



### **The Challenge**

Current network and security solutions are rigid, complex, and often vendor-specific. This creates a costly barrier to realizing the full agility of the software-defined data center (SDDC).

Limitations of physical networking and traditional security tie an increasingly dynamic virtual world back to inflexible, dedicated hardware, creating 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 monitoring the SDDC infrastructure is the ability to have an immediate and rich understanding of activity in your network. To accomplish this, network monitoring solutions require visibility and monitoring of both virtual and physical infrastructure. This requirement can be challenging.

Pervasive visibility into your SDDC 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 SDDC.

### **Key Benefits**

- Non-disruptive deployment over existing physical networks or next generation topologies
- Place and move virtual workloads independent of physical topology
- Use data center micro-segmentation to achieve tenant level isolation and security
- Pervasive visibility into virtual and physical network traffic by offloading intelligent and scalable filtering policies to Gigamon's Visibility Fabric™ while optimizing operational tool infrastructure
- Operational efficiency through automation using VMware NSX APIs and Gigamon's GigaVUE-VM "Visibility in Motion" policy migration

### **The Gigamon and VMware Joint Solution Overview**

Gigamon, a leader in network visibility and monitoring (NVM) solutions and VMware, the leader in server and network virtualization, are extending their partnership 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 Visibility Fabric architecture is an innovative solution that delivers pervasive and dynamic visibility of traffic traversing communication networks. The Visibility Fabric architecture 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 (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**

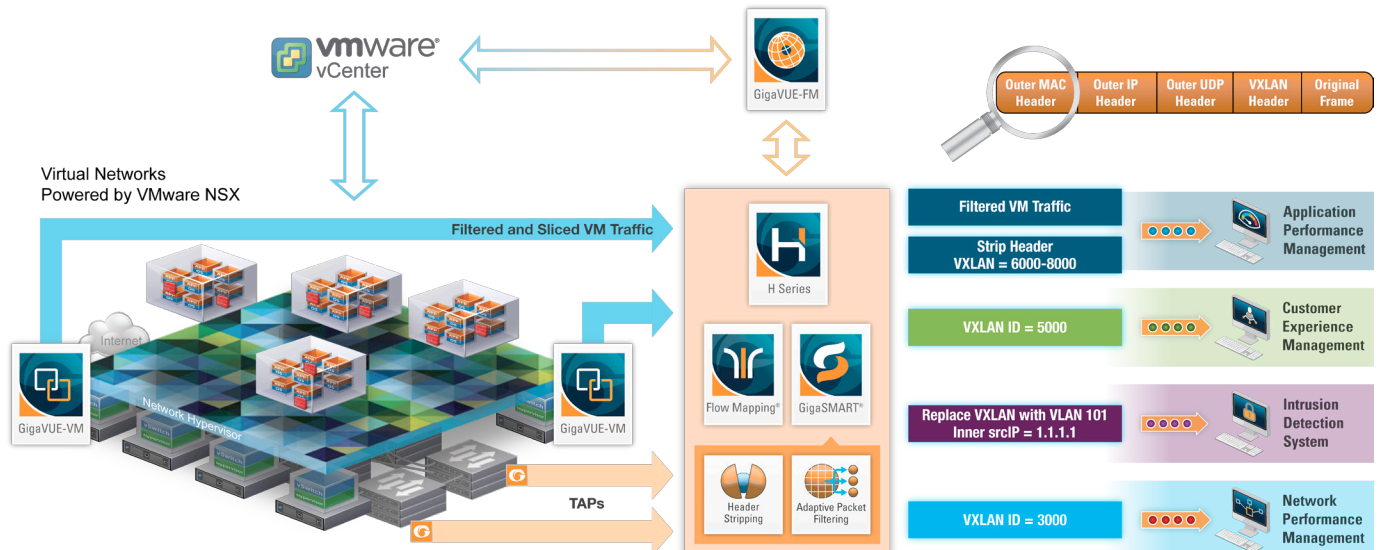
VMware NSX leverages the vSwitches already present in server hypervisors across the data center. NSX coordinates these vSwitches and the network services pushed to them for connected VMs to effectively deliver a platform—or "network hypervisor"—for the creation of virtual networks.

These virtual networks are created using encapsulation technologies like VXLAN, which create Layer 2 logical networks that are encapsulated in standard Layer 3 IP packets, thus allowing the extension of Layer 2 virtual networks across physical boundaries. A "Segment ID" in every frame differentiates the VXLAN logical networks from each other without any need for VLAN-Tags. With a 24 bit segment ID to uniquely identify broadcast domains, VXLAN enables multi-tenant environments at cloud scale and extends the Layer 2 network across physical boundaries by encapsulating the original frames in a MAC-in-UDP encapsulation.

Monitoring performance of VXLAN networks and virtual tunnel endpoints is the key to enabling network operations teams to control and comprehend the "virtual" domains floated on top of the common networking and virtualization infrastructure.

Gigamon's solutions extend visibility into the "Virtual Networks" using existing physical network monitoring tools.

- Filter and monitor traffic at virtual network level using GigaSMART® Adaptive Packet Filtering
- Decapsulate VXLAN traffic using GigaSMART Header Stripping
- Integration with VMware vCenter to extend visibility policies for inter-host VM traffic using GigaVUE-VM
- Automated migration of VM-level monitoring policies when vMotion is detected
- Centralized management of physical and virtual visibility policies using GigaVUE-FM Fabric Manager



## Gigamon and VMware joint solution

### About VMware

VMware is radically transforming IT with technologies that make your business more agile, efficient, and profitable. A pioneer in virtualization and policy-driven automation, VMware simplifies IT complexity across the entire data center. VMware delivers value to more than 500,000 customers through virtualization software, professional services, and a robust ecosystem of more than 55,000 partners that drive application interoperability and customer choice.

### About Gigamon

Gigamon provides an intelligent Visibility Fabric™ architecture to enable the management of increasingly complex networks. Gigamon technology empowers infrastructure architects, managers and operators with pervasive visibility and control of traffic across both physical and virtual environments without affecting the performance or stability of the production network. Through patented technologies, centralized management and a portfolio of high availability and high-density fabric nodes, network traffic is intelligently delivered to management, monitoring and security systems. Gigamon solutions have been deployed globally across enterprise, data centers and service providers, including over half of the Fortune 100 and many government and federal agencies.

### Learn More

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



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