Gigamon®

GigaVUE-FM Installation and Upgrade Guide

GigaVUE-FM

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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
6.13	1.0	02/25/2026	The original release of this document with 6.13.00 GA.

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About this Guide

This guide describes how to install and upgrade the GigaVUE-FM fabric manager (GigaVUE-FM).

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Supported Virtual Computing Requirements for GigaVUE-FM

This section lists the supported virtual computing resources required for installing GigaVUE-FM[1].

[1]GigaVUE-FM software version 6.5.00 runs on Rocky Linux 8.8 (as CentOS is End of Life).

Table 1: Supported Virtual Computing Requirements for GigaVUE-FM

Supported Virtual Computing Requirements	
Memory	Minimum 16GB memory
Virtual CPU (vCPU)	2 vCPU
Virtual Storage for Guest	80GB • System Disk - 40GB • Swap Disk - 4GB • Data Disk - 40GB
Virtual Network Interfaces	One vNIC using VMXNET3 (VMware 3rd Generation Paravirtual NIC)

EULA Acceptance

You can view the End User License Agreement (EULA) acceptance message only for the first time when you login after installing and upgrading the GigaVUE-FM. To use the GigaVUE-FM, you must agree with the EULA. Restoring a previous release's backup on the current GigaVUE-FM works like an upgrade. The End User License Agreement (EULA) process during this restoration is the same as during an upgrade.

Customer Deployed Assets (CDA)

GigaVUE-FM will send details about hardware SKUs, software SKUs, cloud SKUs, GigaVUE-OS version, and GigaVUE-FM version, and it will not send details regarding Accessories SKUs, PSU or Fan info, Support SKUs, and GigaVUE Cloud Suite™ virtual inventory collection.

The information is sent only when the Automatic Entitlement Retrieval is enabled. It is sent once a week during off-hours. The frequency is not configurable but can be adjusted by Gigamon staff. In such cases, you can reach out to Technical Support. If sending information fails, the node will retry up to 3 times.

You need to open a one-way port for communication between GigaVUE-FM and Gigamon. All communications between GigaVUE-FM and Gigamon should be secure and encrypted. The information shared must also be encrypted.

GigaVUE-FM shares SKU-level information without any PII (Personally Identifiable Information) implications. No sensitive data will be shared, such as IP addresses, host names, or usernames/passwords.

By adhering to these guidelines, the GigaVUE-FM ensures secure and efficient communication with Gigamon while protecting customer privacy.

GigaVUE-FM collects the following four types of JSON data that provide insights into inventory and licensing:

- Physical Inventory
- Physical Node Summary
- License Summary
- Virtual Node Summary

For information on Generating report for CDA, Generate Report for CDA.

The following table shows the details of the data captured for the above JSON data:

Field Name	Type	Description
Physical Inventory		
model	string	Name of the device model
versionSummary	array	Contains details about different versions of the model in use
version	string	The software version installed on the model.
count	integer	The number of devices running this version.
Physical Node Summary JSON		
nodeType	string	Type of the hardware node
hwType	string	The specific hardware type
productCode	string	The unique product code of the hardware component
version	string	Installed software version.
count	integer	Number of unique serial numbers belonging to this grouping of “nodeType”,”hwType”, and “productCode”
serialNumbers	array	A list of unique serial numbers associated with this version
License Summary JSON		
sku	string	The SKU identifier of the license.
licenseType	string	Type of license

Field Name	Type	Description
Physical Inventory		
licenseStatus	string	Status of the license
availableLicenses	integer	Total number of licenses issued (numLicenses)
assignedLicenses	integer	Number of licenses currently in use (numLicenses - bindingCount).
startDate	string	Start date of the license
endDate	string	Expiry date of the license.
Node License Details		
model	string	Name of the device model.
hwType	string	The specific hardware type(
serialNumber	string	serial numbers associated with this model and hwType.
feature	string	list of features for which the license is purchased and installed in the node.
floated	string	It is a flag true - It is not a floated license false - It is a floated license

UEFI Boot

UEFI stands for Unified Extensible Firmware Interface. It stores all device initialization and start-up data in a .efi file on a special disk partition called the EFI System Partition (ESP). The ESP also holds the bootloader responsible for booting the operating system.

The primary purpose of creating UEFI is to overcome the limitations of BIOS and shorten system boot time. UEFI uses the GPT partitioning scheme and supports drive sizes that are much larger.

In addition, UEFI provides better security with the Secure Boot feature, preventing unauthorized applications from booting. However, the downside is that Secure Boot prevents dual booting because it treats other operating systems as unsigned applications.

UEFI runs in 32-bit or 64-bit mode, providing a graphical user interface.

UEFI Secure Boot

Secure Boot is a Unified Extensible Firmware Interface (UEFI) feature that provides a verification mechanism for ensuring the device boots using only authorized firmware and software. It prevents running unauthorized, untrusted code. Without Secure Boot, malicious code can easily be executed, and Gigamon platforms can be easily compromised.

The following table provides the details of the platforms that support UEFI boot and UEFI secure boot:

Supported Platforms

Platforms	UEFI Boot	UEFI Secure Boot
AWS	Yes	Yes
Azure	Yes	Yes
Microsoft Hyper-V	Yes	Yes
OpenStack	Yes	Yes
Nutanix	Yes	Yes
KVM	Yes	Yes
GCP	Yes	Yes
GigaVUE-FM Hardware Appliance (GFM-HW1-FM010, GFM-HW1-FM001-HW, and GFM-HW2-FM001-HW)	Yes	Yes
VMware ESXi	Yes	Yes

Rules and Notes

- Fresh installations only support UEFI boot on any platform.
- Image upgrade deployments do not change the boot mode of a GigaVUE-FM system.
  - BIOS boot systems remain as BIOS boot
  - UEFI boot systems remain as UEFI boot.
- You can change a BIOS boot installation to UEFI boot by using the snapshot upgrade method, which is recommended only on AWS, and Azure platforms.
- Disabling UEFI Secure boot after deploying GigaVUE-FM in UEFI Secure boot mode is not recommended.
- Secure Boot in VMware ESXi is supported by virtual hardware version 13 or later.

- FMHA formation with a combination of UEFI Secure Boot GigaVUE Fabric Managers and Non-UEFI Secure Boot GigaVUE Fabric Managers of the same versions is allowed. However, the FMHA cluster cannot be named as a UEFI Secure Boot cluster.

Configuring UEFI boot in GigaVUE-FM

Refer to the sections in the table to learn about how to configure UEFI boot in GigaVUE-FM in the following platforms:

Platforms	Refer to
AWS	You should change the instance from **m4.xlarge** to **m5.xlarge** . UEFI boot supports only **m5.xlarge**. For more information, refer to Recommended Instance Types for AWS in the sectionInstalling GigaVUE-FM on AWS
Azure	No changes in the configuration procedure.
Microsoft Hyper-V	You must specify the option Generation 2 in **Specify Generation** page. UEFI boot supports only Generation 2. For more information, refer toInstall GigaVUE-FM for Microsoft Hyper-V
OpenStack	OpenStack supports UEFI from the Wallaby version and RHSOP 17.01. The train version of OpenStack does not support UEFI boot. You must specify **hw_firmware_type=uefi** in the image property for GigaVUE-FM deployment in UEFI mode. For more information, refer to Installing GigaVUE-FM on OpenStack
Nutanix	You need to switch to UEFI mode when deploying the GigaVUE-FM. For more information, refer to Installing GigaVUE-FM on Nutanix
KVM	You need to switch to UEFI mode when deploying the GigaVUE-FM. For more information, refer to Installing GigaVUE-FM on KVM.
GCP	In GCP, you must set the flag: -**-guest-os-features='UEFI_COMPATIBLE'**. For more information, refer to Install GigaVUE-FM on GCP.
VMware ESXi	Support vSphere 6.5, virtual hardware version 13 or later. For more information, refer to Installing GigaVUE-FM on VMware ESXi. For information related to troubleshooting ESXi 7.0, refer to Troubleshooting section in Deploy OVA file on VMware vCenter.

Installing GigaVUE-FM on VMware ESXi

GigaVUE-FM can be installed on VMware ESXi host and VMware vCenter using OVA file or ISO Image.

NOTE: To prevent data loss, do not allow the GigaVUE-FM instance to be vMotioned. Since vCenter does not provide a mechanism for GigaVUE-FM to prevent or control vMotion events, it is your responsibility to ensure that vMotion is never initiated for the GigaVUE-FM.

This section describes how to install GigaVUE-FM on VMware hypervisor, ESXi. It consists of the following main sections:

- Before You Install
- Deploy OVA file on VMware vCenter
- Install GigaVUE-FM using ISO Image File on VMware ESXi Host
- Install GigaVUE-FM using ISO Image File on VMware vCenter
- Initial GigaVUE-FM Configuration describes the steps to start GigaVUE-FM instance and configure it.
- Redeploy GigaVUE-FM Instance (with VMs Already Deployed) describes how to remove an existing instance and redeploy it.

Before You Install

This section describes the hardware and virtual computing requirements for GigaVUE-FM. Ensure that the time on the VMware ESXi host is set correctly to ensure accuracy of the trending data that is captured.

Prerequisites for GigaVUE-FM

Before Installing GigaVUE-FM, ensure that VMware vSphere Standard, Enterprise, or Enterprise Plus is installed on hardware that meets minimum requirements. Refer VMware ESXi Hardware Requirements for minimum hardware requirements.

VMware ESXi Hardware Requirements

The following table describes the hardware requirements on which VMware ESXi runs GigaVUE-FM.

Table 1: Hardware Requirements for VMware Hypervisor

Hardware Requirements	
VMware Hypervisor	vSphere ESXi: v8.xx and above. Refer to Supported Hypervisors for VMware for more detailed information.
CPU	One or more 64-bit x86 CPUs with virtualization assist (Intel-VT or AMD-V) enabled. **Note**: To run GigaVUE-FM, hardware support for virtualization must be enabled on the VMware ESXi host. Make sure that the BIOS option for virtualization support is not disabled. For more information, see your BIOS documentation
RAM	At least 16GB
Disk Space	At least 84GB shared (FC, iSCSI, NFS, or FCoE) or locally attached storage (PATA, SATA, SCSI) • System Disk - 40GB • Swap Disk - 4GB • Data Disk - 40GB **Note**: Increase the disk space depending on the configuration load requirements for the given GigaVUE-FM instance.
Network	At least one 1Gb NIC

Recommended Resource Requirements for Scaled Environments

Refer to the following sections for large deployment scenarios of GigaVUE-FM.

For Standalone GigaVUE-FM

The following table displays the minimum recommended requirements for a standalone GigaVUE-FM:

Requirements	Basic Configuration	Medium Configuration	Large Configuration	Large Configuration (GigaVUE-FM Hardware Appliance 3)
CPU				
CPU count(minimum)	2	4	12	32
CPU Min speed (per CPU)	2.30GHz	2.30GHz	2.30GHz	2.0GHz
Memory				
Memory Size	16GB	32GB	128GB	128GB
Disk Space				
OS Disk Size (min)	40GB	40GB	40GB	40GB
Config Disk Size - 15 Days Data	80GB	620GB	1100GB	1100GB
Config Disk Size - 35 Days Data	160GB	1240GB	2200GB	2200GB
Config Disk Size - Rollup 35 Days + 120	200GB	1600GB	2500GB	2500GB

Requirements	Basic Configuration	Medium Configuration	Large Configuration	Large Configuration (GigaVUE-FM Hardware Appliance 3)
Days Rollup				
** The disk usage is estimated based on the configuration load defined in the table below (Reference Values for Disk Space Estimation). You must periodically monitor the disk utilization and increase the disk size on need.				
NIC				
Number of NICs	1	1	1	1
Management/Data	1GB	1GB	1GB	1GB
Appliance Scalability				
Number of GigaVUE HC Series/GigaVUE TA Series Devices	Up to 50	Up to 500	Up to 1000	Up to 1000
Number of GigaVUE V Series Nodes	Up to 50	Up to 500	Up to 1000	Up to 1000
Number of Worker Pods monitored	1 Cluster with 100 Nodes and 10000 pods with 2 rules	3 Clusters, each with 100 Nodes and 10000 pods with 2 rules.	–	–

For GigaVUE-FM High Availability Instances

The following table displays the minimum recommended requirements for GigaVUE-FM High Availability group:

Configuration	Basic Configuration	Medium Configuration	Large Configuration	Large Configuration (GigaVUE-FM Hardware Appliance 3)
CPU				
CPU count(minimum)	2	4	12	32
CPU Min speed (per CPU)	2.30GHz	2.30GHz	2.30GHz	2.0GHz
Memory				
Memory Size	16GB	32GB	128GB	128GB
Disk Space				
OS Disk Size	40GB	40GB	40GB	40GB
Config Disk Size - 15 Days Data	80GB	620GB	1600GB	1100GB
Config Disk Size - 35 Days Data	160GB	1240GB	3000GB	3000GB
Config Disk Size - Rollup 35 Days + 120 Days Rollup	200GB	1600GB	4300GB	4300GB

Configuration	Basic Configuration	Medium Configuration	Large Configuration	Large Configuration (GigaVUE-FM Hardware Appliance 3)
** The disk usage is estimated based on the configuration load defined in the table below (Reference Values for Disk Space Estimation). You must periodically monitor the disk utilization and increase the disk size on need.				
NIC				
Number of NICs	1	1	1	1
Management/Data	1GB	1GB	1GB	1GB
Appliance Scalability				
Number of GigaVUE HC Series/GigaVUE TA Series Devices	Up to 50	Up to 500	Up to 3020	Up to 3020

Rules, Notes, and Limitations

- When deploying GigaVUE-FM in VMware ESXi, use the 'reservation' option and allocate fixed resource for CPU and memory.
- Values may change depending on the hardware used. You must ensure that the hardware you use supports the data rate specified in the table.
- Syslogs must be disabled if more than 1000 nodes are configured in GigaVUE-FM.
- Config sync time for 3000 node system on an average takes 10 minutes and on a maximum can go up to 12 minutes.

Reference Values for Disk Space Estimation

The following table defines the load in system for various system configurations that is used for qualification. Use this as a reference to estimate the disk usage and I/O operation in the system.

	Default (Basic)	Medium	Large	GigaVUE-FM High Availability Large 3000 Nodes
Devices	50	500	1000	3020
Ports	4550	45500	91000	273000
Maps	380	4750	13300	39900
Rules	1900	23750	66500	199500
GigaSMART Operations	250	1250	3500	10500
GigaSMART Groups	40	500	1400	4200

	Default (Basic)	Medium	Large	GigaVUE-FM High Availability Large 3000 Nodes
Virtual Ports	250	1250	3500	10500
Syslog Rate (per minute)	40	500	1400	4200
SNMP Traps Rate (per minute)	80	1000	2800	7200
Devices	50	500	1000	3020

Recommended Form Factor for VMware vCenter (Instance Types)

The form factor (instance type) of the GigaVUE V Series Node is configured on the OVF file and packaged as part of the OVA image file.

Instance types can differ for GigaVUE V Series Nodes in different ESXi hosts. Small is the default type.

The table below lists the available form factors (instance types) based on memory and the number of vCPUs for a single GigaVUE V Series Node.

Type	Memory	vCPU	Disk space	vNIC
Small	4GB	2 vCPU	10GB	1 Management interface, 1 Tunnel interface, and 8 vTAP interfaces
Medium	8GB	4 vCPU		
Large	16GB	8 vCPU		

NOTE: You can contact your account manager or Gigamon Technical Support to identify a suitable form factor.

Deploy OVA file on VMware vCenter

The GigaVUE-FM software package is distributed as an OVA file.

Use the vSphere Client to install the GigaVUE-FM OVA file. Starting from software version 5.3, you cannot deploy GigaVUE-FM directly from the ESXi host. You must login to the vCenter on the vSphere client to deploy a GigaVUE-FM instance.

IMPORTANT NOTE:

- The OVA file must be stored in a location that is accessible to the vSphere Client. This location cannot be a datastore accessible to the ESXi host which will be the target of the deployment.
- GigaVUE-FM v5.8 is used for illustration purposes only throughout this example. In your deployment, select the version that you are deploying.

The following the steps given below to deploy a GigaVUE-FM instance:

1. Log in to the VMware vCenter web interface.
2. In the vSphere Client, select an inventory object that is a valid parent object of a virtual machine such as data center, cluster, or ESXi host.
3. Right-click the ESXi Host, Cluster, or data center on which you want to deploy GigaVUE-FM 6.13, and then select **Deploy OVF Template**.

   The Deploy OVF Template wizard opens.
4. In the **Select an OVF template** page of the **Deploy OVF Template** wizard, choose one of the following options:

   a. **URL**—Enter the URL from where you want to download and install the OVF package.

   b. **Local file**—Click **Browse** to navigate to the OVA file available on your local machine, and then select the OVA file.
5. Click the **Next**. The **Select a name and folder** page of the **Deploy OVF Template** wizard appears.
6. Specify a unique name for the GigaVUE-FM instance, and then select a location and host to which you want to deploy the GigaVUE-FM instance.
7. Click **Next**. The **Select a compute resource** page of the **Deploy OVF Template** wizard appears.
8. Select a destination compute host for the OVF deployment. The Deploy OVF Template wizard performs a validation to ensure that the selected host has all the resources required for the GigaVUE-FM deployment.
9. Click **Next**. The **Review details** page of the **Deploy OVF Template** wizard appears.
10. Verify the OVF template details, and then click **Next**. The **Select storage** page of the **Deploy OVF Template** wizard appears.
11. From the **Select virtual disk format** drop-down list, select **Thick Provisioning** as the format for the virtual disks and provisioning.

    NOTE: You must deploy GigaVUE-FM using **Thick Provisioning**. Any other choice results in GigaVUE-FM not working correctly.

12. Select the datastore where the virtual machine's files will be stored.
13. Click **Next**. The **Select networks** page of the **Deploy OVF Template** wizard appears.
14. Set network mapping by doing either of the following, depending on how your are deploying, and then click **Next**:
    - **If you are not deploying on a standalone ESXi host**, the **Network Mapping** displays under **Source Networks**. Use the drop-down lists to assign the correct **Destination Network** to the source network.
    - **If you are deploying GigaVUE-FM on a standalone ESXi host**, the network mapping is set automatically by assigning the destination network to the any destination Network. In case of multiple port groups, you need to manually assign the destination network to the any destination network VM Network.
15. For the **IP protocol** drop-down list, ensure to maintain the default settings intact. Do not make any changes to the **IP protocol** drop-down list, as any changes may cause problems for vCenter.
16. Click **Next**. The **Customize template** page of the **Deploy OVF Template** wizard appears.
17. In the **System Hostname** field, enter the hostname of the GigaVUE-FM instance.
18. Set the Administrative Login Password. The password must be a minimum of 11 characters and a maximum of 30 characters. The characters must include at least:
    - One numerical character
    - One upper case character
    - One lower case character
    - One special character (Example- !@#$%^&*)

    NOTE: The password that you set here is applicable only to the GigaVUE-FM Shell. To access the GigaVUE-FM UI, the default username is admin and password is admin123A!!. You can change the password when you first login to the GigaVUE-FM UI.

    If the password does not meet the complexity requirements:
    - The system displays an error message in the GigaVUE-FM UI.
    - The parameters configured above are not passed on to the GigaVUE-FM except the host name parameter.
    - The static IP addresses that were configured originally will be unavailable after GigaVUE-FM is deployed.
19. (Optional) Set the Administrative Login Public Key. Provide the SSH public key associated with the UCT-V controller instance to configure administrative access.
20. (Optional) Complete the IP Networking configurations such as the default gateway for the management port, IP address of the DNS server, and the domain name for this

GigaVUE-FM instance.

21. (Optional) Complete the NTP configurations such as the IP address and version of the NTP server, and then click **Next**.

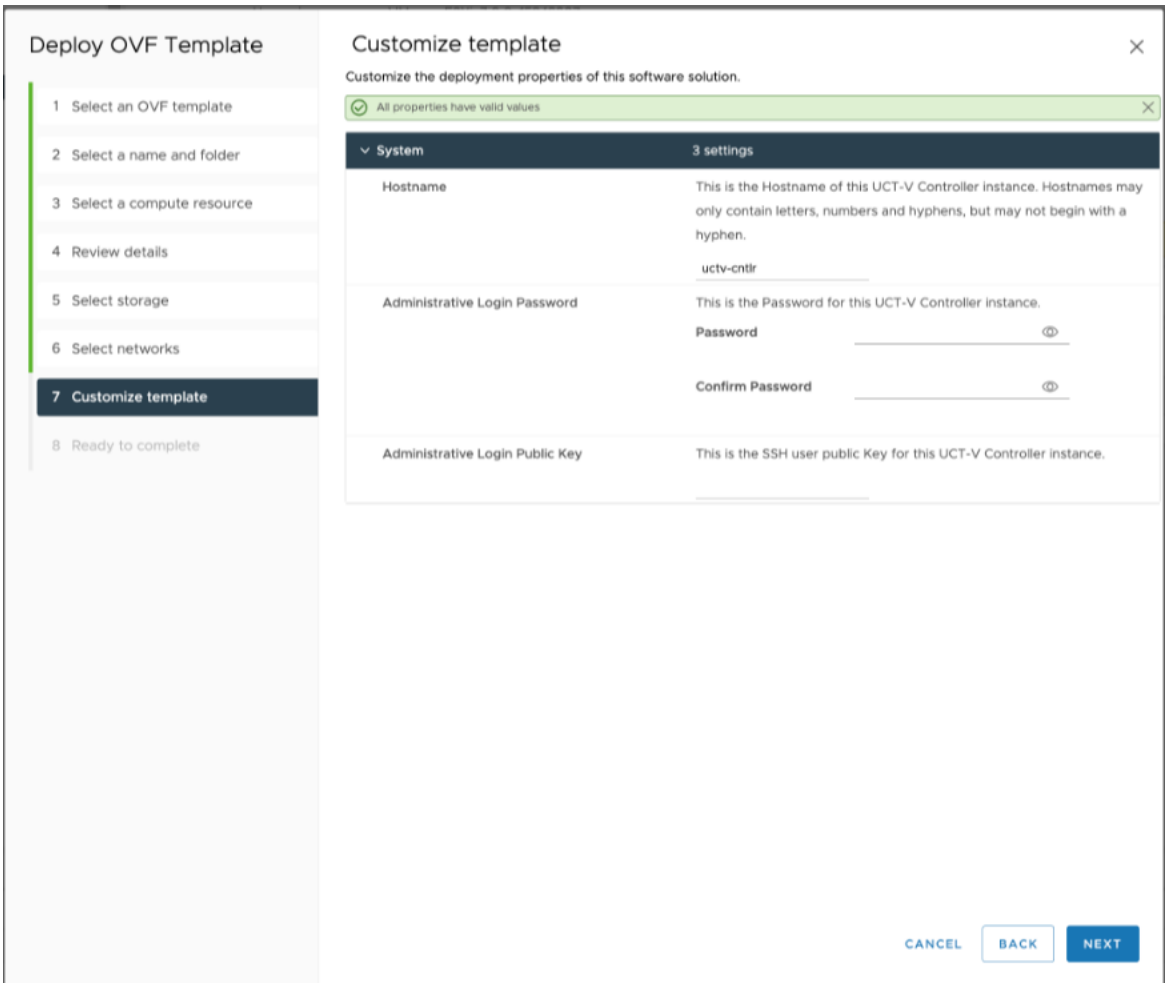


Figure 1 *vSphere Client: Customize Template*

> **NOTE:** You can also choose to perform the IP Networking and NTP configurations by running the **fmctl jump-start** command after you power on the GigaVUE-FM instance at the successful completion of the OVF template deployment. For details, refer to Perform Network Configurations

The **Ready to Complete** page of the **Deploy OVF Template** wizard appears.

22. Verify that all of the settings are correct, and then click **Finish**. The Recent Tasks pane of the vSphere Client Home page shows the progress of the deployment operation.

    When the operation completes, you have successfully deployed a GigaVUE-FM instance.

    Important: Clear the browser cache before logging in to GigaVUE-FM.

Troubleshooting

1. What should be done when GigaVUE-FM does not load on ESXi 7.0?

When GigaVUE-FM 6.8 does not load due to the missing of AVX CPU flags on ESXi 7.0, perform the following steps to bring up GigaVUE-FM:

1. Deploy GigaVUE-FM 6.8.00 on VMware vCenter 7.0 using OVA.

NOTE: After deployment, don't power on the GigaVUE-FM until the following steps are verified.

2. Check the **Compatibility** version in the **Summary** tab of installed GigaVUE-FM; it should be greater than 13. If it is 13 or less than 13, do the following:
   a. Click **Actions** > **Compatibility** > **Upgrade VM Compatibility** to upgrade the VM compatibility.

   The **VM Compatibility Upgrade** message box appears.

   b. Click **Yes** to view the **Configure VM Compatibility** dialog box.
   c. Select the compatible version as **ESXi 7.0 and later** from the drop-down list box and click **OK**.
3. Enable EVC mode. To enable EVC mode for GigaVUE-FM, do the following:
   a. Go to **Configure**> **VMware EVC** > **EDIT**. You can view the **Change EVC Mode** screen.
   b. Click the radio button to **Enable EVC for Intel Hosts**.
   c. Select **Intel Ivy Bridge Generation** from the drop-down list in the **CPU Mode** field.
   d. Press **OK**.
4. Power on GigaVUE-FM and verify whether GigaVUE-FM loads without any issues.

NOTE: Alternatively, instead of using ESXi 7.0, you can upgrade using ESXi 7.2 or 7.3.

Install GigaVUE-FM using ISO Image File on VMware ESXi Host

You can install GigaVUE-FM on VMware ESXi host using the ISO image file.

Pre-requisites

- Download the GigaVUE-FM ISO image file from the Software and Release Notes page on the VUE Gigamon Community portal to your local.
- Ensure you have an ESXi host environment that meets CPU, memory, and storage requirements. Refer to Before you Install for detailed information.

Installation Steps

Follow the steps given below to install GigaVUE-FM using ISO image on ESXi host:

1. Log in to the VMware ESXi host web interface.
2. In the ESXi Host Client, go to **Storage > Datastore browser** for a datastore that is accessible to the host.
3. Click **Upload** and select the GigaVUE-FM ISO image from your local system to a suitable folder on the datastore.
4. After uploading the ISO image file, go to the **Virtual Machines** and select **Create/Register VM**. The New Virtual Machine wizard appears.
5. In the **Select creation type** page, select **Create a new virtual machine**and click **Next**.
6. In the **Select a name and guest OS** page,
   a. Enter a name for the virtual machine.
   b. Select the **Guest OS family** as Linux.
   c. Select the **Guest OS version** as Other Linux (64-bit).
   d. Click **Next**.
7. In the **Select storage** page, choose the datastore where the VM files will reside and click **Next**.

8. In the **Customize settings** page,
   a. On the **Virtual Hardware** tab, enter the following details:
      - CPU: 2
      - Memory: 16GB
      - Hard disk 1: 40GB
      - Click **Add hard disk** to add two more disks with 4GB and 40GB.

      > **NOTE:** Increase the disk space depending upon the configuration load requirements for the given GigaVUE-FM instance.

   b. In the **CD/DVD Drive**, select **Datastore ISO file**. The Datastore browser appears.
   c. Select the ISO image uploaded in Step 3.

      > **NOTE:** By default, the **Connect** checkbox for both **Network Adapter** and **CD/DVD Drive** is enabled.

   d. On the **VM Option** tab, expand **Boot Options**, and under Firmware, select **EFI**.
   e. Click **Next**.

      > **NOTE:** If you leave the firmware as BIOS, GigaVUE-FM attempts to boot in BIOS mode, and the boot process fails .

9. Review all settings on the **Ready to complete** page and click **Finish** to create the virtual machine.
10. Select the newly created VM and click **Power on**.
11. Open the VM console to monitor the boot process. It may take approximately 15–20 minutes for the VM to boot.

What to do Next

1. **Log in with default credentials**: In the VM console, enter the default credentials:
   - Username: admin
   - Password: admin123A!!
2. **Change the default password**: On first login, you will be asked to change the password. Enter the current password (admin123A!!), then set and confirm a new one.

3. **Accessing the Shell Bash in GigaVUE-FM**: After the password is successfully changed, no reboot is required. You are logged in to the fmctl command prompt instead of a standard bash shell. If you need to run other Linux commands, you can switch to the (admin) bash shell by running the **shell** command in the fmctl command prompt. For the list of fmctl commands, refer to GigaVUE-FM CLI Commands.

4. **(Optional)**: If you want to change any of the network configurations or increase memory refer to the instructions in Perform Initial Configuration.

Install GigaVUE-FM using ISO Image File on VMware vCenter

You can install GigaVUE-FM on VMware vCenter using the ISO image file. Follow the steps given below to install GigaVUE-FM using ISO image on vCenter:

1. Log in to the VMware vCenter web interface.
2. In the vSphere Client, select an inventory object that is a valid parent object of a virtual machine such as data center, cluster, or ESXi host.
3. Right-click the ESXi Host, Cluster, or data center on which you want to deploy GigaVUE-FM6.13, and then and select **Files** in the top navigation bar. Then click on **Upload Files** and then upload the ISO image file.
4. Click on the **Actions** button on the top and select **New Virtual Machine**. The New Virtual Machine wizard opens.
5. In the **Select a creation type** tab, select **Create a new virtual machine**. Then, click **Next**.
6. In the **Select a name and folder** tab, specify a unique name for the GigaVUE-FM instance, and then select a location and host to which you want to deploy the GigaVUE-FM instance.
7. Click **Next**. The **Select a compute resource** page of the **New Virtual Machine** wizard appears.
8. Select a destination compute host for the virtual machine deployment. The New Virtual Machine wizard performs a validation to ensure that the selected host has all the resources required for the GigaVUE-FM deployment.
9. Click **Next**. The **Select storage** page of the **New Virtual Machine** wizard appears. Select the datastore where the virtual machine's files will be stored. Then, Click **Next**.
10. The **Select compatibility** page of the **New Virtual Machine** wizard appears. Select compatibility for this virtual machine depending on the ESXi hosts used in your environment. Then, Click **Next**.

11. The **Select a guest OS** page of the **New Virtual Machine** wizard appears.
    a. Select the **Guest OS family** as Linux.
    b. Select the **Guest OS version** as Rocky Linux 8.8 (64-bit).
    c. Then, click **Next**.

    NOTE: GuestOS version is displayed as RockyLinux only if the vSphere version is either 6.7 U3p or 7.0 U3c. For other versions of vSphere, CentOS 4/5 is only displayed. Use the drop-down to select RockyLinux.

12. The **Customize hardware** page of the **New Virtual Machine** wizard appears, enter the CPU, Memory and Hard disk details. Refer to Minimum Requirements for more detailed information on the minimum requirements required to install GigaVUE-FM.
    a. Go to **Add New Device > Hard disk** to more than one hard disk. Add a secondary hard disk with at least 40GB memory.
    b. From the **Disk Provisioning** drop-down list, select **Thick Provisioning** as the format for the virtual disks and provisioning.

    NOTE: You must deploy GigaVUE-FM using **Thick Provisioning**. Any other choice results in GigaVUE-FM not working correctly.

    c. Select a **Network Adapter**.
    d. In the **CD/DVD Drive**, select **Datastore ISO file** and the **CD/DVD Media** select the ISO image uploaded in Step 3.
    e. Click Next.
13. The **Ready to Complete** page of the **New Virtual Machine** wizard appears.
14. Verify that all of the settings are correct, and then click **Finish**. The Recent Tasks pane of the vSphere Client Home page shows the progress of the deployment operation.
15. When the operation is complete, you have successfully deployed a GigaVUE-FM instance.

    Important: Clear the browser canche before logging in to GigaVUE-FM.

Initial GigaVUE-FM Configuration

After you have deployed a new GigaVUE-FM instance, you can choose to perform some initial configuration before you start using GigaVUE-FM. This procedure only needs to be performed once for each GigaVUE-FM instance deployed.

NOTE: Use care when Shutting Down or Rebooting a GigaVUE-FM. **Never** directly Power-Off the virtual machine. In VMware ESXi environment when using vSphere client, ALWAYS use **Shut Down Guest OS** or **Restart Guest** functions from VMware. Access is available from either the FILE menu or from the appropriate buttons on the GigaVUE-FM console. Failure to follow these steps may lead to database corruption issues.

Perform Initial Configuration

You can optionally perform the following configurations:

- Perform Network Configurations
- Add Additional vNIC, vCPUs, and Increase Memory

Perform Network Configurations

To perform the initial configuration:

1. Log in to GigaVUE-FM using one of the following methods:
   - If you have a IP address set up for the GigaVUE-FM, log into GigaVUE-FM directly using the IP address.
     a. Log into GigaVUE-FM directly using the IP address.
     b. Enter the following default login Credentials:
        - Username: admin
        - Password: admin123A!!
     c. On first login, you will be asked to change the password. Enter the current password, then set and confirm a new one.
   - If you do not have a IP address set up for the GigaVUE-FM, complete the following steps:
     a. Log in to the VMware vCenter web interface.
     b. Select the required GigaVUE-FM virtual machine, and click **Console**.
     c. After the password is successfully changed, no reboot is required. You are logged in to the fmctl command prompt instead of a standard bash shell. If you need to run other Linux commands, you can switch to the (admin) bash shell by running the **shell** command in the fmctl command prompt. For the list of fmctl commands, refer to GigaVUE-FM CLI Commands.
2. Perform the following steps to complete the initial configuration:

> **NOTE:** In the VM console, if you are in (admin) bash shell command prompt, you can run both fmctl and bash shell commands. To run fmctl commands, prefix every command given below with fmctl.

a. Provide a unique hostname for GigaVUE-FM. Note that the hostname may contain letters, numbers, periods (**.**), and hyphens (**-**), but may not begin with a hyphen. No other special characters are permitted.

Example: set hostname <host-name>

b. Enter the required domain name.

Example: set domain <domain-name>

c. Decide whether to use DHCP or STATIC for the management interface. Choose one of the following options:

- If you want to set DHCP the **IPv4 Address** or **IPv6 Address**, **CIDR**, **Gateway**, **DNS Servers**, and **Search Domains** are dynamically set up for the management interface.

  Example: set ip dhcp

- If you want to set static ip for GigaVUE-FM, you must provide the following:
  i. **IPv4 Address** or **IPv6 Address**, and the respective **CIDR** and **Gateway**.

  Example: set ip static*<IP address>*/*<mask> <gateway>*

  Example: set ip6 static*<IPv6 address>*/*<mask> <gateway>*

  ii. In the **DNS Servers** field, provide the address of any additional name servers required. Enter the set of IP addresses with spaces in between.

  Example: set nameservers *<IP address>*

  iii. In the **Search Domains** field, provide the required DNS domains with spaces in between.
  Example: set searchdomain <domain-name>

d. You can choose to either enable or disable NTP using fmctl command.

