GigaVUE-FM
Installation, Migration, and Upgrade Guide

GigaVUE-FM

Product Version: 5.9.00

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(See Change Notes for document updates.)

Change Notes

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

Product Version	Document Version	Date Updated	Change Notes
5.9.00	2.0	4/30/2020	Added new **fmctl** commands in the Related Commands section.
5.9.00	2.0	4/3/2020	Original release of this document with 5.9.00 GA.

Contents

GigaVUE-FM Installation, Migration, and Upgrade

This guide describes how to install, migrate, and upgrade the GigaVUE® Fabric Manager (GigaVUE-FM).

Starting with release 5.8.00, GigaVUE-FM introduces several significant changes, which include improvements in usability and performance. These changes include upgrading and replacing databases and changing the underlying operating system. So, you must migrate your existing configurations and data such as audit logs, events, syslogs, and statistics from your current GigaVUE-FM version (either 5.7 or lower) to GigaVUE-FM5.9.00. You cannot directly upgrade your GigaVUE-FM instance to release 5.9.00. You must first upgrade to GigaVUE-FM5.7.02.11, a special release that provides the tools to manage and perform the migration. You can then upgrade to GigaVUE-FM5.9.00. For instructions, refer to Migrate GigaVUE-FM

Refer to the following sections for details:

- Install GigaVUE-FM on VMware ESXi
- Install GigaVUE-FM on MS Hyper-V
- Install GigaVUE-FM on KVM
- Migrate GigaVUE-FM
- Upgrade GigaVUE-FM

Install GigaVUE-FM on VMware ESXi

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

- Before You Install describes the minimum hardware and computing requirements.
- Install New GigaVUE-FM on VMware ESXi describes the steps to install and deploy GigaVUE-FM on VMware ESXi hypervisor.

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. The following VMware vSphere versions are supported. Note the minimum version requirements under Hardware Requirements.

VMware ESXi and NSX-V 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: v5.5 and above.
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

Hardware Requirements	
RAM	At least 16GB
Disk Space	At least 84GB shared (FC, iSCSI, NFS, or FCoE) or locally attached storage (PATA, SATA, SCSI)
Network	At least one 1Gb NIC

The following table lists the virtual computing resources for GigaVUE-FM.

Table 2: Minimum Virtual Computing Requirements for VMware Hypervisor

Minimum Virtual Computing Requirements	
Memory	Minimum 16GB memory
Virtual CPU (vCPU)	2 vCPU
Virtual Storage for Guest	84GB using PVSCSI (VMware Paravirtual SCSI) • System Disk - 40GB • Swap Disk - 4GB • Data Disk - 40GB
Virtual Network Interfaces	One vNIC using VMXNET3 (VMware 3rd Generation Paravirtual NIC)

GigaVUE-FM has been tested on the following browsers:

Browser	Version
Mozilla Firefox™	• Version 49.00
Apple® **Safari**®	• Version 9.1 and Higher
Google® **Chrome**®	• Version 54 and higher
Microsoft Edge	• Version 38

Notes:

- Only the browsers that support TLS v1.2 can access GigaVUE-FM.
- Internet Explorer 11 (IE11) is deprecated for security reasons and is no longer supported. IE users are strongly encouraged to switch to Microsoft Edge.

Install New GigaVUE-FM on VMware ESXi

The GigaVUE-FM software package is distributed as an OVA file. The following sections describe how to deploy a fresh installation of GigaVUE-FM on an ESXi host and perform its initial configuration:

- Deploy GigaVUE-FM from an OVA File
- Initial GigaVUE-FM Configuration

Deploy GigaVUE-FM from 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.

> **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.

> **NOTE:** Starting in software version 5.4.01, you cannot deploy the GigaVUE-FM OVA file on older versions of VMware ESXi. If you have an older version of ESXi, then you must upgrade your VMware ESXi to at least version 5.5. Otherwise, GigaVUE-FM OVA deployment will fail.

The following steps are shown using the ESXi version 6.x. To deploy a GigaVUE-FM instance:

1. Log in to the VMware vCenter web interface.
2. Go to **Menu > VMs and Templates**.
3. Right-click the ESXi Host or data center on which you want to deploy GigaVUE-FM 5.8, and then select **Deploy OVF Template** as shown in the following figure:
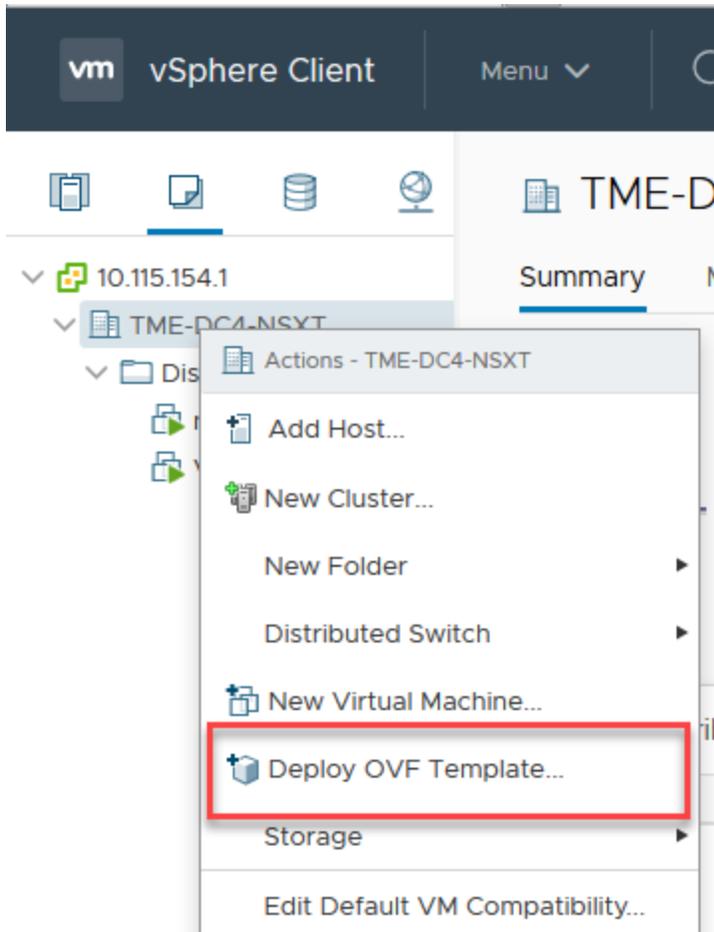
Figure 1: vSphere Client: OVF Template

