



# GigaVUE Cloud Suite for Nutanix Configuration 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.

Product Version	Document Version	Date Updated	Change Notes
5.10.01	2.0	08/28/2020	Fixed formatting and cross-references issues, and streamlined instructions throughout the guide.
5.10.00	1.0	08/14/2020	Original release of this document with 5.10.00 GA.

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# GigaVUE Cloud Suite for Nutanix

This guide describes how to install, configure, and deploy the GigaVUE Cloud Suite for Nutanix in the Prism Central environment. Use this document for instructions on configuring the GigaVUE Cloud Suite Cloud components and setting up the traffic monitoring sessions for the Nutanix.

Topics:

- [Audience](#)
- [GigaVUE Cloud Suite for Nutanix](#)
- [Configure Components in Nutanix](#)
- [Configure Monitoring Sessions](#)

## Audience

This guide is intended for the users who have basic understanding of VMs and Nutanix Environment. This document expects the users to be familiar with the following terminologies that are used in this guide:

- **Cluster:** A group of nodes.
- **Node:** A node is a working machine in Nutanix cluster. Each node runs a standard hypervisor with processors, memories, and local storages.

## GigaVUE Cloud Suite for Nutanix

This chapter introduces the GigaVUE Cloud Suite for Nutanix components and the supported architecture. Refer to the following sections for details:

- [GigaVUE Cloud Suite Cloud for Nutanix Components](#)
- [Supported Architecture](#)

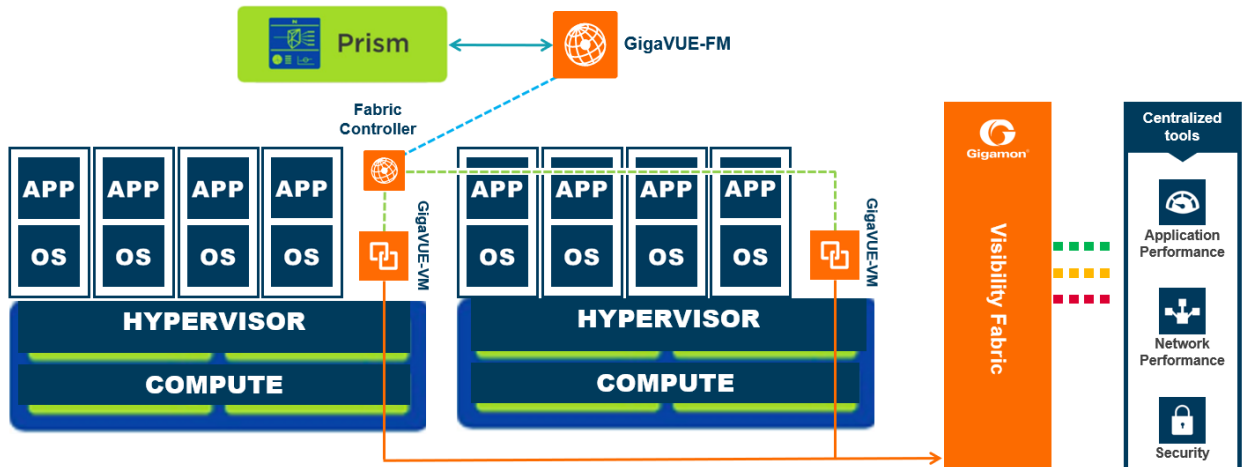
### GigaVUE Cloud Suite Cloud for Nutanix Components

The GigaVUE Cloud Suite for Nutanix includes the following components:

- **GigaVUE® Fabric Manager (GigaVUE-FM)** is a web-based fabric management and orchestration interface that provides a single pane of glass visibility, management, and orchestration of both the physical and virtual traffic that form the GigaVUE Cloud Suite Cloud. You must have GigaVUE-FM installed either on-premises or launched from any of the supported cloud platforms. Refer to the *"GigaVUE-FM Installation, Migration, and Upgrade Guide"* for details on installing and launching GigaVUE-FM.
- **GigaVUE Cloud Suite Fabric Controller** manages multiple GVMs and orchestrates the flow of traffic from GVMs to the monitoring tools. GigaVUE-FM uses one or more GigaVUE Cloud Suite Fabric Controllers to communicate with the GVMs.
- **GigaVUE-VM (GVM)** is a visibility node that aggregates mirrored traffic from Nutanix hosts. It applies filters and distributes the optimized traffic to:
  - Cloud-based tools
  - On-premise tools, such as a GigaVUE H Series device

## Supported Architecture

The design illustrates the Gigamon visibility in Nutanix and extend the same set of tools and policies used for the physical network to Nutanix deployed workloads.



## Role Based Access Control

The Role Based Access Control (RBAC) feature controls the access privileges of users and restricts users from either modifying or viewing unauthorized data. Access privileges in GigaVUE Cloud Suite for Nutanix works on the same principles of access privileges in GigaVUE-FM in which the access rights of a user depends on the following:

- **User role:** A user role defines permission for users to perform any task or operation
- **User group:** A user group consists of a set of roles and set of tags associated with that group. When a user is created they can be associated with one or more groups.

To access the resources and to perform a specific operation in GigaVUE Cloud Suite for Nutanix you must be a user with **fm\_super\_admin** role or a user with write access to the following resource category depending on the task you need to perform.

Resource Category	Cloud Configuration Task
<p><b>Physical Device Infrastructure Management:</b> This includes the following cloud infrastructure resources:</p> <ul style="list-style-type: none"> <li>• Cloud Connections</li> <li>• Cloud Proxy Server</li> <li>• Cloud Fabric Deployment</li> <li>• Cloud Configurations</li> <li>• Sys Dump</li> <li>• Syslog</li> <li>• Cloud licenses</li> <li>• Cloud Inventory</li> </ul>	<ul style="list-style-type: none"> <li>• Configure Components in Nutanix</li> <li>• Connect to Nutanix</li> </ul>
<p><b>Traffic Control Management:</b> This includes the following traffic control resources:</p> <ul style="list-style-type: none"> <li>• Monitoring session</li> <li>• Stats</li> <li>• Map library</li> <li>• Tunnel library</li> <li>• Tools library</li> <li>• Inclusion/exclusion Maps</li> </ul>	<ul style="list-style-type: none"> <li>• Create, Clone, and Deploy Monitoring Session</li> <li>• Add Applications to Monitoring Session</li> <li>• Create Maps</li> <li>• View Statistics</li> <li>• Create Tunnel End Points</li> </ul>

**NOTE:** Cloud APIs are also RBAC enabled.

Refer to the GigaVUE Cloud Suite Administration Guide for detailed information about Roles, Tags, User Groups.