Example: set ntp enable 0.pool.ntp.org, 1.pool.ntp.org, 2.pool.ntp.org

e. Reboot your GigaVUE-FM virtual machine.

You can now access GigaVUE-FM by opening a browser and entering its IP address (the IP address you specified).

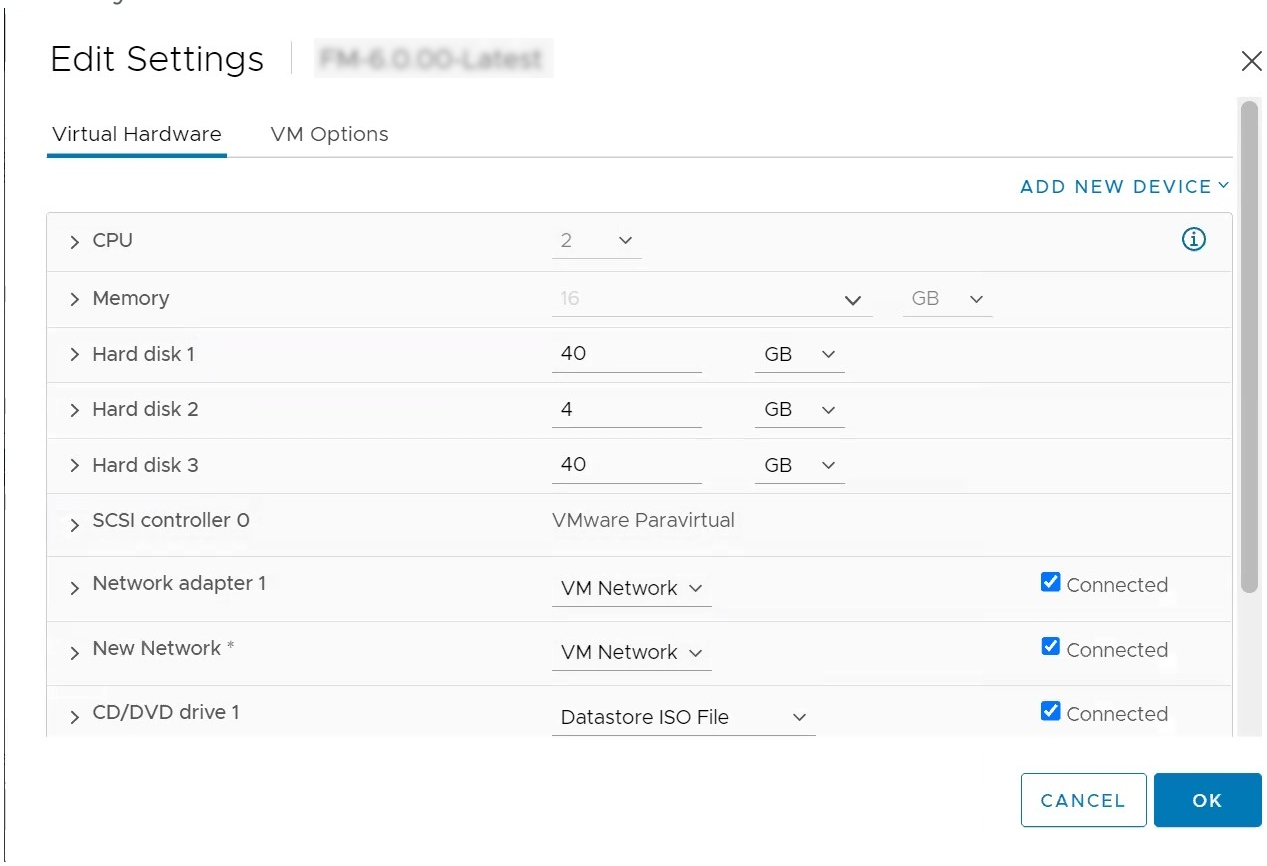
NOTE: You must reboot the GigaVUE-FM, when there is a change in the IP address of the GigaVUE-FM.

Add Additional vNIC, vCPUs, and Increase Memory

Gigamon allows you to configure GigaVUE-FM with two network interfaces—eth0 and eth1. The network interface eth0 can be configured to connect to a network used to manage Gigamon devices. The other network interface eth1 can be configured to connect to a network hosting different servers like SMTP server, Archive server, and so on.

Follow the steps given below to add Additional vNIC, vCPUs, and increase memory:

1. Right-click the GigaVUE-FM instance and select **Edit Settings...** . The **Edit Settings** dialog box opens.
2. Click on the **Virtual Hardware** tab, edit the memory and CPU details to increase the memory and add vCPUs.



3. Click on the Add New Device drop-down in the top right corner.
4. Select Network Adapter under Network. A New device (additional vNIC) is added to GigaVUE-FM.

Redeploy GigaVUE-FM Instance (with VMs Already Deployed)

If there is a need to remove an existing instance of GigaVUE-FM and reinstall it, delete all the virtual centers configured in the Virtual > Management > Virtual Center tab prior to deleting the GigaVUE-FM. To re-install GigaVUE-FM, refer to the Deploy OVA file on VMware vCenter or Install GigaVUE-FM for Microsoft Hyper-V.

Installing GigaVUE-FM on AWS

This section describes how to install GigaVUE-FM on AWS. It consists of the following sections:

- Before You Install describes the pre-requisites and the preparatory steps required for installing GigaVUE-FM.
- Install GigaVUE-FM on AWS describes the steps to deploy GigaVUE-FM on AWS and the steps to start GigaVUE-FM instance and configure it.

Before You Install

Before installing GigaVUE-FM on AWS environment refer to Prerequisites topic in the *GigaVUE Cloud Suite Deployment Guide - AWS* for detailed instructions on the basic requirements required for installing GigaVUE-FM on AWS.

Install GigaVUE-FM on AWS

You can subscribe to GigaVUE-FM in the marketplace and launch in AWS.

Refer to the following topics for instruction on installing GigaVUE-FM in AWS:

- Subscribe to GigaVUE-FM
- Initial Configuration

Subscribe to GigaVUE-FM

You can deploy the GigaVUE Cloud Suite for AWS from the AWS Marketplace.

NOTE: Only users with **aws-marketplace:ViewSubscriptions** permission in their IAM policy can subscribe to GigaVUE products.

To subscribe to the GigaVUE-FM, perform the following steps:

1. Log in to your AWS account.
2. Go to AWS Marketplace: https://aws.amazon.com/marketplace/.
3. In the **Search** field, type Gigamon and select **Search**.
4. Select the latest version GigaVUE Cloud Suite BYOL version. For details, refer to Licensing.
5. Select **View Purchase Options**. The terms and condition page is displayed.
6. Review the Terms and Conditions and select **"Accept Terms**".
7. Review the summary and then select **Continue to Configuration**.
8. In the **Configure this software** page, enter the following details for your deployment:
   a. Set **Fulfillment Option** to the default value.
   b. Select the latest version in the **Software Version** field.
   c. Choose your deployment **Region**.
   d. Select **Continue to Launch.**

9. In the **Configure this software** page, perform the following:
    a. In the **Choose Action** field, select the **Launch from Website** option.
    b. From the **EC2 Instance Type** drop-down list, select the instance type. Refer to Recommended and Supported Instance Types for AWS.
    c. From the **VPC Settings** drop-down list, select the VPC for deploying GigaVUE-FM.
    d. In the **Subnet Settings**, select your desired Subnet.
    e. In the **Security Group Settings**, configure the security group to match your access and permissions needs. For details, refer to Security Group
    f. Select your preferred **Key Pair** for secure access to the instance.
    g. In the **Advanced details** section, select **V2 only (token required)** from the Metadata version drop-down list.
    h. Select **Launch**.

For details, refer to Launch an instance using defined parameters in AWS documentation.

GigaVUE-FM is launched in AWS. You must perform the initial configuration to view the GigaVUE-FM UI.

Initial Configuration

It may take several minutes for the GigaVUE-FM instance to start up. Once it is up and running, perform the following steps to verify:

1. In your EC2 Instances page, select the **Instance ID** of the launched GigaVUE-FM to view the instance information.
2. Copy and paste the **Public IP address** into a new browser window or tab.
   The GigaVUE-FM GUI appears.

NOTE:

- If GigaVUE-FM is deployed inside AWS, use **admin** as the username and the **Instance ID** as the default password for the admin user to login to GigaVUE-FM, (Ex: i-079173111e2d73753). You can get the **Instance ID** of GigaVUE-FM in the EC2 Instances page.
- If GigaVUE-FM is deployed outside the AWS, use admin123A!! as the default admin password.

When you first log in to GigaVUE-FM, you are asked to change your default password.

What to do Next:

Configure the required permission and privileges in AWS. For detailed instructions on configuring required AWS permissions and privileges for your chosen deployment option, refer to the following topics:

Deployment Options	Reference Topics
Acquire Traffic using UCT-V	Example: Traffic Acquisition using the UCT-V
Acquire Traffic using Customer Orchestrated Source	Example: Traffic Acquisition using the Customer Orchestrated Source
Acquire Traffic using Customer Orchestrated Source when configuring Gateway Load Balancer in AWS	Example: Traffic Acquisition using the Customer Orchestrated Source with GwLB
Acquire Traffic using Customer Orchestrated Source when configuring Network Load Balancer in AWS	Example: Traffic Acquisition using the Customer Orchestrated Source with NwLB
Acquire Traffic using Traffic Mirroring	Example: Traffic Acquisition using Traffic Mirroring
Acquire Traffic using Traffic Mirroring when configuring Gateway Load Balancer in AWS	Example: Traffic Acquisition using Traffic Mirroring and GwLB
Acquire Traffic using Traffic Mirroring when configuring Network Load Balancer in AWS	Example: Traffic Acquisition using Traffic Mirroring with Network Load Balancer

Installing GigaVUE-FM on Azure

This section describes how to install GigaVUE-FM on Azure. It consists of the following sections:

- Before You Install describes the pre-requisites and the preparatory steps required for installing GigaVUE-FM.
- Install GigaVUE-FM on Azure describes the steps to install and deploy GigaVUE-FM on Azure.

Before You Install

You must create an account and configure a VNet as per your requirements. Refer to *Before You Begin* topic in the *GigaVUE Cloud Suite Deployment Guide - Azure* for detailed instructions.

Install GigaVUE-FM on Azure

You can launch GigaVUE-FM from the Azure VM dashboard or Azure Marketplace.

Install GigaVUE-FM Using Azure VM Dashboard

To install,

1. Go to **Azure VM Dashboard > Virtual Machines** and select **Create** to create an Azure Virtual Machine.

   For details, refer to Create a Linux virtual machine in the Azure in Azure Documentation.

2. Enter the details as mentioned in Table 1: GigaVUE-FM Installation Steps.

Install GigaVUE-FM Using Azure Marketplace

You can install GigaVUE-FM using the Azure Marketplace.

To install,

1. Go to Azure Marketplace and search for Gigamon.

   The latest version of Gigamon GigaVUE Cloud Suite for Azure appears.

2. Open the latest version of GigaVUE-FM.

3. Review and accept the terms for Gigamon GigaVUE Cloud Suite for Azure.

   For details, refer to Enable Subscription for GigaVUE Cloud Suite for Azure.

4. For details, refer to Create a Linux virtual machine in the Azure in Azure Documentation.

5. Enter the details as mentioned in Table 1: GigaVUE-FM Installation Steps.

The following table describes the important fields.

Table 1: GigaVUE-FM Installation Steps

Field	Description
Basics	
Subscription	Select your subscription.
Resource Group	Select an existing resource group or create a new resource group. For more information, refer to Create a resource group topic in the Azure Documentation.
System-assigned managed identity	Use a system-assigned managed identity when a resource needs to authenticate to other services, and you want the identity to be created and deleted with the resource. **Note**: If you update any role it would take more than an hour to reflect in GigaVUE-FM, however, if you use APP registration it would take between 5-10 minutes to update in GigaVUE-FM.

Field	Description
Virtual machine name	Enter a name for the VM.
Region	Select a region for Azure VM.
Availability Zone	Choose your availability zone
Security Type	To enable UEFI secure boot, select **Trusted launch virtual machines** from the drop-down list. Click **Configure security features** and ensure that the **Enable secure boot check box** is enabled.
Image	Select the latest GigaVUE-FM images. **Note**: You cannot select multiple images for a VM. Refer to Configure GigaVUE Fabric Components in Azure for more details on configuring GigaVUE V Series Node, GigaVUE V Series Proxy, and UCT-V Controller in Azure.
Size	The recommended instance types are as follows: • GigaVUE-FM - **Standard_D4s_v3** • UCT-V Controller - **Standard_B4ms** • V Series Node - **Standard_D4s_v4** • V Series Proxy - **Standard_Bms**
Authentication Type	We support only SSH public key authentication type • SSH public key o Enter the administrator username for the VM. o Enter the SSH public key pair name. • Password o Enter the administrator username for the VM. o Enter the administrator password.
Disks	
Disk Size	The required disk size for GigaVUE-FM is **2 x 40GB**.
Networking	
Virtual Network	Select an existing VNet or create a new VNet. For more information, refer to Create a virtual network topic in the Azure Documentation. On selecting an existing VNet, the **Subnet** and the **Public IP** values are auto-populated.
Configure network security group	Select an existing network security group or create a new network security group. For more information, refer to Network Security Groups. Configure the Network Security Group to allow GigaVUE-FM to communicate with the rest of the components.

NOTE: Verify the summary before proceeding to create. It will take several minutes for the VM to initialize. After the initialization is completed, you can verify the VM through the Web interface.

After the deployment, navigate to the VM overview page, copy the **Public IP address**, and paste it in a new web browser tab.

If GigaVUE-FM is deployed in Azure, use **admin123A!!** as the password for the **admin** user to login to GigaVUE-FM. You must change the default password after logging in to GigaVUE-FM.

Install and Upgrade GigaVUE-FM

You can install and upgrade the GigaVUE-FM fabric manager on cloud platforms or on-premises.

You have the flexibility of installing GigaVUE-FM across various supported platforms. Additionally, you can effectively manage deployments in any of the cloud platform as long as there exists IP connectivity for seamless operation.

Cloud

- Azure - To install GigaVUE-FM inside your Azure environment, you can launch the GigaVUE-FM instance in your VNet.
  - Installation: Refer to Install GigaVUE-FM on Azure.
  - Upgrade: Refer to Upgrade GigaVUE-FM in Azure topic in GigaVUE-FM Installation and Upgrade Guide.
- GigaVUE-FM can also be installed in any of the cloud platform. For details to install on in public, private or hybrid cloud platforms, refer to GigaVUE-FM Installation and Upgrade Guide.
  - Upgrade: For details, refer toUpgrade GigaVUE-FM topic in GigaVUE-FM Installation and Upgrade Guide.

On-premise

To install and upgrade GigaVUE-FM in your enterprise data center, refer to GigaVUE-FM Installation and Upgrade Guide available in the Gigamon Documentation Library.

  - Installation: Refer to GigaVUE-FM Installation and Upgrade Guide.
  - Upgrade: Refer toUpgrade GigaVUE-FM topic in GigaVUE-FM Installation and Upgrade Guide.

Installing GigaVUE-FM on GCP

This section describes how to install GigaVUE-FM on GCP. It consists of the following sections:

- Before You Install describes the pre-requisites and the preparatory steps required for installing GigaVUE-FM.
- Install GigaVUE-FM on GCP describes the steps to install and deploy GigaVUE-FM on GCP.

Before You Install

This section describes the hardware and virtual computing requirements for GigaVUE-FM.

Prerequisites for GigaVUE-FM

Minimum Virtual Computing Requirements	
Machine type	e2-standard-4
Memory	16GB
Virtual CPU (vCPU)	4vCPU
Additional Disk Size	40GB

Install GigaVUE-FM on GCP

The GigaVUE-FM can be launched from the Google Cloud Platform. The following instructions describe how to launch GigaVUE-FM in your Google Cloud Platform. Refer to Create and Start a VM Instance topics in GCP Documentation for more information.

Parameter	Description
Basics	
Name	Enter a name for the Instance.
Region	Select a region for Instance.
Zone	Select a zone for GCP instance.
Machine Configuration	
Machine Type	The recommended instance type is as follows: • GigaVUE-FM - **e2-standard-4**
Boot Disk: Click **Change**. Select the **Custom Image** tab.	
Image	Select the latest GigaVUE-FM images. **Note**: You cannot select multiple images for a VM.
Firewall	
Allow HTTP traffic	Enable the check box to allow HTTP traffic
Allow HTTPS traffic	Enable the check box to allow HTTPS traffic
Advanced Options	
Networking	

Parameter	Description
Network Interface	Select the Network Interface, the **Network** and the **Subnetwork** values.
SSH Keys	• SSH keys o Enter the **admin** under **username**. o Enter the SSH public key under **key**.
Disks	
Disk Size	The required disk size for GigaVUE-FM is **40GB**. **Note**: When using UEFI secure boot, you must include an additional disk with a minimum capacity of 40GB.
Security	
Turn on Secure Boot	Enable this option to use UEFI secure boot.

After the instance deployment, navigate to the VM instances page, copy the **External IP**, and paste it in a new web browser tab.

If GigaVUE-FM is deployed in GCP, use **admin123A!!** as the password for the **admin** user to login to GigaVUE-FM. You must change the default password after logging in to GigaVUE-FM.

Installing GigaVUE-FM on OpenStack

This section describes how to install GigaVUE-FM on OpenStack. It consists of the following sections:

- Before You Install describes the pre-requisites and the preparatory steps required for installing GigaVUE-FM.
- Install GigaVUE-FM on OpenStack describes the steps to install and deploy GigaVUE-FM on OpenStack.
- Initial GigaVUE-FM Configuration describes the steps to start GigaVUE-FM instance and configure it.

Before You Install

Before installing GigaVUE-FM on OpenStack environment, follow the steps given in the Before You Begin topic in the GigaVUE Cloud Suite Deployment Guide - OpenStack for minimum compute requirements and pre-requisites.

Install GigaVUE-FM on OpenStack

To launch the GigaVUE-FM instance inside the cloud:

1. Log into Horizon.
2. From the Horizon GUI, select the appropriate project, and select **Compute > Images**. The list of existing images is displayed.
3. Select the GigaVUE-FM image and click **Launch**. The Launch Instance dialog box is displayed.
4. In the **Details** tab, enter the following information and Click **Next**.

Parameter	Attribute
Instance Name	Initial hostname for the instance
Availability Zone	Availability zone where the image will be deployed.
Count	Number of instances to be launched

5. In the **Source** tab, verify that the selected GigaVUE-FM image is displayed under **Allocated** section and click **Next**.
6. In the **Flavor** tab, select a flavor complying the Supported Compute Requirements and then move the flavor from the **Available** section to the **Allocated** section. The selected GigaVUE-FM flavor is displayed under Allocated and click **Next**.
7. In the **Networks** tab, select the specific network for the GigaVUE-FM instance from the **Available** section and then move the Network to the **Allocated** section. The selected network is displayed under Allocated and Click **Next**.
8. In the **Network Ports** tab, click **Next** again.
9. In the **Security Groups** tab, select the appropriate security group for the GigaVUE-FM instance from the **Available** section and then move the Security Group to the **Allocated** section. For information about the security groups, refer to Security Group. The selected security group is displayed under Allocated. Click **Next**.
10. In the **Key Pair** tab, select the existing key pair from the **Available** section and then move the Key Pair to the **Allocated** section. or create a new key pair. For information about the key pairs, refer to Key Pairs. The selected key pair is displayed under Allocated. Click **Next**.
11. Click **Launch Instance**. The GigaVUE-FM instance takes few minutes to fully initialize.
12. From the Horizon GUI, navigate to **Compute > Instances**. You can view the launched instance displayed in the **Instances** page. During the initial boot-up sequence, click **Associate Floating IP**. The **Manage Floating IP Associations** dialog box appears.

13. In the Manage Floating IP Associations dialog box, enter the following information and click **Associate**.

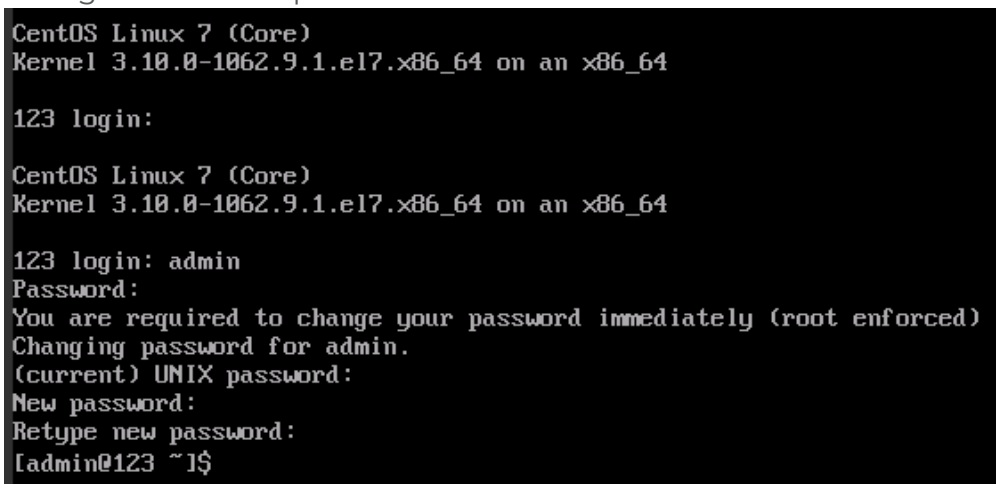
Parameter	Attribute
IP Address	Floating IP address of the instance
Port to be associated	Port for the GigaVUE-FM instance

The Floating IP is then displayed in the **IP Address** column of the corresponding Instance.

Initial GigaVUE-FM Configuration

After you have deployed a new GigaVUE-FM instance, you need to perform an initial configuration before you can start using GigaVUE-FM. This is a one-time activity that must be performed for each GigaVUE-FM instance deployed.

1. From the Horizon GUI, navigate to **Compute > Instances**.
2. In the Instances page, click the GigaVUE-FM instance name. The GigaVUE-FM instance **Overview** tab is displayed by default.
3. Click the **Console** tab and the **Instance Console** appears.
4. Log in as admin with password as admin123A!! and then the console prompts you to change the default password.



> **NOTE:** You can also choose to perform the IP Networking and NTP configurations by running the **fmctl set ip** command after you power on the GigaVUE-FM instance

5. To access GigaVUE-FM GUI, enter **wget -q -O - http://169.254.169.254/latest/meta-data/instance-id** command in the Instance Console and retrieve the instance ID in the format of **i-000000##** which is the default password for the admin user. If GigaVUE-FM is deployed inside OpenStack, use the **Instance ID** as the password for the admin user to login to GigaVUE-FM, however if GigaVUE-FM is deployed outside OpenStack, use admin123A!! as the default admin password.

Installing GigaVUE-FM on Nutanix

This section describes how to install GigaVUE-FM on Nutanix. It consists of the following sections:

- Before You Install describes the pre-requisites and the preparatory steps required for installing GigaVUE-FM.
- Install GigaVUE-FM on Nutanix describes the steps to install and deploy GigaVUE-FM on Nutanix.

Before You Install

This section describes the requirements and prerequisites to configure the GigaVUE Cloud Suite for Nutanix. Refer to Before You Begin topic in the *GigaVUE Cloud Suite for Nutanix Guide—GigaVUE-VM Guide* for prerequisites and minimum compute requirements.

Before installing GigaVUE-FM on Nutanix environment you must upload the recent GVM, and Fabric Controller qcow2 image file to the Prism Central. Refer to Upload Fabric Images topic in the *GigaVUE Cloud Suite for Nutanix Guide—GigaVUE-VM Guide* for more details on how to upload fabric images..

Install GigaVUE-FM on Nutanix

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

1. Log in to Prism Central.
2. In Prism Central, select **Dashboard > Compute & Storage > VMs**. The **VMs** page appears.

   NOTE: You can view the uploaded images under **Compute & Storage > Images**. For more detailed information on how to upload fabric images refer Upload Fabric Images.
3. On the VMs page, click **Create VM**. The **Create VM** window appears.

4. In the **Configuration** tab, enter the following details:

Field	Description
Name	Enter a name for the VM.
Description	Enter description for the VM. (optional)
Cluster	Select the cluster in which you wish to deploy GigaVUE-FM.
Number of VMs	Enter the number of GigaVUE-FM you wish to deploy.
VM Properties	• **CPU(s)**—number of vCPUs required. Minimum value is 1 vCPUs. However, the recommended value is 4 vCPUs. • **Cores Per vCPU**—number of cores per vCPU. Minimum value is 2 vCPUs. • **Memory**—memory size of the vCPU(s). Minimum value is 16GB.

5. In the **Resources** tab, enter or select the following details:

Field	Description

Disks	Click **Attach Disk**. The Attach Disk dialog box opens. Enter or select the following details:
	• **Type** - Select **Disk** from drop-down menu.
	• **Operation** - Select **Clone from Image** from the drop-down. This allows you to clone the GigaVUE-FM qcow2 image which you have already uploaded.
	• **Image** - Select the Image uploaded in the Upload Fabric Images section.
	• **Capacity** - Enter the Capacity in GB. Minimum value is 40GB.
	• **Bus Type** - Select the Bus Type as SCSI.
	Click **Save**.
	Add additional disk:
	Click **Attach Disk**. Enter or select the following details:
	• **Type** - Select **Disk** from drop-down menu.
	  • **Operation** - Select **Allocate on Storage Container** from the drop-down.
	  • **Storage Container** - Select SelfServiceContainer from the drop down.
	  • **Capacity** - Enter the Capacity in GB. Minimum value is 40GB.
	  • **Bus Type** - Select the Bus Type as SCSI.

Networks	Click **Attach to Subnet**. The **Attach to Subnet** dialog box opens. Enter or select the following details: • **Subnet** - Select the Subnet from the drop-down menu. • **Network Connection State** - Ensure the status is Connected. • **Assignment Type** - Select the IP assignment type from the drop-down menu. • **IP Address** - Enter the static IP address for VLAN. This field is enabled only if Assign Static IP is selected in the Assignment Type field.
Boot Configuration	Select the boot configuration: UEFI Mode - To enable UEFI boot mode, select the **UEFI Mode** option.
Shield VM Security Settings	Enable the **Secure Boot** check box to use the secure boot mode.

6. In the **Management** tab, enter or select the following details:

7.

Field	Description
Categories	Search for the category to be assigned to the VM. The policies associated with the category value are assigned to the VM.
Timezone	Select the time zone from the drop-down list.

8. Review the details in the review tab.
9. Click **Save**.
10. The new VM appears on the VMs list with the **Power State** as **Off**.
11. Select the new VM and then select **Actions > Power On**. The new VM is now Active.
12. Copy the IP address of the newly launched GigaVUE-FM and paste it on the browser to login to the GigaVUE-FM. You can login to GigaVUE-FM using the default user name **admin** and the default password admin123A!!.

You can also launch the GigaVUE-FM console using the following steps:

1. Select the new VM launched in the Prism Central and then select **Actions > Launch console**. The GigaVUE-FM console appears.
2. Log in to the GigaVUE-FM console as admin with the user name as admin and default password admin123A!! and you are requested to change the password.

Installing GigaVUE-FM on MS Hyper-V

This section describes how to install and configure GigaVUE-FM in a Microsoft Hyper-V environment. It consists of the following main sections:

- Before You Install describes the preparatory steps and the hardware requirements required for installing GigaVUE-FM.
- Install GigaVUE-FM for Microsoft Hyper-V describes the steps to install and deploy GigaVUE-FM.
- Initial GigaVUE-FM Configuration describes the steps to start GigaVUE-FM instance and configure it.

Before You Install

This section describes the hardware and virtual computing requirements for GigaVUE-FM. Before installing GigaVUE-FM, ensure that a supported version of Windows Server is installed on hardware that meets minimum requirements for hardware requirements).

Ensure that the GigaVUE-FM time is set correctly to ensure accuracy of the trending data that is captured.

The Hyper-V implementations provided by the following Windows Server versions have been tested and found to operate acceptably with GigaVUE-FM:

- Windows Server 2012 R2 and later

Windows Server Hardware Requirements

The following table describes the minimum requirements for the hardware on which Microsoft Hyper-V runs GigaVUE-FM.

Minimum Hardware Requirements	
Hypervisor	Microsoft Hyper-V
CPU	One or more 64-bit x86 CPUs with virtualization assist (Intel-VT or AMD-V) enabled. **Note**: To run GigaVUE-FM, hardware support for virtualization must be enabled. Make sure that the BIOS option for virtualization support is not disabled. For more information, see your BIOS documentation

Minimum Hardware Requirements	
RAM	At least 16GB
Disk Space	At least 84GB shared (FC, iSCSI, NFS, or FCoE) or locally attached storage (PATA, SATA, SCSI). **Note**: Increase the disk space depending on the configuration load requirements for the given GigaVUE-FM instance.
Network	At least one 1Gb NIC

NOTE: Refer to the Microsoft documentation for information on enabling Hyper-V.

The following table lists the virtual computing resources that the Windows Server must provide for each GigaVUE-FM instance.

Minimum Virtual Computing Requirements	
Memory	Minimum 8GB memory
Virtual CPU	2 vCPU
Virtual Storage for Guest	84GB Virtual IDE (the Hyper-V default) • System Disk - 40GB • Swap Disk - 4GB • Data Disk - 40GB
Virtual Network Interfaces	1 vNIC using Hyper-V Virtualized NIC (the Hyper-V default)

Install GigaVUE-FM for Microsoft Hyper-V

The GigaVUE-FM software package for Microsoft Hyper-V environments is distributed as an **ISO image** file. This section describes how to deploy a fresh installation of GigaVUE-FM on a Hyper-V host.

Install GigaVUE-FM from an ISO Image File

Use the Hyper-V Manager to install the GigaVUE-FM ISO image file.

NOTE: The ISO image file must be stored in a location that is accessible to the Hyper-V Manager.

To create the Virtual Machine for GigaVUE-FM in Microsoft Hyper-V:

1. Click **Start > Administrative Tools > Hyper-V Manager** to open the Hyper-V Manager.
2. From the Actions pane, click **New > Virtual Machine**. Refer to Figure 1Opening the Virtual Machine Wizard.

   The **New Virtual Machine Wizard** opens.

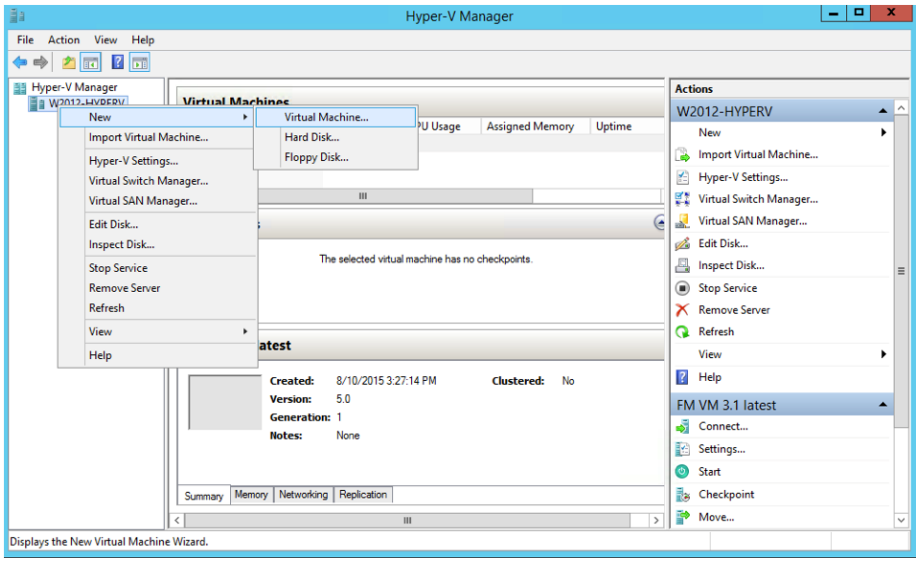


Figure 1 *Opening the Virtual Machine Wizard*

3. Read the notes on the Before You Begin screen (refer to Figure 2Before You Begin Screen), and then click **Next** to continue.

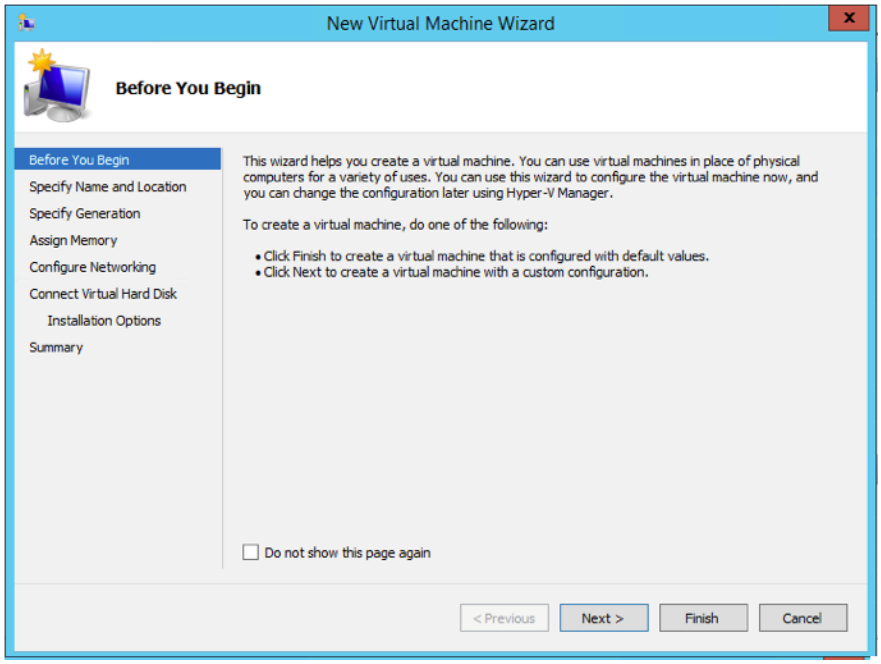


Figure 2 *Before You Begin Screen*

4. After the **Specify Name and Location** page of the **New Virtual Machine Wizard** opens, do the following:

   a. Supply a descriptive name for the GigaVUE-FM virtual machine in the **Name** field.

By default, the virtual machine will be stored in the default configuration folder shown in the **Location** text box. You can change this default location by checking the **Store the virtual machine in a different location** check box and providing a custom path.

b. Click **Next** to continue.

5. On the **Specify Generation** page of the **New Virtual Machine Wizard**, select **Generation 2**.

> **NOTE:** You must specify the option Generation 2 for UEFI boot. UEFI boot supports only Generation 2.