The Deploy OVF Template wizard opens.
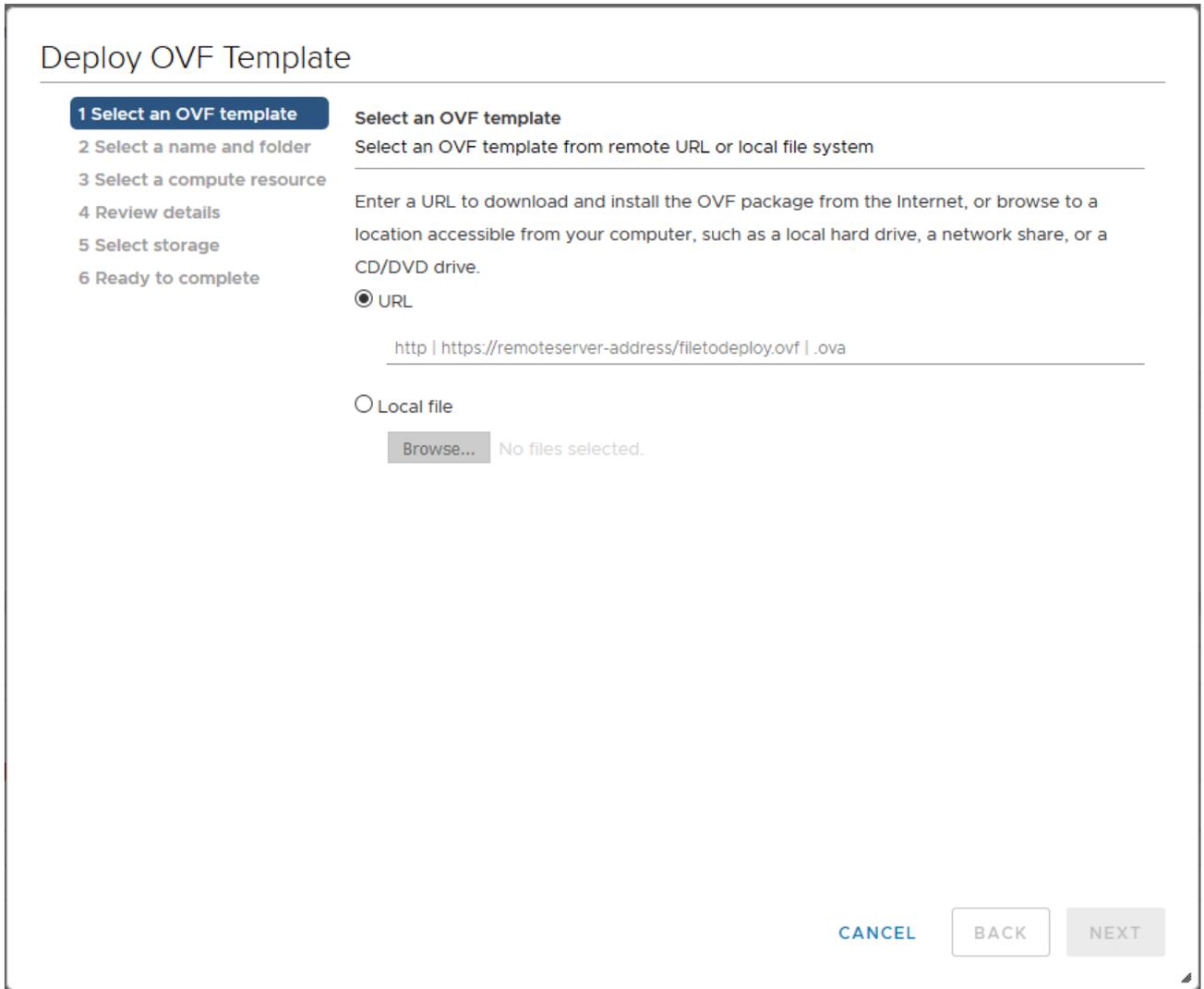
Figure 2: vSphere Client: Find the Location of the OVA File

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.
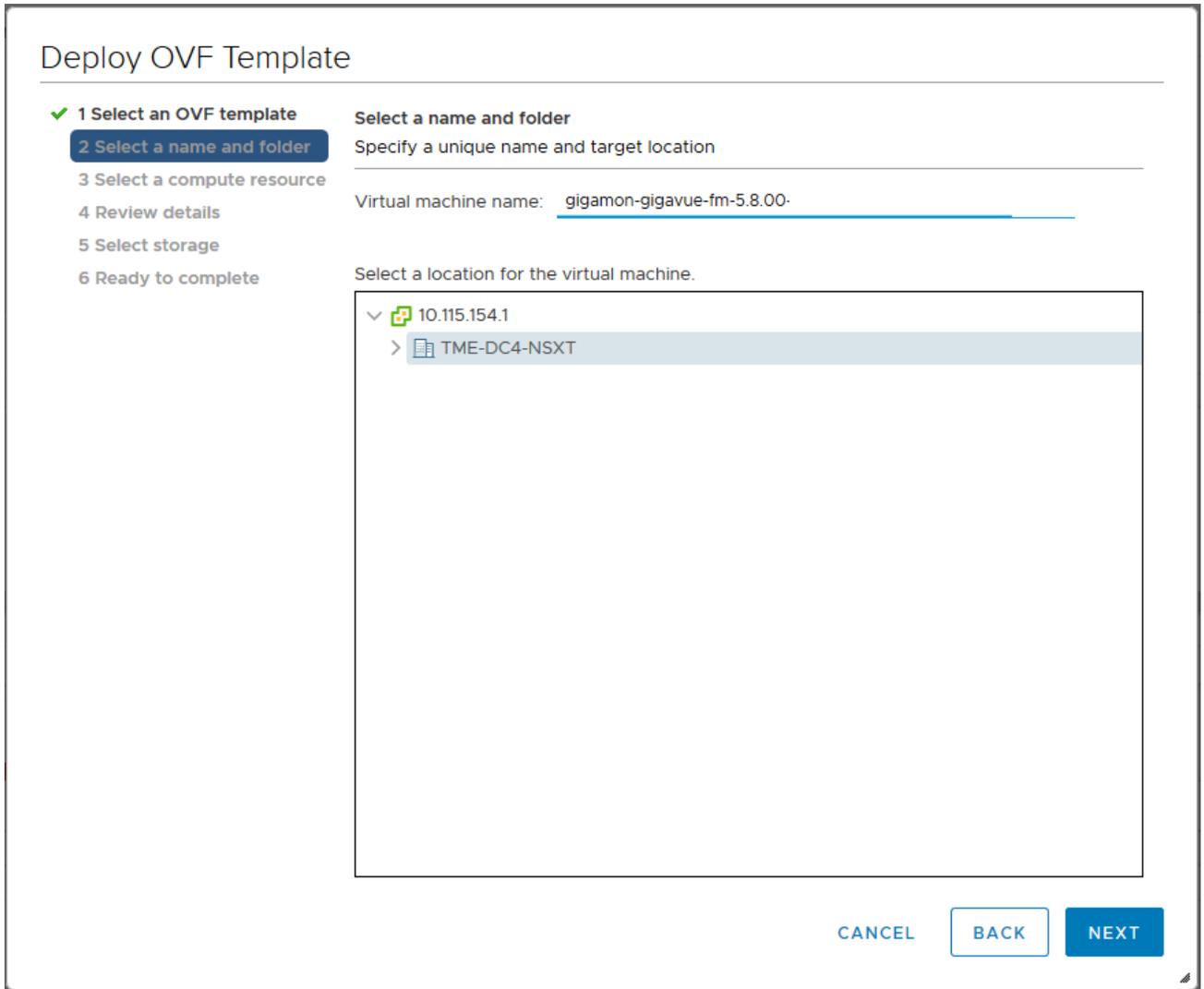
Figure 3: vSphere Client: Enter Name and Location for OVA File on ESXi Server

