



GigaVUE Licensing Guide

GigaVUE-FM and GigaVUE-OS

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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
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About this Guide

Gigamon offers both fixed and floating licensing options for its various product portfolios. This guide describes the different types of software licenses and provides details on how to install, activate, and manage the licenses.

Refer to the following sections for details:

- [License Models](#)
- [GigaVUE-FM Licenses](#)
- [Manage and Activate GigaVUE-FM License](#)
- [Upgrade and Downgrade License Packages](#)
- [GigaSMART Application Licenses](#)
- [GigaVUE-OS and GigaVUE-OS Module Licenses](#)
- [Manage and Activate GigaSMART, GigaVUE-OS, and GigaVUE-OS Module Licenses](#)
- [Manage GigaSMART Application Licenses using CLI](#)
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- [Licenses - GUI Options in GigaVUE-FM](#)
- [License Command](#)
- [Grace Period Behavior \(from Software Version 6.1.00\)](#)
- [Grace Period Behavior \(until Software Version 6.0.00\)](#)
- [Notification Banners for Licenses](#)
- [Gigamon License Portal](#)
- [FAQs For Licensing](#)

NOTE: This guide does not provide details on the licenses for the hardware devices.

License Models

The following licensing models are implemented at Gigamon:

Model	Description	Features
Fixed Licensing Model	<p>Licenses of this model are termed as Node-locked licenses.</p> <p>License is attached to a specific card serial number or chassis serial number.</p>	<ul style="list-style-type: none"> License key is generated through the licensing portal. You can manage the licenses from CLI or through GigaVUE-FM GUI. Automatic renewal of licenses is not supported. You must manually create the license in the Licensing Portal, import the licenses to GigaVUE-FM and assign the new licenses in GigaVUE-FM.
Flexible Licensing Model	<p>Licenses of this type are termed as Floating licenses.</p> <p>License is not attached to a specific card or chassis. You can move the licenses across the cards within a chassis or across the chassis.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p>NOTE: Only the GigaSMART application licenses can be moved across the chassis or cards. Note that you can move licenses only within the same platform devices.</p> </div>	<ul style="list-style-type: none"> License file with pooled floating licenses is generated in License Portal, and imported into GigaVUE-FM through GUI. You can manage the licenses using GigaVUE-FM. Automatic renewal of licenses is supported.
Volume-based Licensing Model	<p>Licenses are offered based on volume. Licenses of this type are termed as Volume-based licenses.</p>	<p>License file with bundled volume license is generated in the License Portal, and imported into GigaVUE-FM through GUI.</p>

Based on the duration, licenses can be term licenses or perpetual licenses:

	Software and Feature Usability	Support	Grace Period, Expiry and Renewal
<p>Term Licenses can be:</p> <ul style="list-style-type: none"> Evaluation Subscriptions: Subscription licenses are available as monthly or yearly subscriptions (1, 3, 5, and 7 year term) 	<p>Until the license expires</p>	<p>Elite Support included with the license.</p>	<p>License expires and must be renewed.</p> <ul style="list-style-type: none"> Evaluation licenses expire after 45 days. You must upgrade to a fully licensed software at the end of the evaluation period. Subscription licenses expire at the end of the subscription period and can be either renewed or upgraded.

Perpetual Licenses	Can be used indefinitely	Elite support to be purchased separately.	Does not expire.
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Notes

- **Managing Licenses:** GigaVUE-FM must be installed for purchasing and managing floating licenses. Node-locked licenses can be managed either from the GigaVUE-FM GUI or using the Command Line Interface.
- **Grace Period:** Term licenses come with a grace period. Refer to the [Grace Period Behavior \(from Software Version 6.1.00\)](#) section for more details.

GigaVUE-FM Licenses

GigaVUE-FM is provisioned by default with a base license. With the base license you can add one physical node, one virtual node, and 10 virtual tap points for each of the applicable cloud platforms. Contact your Gigamon representative to get an evaluation license for GigaVUE-FM.

Table 1: GigaVUE-FM Evaluation License Package

License Types	Physical Nodes	Virtual Nodes	OpenStack/AWS/Azure	Features available	Notes
GigaVUE-FM Evaluation	Up to 200	1 (included as Base)	10 Virtual TAP Points	All features available with Prime for the evaluation period.	License automatically expires after 45 days.

Evaluation licenses are not recommended for deployment in production environment. At the end of the evaluation period, if you fail to upgrade GigaVUE-FM to a fully licensed version, the features are disabled automatically.

NOTE: To run only GigaVUE-VM, there is no requirement to purchase additional licenses for GigaVUE-FM. For information about GigaVUE-VM licensing, refer to the *GigaVUE Cloud Suite Deployment Guide - VMware*.

GigaVUE-FM License Packages

Upgrade packages for GigaVUE-FM are available if you have already purchased GigaVUE-FM. The packages allow users to upgrade from a 5-pack option to a 10-pack or a Prime package. There is also an option to upgrade from a 10-pack to a Prime package. To find out more about the upgrade purchase, contact your Gigamon Sales representative.

The following table summarizes the GigaVUE-FM License packages.


Table 2: GigaVUE-FM License Packages

Features	Base / Evaluation License (Free of charge)	5-Pack	10-Pack	Prime
Physical Node Count	1	Up to 5	Up to 10	¹ Greater than 10 nodes.
Rest API	Yes	Yes	Yes	Yes
Audit, Events Logs	Yes	Yes	Yes	Yes
Firmware Upgrade	Yes	Yes	Yes	Yes
Configuration Backup	Yes	Yes	Yes	Yes
Dashboard	<p>Only the following Static Widgets are displayed:</p> <ul style="list-style-type: none"> • Top 10 Network Ports by Traffic • Top 10 Tool Ports by Traffic • Top 10 Maps by Traffic • Audit Logs By Result • Events By Severity • Ports Link Status Summary • Unhealthy Maps Status Summary • Unhealthy Flows 	Customizable	Customizable	Customizable
Reports	No	Yes	Yes	Yes
Trending Data	1 Day	1 Week	1 Month	1 Month

¹Refer to the GigaVUE-FM specifications for the maximum number of nodes.

Manage and Activate GigaVUE-FM License

You can manage GigaVUE-FM licenses from the GigaVUE-FM GUI. To access the GigaVUE-FM license(s) page:

1. On the left navigation pane, click .
2. Select **System > Licenses > FM/Cloud**.

This page lists the Challenge MAC address of GigaVUE-FM, GigaVUE-FM license type and the applicable licenses for the various cloud platforms and the virtual nodes.

Licenses	FM/Cloud	Node Locked	Floating	Volume Usage	Expiry	Settings
Challenge MAC :	00:50:56:9b:a7:65					
GigaVUE-FM License :	Prime - Licensed for 200 nodes					
GigaVUE Cloud Suite for VM License :	Active - Licensed for 1 GigaVUE-VM Nodes					
GigaVUE Cloud Suite for NSX-T License :						
GigaVUE Cloud Suite for OpenStack License :	Licensed for 10 Virtual Tap Points					
GigaVUE Cloud Suite for Kubernetes License :						
GigaVUE Cloud Suite for Nutanix License :						
GigaVUE Cloud Suite for AWS License :						
GigaVUE Cloud Suite for Azure License :						
GigaVUE Cloud Suite for AnyCloud License :						
<input type="checkbox"/> License Key	Description	State	Expiration Date			
<input type="checkbox"/>	GFM-FM000: GigaVUE-FM Prime Edition, mana...	Active				

Use the following buttons to manage GigaVUE-FM licenses:

Button	Description
Activate License	Use this button to activate the GigaVUE-FM licenses. Refer to Activate GigaVUE-FM License section for more information.
Delete	Use this button to delete the licenses. Refer to Delete GigaVUE-FM License the details.
Revoke	Use to button to revoke the licenses. Refer to Revoke License section for details.
Export	Use this button to export the details in the Activate Licenses page to a CSV or XLSX page.


Activate GigaVUE-FM License

To activate the license key, you need the following:

Entitlement ID	Locate the email sent to you by Gigamon containing the licensing information for your installation. This email contains one or more EID (Entitlement ID) values.
Challenge MAC	Locate the Challenge MAC displayed in the GigaVUE-FM GUI. The license is only valid with the corresponding MAC address. If GigaVUE-FM is deleted or re-installed, contact Gigamon Support

GigaVUE-FM licenses can be activated by clicking **Activate License** and following the on-screen advice. The instructions provide a link directly to the Gigamon License Portal at <https://licensing.gigamon.com>

To activate a license:

1. On the left navigation pane, click , and select **System > Licenses > FM/Cloud**.
2. Click **Activate** to activate a GigaVUE-FM license.

Activate your license

In order to activate your license, follow the steps below

- 1 Download this inventory (.json) file, which contains everything we need to know about your GigaVUE-FM.

You can choose to include the below device information. If you exclude the IP or Hostname, you will have to identify the chassis or GigaSMART card by its ID when activating.

IP Address
 Hostname

This file will only be valid for the next 1 hour. If you need to export a new file, you can download your file again.

[Download Fabric Inventory \(.Json\)](#)
- 2 Upload the above file to your [Gigamon license portal](#), after choosing a SKU to activate in the portal.
- 3 After uploading the inventory (.json) file, the license portal will provide you with a license key. Proceed to the [Add FM License](#) page to manually activate your license.


[Cancel](#)

3. The *Activate your license* pop-up appears with instructions to:
 - a. Download the Fabric Inventory File, which is a JSON file that contains the details about GigaVUE-FM. For more information about fabric inventory file, refer to the section [What is a Fabric Inventory File?](#) in the *FAQs for Licensing* chapter.
 - b. Upload the Fabric Inventory file to the Gigamon License Portal. Refer to the [Gigamon License Portal](#) section for instructions on how to activate the licenses from the portal.
 - c. After activating the license, record the license key or keys.
 - i. Return to GigaVUE-FM GUI.
 - ii. Click the **Add FM License** link in the pop-up that appears. The Add License page is displayed. Enter the license key.
 - iii. To add more than one license, click the **+** button.
 - iv. Click **Save**.

The license and its description is added to the Licenses page.

Delete GigaVUE-FM License


To delete a license, do the following:

1. On the left navigation pane, click .
2. Go to **System > Licenses > FM/Cloud**.
3. Select the license key to be deleted.
4. Click **Delete** to delete the license.

A deleted license can be added again to GigaVUE-FM and can be reused.

Revoke License

To revoke a license, do the following:

1. On the left navigation pane, click .
2. Go to **System > Licenses > FM/Cloud**.
3. Select the license key to be revoked.
4. Click **Revoke** to remove the license.

Once a license is revoked, you cannot add the license again in GigaVUE-FM.

NOTE: A separate revocation key is not generated for revoked licenses.

Obtaining a New License

Contact your Sales representative to obtain a new license for GigaVUE-FM Nodes (see [Contacting Sales](#) for the contact information).

Retrieving a Lost License

If you lost an existing license, contact Gigamon Technical Support for assistance. For the contact information, refer to [Contact Technical Support](#).

Upgrade and Downgrade License Packages

- Upgrading of license packages is available at all times.
- To purchase a new license, please contact Gigamon Sales Representative.
- Licenses can be either term or perpetual licenses.
- Licenses can be upgraded from Base to either a 45 day evaluation or to a paid version.
- Licenses can be deleted and re-entered as long as the MAC address tied to the license is still valid.

In case of expiration of the evaluation license, GigaVUE-FM will revert back to supporting only 1 physical and 1 virtual node.

The list below shows the node priorities in case a License is invalid and nodes are deactivated. In such a case, the nodes will be visible but deactivated. They can be re-activated if the license is reinstalled. This is especially important if the evaluation license expires and you need extra time to enter a valid license.

(1) If a cluster exists:

- Leader
 - In case of multiple clusters, the cluster with the top level priorities as shown in standalone will take over. For example, a cluster with leader as GigaVUE-FM and GigaVUE-OS-2404 will have preference over a cluster with leader as GigaVUE-HC2.
- Standalone node (*Based on the node priority levels as shown below*)
- Standby leader, in case the leader is removed
- Stack/Cluster member
- Unreachable
- Unknown

(2) If there is no cluster

- GigaVUE-HC3
- GigaVUE-HC2
- GigaVUE-HC1
- GigaVUE-FM and GigaVUE-OS-TA100

In cases where nodes have connectivity issues as listed below, the next level nodes as shown in Scenarios (1) and (2) will take effect:

- Nodes should not have any connectivity issue
- Nodes can be reached but node response has parsing problem
- Nodes can be reached but authentication is invalid
- Node cannot be reached
- Nodes cannot be added

GigaSMART Application Licenses

GigaSMART applications improve network visibility, traffic handling, and tool efficiency. You need licensing keys to enable GigaSMART applications in the devices. GigaSMART licenses can be procured as either node-locked or floating and are available in the following licensing models:

Licensing Modal	Description
Evaluation	Use an evaluation license to evaluate GigaSMART applications. During the evaluation period of 45 days, you will have access to the full functionality of the GigaSMART applications under evaluation. You can obtain an evaluation license for any GigaSMART application, for either a single or for a number of GigaSMART applications combined into a bundle.
Subscription	Few GigaSMART applications, such as De-duplication, Inline SSL, and Application Intelligence, are available only as bundles through a subscription license.
Perpetual	Perpetual licenses are node-locked to a specific card. These can be managed from CLI as well as GigaVUE-FM

GigaSMART licenses can be purchased individually or as bundles. Refer to the [GigaSMART Data Sheet](#) for the GigaSMART License SKU for the various devices.

