GigaVUE Cloud Suite for Microsoft Azure

The Power of Deep Observability for Your Azure Environments

GigaVUE Cloud Suite™, a key component of the Gigamon Deep Observability Pipeline, is a fully Microsoft Azure-certified product that acquires and processes traffic from your Azure environments before distributing optimized network-based intelligence to the security, monitoring, and observability tools of your choice. You get complete application, flow, and packet-level visibility into all data-in-motion running within Azure public cloud — without having to invest in new tools.

GigaVUE Cloud Suite can be deployed in multiple public and private clouds. This data sheet describes the specific deployment with Azure, including integrations with many Azure services.

By extending your existing on-prem or cloud tools to monitor and secure your Azure workloads and applications, you can:

- Ensure a consistent security and compliance posture across hybrid and multi-cloud environments
- Eliminate network blind spots, including East-West traffic, where threats can hide
- Lower operational friction associated with cloud migration and the need to learn new tools and processes
- Speed up troubleshooting by going deeper than Azure native tools to identify exactly where, when, and how a network transaction occurred

The Gigamon Deep Observability Pipeline goes even further by augmenting the capabilities of your current metrics, events, logs, and traces (MELT) or MELT-based SIEM, APM, and observability tools with actionable network-level intelligence. This powerful combination of network-based data and MELT helps NetOps, SecOps, and CloudOps teams speed issue resolution and root cause analysis. It also brings new security use cases to your current set of observability tools, such as detecting unauthorized activities like crypto mining or compliance risks such as expiring TLS certificates.

How Gigamon Works in Azure

GigaVUE Cloud Suite integrates with Microsoft Azure compute APIs to automatically discover new cloud instances, deploy visibility nodes in VNets, and apply advanced traffic intelligence to streamline and load balance traffic prior to sending the data to security and monitoring tools. Traffic acquisition can be done through tunnel-as-a-source or GigaVUE® Universal Cloud Tap (UCT). Best of all, there's minimal impact on Azure resources and no need to implement individual tool agents just to get traffic to a specific tool. Gigamon also supports Azure VNet gateways to ensure visibility for tools across interconnected VNets and on-premises networks. Visibility is also available for workloads deployed in the Microsoft Azure Kubernetes Service (AKS).

After Gigamon is deployed, it removes operational burdens by offering the same level of elastic scalability you expect in your Azure deployments. Gigamon automatically detects changes in the number and locations of Azure VNets being monitored. Gigamon cloud visibility nodes are then expanded (or contracted) to whatever levels are required.