# Configure Components in Nutanix

This chapter describes how to configure GVMs, and GigaVUE Cloud Suite® Fabric Controllers in your environment. Refer to the following sections for details:

- [Before You Begin](#)
- [Launch GigaVUE-FM Instance](#)
- [Configure GigaVUE Cloud Suite Cloud for Nutanix Components](#)

## Before You Begin

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

- [Prerequisites](#)
- [Minimum Compute Requirements](#)
- [Network Firewall Requirements](#)

## Prerequisites

The following are the prerequisites for configuring GigaVUE-FM and fabric images in Nutanix.

- If the Gigamon fabric VMs (Fabric Controller and GigaVUE-VM) are deployed on multiple clusters, the management network selected during configuration must have the same name on all clusters.
- You must upload the GigaVUE-FM image and fabric image (Fabric Controller and GVM) files in the Prism Central repository. Do not use the Prism Element to upload the GigaVUE-FM image and fabric image files.
- Assigning a Static IP on Gigamon Fabric Nodes is not supported and the management subnet selection must be DHCP enabled.
- Only one GVM can be deployed per Nutanix Node.
- A Fabric Controller can be shared among GVMs on multiple clusters as long as there is network connectivity
- The GVM does not support any GigaSMART applications in Nutanix for GigaVUE-FM version 5.8.

- For GigaVUE Cloud Suite FM to orchestrate the solution, the minimum requirement that the Nutanix admin account must be a **Prism Central Admin** on Prism Central and a **Cluster Admin** on individual clusters. The password must set to be the same across the environment if they are locally managed. Alternatively, if the Nutanix Prism Central is configured with external authentication like AD/LDAP then you can avoid replicating the manual password creation across the environment.
- While uploading the fabric images in Nutanix, ensure that the file names of the Fabric images have,
  - "gigamon-fabric-cntlr-1.7-1" as the Fabric Controller filename.
  - "gigamon-gvm-nutanix-1.7-1" as the GVM filename.

## Minimum Compute Requirements

The minimum recommended computing requirements are listed in the following table.

Compute Instances	vCPU	Memory	Disk Space	Description
GigaVUE-VM	2 vCPU	4GB	1 x 12GB	NIC 1: Management IP + vTAP interfaces
GigaVUE Cloud Suite® Fabric Controller	1 vCPU	1GB	1 x 10GB	Based on the number of GVMs being monitored, multiple fabric controllers are required to scale out horizontally
GigaVUE-FM	2 vCPU	16GB	2 x 40GB	GigaVUE-FM must be able to access the controller instance for relaying the commands.

## Network Firewall Requirements

Following are the Network Firewall Requirements for Gigamon fabrics for Nutanix deployments.

Table 1: Network Firewall Requirements

Direction	Type	Protocol	Port	CIDR	Purpose
<b>GigaVUE-FM Inside Nutanix</b>					
Inbound	HTTPS	TCP	443	Anywhere Any IP	Allows GVMs, GigaVUE Cloud Suite Fabric Controllers, and GigaVUE-FM administrators to communicate with GigaVUE-FM
Inbound	SSH	TCP	22	Anywhere Any IP	Allows GVMs, GigaVUE Cloud Suite Fabric Controllers, and GigaVUE-FM administrators to communicate with GigaVUE-FM

Direction	Type	Protocol	Port	CIDR	Purpose
Outbound	Custom TCP Rule	TCP	9902	GigaVUE Cloud Suite Fabric Controller IP	Allows GigaVUE-FM to communicate with GigaVUE Cloud Suite Fabric Controllers
<b>GigaVUE Cloud Suite Fabric Controller</b>					
Inbound	Custom TCP Rule	TCP	9902	GigaVUE-FM IP	Allows GigaVUE-FM to communicate with GigaVUE Cloud Suite Fabric Controllers
<b>GVM</b>					
Inbound	Custom TCP Rule	TCP	9903	GigaVUE Cloud Suite Fabric Controller IP	Allows GigaVUE Cloud Suite Fabric Controllers to communicate with GVMs

## Upload Fabric Images

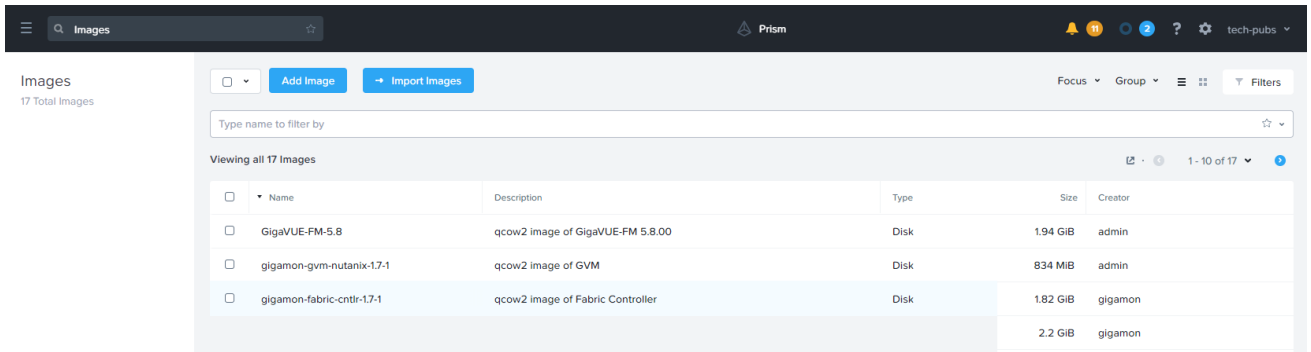
The recent GVM, and Fabric Controller qcow2 image files can be downloaded from [Gigamon Customer Portal](#). After fetching the images, upload the fabric images to Prism Central. Select all the available clusters as placements while uploading fabric images.