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.
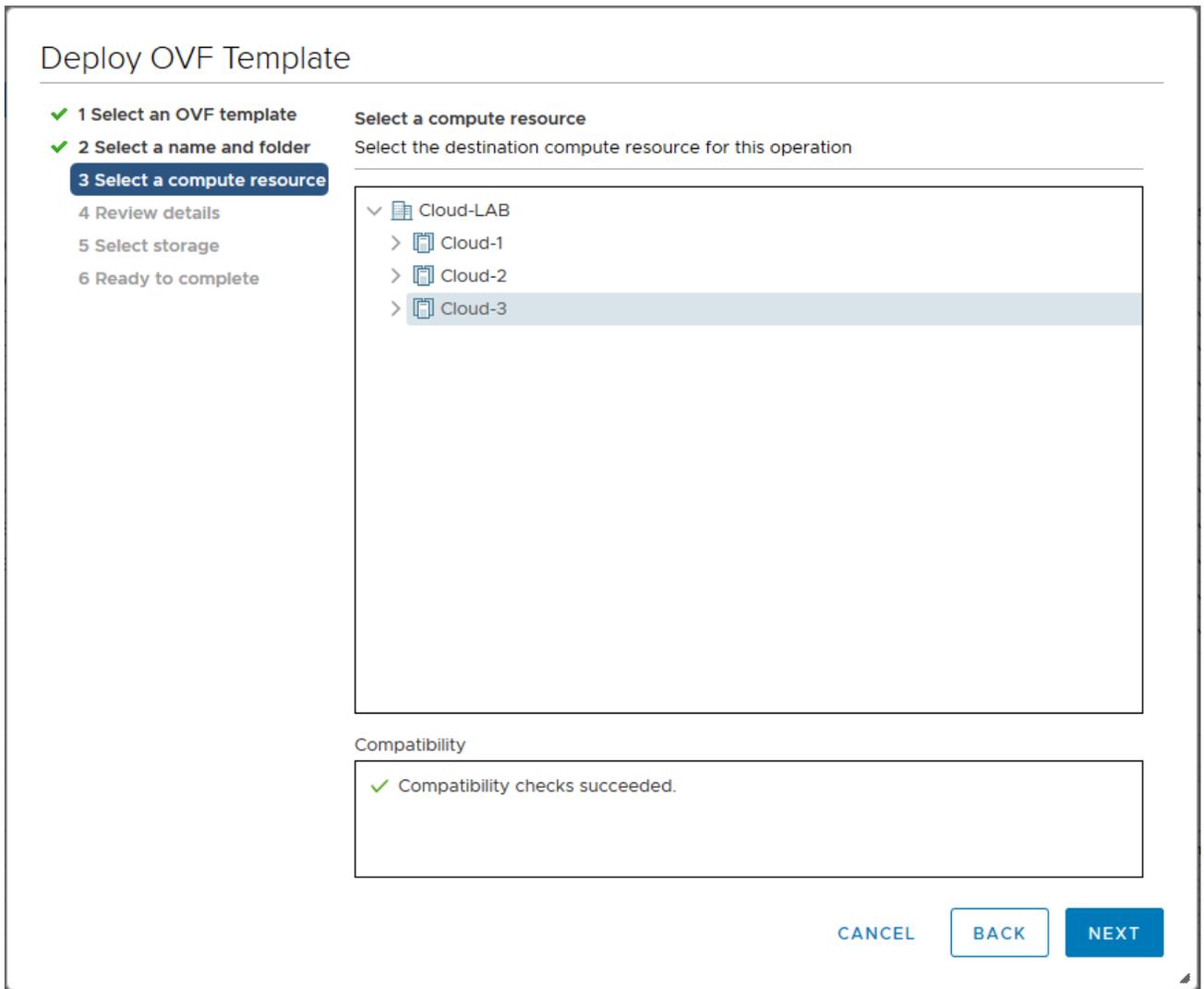
Figure 4: vSphere Client: Select a Compute Resource for the OVF Deployment

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.
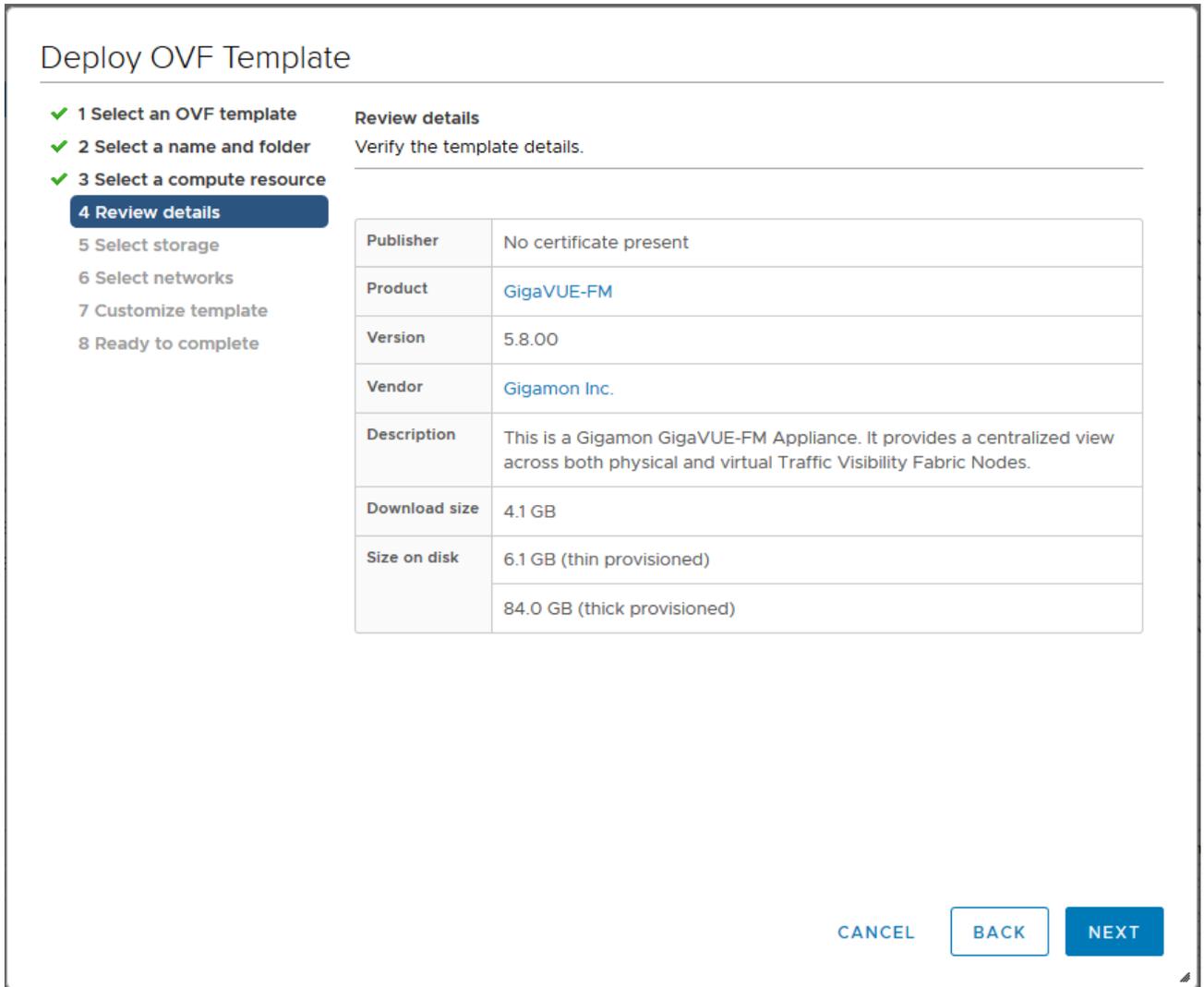
Figure 5: vSphere Client: Review Details