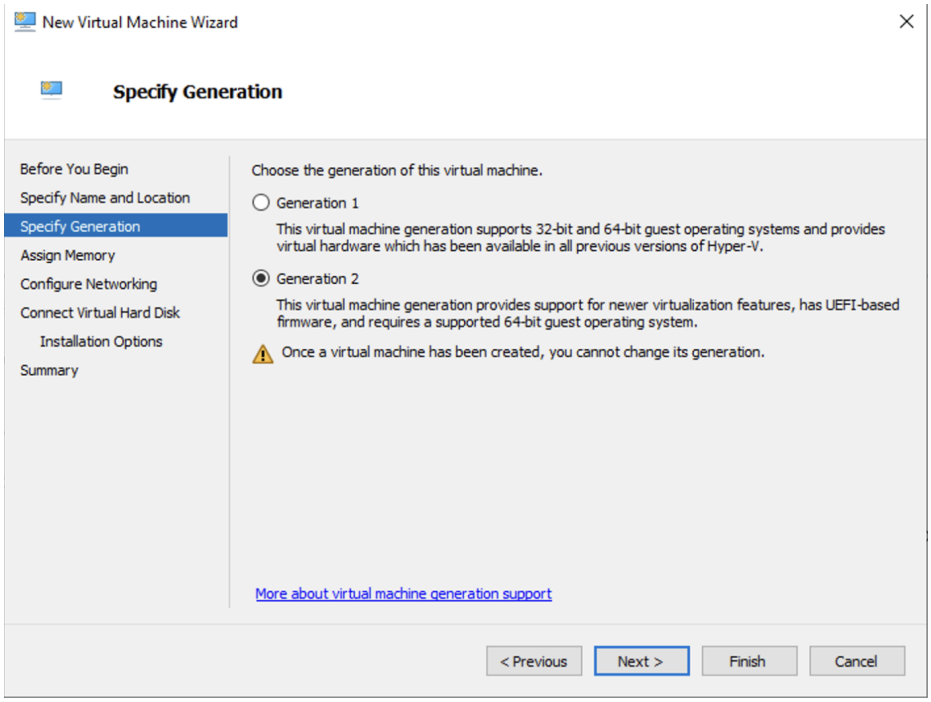


Figure 3 *Specify Generation Screen*

6. Click **Next** to continue.

   The **Assign Memory** page of the **New Virtual Machine Wizard** opens.

7. Change the **Memory** assigned to this virtual machine to **16384** MB, and then click **Next** to continue.

   The **Configure Networking** page of the **New Virtual Machine Wizard**opens.

8. From the Connection drop-down list, select the virtual network to which GigaVUE-FM will connect to, and then click **Next** to continue.

   The **Connect Virtual Hard Disk**page of the **New Virtual Machine Wizard** opens, which is shown in Figure 4Connect Virtual Hard Disk Page.

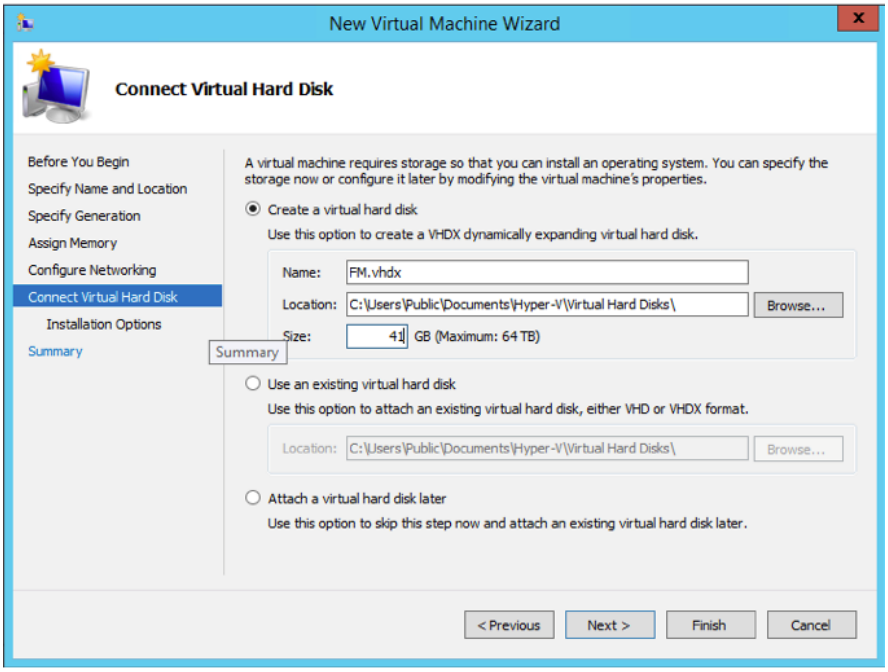


Figure 4 *Connect Virtual Hard Disk Page*

9. Select the **Create a virtual hard disk** option and set the **Size** to **41**GB.

   You can accept the default **Name** and **Location** or customize them according to your needs. When you have finished, click **Next** to continue.

   The **Installation Options** page of the **New Virtual Machine Wizard** opens, which is shown in Figure 5Install Options Page.

10. Use this dialog box to select the ISO image file for GigaVUE-FM. As shown in the figure Figure 5Install Options Page, set the following options:

    a. Select the **Install an operating system from a bootable CD/DVD-ROM** option.

    b. Set the **Media** option to **Image file (.iso)**.

    c. Use the **Browse** button to navigate to the GigaVUE-FM ISO image file.

    d. Click **Next** to continue.

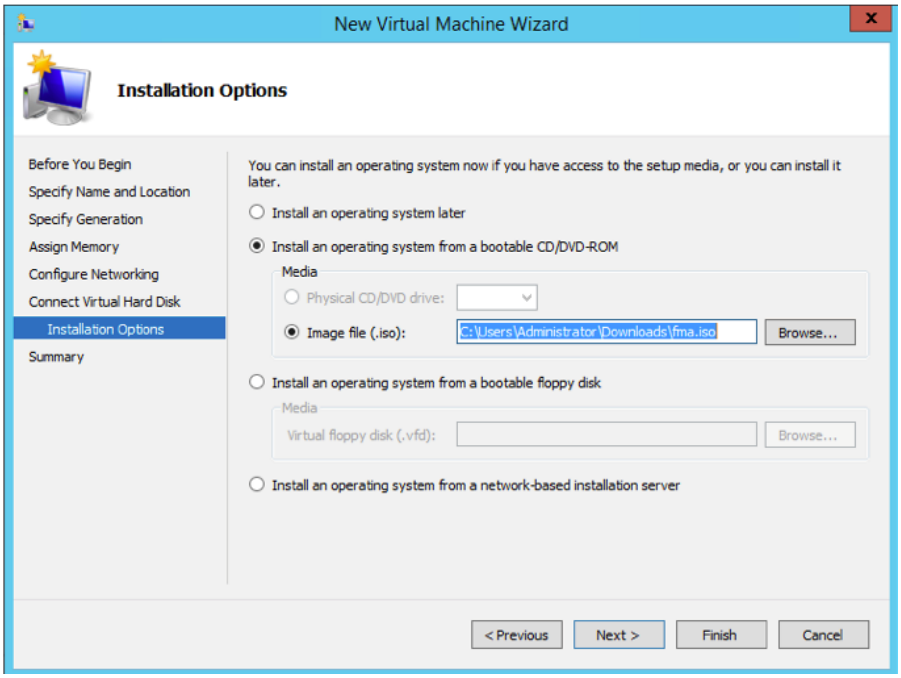


Figure 5 *Install Options Page*

After you click **Next**, the summary page of the **New Virtual Machine Wizard** opens, showing the settings that you configured for the GigaVUE-FM virtual machine.

11. Click **Finish** to create the GigaVUE-FM virtual machine as configured. Alternatively, you can use the **Previous** button to go back and change settings.

    The New Virtual Machine Wizard only creates the GigaVUE-FM virtual machine, returning you to the Hyper-V Manager when creation is complete. The new GigaVUE-FM virtual machine is listed in the **Action** pane by the name you supplied during installation.

    The procedures given below will take you through the steps of adding an additional virtual hard disk and actually installing GigaVUE-FM.

Add Additional Virtual Hard Disk and Install GigaVUE-FM

To add an additional virtual hard disk and install GigaVUE-FM:

1. In Hyper-V Manager, from the Actions pane, select the newly added GigaVUE-FM virtual machine, and then click **Settings**.
2. In the Settings page, select **Security**.

3. On the Security page, select the **Microsoft UEFI Certificate Authority** from the template drop down and click on **Apply**.

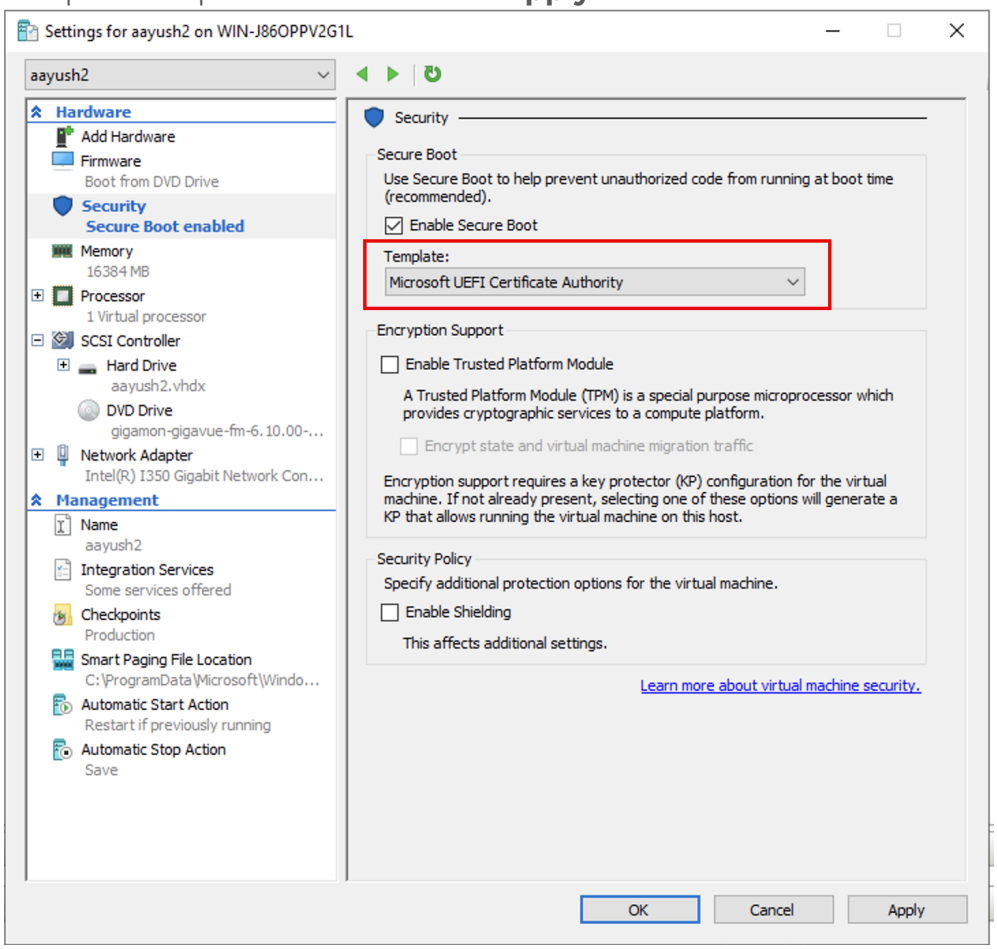


Figure 6 *Security Screen*

4. Now on the Security page, select **SCSI Controller**.
5. In the SCSI Controller pane that appears to the right, select **Hard Drive**, and then click **Add**. Refer to the following figure:

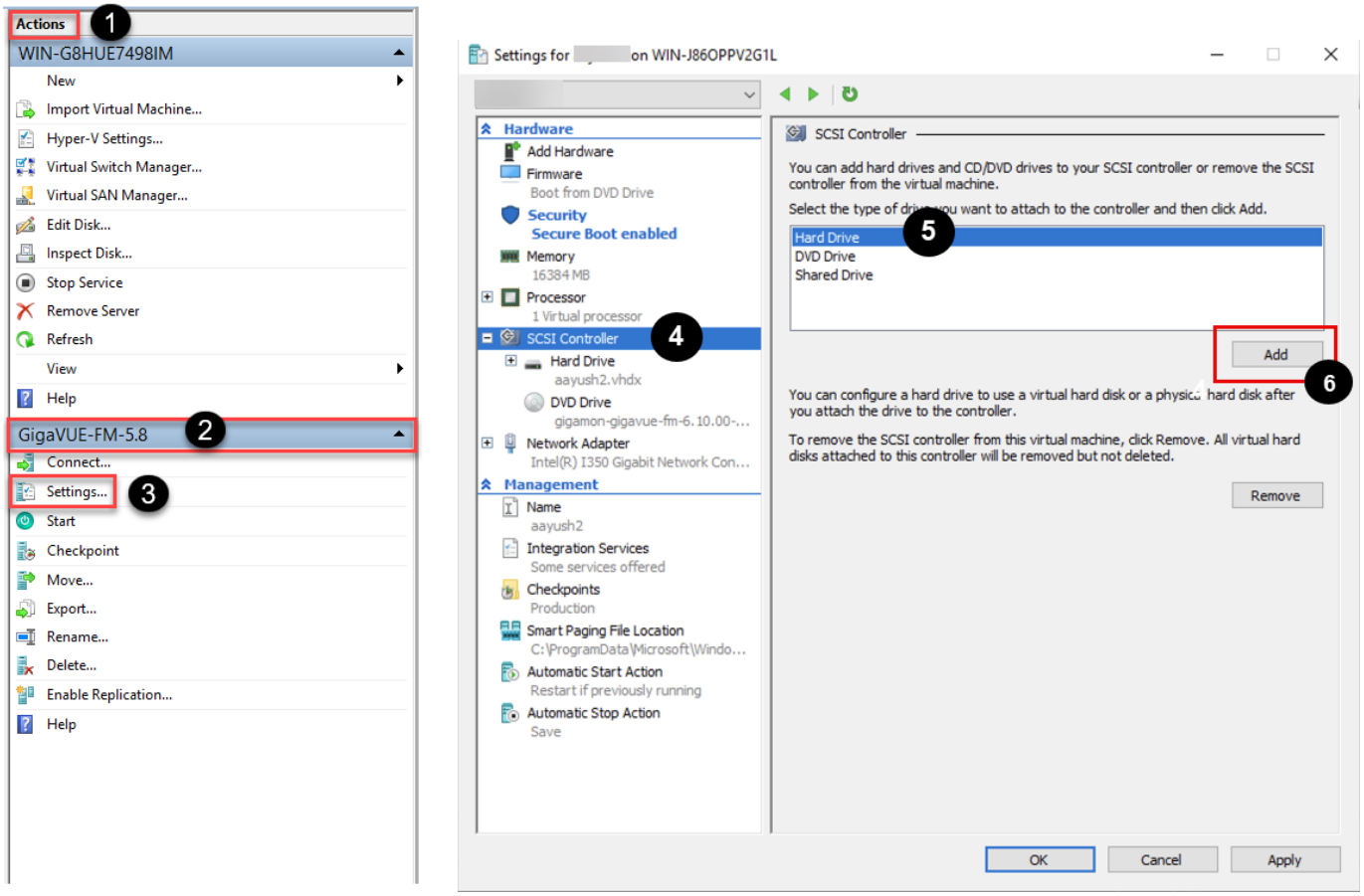


Figure 7 *Navigating to Add Additional Hard Drive*

A new Hard Drive entry is added under SCSI Controller.

6. Select the Hard Drive entry.
7. In the Hard Drive pane that appears to the right, select **Virtual hard disk**, and then click **New** as shown in the following figure:

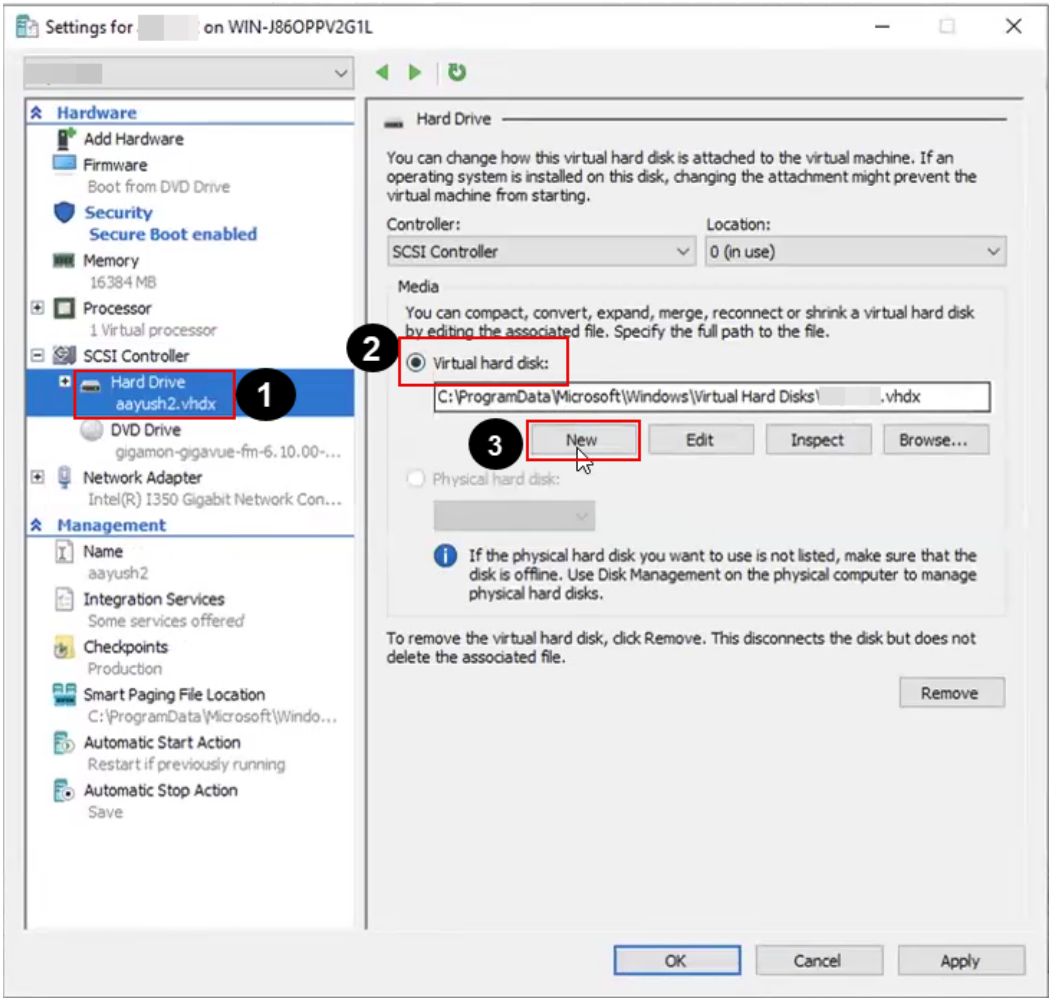


Figure 8 *Navigating to the New Virtual Hard Disk Wizard*

The **New Virtual Hard Disk Wizard** opens.

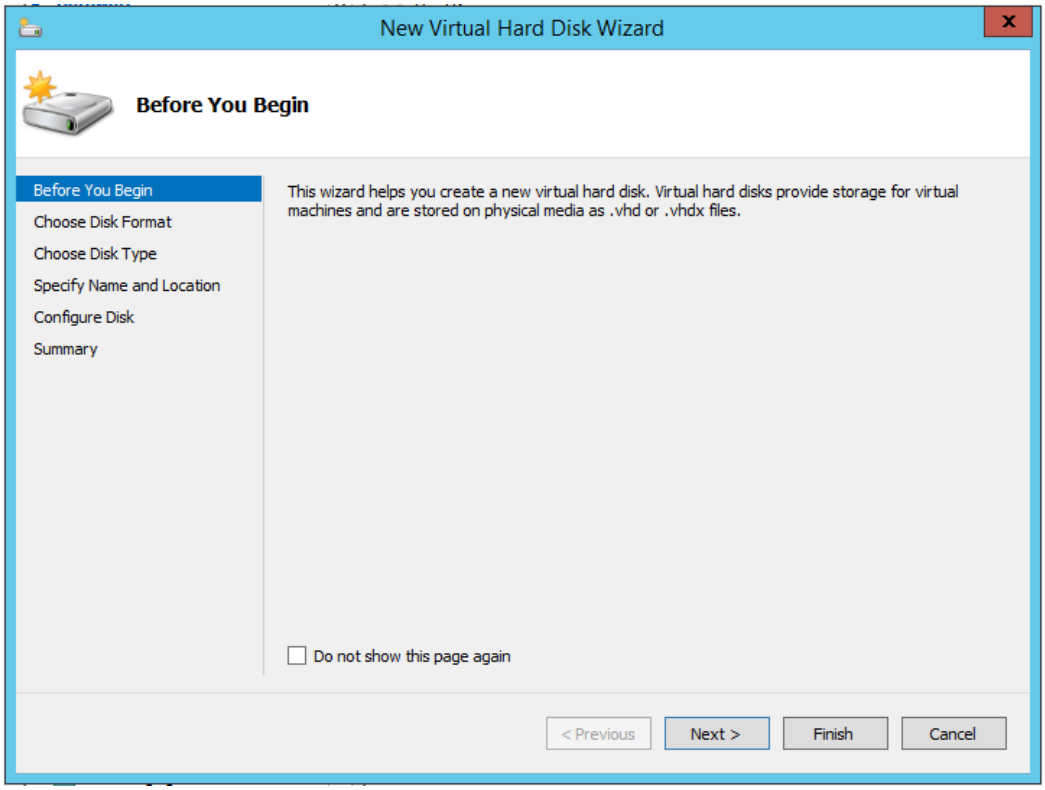


Figure 9 *New Virtual Hard Disk Wizard*

8. Click **Next** to go to the Choose Disk Format page of the wizard.
9. Select the required format that you want to use for the virtual hard disk, and then click **Next**.

   The Choose Disk Type page of the wizard appears.

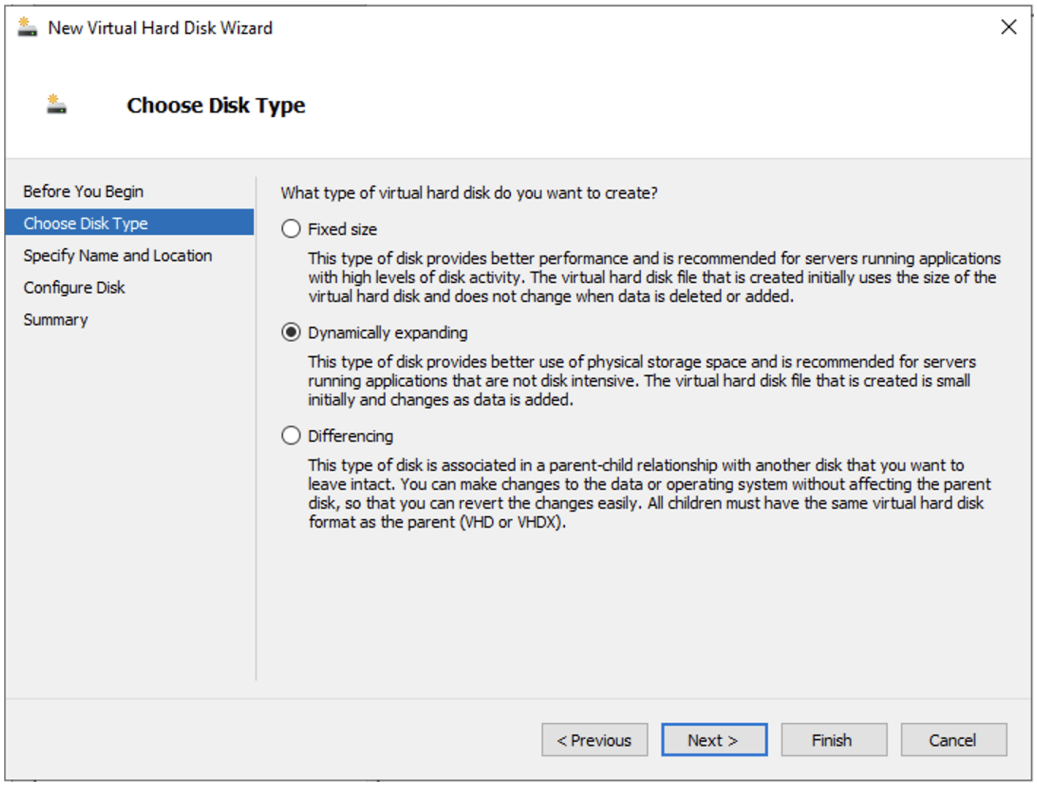


Figure 10 *Choose Disk Type*

10. Select the required disk type for the virtual hard disk, and then click **Next**.

    The Specify Name and Location page of the wizard appears.

11. Specify a unique name for the virtual hard disk, and then browse and select the location where you want to save the disk.
12. Click **Next**. The Configure Disk page of the wizard appears.
13. You can choose one of the following options to configure the virtual hard disk:
    - Create a blank virtual hard disk of size 41GB.
    - Choose a physical hard disk from which you can copy the contents into the new virtual hard disk.
    - Browse and select a virtual hard disk from which you can copy the contents into the new virtual hard disk.
14. Click **Next** to exit the New Virtual Hard Disk Wizard.
15. Click **OK**. The GigaVUE-FM installation begins as shown in the following figure:

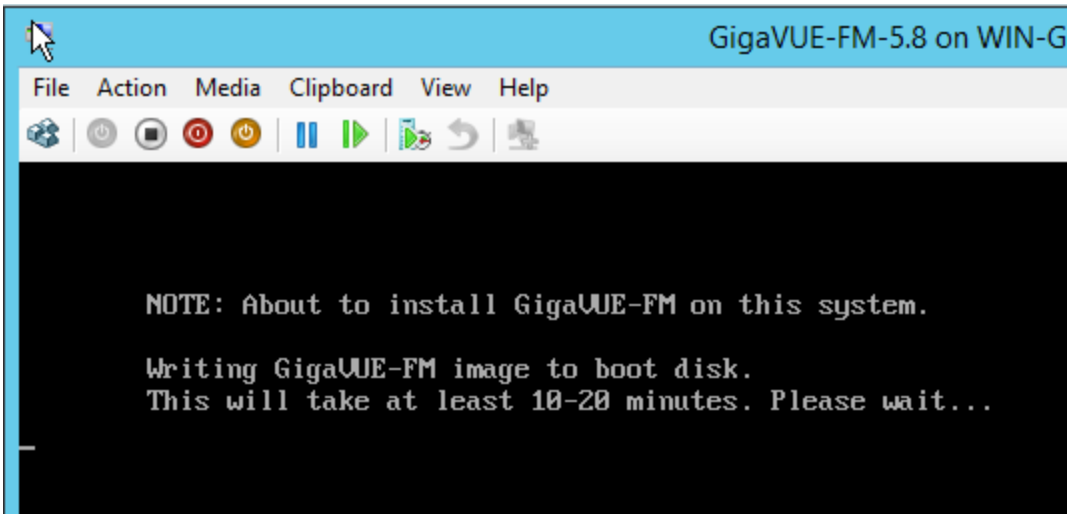


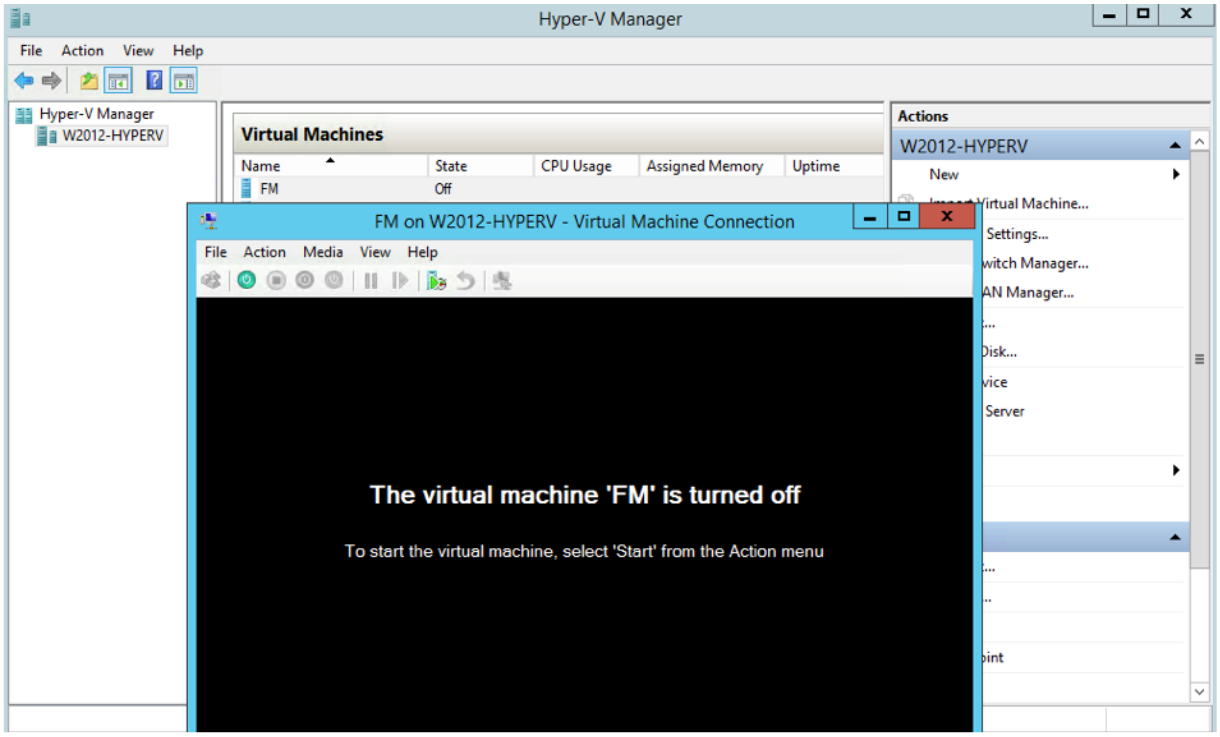
Figure 11 *GigaVUE-FM Installation Begins*

It may take several minutes for the installation to complete. The system will reboot after the installation is completed.

Connect and Power On the GigaVUE-FM Virtual Machine

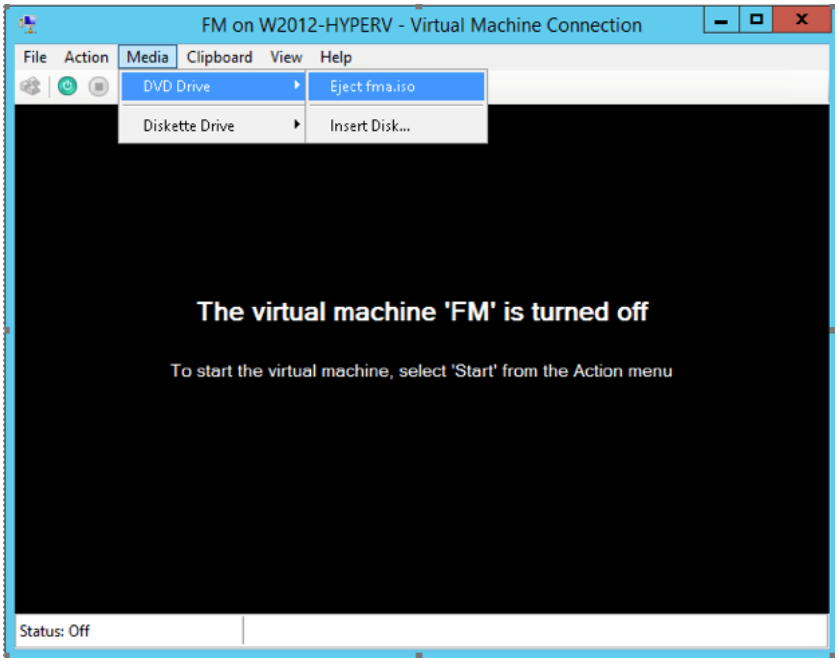
The next step is to connect to the GigaVUE-FM virtual machine from within Hyper-V Manager and start it. This begins the actual installation of the GigaVUE-FM Virtual Appliance from the connected ISO image file. Once GigaVUE-FM finishes installing from the ISO image file, you will then disconnect the ISO image file and restart the virtual machine.

1. In Hyper-V Manager, locate the **Virtual Machines** entry in the results pane, right-click the GigaVUE-FM virtual machine, and click the **Connect** option.
2. The Virtual Machine Connection tool opens for the GigaVUE-FM virtual machine.



3. Select **Action > Start** to start the GigaVUE-FM virtual machine from the Virtual Machine Connection tool.
4. The GigaVUE-FM virtual machine powers on. You can monitor the progress of the system start in the Virtual Machine Connection tool.

   The system power-on can take several minutes as GigaVUE-FM is installed from the ISO image file. Disconnect the media before Powering On as shown below:



Disconnect the ISO Image File

It is important to disconnect the ISO image file before you power on GigaVUE-FM again so you don't have to go through the image install process again. Disconnect the ISO image file as follows:

1. In Hyper-V Manager, locate the **Virtual Machines** entry in the results pane and select the GigaVUE-FM virtual machine.
2. In the **Actions** pane, click the **Settings** entry under the GigaVUE-FM virtual machine name.

   A Settings dialog box for the GigaVUE-FM virtual machine appears.
3. Select the **DVD Drive** entry in the panel on the left of the Settings dialog box and change its setting from **Image file** to **None**, as shown in the figure below.
4. Click the **OK** button to apply the changes.

This concludes the installation procedure for GigaVUE-FM on Hyper-V. The next step is to power on the virtual machine and perform its initial configuration, as described in Initial GigaVUE-FM Configuration .

IMPORTANT: Clear the browser cache before logging in to GigaVUE-FM.

Initial GigaVUE-FM Configuration

After you have deployed a new GigaVUE-FM instance, you need to perform an initial configuration before you can start using GigaVUE-FM. This procedure only needs to be performed once for each GigaVUE-FM instance deployed.

> **NOTE:** Use Care When Shutting Down or Rebooting GigaVUE-FM. **Never** directly Power-Off the virtual machine. For Microsoft Hyper-V environment, you cannot use any of the reset, or turn-off hooks. Using either of these may lead to corruption that will prevent proper GigaVUE-FM operation.

The best ways to **shutdown** a GigaVUE-FM on Hyper-V is to use either Shutdown or Ctrl+Alt+Del from the **Action** button on the virtual console.

To perform the initial configuration:

1. Click **Start > Administrative Tools > Hyper-V Manager**.

   > **NOTE:** Make sure you have already disconnected the ISO image file used to install GigaVUE-FM. Refer to Disconnect the ISO Image File for details.