While uploading images to Nutanix, the names of the image files should be of the following format:

- gigamon-fabric-cntlr-1.7-1
- gigamon-gvm-nutanix-1.7-1

Once the images are uploaded, you can view the images under **Virtual Infrastructure > Images** in the Nutanix console.

**NOTE:** The GVM and Fabric Controller images are built with identical username (ubuntu) and password (ubuntu). You must change the password when you first login to the GVMs and Fabric controllers.



**Figure 1** Upload Fabric Images in Prism Central

## Launch GigaVUE-FM Instance

To launch the GigaVUE-FM instance from the Prism Central:

1. Log in to Prism Central.
2. In Prism Central, select **Dashboard > Virtual Infrastructure > VMs**. The VMs page appears.
3. On the VMs page, click **Create VM**. The **Create VM** window appears.

**NOTE:** If the device has more than one cluster, select the required cluster in the **Cluster Selection** window.

4. Enter or select the values as described in the following table.

Field	Description
General Configuration	<ul style="list-style-type: none"> <li>• <b>Name</b>—name for the VM.</li> <li>• <b>Description</b>—description for the VM.</li> <li>• <b>Timezone</b>—time zone from the drop-down list.</li> </ul>
Compute Details	<ul style="list-style-type: none"> <li>• <b>vCPU(s)</b>—number of vCPUs required.</li> <li>• <b>Number Of Cores Per vCPU</b>—number of cores per vCPU.</li> <li>• <b>Memory</b>—memory size of the vCPU(s). Minimum value is 8GiB.</li> </ul>
Disks	Add, edit or delete the disks. Add the GigaVUE-FM qcow2 disk image and a Container (second disk), minimum of 40GB for the VM. You must select the fabric image as Boot Device.
Network Adapters (NIC)	Add, edit or delete the NIC.
VM Host Affinity	Set Affinity by choosing the required nodes to run GigaVUE-FM or a particular VM.

5. Click **Save** and the new VM appears in the VMs list with the **Power State** as **Off**.
6. Select the new VM and then select **Actions > Power On**. The new VM is now Active.

7. Select the new VM and then select **Actions > Launch console**. The GigaVUE-FM console appears.
8. Log in to the GigaVUE-FM console as admin with the default password admin123A! and you are requested to change the password.

## Configure GigaVUE Cloud Suite Cloud for Nutanix Components

You must establish a connection between GigaVUE-FM and your Prism environment before you can perform the configuration steps for GVM and Fabric Controller. After a connection is established, you can use GigaVUE-FM to specify a launch configuration for the GVMs, and GigaVUE Cloud Suite Fabric Controllers.

Refer to the following sections for details:

- [Connect to Nutanix](#)
- [Nutanix Fabric Launch Configuration](#)

### Connect to Nutanix

To configure Nutanix in GigaVUE-FM:

1. In GigaVUE-FM, on the top navigation bar, select **Cloud**.
2. On the left navigation pane, select **Nutanix > Monitoring Domain**. The Monitoring Domain page appears.
3. On the Monitoring Domain page, click **New**. The Nutanix Configuration page appears.

4. In the Nutanix Configuration page, enter or select the following details:

Field	Description
<b>Monitoring Domain</b>	Name of the monitoring domain.
<b>Connection Alias</b>	Name of the connection.
<b>Nutanix Prism Central IP</b>	IP address of the Prism Central.
<b>Nutanix Prism Central Username</b>	Username of the Prism Central User with admin role privilege.
<b>Nutanix Prism Central Password</b>	Prism Central Password used to connect to the Nutanix.
<b>Cluster</b>	Clusters that need to be monitored

