



GigaVUE V Series Quick Start Guide

GigaVUE Cloud Suite

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Change Notes

When a document is updated, the document version number on the cover page will indicate a new version and will provide a link to this Change Notes table, which will describe the updates.

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GigaVUE V Series Quick Start

GigaVUE Cloud Suite are cloud-native solutions that acquire, optimize and distribute selected traffic to security and monitoring tools. The suite enable enterprises to extend their security posture to both public and private cloud and also accelerate the time to detect threats to applications while taking advantage of a reliable, scalable and available cloud environment.

This solution includes three main components:

GigaVUE V Series Node: Processes network traffic and allows administrators to provide additional functionality including forwarding, de-duplication, and NetFlow generation

G-vTAP Agents: Acquires traffic from the host on which it is deployed and transfers it to the V Series Node.

GigaVUE-FM: Provides detailed analytics for the solution and can optionally orchestrate the deployed components.

What is a V Series Node?

A V Series Node is a virtual machine running in the customer's infrastructure which processes and distributes network traffic. It plays the same role as an H Series appliance in a physical deployment, running many of the same GigaSMART applications and feeding data to tools in a similar manner. Because V Series nodes reside in a virtualized environment, inbound and outbound traffic is tunneled (because there are no physical device ports).

V Series 1.x nodes:

- Platform support—AWS, Azure, Nutanix, OpenStack, "AnyCloud"
- GigaSMART support—Deduplication, NetFlow generation, Slicing, Masking
- Licensing—Licensed per platform (Sold in bundles of nodes, e.g. 100 / 1000), separate SKUs for each

V Series 2.x nodes:

- Platform support—AWS, Azure, VMware (ESXi and NSX-T), OpenStack
- GigaSMART support—Deduplication, NetFlow, AMI, AFI, Slicing, Masking

- Licensing—Licensed according to traffic volume. With Volume Based Licensing, the customer can choose any supported platform, or combination of platforms.

GigaVUE Cloud Suite supports V Series 1 and V Series 2, however, V Series 2 is recommended. V Series 1 are older and are replaced by the newer and better V Series 2.

Cloud Platform	Guides	V Series
Public Cloud		
AWS	GigaVUE Cloud Suite for AWS Guide	V Series 1 and V Series 2
Azure	GigaVUE Cloud Suite for Azure Guide	V Series 1 and V Series 2
Private Cloud		
OpenStack	GigaVUE Cloud Suite for OpenStack Guide	V Series 2
VMware	GigaVUE Cloud Suite for VMware—GigaVUE V Series Guide	V Series 2
Other Platforms		
AnyCloud	GigaVUE Cloud Suite for AnyCloud Guide	V Series 1

Note on Legacy Products

Before V Series nodes were supported in VMware environments, Gigamon's visibility solution utilized a different architecture. Virtualized traffic acquisition was performed by a GigaVUE-VM running on an ESXi hypervisor and that traffic was forwarded to H Series appliances for processing and distribution.

If you wish to keep that network architecture a V Series 2 node can be configured to forward all traffic to an H Series appliance, effectively functioning as a GigaVUE-VM. In order to start applying GigaSMART applications in the V Series node, you must allocate more RAM and vCPU resources to the nodes.

Topics:

- [Volume-Based Licensing \(VBL\)](#)
- [GigaVUE V Series in VMware](#)
- [GigaVUE V Series in OpenStack](#)
- [GigaVUE V Series in Azure](#)
- [GigaVUE V Series in AWS](#)
- [GigaVUE-FM Version Compatibility Matrix](#)
- [Supported GigaSMART Operations](#)
- [GigaVUE V Series Logs and Commands](#)

Volume-Based Licensing (VBL)

All the V Series 2 nodes connected to GigaVUE-FM periodically reports statistics on the amount of traffic that flows through the V Series Nodes. The statistics gives information on the total volume of data that is allowed to flow through the V Series Node versus the actual data volume that flows through the V Series Nodes. All licensed applications, when running on the node, generate usage statistics. In the Volume-Based Licensing scheme, a license entitles specific applications on your devices to use a specified amount of total data volume over the term of the license. The distribution of the license to individual nodes or devices becomes irrelevant for Gigamon's accounting purpose. GigaVUE-FM tracks the total amount of data processed by the various licensed applications and provides visibility into the actual amount of data, each licensed application is using on each node, and track the overuse if any. You will have grace period for each license that are conveyed in the license file. For purchasing licenses with the VBL option, contact our Gigamon Sales. Refer to Contact Sales.

Refer [Dashboards for Volume-based Licenses Usage](#) for more details.

GigaVUE V Series in VMware

Prerequisites for Integrating V Series Nodes with vCenter

Few VMware vCenter versions are supported, with the GigaVUE Cloud Suite V Series nodes hosted on ESXi hosts. Refer to the Release Notes for the hardware requirements on which VMware ESXi runs V Series Node.

NOTE: To support internationalized characters in the VMware vCenter environment ensure that the vCenter character encoding is set to UTF-8.

The following are the prerequisites for integrating V Series nodes with ESXi:

- VMware ESXi Standard Version must be either 6.7 u3 or 7.0.
- VMware vCenter Server Version must be either 6.7 u3 or 7.0.

NOTE: Both VMware ESXi Standard Version and VMware vCenter Server Version must be same. For example. if the VMware ESXi Standard Version is 6.7 u3 , the VMware vCenter Server Version must also be 6.7 u3 .

- ESXi hosts must have the minimum vCPU and memory resources.
- GigaVUE-FM version 5.12.xx or later.

- V Series 2.x device OVA image file.
- All the target VMs must have VMware guest tools or Open VM tools if workload VMs is selected based on IP address.
- Port number 8889 must be available for GigaVUE-FM to access V Series nodes.