2. Locate the **Virtual Machines** entry in the results pane, right-click the GigaVUE-FM virtual machine, and click the **Connect** option. The Virtual Machine Connection tool opens for the GigaVUE-FM virtual machine.
3. Select **Action > Start** to start the GigaVUE-FM virtual machine from the Virtual Machine Connection tool. The GigaVUE-FM virtual machine powers on and displays a login prompt.
4. Log in as **admin** with password **admin123A!!**. You will be prompted to change your password. After you change and confirm your password, perform the following steps:

    a. Provide a unique hostname for GigaVUE-FM. Note that the hostname may contain letters, numbers, periods (**.**), and hyphens (**-**), but may not begin with a hyphen. No other special characters are permitted.

    Example: set hostname <host-name>

    b. Enter the required domain name.

    Example: set domain <domain-name>

    c. Decide whether to use DHCP or STATIC for the management interface. Choose one of the following options:

    - If you want to set DHCP the **IPv4 Address** or **IPv6 Address**, **CIDR**, **Gateway**, **DNS Servers**, and **Search Domains** are dynamically set up for the management interface.

      Example: set ip dhcp

    - If you want to set static ip for GigaVUE-FM, you must provide the following:
        i. **IPv4 Address** or **IPv6 Address**, and the respective **CIDR** and **Gateway**.

        Example: set ip static*<IP address>*/*<mask> <gateway>*

        Example: set ip6 static*<IPv6 address>*/*<mask> <gateway>*

        ii. In the **DNS Servers** field, provide the address of any additional name servers required. Enter the set of IP addresses with spaces in between.

        Example: set nameservers *<IP address>*

        iii. In the **Search Domains** field, provide the required DNS domains with spaces in between.
        Example: set searchdomain <domain-name>

    d. You can choose to either enable or disable NTP using fmctl command.

    Example: set ntp enable 0.pool.ntp.org, 1.pool.ntp.org, 2.pool.ntp.org

    e. Reboot your GigaVUE-FM virtual machine.

    You can now access GigaVUE-FM by opening a browser and entering its IP address (the IP address you specified).

NOTE: You must reboot the GigaVUE-FM, when there is a change in the IP address of the GigaVUE-FM.

Installing GigaVUE-FM on KVM

This section describes how to install and configure GigaVUE-FM in a KVM environment. It consists of the following main sections:

- Before You Install describes the pre-requisites and the preparatory steps required for installing GigaVUE-FM.
- Install GigaVUE-FM for KVM using ISO Image File describes the steps to install and deploy GigaVUE-FM on KVM environment.
- Initial GigaVUE-FM Configuration describes the steps to start GigaVUE-FM instance and configure it.
- Deploy Application Metadata Exporter (AMX) on KVM Hypervisor describes the steps deploy GigaVUE-FM in the KVM environment.

Before You Install

This section describes the hardware requirements and the limitations for installing GigaVUE-FM in a KVM environment. Before you begin, ensure that the GigaVUE-FM time is set correctly to ensure accuracy of the trending data that is captured.

Limitations

You can install GigaVUE-FM in a KVM environment, but you cannot access GigaVUE-FM through CLI in a KVM environment using SSH. In KVM, you can only access the GigaVUE-FM CLI using the VNC console.

System Requirements

This section describes the hardware and virtual computing requirements for GigaVUE-FM.

Linux Server Hardware Requirements

The following table describes the minimum requirements for the hardware on which KVM runs GigaVUE-FM.

Minimum Hardware Requirements	
Hypervisor	KVM **Supported** (tested on previous versions of GigaVUE-FM) ▪ v2.0.0
CPU	One or more 64-bit x86 CPUs with virtualization assist (Intel-VT or AMD-V) enabled. **Note**: To run GigaVUE-FM, hardware support for virtualization must be enabled. Make sure that the BIOS option for virtualization support is not disabled. For more information, see your BIOS documentation.
RAM	At least 16GB.
Disk Space	At least 84GB shared (FC, iSCSI, NFS, or FCoE) or locally attached storage (PATA, SATA, SCSI). **Note**: Increase the disk space depending on the configuration load requirements for the given GigaVUE-FM instance.
Network	At least one 1Gb NIC.

The following table lists the virtual computing resources that the Linux Server must provide for each GigaVUE-FM instance.

Minimum Virtual Computing Requirements	
Memory	Minimum 8GB memory
Virtual CPU	2 vCPU
Virtual Storage for Guest	84GB • System Disk - 40GB • Swap Disk - 4GB • Data Disk - 40GB
Virtual Network Interfaces	One vNIC

Install GigaVUE-FM for KVM using ISO Image File

The GigaVUE-FM software package for KVM environments is distributed as an **ISO image** file. The following sections describe how to deploy a fresh installation of GigaVUE-FM on a KVM host.

These steps are only valid for new installations of GigaVUE-FM.

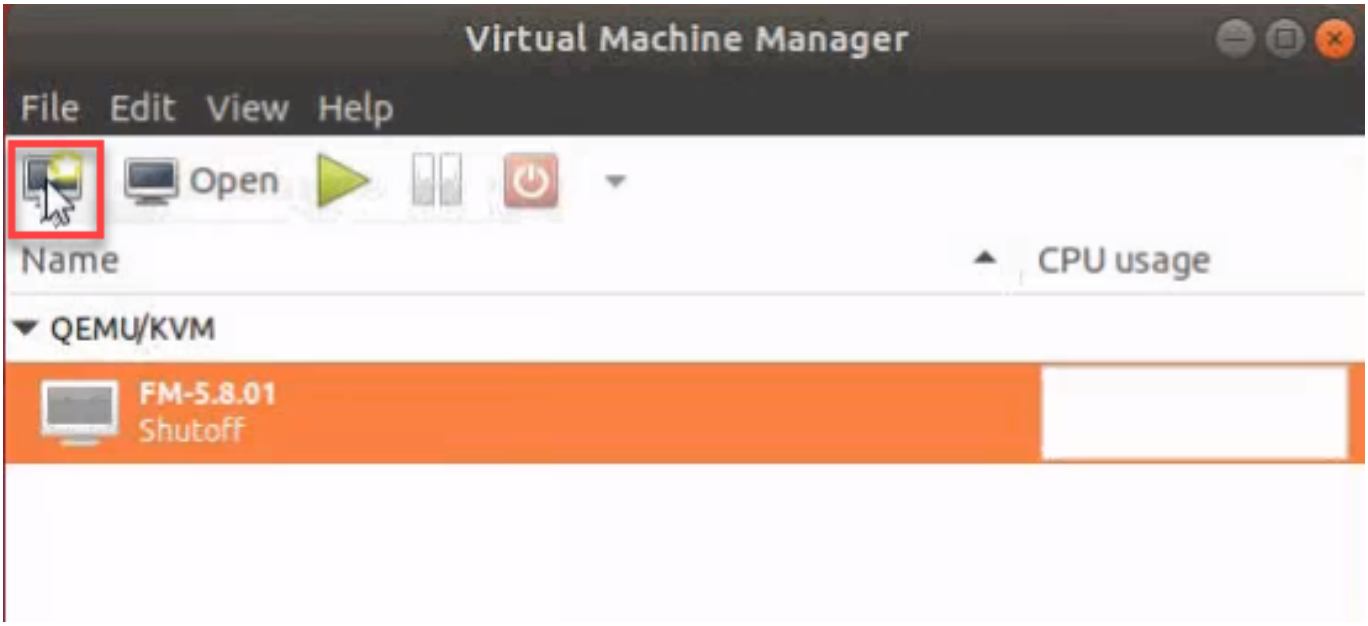
Use the Virtual Machine Manager to install the GigaVUE-FMISO image file.

NOTE: The ISO image file must be stored in a location that is accessible to the Manager.

To create the Virtual Machine for GigaVUE-FM in KVM:

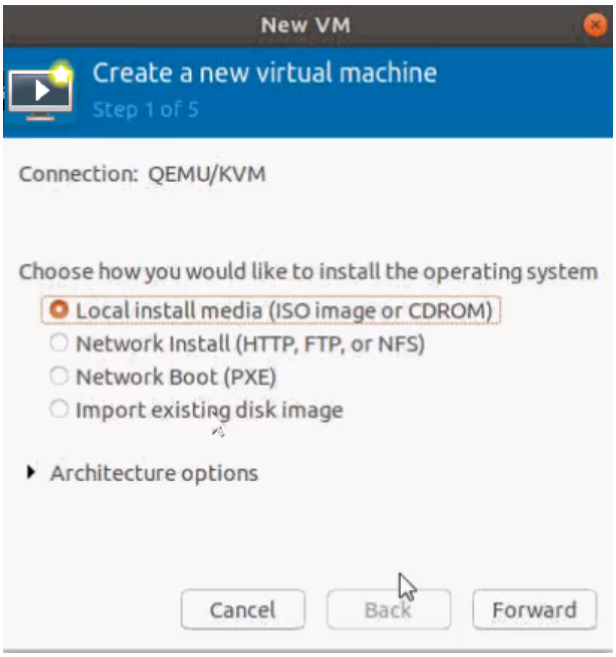
NOTE: These instructions use "Virtual Machine Manager" to create and manage the virtual machines (VMs).

1. Open the Virtual Machine Manager, and then click the **Create a new virtual machine** icon as shown in the following figure:

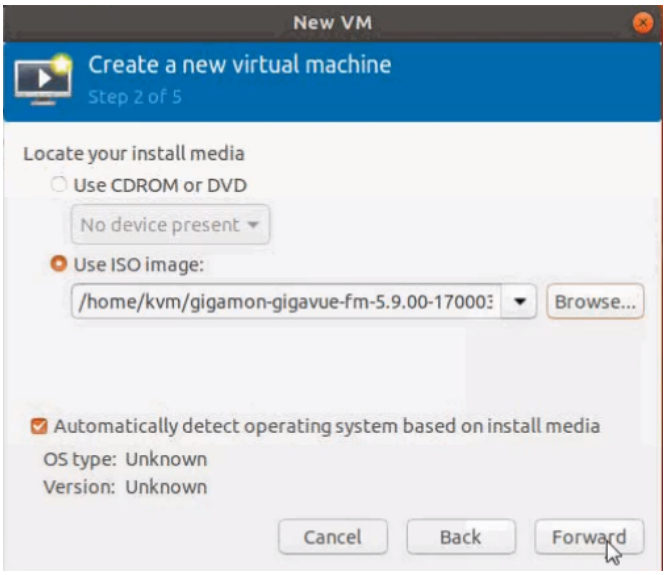


The **New Virtual Machine Wizard** opens.

2. Select **Local install media (ISO image or CDROM)**, and then click **Forward** to continue.

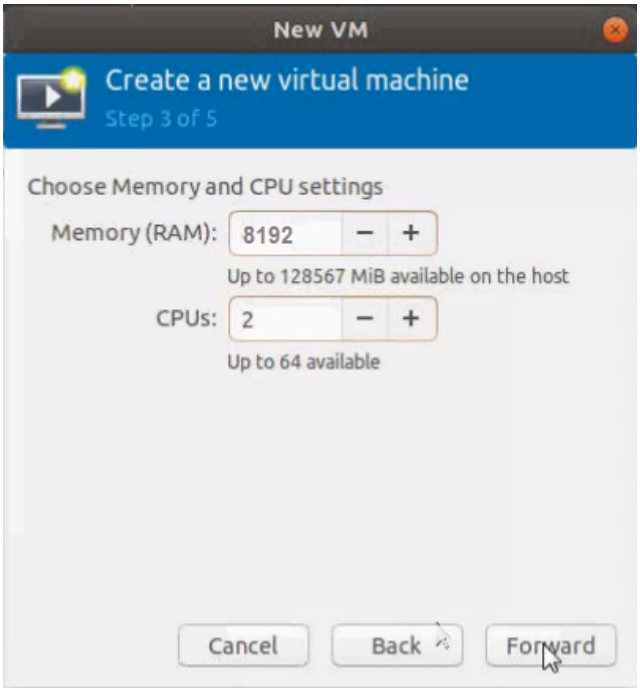


3. Browse and select the location from where to upload the GigaVUE-FM ISO image, and then select the **Automatically detect operating system based on install media** check box.



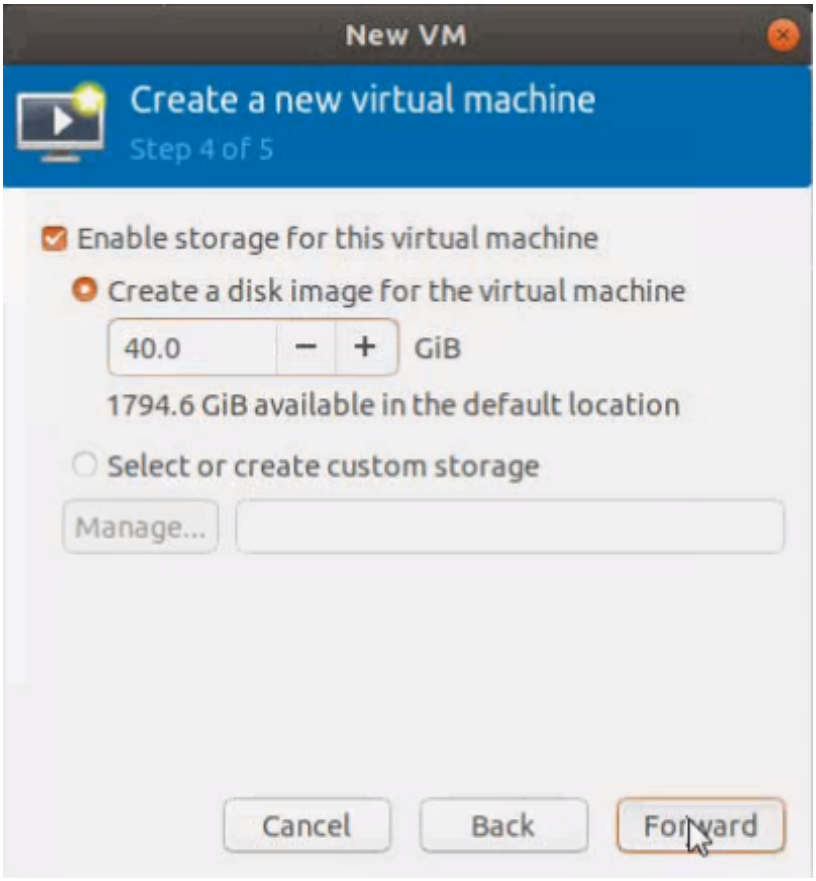
Click **Forward** to continue.

4. Set the **Memory** and **CPU** Settings.



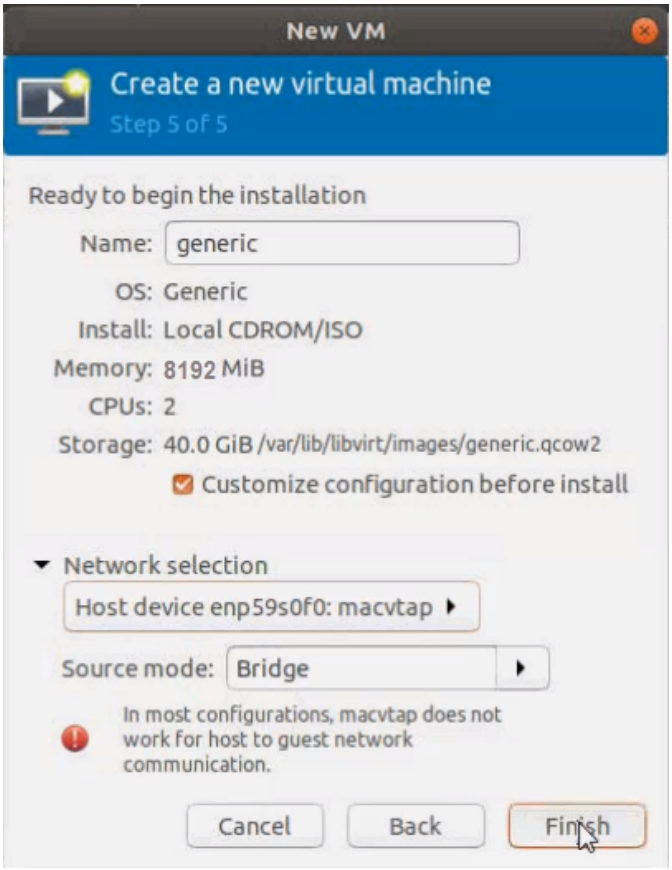
Click **Forward** to continue.

5. Select the **Enable storage for this virtual machine** check box, and set the **Size** to **40**Gb.

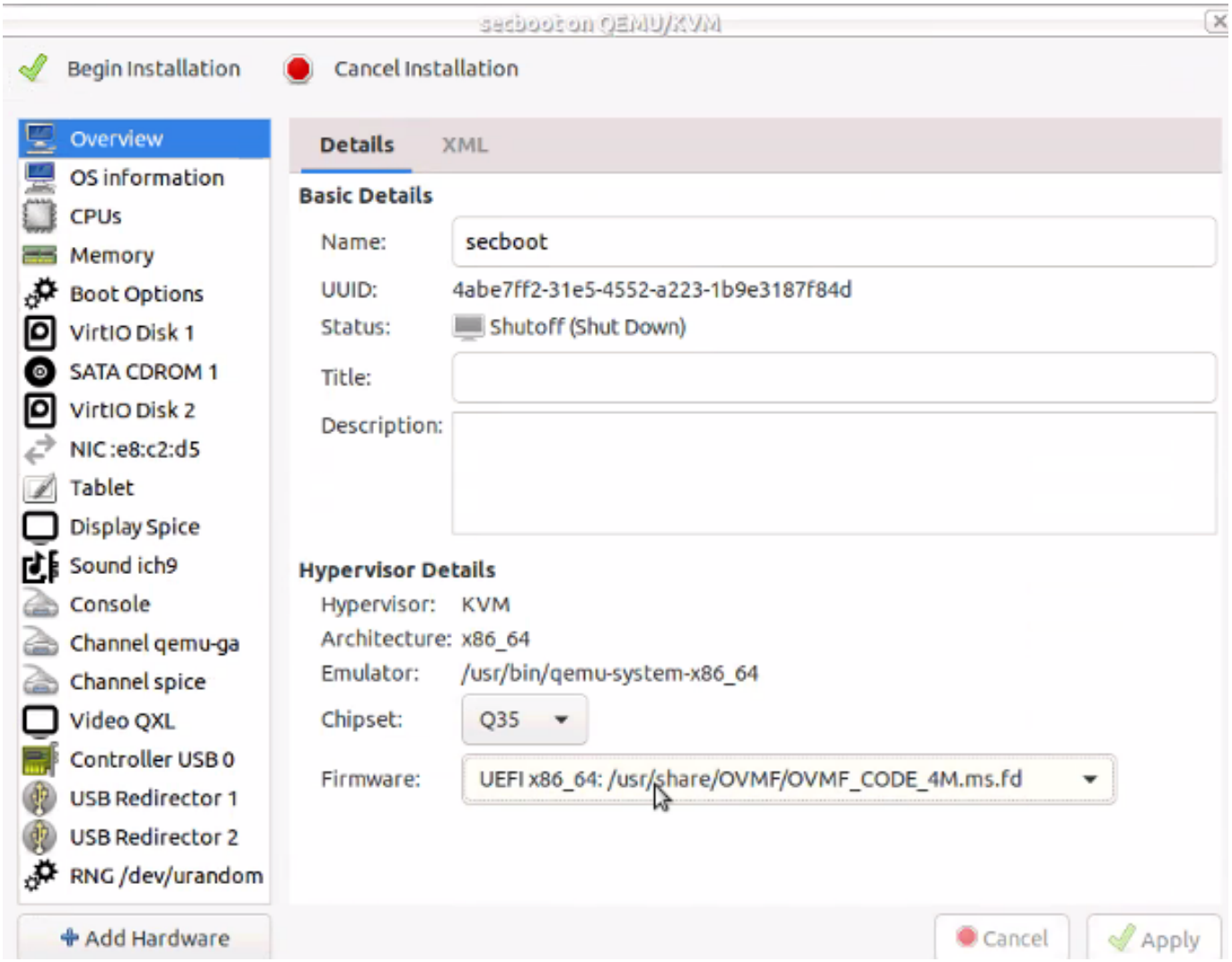


Click **Forward** to continue.

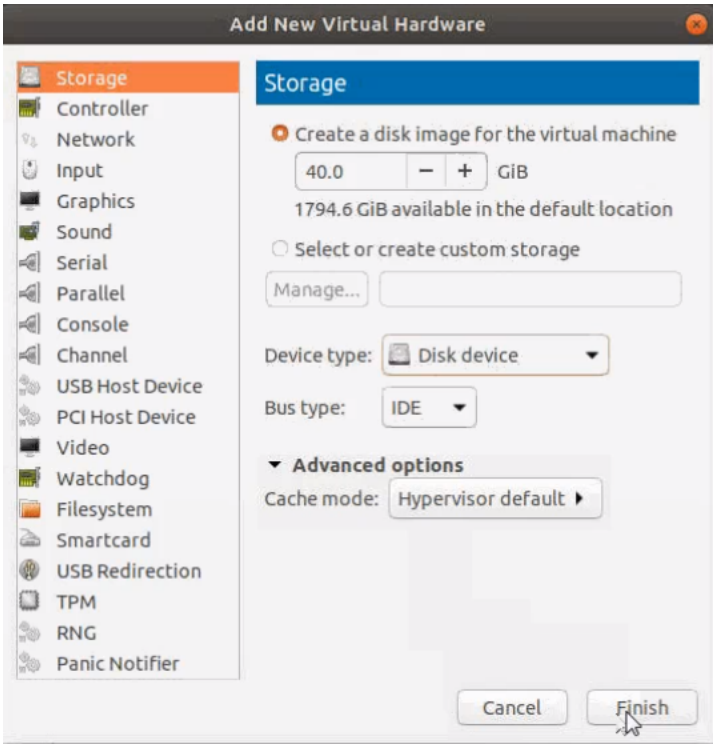
6. On the next screen, complete the following:
   a. Enter a unique name for the virtual machine.
   b. Select the **Customize configuration before install** check box.
   c. From the **Network Selection** drop-down list, select the required network communication option.
   d. From the **Source mode** drop-down list, select **Bridge**.
   e. Click **Finish**.



The summary screen appears as shown in the following figure:



7. To enable UEFI Secure boot, choose the **UEFI X86_64:** option from the **Firmware** drop-down list.
8. Verify the options that you have selected, and then click **Add Hardware** to add the second disk.
9. In the Add New Virtual Hardware screen, set the disk size to **40** GiB.



10. Click **Finish**. The summary screen appears again where you can verify the details of IDE Disk 2 that you added. Click **Begin Installation**.

    Once the installation is complete, the virtual machine launches.

Initial GigaVUE-FM Configuration

After you have deployed a new GigaVUE-FM instance, you need to perform an initial configuration before you can start using GigaVUE-FM. This procedure only needs to be performed once for each GigaVUE-FM instance deployed.

To perform the initial configuration:

1. Open Virtual Machine Manager.
2. Locate the **Virtual Machines** entry in the results pane, right-click the GigaVUE-FM virtual machine, and click the **Open** option.

   The Virtual Machine Connection tool opens for the GigaVUE-FM virtual machine.
3. Open the GigaVUE-FM virtual machine from the Virtual Machine tool.
4. The GigaVUE-FM virtual machine powers on and displays a login prompt.
5. Log in as **admin** with password **admin123A!!**. You will be prompted to change your password. After you change and confirm your password, perform the following steps:

a. Provide a unique hostname for GigaVUE-FM. Note that the hostname may contain letters, numbers, periods (**.**), and hyphens (**-**), but may not begin with a hyphen. No other special characters are permitted.

   Example: set hostname <host-name>

b. Enter the required domain name.

   Example: set domain <domain-name>

c. Decide whether to use DHCP or STATIC for the management interface. Choose one of the following options:

   - If you want to set DHCP the **IPv4 Address** or **IPv6 Address**, **CIDR**, **Gateway**, **DNS Servers**, and **Search Domains** are dynamically set up for the management interface.

     Example: set ip dhcp

   - If you want to set static ip for GigaVUE-FM, you must provide the following:
     i. **IPv4 Address** or **IPv6 Address**, and the respective **CIDR** and **Gateway**.

        Example: set ip static<*IP address*>/<*mask*> <*gateway*>

        Example: set ip6 static<*IPv6 address*>/<*mask*> <*gateway*>

     ii. In the **DNS Servers** field, provide the address of any additional name servers required. Enter the set of IP addresses with spaces in between.

        Example: set nameservers <*IP address*>

     iii. In the **Search Domains** field, provide the required DNS domains with spaces in between.
        Example: set searchdomain <domain-name>

d. You can choose to either enable or disable NTP using fmctl command.

   Example: set ntp enable 0.pool.ntp.org, 1.pool.ntp.org, 2.pool.ntp.org

e. Reboot your GigaVUE-FM virtual machine.

   You can now access GigaVUE-FM by opening a browser and entering its IP address (the IP address you specified).

NOTE: You must reboot the GigaVUE-FM, when there is a change in the IP address of the GigaVUE-FM.

Deploy Application Metadata Exporter (AMX) on KVM Hypervisor

For using the KVM hypervisor on GigaVUE-FM, the following sections provide information on deploying a fresh installation of GigaVUE-FM in the KVM environment. This setup enables the deployment of the Application Metadata Exporter (AMX) on a GigaVUE-FM Hardware Appliance.

Install GigaVUE-FM on KVM hypervisor

Prerequisite:

1. Download the recent GigaVUE-FM image from Gigamon Customer Portal and move qcow2 file to a desired location.
2. Install and enable Cockpit services on the KVM hypervisor. To enable Cockpit View on the KVM hypervisor, follow these steps:
   a. Update the system package list.

   ```
   sudo apt update
   ```

   b. Install Cockpit and Cockpit-Machines.

   ```
   sudo apt install -y cockpit cockpit-machines
   ```

   c. Enable and start the Cockpit service.

   ```
   sudo systemctl enable --now cockpit.socket
   ```

   Once these commands are executed, access KVM using port 9090 in your browser: http://<your-server-IP>:9090

To create a VM in KVM hypervisor for deploying the GigaVUE-FM, follow the instructions.

Parameters	Instructions	Mandatory field
Connection	Select **System**.	Yes
Installation Type	Select **Cloud base image** from the drop-down list.	Yes
Installation Source	Select the location of the qcow2 image.	Yes
Operating System	Select the latest Rocky Linux version.	Yes

Parameters	Instructions	Mandatory field
Storage	Select **Create new qcow2 volume**.	Yes
Storage Limit	Enter the required storage limit (ex: 40 GiB).	Yes
Memory	Enter the required memory allocation (ex: 16 GiB).	Yes

Click **Create and edit** to edit the Virtual Machine. Modify the **Firmware** to **UEFI** and click **Install**.

Edit the VM as mentioned in the following table.

Parameters	Instructions	Mandatory field
Firmware	Select **UEFI** from the drop-down list	Yes
Disks Add new disk		
Size	Enter the disc size as required (ex: 40 GiB).	Yes
Format	Select the format (ex: **qcow2**).	Yes
CPU		
vCPU Maximum	Enter the maximum number of vCPU's required (ex: 10).	Yes
vCPU Count	Enter the number of CPUs to allocate (ex: 8).	Yes

NOTE: The values mentioned for CPU, size, format, storage, and memory are sample entries and can be customized as required. Refer to Before You Install to know more about the hardware and virtual computing requirements for GigaVUE-FM.

Click **Run** to deploy **GigaVUE-FM**. Copy the IP address of the newly launched GigaVUE-FM and paste it on the browser to login to the GigaVUE-FM. You can login to GigaVUE-FM using the default user name **admin** and the default password admin123A!!.

Upgrade GigaVUE-FM

This section describes how to upgrade GigaVUE-FM to the latest revision in either a VMware ESXi host or in Microsoft HyperV environment.

NOTE:

- **Before you upgrade**, read Important GigaVUE-FM Upgrade Guidance for special guidelines and caveats related to upgrading from specific versions of GigaVUE-FM.
- Upgrade requires the underlying processor having AVX instruction set support.
  - When you migrate the GigaVUE-FM from the host that does not support AVX to the host that supports AVX, the GigaVUE-FM must be power cycled so that it will choose the current host's processor flags.
- To prevent data loss, do not allow the GigaVUE-FM instance to be vMotioned. Since vCenter does not provide a mechanism for GigaVUE-FM to prevent or control vMotion events, it is your responsibility to ensure that vMotion is never initiated for the GigaVUE-FM.

At a high level, the upgrade process involves the following steps:

1. Before starting an upgrade to GigaVUE-FM, get the latest image, upgrade information, and Release Notes from the Software & Release Notes download page (login required) on the Gigamon Community.
2. Be sure to review the *GigaVUE Release Notes* for the latest release before performing the upgrade.
   - Ensure your environment supports any specified system requirements.
   - Check the minimum memory requirements in the new release as they may change between releases.
3. Once the GigaVUE-FM image is obtained, download it to a server within your environment. This must be a server that your current GigaVUE-FM instance can access to upload it.
4. (**Important**) Save your current configuration using the facilities provided by the hypervisor before upgrading.
5. Verify that the GigaVUE-FM instance time is set correctly to ensure accuracy of the trending data that is captured.
6. Perform the upgrade using either the Command-Line Interface (CLI) or the GigaVUE-FM User Interface (UI).

Upgrade Methods:

- Upgrade GigaVUE-FM from the GigaVUE-FM CLI
- Upgrade GigaVUE-FM from the UI

Important GigaVUE-FM Upgrade Guidance

To upgrade GigaVUE-FM, the recommended procedure is to back up your current configuration and perform the pre-upgrade checks (memory requirements, the maximum number of images) before installing the image. You can upgrade via the GigaVUE-FM GUI or CLI. It is recommended that you plan your upgrade before performing any upgrade steps. Refer Supported Upgrade Paths for GigaVUE-FM for details on upgrade path.

Best Practice: Before performing an upgrade, in addition to taking a backup of GigaVUE-FM, also take a Sysdump, which provides valuable configuration information that is not captured in the backup. You can use the Sysdump after the upgrade to troubleshoot any upgrade-related issues with your configurations.

Always take a snapshot of GigaVUE-FM before performing a version upgrade on GigaVUE-FM to ensure quick recovery in case of upgrade failures.

GigaVUE-FM Upgrade Guidance for GigaVUE Cloud Suite

Starting from software version 6.10.00, the Secure Communication feature in GigaVUE-FM enhances security by enabling mutual Transport Layer Security (mTLS)-based authentication across GigaVUE Fabric Components. Upon upgrading to 6.10.00, this feature will be implemented. Before upgrading GigaVUE-FM and the fabric components, ensure that the necessary ports are open as mentioned in Network Firewall Requirement for GigaVUE Cloud Suite.

Note: When you upgrade GigaVUE-FM with a Monitoring Session in V Series Node 1 to version 6.12 from an earlier release, follow these steps to ensure a successful migration:

- Undeploy the existing V Series Node 1 Monitoring Session.
- Delete any Egress VXLAN TEPs with the Multi-Tunnel feature enabled.
- Recreate the Egress VXLAN TEP with the required configuration and enable the Multi-Tunnel flag.
- Establish a Link connection between the LB application and the Egress VXLAN TEP.
- Deploy the Monitoring Session.

GigaVUE-FM Upgrade Guidance for Application Intelligence

Starting from Software version 6.5.00, Application Intelligence solution can be configured from the Monitoring Session Page. You cannot create a new Application Intelligence Session or edit an Application Intelligence Session for virtual environment from the **Application Intelligence** page.

In the Monitoring Session page, Application Filtering can be configured either with Pass All or Advanced Rules in the fifth Rule Set. You cannot configure Application Filtering with both Pass All and Advanced Rules in the fifth Rule set. Therefore, before upgrading your GigaVUE-FM to 6.5.00, ensure that none of the existing Application Intelligence Session has Application Filtering configured with both Advanced Rules as Drop and No Rule Match Pass All in the fifth rule set. Otherwise, after upgrading to 6.5.00, you must delete that particular Application Intelligence Session to continue with your migration process.

For this reason, before upgrading to 6.5.00, you must edit the fifth rule set in the Application Filtering such that either only Advanced Rule as Drop or No Rule Match Pass All exists. Else, after upgrading to 6.5.00, you must delete that particular Application Intelligence Session to continue with your migration process. Refer to Migrate Application Intelligence Session to Monitoring Session section in the respective cloud deployment guides for more detailed information on how to migrate the existing Application Intelligence Session to the Monitoring Session page.

GigaVUE-FM Migration Guidance

GigaVUE-FM v5.8.01 introduced several significant changes that included improvements in usability and performance. These changes involved upgrading and replacing databases and changing the underlying operating system. For this reason, when upgrading from any pre-5.8.xx version of GigaVUE-FM to version 5.8.xx or above, you must first migrate your existing configurations and data such as audit logs, events, syslogs, and statistics from your current pre-5.8.xx GigaVUE-FM version to GigaVUE-FM v6.13.00.

Special migration steps and supported upgrade paths are provided under Migrate GigaVUE-FM. After GigaVUE-FM v5.10.xx, migration is no longer needed when upgrading to future versions. For supported upgrade paths requiring a special migration step, see Supported Upgrade Paths for GigaVUE-FM.

Supported Upgrade Paths for GigaVUE-FM

Supported upgrade paths for GigaVUE-FM 6.1.xx and later:

You can upgrade your GigaVUE-FM instance to any of the subsequent two versions. To upgrade your GigaVUE-FM from 6.1.xx to later versions, the supported upgrade paths are:

IMPORTANT:

When you are upgrading to 6.13, you must upgrade all fabric components within **30** days of upgrading GigaVUE-FM to ensure version compatibility before the next UCT-V certificate renewal. Complete the following upgrades immediately after the GigaVUE-FM upgrade to ensure that UCT-V certificates renew only after all components are running compatible versions, reducing the risk of registration or communication failures:

- UCT-V Controller
- UCT-V's
- GigaVUE V Series Node
- GigaVUE V Series Proxy

6.1.xx > 6.3.xx > 6.5.xx > 6.7.xx > 6.8.xx > *6.10.02 > 6.12.xx > 6.13.xx

6.2.xx > 6.4.xx > 6.6.xx > 6.8.xx > *6.10.02 > 6.12.xx > 6.13.xx

6.3.xx > 6.5.xx > 6.7.xx > 6.8.xx > *6.10.02 > 6.12.xx > 6.13.xx

6.4.xx > 6.6.xx > 6.8.xx > *6.10.02 > 6.12.xx > 6.13.xx

6.5.xx > 6.7.xx > 6.8.xx > *6.10.02 > 6.12.xx > 6.13.xx

6.6.xx > 6.8.xx > *6.10.02 > 6.12.xx > 6.13.xx

6.7.xx > 6.8.xx > *6.10.02 > 6.12.xx > 6.13.xx

6.8.xx > *6.10.02 > 6.12.xx > 6.13.xx

6.9.xx > *6.10.02 > 6.12.xx > 6.13.xx

*MongoDB changes were introduced in 6.10.02. You must upgrade to 6.10.02 before moving to 6.11.xx or later.