NOTE: Bundled features can only run on the corresponding GigaSMART hardware.

GigaSMART applications are enabled using license keys. This section provides summaries of the applications associated with each GigaSMART License:

GigaSMARTLicense	Refer to the following chapters in the GigaVUE Fabric Management Guide for the configuration details
Base GigaSMART Applications	<ul style="list-style-type: none"> GigaSMART Masking GigaSMART Packet Slicing How to Use GigaSMART Trailers GigaSMART IP Encapsulation (GigaSMART Tunnel) GigaSMART IP Encapsulation/Decapsulation (GigaSMART Tunnel) GigaSMART VxLAN Tunnel Encapsulation GigaSMART VXLAN Tunnel Decapsulation GigaSMART Layer 2 GRE Tunnel Encapsulation/Decapsulation
Application Intelligence License	Application Intelligence
Advanced Tunneling License/Tunneling License	Tunneling Operations
De-duplication License	GigaSMART De-Duplication
Header Stripping License	GigaSMART Header Stripping

Adaptive Packet Filtering (APF) License	GigaSMART Adaptive Packet Filtering (APF)
Application Session Filtering (ASF) License	GigaSMART Application Session Filtering (ASF) and Buffer ASF
GTP Filtering & Correlation License	GigaSMART GTP Correlation
SIP/RTP Correlation License	GigaSMART SIP/RTP Correlation
FlowVUE License	GigaSMART FlowVUE
NetFlow Generation License	GigaSMART NetFlow Generation
SSL Decryption Licenses	GigaSMART TLS/SSL Decryption for Inline and Out-of-Band Tools

Base GigaSMART Applications

- **GigaVUE-FM and GigaVUE-OS-HC0 Module** – The base applications include Packet Slicing, Masking, Trailer, and IP and L2GRE Tunnel Decap.
- **GigaVUE-HC3 SMT-HC3-C05 Module** – The base applications include Packet Slicing, Masking, Trailer, and IP and L2GRE Tunnel Decap.
- **GigaVUE-HC1 Node** – The base applications include Packet Slicing, Masking, and Trailer.

GigaSMART applications with the Base license available on GigaVUE-FM and GigaVUE-OS H Series nodes:

- GigaSMART Packet Slicing
- GigaSMART Masking
- Using GigaSMART Trailers
- GigaSMART IP Encapsulation/Decapsulation (GigaSMART Tunnel)
- GigaSMART Layer 2 GRE Tunnel Encapsulation/Decapsulation
- GigaSMART VXLAN Tunnel Decapsulation
- GigaSMART Custom Tunnel Decapsulation

Advanced Tunneling License/Tunneling License

NOTE: Advanced Tunneling license on GigaVUE-HC2, and GigaVUE-HC3. Referred to as “Tunneling license” on GigaVUE-HC1.

The **Advanced Tunneling License/Tunneling License** enables the following GigaSMART applications:

- GigaSMART IP Encapsulation/Decapsulation (GigaSMART Tunnel)
- GigaSMART Layer 2 GRE Tunnel Encapsulation/Decapsulation
- GigaSMART VXLAN Tunnel Decapsulation
- GigaSMART Custom Tunnel Decapsulation
- GigaSMART ERSPAN Tunnel Decapsulation

De-duplication License

The **De-duplication License** enables the following GigaSMART applications:

- GigaSMART De-duplication

Header Stripping License

The **Header Stripping License** enables the following applications:

- GigaSMART Header Addition
- GigaSMART Header Stripping

Adaptive Packet Filtering (APF) License

The **Adaptive Packet Filtering License** enables the following GigaSMART applications:

- GigaSMART Adaptive Packet Filtering (APF)

Application Session Filtering (ASF) License

The **Application Session Filtering License** enables the following GigaSMART applications:

- GigaSMART Application Session Filtering (ASF) and Buffer ASF

GTP Filtering & Correlation License

The **GTP Filtering & Correlation License** enables the following GigaSMART applications:

- GigaSMART GTP Correlation
- GigaSMART GTP Whitelisting and GTP Flow Sampling
- GTP Scaling
- GTP Stateful Session Recovery

SIP/RTP Correlation License

The **SIP/RTP Correlation License** enables the following GigaSMART application:

- GigaSMART SIP/RTP Correlation

FlowVUE License

The **FlowVUE License** enables the following GigaSMART applications:

- GigaSMART FlowVUE

NetFlow Generation License

The **NetFlow Generation License** enables the following GigaSMART applications:

- GigaSMART NetFlow Generation

SSL Decryption Licenses

The **SSL Decryption Licenses** enable the following GigaSMART applications:

- GigaSMART Passive SSL Decryption

- GigaSMART SSL Decryption for Inline and Out-of-Band Tools

NOTES:

- GigaSMART load balancing does not require a separate license. Stateless load balancing is included with base licenses. Stateful load balancing for GTP and ASF are included with the GTP Filtering & Correlation and Application Session Filtering (ASF) licenses. Stateful load balancing for tunnel is included with the tunneling licenses. Refer to GigaSMART Load Balancing in GigaVUE Fabric Management Guide.
- GigaSMART MPLS traffic performance enhancement does not require a separate license. Refer to GigaSMART MPLS Traffic Performance Enhancement in GigaVUE Fabric Management Guide.

GigaVUE-OS and GigaVUE-OS Module Licenses

Starting in software version 5.12.00, Gigamon hardware devices can be manufactured with or without a software license:

License Type	Supported Platforms
Fully licensed devices (integrated devices)	Provisioned with both hardware and software licenses. Software license is a perpetual license.
Hardware-only licensed devices (suffixed with "-HW" in the hardware type)	Provisioned with only the hardware license. Need additional software licenses for the device to be fully operational.

The following software licenses must be installed in the hardware-only licensed devices for the chassis and the modules to be active and operational:

- GigaVUE-OS License.
- GigaVUE-OS Module License.

Refer to the following notes:

- GigaVUE-OS and GigaVUE-OS Module licenses support both Term and Perpetual licensing.

- You can activate the GigaVUE-OS and GigaVUE-OS Module licenses from the Gigamon Licensing portal or from the GigaVUE-FM GUI. Refer to [Manage and Activate GigaSMART, GigaVUE-OS, and GigaVUE-OS Module Licenses](#)
 - When assigning GigaVUE-OS licenses, only the relevant chassis (based on the model) is available for assignment (GigaVUE-HC1, GigaVUE-HC2, GigaVUE-HC3, GigaVUE-HC1Plus) based on the specific SKU.
 - When assigning GigaVUE-OS module licenses, only the relevant cards (based on the card type) is available for assignment (PRT-, BPS-, TAP-, SMT-) based on the specific SKU of the card.
- Activation of licenses from GUI is applicable only for the following devices:
 - GigaVUE-HC1
 - GigaVUE-HC1Plus
 - GigaVUE-HC2
 - GigaVUE-HC3
- Devices must be running software version 6.2.00. GigaVUE-FM does not allow you to activate licenses for devices running earlier software versions.
- You cannot transfer the GigaVUE-OS and GigaVUE-OS Modules licenses across chassis and cards.
- On the GigaVUE-OS and GigaVUE-OS Module licenses that are activated from the GigaVUE-FM GUI, an F-icon is displayed.


Refer to the [GigaVUE HC Series Data Sheet](#) for the license SKUs.

Supported Hardware Devices

The following table shows the licenses applicable for the GigaVUE HC series and TA series devices and their behavior during the grace period¹ and expiry of the license.

¹Grace period for GigaVUE-OS and GigaVUE-OS Module license is 45 days.

License Type	Supported Platforms	Installation of License	Uninstallation/Expiry of License	Grace Period Behavior
GigaVUE-OS License	<ul style="list-style-type: none"> GigaVUE-HC1/HCI1P GigaVUE-HC2 GigaVUE-HC3 	<ul style="list-style-type: none"> Chassis will be operationally up and active. 	<ul style="list-style-type: none"> All the modules except the CC cards will be in shutdown state. You cannot bring the cards up through CLI or GigaVUE-FM until the licenses are renewed. 	Refer to Grace Period Behavior (from Software Version 6.1.00) for details.
	<ul style="list-style-type: none"> GigaVUE-TA25 GigaVUE-TA25E GigaVUE-TA100 GigaVUE-TA200 GigaVUE-TA200E GigaVUE-TA400 GigaVUE-TA40 	<ul style="list-style-type: none"> Default ports will be up and active. Non-default ports (Pseudo slot) will require appropriate port license. 	<ul style="list-style-type: none"> All ports in the device will go to inactive state. Port level configurations (such as, admin enable, port type change) are not allowed until licenses are renewed. 	
GigaVUE-OS Module License	<ul style="list-style-type: none"> GigaVUE-HC1/HCI1P GigaVUE-HC2 GigaVUE-HC3 	<ul style="list-style-type: none"> Ports will be up and active. 	<ul style="list-style-type: none"> Ports will be in inactive state. Port level configurations (such as, admin enable, port type change) are not allowed until licenses are renewed. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>NOTE: The GigaVUE-HC1-X12G4 card does not require a separate module license. The GigaVUE-OS license is used to bring up / down the card.</p> </div>	

 Appropriate banner notifications will be displayed on expiry of licenses and also during the grace period.

 The GTAP/Dell platforms do not support GigaVUE-OS and GigaVUE-OS Module License. The GigaVUE TA Series devices do not support GigaVUE-OS Module license.

The following table provides additional details on the dependency between the chassis and the modules types for software version 5.12.00 and above (for the GigaVUE H Series devices):

Chassis License Type	Module License Type	Dependency
Chassis with Hardware only license	Module with Hardware only license	GigaVUE-OS license and GigaVUE-OS Module license are required for the chassis and the modules to be operationally up and active.
Chassis with integrated license	Module with integrated license	No license requirement for chassis and module to be operationally up.
Chassis with Hardware only license	Module with integrated license	GigaVUE-OS license is required for the modules to be operationally up. No license requirement for the ports.
Chassis with integrated license	Module with Hardware only license	GigaVUE-OS Module license is required for the ports to be in active state. No license requirement for the chassis.

If the GigaVUE-OS Module license expires on the BPS card, physical bypass is enabled on all protected inline-networks in the card, allowing traffic to be physically bypassed when licenses are expired.

Rules and Notes

- For OOB clusters, it is recommended to install license for all the nodes from the leader.
- For Inband clusters, GigaVUE-OS and GigaVUE-OS module licenses (as applicable) must be installed in the individual nodes before the cluster is formed.
- On expiry of the GigaVUE-OS or GigaVUE-OS Module licenses:
 - Inband cluster will break.
 - Logical inline traffic flows will get affected.
 - `config switch-to` will fail.
 - Switching to FIPS/Crypto Mode will fail

NOTE: Renew the licenses for the above functionality/commands to work.

Install GigaVUE-OS and GigaVUE-OS Module license

Use the `license` command to install the GigaVUE-OS and GigaVUE-OS Module license:

For example: To install the GigaVUE-OS license:

```
(config) # license install box 1 key LK2-GVOS-****-****-****-****-****-****-
****-****-****-****-****
                                -****-*
```

NOTE: Execute the **Write Memory** command after installing the license.

To verify that the GigaVUE-OS license is installed:

show license

```
-----
Box 2
-----
Slot      Feature      Parameters  Start Date  Expiration Date
-----
1         GVOS-module  -           Never
Chassis-Feature  Parameters  Start Date  Expiration Date
-----
GVOS      -           2021/02/22  Never
```

To verify that the cards and ports are operationally up:

show card

```
Box ID: 2
Slot  Config   Oper Status      HW Type           Product Code   Serial Num
HW Rev  PowerReq  PowerPriority
-----
cc1   yes      up               HC3-Main-Board   132-00DR      1DR0-1100
1.0-00 N/A      N/A
1     yes      up               PRT-HC3-X24-HW   132-00DY      1DY0-1000
1.0-0  60      1
2     yes      up               PRT-HC3-C08Q08   132-00DW      1DW0-2001
1.0-0  160     2
```

3	yes	up (unlicensed)	SMT-HC3-C05-HW	132-00DX	1DX0-1005
1.0-0	200	3			
4	yes	up (unlicensed)	PRT-HC3-C08Q08-HW	132-00DW	1DW0-2002
1.0-0	160	4			

The above **show card** output indicates the following:

- GigaVUE-OS license is installed for the chassis: *cc1 is displayed as licensed*.
- GigaVUE-OS Module license is installed for Module 1: *Module 1 is displayed as licensed*.
- Module 2 (PRT-HC3-C08Q08) is displayed as licensed, since it has the integrated license.
- The rest of the modules are displayed as unlicensed (highlighted in gray).

NOTE: To assign GigaVUE-OS and GigaVUE-OS Module licenses from GUI, refer to [Manage and Activate GigaSMART, GigaVUE-OS, and GigaVUE-OS Module Licenses](#)

Troubleshooting Scenarios

Use the following table to troubleshoot issues that you might encounter on expiry of the GigaVUE-OS and GigaVUE-OS Module licenses.