The V Series 2 Node OVA image files can be downloaded from the [Gigamon Customer Portal](#).

Network Firewall Requirements for ESXi

Following are the Network Firewall Requirements for V Series 2 node deployment.

Direction	Type	Protocol	Port	Source/Destination	Purpose
GigaVUE-FM					
Inbound	<ul style="list-style-type: none"> • HTTPS • SSH 	TCP	<ul style="list-style-type: none"> • 443 • 22 	Administrator Subnet	Management connection to GigaVUE-FM
Outbound	HTTPS	TCP	443	All ESXi hosts IP and vCenter IP	Allows GigaVUE-FM to communicate with vCenter and all ESXi hosts and NSX-T managers to import the V Series OVA files
Outbound	Custom TCP Rule	TCP	8889	V Series 2 Node IP	Allows GigaVUE-FM to communicate with V Series node
V Series 2 node					
Inbound	Custom TCP Rule	TCP	8889	GigaVUE-FM IP	Allows GigaVUE-FM to communicate with V Series node
Inbound	<ul style="list-style-type: none"> • UDP • IP 	<ul style="list-style-type: none"> • UDP (VXLAN) • GRE • UDPGRE 	<ul style="list-style-type: none"> • 4789 • Protocol 47 • 4754 	Ingress Tunnel	Allows to UDPGRE Tunnel to communicate and tunnel traffic to V Series nodes
Outbound	Custom UDP Rule	UDP (VXLAN)	VXLAN (default 4789)	Tool IP	Allows V Series node to communicate and tunnel traffic to the Tool
Outbound (optional)	ICMP	ICMP	<ul style="list-style-type: none"> • echo request • echo reply 	Tool IP	Allows V Series node to health check tunnel destination traffic

Recommended Instance Types for ESXi

The instance size of the V Series is configured on the OVF file and packaged as part of the OVA image file. The following table lists the available instance types and sizes based on memory and the number of vCPUs for a single V series node. Instance sizes can be different for V Series nodes in different ESXi hosts and the default size is Small.

Type	Memory	vCPU	Disk space	vNIC
Small	4GB	2 vCPU	8GB	1 Management interface, 1 Tunnel interface, and 8 vTAP interfaces
Medium	8GB	4 vCPU		
Large	16GB	8 vCPU		

Note: Refer to Support, Sales, or Professional Services for deployment optimization.

Required VMware Virtual Center Privileges

This section lists the minimum privileges required for the GigaVUE-FM user in Virtual Center. You assign privileges to Virtual Center users by selecting Roles > Administration > Role, and then use the Edit Role dialog box in vCenter. Roles should be applied at the vSphere Virtual Center level and not the Data Center or Host levels.

The following table lists the minimum required permissions for GigaVUE-FM to manage the virtual center.

Category	Required Privilege	Purpose
Host	Configuration <ul style="list-style-type: none"> Network Configuration 	VSS Tapping
	Inventory <ul style="list-style-type: none"> Modify Cluster 	Pin V Series Node to the host in cluster configurations. This prevents automatic migration.
Datastore	<ul style="list-style-type: none"> Allocate space 	V Series Node Deployment
Distributed Switch	<ul style="list-style-type: none"> VSPAN Operation 	VDS Tapping
Network	<ul style="list-style-type: none"> Assign network Configure 	V Series Node Deployment/VSS Tapping V Series Node Deployment
Resource	<ul style="list-style-type: none"> Assign virtual machine to resource pool 	V Series Node Deployment
vApp	<ul style="list-style-type: none"> Import vApp instance configuration 	V Series Node Deployment V Series Node Deployment

Category	Required Privilege	Purpose
Virtual machine	Configuration <ul style="list-style-type: none"> Add new disk Add or remove device Modify device settings 	V Series Node Deployment V Series Node Deployment/VSS Tapping
	Interaction <ul style="list-style-type: none"> Connect devices Power on Power off 	V Series Node Deployment V Series Node Deployment V Series Node Deployment
	Inventory <ul style="list-style-type: none"> Create from existing Remove 	V Series Node Deployment V Series Node Deployment
	Provisioning <ul style="list-style-type: none"> Clone virtual machine 	V Series Node Deployment

Prerequisites for Integrating V Series Nodes with NSX-T

Refer to the Release Notes for the hardware requirements on which VMware NSX-T runs V Series Node.

The following are the prerequisites for integrating V Series nodes with NSX-T:

- VMware vCenter Standard Version must be 6.7 u3, and 7.0 with the required privileges. Refer to [Required VMware Virtual Center Privileges](#) for more information on vCenter privileges.
- Before deploying V Series nodes through GigaVUE-FM, Service segments must be created in the NSX-T manager.
- NSX-T versions must be 2.5.1, 2.5.2, 3.0, 3.0.2, 3.1.2. If you have other versions, please contact Gigamon support.

NOTE: NSX-T is different than the ESXi implementation for hosting the V Series OVA file on an image server. In that you need to have an image server to host the V Series image file. The default http port supported is 80. However, if the image server listens on any port other than the default http port then, the port number should be provided in the image URL. For example: If the image server listens on port 8080, then the image URL should be `http://IP_Address:8080/path_to_ova` .

- GigaVUE-FM version 5.12.xx or later.
- V Series 2.2 device OVA image file.
- Port number 8889 must be available for GigaVUE-FM to access V Series nodes.

NOTE: You cannot have both GigaVUE-VM and V Series node visibility solutions deployed on the same vCenter.

The V Series 2.x Node OVA image files can be downloaded from the [Gigamon Customer Portal](#).

Network Firewall Requirements for NSX-T

Following are the Network Firewall Requirements for V Series 2 node deployment.