5. Click **Save**. The [Nutanix Fabric Launch Configuration](#) page appears.

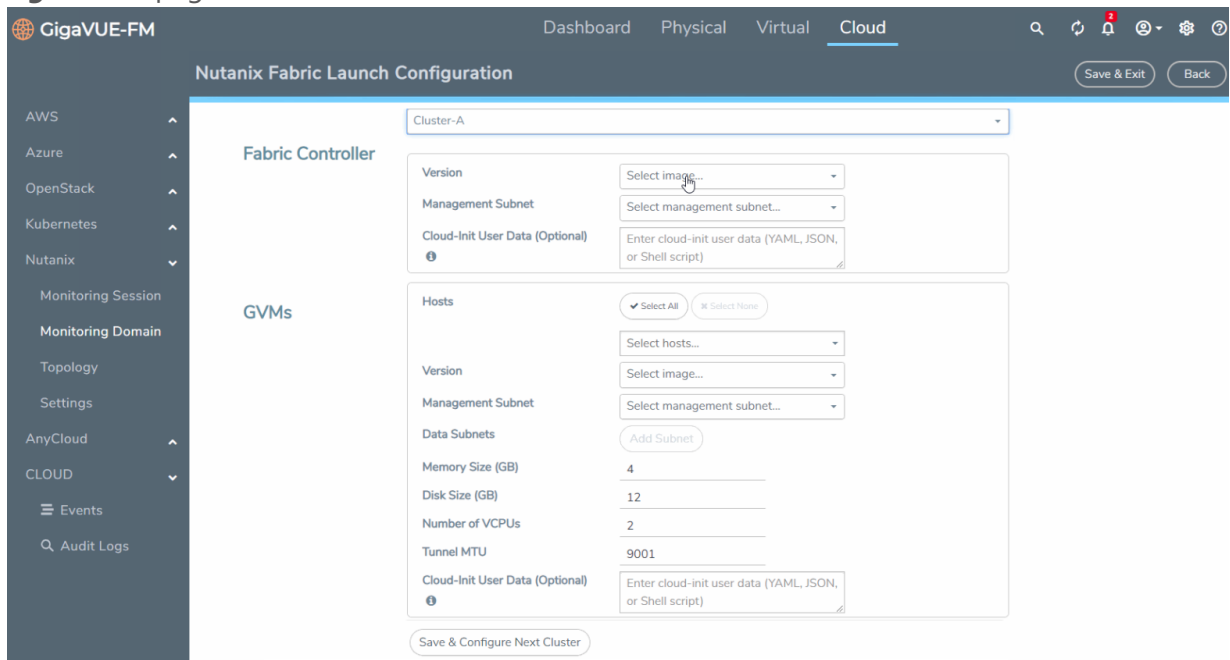
## Nutanix Fabric Launch Configuration

The fabric images (Fabric controller and GVM) are launched by GigaVUE-FM based on the configuration made in Nutanix Fabric Launch Configuration page.

GigaVUE Cloud Suite Fabric Controller manages multiple GVMs and orchestrates the flow of traffic from GVMs to the monitoring tools. GigaVUE-FM uses one or more GigaVUE Cloud Suite Fabric Controllers to communicate with the GVMs.

To configure the Nutanix Fabric Images in GigaVUE-FM, do the following:

1. After [Nutanix Configuration](#) in GigaVUE-FM, you are navigated to **Nutanix Fabric Launch Configuration** page.



2. On the Nutanix Fabric Launch Configuration page, enter or select the following information.

Field	Description
Cluster	Select the cluster where the Fabric controller and GVM are to be deployed.
<b>Fabric Controller</b>	<ul style="list-style-type: none"> <li>• <b>Version</b>—Select a Fabric Controller image file (gigamon-fabric-cntrl-1.7-1). Refer to <a href="#">Upload Fabric Images</a> for more information.</li> <li>• <b>Management Subnet</b>—The subnets registered in Prism Central are listed. Select a management subnet as specified in the <a href="#">Prerequisites</a>.</li> <li>• <b>Cloud-init User Data (Optional)</b>—Enter cloud-init user data (YAML, JSON, or Shell script)</li> </ul> <p>A Fabric Controller can be shared among GVMs on multiple clusters as long as there is network connectivity. Minimum one Fabric Controller must be configured in a cluster.</p>
<b>GVM</b>	<ul style="list-style-type: none"> <li>• <b>Hosts</b>—Select a node or multiple nodes from the selected Cluster.</li> <li>• <b>Version</b>—Select a GVM image file (gigamon-gvm-nutanix-1.7-1). Refer to <a href="#">Upload Fabric Images</a> for more information.</li> <li>• <b>Management Subnet</b>—The subnets registered in Prism Central are listed. Select a management subnet as specified in the <a href="#">Prerequisites</a>.</li> <li>• <b>Data Subnets</b>—Select the subnet(s) based on the required VMs and vNICs. Click <b>Add Subnet</b> to add additional Subnets.</li> <li>• <b>Memory Size (GB)</b>—Enter the memory size of the vCPU(s)</li> <li>• <b>Disk Size (GB)</b>—Enter the image size of the GVM.</li> <li>• <b>Number of vCPUs</b>—Enter the number of vCPUs required.</li> <li>• <b>Tunnel MTU</b>—Enter the Tunnel MTU size.</li> <li>• <b>Cloud-init User Data (Optional)</b>—Enter cloud-init user data (YAML, JSON, or Shell script)</li> </ul>

3. Click **Save & Configure Next Cluster** to configure next Cluster,  
Or

Click **Save & Exit** to initiate the deployment of the selected fabric images. You can view the status of the deployment on the Tasks page of Prism Central.



## Configure Monitoring Sessions

This chapter describes how to setup tunnel endpoints in a monitoring session to receive and send traffic to the GVM. It also describes how to filter and send the traffic from the GVM to the various monitoring tools.

Refer to the following sections for details:

- [Overview of Visibility Components](#)
- [Create Tunnel Endpoints](#)
- [Create Monitoring Session](#)
- [Configure Nutanix Settings](#)

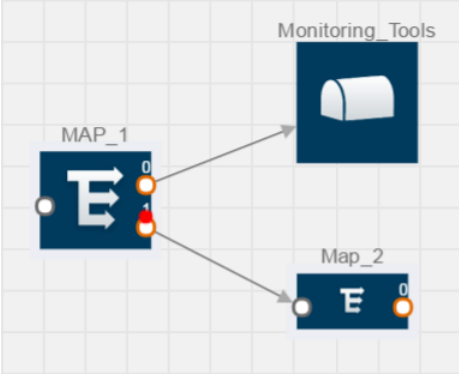
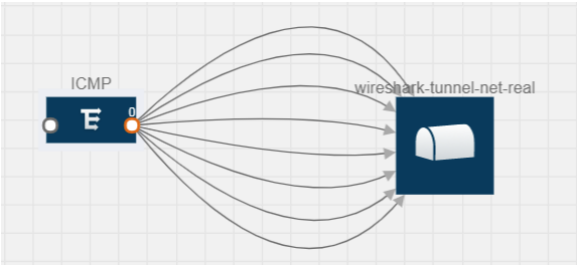
### Overview of Visibility Components

The GVM aggregates the traffic from Nutanix platform and filters it using maps.

The following table lists the components of the monitoring session:

*Table 1: Components of Traffic Visibility Sessions*

Parameter	Description
<b>Map</b>	A map (M) is used to filter the traffic flowing through the GVM. It is a collection of one or more rules (R). The traffic passing through a map can match one or more rules defined in the map.
<b>Rule</b>	A rule (R) contains specific filtering criteria that the packets must match. The filtering criteria lets you determine the targets and the (egress or ingress) direction of tapping the network traffic. A rule is also associated with priority and action set.
<b>Priority</b>	A priority determines the order in which the rules are executed. The greater the value, the higher the priority. The priority value can range from 0 to 99.
<b>Action Set</b>	An Action Set is an exit point in a map that you can drag and create links to the other maps and monitoring tools. A single map can have multiple action sets. A single action set can have multiple links connecting to maps. You can create an Action Set when you create a rule for a map.  In the following example, Map 1 has two action sets: Action Set 0 and Action Set 1. The packets that match the rules in Action Set 0 are forwarded to monitoring tools. The packets that match the rules in Action Set 1 are forwarded to Map 2.