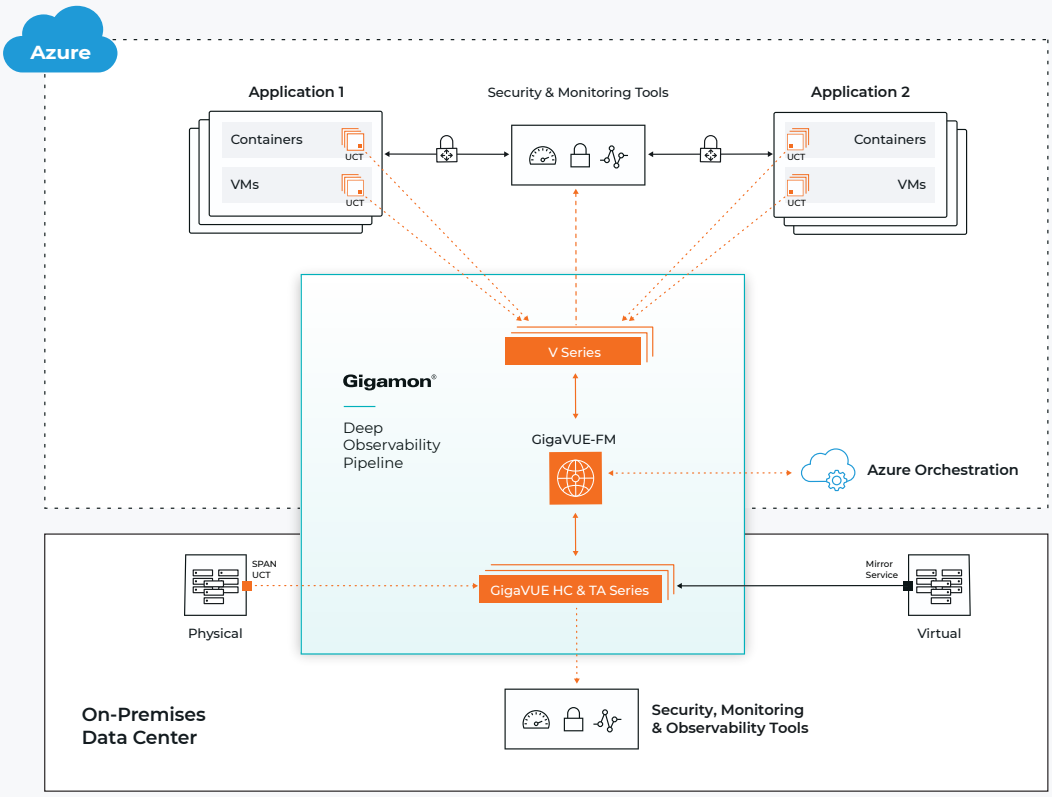

Figure 1. The Gigamon Deep Observability Pipeline acquires, processes, and forwards traffic within an Azure VNet.

The Gigamon Deep Observability Pipeline acquires traffic in Azure Infrastructure-as-a-Service (IaaS), intelligently processes this data, and then sends optimized network-level intelligence to your security, monitoring, and observability tools.

Solution Highlights

Strengthen Security and Compliance Within Azure

- IT teams can use proven, familiar security tools to monitor Azure VNets.
- Gigamon Application Metadata Intelligence (AMI), generated from deep packet inspection, provides thousands of important application attributes to observability and SIEM tools.
- Gigamon Precryption® redefines security for applications running in Azure environment, delivering plaintext visibility of encrypted lateral traffic.
- Selective Precryption is a feature of Gigamon Precryption technology that allows users to choose which workloads to exempt from Precryption analysis. This powerful functionality is useful for protecting sensitive data while still allowing security tools to detect threats.

Increase Tool Efficiency and Effectiveness

- Traffic intelligence features, such as Application Filtering Intelligence, Application Metadata Intelligence, Packet Slicing, Advanced Flow Slicing, Packet De-duplication, and NetFlow generation, work to streamline traffic and reduce the burden on monitoring and security tools.

Easily Acquire Traffic and Scale Observability

- GigaVUE Cloud Suite supports traffic acquisition within Azure infrastructure using lightweight (and free) GigaVUE UCT.