Direction	Type	Protocol	Port	Source/Destination	Purpose
GigaVUE-FM					
Inbound	<ul style="list-style-type: none"> • HTTPS • SSH 	TCP	<ul style="list-style-type: none"> • 443 • 22 	Administrator Subnet	Management connection to GigaVUE-FM
Outbound	HTTPS	TCP	443	All ESXi hosts IP and vCenter IP	Allows GigaVUE-FM to communicate with vCenter and all ESXi hosts and NSX-T managers to import the V Series OVA files
Outbound	Custom TCP Rule	TCP	8889	V Series 2 Node IP	Allows GigaVUE-FM to communicate with V Series node
V Series 2 node					
Inbound	Custom TCP Rule	TCP	8889	GigaVUE-FM IP	Allows GigaVUE-FM to communicate with V Series node
Inbound	<ul style="list-style-type: none"> • UDP • IP 	<ul style="list-style-type: none"> • UDP (VXLAN) 	<ul style="list-style-type: none"> • 4789 • Protocol 47 	Ingress Tunnel	Allows to UDPGRE Tunnel to

Direction	Type	Protocol	Port	Source/Destination	Purpose
		<ul style="list-style-type: none"> GRE UDPGRE 	<ul style="list-style-type: none"> 4754 		communicate and tunnel traffic to V Series nodes
Outbound	Custom UDP Rule	UDP (VXLAN)	VXLAN (default 4789)	Tool IP	Allows V Series node to communicate and tunnel traffic to the Tool
Outbound (optional)	ICMP	ICMP	<ul style="list-style-type: none"> echo request echo reply 	Tool IP	Allows V Series node to health check tunnel destination traffic

Recommended Instance Types for NSX-T

The instance size of the V Series is configured on the OVF file and packaged as part of the OVA image file. The following table lists the available instance types and sizes based on memory and the number of vCPUs for a single V series node. Instances sizes can be different for V Series nodes in different NSX-T hosts and the default size is Small.

Type	Memory	vCPU	Disk space	Recommended Traffic Volume
Small	4GB	2 vCPU	8GB	upto 2G
Medium	8GB	4 vCPU	8GB	upto 4G
Large	16GB	8 vCPU	8GB	More than 4G

For more specific throughput information on specific applications, please contact Gigamon Support.

GigaVUE V Series in OpenStack

This section describes the requirements and prerequisites for configuring the GigaVUE Cloud Suite for OpenStack. Refer to the following section for details.

- [Minimum Compute Requirements for OpenStack](#)
- [Recommended Instance Type for OpenStack](#)
- [GigaVUE V Series in OpenStack](#)
- [Network Requirements](#)

Minimum Compute Requirements for OpenStack

In OpenStack, flavors set the vCPU, memory, and storage requirements for an image. Gigamon recommends that you create a flavor that matches or exceeds the minimum recommended requirements listed in the following tables.

Requirements for V Series 1

Compute Instances	vCPU	Memory	Disk Space	Description
G-vTAP Agent	2 vCPU	4GB	N/A	Available as rpm or Debian package. Instances can have a single vNIC or dual vNICs configured for monitoring the traffic.
G-vTAP OVS Agent	N/A	N/A	N/A	Available as rpm or Debian package.
G-vTAP Controller	1 vCPU	4GB	8GB	Based on the number of agents being monitored, multiple controllers will be required to scale out horizontally.
V Series Node	2 vCPU	3.75GB	20GB	NIC 1: Monitored Network IP; Can be used as Tunnel IP NIC 2: Tunnel IP (optional) NIC 3: Management IP
V Series Controller	1 vCPU	4GB	8GB	Based on the number of GigaVUE V Series nodes being monitored, multiple controllers will be required to scale out horizontally
GigaVUE-FM	2 vCPU	16GB	2x 40GB	GigaVUE-FM must be able to access the controller instance for relaying the commands. Use a flavor with a root disk and an ephemeral disk each of minimum 40GB.

Requirements for V Series 2

Compute Instances	vCPU	Memory	Disk Space	Description
G-vTAP Agent	2 vCPU	4GB	N/A	Available as rpm or Debian package. Instances can have a single vNIC or dual vNICs configured for monitoring the traffic.
G-vTAP Controller	1 vCPU	4GB	8GB	Based on the number of agents being monitored, multiple controllers will be required to scale out horizontally.

Compute Instances	vCPU	Memory	Disk Space	Description
V Series Node	2 vCPU	3.75GB	20GB	NIC 1: Monitored Network IP; Can be used as Tunnel IP NIC 2: Tunnel IP (optional) NIC 3: Management IP
V Series Proxy	1 vCPU	4GB	8GB	Based on the number of GigaVUE V Series nodes being monitored, multiple controllers will be required to scale out horizontally
GigaVUE-FM	4 vCPU	8GB	40GB	GigaVUE-FM must be able to access the controller instance for relaying the commands. Use a flavor with a root disk of minimum 40GB and an ephemeral disk of minimum 41GB.

Recommended Instance Type for OpenStack

The instance size of the V Series is configured and packaged as part of the qcow2 image file. The following table lists the available instance types and sizes based on memory and the number of vCPUs for a single V series node. Instance sizes can be different for V Series nodes in different OpenStack VMs and the default size is Small.