IMPORTANT:

- To prevent upgrades outside the supported paths, which may cause GigaVUE-FM to corrupt, a prevention mechanism has been introduced in GigaVUE-FM version 6.12. Starting from GigaVUE-FM version 6.12, any unsupported upgrade attempt is blocked and marked as failed. Review the **FMCTL log** (*/var/log.fm-ctl.log*) for details on the failure.

- For versions prior to 6.12, unsupported upgrade paths are not automatically blocked. You must follow the correct upgrade sequence mentioned above. If you fail to follow, it may cause GigaVUE-FM to corrupt or lockup.

GigaVUE-FM Upgrade Rules and Notes

- **Best Practice:** Always upgrade your GigaVUE-FM instance before upgrading the GigaVUE-OS nodes. You can upgrade the attached nodes from the device or from GigaVUE-FM. The latter is recommended. Refer to *"Upgrading Software on a GigaVUE-FM Node or a Cluster from GigaVUE-FM"* in the *GigaVUE Fabric Management Guide*.
- **If upgrading from GigaVUE-FM versions lower than 5.10.xx**: You cannot directly upgrade your GigaVUE-FM instance to release 5.10.00 from a release prior to 5.8.xx. If your current version of GigaVUE-FM is 5.7.xx or lower and you want to upgrade to software version 6.13.xx, you must first migrate to GigaVUE-FM 5.10.xx and then upgrade to 5.11.xx.

  NOTE: For instructions on how to migrate refer to Migrate GigaVUE-FM in GigaVUE 5.10 Documentation.

- **If upgrading from GigaVUE-FM versions lower than 5.5.00**: While upgrading from any version lower than 5.5.00, an association of more than one VPort to the same GigaSMART group needs to be removed for any existing GTP GigaSMART operation.
- **If upgrading from GigaVUE-FM versions lower than 5.4.00**: Be aware of the minimum memory requirement changes between releases. Earlier releases specified 4GB of memory for the OVA template; whereas versions after 5.4.00 require 8GB and versions after 5.7.00 require 16GB. If the existing virtual or physical hardware running GigaVUE-FM is configured with less memory than required, then increase the amount of memory available to the GigaVUE-FM machine. Refer to GigaVUE-FM Memory and CPU Requirements in the *GigaVUE Release Notes* for additional details.

Upgrade GigaVUE-FM from the GigaVUE-FM CLI

The following steps describe how to upgrade an existing GigaVUE-FM deployment to the current release.

1. Verify that only three images are present on the GigaVUE-FM server.
2. Download the new image into GigaVUE-FM using either HTTP, HTTPS, FTP, SCP, or SFTP.
3. Install the new image.
4. Change boot partition.
5. Upgrade GigaVUE-VM (Optional).

Notes:

- It is important that you must be a user with fm_super_admin role when upgrading the image on the existing GigaVUE-FM.
- GigaVUE-FM backup and restore files use a text based format; binary backups or restore on physical nodes are not supported. For binary backups, you must use the CLI commands rather than GigaVUE-FM. For more information about the CLI commands, refer to the *GigaVUE-OS CLI Reference Guide*.
- In your commands use the actual file names of the image(s) you are fetching, managing, or deploying.

Step 1: Verify that only three images are present on GigaVUE-FM server

1. To begin an upgrade, open a SSH session and log into GigaVUE-FM.
2. Check the number of images currently available for installation with the following command from the GigaVUE-FM CLI:

   ```
   $ fmctl image list
   ```

   Important: If there are three images listed in the **Images available to be installed** section of the **fmctl image** list output, Gigamon recommends you to delete existing older images. GigaVUE-FM will display a warning if you attempt to fetch a fourth image.

3. To delete an existing image from the server use the following command:

   ```
   $ fmctl image delete <Filename>
   ```

4. Go to Step 2: Fetch the latest release of GigaVUE-FM.

Step 2: Fetch the latest release of GigaVUE-FM

Gigamon software image can be downloaded using the GigaVUE-FM CLI through a local FTP server. To fetch the latest release, do the following:

1. Locate and download the required software image from the Gigamon Community site.
2. Copy the image file to your local FTP server.
3. Use the **fmctl image fetch** command to retrieve the software image from your file server. The CLI shows you the progress of the image fetch with a series of hash marks, returning you to the system prompt when complete.

   NOTE: The **image fetch** command supports the use of HTTP, HTTPS, FTP, SCP, or SFTP for the transfer of images. The examples are provided to show the syntax only. In your commands, use your actual login credentials and the actual name of the image file you wish to fetch.

   a. The following command uses SCP to retrieve the **gigamon-gigavue-fm-6.13 image** image from the image server with the IP address using login and password.

```
fmctl image fetch <download URI> [<filename>]
```

```
$ fmctl image fetch scp://user:password@<IP address>:/gigamon-gigavue-fm-6.13.img
```

b. The following command uses FTP to retrieve the same image using login and password.

```
$ fmctl image fetch ftp://user:password@<IP address>:/gigamon-gigavue-fm-6.13.img
```

4. Go to Step 3: Install the latest release of the GigaVUE-FM.

Step 3: Install the latest release of the GigaVUE-FM

Use the **image install** command to install the downloaded image file. When running the following command, the process will first verify that the filename used for the image is suitable for installation prior to installing the image. For example, to install the image downloaded in the previous step and provide the location for boot location for installation.

To check current boot location:

```
$ fmctl image show
```

This command lists the current boot partition, which can be 1 or 2. Use 2 if the current partition is 1 and vice e versa.

```
$fmctl image install <Filename> <Boot location>
```

Step 4: Change the boot partition

Set the image you just installed to boot next with the following command. This ensures that at the next boot the latest image will be picked up.

```
$ fmctl image boot next
```

GigaVUE-FM will reboot with the next boot image and GigaVUE-FM will be upgraded.

Step 5: Upgrade GigaVUE-VM (Optional)

After upgrading GigaVUE-FM, you must also upgrade any deployed GigaVUE-VM. Otherwise, maps may not work and the GigaVUE-VM will be unreachable. For information about upgrading GigaVUE-VM, refer to the *"Bulk Upgrading GigaVUE-VM Nodes"* section in the *GigaVUE Cloud Suite Deployment Guide - VMware*.

Upgrade GigaVUE-FM from the UI

This section describes the steps to upgrade GigaVUE-FM from the UI. You can upgrade by using an image that is located on an external image server, or you can use the image that is available on the internal server.

You can upgrade an image in GigaVUE-FM from the UI in two ways:

- Upgrade using image in External Image Server
- Upgrade using image in Internal server

Before you upgrade GigaVUE-FM from the UI, follow the given rules and notes:

- You can upgrade your GigaVUE-FM instance only to the next two subsequent versions. For example, if you want to upgrade your GigaVUE-FM 6.1.xx to 6.13.xx, your supported upgrade path is 6.1.xx > 6.3.xx > 6.5.xx> 6.7.xx > 6.9.xx > 6.10.02* >6.13.xx . You cannot downgrade.

  *MongoDB changes were introduced in 6.10.02. You must upgrade to 6.10.02 before moving to 6.11.xx or later. Upgrade from version 6.11.xx to 6.12.xx is also supported.

  IMPORTANT: To prevent upgrades outside the supported paths, which may cause GigaVUE-FM to corrupt, a prevention mechanism has been introduced in GigaVUE-FM version 6.12. Any unsupported upgrade attempt is blocked and marked as failed. Review the **FMCTL log** (/var/log.fm-ctl.log) for details on the failure.

- When upgrading GigaVUE-FM to the latest image file, the upgrade operation will fail if GigaVUE-FM already has three image files. Delete the unused image files before proceeding to download a new image file.

  NOTE: You can enable auto-purge of GigaVUE-FM images using an API. Contact Gigamon Technical Support for assistance.

- Starting from software version 5.15.00, subsequent GigaVUE-FM upgrade operation to higher versions deletes the upgraded GigaVUE-FM image file irrespective of the completion status. For example, when upgrading from 5.15.00 to 5.16.00, irrespective of whether the upgrade process fails or succeeds, GigaVUE-FM deletes the 5.16.0.0 image file at the end of the upgrade process.
- When upgrading from any previous version to 6.10 or above, the GUI may appear stuck in the reboot state, as a new certificate is generated using the GigaVUE-FM PKI service. Reload the page to update the status. This issue will not occur in subsequent upgrades.
- When upgrading from any previous version to 6.12.00, all active user sessions will be logged out.
- From GigaVUE-FM version 6.12.00, the user who initiates the upgrade will be taken to the GigaVUE-FM dashboard after the upgrade is complete.

IMPORTANT: After upgrading GigaVUE-FM, it is recommended to clear the cache and refresh the browser to avoid any potential browser issues.

BEST PRACTICES

- Before performing an upgrade, you must take a backup of GigaVUE-FM. For more information, refer to Backup and Restore.
- You must also take a Sysdump, which provides valuable configuration information that is not captured in the backup. You can use the Sysdump after the upgrade to troubleshoot any upgrade-related issues with your configurations.
- Always upgrade your GigaVUE-FM instance before upgrading the GigaVUE-OS nodes. You can upgrade the attached nodes from the device or from GigaVUE-FM. The latter is recommended. Refer to "Upgrade Software on a GigaVUE Node or a Cluster from GigaVUE-FM" in the GigaVUE-FM User's Guide.

Upgrade using image in External Image Server

This section provides the steps for upgrading the GigaVUE-FM from an image stored on an external server. The image can be transferred from the server to the GigaVUE-FM using SCP file protocol.

To upgrade GigaVUE-FM with an image stored on an external image server, you must sequentially perform the tasks in the following table:

S.No	Task	Refer to
1	Upload the image to external image server	Upload image to external image server
2	Add the image from the external server to GigaVUE-FM	Add image from external server to GigaVUE-FM
3	Upgrade GigaVUE-FM using external image	Upgrade GigaVUE-FM using External image

Upload image to external image server

1. Upload the image to the external image server to make it available to GigaVUE-FM.

   Register on the Gigamon Customer Portal to obtain software images and download the software.
2. Add the image server to GigaVUE-FM. This stores the credentials, image file name, and IP address of the server on GigaVUE-FM.

Add image from external server to GigaVUE-FM

To add the image from the external server, perform the following steps:

1. Go to **Settings**.
2. Go to **System** > **Images** > **External Servers**.

3. Click **Add**. The **Add External Server** page appears.
4. In the Add External Server Page enter the following details:
   - An alias to help identify the image server.
   - The host IP address of the server.
   - The protocol to use for the download: SCP.
   - The user name and password.
5. Click **OK**.

   The External Server page displays the newly added external server.

Upgrade GigaVUE-FM using External image

1. Click the Profile  options on the top navigation bar.
2. Select **Upgrade** from the drop-down list box to view the **Software Upgrade** page.

   The **Software Upgrade** page provides the GigaVUE-FM details such as **Host Name**, **Node Status**, **IP Address**, **Role**, **System Uptime**, and **Version**.
3. Select the image server type as **External Image Server** from the **Image Server Type** drop-down list box.
4. Select the server in which image is stored from the **Image Server** drop-down list box.

NOTE: If the image server is not available in the Image Server drop-down list box, Click **Add External Server** and enter the details provided in **Step 5** in the section Add image from external server to GigaVUE-FM

5. Enter the path used for storing the image in the **Image File Path**.
6. Click **Start Upgrade**.

A confirmation message appears to refrain from performing any task during the process of upgrade.

7. Click **OK**.

GigaVUE-FM notifies the various stages of the upgrade and also the completion of the upgrade process.

Upgrade using image in Internal server

This section provides the steps for upgrading GigaVUE-FM when the image is available in the internal server.

Upgrading from GigaVUE-FM 5.6.01 to 5.7.xx.00 or 5.7.01 via an internal image will not work because internal server storage does not function during the upgrade procedure. Alternatively, you can upgrade using an external image server or the GigaVUE-FM CLI or you can store the image in your machine and point to it as if it were an external server as follows :

1. Add the GigaVUE-FM image under the GigaVUE-FM internal image server (/config/gigamon/imagesRepo).
2. Configure the GigaVUE-FM external server with the GigaVUE-FM IP address.
3. Initiate the upgrade process, select External Image Server, and then specify the path to the GigaVUE-FM Image file that you added in step 1 (/config/gigamon/imagesRepo/fma5700.img).

To upgrade a GigaVUE-FM using internal image files, you must sequentially perform the tasks in the following table:

S.No	Task	Refer to
1	Download the Image	Download Image
2	Upload the image file to GigaVUE-FM	Upload the image file to GigaVUE-FM
3	Upgrade GigaVUE-FM using Internal image	Upgrade GigaVUE-FM using Internal image

Download Image

Download the images from the Gigamon website and place them where they can be uploaded to GigaVUE-FM. To obtain software images, register on the Gigamon Customer Portal and download the software.

Upload the image file to GigaVUE-FM

To upload the images file to GigaVUE-FM, follow these steps:

1. Go to **Settings** .
2. Go to **System > Images > Internal Image Files** and do the following:
   a. On the Internal Image File page, click **Upload**.
   b. Click **Choose** to locate the image file on the **Upload Internal Image Files** page.
   c. Click **OK** to upload the file. The page displays the progress of the upload.

   After the upload is completed, you can see the GigaVUE-FM image to use for the upgrade on the Internal Images Files page.

Upgrade GigaVUE-FM using Internal image

1. Click the Profile  options on the top navigation bar and select **Upgrade**.
2. Select **Upgrade** from the drop-down list box to view the **Software Upgrade** page.

   The **Software Upgrade** page provides the GigaVUE-FM details such as **Host Name**, **Node Status**, **IP Address**, **Role**, **System Uptime**, and **Version**.
3. Select the image server type as **Internal Image Server** from the **Image Server Type** drop-down list box.
4. From the **Version** drop-down list, select the version to which you are upgrading.
5. Click **Start Upgrade**.

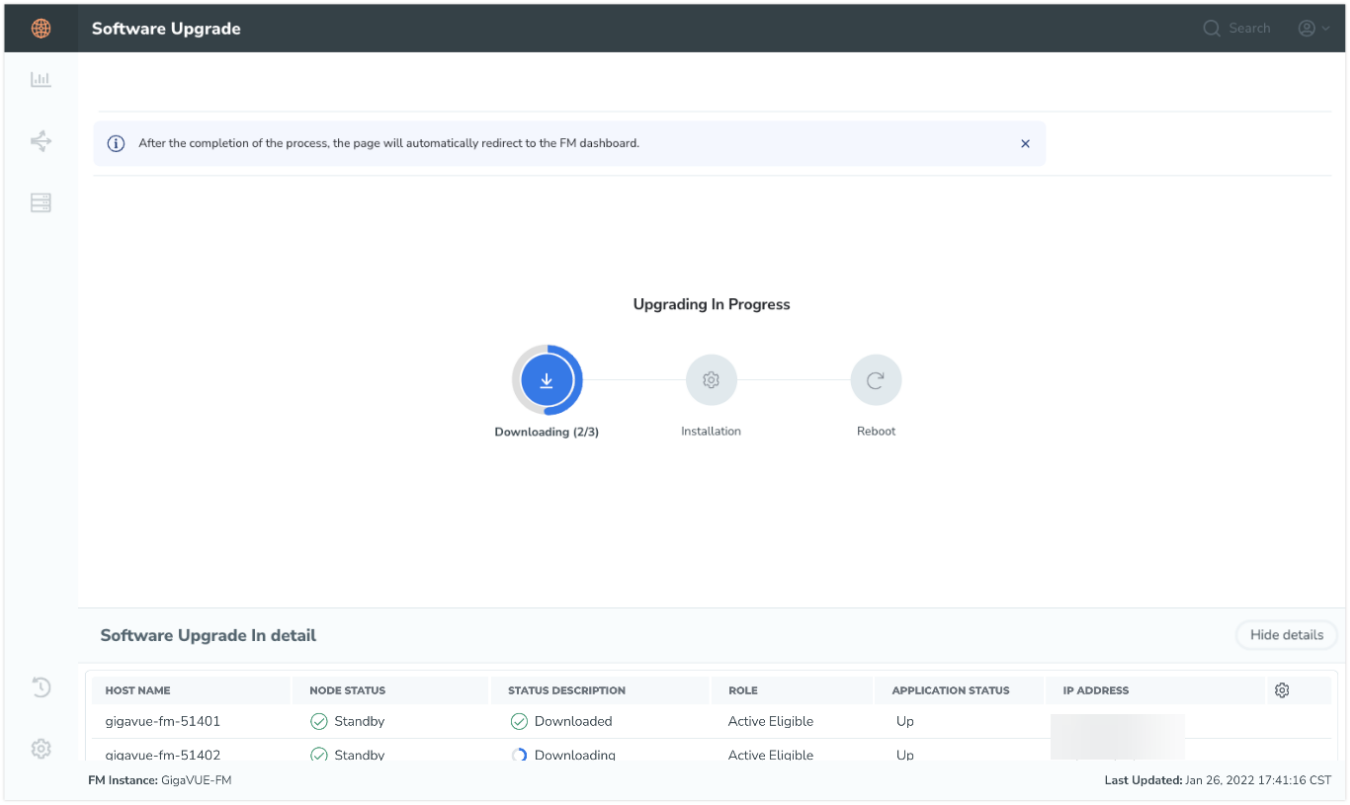
> **NOTE:** If the image server is not available in the Image Server drop-down list box, Click **Add Internal Server** and perform the actions provided in **Step 2** in the section Upload the image file to GigaVUE-FM

A confirmation message appears to refrain from performing any task during the upgrade process.

6. Click **OK**.

   > **NOTE:** You can only upgrade to another instance of the current version or the immediate next version. Downgrading to a lower version is not supported through the UI.

GigaVUE-FM notifies the various stages of upgrade and also the completion of the upgrade process.



NOTE: When you change the IP address of the GigaVUE-FM instance using the jump-start configuration, the internal database and the in-memory caches of the GigaVUE-FM instance are not updated. The Database continues to have the IP address of the old GigaVUE-FM, and the image upgrade using the internal server option does not work. To fix this, you must restart the GigaVUE-FM instance after upgrade.

Post-Upgrade Notes

Intent Based Orchestration (IBO): IBO Policies are removed when upgrading from any pre-5.11 version of GigaVUE-FM to version 5.11.00 or above. You must recreate the IBO Policies after upgrading to 5.11.00 or above. However if you have upgraded your GigaVUE-FM to 5.15.00 or above, the IBO policies will be retained. Refer to the *"Orchestrated Configurations"* section in the *GigaVUE Fabric Management Guide* for more details on how to create policy.

Storage Management: The time period specified for the storage management settings will be configured to the default values when upgrading to GigaVUE-FM v5.11.xx. After completing the upgrade, you must reconfigure the time period to the required values.

Remember to upgrade your GigaVUE-VM deployments: When upgrading GigaVUE-FM, you must also upgrade your GigaVUE-VM deployments. GigaVUE-FM and GigaVUE-VM must be in the same software version. For the steps to upgrade GigaVUE-VM, refer to the "*Bulk Upgrading GigaVUE-VM Nodes*" section in the *GigaVUE Cloud Suite for VMware—GigaVUE-VM Guide*.

Tags Applied to Resources: After you upgrade to software version 5.11.0.0, duplicate tag values will not get associated to nodes and ports while adding and removing nodes from the clusters. However, the existing duplicate tags on the resources do not get cleaned up as part of the upgrade. You must run the following script (bundled with 5.11) to remove the duplicate tags of nodes/clusters and ports.

Script name: duplicate_tags_removal.

> **NOTE:** It is recommended that a sudo privileged user runs this script. The default admin user is a sudo privileged user.

To run the script:

1. SSH to GigaVUE-FM.
2. Execute sudo duplicate_tags_removal.
3. You can see the logs in the console.

Application Intelligence Session: After the GigaVUE-FM upgrades to software version 6.4.00, your existing application intelligence session's export interval will be updated to five minutes. After upgrading to 6.4.00, you will lose the complete historical application visualization data except for the last 24 hours. Refer to "*View the Application Intelligence Dashboard*" section in the GigaVUE Fabric Management Guide for more details.

Important: Clear the browser cache before logging in to GigaVUE-FM.

Upgrade GigaVUE-FM in Azure

This chapter describes how to upgrade the GigaVUE-FM instance on Azure.

Refer to the following sections for details:

- Upgrade Options in Azure
- Upgrade GigaVUE-FM from the UI
- Upgrade the GigaVUE-FM using the Snapshot method
- Stop GigaVUE-FM Instance
- Create Snapshot of the GigaVUE-FM Instance
- Upgrade GigaVUE-FM Instance

Upgrade Options in Azure

You can upgrade the GigaVUE-FM instance using one of the following options:

- Upgrade from External Image Server
- Upgrade with GigaVUE-FM as the Image Server
- Upgrade the GigaVUE-FM using the Snapshot.

Upgrade GigaVUE-FM from the UI

This section describes the steps to upgrade GigaVUE-FM from the UI. You can upgrade by using an image that is located on an external image server, or you can use GigaVUE-FM as the image server.

Keep in mind the following rules and notes before you upgrade GigaVUE-FM from the UI:

- In place GigaVUE-FM upgrade is supported from GigaVUE-FM version 6.6 to a later releases.
- When using the GigaVUE-FM UI to upgrade GigaVUE-FM, you can only upgrade to the currently available version or to the next version. You cannot downgrade.
- When using the Firefox browser, clear the cache before upgrading to prevent issues with the browser.
- When upgrading GigaVUE-FM to the latest image file, the upgrade operation will fail if GigaVUE-FM already has three image files. Delete the unused image files before proceeding to download a new image file.

  NOTE: You can enable auto-purge of GigaVUE-FM images using an API. Contact Gigamon Technical Support for assistance.

Upgrade from External Image Server

This section provides the steps for upgrading the GigaVUE-FM from an image stored on an external server. The image can be transferred from the server to the GigaVUE-FM using SCP.

To upgrade with an image stored on an external image server, do the following:

1. Upload the image to the external image server to make it available to GigaVUE-FM.

   To obtain software images, register on the Gigamon Customer Portal and download the software.

2. Add the image server to GigaVUE-FM. This stores the credentials, image file name, and IP address of the server on GigaVUE-FM.

   To add the image server:

a. Go to **Settings**.

b. Select **System** on the left navigation panel and go to **Images > External Servers**. The External Servers page appears.

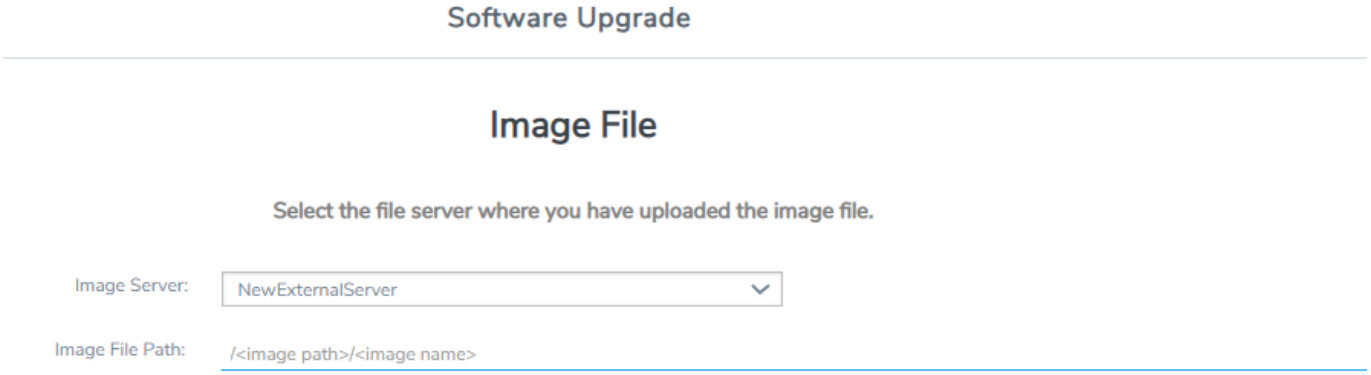
c. Click **Add**. The Add External Server page appears.

d. On the Images Server page, specify the following:

- An alias to help identify the image server.
- The host IP address of the server.
- The protocol to use for the download: SCP
- The user name and password.

e. Click **Save**.

The External Server page displays the newly added external server. From the **Admin** drop-down list in the top right corner of the window, select **Upgrade** to open the GigaVUE-FM Image Upgrade page as shown in the following figure.



To monitor the progress and status of the upgrade, click  "GigaVUE Administration Guide".

3. On the GigaVUE-FM Image Upgrade page, click on the Image Server field and select the server added in Step 2.
4. In the Image File Path, enter the image path and filename on the external file server.
5. Upgrade any deployed GigaVUE-FM-VMs.

   After upgrading GigaVUE-FM, you must also upgrade any deployed GigaVUE-FM-VMs. Otherwise, maps may not work and the GigaVUE-FM-VMs will be unreachable. For information about upgrading GigaVUE-FM-VM, refer to the *"Bulk Upgrading GigaVUE-VM Nodes"* section in the *GigaVUE Cloud Suite Deployment Guide - VMware*.

Upgrade with GigaVUE-FM as the Image Server

This section provides the steps for upgrading GigaVUE-FM when GigaVUE-FM is used as the file server.

To upgrade a GigaVUE-FM using internal image files, perform the following:

1. Download the images from the Gigamon website and store them in the instance where GigaVUE-FM is installed.

   To obtain software images, register on the Gigamon Customer Portal and download the software.

2. Upload the images file to GigaVUE-FM.

   a. Go to **Settings** and select to **System > Images > Internal Image Files**.

   b. On the Internal Image File page, click **Upload**.

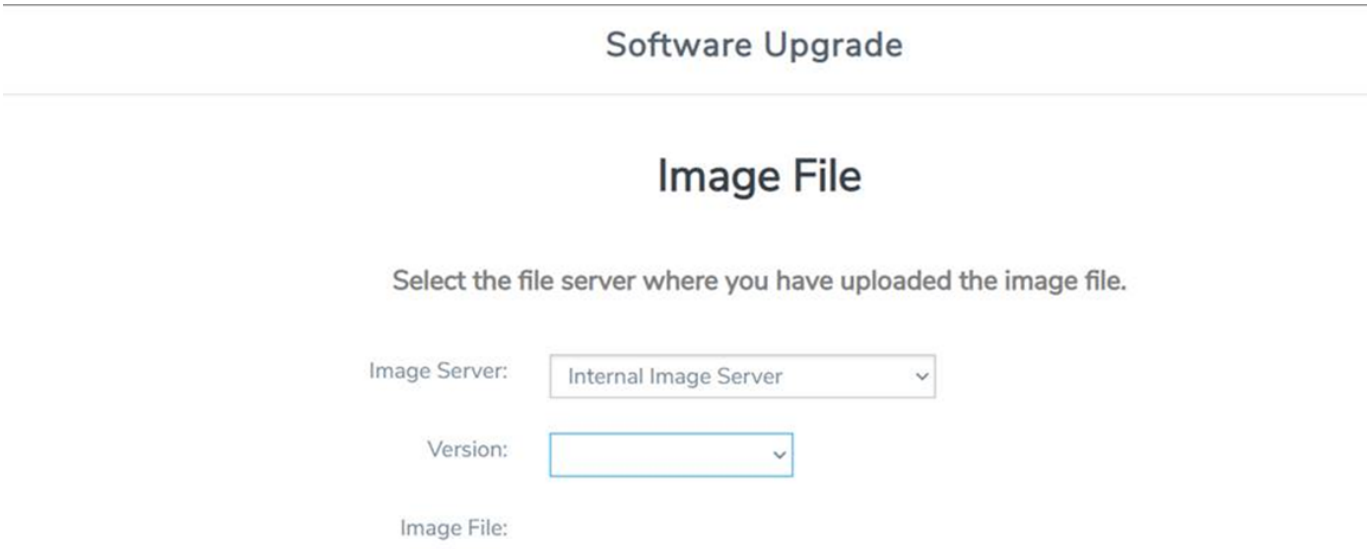
   c. Click **Browse** to locate the image file.

   d. Click **OK** to upload the file. The page displays the progress of the upload.

   After the upload completes, you can see the GigaVUE-FM image to use for the upgrade on the Internal Images Files page.

3. Click the **Admin** drop-down list on the top right of the window and select **Upgrade**.

4. On the GigaVUE-FM Image Upgrade page, click in the **Image Server** field and select **Internal Image Server**.



5. From the **Version** drop-down list, select the version to which you are upgrading.

> **NOTE:** You can only upgrade to another instance of the current version or the immediate next version. Downgrading to a lower version is not supported through the UI.

6. Click **Upgrade**.

> **NOTE:** When you change the IP address of the GigaVUE-FM instance using the jump-start configuration, the internal database and the in-memory caches of the GigaVUE-FM instance are not updated. The Database continues to have the IP address of the old GigaVUE-FM, and the image upgrade using the internal server option does not work. To fix this, you must restart the GigaVUE-FM instance after upgrade.

> **NOTE:** If you are using FireFox, clear the cache before upgrading to prevent issues with the browser.

Upgrade GigaVUE-FM using Snapshot in Azure

This chapter describes how to upgrade the GigaVUE-FM instance deployed on Azure using snapshot:

- Upgrade the GigaVUE-FM using the Snapshot method
- Stop GigaVUE-FM Instance
- Create Snapshot of the GigaVUE-FM Instance
- Upgrade GigaVUE-FM Instance

Upgrade the GigaVUE-FM using the Snapshot method

To upgrade the GigaVUE-FM instance successfully, you must perform the following steps:

1. Stop the existing version of the GigaVUE-FM instance.
2. Create a snapshot of the data disk of the current version of the GigaVUE-FM instance.
3. Deploy the latest version of the GigaVUE-FM instance from the marketplace.
4. In the disk tab, select **Create and attach a new disk**, and attach the Snapshot.
5. Launch the GigaVUE-FM and wait for it to initialize.

Stop GigaVUE-FM Instance

Before upgrading the GigaVUE-FM instance, the existing version of the GigaVUE-FM instance must be stopped.

NOTE: Do not terminate the GigaVUE-FM instance.

To stop the GigaVUE-FM instance:

1. Login to the Azure portal and select the **Virtual Machines** that have the GigaVUE-FM deployed
2. Click the Stop button in the portal to shutdown GigaVUE-FM
3. Wait for few seconds for Azure to completely stop the virtual machine

Create Snapshot of the GigaVUE-FM Instance

You must create a snapshot of the blob of the existing version of the GigaVUE-FM instance. Snapshots capture data that are written to your Azure Virtual Disks at the time the snapshot is taken. This excludes any data that are cached by any applications or the operating system.

To create a snapshot:

1. Click the Data Disk link in the existing version of the GigaVUE-FM properties in the Azure portal.
2. Click Create Snapshot in the screen. The Create Snapshot (using SSD) dialog box is displayed.
3. In the Create Snapshot dialog box, enter the following information:

Table 1: Fields for Creating a Snapshot

Field	Description
Name	The name of the snapshot
Subscription	Subscription ID
Resource-group	The name of the resource group
Location	Location of the resource group
Account-type	Select the account type to use to store the snapshot.

4. Click Create. It will take several minutes for the snapshot to be created.

Upgrade GigaVUE-FM Instance

To upgrade the GigaVUE-FM instance:

1. In the Azure Marketplace, search for the GigaVUE-FM.
2. Select the latest version GigaVUE-FM of and then click **Create**.

3. On the Basic page, configure basic information for the GigaVUE-FM and then click **Next**.
4. In the disk tab, select **Create and attach a new disk**.
5. In the **Create a new disk page**, enter the name.
6. Select the **Source type** as Snapshot and then select the **Snapshot**. For more information, see Create Snapshot of the GigaVUE-FM Instance
7. Enable the option, **Delete disk with VM** and click **Ok**
8. On the **Networking Page**, configure the network settings and then click **Next**.
9. On the **Management page**, enable System assigned managed Identity and then click **Next**.
10. Configure the **Advanced page** as required and then click **Review and Create**.

Upgrade GigaVUE-FM in AWS

This chapter describes how to upgrade the GigaVUE-FM instance deployed in AWS.

Refer to the following sections for details:

- Upgrade GigaVUE-FM using Snapshot in AWS
- Upgrade from UI.

For more information on upgrading from UI, refer to the Upgrade from the UI topic in GigaVUE-FM Installation and Upgrade Guide.

Upgrade Options in AWS

You can upgrade the GigaVUE-FM instance using one of the following options:

- Upgrade from External Image Server
- Upgrade with GigaVUE-FM as the Image Server
- Upgrade the GigaVUE-FM using the Snapshot.

Upgrade GigaVUE-FM

This section describes the steps to upgrade GigaVUE-FM from the UI. You can upgrade by using an image that is located on an external image server, or you can use GigaVUE-FM as the image server.

Keep in mind the following rules and notes before you upgrade GigaVUE-FM from the UI:

- When using the GigaVUE-FM UI to upgrade GigaVUE-FM, you can only upgrade to the currently available version or to the next version. You cannot downgrade.
- When using the Firefox browser, clear the cache before upgrading to prevent issues with the browser.
- When upgrading GigaVUE-FM to the latest image file, the upgrade operation will fail if GigaVUE-FM already has three image files. Delete the unused image files before proceeding to download a new image file.

  NOTE: You can enable auto-purge of GigaVUE-FM images using an API. Contact Gigamon Technical Support for assistance.

- Starting from software version 5.15.00, subsequent GigaVUE-FM upgrade operation to higher versions deletes the upgraded GigaVUE-FM image file irrespective of the completion status. For example, when upgrading from 5.15.00 to 5.16.00, irrespective of whether the upgrade process fails or succeeds, GigaVUE-FM deletes the 5.16.00 image file at the end of the upgrade process.

Upgrade from External Image Server

This section provides the steps for upgrading the GigaVUE-FM from an image stored on an external server. The image can be transferred from the server to the GigaVUE-FM using SCP.

To upgrade with an image stored on an external image server, do the following:

1. Upload the image to the external image server to make it available to GigaVUE-FM.

   To obtain software images, register on the Gigamon Customer Portal and download the software.

2. Add the image server to GigaVUE-FM. This stores the credentials, image file name, and IP address of the server on GigaVUE-FM.

   To add the image server:

   a. Go to **Settings**.

   b. Select **System** on the left navigation panel and go to **Images > External Servers**. The External Servers page appears.