10. Verify the OVF template details, and then click **Next**. The **Select storage** page of the **Deploy OVF Template** wizard appears.
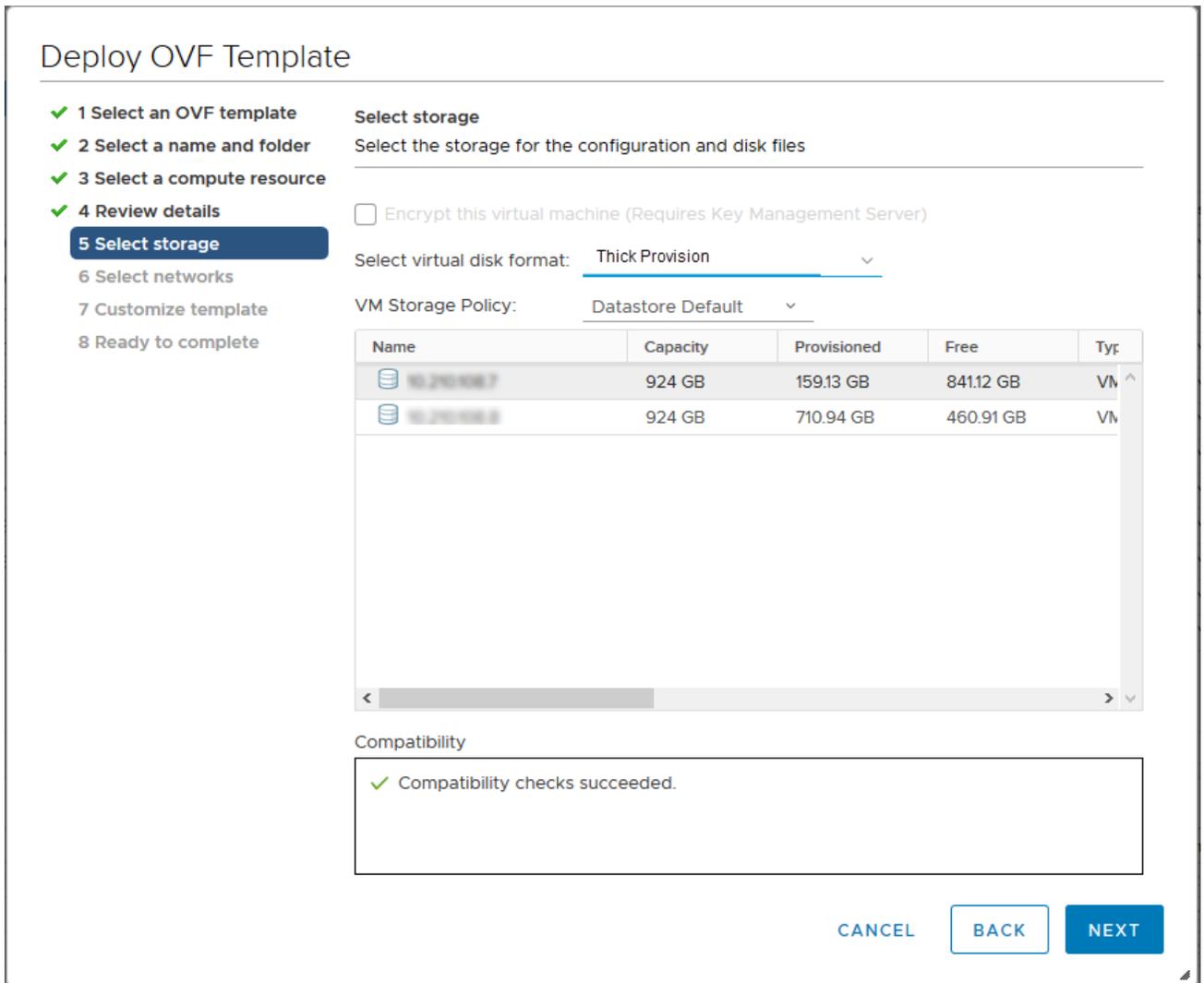
Figure 6: vSphere Client: Select Storage

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.

Figure 7: vSphere Client: Select Networks

14. Set network mapping by doing either of the following, depending on how your are deploy-
    ing, 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 VM Network. In case of
      multiple port groups, you need to manually assign the destination network to the VM
      Network.

15. Click **Next**. The **Customize template** page of the **Deploy OVF Template** wizard appears.

16. In the **System Hostname** field, enter the hostname of the GigaVUE-FM instance, and then spe-
    cify **40** GB as the size of the data disk.

17. Set the admin password. The admin password must be a minimum of 11 characters and a maximimum of 30 characters. The characters must include at least:

   • One numerical character
   • One upper case character
   • One lower case character
   • One special character

> **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 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.

18. (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.
19. (Optional) Complete the NTP configurations such as the IP address and version of the NTP server, and then click **Next**.

Deploy OVF Template

✔ 1 Select an OVF template
✔ 2 Select a name and folder
✔ 3 Select a compute resource
✔ 4 Review details
✔ 5 Select storage
✔ 6 Select networks
7 Customize template
8 Ready to complete

Customize template
Customize the deployment properties of this software solution.

⊘ All properties have valid values ✕

⌄ Basic Configuration	4 settings
01. System Hostname	A Unique hostname for this instance.
	GigaVUE-FM-5800
02. Size of Data Disk	The size of the Data Disk in gigabytes.
	40
03. Optional admin password	If set, the default admin password will be set to this value to allow password based login. The password will be good for only a single login. You MUST specifiy either a password or an SSH Public Key, otherwise you will NOT be able to access your GigaVUE-FM instance.
	Password
	Confirm Password