Type	Memory	vCPU	Disk space	vNIC
Small	4GB	2 vCPU	8GB	1 Management interface, 1 to 8 Tunnel interfaces
Medium	8GB	4 vCPU		
Large	16GB	8 vCPU		

Network Firewall Requirements for OpenStack

Direction	Ether Type	Protocol	Port	CIDR	Purpose
GigaVUE-FM					
Inbound	HTTPS	TCP	443	Any IP address	Allows users to connect to the GigaVUE-FM GUI.
Inbound	IPv4	UDP	53	Any IP address	Allows GigaVUE-FM to communicate with standard DNS server

Direction	Ether Type	Protocol	Port	CIDR	Purpose
G-vTAP Controller					
Inbound	IPv4	TCP	9900	GigaVUE-FM IP address	Allows GigaVUE-FM to communicate with G-vTAP Controllers
G-vTAP Agent					
Inbound	IPv4	TCP	9901	G-vTAP Controller IP address	Allows G-vTAP Controllers to communicate with G-vTAP Agents
V Series Proxy					
Inbound	IPv4	TCP	8890	GigaVUE-FM IP address	Allows GigaVUE-FM to communicate with GigaVUE V Series Proxys.
V Series 2 Node					
Inbound	Custom TCP Rule	TCP(6)	8889	GigaVUE V Series Proxy IP address	Allows GigaVUE V Series Proxys to communicate with GigaVUE V Series nodes
GRE Traffic					
Inbound	Custom Protocol Rule	GRE (47)	47	Any IP address	Allows mirrored traffic from G-vTAP Agents to be sent to GigaVUE V Series nodes using the L2 GRE or VXLAN tunnel
Outbound	Custom Protocol Rule	GRE (47)	47	Any IP address	Allows monitored traffic from GigaVUE V Series nodes to be sent to the monitoring tools using the L2 GRE or VXLAN tunnel
VXLAN Traffic					
Inbound	Custom UDPRule	UDP	Default port is 4789 and can be any port	Any IP address	Allows mirrored traffic from G-vTAP Agents to be sent to GigaVUE V Series nodes using the VXLAN tunnel
Outbound	Custom UDPRule	UDP	Default port is 4789 and can be any port	Any IP address	Allows monitored traffic from GigaVUE V Series nodes to be sent to the monitoring tools using the VXLAN tunnel

NOTE: The Security Group Rules table lists only the ingress rules. Make sure the egress ports are open for communication. Along with the ports listed in the Security Group Rules table, make sure the suitable ports required to communicate with Service Endpoints such as Identity, Compute, and Cloud Metadata are also open.

Network Requirements

The following table lists the recommended requirements to setup the network topology.

Network	Purpose
Management	Identify the subnets that GigaVUE-FM uses to communicate with the GigaVUE V Series nodes and controllers.
Data	Identify the subnets that receives the mirrored tunnel traffic from the monitored instances. In data network, if a tool subnet is selected then the V Series node egress traffic on to the destinations or tools.

GigaVUE V Series in Azure

Network Firewall Requirements for Azure

Following is the Network Firewall Requirements for V Series 2 node deployment.

Direction	Type	Protocol	Port	CIDR	Purpose
GigaVUE-FM					
Inbound	<ul style="list-style-type: none"> HTTPS SSH 	TCP	<ul style="list-style-type: none"> 443 22 	Administrator Subnet	Management connection to GigaVUE-FM
Outbound	Custom TCP Rule	TCP(6)	9900	GigaVUE-FM IP	Allows G-vTAP Controller to communicate with GigaVUE-FM
Outbound (optional)	Custom TCP Rule	TCP	8890	V Series Proxy IP	Allows GigaVUE-FM to communicate with V Series Proxy
Outbound (configuration without V Series Proxy)	Custom TCP Rule	TCP	8889	V Series 2 Node IP	Allows GigaVUE-FM to communicate with V Series node
G-vTAP Controller					

Direction	Type	Protocol	Port	CIDR	Purpose
Inbound	Custom TCP Rule	TCP(6)	9900	GigaVUE-FM IP	Allows G-vTAP Controller to communicate with GigaVUE-FM
Outbound	Custom TCP Rule	TCP(6)	9901	G-vTAP Controller IP	Allows G-vTAP Controller to communicate with G-vTAP Agents
G-vTAP Agent					
Inbound	Custom TCP Rule	TCP(6)	9901	G-vTAP Controller IP	Allows G-vTAP Agents to communicate with G-vTAP Controller
Outbound	<ul style="list-style-type: none"> • UDP • IP 	<ul style="list-style-type: none"> • UDP (VXLAN) • IP Protocol (L2GRE) 	VXLAN (default 4789)	G-vTAP Agent or Subnet IP	Allows G-vTAP Agents to (VXLAN/L2GRE) tunnel traffic to V Series nodes
V Series Proxy (optional)					
Inbound	Custom TCP Rule	TCP	8890	GigaVUE-FM IP	Allows GigaVUE-FM to communicate with V Series Proxy
Outbound	Custom TCP Rule	TCP	8889	V Series 2 node IP	Allows V Series Proxy to communicate with V Series node
V Series 2 node					
Inbound	Custom TCP Rule	TCP	8889	<ul style="list-style-type: none"> • GigaVUE-FM IP • V Series Proxy IP 	Allows V Series Proxy or GigaVUE-FM to communicate with V Series node
Inbound	<ul style="list-style-type: none"> • UDP • IP 	<ul style="list-style-type: none"> • UDP (VXLAN) • IP Protocol (L2GRE) 	<ul style="list-style-type: none"> • VXLAN (default 4789) • L2GRE 	G-vTAP Agent or Subnet IP	Allows G-vTAP Agents to (VXLAN/L2GRE) tunnel traffic to V Series nodes

Direction	Type	Protocol	Port	CIDR	Purpose
Inbound	UDP	UDPGRE	4754	Ingress Tunnel	Allows to UDPGRE Tunnel to communicate and tunnel traffic to V Series nodes
Outbound	Custom UDP Rule	<ul style="list-style-type: none"> • UDP (VXLAN) • IP Protocol (L2GRE) 	VXLAN (default 4789)	Tool IP	Allows V Series node to communicate and tunnel traffic to the Tool
Outbound (optional)	ICMP	ICMP	<ul style="list-style-type: none"> • echo request • echo reply 	Tool IP	Allows V Series node to health check tunnel destination traffic

The following is the Network Firewall Requirements for V Series 1 node deployment.