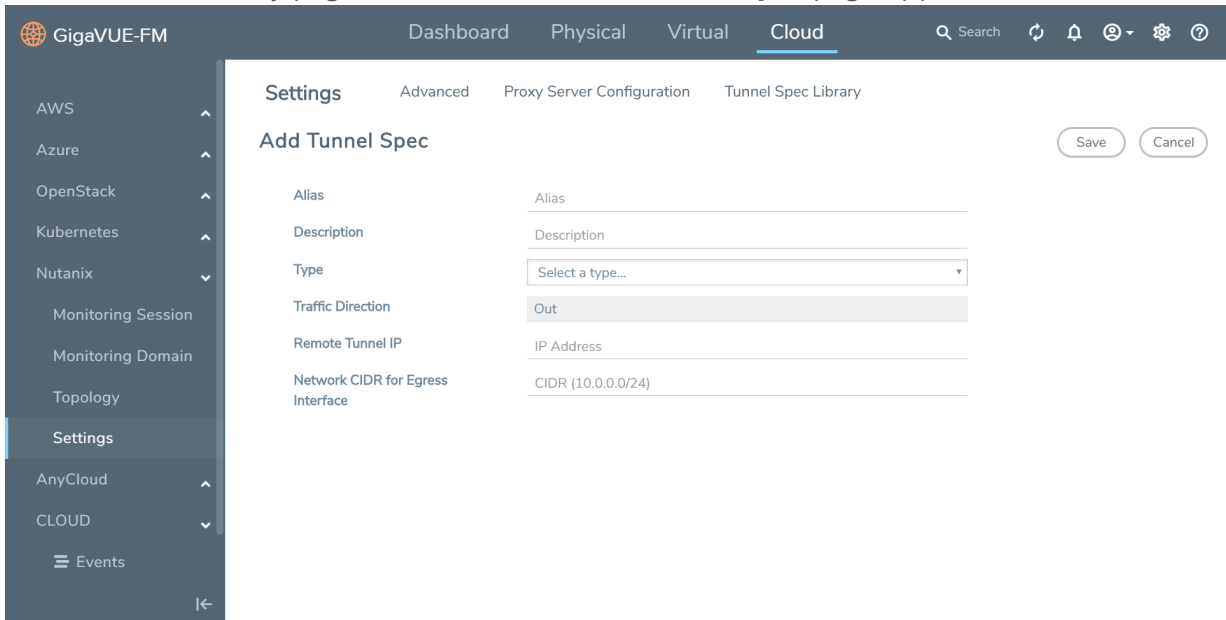
Parameter	Description
	 <p><b>Figure 1</b> <i>Action Set</i></p> <p>A single action set can have up to 8 links connecting the same destination point. The same packets from the map are replicated in 8 different links.</p>  <p><b>Figure 2</b> <i>Action Set with Multiple Links</i></p>
<b>Link</b>	A link directs the packets to flow from a map to the destination. The destination could be the other maps and the monitoring tools.
<b>Group</b>	A group is a collection of maps that are pre-defined and saved in the map library for reuse.
<b>Inclusion Map</b>	An inclusion map determines the instances to be included for monitoring. This map is used only for target selection.
<b>Exclusion Map</b>	An exclusion map determines the instances to be excluded from monitoring. This map is used only for target selection.
<b>Target</b>	A target determines the instances that are to be monitored. Targets are determined based on the following formula:
<b>Automatic Target Selection (ATS)</b>	A built-in feature that automatically selects the cloud instances based on the rules defined in the maps, inclusion maps, and exclusion maps in the monitoring session.
<b>Tunnel</b>	A tunnel lists the monitoring tools to which the traffic matching the filtered criteria is routed.

## Create Tunnel Endpoints

Traffic from the GVM is distributed to tunnel endpoints in a monitoring session. A tunnel endpoint can be created using a standard L2GRE or VXLAN tunnel.

To create a tunnel endpoint:

1. In GigaVUE-FM, on the top navigation bar, select **Cloud**.
2. On the left navigation pane, select **Nutanix > Settings**.
3. Select the **Tunnel Spec Library** tab. The **Tunnel Library** page appears.
4. On the Tunnel Library page, click **New**. The **Add Tunnel Spec** page appears.



5. On the Add Tunnel Spec page, select or enter the required information as described in the following table.

Field	Description
Alias	Enter a name for the tunnel endpoint.
Description	Enter any required details or comments for the tunnel endpoint.
Type	Select the tunnel type (L2GRE or VXLAN).
Traffic Direction	The direction of the traffic flowing through the GVM. By default the value is set as <b>Out</b> .
Remote Tunnel IP	The IP address of the tunnel destination endpoint.
Network CIDR for Egress Interface	Specify the CIDR of the egress interface through which the mirrored traffic is exported (routed) to reach the tunnel endpoint.

6. Click **Save** and a new Tunnel Endpoint is created.
7. Select **Nutanix > Settings > Tunnel Spec Library** and verify that the tunnel endpoint is added to GigaVUE-FM.

## Create Monitoring Session

GigaVUE-FM automatically collects inventory data on all target VMs available in your environment. You can design your monitoring session to include or exclude the target VMs that you want to monitor. You can also choose to monitor egress, ingress, or all traffic.

When a new target VM is added to your environment, GigaVUE-FM automatically detects and adds the VM into your monitoring session. Similarly, when a VM is removed, it updates the monitoring sessions to show the removed instance.

