

# GigaVUE Cloud Suite for VMware

## Comprehensive Workload Visibility for Fully Automated and Virtualized Hybrid Clouds

GigaVUE® Cloud Suite for VMware provides an industry-leading, fully virtual and automated solution that allows VM traffic flows within a private cloud managed by vCenter and NSX-T to be acquired, optimized and delivered to security, network and application performance monitoring tools.

GigaVUE-FM leverages vMotion and other techniques to ensure visibility and policy integrity. GigaVUE-FM is tightly integrated with vCenter and NSX-T to automatically provide continuous VM visibility in a micro-segmented SDDC.

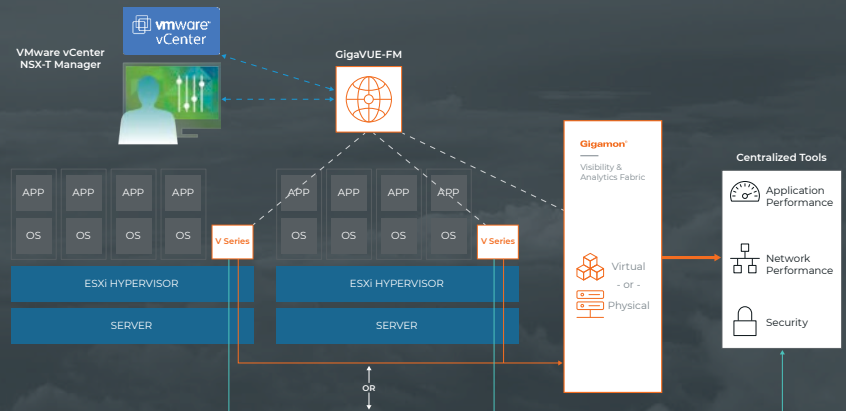


Figure 1. Certified integration of GigaVUE Cloud Suite with VMware vCenter and NSX-T

### KEY FEATURES

- Dynamically deploy and provision virtual V Series instances for VM traffic acquisition, aggregation, processing and distribution
- Manage and control via tight coupling between GigaVUE-FM and vCenter/NSX-T
- Supports all GigaSMART® CoreVUE applications and data de-duplication in software
- Track vMotion and events across DSR and HA clusters
- Automatically identifies 3,200 applications and generates 5,000 app-aware metadata attributes

### KEY BENEFITS

- Enables a completely virtualized infrastructure with full automation
- Comprehensive visibility into all VM traffic; scale to any number of servers
- Automatically discover new workloads and adjust policies as needed
- Significantly lower tool processing demands by optimizing the traffic that is forwarded
- Selectively filter and forward applications to the appropriate tools with contextual insights

## Virtualized Datacenter Traffic Keeps Growing

With the migration of applications to virtual servers, the shift to completely virtualized private cloud infrastructures, fully automated environments and today's modular and distributed application architectures, more and more application traffic never hits the physical network.

While solutions for virtual machine (VM) monitoring are well developed, they focus on server status with available CPU, memory, storage and overall North-South network bandwidth. Very little insight into VM-to-VM traffic is being offered by legacy VM monitoring tools.

With exponential growth in virtualized traffic within the datacenter, a challenge for a centralized monitoring infrastructure is accessing East-West virtual traffic for application, network and security analysis and eliminating any blind spots in enterprise private clouds or service-provider NFV deployments. Only Gigamon provides application layer traffic visibility solutions for virtual workloads in VMware-powered SDDC (ESXi, vCenter and NSX-T) and multi-tenant clouds.

## Key Considerations

To ensure that traffic is optimally processed and distributed, IT, cloud and security architects must answer to the following questions before deploying applications in virtual machines with VMware vCenter and NSX-T.