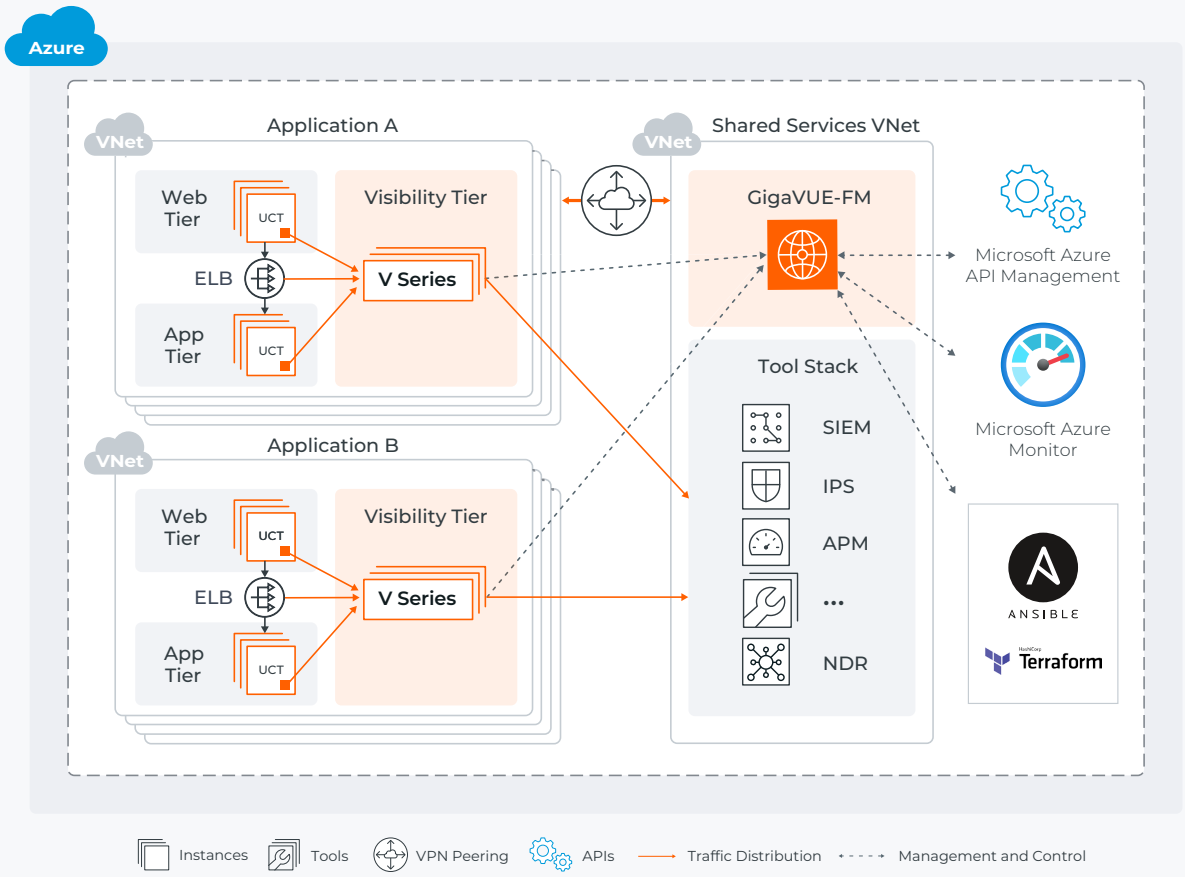

Figure 2. GigaVUE Cloud Suite acquires, processes, and forwards traffic across multiple Azure VNets.

- Azure VNet gateway support ensures tools also see traffic across interconnected VNets without the inefficiency of VPC Peering or other routing complexities.
- Automatic Target Selection® enables dynamic discovery and monitoring of new workloads — without any manual action.
- Traffic steering and tool load-balancing techniques optimize traffic distribution across multiple tools to ensure high availability.

Get Unified Orchestration and Management

- One common platform — GigaVUE-FM fabric manager — supports orchestration and management of your entire observability fabric across physical, cloud, and virtual environments.
- Tight integration with Azure cloud management, as well as third-party orchestration tools like Ansible and Terraform, simplifies management.

GigaVUE Cloud Suite for Azure supports multiple VNets and integrates with Azure cloud management tools to enable automation. Use tunnel-as-a-source or GigaVUE UCT to collect all traffic streams.

Components of GigaVUE Cloud Suite for Azure

GigaVUE UCT

The next generation of UCT takes advantage of Linux and Windows functionalities to mirror production traffic and send to GigaVUE V Series nodes. This enhances performance and reduces resource impact in VM-based environments and makes it easier to tap VMs, and can be deployed using GigaVUE-FM or third party orchestration.

GigaVUE V Series

Visibility nodes deployed in Azure aggregate, replicate, and select traffic of interest, then optimize and distribute acquired traffic to multiple tools located in any VNet. Take advantage of flow mapping and tool load balancing functions to reduce burden on tools.