To design your monitoring session, refer to the following sections:

- [Create New Session](#)
- [Clone Monitoring Session](#)
- [Create Map](#)
- [Deploy Monitoring Session](#)
- [View Statistics](#)
- [View Topology](#)

### Create New Session

You can create multiple monitoring sessions within a single connection.

To create a new session:

1. In GigaVUE-FM, on the top navigation bar, select **Cloud**.
2. Select **Nutanix > Monitoring Session**. The Monitoring Sessions page appears.
3. Click **New**. The **Create a New Monitoring Session** dialog box appears.
4. In the Create a New Monitoring Session dialog box, enter the required information as described in the following table.

Field	Description
<b>Alias</b>	Enter a name for the monitoring session.
<b>Monitoring Domain</b>	Select an existing monitoring domain. The Connection field appears on selecting a monitoring domain.
<b>Connection</b>	Select the required connections.

5. Click **Create** and a new monitoring session is created.

## Clone Monitoring Session

You can clone an existing monitoring session.

To clone a monitoring session:

1. In the **Monitoring Session** page, select the monitoring session that you need to clone.
2. Click **Clone**. The **Clone Monitoring Session** dialog box appears.
3. In the Clone Monitoring Session dialog box, enter the required information as described in the following table.

Field	Description
<b>Alias</b>	The name of the monitoring session.
<b>Monitoring Domain</b>	The name of the monitoring domain.

4. Click **Create** to create the cloned monitoring session.
5. Once the monitoring session is created, click **Edit** to add connections to the cloned monitoring session.

## Create Map

Each map can have up to 32 rules associated with it. The following table lists the various rule conditions that you can select for creating a map, inclusion map, and exclusion map.

Table 3: Conditions for the Rules

Conditions	Description
<b>L2, L3, and L4 Filters</b>	
<b>Ether Type</b>	<p>The packets are filtered based on the selected ethertype. The following conditions are displayed:</p> <ul style="list-style-type: none"> <li>• IPv4</li> <li>• ARP</li> <li>• RARP</li> <li>• Other</li> </ul> <p><b>L3 Filters</b></p> <p>If you choose IPv4, the following L3 filter conditions are displayed:</p> <ul style="list-style-type: none"> <li>• Protocol</li> <li>• IP Fragmentation</li> </ul>

Conditions	Description
	<ul style="list-style-type: none"> <li>• IP Time to live (TTL)</li> <li>• IP Type of Service (TOS)</li> <li>• IP Explicit Congestion Notification (ECN)</li> <li>• IP Source</li> <li>• IP Destination</li> </ul> <p><b>L4 Filters</b></p> <p>If you select TCP or UDP protocol, the following L4 filter conditions are displayed:</p> <ul style="list-style-type: none"> <li>• Port Source</li> <li>• Port Destination</li> </ul>
<b>MAC Source</b>	The egress traffic matching the specified source MAC address is selected.
<b>MAC Destination</b>	The ingress traffic matching the specified destination MAC address is selected.
<b>VLAN</b>	All the traffic matching the specified IEEE 802.1q Virtual LAN tag is filtered. Specify a number from 0 to 4094.
<b>VLAN Priority Code Point (PCP)</b>	All the traffic matching the specified IEEE 802.1q Priority Code Point (PCP) is filtered. Specify a value between 0 to 7.
<b>VLAN Tag Control Information (TCI)</b>	All the traffic matching the specified VLAN TCI value is filtered. Specify the exact TCI value.
<b>Pass All</b>	All the packets coming from the monitored VMs are passed through the filter. When Pass All is selected, the L3 and L4 filters are disabled.

When you select a condition without source or destination specified, then both egress and ingress traffic is selected for tapping the traffic. For example, if you select Ether Type as IPv4, TCP as the protocol, and do not specify IPv4 source or destination, then both egress and ingress traffic is selected for monitoring purpose.

When you select a condition with either source or destination specified, it determines the direction based on the selection.

**NOTE:** You can create Inclusion and Exclusion Maps using all default conditions except Ether Type and Pass All.

To create a new map:

1. Select **Nutanix > Monitoring Session**.
2. Click **New**. The Monitoring Sessions page appears.
3. Create a new session. Refer to [Create Monitoring Session](#).

4. Select **New > New Map**, drag and drop a new map template to the workspace. The **New Map** quick view appears.
5. On the New Map quick view, enter or select the required information as described in the following table.

Parameter	Description
<b>Alias</b>	The name of the new map.
<b>Comments</b>	The description of the map.
<b>Map Rules</b>	<p>The rules for filtering the traffic in the map.</p> <p>To add a map rule:</p> <ol style="list-style-type: none"> <li>a. Click <b>Add a Rule</b>.</li> <li>b. Select a condition from the <b>Search L2 Conditions</b> drop-down list and specify a value. Based on this selection, the Search L3 Conditions drop-down list is automatically updated.</li> <li>c. Select a condition from the <b>Search L3 Conditions</b> drop-down list and specify a value.</li> <li>d. (Optional) If you have selected TCP or UDP as the protocol in the L3 conditions, then select Port Source or Port Destination from the Search L4 Conditions drop-down list and specify a value. If you have selected conditions other than TCP or UDP, then the Search L4 Conditions drop-down list is disabled.</li> <li>e. (Optional) In the Priority and Action Set box, assign a priority and action set.</li> <li>f. (Optional) In the Rule Comment box, enter a comment for the rule.</li> </ol> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>• Repeat steps <b>b</b> through <b>f</b> to add more conditions.</li> <li>• Repeat steps <b>a</b> through <b>f</b> to add nested rules.</li> </ul> </div>