Problem	Solution
On expiry of the GigaVUE-OS Module license, installing the new term license or perpetual license will not move the ports to active state.	<ul style="list-style-type: none"> • Uninstall the new license and re-install it. • Execute the write memory command after installing the license.
GigaVUE TA Series devices: On expiry of the GigaVUE-OS license, installing the new term license or perpetual license will not bring up the cards.	<ul style="list-style-type: none"> • Uninstall the new license and re-install it. • Execute the write memory command after installing the license.
GigaVUE HC Series devices: On expiry of the GigaVUE-OS license, installing the new term license or perpetual license will not bring up the cards.	<ul style="list-style-type: none"> • Execute the no card slot <slot number> down command for all the cards. • If the problem persists, uninstall the new license and re-install it. • Execute the write memory command after installing the license.
During new cluster formation or adding a node to a cluster, the leader does not detect member nodes license that have been installed before the cluster formation.	<ul style="list-style-type: none"> • Install the member nodes license once again from the leader after the cluster is formed. • If the problem persists, uninstall the new license and re-install it. • Execute the write memory command.

Manage and Activate GigaSMART, GigaVUE-OS, and GigaVUE-OS Module Licenses

You can manage the following licenses from the GigaVUE-FM GUI:

- GigaSMART License
- GigaVUE-OS License
- GigaVUE-OS Module License

To access the licenses page for managing the above:

1. On the left navigation pane, click .
2. Select **System > Licenses > Floating > Activated**.

This page displays the license details of the nodes managed by GigaVUE-FM.

Use the following buttons to manage the licenses:

Button	Description
Activate Licenses	Use this button to activate the licenses. Refer to Activate GigaSMART, GigaVUE-OS, and GigaVUE-OS Module Licenses for more information.
Deactivate	Use this button to deactivate the licenses. Refer to Deactivate Licenses for more information.
Replace Licenses	Use this button to replace licenses.
Renewal	Use this button to renew the licenses.
Export	Use this button to export the details in the Activate Licenses page to a CSV or XLSX page.
Filter	Use this button to narrow down the list of active GigaSMART Licenses that are displayed on the VBL active page.

Activate GigaSMART, GigaVUE-OS, and GigaVUE-OS Module Licenses

Prior to activating the licenses, ensure that you have the following information:

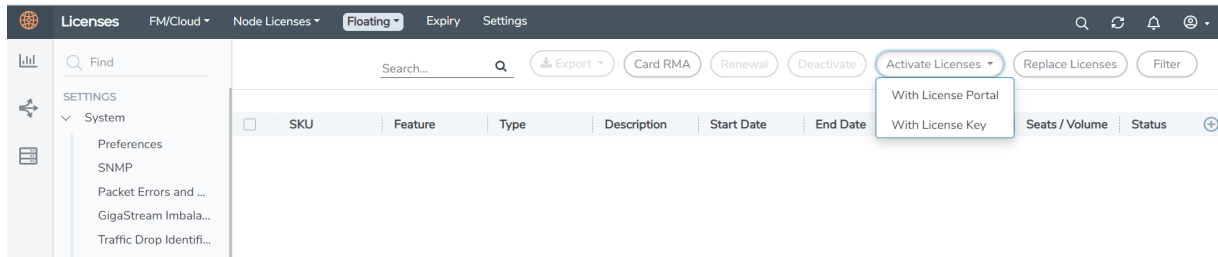
- **Entitlement IDs:** Locate the email sent to you by Gigamon containing the licensing information for your installation. This email contains one or more EID (Entitlement ID) values. You will use these EIDs to generate License Keys on the Gigamon Licensing Website.
- **Challenge MAC Address:** Locate the Challenge MAC address of the virtual network adapter associated with the GigaVUE-FM installation.

To activate or find the license or licenses, do the following:

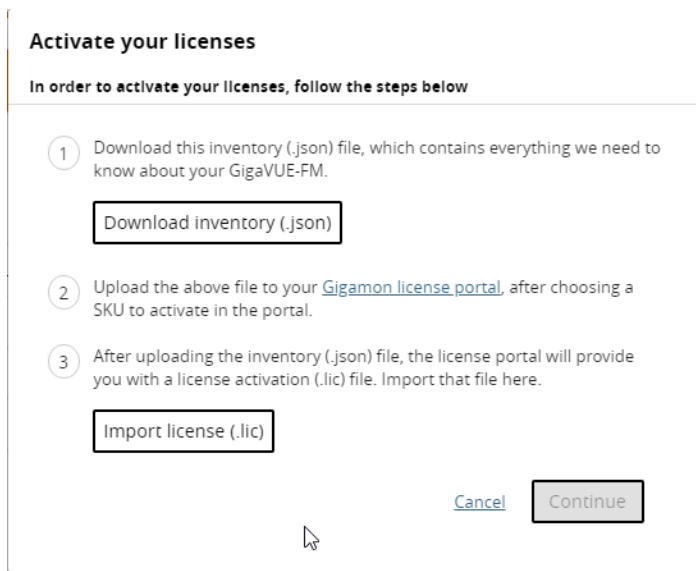
1. On the left navigation pane, click .
2. Go to **System > Licenses > Floating**. Click **Activated**.

You can use this page to access the Gigamon license portal where you can activate licenses. You can then use this page to assign the active licenses to the devices.

3. Click **Activate Licenses > With License Portal**:



4. Follow the instructions on the screen to activate your licenses.



In these next steps you will:

- o Download the fabric inventory (.json) file from GigaVUE-FM. For more details, refer to [What is a Fabric Inventory File?](#)
- o Go to the Gigamon license portal and find license you want to activate and complete the three screens to activate your license. On the second screen, you will be prompted to upload the fabric inventory (.json) file. Refer to the [Gigamon License Portal](#) section for instructions on how to activate the licenses from the portal.
- o After activating the license, you can download the license (.lic) files or record the license key or keys.

NOTE: When downloading the license file, ensure to not include special characters such as '(', ')', '&' in the name of the license file.


- Return to GigaVUE-FM, log in as an administrator, and return to the license activation screen.
 - Click the gear icon. Navigate to **System > Licenses > Floating** and click **Activated** from the drop-down menu. You can either,
 - Click **Activate Licenses > With License Portal** and complete the activation by importing the downloaded License (.lic) files.
 - Or, Click **Activate Licenses > With License Key** and complete the activation by entering the license key.

NOTE: To access the Gigamon license portal, directly, you can go to the Licensing Portal at <https://licensing.gigamon.com>.

NOTE: Please contact technical support team for assistance.

Deactivate Licenses

You can deactivate licenses that are in grace period or that have expired and also the license must not be assigned to any node. To deactivate the licenses:

1. On the left navigation pane, click .
2. Go to **System > Licenses > Floating**. Click **Activated**.
3. Select the license that you want to deactivate and click the **Deactivate** button.

The license will get deactivated and will be added to the list view in the **Deactivated** tab.

Manage GigaSMART Application Licenses using CLI

Install GigaSMART Licenses

Generate the license key from the licensing portal. GigaSMART licenses can be either node-locked or floating licenses. Use the **license** command to associate the hardware to the license key.

The key consists of a long string beginning with LK2, which is a protocol, followed by the line card or module (SMT_HCO_R), followed by the content of the license key.

Notify Evaluation License Expiry

After installation, the evaluation license will expire after 45 days, on a specific date.

To notify you as the evaluation license approaches the expiry date, you can enable a notification. When enabled, the notification will be sent when there are 30, 15, 10, 5, 4, 3, 2, and 1 days remaining before the license expires.

Use the following CLI command to enable the evaluation license reminder:

```
(config) # snmp-server enable notify evallicensereminder
```

You can also use the **show license** command to display the expiration date of an evaluation license.

How to Combine Evaluation and Perpetual Licenses

An evaluation license can be for a number of GigaSMART applications combined in a bundle. If you have a perpetual license for one GigaSMART application, for example, de-duplication, and you want to evaluate a bundle that contains 10 GigaSMART applications, including de-duplication, the 45-day evaluation period will apply to the other 9 GigaSMART applications, while the perpetual license will apply to de-duplication.

If you obtain a perpetual license after an evaluation license, the perpetual license will overwrite the evaluation license.

GigaSMART Application after Expiry

Once an evaluation license expires, access to the GigaSMART application is disabled. If maps were configured using GigaSMART applications on the evaluation license, traffic will be dropped when the evaluation license expires.

NOTE: Traffic will flow through maps with perpetually licensed GigaSMART applications.

In addition, the **gsop** command will not be available once the evaluation license has expired.

However, if a new evaluation license for the same GigaSMART application is installed, a new 45-day evaluation period will begin.

Move Evaluation and Perpetual Licenses

Evaluation and perpetual license keys are saved on the GigaSMART line card or module, while license information is stored in the configuration database. The license key on the line card or module has to match the license information stored in the database, otherwise a license mismatch will result.

Line cards or modules may sometimes need to be moved or swapped. For the procedure to move a license, refer to [Move Licensed GigaSMART Line Card to a New Slot](#). This procedure will clear a license mismatch under certain circumstances. Moving a license depends on the license type, as well as the expiry date, as follows:

License Key Saved on GigaSMART Line Card/Module	License Information Stored on Configuration Database	Can be Moved?
Perpetual License	Evaluation License	Yes
Evaluation License	Perpetual License	No
Evaluation License with an earlier expiry date than the one stored on the configuration database	Evaluation License	No
Evaluation License with a later expiry date than the one stored on the configuration database	Evaluation License	Yes

Move Licensed GigaSMART Line Card to a New Slot

On the GigaVUE-FM and GigaVUE-OS HD Series, you can move a GigaSMART line card from one slot to another. On the GigaVUE-HC2 or GigaVUE-HC3, you can move a GigaSMART front module from one bay to another. However on the GigaVUE-HC2, you cannot move the GigaSMART rear module from the rear to the front.

If there are no GigaSMART operations (gsops) configured on the line card or module to be moved, you can move the line card or module to the new slot or bay.

If there are GigaSMART operations (gsop), GigaSMART groups (gsgroup), and maps configured on the line card or module to be moved, the system will report a license mismatch if you try to move it without first removing the related configuration.

To clear the settings related to the GigaSMART line card or module from its previous slot, allowing you to create new GigaSMART operations, GigaSMART groups, and maps using the GigaSMART line card or module in its new slot, use the following procedure:

1. Issue the following CLI command:

(config) # show running-config

2. Copy and paste the output to a file such as Notepad, for reference.
3. Remove the map that uses the gsop defined on the gsgroup of the GigaSMART line card or module to be moved, using the following CLI command:

(config) # no map alias <alias>

4. Remove the gsop that was defined on the gsgroup of the GigaSMART line card or module to be moved, using the following CLI command:

(config) # no gsop alias <alias>

5. Remove the gsgroup that was defined on GigaSMART line card or module to be moved, using the following CLI command:

(config) # no gsgroup alias <alias>

6. Issue the following CLI command on GigaSMART line card or module to be moved:

(config) # no card slot <slot ID>

7. Assuming that the new slot does not have a GigaSMART line card or module inserted, issue the following CLI command on the new slot:

(config) # no card slot <slot ID>

8. Issue the following CLI command on the new slot:

(config) # card slot <slot ID>

On the new slot, configure gsgroup, gsop, and reapply the map that uses the gsop on the GigaSMART line card or module.

GigaSMART applications are enabled using license keys. Refer to the **license** command in the *GigaVUE-OS CLI Configuration Guide* for details.

Contact your Sales Representative for information on obtaining a license key to enable additional GigaSMART applications.

Note: The “show license” command also displays the start time and end time to support term licenses.

For **perpetual licenses**, the Expiration Date column has the word Never to indicate that there is no expiration date.

For **evaluation licenses**, the Expiration Date column has a specific date on which the license expires. For more information on evaluation licenses, refer to [Install GigaSMART Licenses](#).

GigaSMART Evaluation Licenses

Use an evaluation license to evaluate GigaSMART applications. During the evaluation period of 45 days, you will have access to the full functionality of the GigaSMART applications under evaluation. You can obtain an evaluation license for any GigaSMART application, for either a single or for a number of GigaSMART applications combined in a bundle.

To obtain an evaluation license, contact your Sales Representative. A license key will be generated by Gigamon and sent to you. You then install the license, which enables the GigaSMART application for evaluation purposes.

Install Evaluation Licenses

You install an evaluation license the same way you install a perpetual license, using the **license** command.

The key consists of a long string beginning with LK2, which is a protocol, followed by the line card or module (SMT_HCO_R), followed by the content of the license key.

Notify Evaluation License Expiry

After installation, the evaluation license will expire after 45 days, on a specific date.

To notify you as the evaluation license approaches the expiry date, you can enable a notification. When enabled, the notification will be sent when there are 30, 15, 10, 5, 4, 3, 2, and 1 days remaining before the license expires.

Use the following CLI command to enable the evaluation license reminder:

```
(config) # snmp-server enable notify evallicensereminder
```

You can also use the **show license** command to display the expiration date of an evaluation license.

How to Combine Evaluation and Perpetual Licenses

An evaluation license can be for a number of GigaSMART applications combined in a bundle. If you have a perpetual license for one GigaSMART application, for example, de-duplication,

and you want to evaluate a bundle that contains 10 GigaSMART applications, including de-duplication, the 45-day evaluation period will apply to the other 9 GigaSMART applications, while the perpetual license will apply to de-duplication.