GigaSMART Applications

GigaSMART® applications, running on top of V Series, provide application and traffic intelligence, including Application Filtering Intelligence, Application Metadata Intelligence, Packet De-duplication, Adaptive Packet Filtering, Packet Slicing and Masking.

GigaVUE-FM

GigaVUE-FM fabric manager provides centralized orchestration and management across all environments, including Azure, on-premises and private clouds (Nutanix, OpenStack and VMware). Traffic policies for V Series are configured using a simple drag-and-drop user interface.

GigaVUE UCT-V Controller and GigaVUE V Series Proxy (Optional)

For hybrid and multi-VPC deployments, GigaVUE uses a controller-based design to proxy the command and control APIs while preserving existing IP addressing schemes or Network Address Translation (NAT). The UCT-V Controller proxies commands from GigaVUE-FM to the UCT instances (see Figure 3), while the V Series Proxy proxies commands from GigaVUE-FM to the GigaVUE V Series nodes.

Note: A UCT-C Controller would be required and not optional in case UCT-C is deployed.

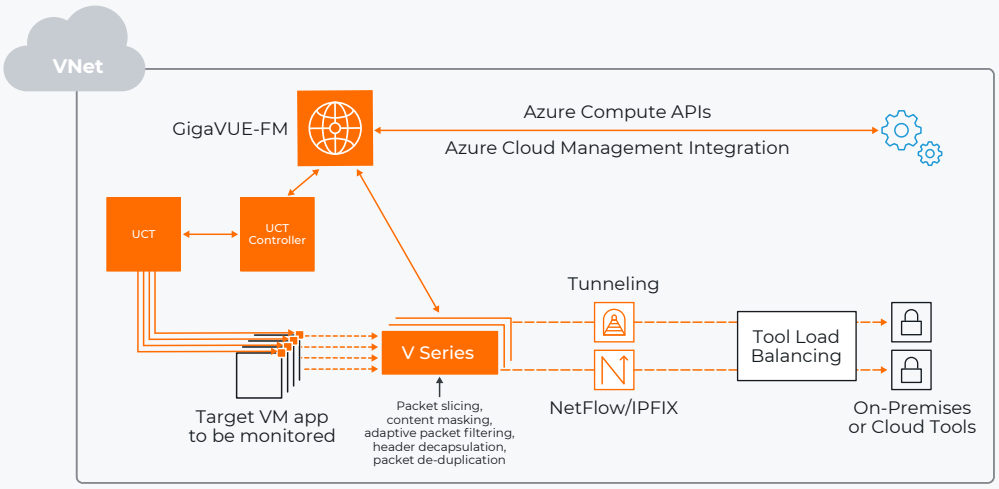

Figure 3. GigaVUE Cloud Suite for Azure is composed of GigaVUE V Series for optimization, transformation, and brokering, as well as GigaVUE-FM for management. For access to workload traffic, GigaVUE Cloud Suite also includes the components UCT and UCT Controller, which are optional, but may be preferred in situations where free workload-level visibility is preferred over paid Azure services.

Key Features and Benefits

GigaVUE UCT-V

Lightweight instances, available at no cost, deployed on an Azure compute instance that mirror traffic and send to GigaVUE V Series.

Simplified Traffic Mirroring
Deploy just one lightweight module per Azure compute instance (vs. deploying one per security tool), reducing impact on compute CPU utilization and operational overhead.

Reduce Application Downtime
No infrastructure redesign needed to add new agents as applications or tools scale out in Azure.

Scale What's Being Monitored
Integration between GigaVUE-FM, Azure compute APIs, and Azure cloud management enables agents to automatically scale as compute instances scale.

Zero Touch Deployment
Simplify deployments in Azure, automate processes, and eliminate errors. Save time and resources with instant setup and effortless upgrades.

Minimize Production Changes
Use the production Network Interface or separate Network Interface Card (NIC) to mirror workload traffic. The separate NIC option allows IT to preserve application traffic policies.

GigaVUE V Series

Visibility nodes that aggregate, select, optimize, and distribute traffic. V Series nodes work seamlessly with Azure cloud management templates.