Direction		Protocol	Port Range	Source and CIDR, IP, or Security Group	Purpose
GigaVUE-FM Inside Azure					
Inbound	HTTPS	TCP(6)	443	Anywhere Any IP	Allows G-vTAP Controllers, GigaVUE Cloud Suite V Series Controllers, and GigaVUE-FM administrators to communicate with GigaVUE-FM
G-vTAP Controller					
Inbound	Custom TCP Rule	TCP	9900	Custom GigaVUE-FM IP	Allows GigaVUE-FM to communicate with G-vTAP Controllers
G-vTAP Agent					
Inbound	Custom TCP Rule	TCP	9901	Custom G-vTAP Controller IP	Allows G-vTAP Controllers to communicate with G-vTAP Agents
GigaVUE Cloud Suite V Series Controller					

Direction		Protocol	Port Range	Source and CIDR, IP, or Security Group	Purpose
Inbound	Custom TCP Rule	TCP	9902	Custom GigaVUE-FM IP	Allows GigaVUE-FM to communicate with GigaVUE Cloud Suite V Series Controllers
GigaVUE Cloud Suite V Series 1 node					
Inbound	Custom TCP Rule	TCP	9903	Custom GigaVUE V Series Controller IP	Allows GigaVUE Cloud Suite V Series Controllers to communicate with GigaVUE Cloud Suite V Series nodes
VXLAN Traffic					
Inbound	Custom UDP Rule	VXLAN	4789		Allows mirrored traffic from G-vTAP Agents to be sent to GigaVUE Cloud Suite V Series nodes using VXLAN tunnel Allows monitored traffic to be sent from GigaVUE Cloud Suite V Series nodes to the tools using VXLAN tunnel

GigaVUE V Series in AWS

V Series in AWS can be deployed in two ways – with or without the use of a V Series Proxy. When deployed with Proxy, GigaVUE-FM communication with the V Series Node via the Proxy node. This is typically useful when GigaVUE-FM is deployed in a VPC that is different than where V Series Nodes are deployed, which makes direct communication with the V Series Nodes unfeasible.

Recommended Instance Types for AWS

Node type	Recommended Instance Types
V Series Proxy	t2.micro
V Series	c5n.xlarge c5n.2xlarge t3a.xlarge

NOTE: Additional instance types are also supported. Refer to Support, Sales, or Professional Services for deployment optimization.

Starting in the 5.12.00 release, V Series 2 deployments in AWS can also be deployed in conjunction with a Network Load Balancer. Refer to the [Configure an External Load Balancer](#) topic more information.

More detailed information and step-by-step instructions for deployment, refer to the [Configure GigaVUE Fabric Components in GigaVUE-FM](#) topic in the *GigaVUE Cloud Suite for AWS-GigaVUE V Series 2* guide.

Network Firewall Requirements for AWS

Following is the Network Firewall Requirements for V Series 2 node deployment.

Direction	Type	Protocol	Port	CIDR	Purpose
GigaVUE-FM					
Inbound	<ul style="list-style-type: none"> HTTPS SSH 	TCP	<ul style="list-style-type: none"> 443 22 	Administrator Subnet	Management connection to GigaVUE-FM
Outbound	Custom TCP Rule	TCP(6)	9900	GigaVUE-FM IP	Allows G-vTAP Controller to communicate with GigaVUE-FM
Outbound (optional)	Custom TCP Rule	TCP	8890	V Series Proxy IP	Allows GigaVUE-FM to communicate with V Series Proxy
Outbound (configuration without V Series Proxy)	Custom TCP Rule	TCP	8889	V Series 2 Node IP	Allows GigaVUE-FM to communicate with V Series node
G-vTAP Controller					
Inbound	Custom TCP Rule	TCP(6)	9900	GigaVUE-FM IP	Allows G-vTAP Controller to communicate with GigaVUE-FM
Outbound	Custom TCP Rule	TCP(6)	9901	G-vTAP Controller IP	Allows G-vTAP Controller to communicate with G-vTAP Agents
G-vTAP Agent					
Inbound	Custom TCP Rule	TCP(6)	9901	G-vTAP Controller IP	Allows G-vTAP Agents to communicate with G-vTAP Controller
Outbound	<ul style="list-style-type: none"> UDP IP 	<ul style="list-style-type: none"> UDP (VXLAN) 	VXLAN (default 4789)	G-vTAP Agent or Subnet IP	Allows G-vTAP Agents to (VXLAN/L2GRE) tunnel traffic to V Series nodes

Direction	Type	Protocol	Port	CIDR	Purpose
		<ul style="list-style-type: none"> IP Protocol (L2GRE) 			
V Series Proxy (optional)					
Inbound	Custom TCP Rule	TCP	8890	GigaVUE-FM IP	Allows GigaVUE-FM to communicate with V Series Proxy
Outbound	Custom TCP Rule	TCP	8889	V Series 2 node IP	Allows V Series Proxy to communicate with V Series node
V Series 2 node					
Inbound	Custom TCP Rule	TCP	8889	<ul style="list-style-type: none"> GigaVUE-FM IP V Series Proxy IP 	Allows V Series Proxy or GigaVUE-FM to communicate with V Series node
Inbound	<ul style="list-style-type: none"> UDP IP 	<ul style="list-style-type: none"> UDP (VXLAN) IP Protocol (L2GRE) 	<ul style="list-style-type: none"> VXLAN (default 4789) L2GRE 	G-vTAP Agent or Subnet IP	Allows G-vTAP Agents to (VXLAN/L2GRE) tunnel traffic to V Series nodes
Inbound	UDP	UDPGRE	4754	Ingress Tunnel	Allows to UDPGRE Tunnel to communicate and tunnel traffic to V Series nodes
Outbound	Custom UDP Rule	<ul style="list-style-type: none"> UDP (VXLAN) IP Protocol (L2GRE) 	VXLAN (default 4789)	Tool IP	Allows V Series node to communicate and tunnel traffic to the Tool
Outbound (optional)	ICMP	ICMP	<ul style="list-style-type: none"> echo request echo reply 	Tool IP	Allows V Series node to health check tunnel destination traffic

GigaVUE-FM Version Compatibility Matrix

The following tables list the different versions of GigaVUE Cloud Suite Cloud Suite solutions, GigaVUE cloud components with different versions of GigaVUE-FM.