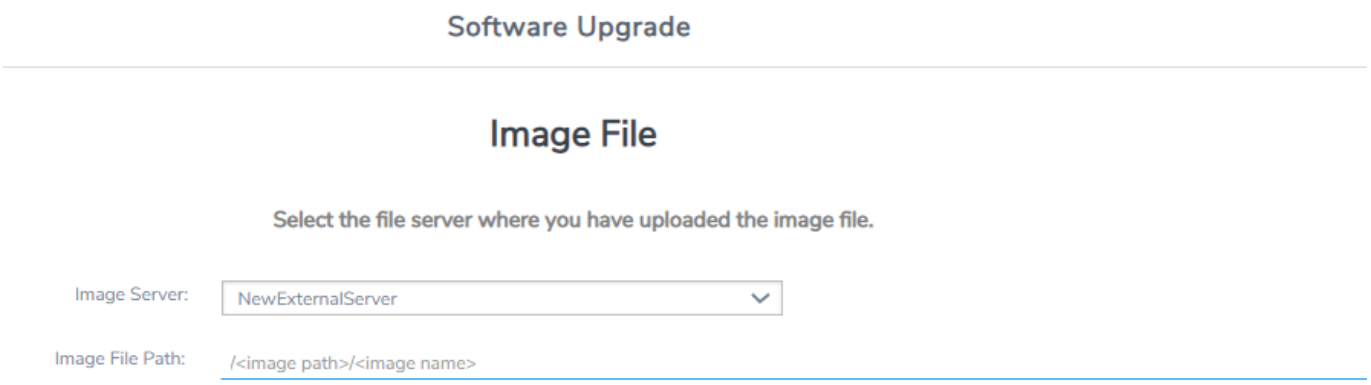
   c. Click **Add**. The Add External Server page appears.

   d. On the Images Server page, specify the following:

- An alias to help identify the image server.
- The host IP address of the server.
- The protocol to use for the download: SCP
- The user name and password.

   e. Click **Save**.

      The External Server page displays the newly added external server. From the **Admin** drop-down list in the top right corner of the window, select **Upgrade** to open the GigaVUE-FM Image Upgrade page as shown in the following figure.



To monitor the progress and status of the upgrade, click  "GigaVUE Administration Guide".

3. On the GigaVUE-FM Image Upgrade page, click on the Image Server field and select the server added in Step 2.
4. In the Image File Path, enter the image path and filename on the external file server.
5. Upgrade any deployed GigaVUE-FM-VMs.

   After upgrading GigaVUE-FM, you must also upgrade any deployed GigaVUE-FM-VMs. Otherwise, maps may not work and the GigaVUE-FM-VMs will be unreachable. For information about upgrading GigaVUE-FM-VM, refer to the *"Bulk Upgrading GigaVUE-VM Nodes"* section in the *GigaVUE Cloud Suite Deployment Guide - VMware*.

Upgrade with GigaVUE-FM as the Image Server

This section provides the steps for upgrading GigaVUE-FM when GigaVUE-FM is used as the file server.

To upgrade a GigaVUE-FM using internal image files, perform the following:

1. Download the images from the Gigamon website and store them in the instance where GigaVUE-FM is installed.

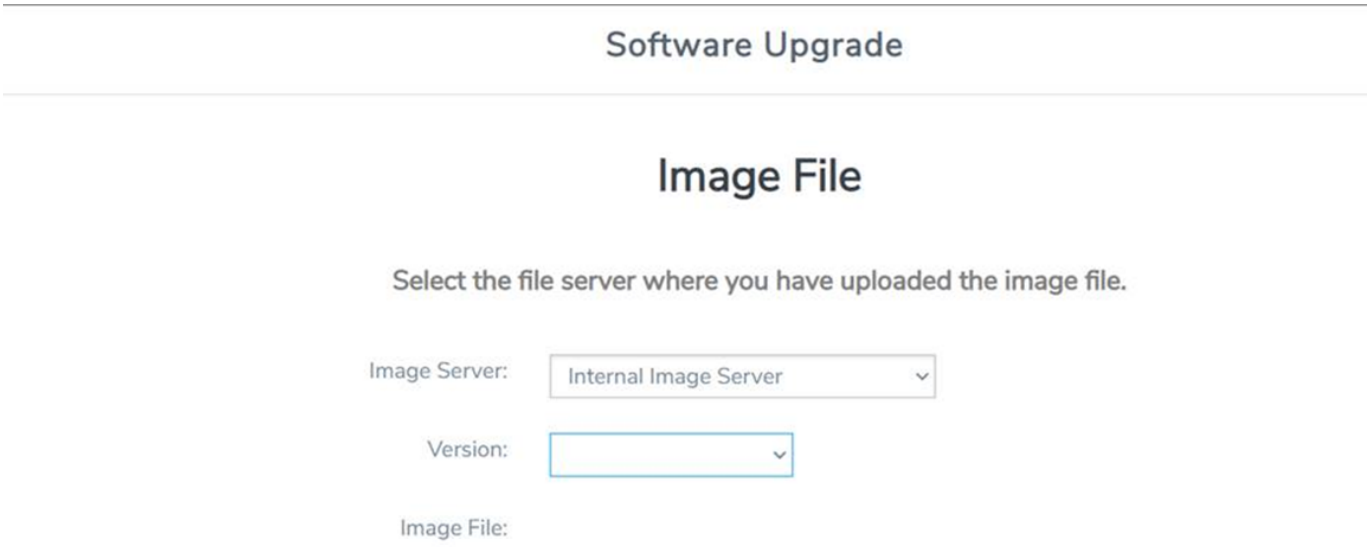
   To obtain software images, register on the Gigamon Customer Portal and download the software.
2. Upload the images file to GigaVUE-FM.
   a. Go to **Settings** and select to **System > Images > Internal Image Files**.
   b. On the Internal Image File page, click **Upload**.

c. Click **Browse** to locate the image file.

d. Click **OK** to upload the file. The page displays the progress of the upload.

After the upload completes, you can see the GigaVUE-FM image to use for the upgrade on the Internal Images Files page.

3. Click the **Admin** drop-down list on the top right of the window and select **Upgrade**.
4. On the GigaVUE-FM Image Upgrade page, click in the **Image Server** field and select **Internal Image Server**.



5. From the **Version** drop-down list, select the version to which you are upgrading.

   NOTE: You can only upgrade to another instance of the current version or the immediate next version. Downgrading to a lower version is not supported through the UI.

6. Click **Upgrade**.

   NOTE: When you change the IP address of the GigaVUE-FM instance using the jump-start configuration, the internal database and the in-memory caches of the GigaVUE-FM instance are not updated. The Database continues to have the IP address of the old GigaVUE-FM, and the image upgrade using the internal server option does not work. To fix this, you must restart the GigaVUE-FM instance after upgrade.

After upgrading GigaVUE-FM, you must also upgrade any deployed GigaVUE-VMs. Otherwise, maps may not work and the GigaVUE-VMs will be unreachable. For information about upgrading GigaVUE-VM, refer to the "*Bulk Upgrading GigaVUE-VM Nodes*" section in the *GigaVUE Cloud Suite Deployment Guide - VMware*.

NOTE: If you are using FireFox, clear the cache before upgrading to prevent issues with the browser.

Upgrade GigaVUE-FM using Snapshot in AWS

This chapter describes how to upgrade the GigaVUE-FM instance deployed on AWS using snapshot:

- At a Glance
- Stop GigaVUE-FM Instance
- Create Snapshot of the GigaVUE-FM Instance
- Upgrade GigaVUE-FM Instance

At a Glance

To upgrade the GigaVUE-FM instance successfully, you must perform the following steps:

Step 1: Stop the existing version of the GigaVUE-FM instance.

Step 2: Create a snapshot of the second disk (dev/sdb) of the GigaVUE-FM instance.

Step 3: Make a note of the snapshot ID.

Step 4: Launch the latest version of the GigaVUE-FM instance. While launching the latest version, enter the snapshot ID of the old version of the GigaVUE-FM instance in **Add Storage** > **Add New Volume**.

Step 5: Complete the launch.

Step 6: Verify if the data from the previous GigaVUE-FM instance is restored in the new instance.

Step 7: Terminate the old GigaVUE-FM instance.

Stop GigaVUE-FM Instance

Before upgrading the GigaVUE-FM instance, the existing version of the GigaVUE-FM instance must be stopped.

NOTE: Do not terminate the GigaVUE-FM instance.

To stop the GigaVUE-FM instance:

1. Login to the AWS account and select **Services > EC2**.
2. In the left navigation pane, select **Instances**.
3. In the search field, enter the name of the existing GigaVUE-FM instance and select the Instance ID.

NOTE: If the instance ID is the password for logging in to the existing GigaVUE-FM, make note of this instance ID. This instance ID will be used as the password for logging in to the upgraded GigaVUE-FM as well. If the password is changed, use the changed password to login to the upgraded GigaVUE-FM.

4. Go to **Actions** > **Instance State** > **Stop**.

Create Snapshot of the GigaVUE-FM Instance

You must create a snapshot of the volume of the existing version (dev/sdb) of the GigaVUE-FM instance. Snapshots capture data that are written to your Amazon EBS volume at the time the snapshot is taken. This excludes any data that are cached by any applications or the operating system.

To create a snapshot:

1. Select the GigaVUE-FM instance and click the **Description** tab.
2. Scroll down and locate Block Devices.
3. Click the **/dev/sdb** link. The Block Device dialog box is displayed with the volume ID link.
4. In the Block Device dialog box, click the volume ID link. The Volumes page is displayed.
5. Click **Actions** and select **Create Snapshot.**

   The Create Snapshot dialog box is displayed.
6. In the Create Snapshot dialog box, enter the following information:

Table 1: Fields for Creating a Snapshot

Field	Description
Name	The name of the snapshot.
Description	The description of the snapshot.

7. Click **Create**. It will take several minutes for the snapshot to be created.

NOTE: Make a note of the snapshot ID. This snapshot ID will be used to find the snapshot and add the volume while upgrading the GigaVUE-FM instance.

Upgrade GigaVUE-FM Instance

While upgrading the GigaVUE-FM instance, the Amazon EBS volume must be restored with the data from the snapshot that is created in Create Snapshot of the GigaVUE-FM Instance.

To upgrade the GigaVUE-FM instance:

1. Select **Services > EC2**.
2. Click **Launch Instance** and go to **AWS Marketplace** or **Community AMIs**.
3. Search for **Gigamon**, locate the latest version of the GigaVUE-FM AMI, and click **Select**.
4. Choose the Instance Type. The recommended instance type is **m4.xlarge**.

NOTE: Do not select the t2 instance types as they are not supported.

5. Click **Next: Configure Instance Details.**
6. Enter the following information.
   - **Network**— Select the VPC where you want to launch the AMI.
   - **Subnet**— Select the management subnet that the instance will use after launch. (Required)
   - **Auto-assign Public IP**— Select **Enable**.
   - **IAM role**—Select an existing IAM role to associate with the instance. Refer to the *GigaVUE Cloud Suite for AWS Quick Start Guide*.
7. Click **Configure storage** and then click **Advanced**.
8. Select **Volume 2** and then select the Snapshot that you created in Create Snapshot of the GigaVUE-FM Instance.
9. Click **Next: Tag Instance,** and then add a key-value pair to identify the instance.
10. Click **Next: Add Security Group**. Click the **Select an existing security group** check box if the security group is already created. Otherwise, select the **Create a new security group** check box and click **Add Rule**. For more information on creating a security group, refer to the *Security Group* section in GigaVUE Cloud Suite Deployment Guide - AWS.
11. Click **Review and Launch**. Review the instance launch details and click **Launch**.
12. Select the SSH key pair, check the acknowledgment check box, and click **Launch Instances**.
13. It will take several minutes for the instance to initialize. After the initialization is completed, verify the instance through the Web interface as follows:
    a. Find the instance and expand the page in the **Descriptions** tab to view the instance information, if necessary.
    b. Copy the Public DNS value and paste the value into a new browser window or tab.

c. Copy the Instance ID of the previous version of the GigaVUE-FM. If the password is changed, use the changed password to login to the upgraded GigaVUE-FM.

NOTE: Do not have multiple versions of GigaVUE-FM instances monitoring the same AWS connection.

Launch the new version of the GigaVUE-FM instance. Verify if the data from the previous GigaVUE-FM instance is restored in the new instance. Once the data is verified, terminate the old version of the GigaVUE-FM instance.

Upgrade GigaVUE Fabric Components

This chapter describes how to upgrade different fabric components like GigaVUE V Series Node, GigaVUE V Series proxy, UCT-V Controller, and UCT-V. For more detailed information about UCT-V, UCT-V Controller, GigaVUE V Series Proxy and Node Version refer GigaVUE-FM Version Compatibility Matrix.

Refer to the following topics for more detailed information on how to upgrade the fabric components using GigaVUE-FM for the respective cloud platforms:

- Upgrade GigaVUE Fabric Components in GigaVUE-FM for AWS
- Upgrade GigaVUE Fabric Components in GigaVUE-FM for Azure
- Upgrade GigaVUE Fabric Components in GigaVUE-FM for OpenStack
- Upgrade GigaVUE V Series Node in GigaVUE-FM for ESXi
- Upgrade GigaVUE V Series Node for VMware NSX-T

Upgrade GigaVUE Fabric Components in GigaVUE-FM for AWS

This topic describes how to upgrade GigaVUE V Series Proxy and GigaVUE V Series Nodes. For details about UCT-V, UCT-V Controller, GigaVUE V Series Proxy, and Node version, refer to the GigaVUE-FM Version Compatibility Matrix.

Refer to the following topic for more information:

- Prerequisite
- Upgrade UCT-V Controller
- Upgrade GigaVUE V Series Nodes and GigaVUE V Series Proxy

Prerequisite

Before you upgrade the GigaVUE V Series Proxy and GigaVUE V Series Nodes, you must upgrade GigaVUE-FM to the software version 5.13 or above.

Upgrade UCT-V Controller

NOTE: You cannot upgrade UCT-V Controllers. In the **AWS Fabric Launch Configuration** page, you can only add or remove a new version that is compatible with the UCT-V's version.

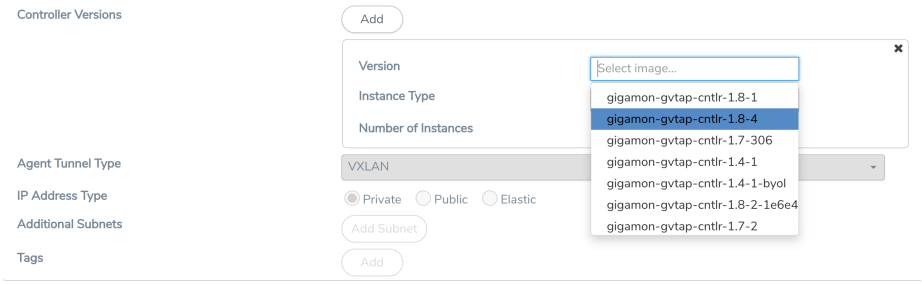
To change the UCT-V Controller version, see the instructions below.

Change UCT-V Controller version between different major versions

NOTE: You can only add UCT-V Controllers having different major versions. For example, you can only add UCT-V Controller version 1.8-x if your existing version is 1.7-x.

To change,

a. Under **Controller Versions**, select **Add**.
b. From the **Version** drop-down list, select a UCT-V Controller image that matches the version number of UCT-Vs installed in the instances.
c. From the **Instance Type** drop-down list, select a size for the UCT-V Controller.
d. In **Number of Instances**, specify the number of UCT-V Controllers to launch. The minimum number you can specify is 1.



You cannot change the IP Address Type and the Additional Subnets details, provided at the time of UCT-V Controller configuration.

After installing the new version of UCT-V Controller, follow these steps:

1. Install UCT-V with the version same as the UCT-V Controller.
2. Delete the UCT-V Controller with older version.

Change UCT-V Controller version within the same major version

This applies only if when changing the UCT-V Controller version from one minor version to another within the same major version. For example, from 1.8-2 to 1.8-3.

To change,

a. From the **Version** drop-down list, select a UCT-V Controller image in the same major version.
b. Specify **Number of Instances**. The minimum number you can specify is 1.
c. Select **Subnet** from the drop-down.

- You cannot modify the rest of the fields.
- After installing the new version of UCT-V Controller with the same version.

Upgrade GigaVUE V Series Nodes and GigaVUE V Series Proxy

GigaVUE-FM lets you upgrade GigaVUE V Series Proxy and GigaVUE V Series Nodes at the same time.

Use one of the following two options to upgrade the GigaVUE V Series Proxy and Nodes:

- Launch and replace the complete set of nodes and proxy at a time.

  For example, if you have 1 GigaVUE V Series Proxy and 10 GigaVUE V Series Nodes in your VPC, you can upgrade all of them at once. It launches in the following sequence:

  1. First, launches GigaVUE V Series Proxy.
  2. Next, launches the new version of GigaVUE V Series Nodes.
  3. Then, the old version of V Series Proxy and Nodes are deleted from the VPC.

  NOTES:
  - When the new version of nodes and proxy are launched, GigaVUE-FM does not delete the old version until you,
    - Launch the new version of node and proxy
    - Change the status to **Ok**.
  - Make sure that the instance type of the node and proxy selected during the configuration can accommodate the total number of new and old fabric components present in the VPC. If the instance type cannot support so many Virtual Machines, you can choose to upgrade the fabric components in multiple batches.
  - If you face an error while upgrading the complete set of proxy and nodes present in the VPC, the new version of the fabric is immediately deleted and the old version of the fabric is retained as before.

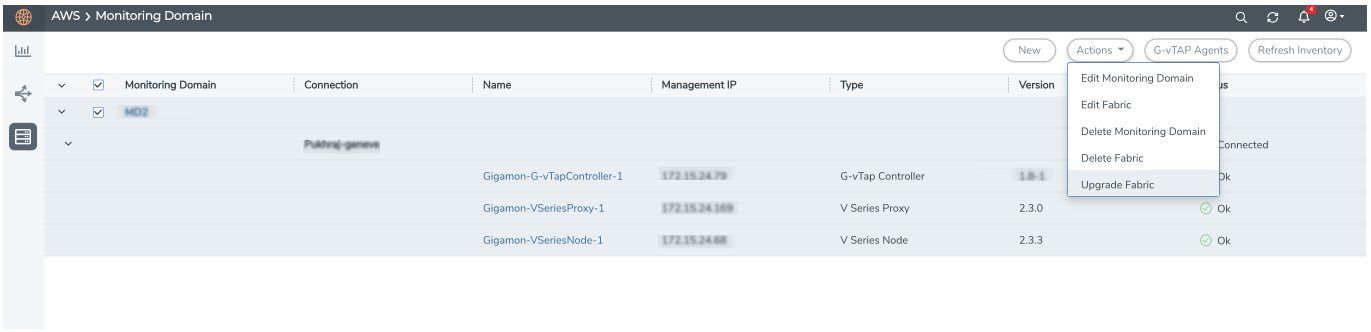
- Prior to upgrading the GigaVUE V Series Proxy and Nodes, ensure that the required number of free addresses is available in the respective subnets. Otherwise, the upgrade fails.

- Launch and replace the nodes and proxy in multiple batches.

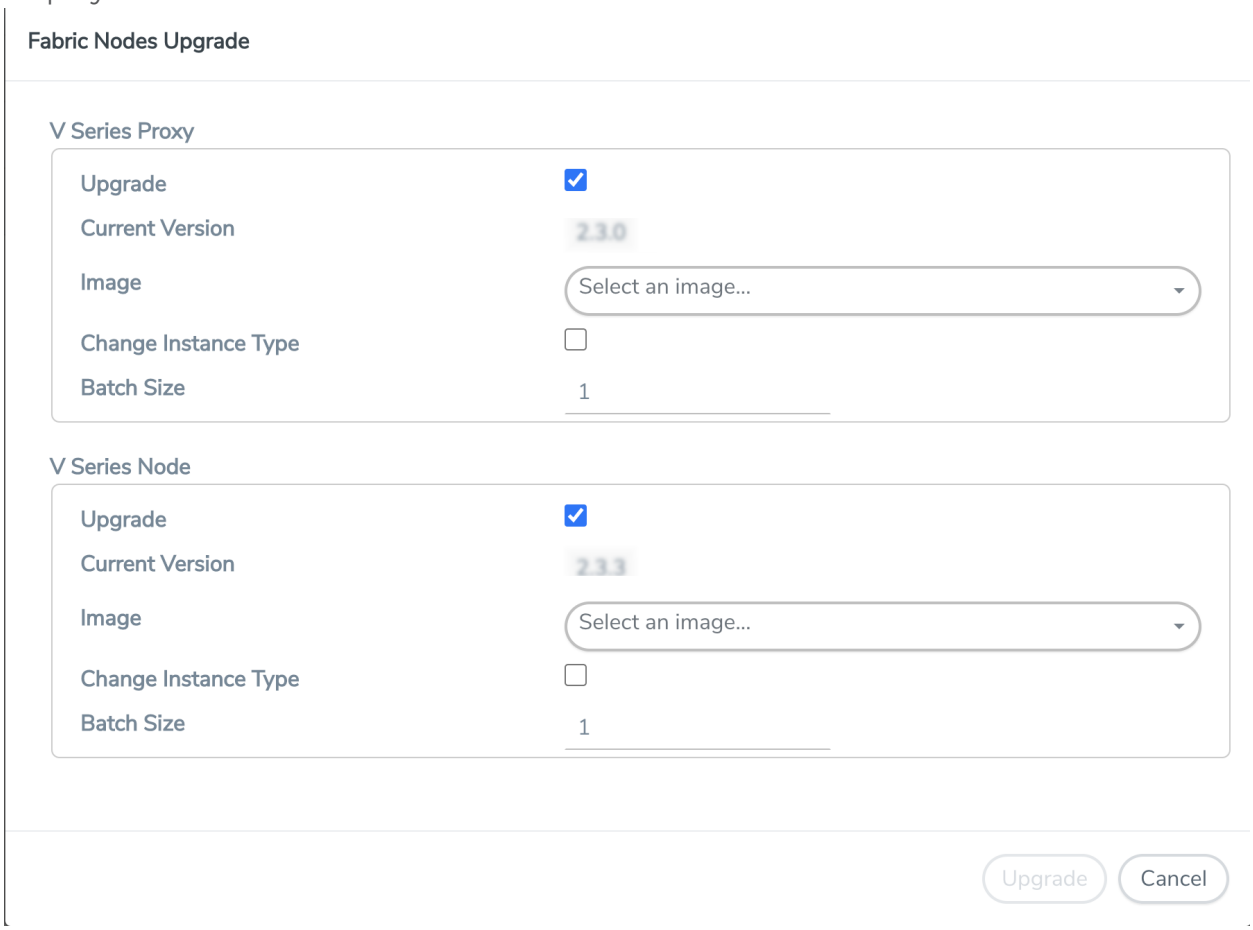
  For example, to upgrade 18 GigaVUE V Series Nodes, you can specify how many you want to upgrade per batch.

To upgrade the GigaVUE V Series Proxy and GigaVUE V Series Nodes:

1. Go to **Inventory > VIRTUAL > AWS** , and then select **Monitoring Domain**. The Monitoring Domain page appears.
2. On the Monitoring Domain page, select the connection name check box and select **Actions**



3. Select **Upgrade Fabric** from the drop-down list. The Fabric Nodes Upgrade page is displayed.



4. Select the **Upgrade** checkbox to upgrade the GigaVUE V Series Nodes/Proxy.
5. From the **Image** drop-down list, select the latest version of the GigaVUE V Series Proxy/Nodes.
6. Select the **Change Instance Type** checkbox to change the instance type of the nodes/proxy, only if required.
7. Specify the batch size in the **Batch Size** box to upgrade the GigaVUE V Series Nodes/Proxy.

   For example, if you have 7 GigaVUE V Series Nodes, you can specify 7 as the batch size and upgrade all of them at once. Alternatively, you can specify 3 as the batch size, and launch and replace 3 V Series Nodes in each batch. In the last batch, the remaining 1 V Series Node is launched.
8. Select **Upgrade**.

   The upgrade process takes a while depending on the number of GigaVUE V Series Proxy and Nodes upgrading in your AWS environment.

First, the new version of the GigaVUE V Series Proxy is launched. Next, the new version of GigaVUE V Series Nodes is launched. Then, the older version of both is deleted from the project.

To view the upgrade status, in the V Series Proxy page, select the link under Progress.

When upgrading the nodes is complete, the monitoring session is re-deployed automatically.

Upgrade GigaVUE Fabric Components in GigaVUE-FM for Azure

This chapter describes how to upgrade GigaVUE V Series Proxy and GigaVUE V Series Node. For more detailed information about UCT-V Controller, GigaVUE V Series Proxy and Node Version, refer to the *GigaVUE-FM Version Compatibility* section in the Prerequisites for GigaVUE Cloud Suite for Azure.

IMPORTANT NOTE:

Before upgrading the Fabric Components to version 6.10.00 or above, ensure the following actions are performed:

- Create Token in GigaVUE-FM for UCT-V Installation and update it in the configuration file. For more details, refer to UCT-V-VSN.html.
- Create Tokens for deploying the Fabric Components using Third Party Orchestration. For more details, refer to Token-based Authentication.
- Open the required ports in the cloud platform. For more details, refer to Network Firewall Requirement for GigaVUE Cloud Suite.

For more details, refer for more information:

- Prerequisite
- Upgrade UCT-V Controller
- Upgrade GigaVUE V Series Node and GigaVUE V Series Proxy

Prerequisite

Before you upgrade the GigaVUE V Series Proxy and GigaVUE V Series Node, you must upgrade GigaVUE-FM to software version 5.13.01 or above.

Upgrade UCT-V Controller

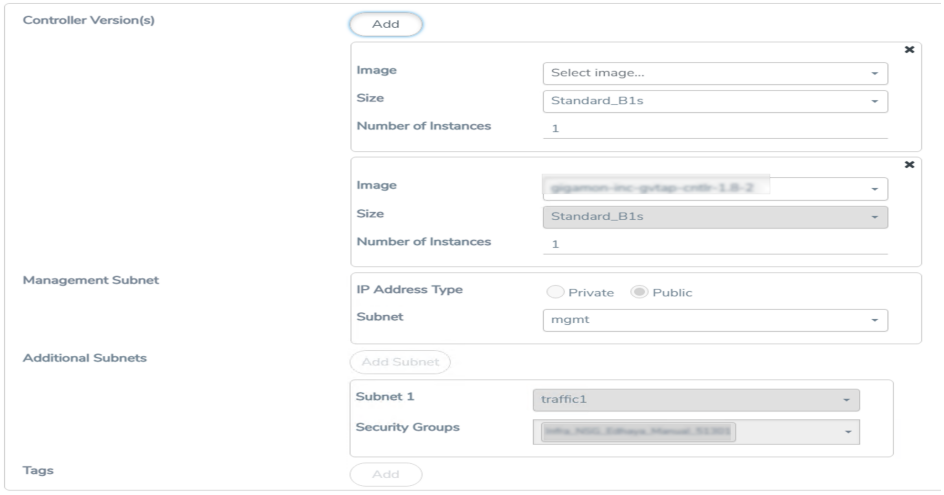
NOTE: UCT-V Controllers cannot be upgraded. Only a new version that is compatible with the UCT-V's version can be added or removed in the **Azure Fabric Launch Configuration** page.

To change the UCT-V Controller version follow the steps given below:

To change UCT-V Controller version between different major versions

NOTE: You can only add UCT-V Controllers which has different major versions. For example, you can only add UCT-V Controller version 1.8-x if your existing version is 1.7-x.

a. In the **Azure Fabric Launch Configuration** page, under **Controller Versions**, click **Add**.
b. From the **Image** drop-down list, select a UCT-V Controller image that matches with the version number of UCT-Vs installed in the instances.
c. From the **Size** drop-down list, select a size for the UCT-V Controller. The default size is Standard_B1s.
d. In **Number of Instances**, specify the number of UCT-V Controllers to launch. The minimum number you can specify is 1.



You cannot change the IP Address Type and the Additional Subnets details, provided at the time of UCT-V Controller configuration.

After installing the new version of UCT-V Controller, follow these steps:

1. Install UCT-V with the version same as the UCT-V Controller.
2. Delete the UCT-V Controller with older version.

Change UCT-V Controller version with in the same major version

NOTE: This is only applicable, if you wish to change your UCT-V Controller version from one minor version to another with in the same major version. For example, from 1.8-2 to 1.8-3.

a. From the **Image** drop-down list, select a UCT-V Controller image with in the same major version.
b. Specify the **Number of Instances**. The minimum number you can specify is 1.
c. Select the **Subnet** from the drop-down.

- You cannot modify the rest of the fields.
- After installing the new version of UCT-V Controller, install the UCT-V with the same version.

Upgrade GigaVUE V Series Node and GigaVUE V Series Proxy

GigaVUE-FM lets you upgrade GigaVUE V Series Proxy and GigaVUE V Series Node at a time.

You can upgrade the GigaVUE V Series Proxy and Node using the following options:

- Launch and replace the complete set of nodes and proxys at a time.

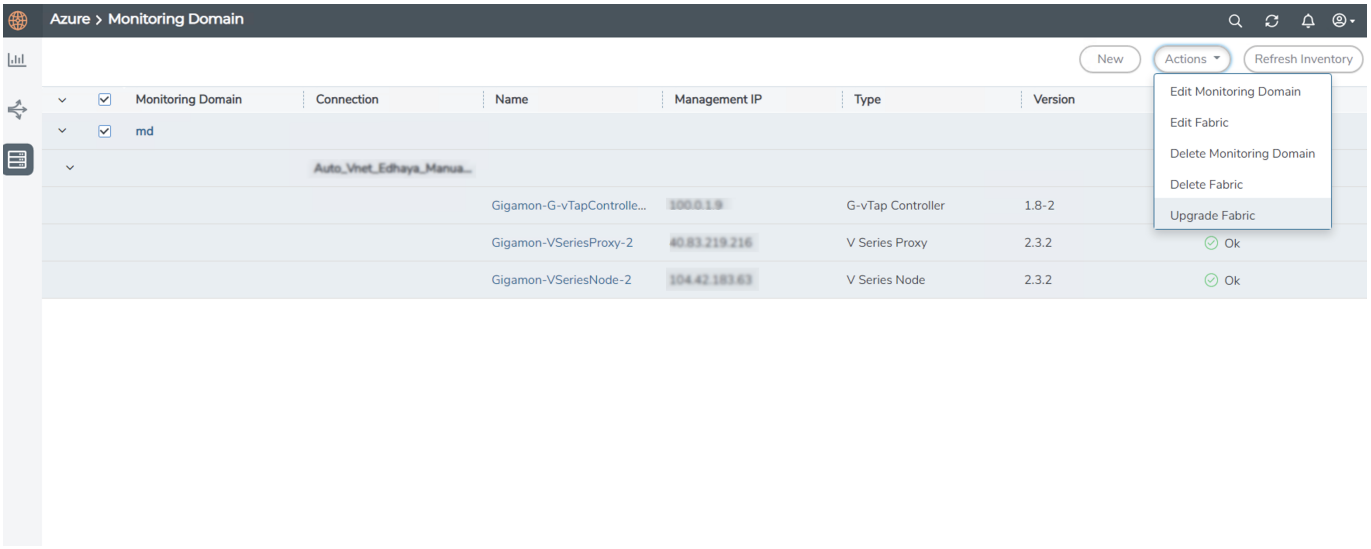
  For example, if you have 1 GigaVUE V Series Proxy and 10 GigaVUE V Series Nodes in your VNet, you can upgrade all of them at once. First, the new version of GigaVUE V Series controller is launched. Next, the new version of GigaVUE V Series nodes are launched. Then, the old version of V Series controller and nodes are deleted from the VNet.

  NOTES:
  - When the new version of node and proxy is launched, the old version still exists in the VNet until they are deleted. Make sure the instance type determined during the configuration can accommodate the total number of new and old instances present in the VNet. If the instance type cannot support so many instances, you can choose to upgrade in multiple batches.
  - If an error happens while upgrading the complete set of proxys and nodes present in the VNet, the new version of the fabric is immediately deleted and the old version of the fabric is retained as before.
  - If you have deployed your nodes using Public IP address while creating the monitoring domain, then select the same number of Public IP addresses defined in your Max Instances when upgrading your nodes. For details, refer to *Create Monitoring Domain* in GigaVUE Cloud Suite Deployment Guide - Azure.
- Launch and replace the nodes and proxy in multiple batches.

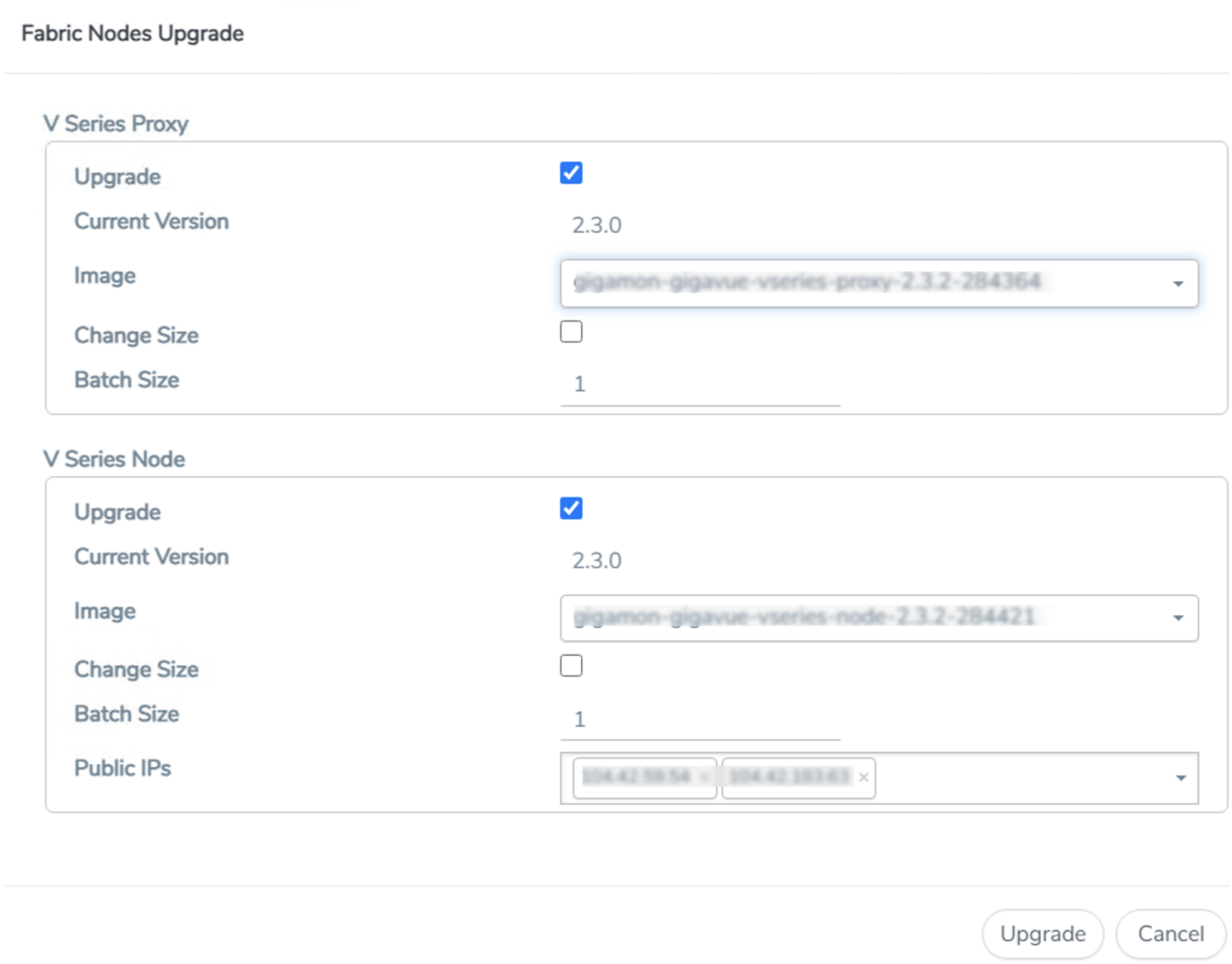
  For example, if you need to upgrade 18 GigaVUE V Series Nodes, specify how many you want to upgrade per batch.