**NOTE:** Do not create duplicate map rules with the same priority.

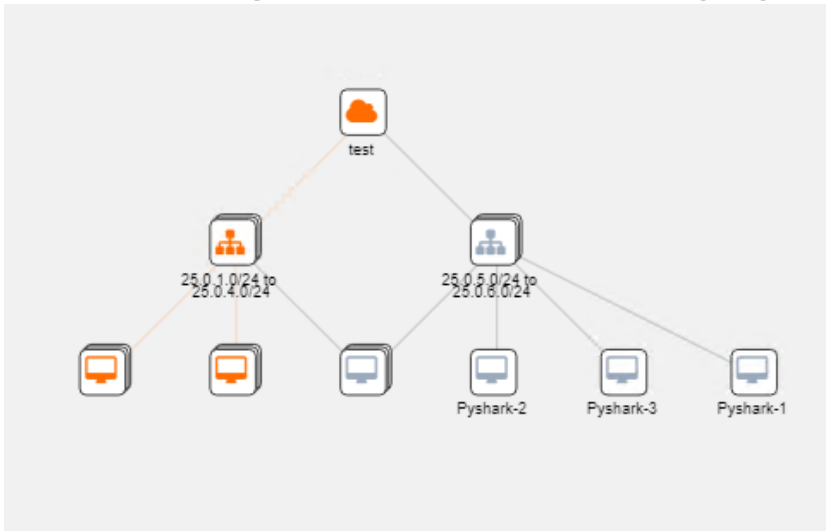
6. To reuse the map, click **Add to Library**. Save the map using one of the following ways:
  - Select an existing group from the **Select Group** list and click **Save**.
  - Enter a name for the new group in the **New Group** field and click **Save**.

**NOTE:** The maps saved in the Map Library can be reused in any monitoring session created in the connection.

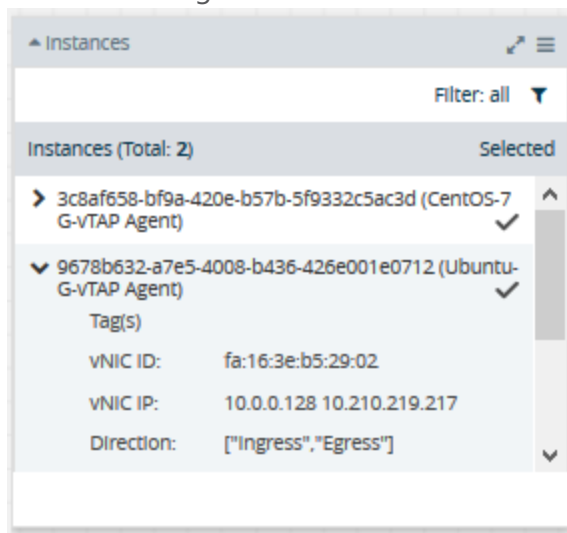
7. Click **Save**.

You can also perform the following action in the Monitoring session canvas.

- Click a map and select **Details** to edit the map or select **Delete** to delete the map.
- Click the **Show Targets** button to view the monitoring targets highlighted in orange.



- Click to expand the **Targets** dialog box. Click to change the view from the Topology view to the targets view. To view details about a GVM, click the arrow next to the VM.



- In the Instances window, click

## Deploy Monitoring Session

To deploy the monitoring session:

1. Drag and drop one or more maps from the **MAP LIBRARY** section to the canvas.
2. (Optional) To add Inclusion and Exclusion maps, drag and drop the maps from the Map Library to their respective section at the bottom of the workspace.
3. Drag and drop one or more tunnels from the **TUNNELS** section to the canvas.



4. Hover your mouse on the map, click the red dot, and drag the arrow over to another map, or tunnel.

**NOTE:** You can drag multiple arrows from a single map and connect them to different maps.

5. Click **Show Targets** to view details about the subnets and monitored instances. The instances and the subnets that are being monitored are highlighted in orange.
6. Click **Deploy** to deploy the monitoring session. The status is displayed as **Success** in the Monitoring Sessions page. The session is successfully deployed on all GVMs. Click on the status link in the Status column on the Monitoring Session page to view the Monitoring Session Deployment Report. When you click on the Status link, the Deployment Report is displayed. If the monitoring session is not deployed properly, then one of the following errors is displayed in the Status column.
  - **Partial Success**—The session is not deployed on one or more instances due to GVM failure.
  - **Failure**—The session is not deployed on any of the GVMs.

The Monitoring Session Deployment Report displays the errors that appeared during deployment.

The Monitoring Session page also has the following buttons:

- **Undeploy**—Undeploys the selected monitoring session.
- **Clone**—Duplicates the selected monitoring session.
- **Edit**—Opens the Edit page for the selected monitoring session.
- **Delete**—Deletes the selected monitoring session.

## View Statistics

The Monitoring Session Statistics page lets you analyze the incoming and outgoing traffic on an hourly, daily, weekly, and monthly basis. The traffic can be viewed based on kilobits/second, megabits/second, or gigabits/second.

On the Monitoring Sessions page, click **View** in the Statistics column to view the Monitoring Session Statistics page.

The Monitoring Session Statistics page appears where you can analyze incoming and outgoing traffic.

Directly below the graph, you can click on **Incoming Maps**, **Outgoing Maps**, or **Ratio (Out/In)** to view the statistics individually.

At the bottom of the Monitoring Session Statistics page, you can click on **View Monitoring Session Diagram**. The Monitoring Session Diagram quick view appears.

On the **Monitoring Session Diagram** page, you can expand any map, or tunnel to open a Quick View for that item to see more details about the incoming and outgoing traffic for that item.

You can also scroll down the Map Statistics Quick View to view the Map Rules, Action Sets, and Map Info for this map. You can select Map Rules or Action Sets to view the traffic matching the selected rule on the graph in the Quick View.

## View Topology

You can have multiple connections in GigaVUE-FM. Each connection can have multiple monitoring sessions configured within them. You can select the connection and the monitoring session to view the selected subnets and instances in the topology view.

To view the topology diagram:

1. Select **Nutanix > Topology**. The Topology page appears.
2. Select a connection from the **Select connection...** drop-down list. The topology view of the subnets and instances are displayed.
3. (Optional) Select a monitoring session from the **Select monitoring session...** drop-down list. The monitored subnets and instances change to blue.
4. Select one of the following check boxes:
  - **Fabric**—Displays the topology view of the Fabric VMs.
  - **Monitored**—Displays the topology view of the selected target interfaces that are being monitored.
  - **Not Monitored**—Displays the topology view of the interfaces that are not being monitored.
5. (Optional) Hover over or click the subnet or VM Group icons to view the subnets or instances present within the group.