If you obtain a perpetual license after an evaluation license, the perpetual license will overwrite the evaluation license.

GigaSMART Application after Expiry

Once an evaluation license expires, access to the GigaSMART application is disabled. If maps were configured using GigaSMART applications on the evaluation license, traffic will be dropped when the evaluation license expires.

NOTE: Traffic will flow through maps with perpetually licensed GigaSMART applications.

In addition, the **gsop** command will not be available once the evaluation license has expired.

However, if a new evaluation license for the same GigaSMART application is installed, a new 45-day evaluation period will begin.

Move Evaluation and Perpetual Licenses

Evaluation and perpetual license keys are saved on the GigaSMART line card or module, while license information is stored in the configuration database. The license key on the line card or module has to match the license information stored in the database, otherwise a license mismatch will result.

Line cards or modules may sometimes need to be moved or swapped. For the procedure to move a license, refer to [Move Licensed GigaSMART Line Card to a New Slot](#). This procedure will clear a license mismatch under certain circumstances. Moving a license depends on the license type, as well as the expiry date, as follows:

License Key Saved on GigaSMART Line Card/Module	License Information Stored on Configuration Database	Can be Moved?
Perpetual License	Evaluation License	Yes
Evaluation License	Perpetual License	No
Evaluation License with an earlier expiry date than the one stored on the configuration database	Evaluation License	No
Evaluation License with a later expiry date than the one stored on the configuration database	Evaluation License	Yes

Move Licensed GigaSMART Line Card to a New Slot

On the GigaVUE-FM and GigaVUE-OS HD Series, you can move a GigaSMART line card from one slot to another. On the GigaVUE-HC2 or GigaVUE-HC3, you can move a GigaSMART front module from one bay to another. However on the GigaVUE-HC2, you cannot move the GigaSMART rear module from the rear to the front.

If there are no GigaSMART operations (gsops) configured on the line card or module to be moved, you can move the line card or module to the new slot or bay.

If there are GigaSMART operations (gsop), GigaSMART groups (gsgroup), and maps configured on the line card or module to be moved, the system will report a license mismatch if you try to move it without first removing the related configuration.

To clear the settings related to the GigaSMART line card or module from its previous slot, allowing you to create new GigaSMART operations, GigaSMART groups, and maps using the GigaSMART line card or module in its new slot, use the following procedure:

1. Issue the following CLI command:

```
(config) # show running-config
```

2. Copy and paste the output to a file such as Notepad, for reference.
3. Remove the map that uses the gsop defined on the gsgroup of the GigaSMART line card or module to be moved, using the following CLI command:

```
(config) # no map alias <alias>
```

4. Remove the gsop that was defined on the gsgroup of the GigaSMART line card or module to be moved, using the following CLI command:

```
(config) # no gsop alias <alias>
```

5. Remove the gsgroup that was defined on GigaSMART line card or module to be moved, using the following CLI command:

```
(config) # no gsgroup alias <alias>
```

6. Issue the following CLI command on GigaSMART line card or module to be moved:

```
(config) # no card slot <slot ID>
```

7. Assuming that the new slot does not have a GigaSMART line card or module inserted, issue the following CLI command on the new slot:

```
(config) # no card slot <slot ID>
```

8. Issue the following CLI command on the new slot:

```
(config) # card slot <slot ID>
```


On the new slot, configure `gsgroup`, `gsop`, and reapply the map that uses the `gsop` on the GigaSMART line card or module.

GigaVUE TA Series Licenses

GigaVUE TA Series devices need the following two licenses:

- Port Licenses
- Advanced Feature

Port licenses and advanced feature licenses are node-locked licenses and can be activated only from the License portal. You need the Chassis Serial number to activate the licenses. For instructions on how to activate node-locked licenses refer to [Activate Node-Locked Licenses](#) for details.

Port Licenses

Table 1: GigaVUE TA Series License Types lists perpetual licenses available on GigaVUE-FM and GigaVUE-OS TA Series nodes.

Table 1: GigaVUE TA Series License Types

Port License	
GigaVUE-OS	<p>To enable ports on a white box after installing GigaVUE-OS, the appropriate license needs to be installed on the whitebox. The license can be purchased by calling the Gigamon representative. The initial key sent to the user is the Gigamon Installation Key.</p> <p>Using the digital footprint and serial number of the white box along with the EID, the license key can be obtained from the Gigamon licensing portal. After obtaining the license key, install it directly on the white box from either the CLI or GigaVUE-FM.</p> <p>This enables all ports on the white box.</p>
GigaVUE-TA25/GigaVUE-TA25E	<p>The GigaVUE-TA25 can have either twenty-four (24) or forty-eight (48) 1Gb/10Gb/25Gb ports enabled.</p> <ul style="list-style-type: none"> • The GigaVUE-TA25 devices with all forty-eight (48) 1Gb/10Gb/25Gb ports and eight (8) 40/100Gb ports enabled does not require a port license. • The 24-port GigaVUE-TA25 is called the GigaVUE-TA25E. A port license is available to expand the GigaVUE-TA25E to include all 48 1Gb/10Gb/25Gb ports as well as the eight (8) 40/100Gb ports. <p>For details, refer to the GigaVUE-TA25 Hardware Installation Guide.</p>

Port License	
GigaVUE-TA100	On the GigaVUE-TA100, only the first 16 out of 32 ports are enabled. Two port licenses are available to enable an additional 8 or 16 ports to expand to 24 or 32 ports. For details, refer to the <i>Hardware Installation Guide</i> .
GigaVUE-TA200	On the GigaVUE-TA200, only the first 32 out of 64 ports are enabled. A port license is available to enable an additional 32 ports. For details, refer to the GigaVUE-TA200 Hardware Installation Guide.
GigaVUE-TA200E	On the GigaVUE-TA200E, only the first 32 out of 64 ports are enabled. A port license is available to enable an additional 32 ports. For details, refer to the GigaVUE-TA200E Hardware Installation Guide.

NOTE: GigaVUE-TA25E, GigaVUE-TA40, and GigaVUE-TA400 have all ports enabled. No separate port license is required for these devices.

Advanced Feature Licenses

With Advanced Feature licenses, the following capabilities are available on the GigaVUE TA Series devices:

Capability	Description
Clustering	Clustering is enabled with an Advanced Features License. <ul style="list-style-type: none"> GigaVUE-TA25 GigaVUE-TA25E GigaVUE-TA40 GigaVUE-TA100 GigaVUE-TA200 GigaVUE-TA200E GigaVUE-TA400
Stack Port	For ports containing stacking enabled will be moved to disabled state after license expired. Once the license is renewed, the stack port needs to be manually enabled. Disabling of stack port will stop the traffic flowing.
Circuit Port	After license expiry, all the maps containing circuit port or circuit GigaStream will moved to disabled state and the traffic is dropped. Upon license renewal, the map will be enabled again.
PTP/Time Stamping	After license expiry, all the ports having PTP / Timestamp enabled will be moved to disabled state. Upon license renewal, the PTP / Timestamp is enabled again on the port.

Manage and Install Licenses for GigaVUE-FM and GigaVUE-OS Nodes

To view all the licenses assigned to a GigaVUE node:

1. From the device view, select **Settings > Config and Licenses** from the navigation pane.
2. Click **Licenses**.

You can view the list of licenses. GigaVUE TA Series device licenses may be one of the following:

- Advanced Features Licenses start with ADV
- Ports licenses start with PRT

For all licenses, the **Expiration Date** column has the word Never to indicate that there is no expiration date. Evaluation licenses are currently not available for GigaVUE-FM and GigaVUE-OS TA Series.

To view the serial numbers:

1. From the device view, select **System > Chassis** from the navigation pane.
2. Click **Table View**.

The serial number is displayed in the **Serial Number** column under **Properties**.

Install Licenses for GigaVUE-FM and GigaVUE-OS Nodes

To install licenses:

1. From the device view, select **Settings > Config and Licenses > Licenses** from the navigation pane.
2. Click **Add**.
3. In the Add Licenses page, enter the license key in the License1 field and select the **Box ID** of the chassis to which to apply the license.
4. Use the +/- option to add additional licenses.
5. Click **Install** to install the license.

For standalone nodes, the Box ID of the selected node will be available.

For clusters you must select the required Box ID from the drop-down. Use the +/- option to add licenses for other Box IDs.

Volume Based Licenses

All the GigaVUE V Series Nodes connected to GigaVUE-FM periodically report statistics on the amount of traffic that flows through the V Series Nodes. The statistics provide information on the actual data volume that flows through the V Series Nodes. All licensed applications, when running on the node, generate usage statistics.

Licensing for Cloud Suite is volume-based. In the Volume-Based Licensing (VBL) scheme, a license entitles specific applications on your V Series Nodes to use a specified amount of total data volume over the term of the license. The distribution of the license to individual nodes becomes irrelevant for Gigamon's accounting purpose. GigaVUE-FM tracks the total amount of data processed by the various licensed applications and provides visibility on the actual amount of data, each licensed application is using on each node, and tracks the overuse, if any.

Volume-based licenses are available as monthly subscription licenses with a service period of 1 month. Service period is the period of time for which the total usage or overage is tracked. There is a grace period for each license that is encoded in the license file. The license effectively provides data allowance for this additional time after the official end time of the license.

For purchasing licenses with the Volume-Based License (VBL) option, contact our Sales. Refer to [Contact Sales](#).

Base Bundles

In volume-based licensing scheme, licenses are offered as bundles. The following three base bundle types are available:

- CoreVUE
- NetVUE
- SecureVUEPlus

The bundles are available as SKUs¹. The number in the SKU indicates the total volume allowance of the SKU for that base bundle. For example, VBL-250T-BN-CORE has a daily volume allowance of 250 terabytes for CoreVUE bundle.

Bundle Replacement Policy

Refer to the following notes:

¹Stock Keeping Unit. Refer to the [What is a License SKU?](#) section in the FAQs for Licenses chapter.

- You can always upgrade to a higher bundle but you cannot move to a lower version.
- You cannot have two different base bundles at the same time however, you can have multiple base bundles of the same type.
- Once upgraded to a higher bundle, the existing lower bundles will be automatically deactivated.

Add-on Packages

GigaVUE-FM allows you to add additional packages called add-on packages to the base bundles. These add-on packages allow you to add additional applications to your base bundles. Add-on packages have their own start/end date and volume specifications.

Rules for add-on packages:

- Add-on packages can only to be added when there is an active base bundle available in GigaVUE-FM.
- The base bundle limits the total volume usage of the add-on package.
- If your add-on package has volume allowance less than the base bundle, then your add-on package can only handle volume allocated for add-on package.
- When the life term of an add-on package extends beyond the base bundle, then when the base bundle expires, the volume allowance of the add-on package will be reduced to zero until a new base bundle is added.

For more information about SKUs refer to the respective Data Sheets as follows:

GigaVUE Data Sheets
GigaVUE Cloud Suite for VMware Data Sheet
GigaVUE Cloud Suite for AWS Data Sheet
GigaVUE Cloud Suite for Azure Data Sheet
GigaVUE Cloud Suite for OpenStack
GigaVUE Cloud Suite for Nutanix
GigaVUE Cloud Suite for Kubernetes

How GigaVUE-FM Tracks Volume-Based License Usage

GigaVUE-FM tracks the license usage for each V series node as follows:


- When you create and deploy a monitoring session, GigaVUE-FM allows you to use only those applications that are licensed at that point (applicable only for ACTIVE licenses, licenses in grace period are not included).
- When a license goes into grace period, you will be notified with an audit log.
- When a license expires (and has not been renewed yet), the monitoring sessions using the corresponding license will not be undeployed.

For releases prior to 6.4:

- The monitoring sessions using the corresponding license will be undeployed (but not deleted from the database).
- When a license is later renewed or newly imported, any undeployed monitoring sessions are redeployed.

Manage and Activate Volume-based Licenses

To manage active Volume-based Licenses:

1. On the left navigation pane, click .
2. Go to **System > Licenses**. From the top navigation bar, select the **VBL Active** from the **FM/Cloud** drop-down.

This page lists the following information about the active Volume-based Licenses:

Field	Description
SKUs	Unique identifier associated with the license
Bundles	Bundle to which the license belongs to
Volume	Total daily allowance volume
Starts	License start date
Ends	License end date
Type	Type of license (Commercial, Trial, Lab and other license types).
Activation ID	Activation ID
Entitlement ID	Entitlement ID

NOTE: The License Type and Activation ID are displayed by default in the VBL Active page. To display the Entitlement ID field, click on the column setting configuration option to enable the Entitlement ID field.

The expired licenses are displayed in the **VBL Inactive** page, which can be found under the **FM/Cloud** drop-down in the top navigation bar. This page lists the following information about the inactive Volume-based Licenses:

Field	Description
SKUs	Unique identifier associated with the license.
Bundles	Bundle to which the license belongs to.
Ends	License end date
Grace Period	Number of days the license is in grace period
Deactivation Date	Date the license got deactivated.
Revocation Code	License revocation code.
Status	License status.

NOTE: The License Type, Activation ID and Entitlement ID fields are not displayed by default in the VBL Inactive page. To display these fields, click on the column setting configuration option and enable these fields.