CANCEL   BACK   **NEXT**

Figure 8: 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.
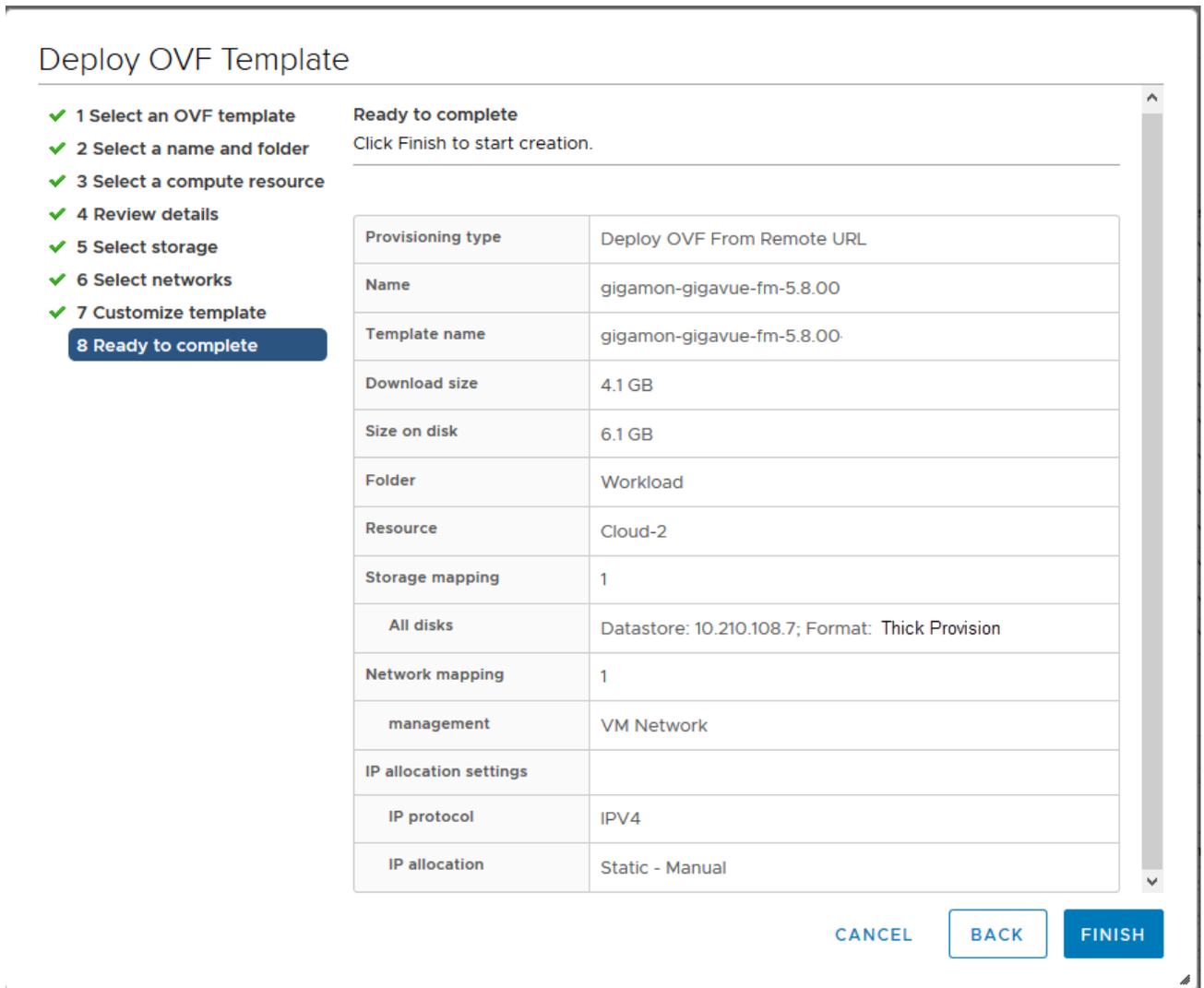
Figure 9: vSphere Client: Final Verification Before Installation

20. 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.

Figure 10: vSphere Client: OVF Deployment Progress

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

Important: Clear the browser cache before logging in 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 Install New GigaVUE-FM on VMware ESXi or Install GigaVUE-FM for Microsoft Hyper-V.

By deleting the virtual centers, you will lose all the GigaVUE-VM nodes and vMaps configured on those virtual centers and they will need to be recreated.

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.

Use Fault Tolerance for GigaVUE-FM Deployments (VMware ESXi only)

Gigamon recommends that you enable the VMware Fault Tolerance feature for the GigaVUE-FM virtual machine, providing redundancy in the case of a failure. Enabling the VMware Fault Tolerance feature provides a "hot" GigaVUE-FM virtual machine instance on another ESXi host in the cluster. If the ESXi host with the primary GigaVUE-FM instance goes down, you can take advantage of the Fault Tolerance feature to continue GigaVUE-FM operations.

When in Fault Tolerance mode, the MAC address and the UUID for both the primary GigaVUE-FM and the "hot" GigaVUE-FM virtual machine instance remains the same, therefore there is no need to update the existing licenses for GigaVUE-FM or GigaVUE-VM that are installed on the primary.

Both instances of the GigaVUE-FM implement VMware vLockstep technology to keep in virtual lockstep with each other. Any events are executed on the primary and then transmitted over a Gigabit Ethernet network to the other instance. Both instances access a common disk and appear as a single instance since they share the MAC address and UUID.

> **NOTE:** Refer to the VMware Fault Tolerance documentation for deployment requirements and instructions.

Depending on the host configurations, there may be a need to shutdown GigaVUE-FM (primary) to enable the Fault Tolerance mode.

Perform Initial Configuration

Before powering on GigaVUE-FM, you can optionally perform the following:

- Perform Network Configurations
- Add Additional vNIC
- Increase the Memory
- Add vCPUs

Perform Network Configurations

To perform the initial configuration:

1. Log in to GigaVUE-FM using one of the following methods:

    - If you have a static IP address set up for the GigaVUE-FM, log in through SSH.
    - If you do not have a static IP address set up for the GigaVUE-FM, complete the following steps:

        a. Log in to the VMware vCenter web interface.

        b. Go to **Menu > VMs and Templates**.

        c. Right-click the GigaVUE-FM virtual machine, and select **Open Remote Console**.

        d. Log in with your GigaVUE-FM Shell credentials.

2. Perform the following steps to complete the initial configuration:

    a. Run the `fmctl jump-start` command. The Initial System Configuration screen appears as shown in the following figure:

```
Initial System Configuration

Hostname        unconfigured-gigavue-fm
Domain Name

Enable DHCP4    yes              Enable DHCP6  yes
IPv4 Address                     IPv6 Address
CIDR                             CIDR
Gateway                          Gateway

DNS Servers
Search Domains

Enable NTP      no      NTP Servers  0.centos.pool.ntp.org 1.centos.poo
                        NTP Version  4


            <  OK  >              <Cancel>
```

b. 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.

c. Enter the required domain name.

d. Decide whether to use DHCP for the management interface. Choose one of the following options:
   - If you enter **yes**, the **IPv4 Address** or **IPv6 Address**, **CIDR**, **Gateway**, **DNS Servers**, and **Search Domains** are dynamically set up for the management interface.
   - If you enter **no**, you must provide the following:
     i. **IPv4 Address** or **IPv6 Address**, and the respective **CIDR** and **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.
     iii. In the **Search Domains** field, provide the required DNS domains with spaces in between.

e. You can choose to either enable or disable NTP. In the **Enable NTP** field, enter one of the following:
   - **Yes**—Use NTP to synchronize the time between GigaVUE-FM virtual machine and the NTP server. In the **NTP Servers** and **NTP Version** fields, enter the NTP server address and the version number of the NTP server.
   - **No**—you can skip the next step and directly save your configurations.

f. Select **OK** to save your configurations.

g. 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).

Add Additional vNIC

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.

To add an additional vNIC:

1. Right-click the GigaVUE-FM instance and select **Edit Settings...** Refer to Figure 11: vSphere Client: Edit Settings.

