

Gigamon®
www.gigamon.com

3125-04 08/16

Gigamon®
3300 Olcott Street, Santa Clara, CA 95054 USA | +1 (408) 831-4000 | www.gigamon.com