Traffic Brokering with Flow Mapping®
Acquire, Aggregate, Select, Replicate and Distribute

- Acquire traffic from multiple compute instances via VXLAN tunnels, using UCT or third-party sources.
- Support tunnel-as-a-source to gather encapsulated traffic from other virtual TAPs.
- Aggregate traffic from the various acquisition sources and replicate to send to different tools.
- Select traffic of interest with a variety of L2–L4 criteria policies and then forward it to specific tools. Criteria can include IP addresses/subnets, TCP/UDP ports, protocols, instance tags, and more.
- Distribute selected traffic to multiple tools anywhere: Support for 5-tuple load balancing to tool instances improves tool deployment efficiency and eliminates the need for discrete load balancers.

Traffic Intelligence:
Transform, Optimize, and Obfuscate

- Reduce traffic volume by removing duplicated packets, slicing superfluous content, and sampling packet flows to reduce tool overload and traffic backhaul.
- Remove unwanted protocols by stripping specific headers and encapsulations to reduce tool overload.
- Obfuscate confidential, private, or sensitive information by masking specific data to maintain compliance.
- Filter on encapsulated headers or on payload content via Adaptive Packet Filtering.

Application Intelligence

- Identify close to 6,000 protocols, applications, and user behaviors L4-7 attributes spanning over 4,000 standard and custom apps.
- Integrate with Gigamon Application Visualization, Application Filtering, De-duplication from GigaVUE-FM fabric manager.
- Leverage use case based application and attribute templates for metadata extraction.
- Export metadata in NetFlow v5/v9, IPFIX, CEF and JSON over HTTP/S and Kafka.

Elastic Scale and Performance

- Automatic Target Selection: Automatically extract traffic of interest anywhere in the infrastructure being monitored.
- Automatically scale based on varying number of compute instances, without lowering performance of visibility node.
- Process at multi-Gbps rates per instance.

GigaVUE-FM

Centralized management and orchestration.

Centralized Orchestration and Management

- Centralized orchestration and single-pane-of-glass enable visualization across your entire infrastructure – physical, virtual, and cloud.
- Configure all policies in GigaVUE V Series and manage their self-registration process in conjunction with the orchestration tool used; drag-and-drop user interface simplifies definition of traffic policies.
- GigaVUE-FM monitors heartbeat communications from all fabric elements to help ensure high availability and give detailed information on fabric health.
- Software-Defined Networking constructs enable configuration of intelligent traffic policies.

Automation

- Tight integration with Microsoft Azure APIs detects compute changes in the Azure VNet and automatically adjusts the visibility tier.
- Integration with third-party orchestration tools enables instantiation of all visibility fabric components: UCT instances and their Controller and V Series nodes and their Proxy (if needed).
- Open REST APIs published by GigaVUE-FM can be consumed by tools to dynamically adjust traffic received or to orchestrate new traffic policies. GigaVUE-FM automatically scales V Series based on traffic levels, not on the number of VMs.

Topology View

- Auto-discovery and end-to-end topology visualization provide insight into visibility tier and compute instances.

Minimum Requirements for GigaVUE Cloud Suite for Azure

Recommended minimum compute specifications

Solution Component	Minimum VM Instance Type	Description
UCT-V	Any	Linux: Available as an RPM or Debian package Windows: Available for Windows Server 2012/2016/2019
UCT-V Controller	Standard_B1s	Command-and-Control component for the UCT instances
UCT-C Controller	Standard_B1s	Command-and-Control component for the UCT instances
GigaVUE V Series Node	Standard_D4s_v4 Standard_D8s_v4	Requires minimum of two NICs NIC 1: Management NIC 2: Traffic acquisition and distribution NIC 3+: Optional additional data acquisition and distribution
GigaVUE-FM	Standard_D4s_v3 40GB root disk 40GB data disk	GigaVUE-FM must be able to access both the controller instances for relaying the commands. GigaVUE-FM automatically spins up additional V Series nodes based on a pre-defined configuration in the user interface. For on-premises GigaVUE-FM requirements and ordering information, please refer to the GigaVUE-FM data sheet.