Use the following buttons to manage your VBL.


Button	Description
Activate Licenses	Use this button to activate a Volume-based License. Refer to Activate Volume-based Licenses for more information.
Email Volume Usage	Use this button to send the volume usage details to the email recipients.
Filter	Use this button to narrow down the list of active Volume-based Licenses that are displayed on the VBL active page.
Export	Use this button to export the details in the VBL active page to a CSV or XLSX file.
Deactivate	Use this button to deactivate the licenses. You can only deactivate licenses that are in grace period or that have expired.

For more detailed information on dashboards and reports generation for Volume-based Licensing refer to the following table:

For details about:	Reference section	Guide
How to generate Volume-based License reports	Generate VBL Usage Reports	GigaVUE Administration Guide
Volume-based Licensed report details	Volume Based License Usage Report	GigaVUE Administration Guide
Fabric health analytics dashboards for Volume-based Licenses usage	Dashboards for Volume Based Licenses Usage	GigaVUE-FM User Guide

Activate Volume-based Licenses

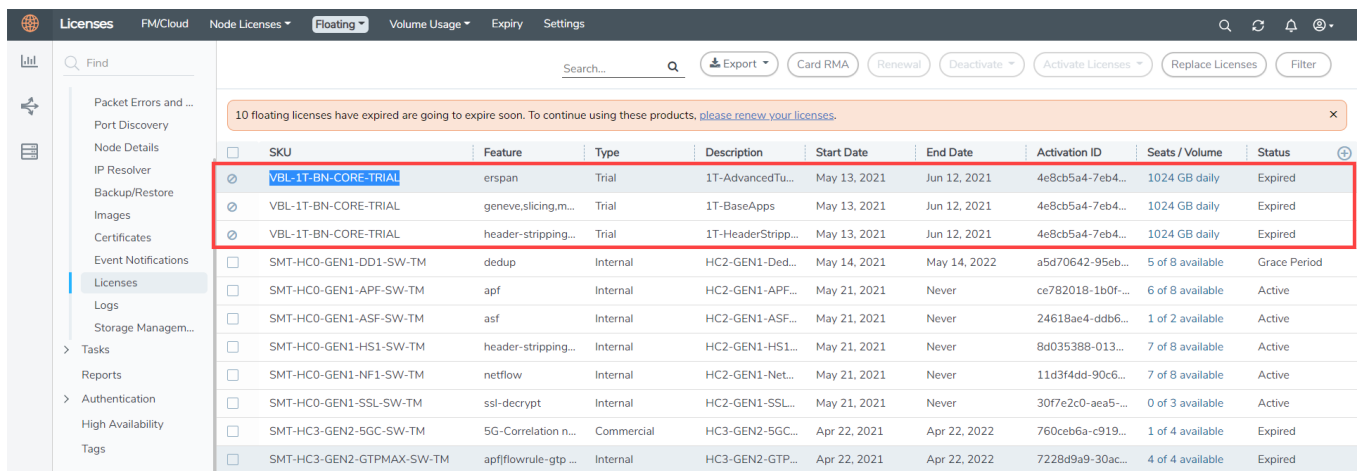
To activate Volume-based licenses:

1. On the left navigation pane, click .
2. Go to **System > Licenses**. From the top navigation bar, select the **VBL Active** from the **FM/Cloud** drop-down.

3. Click **Activate Licenses**. The **Activate License** page appears. Perform the following steps:
 - a. Download the fabric inventory file that contains information about GigaVUE-FM. Click **Next**. Refer to the [What is a Fabric Inventory File?](#) section for more details.
 - b. Navigate to the Licensing Portal. Upload the Fabric Inventory file in the portal. Once the fabric inventory file is uploaded, select the required license and click **Activate**. A license key is provided. Record the license key or keys.
 - c. Return to GigaVUE-FM and add the additional licenses.

Default Trial Licenses

After you install GigaVUE-FM, a default free 1TB of CoreVUE trial volume-based license (VBL) is provided one-time for 30 days (from the date of installation).



SKU	Feature	Type	Description	Start Date	End Date	Activation ID	Seats / Volume	Status
VBL-1T-BN-CORE-TRIAL	erspan	Trial	1T-AdvancedTu...	May 13, 2021	Jun 12, 2021	4e8cb5a4-7eb4...	1024 GB daily	Expired
VBL-1T-BN-CORE-TRIAL	geneve,slicing,m...	Trial	1T-BaseApps	May 13, 2021	Jun 12, 2021	4e8cb5a4-7eb4...	1024 GB daily	Expired
VBL-1T-BN-CORE-TRIAL	header-stripping...	Trial	1T-HeaderStripp...	May 13, 2021	Jun 12, 2021	4e8cb5a4-7eb4...	1024 GB daily	Expired
SMT-HC0-GEN1-DD1-SW-TM	dedup	Internal	HC2-GEN1-Ded...	May 14, 2021	May 14, 2022	a5d70642-95eb...	5 of 8 available	Grace Period
SMT-HC0-GEN1-APF-SW-TM	apf	Internal	HC2-GEN1-APF...	May 21, 2021	Never	ce782018-1b0f...	6 of 8 available	Active
SMT-HC0-GEN1-ASF-SW-TM	asf	Internal	HC2-GEN1-ASF...	May 21, 2021	Never	24618ae4-ddb6...	1 of 2 available	Active
SMT-HC0-GEN1-HS1-SW-TM	header-stripping...	Internal	HC2-GEN1-HS1...	May 21, 2021	Never	8d035388-013...	7 of 8 available	Active
SMT-HC0-GEN1-NF1-SW-TM	netflow	Internal	HC2-GEN1-Net...	May 21, 2021	Never	11d3f4dd-90c6...	7 of 8 available	Active
SMT-HC0-GEN1-SSL-SW-TM	ssl-decrypt	Internal	HC2-GEN1-SSL...	May 21, 2021	Never	30f7e2c0-aea5...	0 of 3 available	Active
SMT-HC3-GEN2-5GC-SW-TM	5G-Correlation n...	Commercial	HC3-GEN2-5GC...	Apr 22, 2021	Apr 22, 2022	760ceb6a-c919...	1 of 4 available	Expired
SMT-HC3-GEN2-GTPMAX-SW-TM	apfflowrule-gtp...	Internal	HC3-GEN2-GTP...	Apr 22, 2021	Apr 22, 2022	7228d9a9-30ac...	4 of 4 available	Expired

This license includes the following applications:


- ERSPAN
- Geneve
- Slicing
- Masking
- Trailer
- Tunneling
- Load Balancing
- Enhanced Load Balancing
- Flowmap
- Header-stripping
- Add header

NOTE: There is no grace period for the trial license. If you do not have any other Volume-based licenses installed, then after 30 days, on expiry of the trial license, any deployed monitoring sessions will be undeployed from the existing GigaVUE V Series Nodes.

To deactivate the trial VBL refer to [Delete Default Trial Licenses](#) section for details.

Delete Default Trial Licenses

GigaVUE-FM allows you to deactivate the default trial licenses from this page. To deactivate the license:

1. On the left navigation pane, click .
2. Go to **System > Licenses > Floating**. Click **Activated**.
3. Click **Deactivate > Default Trial VBL**.

The VBL trial licenses is deactivated and is no longer listed in the Activated page. However, you can view these deactivated licenses from the Deactivated page.

Licenses - GUI Options in GigaVUE-FM

The licenses page in the GigaVUE-FM GUI allows you to perform the following tasks:

Table 1: Licensing Tasks from GigaVUE-FM GUI

Task	Description	Refer to
Activate Licenses	To Activate licenses for the following:	
	- GigaVUE-FM	Manage and Activate GigaVUE-FM License
	- GigaSMART	Manage and Activate GigaSMART, GigaVUE-OS, and GigaVUE-OS Module Licenses
	- GigaVUE-OS and GigaVUE-OS Module Licenses	
	Volume-based Licenses	Manage and Activate Volume-based Licenses
	Advanced Feature and Port Licenses	Manage and Install Licenses for GigaVUE-FM and GigaVUE-OS Nodes
View Activated, Deactivated, and Missing Licenses	View details of activated, deactivated, and missing licenses for GigaSMART and GigaVUE-OS and GigaVUE-OS Module.	Floating
View Expired Licenses	View details of expired licenses	Expiry
Configure Settings for Event Notifications	Configure the settings for event notifications	Settings
View Node-locked Licenses	View hierarchical and list view pages for the nodes	Node Licenses

Floating

The Floating page displays the license details of floating licenses. This page has the following three tabs:

- **Activated:** The Activated tab displays the list of active Floating licenses. You can activate, deactivate, and replace licenses from this page. To activate a license, refer to [Activate Floating Licenses](#).

NOTE: The **License Type** and **Activation ID** fields are displayed by default in the Activated page. To display the **Entitlement ID** field, click on the column setting configuration option to enable the Entitlement ID field.

- **Deactivated:** The Deactivated tab displays the list of deactivated licenses. The **License Type**, **Activation ID**, and **Entitlement ID** fields are not by default displayed in the Deactivated page. To display these fields, click on the column setting configuration option and enable these fields.

- **Missing** : The Missing tab displays the list of GigaVUE-OS and GigaVUE-OS module licenses that are missing or not installed on a particular chassis or card.

NOTE: Floating licenses display the license type field. Node-locked licenses also display the license type field (Type), **only** if the license is imported through the GigaVUE-FM GUI. If a node-locked license is imported through CLI, then it must be re-imported through GigaVUE-FM (the license key must be saved in a .key file which is then imported), so that the node-locked license is visible on the floating activations page.

Licenses

FM/Cloud

Node Locked

Floating

Volume Usage

Expiry

Settings

Activated

Deactivated


Missing

GigaVUE-OS module license missing on 6 cards:

- Cluster mughil, Box id 1, Slot 2, Serial number 1DW0-2001
- Cluster mughil, Box id 1, Slot 3, Serial number 1DX0-1005
- Cluster mughil, Box id 1, Slot 4, Serial number 1DW0-2002
- Cluster mughil, Box id 2, Slot 2, Serial number 1DW0-2001
- Cluster mughil, Box id 2, Slot 3, Serial number 1DX0-1005
- Cluster mughil, Box id 2, Slot 4, Serial number 1DW0-2002

Node Licenses

To access the Node Licenses page:

On the left navigation pane, click  and select **System > Licenses > Node Licenses**.

The following views are available:

- Hierarchical View
- List View

Hierarchical View

This is a view only page showing the cluster-host-slot details along with the license expiry information. In hierarchical view:

- The cluster-host-slot is displayed as an expandable column.
- The serial number column shows chassis or card serial number, depending on the row it represents.
- The collapse all/expand all on the top right corner of the page allows you to collapse and expand in a single click.
- You can drill down in to the license information on each card of any cluster or chassis.

Licenses					
FM/Cloud	Node Locked	Floating	Volume Usage	Expiry	Settings
Hierarchical View	List View				
Expand All Collapse All					
Cluster > Host > Slot	Serial Number	Expiry	Features		
Host HC1: gigamon-ad963c (10.115.38.62)					
Slot cc1	1D60-0010				
Slot 1	1D60-0010				
Slot 2	1EH0-009C				
Slot 3	1D80-0020				
Cluster mughil					
Host HC3: gigamon-ad1ceb (10.115.38.138)					
Slot cc1	1DR0-1100	Never	GigaVUE-OS		
Slot 1	1DY0-1000	Never	GigaVUE-OS module		
Slot 2	1DW0-2001				

List View

The list view provides a flat view of all licenses as retrieved from the devices. This is a view only page showing the node and cluster details along with the license expiry information.

NOTE: When you login to GigaVUE-FM, a notification is displayed on the top of the page with license expiry details for the nodes which have validity less than 30 days. Click the **Go To Licenses** option to go to the **Licenses** page.

The **Expires** option indicates the status of the license:

- **Never:** License is a life time license and will never expire
- **Expired:** License has already expired
- **Exact date:** Date when the license will expire (for example Oct 12, 2019)

Cluster ID	Host name	Serial# (chassis or card)	Slot ID	Features	Expires
10.115.39.243	FMHC1-39...	1D60-0329	1	Add Header	Never
10.115.39.243	FMHC1-39...	1D60-0329	1	Adaptive Packet Filtering	Never
10.115.39.243	FMHC1-39...	1D60-0329	1	Application Session Filtering	Never
10.115.39.243	FMHC1-39...	1D60-0329	1	De-duplication	Never
10.115.39.243	FMHC1-39...	1D60-0329	1	ERSPAN	Never
10.115.39.243	FMHC1-39...	1D60-0329	1	Flow Sampling	Never
10.115.39.243	FMHC1-39...	1D60-0329	1	Header Stripping	Never
10.115.39.243	FMHC1-39...	1D60-0329	1	Masking	Never

Navigation: << < Go to page: 1 of 16 > >> Total Records: 125

Expiry

The Expiry tab displays the list of node-locked licenses (licenses that are locked to specific cards or chassis serial numbers) and floating licenses (licenses that are pooled and dynamically re-assignable from one card to another) in the following three categories:

- **Expired:** License has already expired
- **Expiring Soon:** License expiry is within the notification period
- **Expiring in 90 Days**

The license expiry events are triggered accordingly and can be seen in the Events page. Click on an event related to expiry of license in the Events page to navigate to the Expiry page.