In the topology page, you can also do the following:

- Use the **Filter** button to filter the instances based on the VM name, VM IP, Subnet ID, or Subnet IP, and view the topology based on the search results.
- Use the **Default View** button to view the topology diagram based on the source interfaces of the monitoring instances.

- Use the arrows at the bottom-right corner to move the topology page up, down, left, or right. Click the **Fit-to-Width** icon to fit the topology diagram according to the width of the page.
- Use + or - icons to zoom in and zoom out the topology view.

## Configure Nutanix Settings

To configure the Nutanix Settings:

1. In GigaVUE-FM, on the top navigation bar, select **Cloud**.
2. On the left navigation pane, select **Nutanix > Settings > Advanced**.
3. In the **Advanced** tab of the Settings page, click **Edit** to edit the Settings fields. Refer to the following table for descriptions of the Settings fields:

Settings	Description
<b>Maximum number of connections allowed</b>	Specifies the maximum number of connections you can establish in GigaVUE-FM.
<b>Refresh interval for VM target selection inventory (secs)</b>	Specifies the frequency for updating the state of target VMs in Nutanix.

## 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

**ATTENTION:** 5.10.00 was delivered as embedded software on new hardware only. The updated PDFs for the 5.10.01 software release are coming soon! Check back on 8/29/2020 for the latest.

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.

Table 1: Documentation Set for Gigamon Products

GigaVUE Cloud Suite 5.10 Hardware and Software Guides
<p><b>Hardware</b></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>
<p><b>*G-TAP A Series 2 Installation Guide</b></p>
<p><b>GigaVUE-HC1 Hardware Installation Guide</b></p>
<p><b>GigaVUE-HC2 Hardware Installation Guide</b></p>
<p><b>GigaVUE-HC3 Hardware Installation Guide</b></p>
<p><b>GigaVUE TA Series Hardware Installation Guide</b> <i>(now including TA25)</i></p>
<p><b>*GigaVUE-OS Installation Guide for DELL S4112F-ON</b></p> <p>how to install GigaVUE-OS and configure ports on COTS DELL S4112F-ON</p>
<p><b>Software Installation and Upgrade Guides</b></p>
<p><b>GigaVUE-FM Installation, Migration, and Upgrade Guide</b></p> <p>how to install GigaVUE-FM on VMware ESXi, MS Hyper-V, and KVM</p> <p>how to migrate GigaVUE-FM on VMware ESXi, Hardware Appliance, and AWS</p>
<p><b>GigaVUE-OS Upgrade Guide</b></p>

<b>GigaVUE Cloud Suite 5.10 Hardware and Software Guides</b>	
	how to upgrade the embedded GigaVUE-OS on GigaVUE H Series and GigaVUE TA Series nodes
<b>Administration</b>	
<b>GigaVUE-OS and GigaVUE-FM Administration Guide</b>	how to administer the GigaVUE-OS and GigaVUE-FM software (note, new file name for PDF)
<b>Fabric Management</b>	
<b>GigaVUE-FM User's Guide</b>	how to install, deploy, and operate GigaVUE-FM how to configure GigaSMART operations includes instructions for GigaVUE-FM and GigaVUE-OS features
<b>Cloud Configuration and Monitoring</b>	
	how to configure the GigaVUE Cloud Suite components and set up traffic monitoring sessions for the respective cloud platform
<b>GigaVUE Cloud Suite for AnyCloud Configuration Guide</b>	how to deploy the GigaVUE Cloud Suite solution in any cloud platform
<b>GigaVUE Cloud Suite for AWS Configuration Guide</b>	
<b>GigaVUE Cloud Suite for AWS Quick Start Guide</b>	quick view of AWS deployment used in conjunction with the GigaVUE Cloud Suite for AWS Configuration Guide
<b>GigaVUE Cloud Suite for AWS SecretRegions Configuration Guide</b>	
<b>GigaVUE Cloud Suite for Azure Configuration Guide</b>	
<b>GigaVUE Cloud Suite for Kubernetes Configuration Guide</b>	
<b>GigaVUE Cloud Suite for Nutanix Configuration Guide</b>	
<b>GigaVUE Cloud Suite for OpenStack Configuration Guide</b>	
<b>GigaVUE Cloud Suite for VMware Configuration Guide</b>	
<b>Gigamon Containerized Broker</b>	
<b>Reference</b>	
<b>GigaVUE-OS-CLI Reference Guide</b>	library of GigaVUE-OS CLI (Command Line Interface) commands used to configure and operate GigaVUE H Series and TA Series devices
<b>GigaVUE-OS Cabling Quick Reference Guide</b>	guidelines for the different types of cables used to connect Gigamon devices
<b>GigaVUE-OS Compatibility and Interoperability Matrix</b>	compatibility information and interoperability requirements for Gigamon devices

## GigaVUE Cloud Suite 5.10 Hardware and Software Guides

### 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 .

### 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 from My Gigamon

Registered Customers can download software and corresponding Release Notes documents from the **Software & Docs** 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 & Documentation** 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

To send feedback and report issues in our documentation, complete the short survey at the following link:

<https://www.surveymonkey.com/r/gigamondocumentationfeedback>

## Contact Technical Support

See <https://www.gigamon.com/support-and-services/contact-support> for Technical Support hours and contact information. You can also email Technical Support at [support@gigamon.com](mailto: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](mailto:inside.sales@gigamon.com)

**Partners:** [www.gigamon.com/partners.html](http://www.gigamon.com/partners.html)

## Premium Support

Email Gigamon at [inside.sales@gigamon.com](mailto: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](https://community.gigamon.com)

Questions? Contact our Community team at [community.gigamon.com](https://community.gigamon.com)