

# Automated Application Visibility for the Software-Defined Data Center



## The Challenge

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

## Integrated Solution

Software Defined Data Centers (SDDC) enable fast provisioning of networking and security services, simplified operations and fundamentally better security for data centers. Gigamon and VMware have developed an integrated multi-cloud solution that leverages the Gigamon Visibility Fabric and the VMware NSX-V/T network virtualization suites. This solution delivers pervasive and automated visibility of traffic traversing both physical and virtual workloads and networks.

## Joint Solution Benefits

- Automate application-layer traffic visibility in multi-cloud environments with NSX-T
- 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
- Dynamically update policies/rules and monitor new and relocated VMs with vMotion
- Deploy over existing physical networks or next generation topologies including multi-cloud and container without disrupting the production network
- Instantiate G-vTAP VM using NSX Dynamic Service Insertion without manual intervention
- Enable monitoring in micro-segmented environments with superior tenant security

## 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 network. Security, application and network monitoring solutions require traffic visibility of both virtual and physical infrastructure.

Pervasive visibility into the data center enables application and security monitoring tools to analyze congestion points, security threats and application behavior. This helps 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 providing pervasive and intelligent infrastructure visibility by integrating the Gigamon Visibility Fabric with the VMware NSX platform.

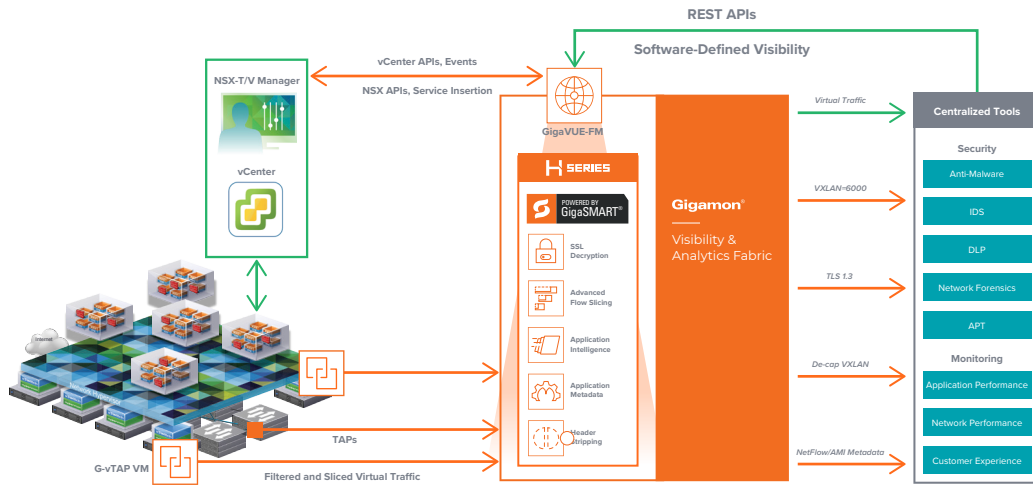
VMware NSX is the leading network virtualization platform that delivers the operational model of a virtual machine for the network. Similar to virtual machines for compute, virtual networks are programmatically provisioned and managed independent of underlying hardware. NSX reproduces the entire network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

Legacy NSX-V solutions are tied to VMware-based infrastructures. With NSX-T, VMware is focused on emerging application workloads and architectures.

Relative to its predecessor, the new suite is hypervisor agnostic, decoupled from vCenter, can run in multiple clouds, supports container-as-a-service (CaaS), and is interoperable with Kubernetes container orchestration methods.

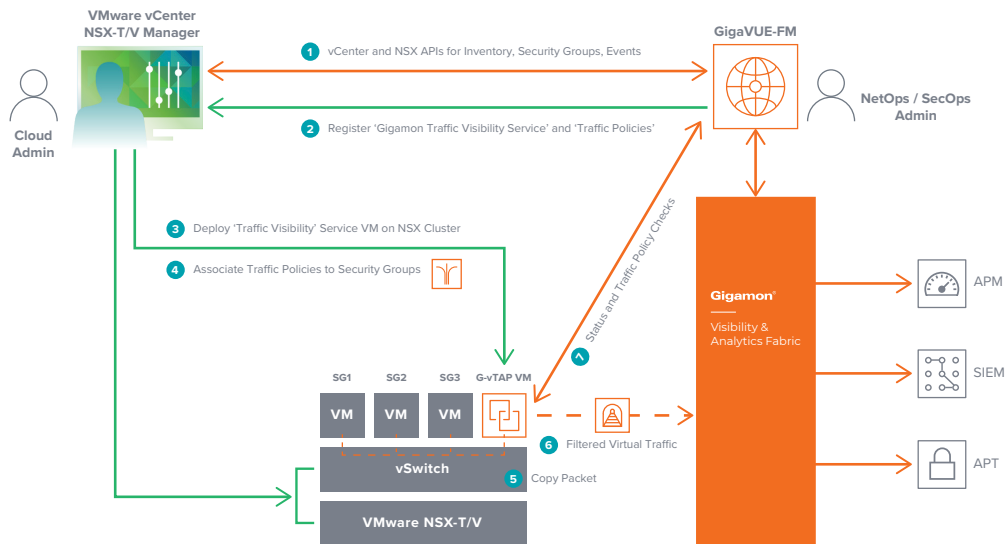
The Gigamon GigaVUE Cloud Suite for VMware is an innovative solution that delivers pervasive and dynamic visibility of traffic traversing communication networks. This Visibility Fabric significantly improves network flexibility by enabling static tools to connect to dynamic, virtualized applications, so users can efficiently and securely address their business needs.

The Visibility Fabric consists of distributed physical nodes (GigaVUE HC Series platforms) and virtual (G-vTAP 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. The fabric is fully integrated with NSX and is certified in both NSX-V and NSX-T environments.



## How the Joint Solution Works

- Using GigaVUE-FM, discover the inventory of the SDDC managed by vCenter and NSX-T/V Manager using NSX APIs
- Insert Traffic Visibility Service using the Gigamon Visibility Fabric and the virtual visibility component, G-vTAP VM
- Define and associate traffic policies to NSX Security Groups using NSX APIs
- VMware NetX APIs and Copy Packet feature, filters and copies the micro-segment's virtual traffic to G-vTAP VM
- VMware NetX automates the traffic visibility for new VMs in the Security Groups as n-tier applications scale-out
- G-vTAP VM adds additional L2-L4 filtering and packet slicing optimizations and forwards the traffic to the Gigamon Visibility Fabric
- For better traffic insight and inspection, additional filtering and L4-L7 optimizations, NetFlow/metadata generation or SSL decryption can be enabled on the Gigamon Visibility Fabric before delivering to the security and monitoring tools



For more information on Gigamon and VMware, visit:

[www.gigamon.com](http://www.gigamon.com) and [www.vmware.com](http://www.vmware.com)