Licenses	FM/Cloud	Node Locked	Floating	Volume Usage	Expiry	Settings
			Floating		Node-Locked	
Expired:		0			0	
Expiring Soon:		0			0	
Expiring in 90 days:		5			0	

5 Floating Licenses Expiring in 90 days:

- Qty 1 of SKU VBL-1T-BN-CORE-TRIALexpiry on 2021/04/29 [AID 4e8cb5a4-7eb4-4c2b-9ac9-0883428d6dc7]
- Qty 1 of SKU VBL-1T-BN-CORE-TRIALexpiry on 2021/04/29 [AID 4e8cb5a4-7eb4-4c2b-9ac9-0883428d6dc7]
- Qty 1 of SKU VBL-1T-BN-CORE-TRIALexpiry on 2021/04/29 [AID 4e8cb5a4-7eb4-4c2b-9ac9-0883428d6dc7]
- Qty 1 of SKU VBL-1T-BN-CORE-TRIALexpiry on 2021/04/29 [AID 4e8cb5a4-7eb4-4c2b-9ac9-0883428d6dc7]
- Qty 1 of SKU SMT-HC1-AMI expiry on 2021/05/26 [AID 95afa667-255f-4de4-86ee-58ff261e365a]

Settings

The Settings page allows you to configure the settings for event notifications and emails. Click the **Edit** button on the top right corner of the page to configure the following:

Table 1: Configure License settings

Field	Description
Volume Usage Event Notification	Enable this to receive a notification when daily volume usage exceeds the threshold. Configure the required threshold level for volume usage.
License Expiry Event Notifications	Enable this to receive a notification when license is within 90 days of expiry or has expired.
Email Server Configured	Configure the email server for receiving emails. Click on the link to navigate to the Email Servers page.
Email Recipients for Volume Usage Reports	Enter the email recipients for receiving volume usage reports.
Email Recipients for License Expiry Notifications	Enter the email recipients for license expiry notifications.

Licenses

FM/Cloud

Node Locked

Floating

Volume Usage

Expiry

Settings

Edit

Volume Usage Event Notification: ?

Status On
Threshold 100%

License Expiry Event Notifications: ?

Status On

Email Server Configured:

Status On [To configure, go here](#)

Email Recipients for Volume Usage Reports:

Mandatory Vbl-Reports@subscriptions.gigamon.com

Others

Email Recipients for License Expiry Notifications:

Mandatory License-Renewal@subscriptions.gigamon.com

Others

License Command

The following licenses can be managed from the command line interface:

- GigaSMART Licenses
- GigaVUE-OS and GigaVUE-OS Module Licenses
- Advanced Feature Licenses
- Port Licenses

The license command is used to configure and manage licenses from CLI.

license

Required Command-Line Mode = Configure

Use the **license** command to enable additional GigaVUE-FM and GigaVUE-OS features. Some license keys enable GigaSMART applications. Other license keys enable ports or clustering.

The following products have GigaSMART licensing:

- GigaVUE-HC1
- GigaVUE-HC2
- GigaVUE-HC3

For GigaSMART licensing details, refer to the “*Working with GigaSMART Operations*” chapter in the *GigaVUE Fabric Management Guide*.

The following products have port licensing:

- GigaVUE-FM and GigaVUE-OS-TA10A (a 24-port version of GigaVUE-FM and GigaVUE-OS-TA10)
- GigaVUE-TA25A (a 24-port version of GigaVUE-TA25)
- GigaVUE-FM and GigaVUE-OS-TA100
- GigaVUE-FM and GigaVUE-OS-TA200
- Certified Traffic Aggregation White Box

NOTE: GigaVUE-FM and GigaVUE-OS-TA10, GigaVUE-FM and GigaVUE-OS-TA40, GigaVUE-FM and GigaVUE-OS-TA100-CXP and GigaVUE-TA25 have all ports enabled.

The following products have Advanced Features License:

- GigaVUE-FM and GigaVUE-OS-TA1
- GigaVUE-FM and GigaVUE-OS-TA10 and GigaVUE-FM and GigaVUE-OS-TA10A
- GigaVUE-TA25 and GigaVUE-TA25A
- GigaVUE-FM and GigaVUE-OS-TA40
- GigaVUE-FM and GigaVUE-OS-TA100
- GigaVUE-FM and GigaVUE-OS-TA200
- Certified Traffic Aggregation White Box

For port licensing and Advanced Features License details, refer to the respective **Hardware Installation Guide**.

The **license** command has the following syntax:

```
(config) # license install box-id <box ID> key <license key>
```

For example:

```
(config) # license install box-id 1 key LK2-SMT_HCO_R-7YF0-QL2M-1G5L-Q32C-T27X-C0VU-
CD5H-NJUK-77XC-0UB1-EDMN-JUK7-7XC0-W3JC-5LNQ-RBJ7-XHY1-T7AU-KECM-N6JU-K741-
6L2G-RW60-Q3LC-A479-0L6E-HH70-W30E-9T8G-V20Q-UFEM-P78F-9Q86-GT6B-BH3Y-N8QQ-
9H20-056C-BHQQ-8KUV
```

The key is generated by Gigamon. It consists of a long string beginning with LK2, which is a protocol, followed by the card or module (SMT_HCO_R), followed by the content of the license key.

The following table describes the arguments for the **license** command:

Argument	Description
box-id <box ID>	Configures the system's box ID. The box ID identifies the node in the system.
key <license key>	Configures the license key.
revoke key <license key>	Revokes the license key. Once the license is revoked, the same key cannot be used for the same device at anytime.

Related Commands

The following table summarizes other commands related to the **license** command:

Task	Command
Displays all installed licenses.	# show license <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> NOTE: The license type is displayed in the show license command output. For licenses obtained before 5.7 release, the license type field is displayed as NA. </div>
Displays the installed licenses on a specified node.	# show license box-id 1

Grace Period Behavior (from Software Version 6.1.00)

Gigamon offers a uniform grace period of 45 days from the day the license expires (applicable for term licenses). During the grace period:

- There is no impact to the flow of traffic.
- Creating new maps and editing existing map configurations are allowed.
- Appropriate notifications are displayed in CLI and GigaVUE-FM.

At the end of the grace period, the license expires. You will not be allowed to create new maps or edit existing maps. The following tables summarize the configuration behavior based on the state of the license for the different license types.

For GigaVUE HC Series devices:

License State	Restrictions / Permissions	GigaVUE-OS License	GigaVUE-OS Module License	GigaSMART License
Not Installed	All cards in chassis will be in down state	✓	-	-
	All ports of the card will be in inactive state.	-	✓	-
	Configuring new maps with GigaSMART operations	-	-	Cannot be configured
During Grace Period	Creating new maps and editing existing maps	✓	✓	✓
	Periodic notification from GigaVUE-FM and devices.	✓	✓	✓
	Banner Notification in CLI	✓	✓	✓
On Expiry	Creating new maps and editing existing maps	Cannot create new maps/ edit existing maps		
	Periodic notification from GigaVUE-FM and devices.	✓	✓	✓
	Banner Notification in CLI	✓	✓	✓

GigaVUE TA Series devices:

License State	Permissions / Restrictions	GigaVUE-OS License	Port License
Not Installed	All ports will be inactive	✓	-
	Ports that need licenses for activation will be in inactive state.		✓
During Grace Period	Creating new maps and editing existing maps	✓	✓
	Periodic notification from GigaVUE-FM and devices.	✓	✓
	Banner Notification in CLI	✓	✓
On Expiry	Creating new maps and editing existing maps.	Cannot create new maps/ edit existing maps	
	Periodic notification from GigaVUE-FM and devices.	✓	✓
	Banner Notification in CLI	✓	✓

Grace period behavior for Inline Bypass license is as follows

License State	Restrictions for TA Series Devices (applicable only for GigaVUE-TA25 and GigaVUE-TA200)
Not Installed	You are not allowed to configure inline network and inline tool ports
Installed and valid	You can: <ul style="list-style-type: none"> • Configure inline network and inline tool ports. • Edit port parameters (admin enable, port type change).
During Grace Period	<ul style="list-style-type: none"> • You can create or edit flexible inline maps. • Periodic notification from GigaVUE-FM and devices. • Banner Notification in CLI.
On Expiry	<ul style="list-style-type: none"> • You cannot create or edit flexible inline maps. • Periodic notification from GigaVUE-FM and devices. • Banner Notification in CLI.

NOTE: Until software version 6.0.00, during the grace period no map configurations (creating and editing of maps) were allowed. Refer to [Grace Period Behavior \(until Software Version 6.0.00\)](#) for details.

Grace Period Behavior (until Software Version 6.0.00)

The following tables describe the grace period behavior for the various license types:

For GigaVUE HC Series devices:

License State	Restrictions / Permissions	GigaVUE-OS License	GigaVUE-OS Module License	GigaSMART License
Not Installed/Expired	Cards will be in down state	✓	-	-
	All ports of the card will be in inactive state.	-	✓	-
	Configuring new maps with GigaSMART operations	-	-	Cannot be configured
During Grace Period	Creating new maps and editing existing maps	Cannot create new maps/ edit existing maps		
	Periodic notification from GigaVUE-FM and devices.	✓	✓	✓
	Banner Notification in CLI	✓	✓	✓
On Expiry	Cards will be in down state	✓	-	-
	All ports of the card will be in inactive state.		✓	
	Configuring new maps with GigaSMART operations			✓

GigaVUE TA Series devices:

License State	Permissions / Restrictions	GigaVUE-OS License	Port License
Not Installed	All ports will be inactive	✓	-
	Ports that need licenses for activation will be in Inactive state.	-	✓
During Grace Period	Creating new maps and editing existing maps.	Cannot create new maps/ edit existing maps	
	Periodic notification from GigaVUE-FM and devices.	✓	✓
	Banner Notification in CLI	✓	✓
On Expiry	All ports will be inactive	✓	
	Ports that need licenses for activation will be in Inactive state.		✓

Grace period behavior for Inline Bypass license is as follows:

License State	Restrictions TA Series Devices (applicable only for GigaVUE-TA25 and GigaVUE-TA200)
Not Installed	You are not allowed to configure inline network and inline tool ports
Installed and Valid	You can: <ul style="list-style-type: none"> • Create inline network and inline tool ports. • Edit port parameters (admin enable, port type change).
During Grace Period	You cannot create or edit flexible inline map.
On Expiry	<ul style="list-style-type: none"> • Inline network and inline tool ports move to inactive state. • You cannot edit port parameters for inline network/inline tool: Speed change, admin enable for ports of type. • You can change the port type to network port or tool port, so that you can continue using the port for other operations. However, you are not allowed to change inline network to inline tool or vice-e-versa.

Notification Banners for Licenses

Notification banners associated with licenses are displayed in the GigaVUE-FM GUI in the following scenarios:

- [Expiry of Licenses](#)
- [Excessive Volume Usage](#)

Until appropriate action is taken, these notification banners continue to be displayed in the GigaVUE-FM GUI:

- To temporarily close the banner, click the **X** button on the banner. The banner does not appear again until the next login session.
- To permanently clear the banners:
 - **Banners for expiry of licenses:** Renew the licenses or deactivate the licenses.
 - **Banners for excessive volume usage:** Add licenses with sufficient allowance to compensate for the deficient volume.

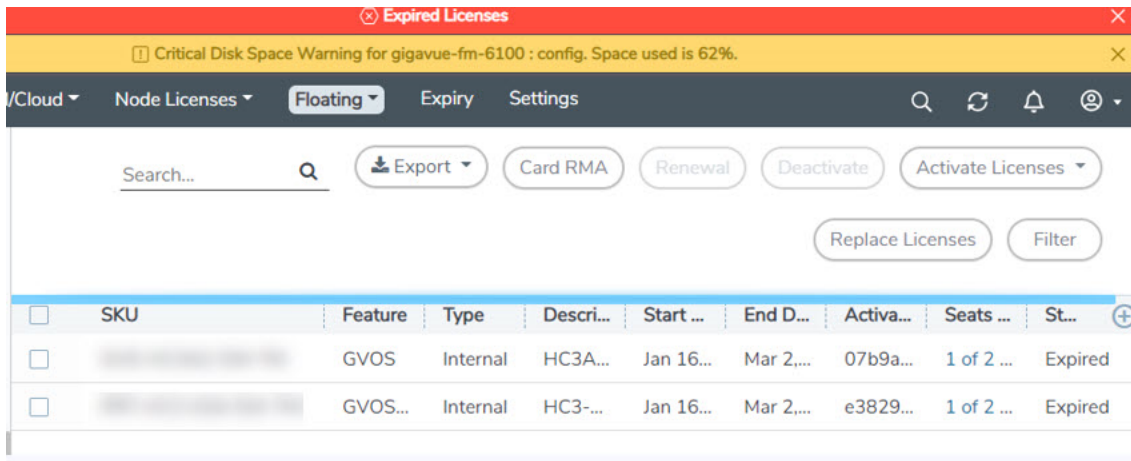
Expiry of Licenses

A notification banner is displayed in the GigaVUE-FM GUI when one of the following licenses expires:

- GigaSMART Licenses
- GigaVUE-OS Licenses

- GigaVUE-OS Module Licenses
- Volume-based Licenses

Click on the Expired Licenses banner ribbon. You will be navigated to the **License Expiry** tab from where you can view the detailed status of the expired licenses.