Refer to the following topics for detailed information:

- [Version Compatibility for V Series 2 Configuration](#)
- [Version Compatibility for V Series 1 Configuration](#)

Version Compatibility for V Series 2 Configuration

GigaVUE-FM	GigaVUE Cloud Suite	G-vTAP Agent	G-vTAP Controller	GigaVUE V Series Node	GigaVUE V Series Proxy
5.15.00	AWS	v1.8-5	v1.8-5	v2.5.0	v2.5.0
	Azure	v1.8-5	v1.8-5	v2.5.0	v2.5.0
	OpenStack	v1.8-5	v1.8-5	v2.5.0	v2.5.0
	VMware	N/A	N/A	v2.5.0	N/A
	AnyCloud	v1.8-5	v1.8-5	v2.5.0	v2.5.0
5.14.00	AWS	v1.8-4	v1.8-4	v2.4.0	v2.4.0
	Azure	v1.8-4	v1.8-4	v2.4.0	v2.4.0
	OpenStack	v1.8-4	v1.8-4	v2.4.0	v2.4.0
	VMware	N/A	N/A	v2.4.0	N/A
	AnyCloud	v1.8-4	v1.8-4	v2.4.0	v2.4.0

GigaVUE-FM	GigaVUE Cloud Suite	G-vTAP Agent	G-vTAP Controller	GigaVUE V Series Node	GigaVUE V Series Proxy
5.13.01	AWS	v1.8-3	v1.8-3	v2.3.3	v2.3.3
	Azure	v1.8-3	v1.8-3	v2.3.3	v2.3.3
	OpenStack	v1.8-3	v1.8-3	v2.3.3	v2.3.3
	VMware	N/A	N/A	v2.3.3	N/A
	AnyCloud	v1.8-3	v1.8-3	v2.3.3	v2.3.3
5.13.00	AWS	v1.8-2	v1.8-2	v2.3.0	v2.3.0
	Azure	v1.8-2	v1.8-2	v2.3.0	v2.3.0
	OpenStack	v1.8-2	v1.8-2	v2.3.0	v2.3.0
	VMware	N/A	N/A	v2.3.1	N/A
5.12.01	AWS	v1.8-1	v1.8-1	v2.2.0	v2.2.0
	OpenStack	v1.8-1	v1.8-1	v2.2.0	v2.2.0
	VMware	N/A	N/A	v2.2.1	N/A
5.12.00	AWS	v1.7-1	v1.7-1	v2.1.0	v2.1.0
	OpenStack	v1.7-1	v1.7-1	v2.1.0	v2.1.0
	VMware	N/A	N/A	v2.2.0	N/A

Version Compatibility for V Series 1 Configuration

GigaVUE-FM	GigaVUE Cloud Suite	G-vTAP Agent	G-vTAP Controller	GigaVUE V Series Node	GigaVUE V Series Controller
5.15.00	AWS	v1.8-5	v1.8-5	v1.7-2	v1.7-2
	Azure	v1.8-5	v1.8-5	v1.7-2	v1.7-2
	OpenStack	v1.8-5	v1.8-5	v1.7-2	v1.7-2
	AnyCloud	v1.8-5	v1.8-5	v1.7-2	v1.7-2
5.14.00	AWS	v1.8-4	v1.8-4	v1.7-1	v1.7-1
	Azure	v1.8-4	v1.8-4	v1.7-1	v1.7-1
	OpenStack	v1.8-4	v1.8-4	v1.7-1	v1.7-1
	AnyCloud	v1.8-4	v1.8-4	v1.7-1	v1.7-1
5.10.01, 5.11.00, 5.11.01, 5.12.00, 5.13.00, 5.13.01	AWS	v1.7-1	v1.7-1	v1.7-1	v1.7-1
	Azure	v1.7-1	v1.7-1	v1.7-1	v1.7-1
	OpenStack	v1.7-1	v1.7-1	v1.7-1	v1.7-1
	AnyCloud	v1.7-1	v1.7-1	v1.7-1	v1.7-1

Supported GigaSMART Operations

The following table lists the supported GigaSMART operations by GigaVUE Cloud Suite V Series 2 Nodes.

