GigaVUE Cloud Suite for Public Cloud

Unparalleled Network and Application Visibility

GigaVUE® Cloud Suite resolves critical cloud visibility problems that impede successful cloud initiatives. It augments existing cloud-native and third-party tools with deep observability so you can easily monitor across your multi-cloud and on-premises workloads. Gigamon provides East-West visibility, identifies all applications running in your environment, and sends network intelligence to empower security and observability tools.

GigaVUE Cloud Suite resides in the VPCs and VNets and aggregates flows from all compute sites, including from native traffic mirroring nodes. Gigamon provides advanced traffic processing to generate metadata of traffic flows beyond traditional logging. This helps detect vulnerabilities or undesired activities and ensures effective and comprehensive cloud security with continuous monitoring.

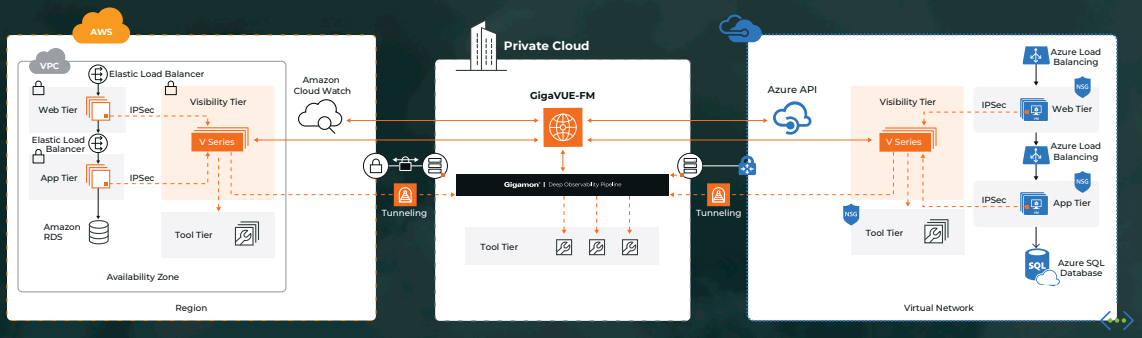

Figure 1: GigaVUE Cloud Suite for Multi-Clouds.

KEY FEATURES

- Traffic visibility within a container, a cloud subnet, VM, or physical network infrastructure and distribution to existing security, observability, and monitoring tools
- Application Intelligence automatically identifies over 3,500 apps and generate 7,000 metadata attributes through deep packet inspection
- Traffic acquisition within public cloud VMs and containers using native functions or virtual tapping module
- Integration of GigaVUE-FM with cloud management suites (AWS, Azure, GCP, and third-party) to instantiate unlimited virtual nodes
- Automatic Target Selection dynamically adapts to changes in VM or container instances and locations, and ensures traffic extraction as workloads pop in and out

KEY BENEFITS

- Gain full visibility into East-West, North-South, and container traffic across your hybrid and multi-cloud environments
- Ensure visibility across interconnected virtual clouds and regions and on-premises tools
- Accelerate migration to clouds with on-prem level of security and compliance governance with continuous monitoring
- Simplify and automate deployment of a dynamic visibility fabric with limitless scalability
- Get discovery of new workloads, proper traffic direction, and adjustment of the visibility tier, all without manual intervention

Key Considerations for DevOps, NetOps, and SecOps Teams

DevOps, NetOps, and SecOps teams must ensure that workloads are deployed securely with appropriate guardrails and perform ongoing monitoring to ensure proper configurations remain in place. To be able to effectively identify and remediate security and performance issues, you need granular visibility into your hybrid, multi-cloud environment. These teams are responsible for addressing the following questions before they can successfully deploy applications in a public cloud:

- How do I ensure that the cloud is being used securely by everyone in the enterprise?
- How do I let developers build apps while meeting compliance and security controls needs?
- How can I continuously monitor known and unknown applications and services in the cloud?
- Does my network visibility support a fully automated environment and dynamically adjust for workload relocations?
- When are cloud-native services enough and when do they need to be augmented?
- As applications communicate from on-premises to the cloud, can the same traffic processing be applied, including application identification, payload masking, and application-aware metadata generation?
- Are there effective methods to reduce the cost of backhauling traffic?
- How are granular intra-subnet and inter-container visibility achieved?
- Which orchestration tools (in addition to the cloud vendor) are supported by the deep observability pipeline vendor? Terraform, Ansible, Chef, Puppet?
- Is there any crypto-mining activity in my infrastructure? Is someone hosting P2P or game servers?

Not addressing these considerations slows down the migration of applications to the cloud and leaves the organization vulnerable to potential security breaches, with potential impact to reputation and brand.