Note: License expiry notification banner will automatically disappear when you deactivate the license. This is applicable for Volume-based licenses, GigaSMART licenses, and GigaVUE-OS and GigaVUE-OS Module licenses when the following conditions are true:

- Licenses are in Grace Period or in Expired state.
- Floating licenses are not assigned to any node.

Excessive Volume Usage

In the Volume-based Licensing scheme, only licensed applications can be used to process the traffic. GigaVUE-FM calculates the volume usage of the licensed applications and displays the same in the Fabric Health Analytics dashboards and reports.

To compute excessive volume usage, GigaVUE-FM calculates the average volume usage (in Terabytes per day) every day, starting from the 15th day after the license is installed, for the previous 14-day period. If license usage is higher than twice the allowed licensed volume, then GigaVUE-FM GUI:

- Displays a notification banner in the GUI to indicate excessive volume usage.
- Triggers an event in the Events page. Refer to the [Event Notifications](#) section in the GigaVUE Administration Guide for details on configuring email notifications for events.

Refer to the [Notes](#) section for details on license upgrade scenarios.

Excessive Volume Usage calculation

GigaVUE-FM calculates excessive volume usage using the following parameters:

- Average Allowed License Volume per day (A)
- Average Volume Usage per day (U)

Ratio = Average Volume Usage per day (U)/ Average Allowed License Volume per day (A)

- If the U/A ratio is greater than or equal to 2, notification banners are triggered in the GUI. An event with a severity level of 'Critical' is displayed in the Events page.
- If the U/A ratio is equal to 1.25, an event with a severity level of 'Major' is displayed in the Events page.

Example:

For a VBL license, the allowed license volume **A** is 250 Terabytes per day. GigaVUE-FM calculates volume usage on a daily basis for the previous 14-day period starting from the 15th day. If the average usage **U** is 500 Terabytes on a particular day, then **U/A** is 2. Notification banners indicating excessive volume usage will be displayed in the GUI.

The average VBL usage is calculated on a daily basis and, therefore will be different for each day.

Average traffic volume usage for last 14 days has exceeded twice the limit allowed by your current license. Used: 3 TB and Allowed: 1 TB

Physical & Virtual

Profile: Default

AUDIT LOGS

1 Day

Success Failure

EVENTS

1 Day

Critical Major Minor Info

STATUS SUMMARY: PORT LINKS

Port Type	Total	Up	Down	Dis...
C Circuit	-	-	-	-
E GigaS...	-	-	-	-
H Hybrid	-	-	-	-
IN Inline ...	-	-	-	-
IT Inline ...	-	-	-	-
N Netw...	-	-	-	-

STATUS SUMMARY: UNHEALTHY MAPS

Cluster	Map Alias	Status
No Records Found		

HIGHEST TRAFFIC: PHYSICAL MAPS

1 Day

Node	Map Alias	Traffic (Mbps)
No Records Found		

HIGHEST TRAFFIC: TOOL PORTS

1 Hour

Cluster ID	Host Name	Port ID	Port Alias	Tra...
No Records Found				

FM Instance: GigaVUE-FM

Last Updated At: Aug 4, 2023 06:00:03

Notes

Refer to the following notes when upgrading licenses or importing additional licenses.

- When you upgrade the license, the licensed volume changes accordingly:
 - GigaVUE-FM does not display the excessive volume usage banner until the following midnight.
 - There is a net increase in the license allowance from the previous day to the next day (a behavior observed for the consecutive pair of days after licenses are upgraded). In this scenario, the banner will not be displayed for the upcoming 14-day period even if license usage is higher than twice the allowed licensed volume.
 - At the end of the 14-day period, the average volume usage (in Terabytes per day) is recalculated to determine if it is still over the 2x threshold. If it is more than the threshold ratio (2x), the banner is displayed in the GUI.

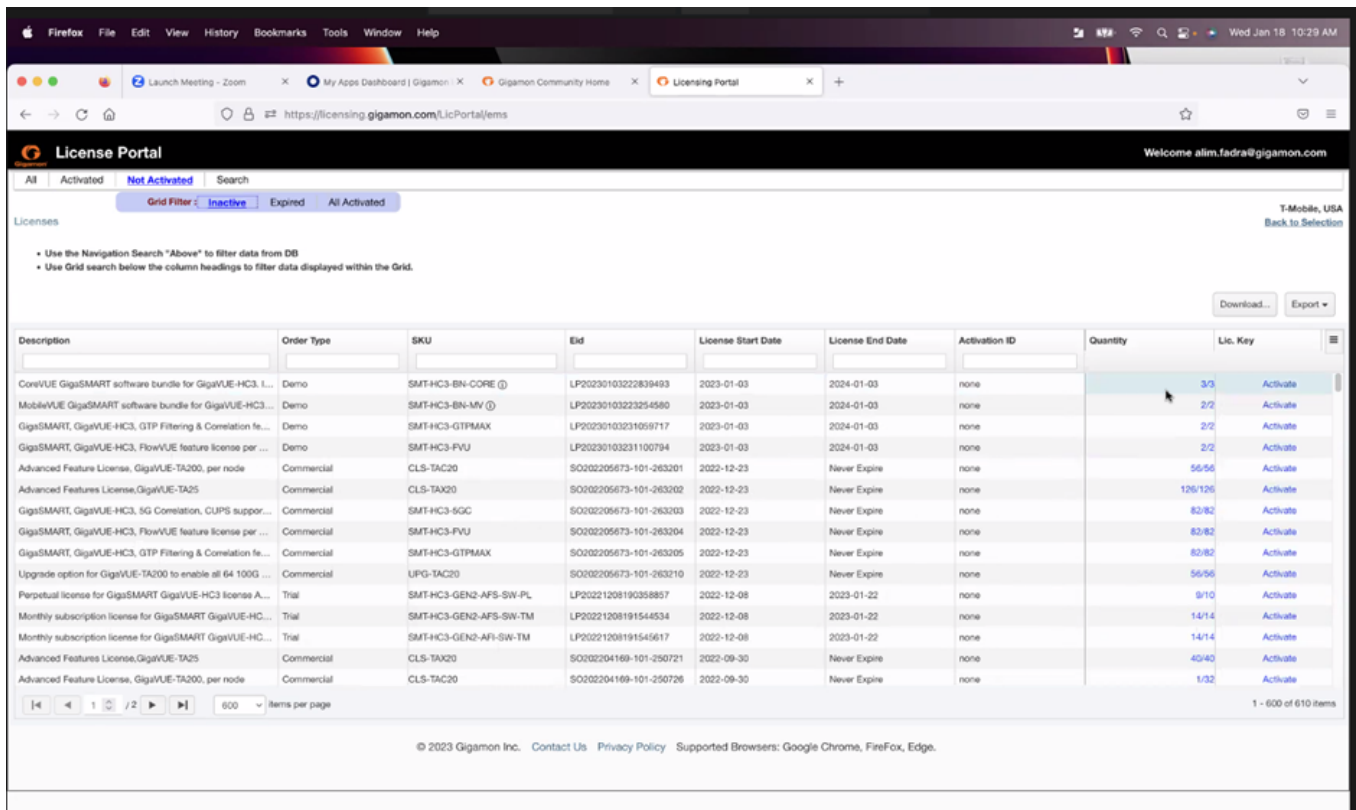
NOTE: Upgrade refers to upgrading to a higher bundle package or higher volume of the same bundle.

- When you import additional licenses, the licensed volume changes accordingly:
 - GigaVUE-FM does not display the excessive volume usage banner until the following midnight.
 - GigaVUE-FM then re-evaluates if a banner should be displayed or not. If license usage is higher than twice the allowed licensed volume, then the banner is displayed.

NOTE: Additional licenses refer to licenses belonging to the same base bundle.

Gigamon License Portal

The Gigamon License Portal is a web-based application that allows you to view the license entitlements for your purchased software. You can activate both Node-locked and Floating licenses from the portal, as required.



The portal lists licenses of all the product/features that you have paid for and are available in your entitlement. These features are listed as Stock Keeping Units (SKUs).

The licensing portal consists of the following tabs:

All	Lists all the licenses
Activated	Lists the licenses activated
Not Activated	Lists only the licenses that have not been activated
Search	Use to search the portal and fetch the results

The licenses in the portal consists of the following fields:

Field	Description
Activation	Date the license got activated
Device Locked To	<ul style="list-style-type: none"> Device ID for node-locked licenses MAC Address for floating licenses
Customer	Customer who purchased the license
Description	Detailed description of the license
Order Type	Order type
SKU	SKU of the license

Type	Type of license, either floating or node locked
Eid	Entitlement Id of the license
License Start Date	License start date
License End Date	License end date
Activation ID	Activation id for the license
Quantity	Number of licenses. This is displayed as a ratio of the activated verses total number of licenses.
Status	Status of licenses, whether activated or not-activated
Lic.key	License key. For inactive licenses, link to Activation is provided.
Revoke (button)	Indicated as revoked for revoked licenses.

The last three columns listed below are fixed. They will always be visible even when you resize the page:

- Quantity
- Status
- License Key

Search for Licenses in the Portal

Use the filter options in the Gigamon license portal to find the required license. The following search options are available.

- **Navigation Search:** Use navigational search to filter the data from the database. You can search based on the following criteria:
 - Device Locked To
 - EID
SKU
 - Date Range
- **Grid Search:** Use the Grid Search below the column headings to further refine the data fetched from the navigation search.

The screenshot shows the License Portal interface. At the top, there is a navigation bar with 'License Portal' and a user welcome message 'Welcome alim.fadra@gigamon.com'. Below this, there are tabs for 'All', 'Activated', and 'Not Activated', along with a 'Search' button. A search filter is set to 'M02FE'. The interface includes a table with columns for Activation, Device Loc..., Customer, Description, Order Type, SKU, Type, Eid, License Sta..., License En..., Activation Quantity, Status, Lic. Key, and Revoke. The table contains one row of data for a license with activation date 2022-06-09, device location M02FE, customer T-Mobile, USA, description Advanced Features License,GigaVUE-TA25, order type Commercial, SKU CLS-TAX20, type Node-Locked, Eid SO2021168..., license start date 2021-03-19, license end date Never Expires, activation quantity 1, and status Activated. There are 'Download' and 'Revoke' links for this license.

The search operation performed from a specific page is applicable only for the items listed in the Grid on that specific page. For example, consider you are on Page 3 of the portal and perform the following searches:

- Specific **EID** from the navigation search menu
- Specific **License Start Date** from the Grid search.

Only Page 3 of the portal is updated with the search results. If you navigate to Page 4, it will still list all the items. Apply the search criteria again in each of the individual pages to get the updated results.

Activate Floating Licenses

Prior to activating the licenses, ensure that you have the following information:

- **Entitlement IDs:** Locate the email sent to you by Gigamon containing the licensing information for your installation. This email contains one or more EID (Entitlement ID) values. You will use these EIDs to generate License Keys on the Gigamon Licensing Website.
- **Challenge MAC Address:** Locate the Challenge MAC address of the virtual network adapter associated with the GigaVUE-FM installation.
- **Fabric Inventory File:** Download the Fabric Inventory JSON file and save it in your local folder.

To activate a floating license:

1. Identify and select the license(s) that you want to activate from the list of available licenses.
2. Click **Activate**. The Activation Method page appears.
3. In the *Do you use GigaVUE-FM to manage your environment* option, select **Yes**.

License Portal Welcome palaniappa.mughilan@gigamon.com

Activation Method

Floating licenses are available only to customers using Fabric Manager 5.7 or above

Do you use GigaVUE-FM to manage your environment?

For GigaVUE-FM 5.6 and lower: Click Continue.
For GigaVUE-FM 5.7 and higher: Please download the Fabric Inventory (.json) file from the Licenses page in Fabric Manager
 Click Choose File to upload it here, and then click Continue

Choose file No file chosen

Cancel Continue

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- Choose the Fabric Inventory File downloaded from GigaVUE-FM and click **Continue**.

License Portal Welcome palaniappa.mughilan@gigamon.com

Activation Method

Floating licenses are available only to customers using Fabric Manager 5.7 or above

Do you use GigaVUE-FM to manage your environment?

For GigaVUE-FM 5.6 and lower: Click Continue.
For GigaVUE-FM 5.7 and higher: Please download the Fabric Inventory (.json) file from the Licenses page in Fabric Manager
 Click Choose File to upload it here, and then click Continue

Choose file FabricInvent...570780.json

Summary of the uploaded file.