Figure 11: vSphere Client: Edit Settings

2. In the Hardware tab, click **Add**.

3. In the Add Hardware dialog box, select **Ethernet Adapter** and then click **Next**.Refer to Figure 12: vSphere Client: Selecting Ethernet Adapter.
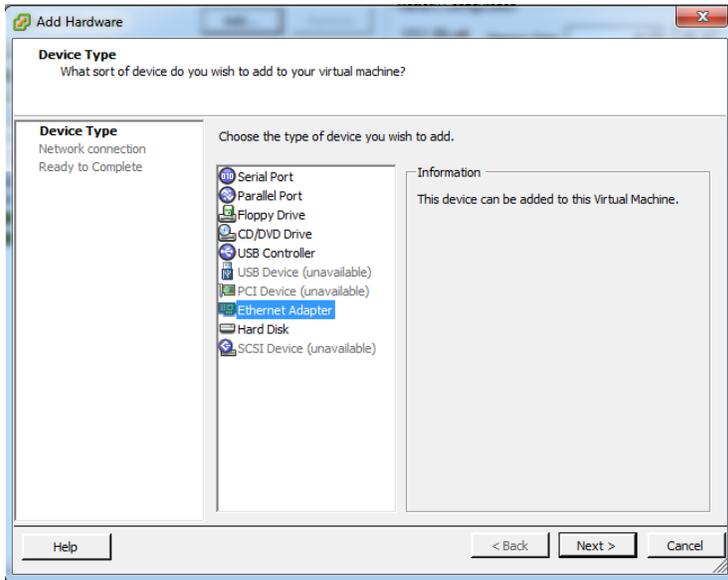
Figure 12: vSphere Client: Selecting Ethernet Adapter

4. In the **Adapter Type** drop-down list, select an appropriate adapter type. Refer to Figure 13: vSphere Client: Selecting Device Type.
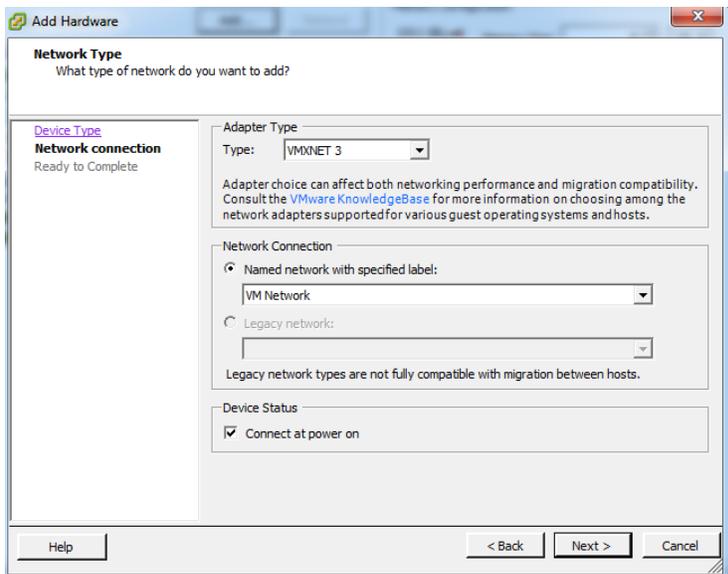
Figure 13: vSphere Client: Selecting Device Type

5. In the **Named network with specified label** drop-down list, select an appropriate network and click **Next**.

   The Network adapter 2 is added to GigaVUE-FM.

Increase the Memory

Based on the requirement, you can increase the memory of the GigaVUE-FM instance.

To increase the memory:

1. Right-click the GigaVUE-FM instance and select **Edit Settings...** Refer to Figure 14: vSphere Client: Edit Settings.
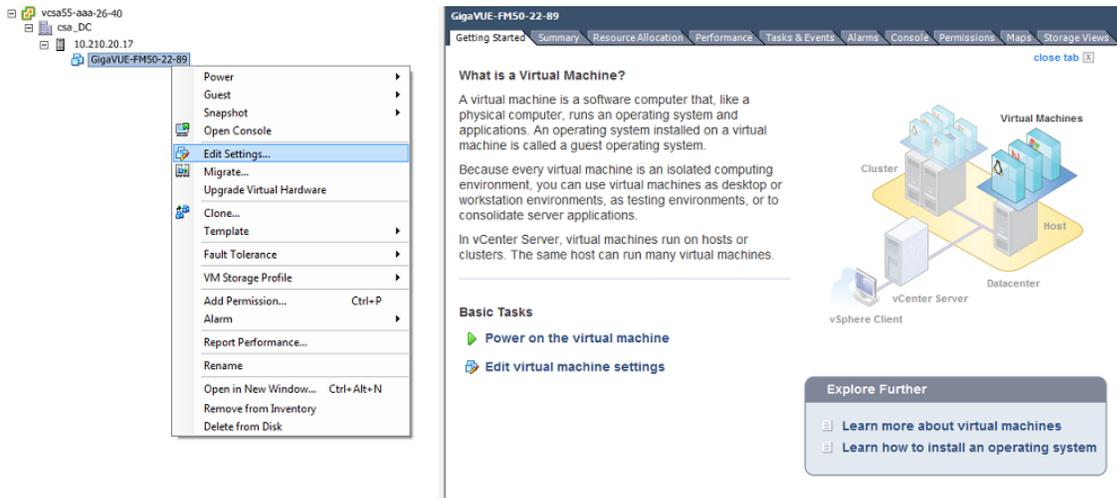
Figure 14: vSphere Client: Edit Settings
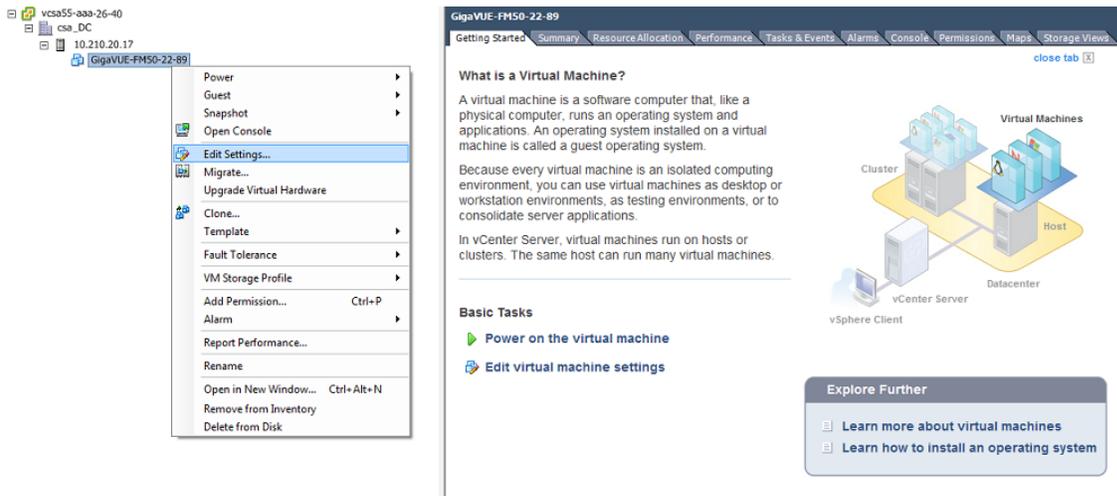
2. In the Hardware tab, select **Memory**.