GigaSMART Operation	GigaVUE Cloud Suite for AWS	GigaVUE Cloud Suite for Azure	GigaVUE Cloud Suite for OpenStack	GigaVUE Cloud Suite for VMware	GigaVUE Cloud Suite for AnyCloud
Masking	✓	✓	✓	✓	✓
Packet Slicing	✓	✓	✓	✓	✓
De-Duplication	✓	✓	✓	✓	✓
L2GRE Tunnel Encapsulation	✓	✗	✓	✓	✗
VXLAN Tunnel Encapsulation	✓	✓	✓	✓	✗
L2GRE Tunnel Decapsulation	✓	✗	✓	✓	✗
VXLAN Tunnel Decapsulation	✓	✓	✓	✓	✗
ERSPAN Tunnel Decapsulation	✓	✗	✓	✓	✗
UDPGRE Tunnel Decapsulation	✓	✗	✓	✓	✗
GENEVE Decap	✓	✗	✗	✓ (NSX-T)	✗
Header Stripping	✗	✗	✗	✗	✗
Header Addition	✗	✗	✗	✗	✗
FlowVUE (IP-based)	✗	✗	✗	✗	✗
Adaptive Packet Filtering (APF) without RegEx	✓	✓	✓	✓	✗
Application Session Filtering (ASF)	✓	✓	✗	✓	✗
Application Filtering Intelligence (AFI)	✓	✓	✗	✓	✗
Application Metadata Intelligence(AMI)	✓	✓	✗	✓	✗
Application Visualization	✓	✓	✗	✓	✗
Load Balancing (Stateless)	✓	✓	✓	✓	✗

GigaSMART Operation	GigaVUE Cloud Suite for AWS	GigaVUE Cloud Suite for Azure	GigaVUE Cloud Suite for OpenStack	GigaVUE Cloud Suite for VMware	GigaVUE Cloud Suite for AnyCloud
Load Balancing (Stateful)	x	x	x	x	x
SSL Decryption for Out-of-Band Tools (Passive SSL)	x	x	x	x	✓
SSL Decryption for Inline Tools	x	x	x	x	x

GigaVUE V Series Logs and Commands

CLI Commands

Device/Component	Platform	Commands
Fabric Manager(FM)	NA	
GvTAP Controller	AWS/OpenStack/Azure/Anycloud	gvtapr
GvTAP OVS Controller	OpenStack	gvtapr
GvTAP Agent Log	AWS/OpenStack/Azure/Anycloud	gvtapl
GvTAP OVS Agent Log	OpenStack	gvtapl
V-Series Controller	AWS/OpenStack/Azure/Anycloud	
V-Series Node	AWS/OpenStack/Azure/Anycloud	apiv

Logs

Device/Component	Platform	Logs
Fabric Manager(FM)	NA	<i>https://<FM IP>/api/0.9/sys/log/file/vmm.log</i>
GvTAP Controller	AWS/OpenStack/Azure/Anycloud	
GvTAP OVS Controller	OpenStack	<i>/var/log/syslog</i>

Device/Component	Platform	Logs
GvTAP Agent Log	AWS/OpenStack/Azure/Anycloud	
GvTAP OVS Agent Log	OpenStack	<i>/var/log/gvtap-agent.log</i>
V-Series Controller	AWS/OpenStack/Azure/Anycloud	
V-Series Node	AWS/OpenStack/Azure/Anycloud	<i>/var/log/syslog</i> <i>/var/log/vseries-node.log</i> <i>/var/log/web-api-access.log</i>

Additional Sources of Information

This appendix provides additional sources of information. Refer to the following sections for details:

- [Documentation](#)
- [Documentation Feedback](#)
- [Contact Technical Support](#)
- [Contact Sales](#)
- [The Gigamon Community](#)

Documentation

This table lists all the guides provided for GigaVUE Cloud Suite software and hardware. The first row provides an All-Documents Zip file that contains all the guides in the set for the release.

NOTE: In the online documentation, view [What's New](#) to access quick links to topics for each of the new features in this Release; view [Documentation Downloads](#) to download all PDFs.

Table 1: Documentation Set for Gigamon Products

GigaVUE Cloud Suite 5.15 Hardware and Software Guides
<p>DID YOU KNOW? If you keep all PDFs for a release in common folder, you can easily search across the doc set by opening one of the files in Acrobat and choosing Edit > Advanced Search from the menu. This opens an interface that allows you to select a directory and search across all PDFs in a folder.</p>
<p>Hardware</p> <p>how to unpack, assemble, rack-mount, connect, and initially configure ports the respective GigaVUE Cloud Suite devices; reference information and specifications for the respective GigaVUE Cloud Suite devices</p>
G-TAP A Series 2 Installation Guide
GigaVUE-HC1 Hardware Installation Guide
GigaVUE-HC2 Hardware Installation Guide
GigaVUE-HC3 Hardware Installation Guide
GigaVUE M Series Hardware Installation Guide
GigaVUE TA Series Hardware Installation Guide

GigaVUE Cloud Suite 5.15 Hardware and Software Guides	
GigaVUE-FM Hardware Appliance Guide for GFM-HW1-FM010	
GigaVUE-OS Installation Guide for DELL S4112F-ON	
Software Installation and Upgrade Guides	
GigaVUE-FM Installation, Migration, and Upgrade Guide	
GigaVUE-OS Upgrade Guide	
Administration	
GigaVUE Administration Guide	covers both GigaVUE-OS and GigaVUE-FM
Fabric Management	
GigaVUE Fabric Management Guide	how to install, deploy, and operate GigaVUE-FM; how to configure GigaSMART operations; covers both GigaVUE-FM and GigaVUE-OS features
Cloud Configuration and Monitoring	
how to configure the GigaVUE Cloud Suite components and set up traffic monitoring sessions for the cloud platforms	
GigaVUE V Series Quick Start Guide	
GigaVUE Cloud Suite for AWS—GigaVUE V Series 2 Guide	
GigaVUE Cloud Suite for AWS—GigaVUE V Series 1 Guide	
GigaVUE Cloud Suite for Azure Guide	
GigaVUE Cloud Suite for OpenStack Guide	
Gigamon Containerized Broker Guide	
GigaVUE Cloud Suite for VMware—GigaVUE V Series Guide	
GigaVUE Cloud Suite for AnyCloud Guide	
GigaVUE Cloud Suite for Kubernetes Guide	
GigaVUE Cloud Suite for Nutanix Guide	
GigaVUE Cloud Suite for VMware—GigaVUE-VM Guide	
GigaVUE Cloud Suite for AWS Secret Regions Guide	
Reference	
GigaVUE-OS CLI Reference Guide	library of GigaVUE-OS CLI (Command Line Interface) commands used to configure and operate GigaVUE