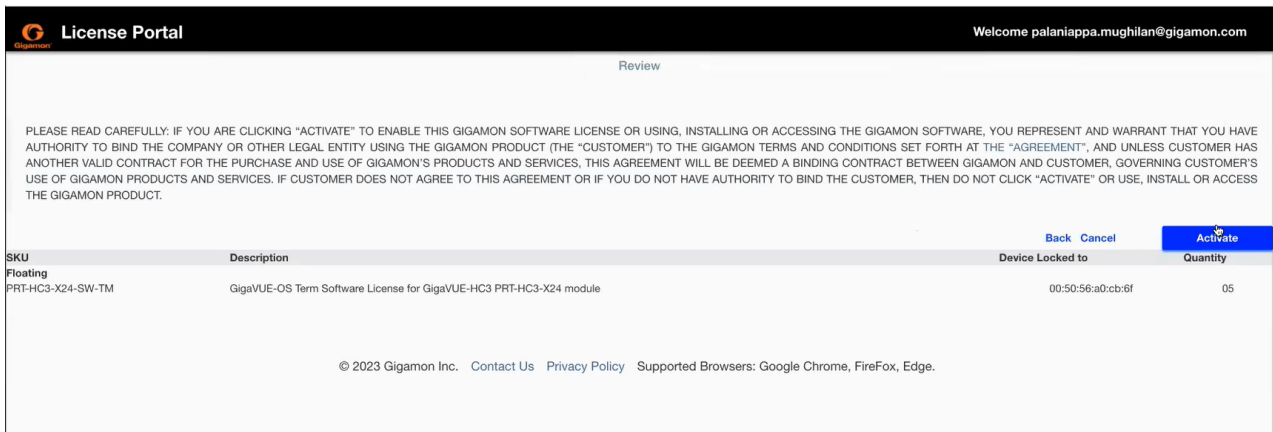
GigaVUE-FM MAC Address: 00:50:56:a0:cb:6f
 GigaVUE-FM Version: 6.2.00
 Total GigaSMART Card Serial # uploaded: 1
 Total TA-Chassis Serial # uploaded: 0

Model	Serial / Chassis Number
HC3	1DX0-1005(6.2.0_Beta)

Cancel Continue

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- Select the required quantity of the licenses. Click **Review**.
- After reviewing the license details, click **Activate** to activate the license.



The Activation Results page appears with the following details:

- Details of the SKU
- Device to which the license is locked to
- License file that can be downloaded.

7. Click **Download** to download the license file.

NOTE: License files downloaded from the portal have unique names. However, if you try to download the same license file again without deleting the already downloaded file, the file name is duplicated with the number 1 surrounded by parenthesis. For example: 'GigamonLic_NL_H2762_f5238c63-0da0-4e16-a613-a81b7d8fa40b (1).lic'. Ensure to delete the number and the parenthesis as GigaVUE-FM does not import file names with parenthesis.

8. Navigate to GigaVUE-FM GUI and upload the license file.

A message prompts up in the GigaVUE-FM GUI to indicate that the license has been successfully activated.

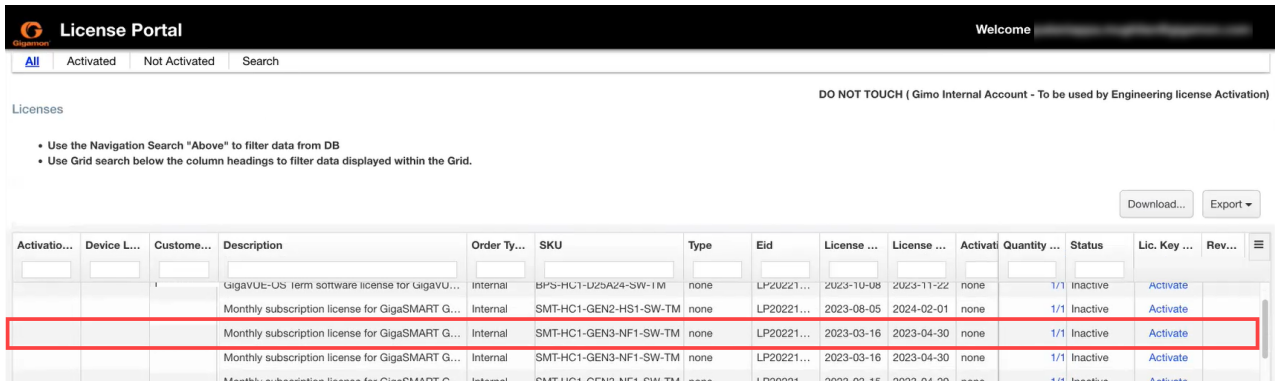
Activate Node-Locked Licenses

You need the following details for activating node-locked licenses:

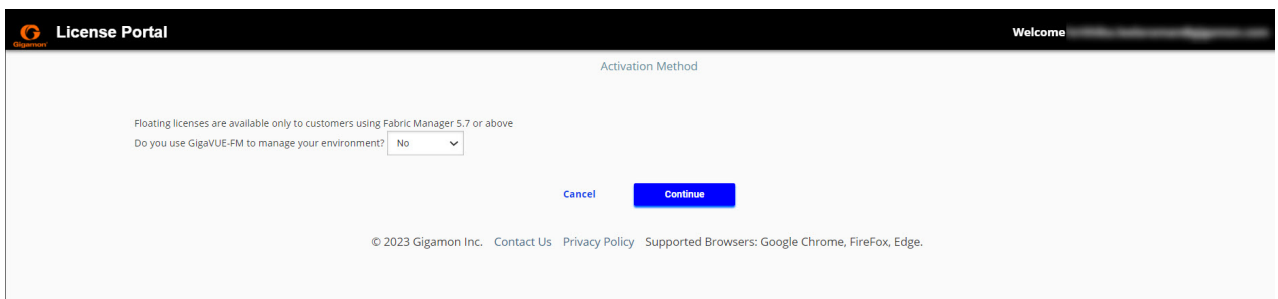
- Chassis Serial Number for the devices
- Challenge MAC Address for GigaVUE-FM

To activate a node-locked license:

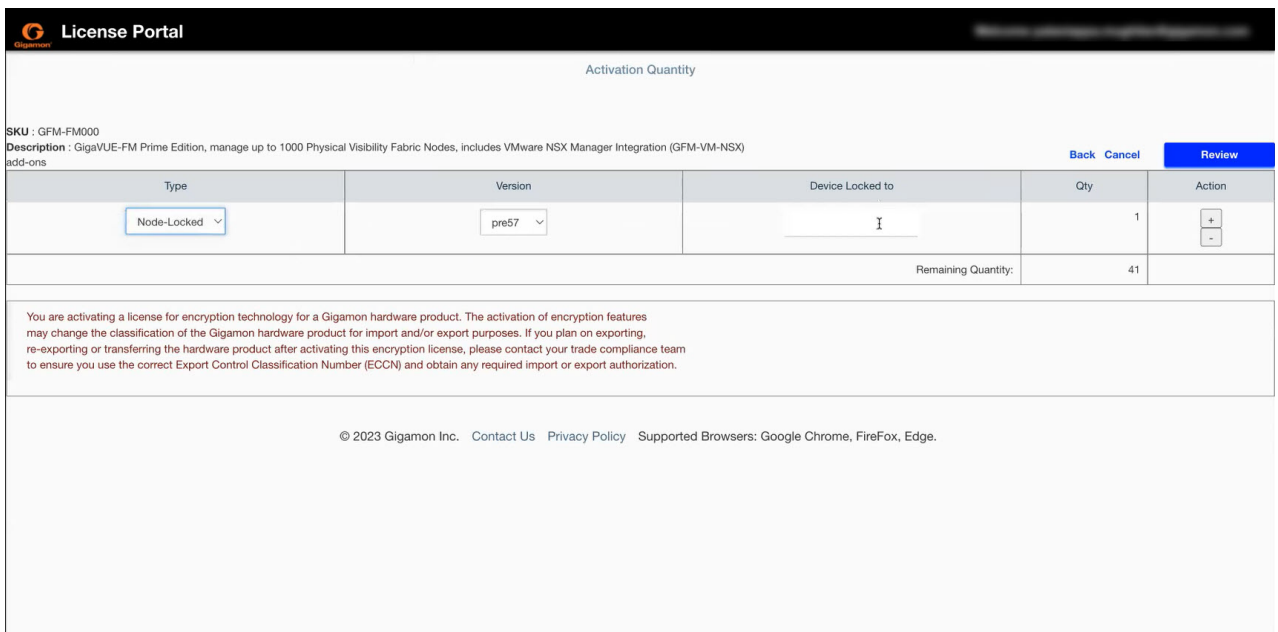
1. Identify and select the license that you want to activate.



2. Click **Activate**. The Activation Method page appears.



3. In the "Do you use GigaVUE-FM to manage your environment" option, select **No** and click **Continue**. The Activation Quantity page appears.



4. In the **Device Locked To** field, enter the serial number of the chassis or the serial number of the card for the devices. For GigaVUE-FM enter the Challenge MAC address of GigaVUE-FM.
5. Specify the required quantity of the licenses. Click the +/- options under **Action** column. Click **Review**.
6. Review the license you wish to activate. Click **Activate** to activate the license. The Activation Results page with the License Key is displayed.

Install the license keys either using the GigaVUE-FM GUI or the `license` command (for GigaVUE TA Series devices and Port licenses).

FAQs For Licensing

This section provides information about some of the issues that you may face while working with Licenses.

How to Clear License Mismatch when Moving Licenses Between Cards

A license mismatch may occur in the following cases:

- When a GigaSMART card crashes: It is possible for all licenses stored in the GigaSMART card to be erased.
- When moving licenses between cards.

In the above cases, the `show license` command output displays license-mismatch.

Re-install one of the licenses to clear the license-mismatch flag on the card. This allows you to continue using the card with the newly installed license.

NOTE: It is always recommended to execute `show license` command before installing a new license. Ensure to re-install all licenses that are lost.

How to Activate License when GigaVUE-FM does not have network access?

In this case, the Fabric Inventory file (JSON file) downloaded from GigaVUE-FM cannot be uploaded in the Licensing portal. You must generate the license key manually by performing the following steps (applicable for):

On a system that can reach the License Portal:

1. Open a notepad and paste the below.

```
{  
  "virtualMac": "00:50:56:94:68:c1",  
  "fmSwVersion": "6.0.00",  
  "timeOfReportCreation": "2022-08-22T17:48:39Z",  
  "allocationMaps": [],  
  "revokedTargets": [],  
  "revokedFmLicences": []  
}
```

2. Change the virtualMAC to the MAC address of GigaVUE-FM and change the timeOfReportCreation to reflect current Zulu time.
3. Save and change the file extension to .json.
4. Log in to the License Portal and select the required Volume-based License and click **Activate**.
5. In the next step, select **Yes** to manage with GigaVUE-FM.
6. Choose the JSON that file you created.
7. Review the information and change quantity accordingly.
8. Generate the .lic file that you can download. Move this file to the network where GigaVUE-FM resides.
9. Log into GigaVUE-FM. Go to **Settings > Licenses > Floating > Activated > Activated Licenses > With License Portal**.
10. In the dialogue box, select Import License (.Lic). Select the license file downloaded. Click **Open > Continue**

The required Volume-based License is successfully activated.

What is a Fabric Inventory File?

Fabric Inventory File is a JSON file that must be downloaded while activating the licenses. This file contains the following details.

- Details about GigaVUE-FM from which license is activated.
- Inventory of all the physical nodes connected to GigaVUE-FM.
- Inventory of GigaSMART cards within the nodes
- License information of each of the GigaSMART cards.

The file must then be uploaded in the Licensing Portal. Refer to [Gigamon License Portal](#).

NOTE: The file is encrypted to prevent unauthorized use. However, you can obtain an unencrypted version of the inventory information (in JSON format) using the following API: <https://<fm-IP>/api/v1.3/licensing/inventory>.

Refer to the following tables for details:

For GigaVUE-FM
The Virtual MAC address of GigaVUE-FM (the primary GigaVUE-FMs MAC address in a HA group)
Software version of GigaVUE-FM
Time of report creation
List of cards from which all license keys have been revoked (possibly because of card RMA)
List of GigaVUE-FM license keys that have been revoked

For each of the devices connected to GigaVUE-FM

Serial number of the chassis
IP address
Host name
The model of the chassis (HC1 etc)
Name of the chassis cluster to which it belongs
The version of software running on the device
Whether the device is healthy
Information about all GigaSMART cards

For each GigaSMART Card

Serial Number of the card
Slot number in the chassis where the card is inserted
The type of card
Whether the card is healthy (operational etc.)

For each GigaSMART Card, the following information about all the license keys that are added on the card is collected:

License SKU
License start date
License end date
Encoded license key

What is a License SKU?

An SKU in the licensing portal is a unique identifier defined for the various products offered by Gigamon. Depending on the type of license, the SKU identifier varies. However, it has a consistent format.

The first three letters in the SKU indicate the product, as seen in the following table:

SKU	Product/Module
GFM	GigaVUE-FM
GVS	GigaVUE-OS
BPS	By Pass Switch
PRT	Port Module
SMT	GigaSMART Module
VBL	Volume-based license
TAP	TAP module
CLS	Advanced Features

Where can I find the license SKUs for the various products?

You can find the license SKUs in the respective product data sheets.

GigaVUE Data Sheets
GigaVUE-FM Data Sheet
GigaSMART Data Sheet
GigaVUE HC Series Data Sheet
GigaVUE TA Series Data Sheet
GigaVUE Cloud Suite for VMware Data Sheet
GigaVUE Cloud Suite for AWS Data Sheet
GigaVUE Cloud Suite for Azure Data Sheet
GigaVUE Cloud Suite for OpenStack
GigaVUE Cloud Suite for Nutanix
GigaVUE Cloud Suite for Kubernetes

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)