- What visibility fabrics will support a completely virtualized datacenter design with full automation?
- How can I get visibility into VM traffic as VMs are ephemeral and constantly in motion?
- Can I ensure scalable visibility as deployed apps grow and can span numerous VMs each?
- Is there a way to automate the configured policies across thousands of VMs in real time?
- How do I detect and respond to security or network anomalies when deploying virtualized apps?
- Are there efficient ways to consolidate network traffic flows to security and monitoring tools?

Not addressing these considerations slows down the transition to VM-based applications, limits the use of datacenter automation and leaves the organization vulnerable to potential security breaches.

## THE SOLUTION

GigaVUE Cloud Suite for VMware® supports a fully virtualized environment and tight integration with orchestration tools to deliver intelligent network traffic visibility for workloads running in VMs, on premises or in private cloud environments.

The solution enables increased security, operational efficiency and it scales across an unlimited number of VMs to:

- Optimize traffic processing and distribution
- Leverage GigaSMART CoreVUE and data deduplication applications to dramatically reduce traffic loads
- Attain insights into thousands of applications running in the network with application-aware metadata

GigaVUE Cloud Suite for VMware consists of three key components:

- Traffic acquisition and optional processing and distribution using virtual V Series instances
- Traffic aggregation, intelligence and distribution using either a second layer of virtual V Series and/or GigaVUE HC Series physical appliances
- Centralized orchestration and management using GigaVUE-FM with certified interoperability with vCenter and NSX-T