Based on the number of virtual TAP points, GigaVUE Series nodes will be auto-launched by GigaVUE-FM.

Ordering Information, Renewals

GigaVUE Cloud Suite for Azure, with all the solution components, can be purchased in the following way:

GigaVUE Cloud Suite for Azure uses a monthly term license and pricing is based on total volume of traffic processed daily. Users can purchase directly from Gigamon or associated partners via the Microsoft Partner Center plan. Customers receive an unlimited number of components (e.g., UCT instances, or V Series instances) at no additional charge.

Part Numbers for the Solution

Part Number	Description
VBL-50T-BN-CORE	Monthly Term license for CoreVUE software up to 50TB per day in V Series for cloud and virtual environments. Capabilities included: Advanced Tunneling, Slicing, Masking, Advanced Load Balancing. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-250T-BN-CORE	Monthly Term license for CoreVUE software up to 250TB per day in V Series for cloud and virtual environments. Capabilities included: Advanced Tunneling, Slicing, Masking, Advanced Load Balancing. Min Term is 12 months. Includes bundled Elite-Plus Support.

Part Numbers for the Solution, cont'd

Part Number	Description
VBL-2500T-BN-CORE	Monthly Term license for CoreVUE software up to 2,500TB per day in V Series for cloud and virtual environments. Capabilities included: Advanced Tunneling, Slicing, Masking, Advanced Load Balancing. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-25KT-BN-CORE	Monthly Term license for CoreVUE software up to 25,000TB per day in V Series for cloud and virtual environments. Capabilities included: Advanced Tunneling, Slicing, Masking, Advanced Load Balancing. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-50T-BN-NV	Monthly Term license for NetVUE software up to 50TB per day in V Series for cloud and virtual environments. Capabilities included: CoreVUE for V Series, De-duplication, NetFlow. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-250T-BN-NV	Monthly Term license for NetVUE software up to 250TB per day in V Series for cloud and virtual environments. Capabilities included: CoreVUE for V Series, De-duplication, NetFlow. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-2500T-BN-NV	Monthly Term license for NetVUE software up to 2,500TB per day in V Series for cloud and virtual environments. Capabilities included: CoreVUE for V Series, De-duplication, NetFlow. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-25KT-BN-NV	Monthly Term license for NetVUE software up to 25,000TB per day in V Series for cloud and virtual environments. Capabilities included: CoreVUE for V Series, De-duplication, NetFlow. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-50T-BN-SVP	Monthly Term license for SecureVUE Plus software up to 50TB per day in V Series for cloud and virtual environments. Capabilities included: NetVUE for V Series, App Metadata Intelligence, App Filter Intelligence. Min Term is 12 months. Includes bundled Elite-Plus Support.
VBL-250T-BN-SVP	Monthly Term license for SecureVUE Plus software up to 250TB per day in V Series for cloud and virtual environments. Capabilities included: NetVUE for V Series, App Metadata Intelligence, App Filter Intelligence. Min Term is 12 months. Includes bundled Elite-Plus Support.
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Note: Licenses are activated from GigaVUE-FM.

Support and Services

Gigamon offers a range of support and maintenance services.For details regarding Gigamon Limited Warranty and its Product Support and Software Maintenance Programs, visit gigamon.com/support-and-services/overview-and-benefits.

About Gigamon

Gigamon® offers a deep observability pipeline that efficiently delivers network-derived intelligence to cloud, security, and observability tools. This helps eliminate security blind spots and reduce tool costs, enabling you to better secure and manage your hybrid cloud infrastructure. Gigamon has served more than 4,000 customers worldwide, including over 80 percent of Fortune 100 enterprises, 9 of the 10 largest mobile network providers, and hundreds of governments and educational organizations. To learn more, please visit gigamon.com.

Gigamon®

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