3. In Memory Configuration, increase the size of the memory as per your requirement. Refer to the recommended size for your guest OS in the dialog box. Refer to Figure 15: vSphere Client: Increasing Memory.
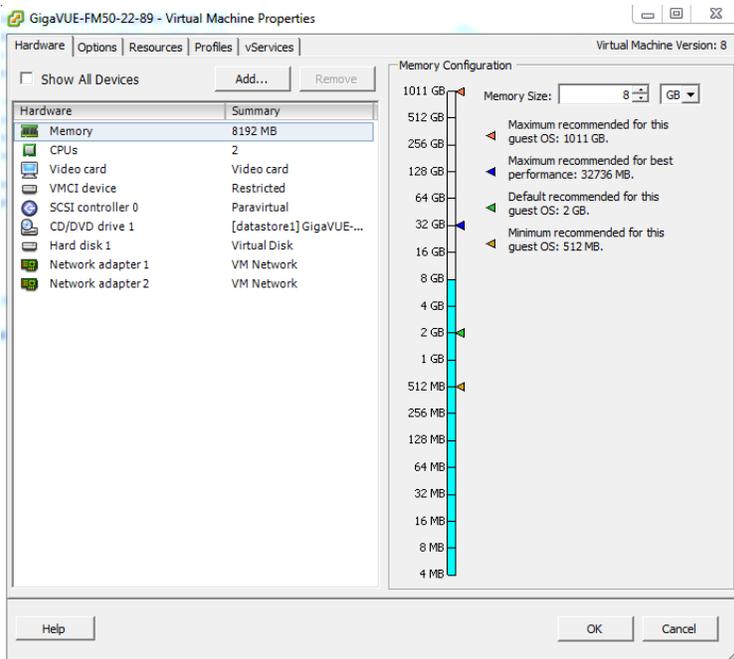
Figure 15: vSphere Client: Increasing Memory

4. Click **OK**.

Add vCPUs

Based on the requirement, you can add additional vCPUs to the GigaVUE-FM instance.

1. Right-click the GigaVUE-FM instance and select **Edit Settings...**

2. In the Hardware tab, select **CPUs**. Refer to Figure 16: vSphere Client: Adding vCPUs.
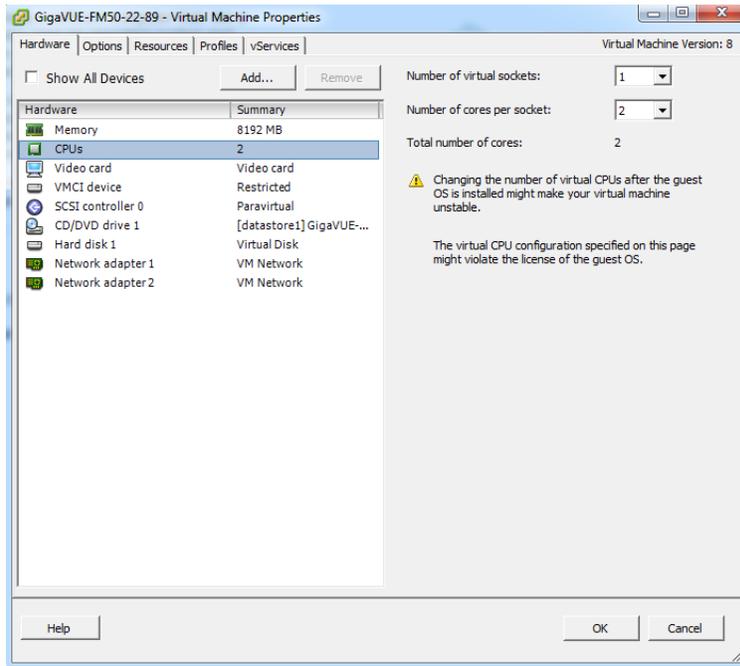
Figure 16: vSphere Client: Adding vCPUs

3. In the **Number of virtual sockets** field, enter the appropriate number of sockets.

4. In the **Number of cores per socket** field, enter the appropriate number of cores per socket.

5. Click **OK**.

Install Third-Party Certificate

Use the following procedure to install a third-party certificate on GigaVUE-FM:

1. Generate a 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:

   openssl req -x509 -nodes -days 365 -newkey rsa:2048 -keyout privatekey.pem -out certificate.pem

2. Copy the contents of the certificate file. You will use the contents in Step .

> **NOTE:** When you copy the contents, do not delete the EOL characters at the start of each line.

3. Log in to the GigaVUE-FM CLI.

4. 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 and key files: chmod 644
   • Restart apache as root systemctl restart httpd.