To upgrade the GigaVUE V Series Proxy and GigaVUE V Series Node,

1. Go to **Inventory > VIRTUAL > Azure**, and then select **Monitoring Domain**. The **Monitoring Domain** page appears.
2. On the Monitoring Domain page, select the connection name check box and select **Actions**



3. Select **Upgrade Fabric** from the drop-down list. The Fabric Nodes Upgrade page is displayed.



4. Select the **Upgrade** check box, upgrade the GigaVUE V Series Node/Proxy.
5. From the **Image** drop-down list, select the latest version of the GigaVUE V SeriesProxy/Nodes.
6. Select the **Change Size** check box to change the flavor of the node/proxy, only if required.
7. Specify the batch size in the **Batch Size** box to upgrade the GigaVUE V Series Node/Proxy.

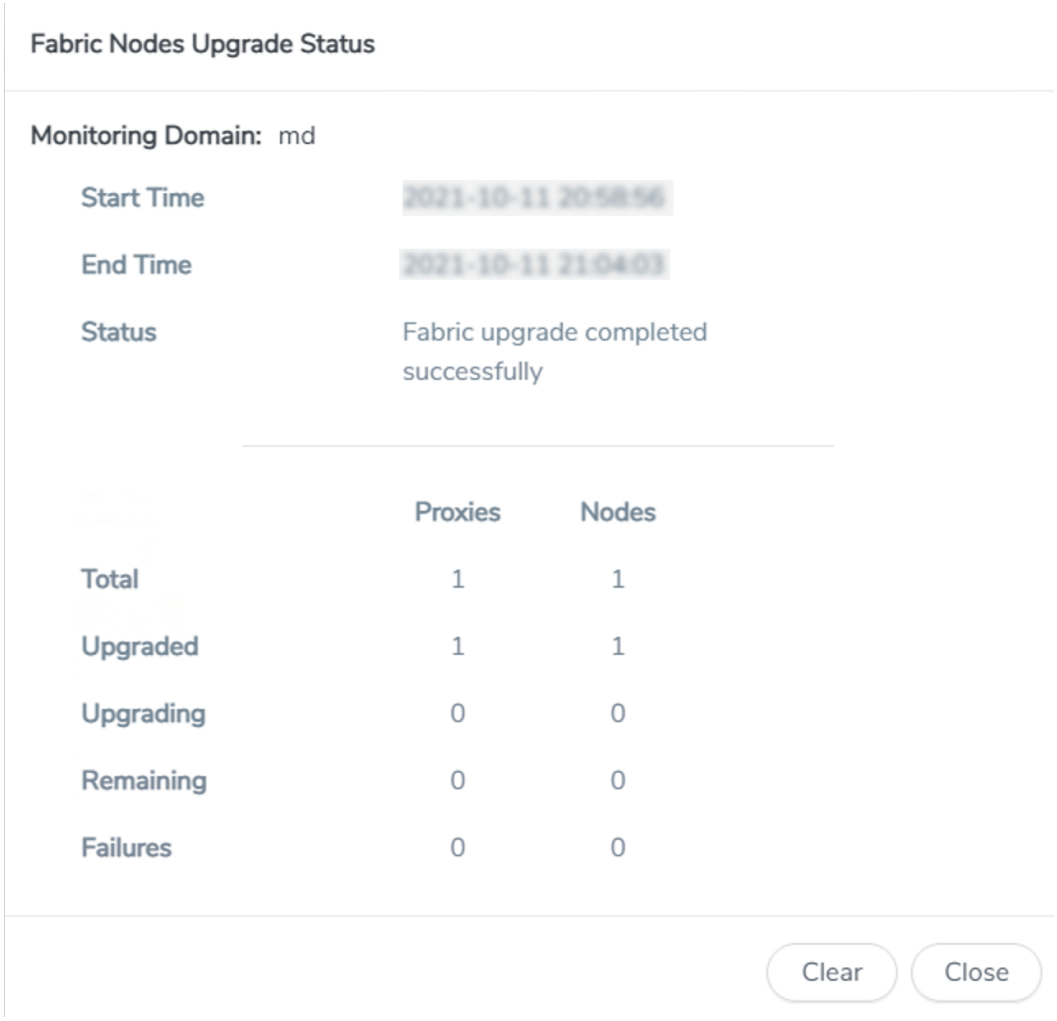
   For example, if you have 7 GigaVUE V Series Nodes, specify 7 as the batch size and upgrade all of them. Alternatively, you can specify 3 as the batch size, and launch and replace 3 V Series nodes in each batch. In the last batch, the remaining 1 V Series node is launched.
8. From the Public IPs drop-down list, select the IP addresses equal to the Max Instances defined when creating a monitoring domain.

> **NOTE:** This is only applicable for nodes deployed using Public IP, when creating a monitoring domain.

9. Select **Upgrade**.

   The upgrade process takes a while depending on the number of GigaVUE V Series Proxys and Nodes upgrading in your Azure environment. First, the new version of the GigaVUE V Series Proxy is launched. Next, the new version of GigaVUE V Series Nodes is launched. Then, the older version of both is deleted from the project. The monitoring session is deployed automatically.

To view the detailed upgrade status, select **Upgrade in progress** or **Upgrade successful**, the **V Series Node Upgrade Status** dialog box appears.



- Click **Clear** to delete the monitoring domain upgrade status history of successfully upgraded nodes.

Upgrade GigaVUE Fabric Components in GigaVUE-FM for OpenStack

This chapter describes how to upgradeGigaVUE V Series Proxy and GigaVUE V Series Nodes. For more detailed information about UCT-V Controller, GigaVUE V Series Proxy and Node Version refer GigaVUE-FM Version Compatibility Matrix.

IMPORTANT NOTE:

Before upgrading the Fabric Components to version 6.10.00 or above, ensure the following actions are performed:

- Create Token in GigaVUE-FM for UCT-V Installation and update it in the configuration file. Refer to Install UCT-Vfor more details.
- Create Tokens for deploying the Fabric Components using Third Party Orchestration. Refer to Configure Tokens for more details.
- Open the required ports in the cloud platform. Refer to Network Firewall Requirement for Cloud Suite] for more details.
- When using FMHA configuration, follow the steps given provided in the Configure Secure Communication between Fabric Components in FMHA section.

Refer to the following topic for more information:

- Prerequisite
- Upgrade UCT-V Controller
- Upgrade GigaVUE V Series Nodes and GigaVUE V Series Proxy

Prerequisite

Before you upgrade the GigaVUE V Series Proxy and GigaVUE V Series nodes, you must upgrade GigaVUE-FM to software version 5.13. For better performance, Gigamon recommends you to upgrade to the latest version.

Upgrade UCT-V Controller

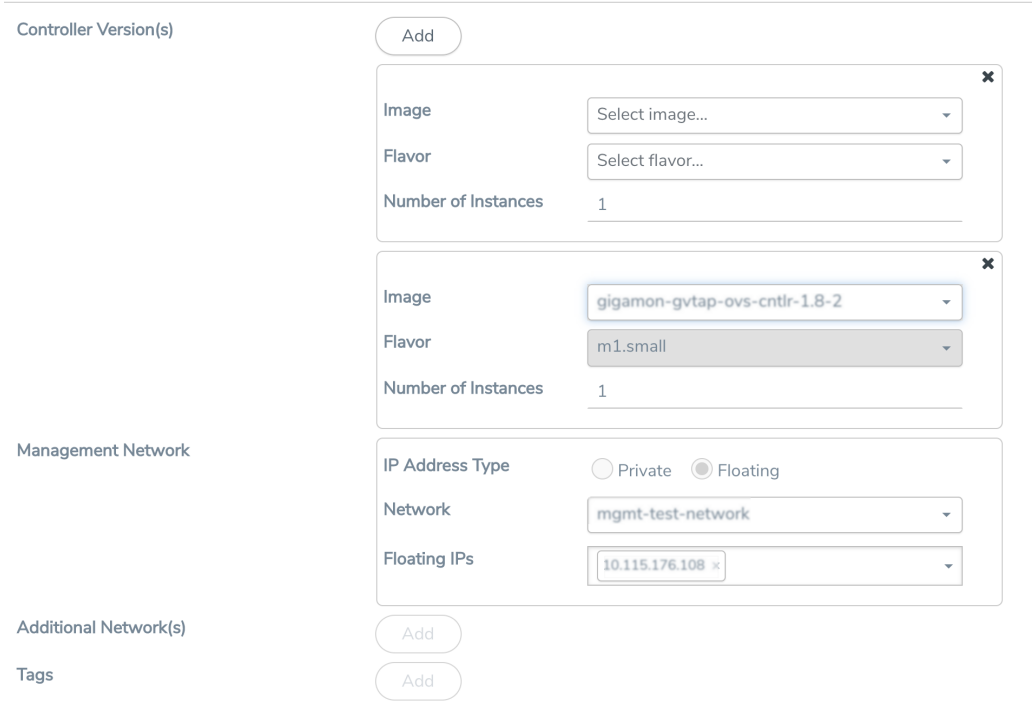
NOTE: UCT-V Controllers cannot be upgraded. Only a new version that is compatible with the UCT-V's version can be added or removed in the **OpenStack Fabric Launch Configuration** page.

To change the UCT-V Controller version follow the steps given below:

To change UCT-V Controller version between different major versions

NOTE: You can only add UCT-V Controllers which has different major versions. For example, you can only add UCT-V Controller version 1.8-x if your existing version is 1.7-x.

a. Under **Controller Versions**, click **Add**.
b. From the **Image** drop-down list, select a UCT-V Controller image that matches with the version number of UCT-Vs installed in the instances.
c. From the **Flavor** drop-down list, select a size for the UCT-V Controller.
d. In **Number of Instances**, specify the number of UCT-V Controllers to launch. The minimum number you can specify is 1.



You cannot change the IP Address Type and the Additional Networks details, provided at the time of UCT-V Controller configuration.

After installing the new version of UCT-V Controller, follow the steps given below:

1. Install UCT-V with the version same as the UCT-V Controller.
2. Delete the UCT-V Controller with older version.

To change UCT-V Controller version with in the same major version

NOTE: This is only applicable, if you wish to change your UCT-V Controller version from one minor version to another with in the same major version. For example, from 1.8-2 to 1.8-3.

a. From the **Image** drop-down list, select a UCT-V Controller image with in the same major version.
b. Specify the **Number of Instances**. The minimum number you can specify is 1.
c. Select the **Network** from the drop-down.

- You cannot modify the rest of the fields.
- After installing the new version of UCT-V Controller, install the UCT-V with the same version.

Upgrade GigaVUE V Series Nodes and GigaVUE V Series Proxy

GigaVUE-FM lets you upgrade GigaVUE V Series Proxy and GigaVUE V Series Nodes at a time.

There are multiple ways to upgrade the GigaVUE V Series Proxy and nodes. You can:

- Launch and replace the complete set of nodes and controllers at a time.

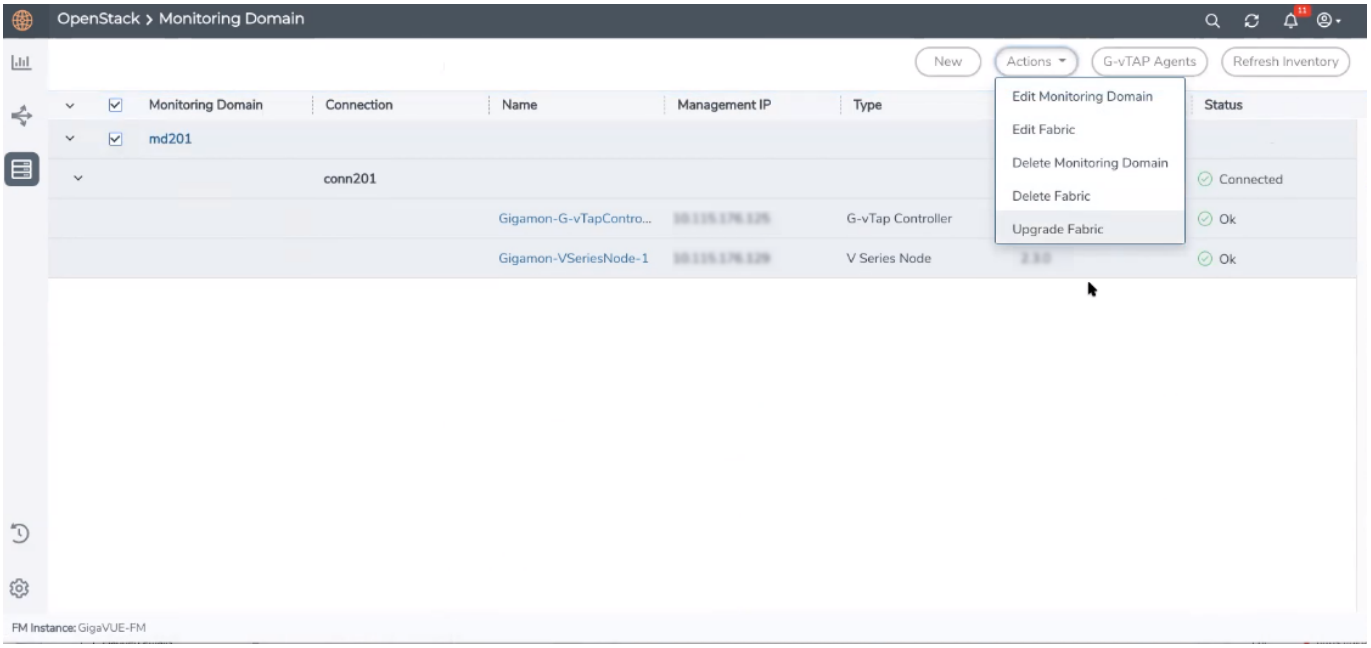
  For example, if you have 1 GigaVUE V Series Proxy and 10 GigaVUE V Series nodes in your project, you can upgrade all of them at once. First, the new version of GigaVUE V Series Proxy is launched. Next, the new version of GigaVUE V Series Nodes are launched. Then, the old version of V Series Proxy and nodes are deleted from the project.

  NOTES:
  - When the new version of nodes and controllers are launched, the old version still exists in the project until they are deleted. Make sure the flavor determined during the configuration can accommodate the total number of new and old fabric nodes present in the project. If the flavor cannot support so many Virtual Machines, you can choose to upgrade in multiple batches.
  - If there is an error while upgrading the complete set of controllers and nodes present in the project, the new version of the fabric is immediately deleted and the old version of the fabric is retained as before.
  - Prior to upgrading the GigaVUE V Series Proxy and Nodes, you must ensure that the required number of floating IP addresses are available in the respective subnets. Otherwise, the upgrade will fail.
- Launch and replace the nodes and controllers in multiple batches.

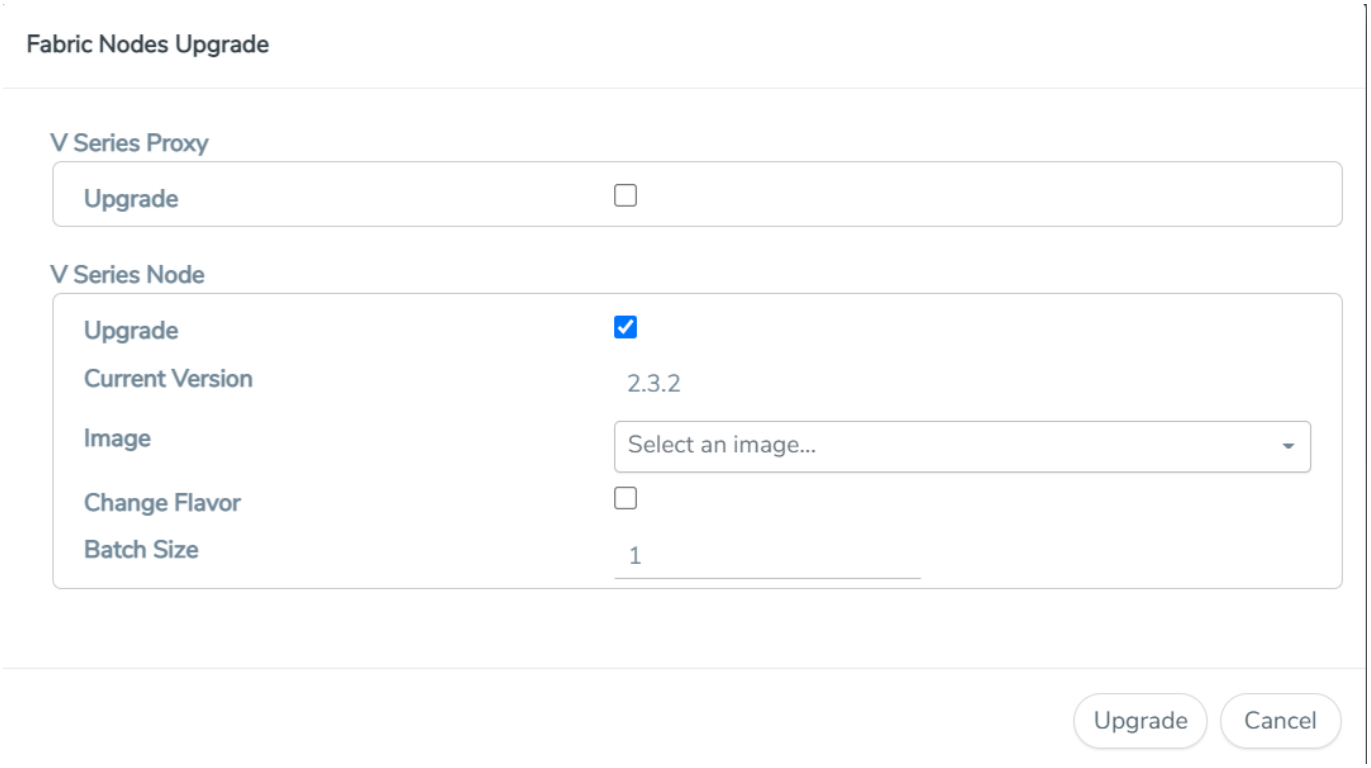
  For example, if there are 18 GigaVUE V Series Nodes to be upgraded, you can specify how many you want to upgrade per batch.

To upgrade the GigaVUE V Series Proxy and GigaVUE V Series Nodes:

1. Go to **Inventory > VIRTUAL > OpenStack,** and then click **Monitoring Domain**. The Monitoring Domain page appears.
2. On the Monitoring Domain page, select the connection name check box and click **Actions**



3. Select **Upgrade Fabric** from the drop-down list. The Fabric Nodes Upgrade page is displayed.



4. To upgrade the GigaVUE V Series Nodes/Proxy, select the **Upgrade** checkbox.
5. From the **Image** drop-down list, select the latest version of the GigaVUE V SeriesProxy/Nodes.

6. Select the **Change Flavor** checkbox to change the flavor of the nodes/proxy, only if required.
7. To upgrade the GigaVUE V Series Nodes/Proxy, specify the batch size in the **Batch Size** box.

   For example, if there are 7 GigaVUE V Series Nodes, you can specify 7 as the batch size and upgrade all of them at once. Alternatively, you can specify 3 as the batch size, and launch and replace 3 V Series nodes in each batch. In the last batch, the remaining 1 V Series node is launched.
8. Click **Upgrade**.

   The upgrade process takes a while depending on the number of GigaVUE V SeriesProxy and Nodes upgrading in your OpenStack environment. First, the new version of the GigaVUE V Series Proxy is launched. Next, the new version of GigaVUE V Series Nodes is launched. Then, the older version of both is deleted from the project. In the V Series Proxy page, click the link under Progress to view the upgrade status.

   The monitoring session is deployed automatically.

Upgrade GigaVUE V Series Node in GigaVUE-FM for ESXi

This section explains the available methods to upgrade the GigaVUE V Series Nodes and provides instructions on how to upgrade GigaVUE V Series Nodes.

IMPORTANT

Before upgrading the Fabric Components to version 6.10.00 or above, ensure the following actions are performed:

- Open the required ports in the cloud platform. For details, refer to Network Firewall Requirement for GigaVUE Cloud Suite.
- When using FMHA configuration, follow the steps in the Configure Secure Communication between Fabric Components in FMHA section.

Update GigaVUE V Series **Nodes**

Use one of the following two options:

1. Upgrade all the GigaVUE V Series Nodes in a monitoring Domain:
   a. Select the Monitoring Domain.
   b. Select **Actions > Upgrade Fabric.**

2. Upgrade a single or a group of GigaVUE V Series Node. When upgrading a group of GigaVUE V Series Nodes, ensure all the GigaVUE V Series Nodes deployed on the same ESXi hosts are selected.

Upgrade Considerations

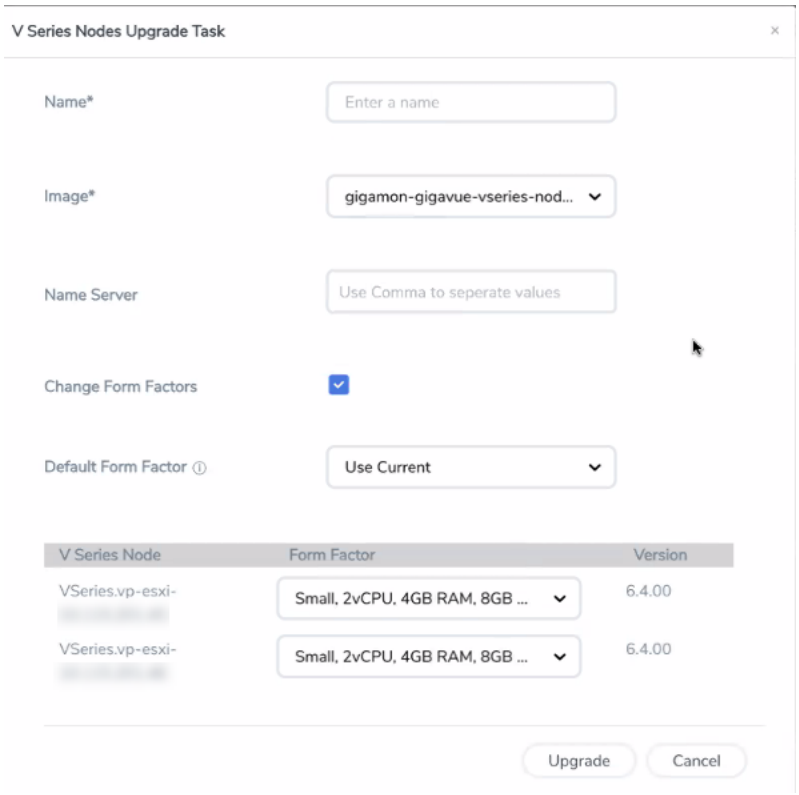
- You can select an entire monitoring domain and upgrade all the GigaVUE V Series Nodes in that particular monitoring domain, or you can select an entire host and upgrade all the GigaVUE V Series Node deployed in that particular host.
- When multiple GigaVUE V Series Nodes are deployed on the same ESXi host and only if a part of GigaVUE V Series Nodes are selected in that particular host, then the **Upgrade Fabric** button is disabled.
- When upgrading GigaVUE V Series Nodes, if a host of a particular GigaVUE V Series Node is under maintenance mode, then the **Upgrade Fabric** button is disabled.
- Unselect the GigaVUE V Series Node whose host is under maintenance mode, and upgrade that GigaVUE V Series Node when the host is out of the maintenance mode.

NOTE: GigaVUE-FMsupports only (n, n-1, n-2) GigaVUE V Series Node versions.

Upgrade the GigaVUE V Series Node in GigaVUE-FM:

1. Go to **Inventory > VIRTUAL > VMware vCenter (V Series)**, then click **Monitoring Domain**. The **Monitoring Domain** page appears.
2. Select an entire monitoring domain or an entire host and select **Actions**.

3. From the drop-down list, select **Upgrade Fabric.** The **V Series Node Upgrade Task** dialog box appears.

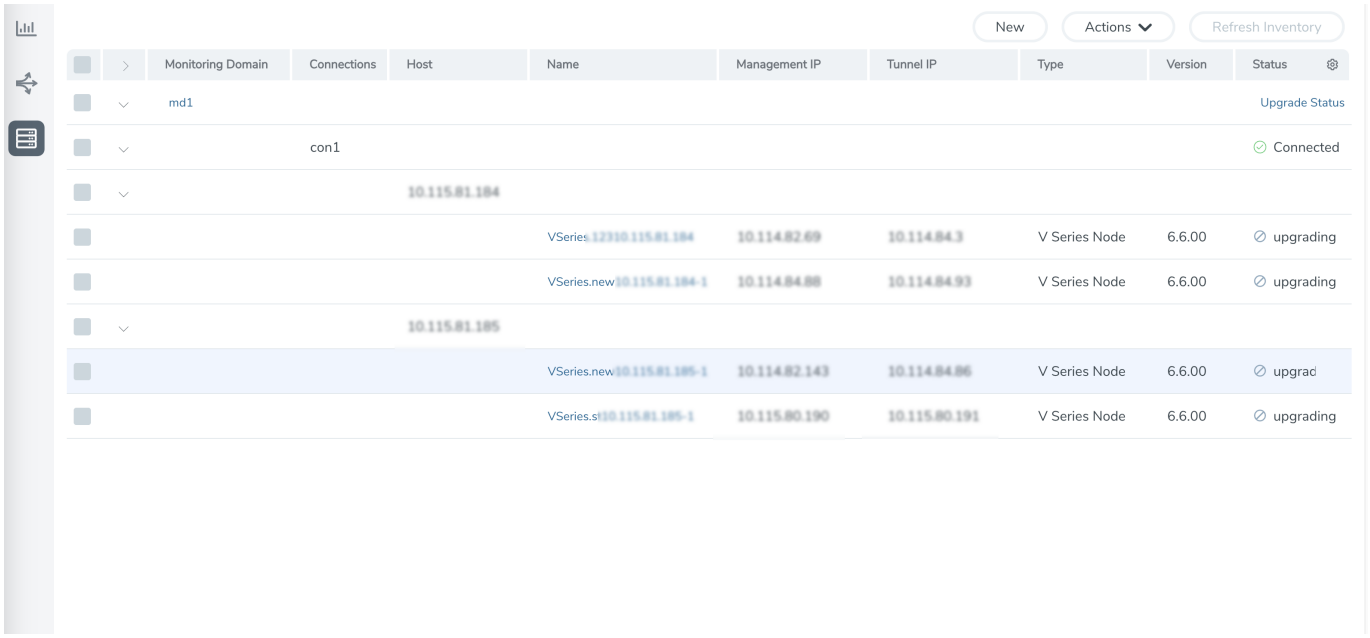


4. Enter a name for the V Series Node upgrade task.
5. Select the latest GigaVUE V Series Node OVA image from the **Image** drop-down list. When upgrading the GigaVUE V Series Nodes to any version equal to or greater than 6.5.00, the **Name Server** field is displayed. This field is optional. Name Server is a server that stores the mapping between the domain names and the IP address. The maximum number of name servers that can be entered is three. Enter valid IPv4 address, separated by comma.
6. (Optional) Select the **Change Form Factors** check box if you want to modify the form factor (instance) size.
7. Select the form factor from the Default Form Factor drop-down menu to change the form factor of all the selected V Series Nodes.
   You can use the **Use Current** option to use the existing form factor of the individual GigaVUE V Series Node. You can also change the form factor of an individual GigaVUE V Series Node from the **Form Factor** drop-down menu of the respective GigaVUE V Series Node. The form factor selected here overwrites the form factor selected in the **Default Form Factor**.

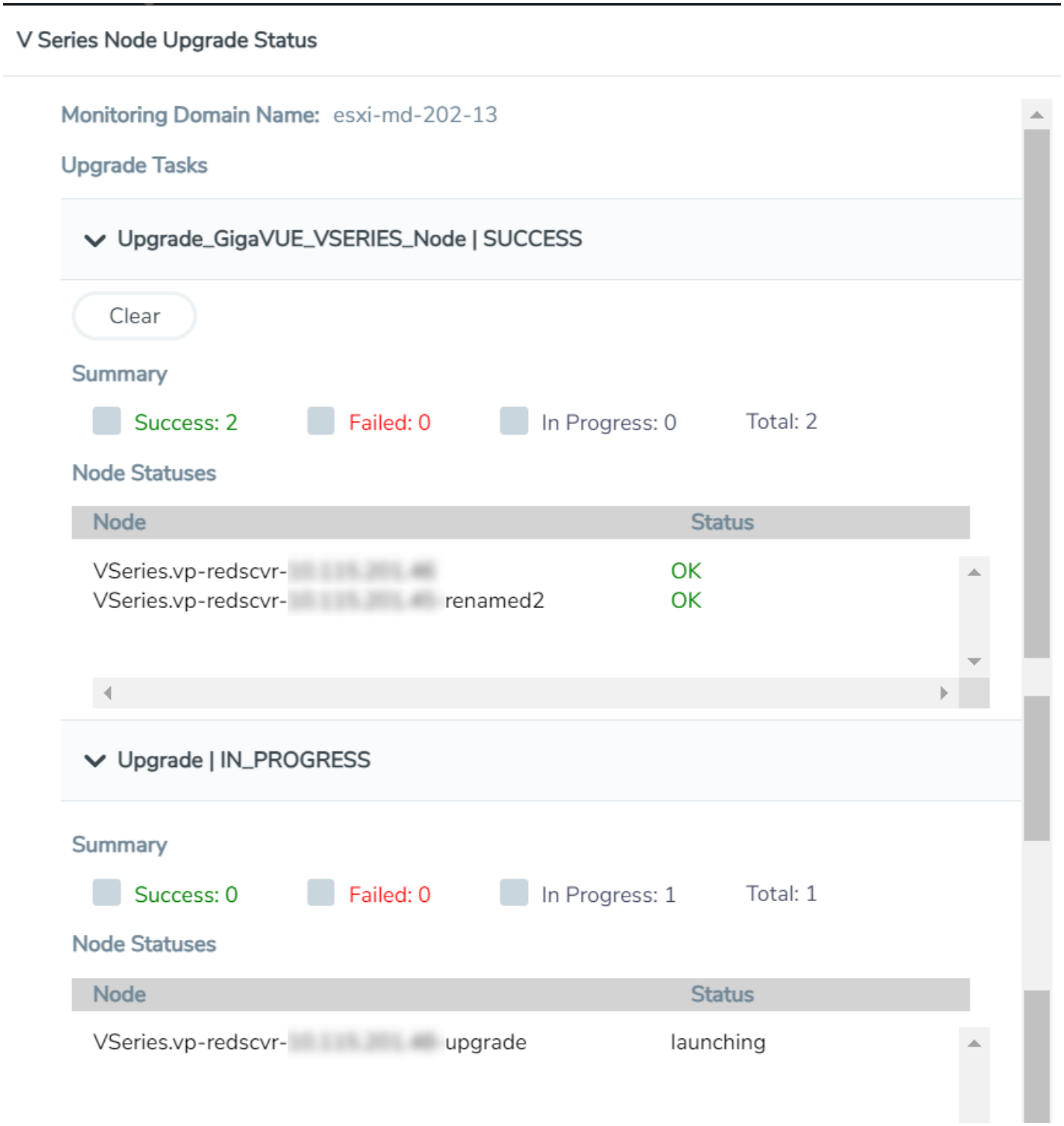
   NOTE: All the GigaVUE V Series Node with Static IP address retain their old IP address even after the upgrade.
8. Select **Upgrade** to launch the GigaVUE V Series Node upgrade.

> **NOTE:** Both the new and the current GigaVUE V Series Nodes appear in the same Monitoring Domain until the new nodes replace the current, and the status changes to **Ok**.

You can view the status of the upgrade in the Status column of the **Monitoring Domain** page.



To view the detailed upgrade status click **Upgrade Status**, the **V Series Node Upgrade Status** dialog box appears.



- Select **Clear** to delete the monitoring domain upgrade status history of successfully upgraded nodes.
- If the GigaVUE V Series Node upgrade fails or is interrupted for any reason, select **Retry** on the **V Series Node Upgrade Status** dialog box.

NOTE: You cannot modify the node configurations when you are using **Retry** option. GigaVUE-FM uses the same values defined in the initial fabric upgrade configuration.

Upgrade GigaVUE V Series Node for VMware NSX-T

GigaVUE V Series Nodes can be deployed in two ways. You can either directly use VMware NSX-T manager to deploy your GigaVUE V Series Nodes or use GigaVUE-FM to deploy your GigaVUE V Series Nodes. Based on the method you deploy GigaVUE V Series Nodes, you can upgrade them in two ways. Refer to the following topic for more detailed information.