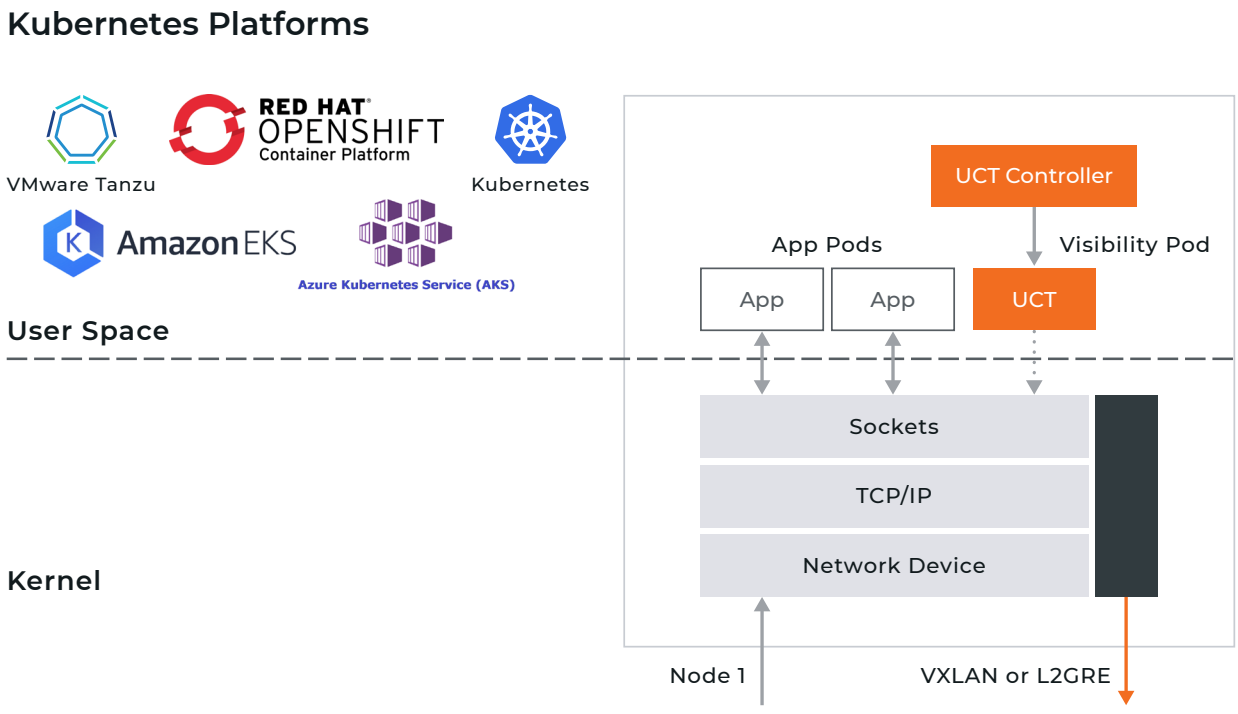

Figure 2: GigaVUE Cloud Suite with Universal Container Tap (UCT) gives you full visibility into Kubernetes-managed container environments.

The Solution

Gigamon GigaVUE Cloud Suite delivers automated intelligent network and application traffic visibility for dynamic workloads — including containers running in multiple clouds (such as AWS, Azure, Google Cloud Platform (GCP), and Oracle) — and enables increased security, operational efficiency, and high-performance processing across these environments. Gigamon improves tool efficiency and minimizes tool costs while enabling you to secure more of your environment.

Figure 3: Centralized management, automation, and straightforward process with IaaS vendor orchestration suites and GigaVUE-FM.

THE GIGAVUE CLOUD SUITE SOLUTION CONSISTS OF:

GigaVUE G-vTAPs

For traffic acquisition, lightweight G-vTAPs are deployed within compute instances that mirror traffic to the V Series. Key benefits include:

- Single, lightweight instance minimizes impact on compute nodes
- Gigamon Universal Container TAPs (UCT) let you easily acquire traffic from any Docker-based container, regardless of Container Network Interface (CNI)
- Reduction in application downtime — there is no need to redesign applications when adding new tools
- Agent filters traffic of interest prior to sending it via IPsec to the GigaVUE V Series to reduce application and data egress costs

GigaVUE V Series Nodes

Traffic aggregation, intelligent high-performance packet processing, and distribution occurs within the GigaVUE V Series nodes, which are deployed within the visibility tier (see Figure 2). Key benefits include:

- Automatic Target Selection (ATS): Automatically extract traffic from any workload with a kernel mod deployed without explicitly specifying VPCs
- Flow Mapping®: Map L2-4 traffic flows to tools of choice
- GigaSMART® intelligence: Load balancing to optimize traffic sent to tools, reducing tool overload
- Fully interoperable with native traffic mirroring
- Application Filtering Intelligence: Automatically identify and filter out thousands of applications in real time and direct their traffic to the appropriate tools
- Application Metadata Intelligence: Generate over 7,000 metadata attributes across applications and protocols to enhance security and monitoring tool effectiveness

GigaVUE-FM

Centralized orchestration and management are done by GigaVUE-FM. Automatically instantiate, configure, and monitor your Gigamon Deep Observability Pipeline through GigaVUE-FM's tight coupling with Ansible, AWS CloudWatch, Azure Network Watch, Google Cloud Operations Suite, Terreform, and other popular orchestration tools. FM also supports dynamic workload migrations.

- Detect compute instance changes in the virtual clouds and automatically adjust the visibility tier through pre-built integration with the orchestrator's APIs.
- Publish REST APIs: Integrate with a broad range of orchestrators and tools to dynamically adjust traffic received or to orchestrate new traffic policies.
- Auto-discover and visualize end-to-end network topology, including virtual cloud workloads, by using an intuitive drag-and-drop user interface.
- Eliminate manual processes and errors by automatically identifying each new workload and its associated traffic mirroring via ATS, and then configuring the traffic mirroring to direct traffic to the V Series Nodes.
- Deep integration with multiple orchestration tools automatically instantiates the G-vTAP Modules and Controllers as well as the V Series and their optional proxies.

Conclusion

Whether your organization is already using IaaS public cloud providers or considering a future migration, GigaVUE Cloud Suite provides intelligent network traffic visibility for workloads running in the cloud. Integration with multiple cloud orchestrator APIs automatically deploys a visibility tier in all containers and virtual clouds (whether based on VPCs, VNets, or VCNs), collects aggregated traffic, and applies advanced packet processing prior to sending selected traffic to existing security tools. With GigaVUE Cloud Suite, organizations can obtain consistent insight into their infrastructure across multicloud and their on-premises environment.

Gigamon®

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

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