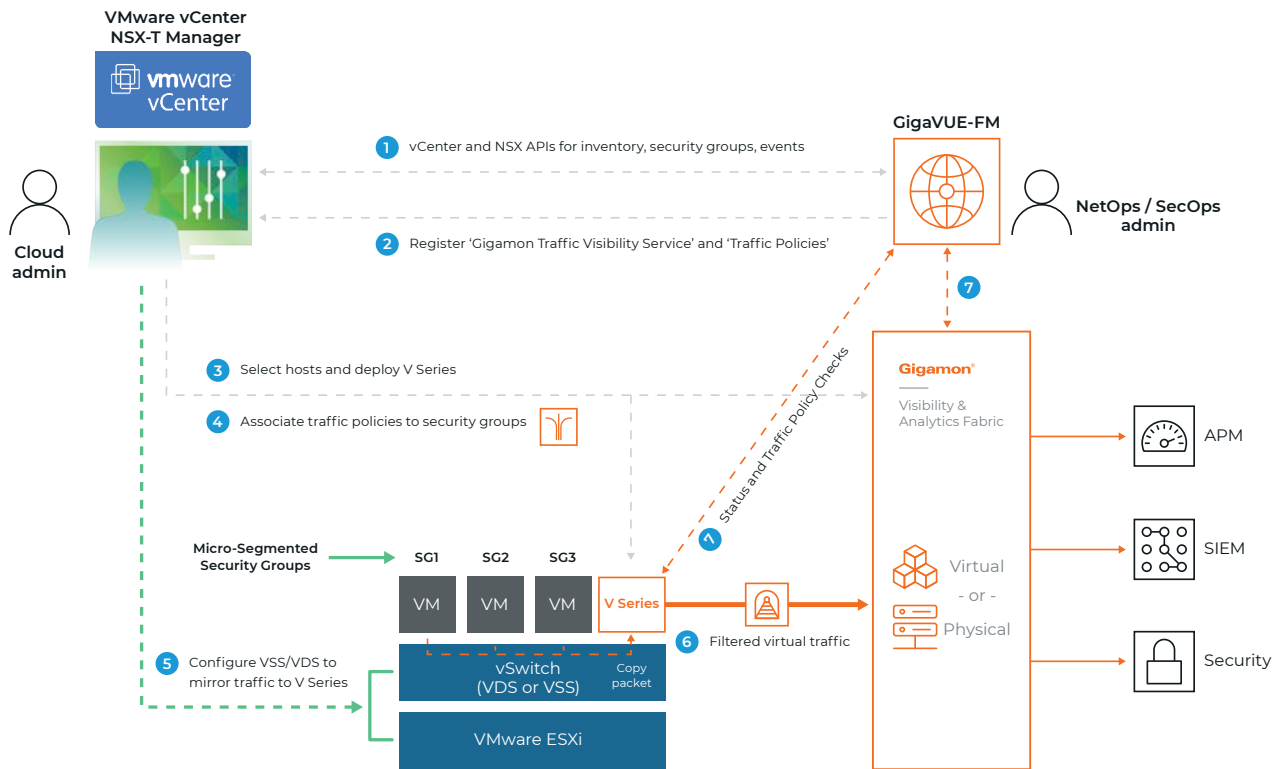


Figure 2: Straightforward seven-step process for provisioning, configuration and monitoring

## GigaVUE V Series: Traffic Acquisition

For traffic acquisition, light-footprint virtualized V Series VM instances are deployed as a vSphere guest VM on each hypervisor. They receive copied packets from each of the other VMs on the same server through a vSwitch. They subsequently send mirror traffic to the second stage V Series for aggregation or GigaVUE HC visibility nodes or directly to tools. Key benefits include:

- Minimizes impact on compute nodes and delivers high throughput per instance with DPDK support
- No special software or changes to kernel modules
- Reduction in application downtime when adding new tools
- Movement of VMs across different servers do not impact continuous traffic visibility
- Flexibility to locally process GigaSMART CoreVUE applications that offloads tools

## GigaVUE Physical Appliances

Traffic aggregation, intelligence and distribution also can take place within the GigaVUE hardware nodes, which are deployed within the visibility tier. Key benefits include:

- Automatic Target Selection (ATS): Automatically extract traffic of interest from any virtualized workload
- Header Transformation: Modify content in the header (L2-L4) to ensure security and segregation of sensitive information
- GigaSMART intelligence: Slice, sample and mask packets to optimize traffic sent to tools, reducing tool overload
- Leverage Application Intelligence to identify thousands of applications and utilize over 5,000 application metadata elements

## GigaVUE V Series: Data Aggregation

For traffic aggregation and processing, V Series can also be provisioned as a visibility node. They combine traffic streams and apply processing to optimize flows and distribute to the proper tools. Key benefits include:

- Deployment of a fully virtualized and automated architecture for SDDCs
- Centrally apply GigaSMART CoreVUE and data deduplication to increase network efficiencies and offload tools
- Accelerate troubleshooting and remediate network and security issues
- Automatically instantiate unlimited V Series instances to ensure performance

## GigaVUE-FM Fabric Manager

Centralized orchestration and management are handled by GigaVUE-FM. Using RESTful APIs and tight coupling to vCenter and NSX-T, this tool instantiates V Series for both traffic acquisition and aggregation where needed and configures policies for virtualized instances within multiple environments where vCenter or NSX-T are used. Key benefits include:

- Detect changes in VM location or scale and automatically instantiate V Series for data acquisition and adjust the V Series for aggregation visibility tier
- Publish REST APIs: Integrate with third-party tools to dynamically adjust traffic received or to orchestrate new traffic policies
- Auto-discover and visualize end-to-end network topology, including virtualized workloads by using an intuitive drag-and-drop user interface

## Conclusion

Whether your organization is already using vCloud with vCenter/NSX-T orchestration or considering a future migration, GigaVUE Cloud Suite for VMware provides intelligent network traffic visibility for virtualized workloads, on premises or in the private cloud.

Integration with vCenter/NSX-T APIs automatically deploys and scales a visibility tier in all required locations, collects aggregated traffic and applies advanced intelligence prior to sending selected traffic to existing security tools. With the GigaVUE Cloud Suite, organizations can obtain consistent insight into their infrastructure across VMware-based environments.

**For more information on GigaVUE Cloud Suite for VMware, visit [gigamon.com/products/access-traffic/virtual-nodes/gigavue-cloud-suite-vmware.html](https://www.gigamon.com/products/access-traffic/virtual-nodes/gigavue-cloud-suite-vmware.html)**