- Upgrade GigaVUE V Series Nodes Deployed using GigaVUE-FM
- Upgrade GigaVUE V Series Node Deployed using VMware NSX-T Manager

Upgrade GigaVUE V Series Nodes Deployed using GigaVUE-FM

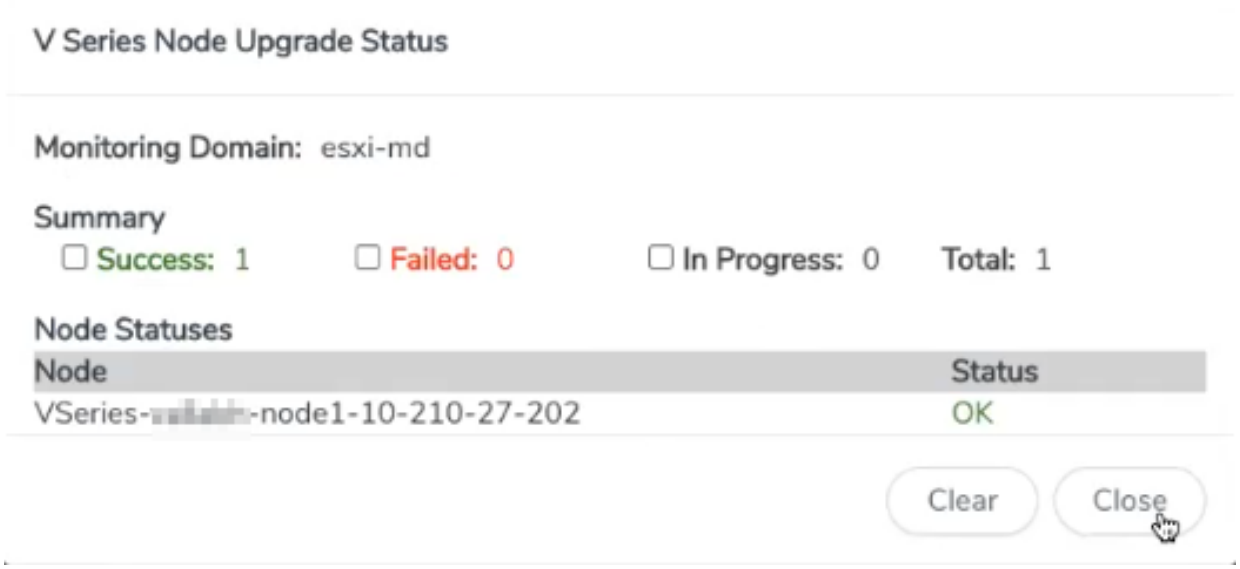
Before upgrading the nodes ensure that all the current V Series nodes are of same version. To upgrade GigaVUE V Series Node in GigaVUE-FM:

1. Go to **Inventory > VIRTUAL > VMware NSX-T (V Series)**, and then click **Monitoring Domain**. The **Monitoring Domain** page appears.
2. Select a deployed monitoring domain and click **Actions**. From the drop-down list, select **Upgrade Fabric**, the **V Series Node Upgrade** dialog box appears.

3. Use the **Use External Image** toggle button to choose between internal and external image.
   - **Yes** to use an external image. Enter the Image URL of the latest V Series Node OVA image
   - **No** to use an internal image. To use an internal image, select the uploaded OVA files from the **Select an image** drop-down menu.
4. Click the **Change Form Factors** check box to modify the form factor (instance) size.

   NOTE: Both the new and the current V Series nodes appears on the same monitoring domain until the new nodes replaces the current and the status changes to **Ok**.
5. Click **Upgrade**.

You can view the status of the upgrade in the Status column of the **Monitoring Domain** page.
To view the detailed upgrade status click **Upgrade in progress** or **Upgrade successful**, the **V Series Node Upgrade Status** dialog box appears.



Click **Clear** to delete the logs of successfully upgraded nodes.

NOTE: Monitoring Domain upgrade can be only done when there is a single service deployment in the monitoring domain.

Upgrade GigaVUE V Series Node Deployed using VMware NSX-T Manager

NOTE: When you deploy your V Series Nodes using VMware NSX-T manager, you cannot directly upgrade V Series Node in GigaVUE-FM. In this case, the upgrade button in GigaVUE-FM is disabled.

To upgrade V Series Nodes deployed using VMware NSX-T, follow the steps given below:

1. Delete the existing V Series Node in VMware NSX-T Manager.
2. Click **Actions > Edit** in the Monitoring Domain page. The **VMware Configuration** page appears.
3. Enter the new **Image URL** or select a new image if **Use External Image** toggle button is disabled.
4. Then, deploy the new V Series Nodes in the VMware NSX-T manager

GigaVUE-FM Administrator Authentication by Platform

This table describes the initial values that are used for first time log in as a GigaVUE-FM administrator via the GUI or CLI on various supported platforms. Important to know:

- The credentials used in the GigaVUE-FM GUI interface are different than those used in the GigaVUE-FM CLI interface.
- As deployments vary by platform, so do the admin authentication methods. Depending on the platform where GigaVUE-FM is installed, you may need to specify the authentication method (SSH Public Key or Password) during deployment or use a pre-defined default password and then change the password the first time you log in.
- Additionally, the default login credentials have also changed in certain software releases.

Initial Credentials for GigaVUE-FM Credentials

The following table provides the initial login credentials for GigaVUE-FM after installing or upgrading. The table displays data for Release 6.0.00 and above, and then provides CLI and GUI authentication options, rules, and notes for each supported platform.

Mode	Credential	Values by Platform and Mode (GUI/CLI)				
		AWS	Azure	VMware OVA Deployments	OpenStack	Other (non-OVA) Deployments
CLI	Username	**gigamon**	*specified during deployment.*	**admin**	**admin**	**admin**
	Password	*no password*	*specified during deployment.*	*specified during deployment*	**admin123A!!**	**admin123A!!**

	SSH Public Key	*specified during deployment*	*specified during deployment*	*specified during deployment*	*no initial value*	*no initial value*
	Rules & Notes	For AWS, initial access is only available using an SSH Public Key	During Azure deployments, you must specify one authentication method and provide the value. Either authentication method will work if configured; however, on Azure, you cannot specify both, you can only configure one method.	In VMware deployments, you may configure an SSH Public Key and/or a Password. You may configure both, but you must configure at least one of them. If you configure both, then you can use either method to access the GigaVUE-FM CLI.	Password change is required on first login.	Password change is required on first login.
GUI	**Username**	**admin**	**admin**	**admin**	**admin**	**admin**
	Password	**<AWS Instance ID>** of GigaVUE-FM virtual instance	**admin123A!!**	**admin123A!!**	**<OpenStack Instance ID>** of GigaVUE-FM virtual instance, reverts to '**admin123A!!**' if no metadata service is available.	**admin123A!!**
	Rules & Notes					

Logging in to GigaVUE-FM Command Line Interface

Access to the Linux shell prompt is now restricted and will be removed in a future release. When you log into the GigaVUE-FM CLI, you can view the ***fmctl*** command prompt instead of a bash shell. To access the bash shell, use the ***shell*** command. In the future, access to bash through the ***shell*** command needs Gigamon support.

NOTE: If you enter an incorrect password three times, your account will be locked for 10 minutes as a security measure. After this 10-minute lockout period, you can attempt to log in again using the correct password.

Refer to the following sections for more information:

- GigaVUE-FM CLI Commands
- Post Installation Configurations

GigaVUE-FM has all the required software pre-installed to perform the various functions. Unless directed by Gigamon, do not install any third-party software, and Gigamon explicitly does not recommend the installation of any such software.

Important: Installing Third-party software in GigaVUE-FM can have adverse effects on the operation of GigaVUE-FM. Uninstall all third-party software prior to contacting Gigamon Support for troubleshooting.

Post Installation Configurations

This section describes the processes that must be performed after GigaVUE-FM is installed. Refer to the instruction in this chapter if you wish to install custom certificate or Rabbit MQ certificate.

- How to install custom certificates instead of default Self-signed certificates loaded in GigaVUE-FM: Install Custom Certificate
- How to establish communication between the load balancer and web server: Post Installation Configurations

Install Custom Certificate

To install a third-party certificate on GigaVUE-FM, refer to the following sections:

- Pre-requisites
- Steps

NOTE: When you install the certificates, the commands must be performed in the Linux shell, which you can access by using the ***shell*** command.

Pre-requisites

Refer to the following pre-requisites:

- Take a backup of the default system self-signed certificate and key contents before replacing them with third-party certificate and key. The files are available in the following folders:
  - **localhost.crt**: `/etc/pki/tls/certs/localhost.crt`
  - **localhost.key**: `/etc/pki/tls/private/localhost.key`
- When replacing the certificate key and file ensure to adhere to the following naming convention:
  - For Certificate: **localhost.crt**
  - For Certificate Key: **localhost.key**
- If the private key is encrypted, you must decrypt it before replacing the localhost.key file. You can use the following **openssl** command to decrypt the private key:

```
openssl rsa -in [original.key] -out [new.key]
```

- When you copy the contents of the certificate file, do not delete the EOL characters at the end of each line. If there is no EOL character at the end of certificate file, insert one.
- In case of chain of certificates, bundle the server, intermediate, and root certificates into a single certificate file before replacing the **localhost.crt.**
- You must bundle the certificates in the following order without any space:
  - Server certificate (at the top)
  - Intermediate certificates
  - Root certificate (at the bottom)
- For chain of certificates, add the SSLCertificateChainFile directive to **/etc/httpd/conf.d/ssl.conf**: **sudo vim /etc/httpd/conf.d/ssl.conf.** Add the following line:**SSLCertificateChainFile /etc/pki/tls/certs/localhost.crt**.
- The uploaded certificate must include client authentication and server authentication in its extended key usage especially when GigaVUE-FM manages cloud deployments.

Steps

Generate the certificate and a private key file in pem format. Use the following command on Linux or a Linux app (such as Cygwin) for generating the files:

sudo openssl req -new -newkey ec -pkeyopt ec_paramgen_curve:secp384r1 -x509 -nodes -keyout privatekey.pem -days 365 -out certificate.pem

NOTE: Until software version 6.4.00, GigaVUE-FM supported RSA based certificates. Starting from software version 6.5.00, GigaVUE-FM supports ECDHE based certificates. However, you can configure the certificate as per your need.

Copy the contents of the certificate file.

To install the certificates:

1. Log in to the GigaVUE-FM CLI.
2. Execute the following steps from the shell prompt as a root user (**sudo**):
   - Replace SSLCertificateFile: **/etc/pki/tls/certs/localhost.crt**
   - Replace SSLCertificateKeyFile: **/etc/pki/tls/private/localhost.key**
   - Provide access to certificate file: **chmod 644 /etc/pki/tls/certs/localhost.crt**
   - Provide access to key file: **chmod 600 /etc/pki/tls/private/localhost.key**
   - Configure GigaVUE-FM load balancer functionality:

     ```
     cat /etc/pki/tls/certs/localhost.crt
     /etc/pki/tls/private/localhost.key > /etc/pki/tls/certs/localhost.pem
     systemctl reload haproxy.service
     ```

   - When using GigaVUE Cloud Suite, run the following commands to ensure that GigaVUE-FM continues to communicate securely with all the fabric components after certificate replacement.

     NOTE: Ensure that you run the following commands before restarting the Apache server.

     ```
     curl --location 'https://<FM-
     IP>/api/v1.3/cloud/nodes/certificate/clientCa' \
     --header 'Authorization: Bearer <YOUR_TOKEN>' \
     --form 'caCertificate=@</path/to/localhost.crt>'
     ```

- Update RabbitMQ certificate:

  a. Execute the following steps from the shell prompt as a root user (sudo):

     Replace the existing certificate: **`cp /etc/pki/tls/certs/localhost.crt /var/lib/gigamon/rabbitmq/server/cert.pem`**

     Replace the existing private key: **`cp /etc/pki/tls/private/localhost.key /var/lib/gigamon/rabbitmq/server/key.pem`**

     Provide access to certificate and key: **`cp /etc/pki/tls/certs/localhost.crt /var/lib/gigamon/rabbitmq/CA/cacert.pem`**

     Restart the RabbitMQ service: **`systemctl restart rabbitmq.service`**

- Restart apache as root: **systemctl restart httpd.service**
- After restarting, ensure tomcat is up and running: **`sudo systemctl status tomcat@cms.service`**

The system will now start using the newly installed certificate.

GigaVUE-FM uses a public key (cms.p12 file) to encrypt the Security Assertion Markup Language (SAML) messages. You can either use the default public key available in GigaVUE-FM or generate a new public key using the following command:

```
sudo openssl pkcs12 -export -name CMS -out /etc/gigamon/cms.p12 -inkey /etc/pki/tls/private/localhost.key -in /etc/pki/tls/certs/localhost.crt -passout pass:cms123
```

You will be prompted for a pass phrase for the **localhost.crt**.

After the public key (cms.p12 file) is generated, place the file in the **/etc/gigamon** directory. Change the access rights to **`chmod 644`**.

Communication between GigaVUE-FM Load Balancer and Web Server

After GigaVUE-FM is installed, communication is established between GigaVUE-FM Load Balancer (HA-proxy service) and the apache web server. By default, Load Balancer uses the IPv4 loopback address to communicate with the webserver present locally.

Refer to the following notes:

To change from IPv4 to IPv6 loopback address use the following command:

```
curl -XPOST "http://localhost:4466/fmcs/fm/network?pretty" -H "Content-Type: application/json" -d '{"haproxy":{"enable_ipv6" : "true"} '
```

To change from IPv6 to IPv4 loopback address use the following command:

```
curl -XPOST "http://localhost:4466/fmcs/fm/network?pretty" -H "Content-Type:
application/json" -d '{"haproxy":{"enable_ipv6" : "false"} '
```

Disable DNSSEC Updates

You may observe that GigaVUE-FM connects to the root DNS servers to update the DNSSEC signatures. This process is managed by the unbound-anchor.service, which, along with unbound-anchor.timer, automates the unbound's root trust anchor updates for DNSSEC.

You can disable these services if you prefer that GigaVUE-FM should not connect to the root DNS servers. This prevents automatic root anchor updates, but it may weaken DNSSEC validation. In such cases, you must manually update the root anchor.

NOTE: These changes will not persist after a GigaVUE-FM upgrade. This procedure serves as a temporary workaround if the actions of the **unbound-anchor.service** are not desirable.

To disable the DNSSEC updates:

1. Log in to the GigaVUE-FM CLI.
2. Run the following commands:

```
sudo systemctl disable --now unbound-anchor.service
sudo systemctl stop unbound-anchor.timer
sudo systemctl disable unbound-anchor.timer
```

After completing these steps, GigaVUE-FM will no longer attempt to connect to the root DNS servers for DNSSEC updates. Ensure that you manually update the root anchor as needed to maintain DNSSEC validation.

Configure rSyslog Server for Receiving TLS/SSL Packets

This section describes the steps to configure the rSyslog server if you want to enable TLS logging for audit logs and syslogs from GigaVUE-FM.

The steps are described in the following table:

	Steps	Details
1	Copy the generated certificates in to the path.	`sudo cp ca.pem rservtls-cert.pem rservtls-key.pem /etc/pki/tls/private/`
2	Run the *fmctl* command to configure syslog server.	`fmctl logging <rsyslog server-ip>:514 tls`

Reference

This section provides additional information useful for GigaVUE-FM installation and upgrade.

Topics:

- Setting the GigaVUE-FM Admin Password
- GigaVUE-FM CLI Commands

Setting the GigaVUE-FM Admin Password

You can set the admin password for GigaVUE-FM from the GigaVUE-FM Command-line Interface (CLI) or from the GigaVUE-FM GUI. This topic describes the requirements for the password.

The characters in the admin password must include, at least:

- At least 8 characters and up to a maximum of 64 characters in length
- One numerical character
- One upper case character
- One lower case character
- One special character from -!@#$%^&*()+

If the password does not meet the complexity requirements:

- The system does not display any error message.
- The parameters configured above are not passed on to the GigaVUE-FM except the host name parameter.
- The static IP addresses that were configured originally will be unavailable after GigaVUE-FM is deployed.

Setting the Admin Password from the GigaVUE-FM CLI

The password can be a minimum of 14 characters and a maximum of 255 characters, and must comply with the character requirements specified above.

NOTE: The password that you set from the GigaVUE-FM CLI is applicable only to the GigaVUE-FM CLI.

Setting the Admin Password from the GigaVUE-FM GUI

You must change the default admin password when you first login to the GigaVUE-FM UI. The default username and password for a admin user in GigaVUE-FM GUI is *admin* and *admin123A!!*, respectively. If GigaVUE-FM is deployed inside AWS or OpenStack, then the default password is the **Instance ID**. You can change the default admin password from GUI. The password can be a minimum of 8 characters and a maximum of 64 characters, and must comply with the character requirements specified above.

NOTE: The password that you set from the GigaVUE-FM GUI is applicable only to the GigaVUE-FM GUI.

GigaVUE-FM CLI Commands

GigaVUE-FM CLI commands assist you in configuring GigaVUE-FM, performing administrative tasks, and conducting maintenance activities. These tasks include system backups, image management, interface configuration, network settings, logging, and security controls, which may be challenging to accomplish through the GigaVUE-FM UI. You can access the GigaVUE-FM CLI via SSH or through the console.

Access to the Linux shell prompt is restricted. When you log into the GigaVUE-FM CLI, you can view the ***fmctl*** command prompt instead of a bash shell. To access the bash shell, use the ***shell*** command.

NOTE: If you enter an incorrect password three times, your account will be locked for 10 minutes as a security measure. After this 10-minute lockout period, you can attempt to log in again using the correct password.

This section describes the commands for the GigaVUE-FM Command-Line Interface (CLI) related to installation and upgrade processes.

fmctl

Use the **fmctl** command to manage GigaVUE-FM-related configurations.

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

```
fmctl

    shell
    help
    exit
    configuration [backup|restore][<absolute pathname of backup file>]
    image

        fetch <download URI> [<filename>]

        list [details] [<filename>]
        install <filename> [next|location {1|2}]
        boot [next|location {1|2}]
        delete [force] <filename>
        {move|rename} <old filename> <new filename>
        show

    logging [<fqdn>[:<port>]] [facility <facility>] [priority <priority>] [udp|tcp|tls]
    logging <ipaddress> [port <port number>] [facility <facility>] [priority <priority>] [udp|tcp|tls]
    no logging <fqdn>[:<port>]
    no logging <ipaddress> [port <port number>]
    reset factory halt
    set crypto enable
    get crypto
    set audit network enable
```

set audit network disable
get audit network
set crl enable
get crl
set UI admin password <new password>

{get|show} interface [{mgmt|management}]
set interface {mgmt|management} <interface name>
[options{--help|--interface <interface name>}]
- **set mapping <fqdn> <IP address>**
- **{get|show} {ip|ntp|hostname|domain|fqdn}**
- **set [ip|ip6] dhcp**
- **set [ip|ip6] [static] <address/cidr> [<gateway> [<dns1>[,<dns2>[,...]]]**
- **set {ip|ip6} route {add|remove} address/cidr gateway**
- **set ntp disable [<server1>[,<server2>[,...]]]**
- **set ntp enable [version <version_number>] [<server>[:<key_id>:<key_type>:<key_value>[,...]]]**
- **set ntp update [version <version_number>] [<server>[:<key_id>:<key_type>:<key_value>]]**
- **set hostname <hostname>**
- **set domain <domain>**
- **set fqdn <hostname> <domain>**
- **set/get/show searchdomains [<domain1>[,<domain2>[,...]]]**
- **set/get/show nameservers [<dns1>[,<dns2>[,...]]]**
- **show backup [<absolute pathname of backup file>]**

unlock UI <username>

NOTE: You must reboot the GigaVUE-FM, when there is a change in the IP address of the GigaVUE-FM.

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

Argument	Description
configuration [backup|restore]	Backs up and restores the configurations such as management interface, hostname, domain, IP, search domains, and NTP. For example, use the following command to back up the system configurations: **configuration backup <absolute path name of backup file>** Use the following command to restore the system configurations from the backup: **configuration restore <absolute path name of backup file>**
image fetch <download URI> [<filename>]	Retrieves an image file from a remote host. Use HTTP(S), FTP, or SCP to retrieve the file. The format for the download URL is as follows: **[protocol]://username[:password]@hostname:/path/filename** For example, the following command retrieves the image file named myimage from the FTP server at 192.168.1.10 using the **robh** account with the **xray** password: **image fetch ftp://robh:xray@xxx.xxx.x.x/myimage** You can also use the **<filename>** argument to give the retrieved file a new name on GigaVUE-FM. For example, the following command retrieves **myimage** and names it **newconfig**: **image fetch scp://bbochy:catch1@xxx.xxx.x.x:/myconfig newconfig** **Note**: You cannot retrieve a file with the same name as an existing configuration file.
image list	Provides the list of image file names available in GigaVUE-FM. For example: **image list**
image install <filename> [next|location {1|2}]	Installs the image file. For example, use the following command to install the image file on the next partition: **image install gigamon-gigavue-fm-5.8.00-160194-trial.img next** Use the following command to install the image file on the specified partition: **image install gigamon-gigavue-fm-5.8.00-160194-trial.img location 1** **Note**: Ensure that your current partition is not the same as the partition you specified for

Argument	Description
	installation. Else, an error is displayed.
image boot [next|location {1|2}]	Boots the image file on the specified partition. Ensure that the partition has the installed image file. For example, use the following command to boot the image file on the next partition: **image boot next** Use the folloaing command to boot the image file on the specified partition: **image boot location 1** **Note**: GigaVUE-FM reboots immediately.
image delete [force] <filename>	Deletes the named image file. For example: **image delete myimage**
image {move|rename} <old filename> <new filename>	Moves or renames the specified image file. For example, the following command renames myimage as newimage: **image rename myimage newimage**
image show	Displays the last boot partition. For example: **image show**
show securebootstatus	Displays whether UEFI secure boot is enabled or not. For example: **show securebootstatus**
logging [<fqdn>[:<port>]] [facility <facility>] [priority <priority>] [udp|tcp|tls]	Configures the logging server for sending events and audit logs to the remote server. For Example 1: **logging 1.2.3.4:6514 facility auth priority debug tcp**

Argument	Description
	Example 2: **logging 1.2.3.4:6514 tcp** **Note**: Don't use '*' in the command. It is the default one for facility and priority . Until software version 6.2.00, you can only use the UDP and TCP protocols for logging the audit logs and Syslogs to a remote server. Starting from software version 6.3.00, GigaVUE-FM allows you to configure the logging of audit logs and syslogs using **tls**. You must perform specific configurations in the remote server to enable logging using TLS. Refer to theConfigure rSyslog Server for Receiving TLS/SSL Packets section for more details.
logging <ipaddress> [port <port number>] [facility <facility>] [priority <priority>] [udp|tcp|tls]	Configure the Syslog server with an IPv4 and IPv6 address. You must use only this command when you configure the IPv6 address. For example: **logging <IPv4 or IPv6 address> port 6514 tls** **Note**: If IPv6 syslog server is configured in 6.9 version and then upgraded to 6.11, you must reconfigure the IPv6 syslog server using the new fmctl command.
no logging <ipaddress> [port <port number>]	Removes the logging server configuration when you use IPv4 or IPv6 address. For example: **no logging <IPv4 or IPv6 address> port 6514**
no logging <fqdn>[:<port>]	Removes the logging server configuration. For example: **no logging 1.2.3.4:6514**
reset factory halt	Resets the GigaVUE-FM instance to the default configuration and shuts down the system. For example: **reset factory halt**
set crypto enable	Enables the crypto mode in GigaVUE-FM.

Argument	Description
get crypto	Returns the response for API.
set audit network enable	Enables the network audit logs in GigaVUE-FM.
set audit network disable	Disables the network audit logs in GigaVUE-FM.
get audit network	Returns the response for API.
set crl enable	Enables the CRL validation in GigaVUE-FM.
set crl disable	Disables the CRL validation in GigaVUE-FM.
get crl	Returns the Response for API.
set UI admin password <new password>	Configures a new admin password for the GigaVUE-FM UI only. For information on setting the GigaVUE-FM password, refer to Setting the GigaVUE-FM Admin Password .
{get|show} interface [{mgmt|management}]	Displays the management interface configured for the GigaVUE-FMinstance. For example: **get|show interface management**
set interface {mgmt|management} <interface name>	Configures the management interface for the GigaVUE-FM instance, which has more than one ethernet interface. For example: **set interface management eth1** **Note**: You cannot use the **--interface** syntax with the **set interface management** argument.
--interface <interface name>	Allows various configurations that can be set for the management interface. This is an optional argument. For example, use the following command to ensure that eth1 management interface uses DHCP: **--interface eth1 set ip dhcp**
[options{--help|--interface <interface name>}] set mapping <fqdn> <IP address>	Maps the FQDN with the IP address of GigaVUE-FM. For example:

Argument	Description
	--interface eth1 set mapping fm 10.10.10.1 Use the following command to remove the mapping: **--interface eth1 set mapping fm**
[options{--help|--interface <interface name>}] {get|show} {ip|ntp|hostname|domain|fqdn}	Use to either fetch or display the IP address, NTP configurations, host name, domain name, or FQDN . For example: **--interface eth1 get {ip|ntp|hostname|domain|fqdn}** **--help show {ip|ntp|hostname|domain|fqdn}**
[options{--help|--interface <interface name>}] set [ip|ip6] dhcp	Configures the management interface to use DHCP. For example: **--interface eth1 set ip dhcp**
[options{--help|--interface <interface name>}] set [ip|ip6] [static] <address/cidr> [<gateway> [<dns1>[,<dns2>[,...]]]	Configures the static IP address and gateway on the management interface. You can also choose to configure DNS. For example: **--interface eth1 set ip static 10.115.46.72/21 10.115.40.1 10.10.1.20**
[options{--help|--interface <interface name>}] set {ip|ip6} route {add|remove} address/cidr gateway	Adds or removes the IP address and gateway for the management interface.
[options{--help|--interface <interface name>}] set ntp {disable <server1>[,<server2>[,...]}	Use to disable NTP for synchronization of the system's clock or delete a NTP server. For example, the following command disables NTP: **--interface eth1 set ntp disable** For example, the following command deletes NTP server: **--interface eth1 set ntp disable 1.2.3.4**
[options{--help|--interface	You choose to enable NTP and add NTP servers. For example, the following command enables

Argument	Description
<interface name>}] set ntp [enable] [version <version_number>] [<server>[:<key_id>:<key_ type>:<key_value>[,...]]]}	NTP and adds a NTP server: **--interface eth1 set ntp enable 192.168.1.10** For example, the following command enables NTP and adds a NTP server with Authentication: **--interface eth1 set ntp enable 192.168.1.10:50:SHA1:HEX:0EAB2E8193262AA0DA64C96A63E9221A20395313**
[options{--help|--interface <interface name>}] set ntp update [version <version_ number>] <server>[:<key_ id>:<key_ type>:<key_value>]	Use to update the Auth-details (keys) of the NTP server or to remove the Auth-details. For example, the following command updates the Auth-details (keys) of a NTP server: **–interface eth1 set ntp update 1.2.3.4:54:SHA1:HEX:0EAB2E8193262AA0DA64C96A63E9221A20395313** For example, the following command removes the Auth-details (keys) of a NTP server if configured already: **--interface eth1 set ntp update 1.2.3.4**
[options{--help|--interface <interface name>}] set hostname <hostname>	Configures the hostname. For example: **--interface eth1 set hostname myfm** **Note**: Ensure that you log out and re-login to the GigaVUE-FM to view the changes.
[options{--help|--interface <interface name>}] set domain <domain>	Configures the domain for GigaVUE-FM. For example: **--interface eth1 set domain gigamon.com**
[options{--help|--interface <interface name>}] set fqdn <hostname> <domain>	Configures the Fully Qualified Domain Name (FQDN) for the current GigaVUE-FM. **--interface eth1 set fqdn myfm gigamon.com**
[options{--help|--interface <interface name>}] set/get/show	Displays a list of domains for the current GigaVUE-FM

Argument	Description
searchdomains [<domain1> [,<domain2>[,...]]]	For example: **--interface eth1 set searchdomains** **--help get | show searchdomains**
[options{--help|--interface <interface name>}] set/get/show nameservers [<dns1>[,<dns2>[,...]]]	Displays a list of name servers for the current GigaVUE-FM For example: **--interface eth1 set nameservers** **--help get | show nameservers**
[options{--help|--interface <interface name>}] show backup	Displays the configurations that were backed up. For example: **--help show backup <absolute path name of backup file>**
unlock UI <username>	Unlocks the admin user whose account is locked after the maximum attempt to login is reached. **--unlock UI <username>**
shell	Navigates from fmctl shell to linux shell for advanced troubleshooting.
help	Displays the list of fmctl commands
exit	Exit the GigaVUE-FM CLI session.

NOTE: The command **fmctl jump-start** is deprecated.

Backing Up Configurations

Configurations that can backed up using **`fmctl`** commands are as follows:

BackupVersion
fmMgmtPort
fmHostname
fmDomain

fmNtpEnabled
fmNtpServers
fmDevice
fmIp4Connection
fmDhcpEnabled
fmIp4Address
fmIp4Gateway
fmIp4DNS
fmIp4Routes
fmIp6Connection
fmDhcp6Enabled
fmIp6Address
fmIp6Gateway
fmIp6DNS
fmIp6Routes
fmNameServers
fmSearchDomains
fmExtraPortCount

NOTE: When there are multiple interfaces in GigaVUE-FM, back up files provide the configurations of all the interfaces.

Rules, Notes and Limitations

Refer to the following rules and notes:

- To include special characters in the **`fmctl`** command line, enclose the string containing the special characters within single quotes. For example, to include the bang (!) special character in a password string, you must enclose the password string within single quotes, as shown in the following example:
  fmctl set UI admin password 'admin!!'
- When you manually restart the rsyslog service or change any fmctl logging configuration parameters, a few GigaVUE-FM audit log messages will not be captured in the syslog. This occurs as a result of limitations of the library used for pushing GigaVUE-FM's audit logs to syslog.

Additional Sources of Information

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

- Documentation
- Documentation Feedback
- Contact Technical Support
- Contact Sales
- The VÜE Community

Documentation

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

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

Table 1: Documentation Set for Gigamon Products

GigaVUE-FM 6.13 Hardware and Software Guides
DID YOU KNOW? If you keep all PDFs for a release in common folder, you can easily search across the doc set by opening one of the files in Acrobat and choosing **Edit > Advanced Search** from the menu. This opens an interface that allows you to select a directory and search across all PDFs in a folder.
Hardware how to unpack, assemble, rackmount, connect, and initially configure ports the respective GigaVUE-FM devices; reference information and specifications for the respective GigaVUE-FM devices
GigaVUE-HC1 Hardware Installation Guide
GigaVUE-HC3 Hardware Installation Guide
GigaVUE-HC1-Plus Hardware Installation Guide
GigaVUE-HCT Hardware Installation Guide
GigaVUE-TA25 Hardware Installation Guide
GigaVUE-TA25E Hardware Installation Guide
GigaVUE-TA100 Hardware Installation Guide
GigaVUE-TA200 Hardware Installation Guide

GigaVUE-FM 6.13 Hardware and Software Guides
GigaVUE-TA200E Hardware Installation Guide
GigaVUE-TA400 Hardware Installation Guide
GigaVUE-TA400E Hardware Installation Guide
GigaVUE-OS Installation Guide for DELL S4112F-ON
G-TAP A Series 2 Installation Guide
GigaVUE M Series Hardware Installation Guide
GigaVUE-FM Hardware Appliances Guide
Software Installation and Upgrade Guides
GigaVUE-FM Installation, Migration, and Upgrade Guide
GigaVUE-OS Upgrade Guide
GigaVUE V Series Migration Guide
Fabric Management and Administration Guides
GigaVUE Administration Guide covers both GigaVUE-OS and GigaVUE-FM
GigaVUE Fabric Management Guide how to install, deploy, and operate GigaVUE-FM; how to configure GigaSMART operations; covers both GigaVUE-FM and GigaVUE-OS features
GigaVUE Application Intelligence Solutions Guide
GigaVUE Inline Solutions Guide(**NEW**) (previously included in the **GigaVUE Fabric Management Guide**)
Cloud Guides how to configure the GigaVUE Cloud Suite components and set up traffic monitoring sessions for the cloud platforms
GigaVUE V Series Applications Guide
GigaVUE Cloud Suite Deployment Guide - AWS
GigaVUE Cloud Suite Deployment Guide - Azure
GigaVUE Cloud Suite Deployment Guide - OpenStack
GigaVUE Cloud Suite Deployment Guide - Nutanix
GigaVUE Cloud Suite Deployment Guide - VMware (ESXi)
GigaVUE Cloud Suite Deployment Guide - VMware (NSX-T)
GigaVUE Cloud Suite Deployment Guide - Third Party Orchestration

GigaVUE-FM 6.13 Hardware and Software Guides
Universal Cloud TAP - Container Deployment Guide
Gigamon Containerized Broker Deployment Guide
GigaVUE Cloud Suite Deployment Guide - AWS Secret Regions
GigaVUE Cloud Suite Deployment Guide - Azure Secret Regions
Reference Guides
GigaVUE-OS CLI Reference Guide library of GigaVUE-OS CLI (Command Line Interface) commands used to configure and operate GigaVUE HC Series and GigaVUE TA Series devices
GigaVUE-OS Security Hardening Guide
GigaVUE Firewall and Security Guide
GigaVUE Licensing Guide
GigaVUE-OS Cabling Quick Reference Guide guidelines for the different types of cables used to connect Gigamon devices
GigaVUE-OS Compatibility and Interoperability Matrix compatibility information and interoperability requirements for Gigamon devices
GigaVUE-FM REST API Reference in GigaVUE-FM User's Guide samples uses of the GigaVUE-FM Application Program Interfaces (APIs)
Factory Reset Guidelines for GigaVUE-FM and GigaVUE-OS Devices Sanitization guidelines for GigaVUE Fabric Management Guide and GigavUE-OS devices.
Release Notes
GigaVUE-OS, GigaVUE-FM, GigaVUE-VM, G-TAP A Series, and GigaVUE Cloud Suite Release Notes new features, resolved issues, and known issues in this release ; important notes regarding installing and upgrading to this release **Note**: Release Notes are not included in the online documentation. **Note**: Registered Customers can log in to My Gigamon to download the Software and Release Notes from the Software and Docs page on to My Gigamon. Refer to How to Download Software and Release Notes from My Gigamon.
In-Product Help
GigaVUE-FM Online Help how to install, deploy, and operate GigaVUE-FM.

How to Download Software and Release Notes from My Gigamon

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

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

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

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

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

Documentation Feedback

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

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

Documentation Feedback Form		
About You	**Your Name**	
	Your Role	
	Your Company	

For Online Topics	**Online doc link**	*(URL for where the issue is)*
	Topic Heading	*(if it's a long topic, please provide the heading of the section where the issue is)*
For PDF Topics	**Document Title**	*(shown on the cover page or in page header)*
	Product Version	*(shown on the cover page)*
	Document Version	*(shown on the cover page)*
	Chapter Heading	*(shown in footer)*
	PDF page #	*(shown in footer)*
How can we improve?	**Describe the issue**	*Describe the error or issue in the documentation.* *(If it helps, attach an image to show the issue.)*
	How can we improve the content? **Be as specific as possible.**	
	Any other comments?	

Contact Technical Support

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

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

Email Technical Support at support@gigamon.com.

Contact Sales

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

Telephone: +1.408.831.4025

Sales: inside.sales@gigamon.com

Partners: www.gigamon.com/partners.html

Premium Support

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

The VÜE Community

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

Visit the VÜE Community site to:

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

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

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

Glossary

D

decrypt list

need to decrypt (formerly blacklist)

decryptlist

need to decrypt - CLI Command (formerly blacklist)

drop list

selective forwarding - drop (formerly blacklist)

F

forward list

selective forwarding - forward (formerly whitelist)

L

leader

leader in clustering node relationship (formerly master)

M

member node

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

N

no-decrypt list

no need to decrypt (formerly whitelist)

nodecryptlist

no need to decrypt- CLI Command (formerly whitelist)

P

primary source

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

R

receiver

follower in a bidirectional clock relationship (formerly slave)

S

source

leader in a bidirectional clock relationship (formerly master)