GigaVUE Cloud Suite 5.15 Hardware and Software Guides

H Series and TA Series devices

GigaVUE-OS Cabling Quick Reference Guide

guidelines for the different types of cables used to connect Gigamon devices

GigaVUE-OS Compatibility and Interoperability Matrix

compatibility information and interoperability requirements for Gigamon devices

GigaVUE-FM REST API Reference in GigaVUE-FM User's Guide

samples uses of the GigaVUE-FM Application Program Interfaces (APIs)

Release Notes

GigaVUE-OS, GigaVUE-FM, GigaVUE-VM, G-TAP A Series, and GigaVUE Cloud Suite Release Notes

new features, resolved issues, and known issues in this release ;
important notes regarding installing and upgrading to this release

NOTE: Release Notes are not included in the online documentation.

NOTE: Registered Customers can log in to [My Gigamon](#) to download the Software and Release Notes from the Software & Docs page on to [My Gigamon](#). Refer to [How to Download Software and Release Notes from My Gigamon](#).

In-Product Help

GigaVUE-FM Online Help

how to install, deploy, and operate GigaVUE-FM.

GigaVUE-OS H-VUE Online Help

provides links the online documentation.

How to Download Software and Release Notes from My Gigamon

Registered Customers can download software and corresponding Release Notes documents from the **Software & Release Notes** page on to [My Gigamon](#). Use the My Gigamon Software & Docs page to download:

- Gigamon Software installation and upgrade images,
- Release Notes for Gigamon Software, or
- Older versions of PDFs (pre-v5.7).

To download release-specific software, release notes, or older PDFs:

1. Log in to [My Gigamon](#)
2. Click on the **Software & Release Notes** link.
3. Use the **Product** and **Release** filters to find documentation for the current release. For example, select Product: "GigaVUE-FM" and Release: "5.6," enter "pdf" in the search box, and then click **GO** to view all PDF documentation for GigaVUE-FM 5.6.xx.

NOTE: My Gigamon is available to registered customers only. Newer documentation PDFs, with the exception of release notes, are all available through the publicly available online documentation.

Documentation Feedback

We are continuously improving our documentation to make it more accessible while maintaining accuracy and ease of use. Your feedback helps us to improve. To provide feedback and report issues in our documentation, send an email to:

documentationfeedback@gigamon.com

Please provide the following information in the email to help us identify and resolve the issue. Copy and paste this form into your email, complete it as able, and send. We will respond as soon as possible.

Documentation Feedback Form		
About You	Your Name	
	Your Role	
	Your Company	
For Online Topics	Online doc link	<i>(URL for where the issue is)</i>
	Topic Heading	<i>(if it's a long topic, please provide the heading of the section where the issue is)</i>

For PDF Topics	Document Title	<i>(shown on the cover page or in page header)</i>
	Product Version	<i>(shown on the cover page)</i>
	Document Version	<i>(shown on the cover page)</i>
	Chapter Heading	<i>(shown in footer)</i>
	PDF page #	<i>(shown in footer)</i>
How can we improve?	Describe the issue	<i>Describe the error or issue in the documentation. (If it helps, attach an image to show the issue.)</i>
	How can we improve the content? Be as specific as possible.	
	Any other comments?	

Contact Technical Support

For information about Technical Support: Go to **Settings**  > **Support** > **Contact Support** in GigaVUE-FM.

You can also refer to <https://www.gigamon.com/support-and-services/contact-support> for Technical Support hours and contact information.

Email Technical Support at support@gigamon.com.

Contact Sales

Use the following information to Gigamon channel partner or Gigamon sales representatives.

Telephone: +1.408.831.4025

Sales: inside.sales@gigamon.com

Partners: www.gigamon.com/partners.html

Premium Support

Email Gigamon at inside.sales@gigamon.com for information on purchasing 24x7 Premium Support. Premium Support entitles you to round-the-clock phone support with a dedicated Support Engineer every day of the week.

The Gigamon Community

The [Gigamon Community](#) is a technical site where Gigamon users, partners, security and network professionals and Gigamon employees come together to share knowledge and expertise, ask questions, build their network and learn about best practices for Gigamon products.

Visit the Gigamon Community site to:

- Find knowledge base articles and documentation
- Ask and answer questions and learn best practices from other members.
- Join special-interest groups to have focused collaboration around a technology, use-case, vertical market or beta release
- Take online learning lessons and tutorials to broaden your knowledge of Gigamon products.
- Submit and vote on feature enhancements and share product feedback. (Customers only)
- Open support tickets (Customers only)
- Download the latest product updates and documentation (Customers only)

The Gigamon Community is a great way to get answers fast, learn from experts and collaborate directly with other members around your areas of interest.

Register today at community.gigamon.com

Questions? Contact our Community team at community@gigamon.com.

Glossary

D

decrypt list

need to decrypt (formerly blacklist)

decryptlist

need to decrypt - CLI Command (formerly blacklist)

drop list

selective forwarding - drop (formerly blacklist)

F

forward list

selective forwarding - forward (formerly whitelist)

L

leader

leader in clustering node relationship (formerly master)

M

member node

follower in clustering node relationship (formerly slave or non-master)

N

no-decrypt list

no need to decrypt (formerly whitelist)

nodecryptlist

no need to decrypt- CLI Command (formerly whitelist)

P

primary source

root timing; transmits sync info to clocks in its network segment (formerly grandmaster)

R

receiver

follower in a bidirectional clock relationship (formerly slave)

S

source

leader in a bidirectional clock relationship (formerly master)