   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:

```
openssl pkcs12 –export –name CMS –out 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.key**.

After the public key (cms.p12 file) is generated, place the file in the **/etc/gigamon** directory.

Install GigaVUE-FM on MS Hyper-V

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

- System Requirements describes the hardware requirements.
- Install GigaVUE-FM for Microsoft Hyper-V describes the steps to install and deploy GigaVUE-FM.

System Requirements

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 (see Windows Server Hardware 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 80GB shared (FC, iSCSI, NFS, or FCoE) or locally attached storage (PATA, SATA, SCSI)
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	2x40GB Virtual IDE (the Hyper-V default) • System Disk - 40GB • Data Disk - 40GB
Virtual Network Interfaces	1 vNIC using Hyper-V Virtualized NIC (the Hyper-V default)

GigaVUE-FM v3.5 has been tested on the following browsers:

Browser	Version
Mozilla Firefox™	• Version 47
Apple® Safari®	• Version 9.1
Google® Chrome®	• Version 52
Microsoft Edge	• Version 38

Notes:

Install GigaVUE-FM for Microsoft Hyper-V

The GigaVUE-FM software package for Microsoft Hyper-V environments is distributed as an **ISO image** file. The following sections describes how to deploy a fresh installation of GigaVUE-FM on a Hyper-V host and perform its initial configuration:

- Install GigaVUE-FM from an ISO Image File
- Initial GigaVUE-FM Configuration

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 1: Opening the Virtual Machine Wizard.

   The **New Virtual Machine Wizard** opens.
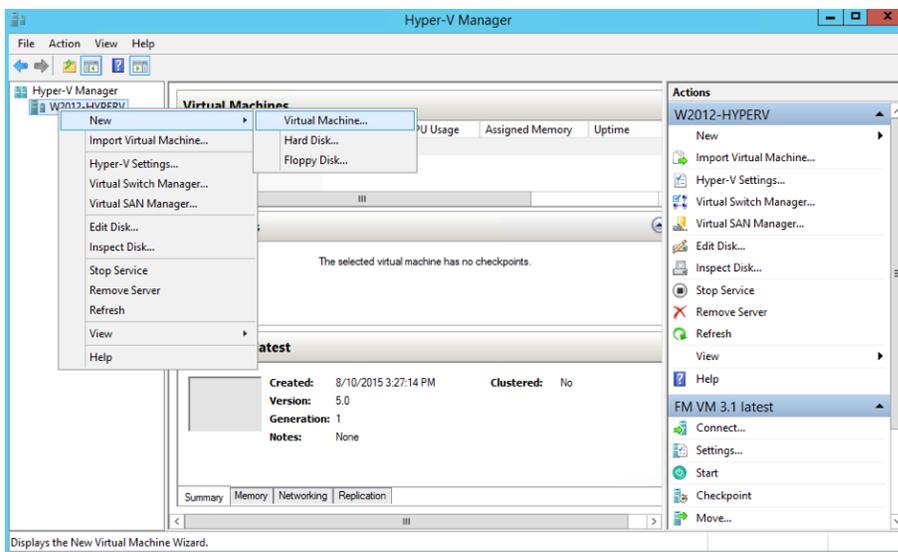
Figure 1: Opening the Virtual Machine Wizard

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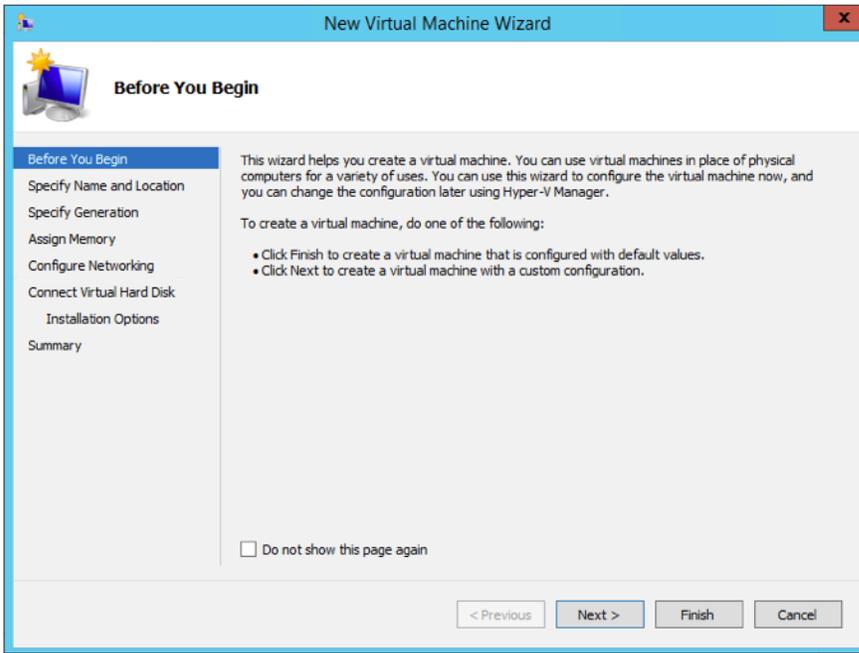
Figure 2: Before You Begin Screen

4. After the **Specify Name and Location** page of the **New Virtual Machine Wizard** opens as shown in Figure 3: Name and Location Page, 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.
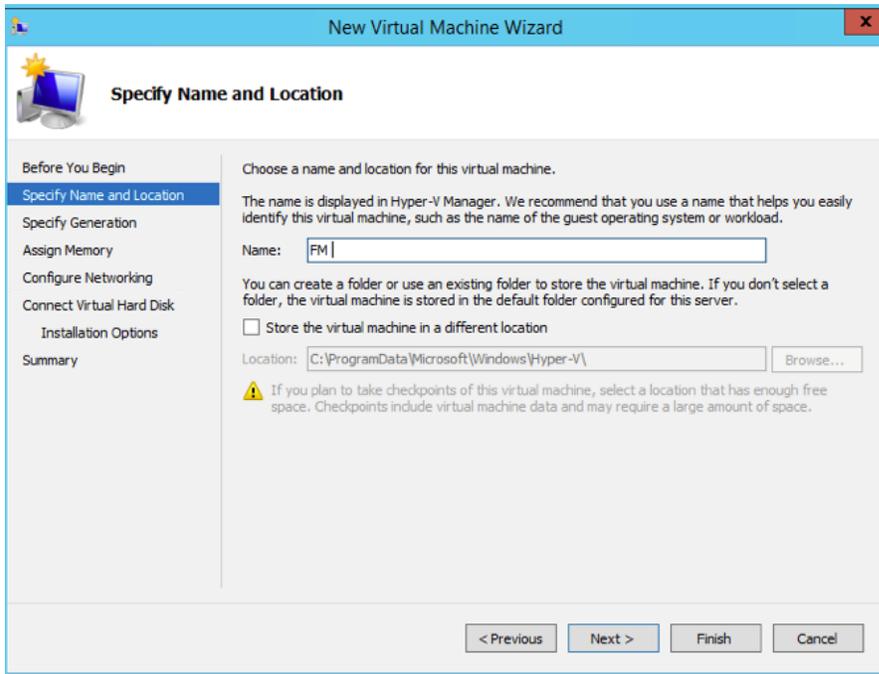
Figure 3: Name and Location Page

5. On the **Specify Generation** page of the **New Virtual Machine Wizard**, select **Generation 1** as shown in Figure 4: Specify Generation Page

> **NOTE:** It is important to select Generation 1 and not Generation 2. Selecting Generation 2 may lead to failure of the GigaVUE-FM installation process because the CD Drive is presented as an SCSI device and not IDE.
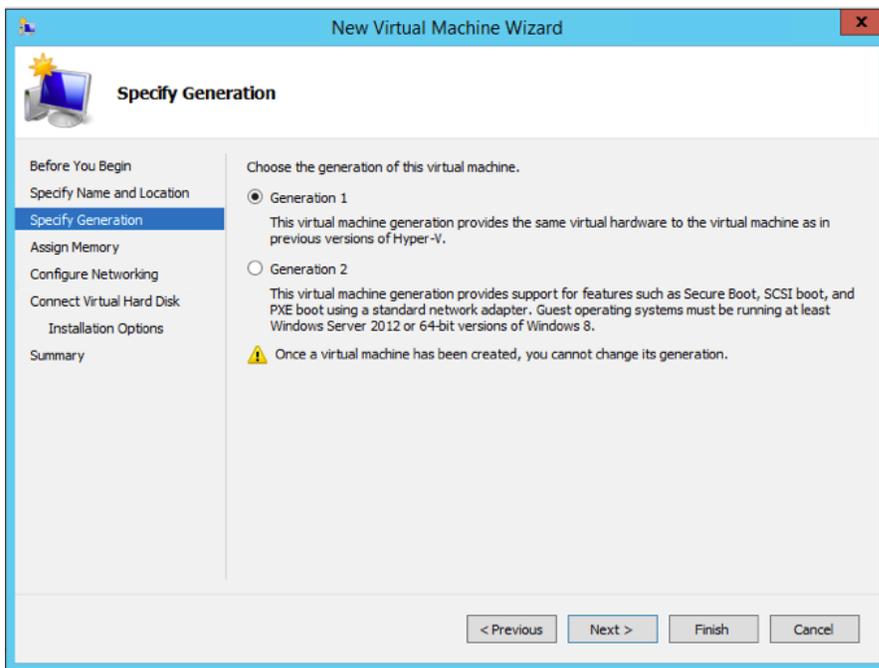
Figure 4: Specify Generation Page

6. Click **Next** to continue.

   The **Assign Memory** page of the **New Virtual Machine Wizard**opens, which is shown in
   Figure 5: Assign Memory Page.
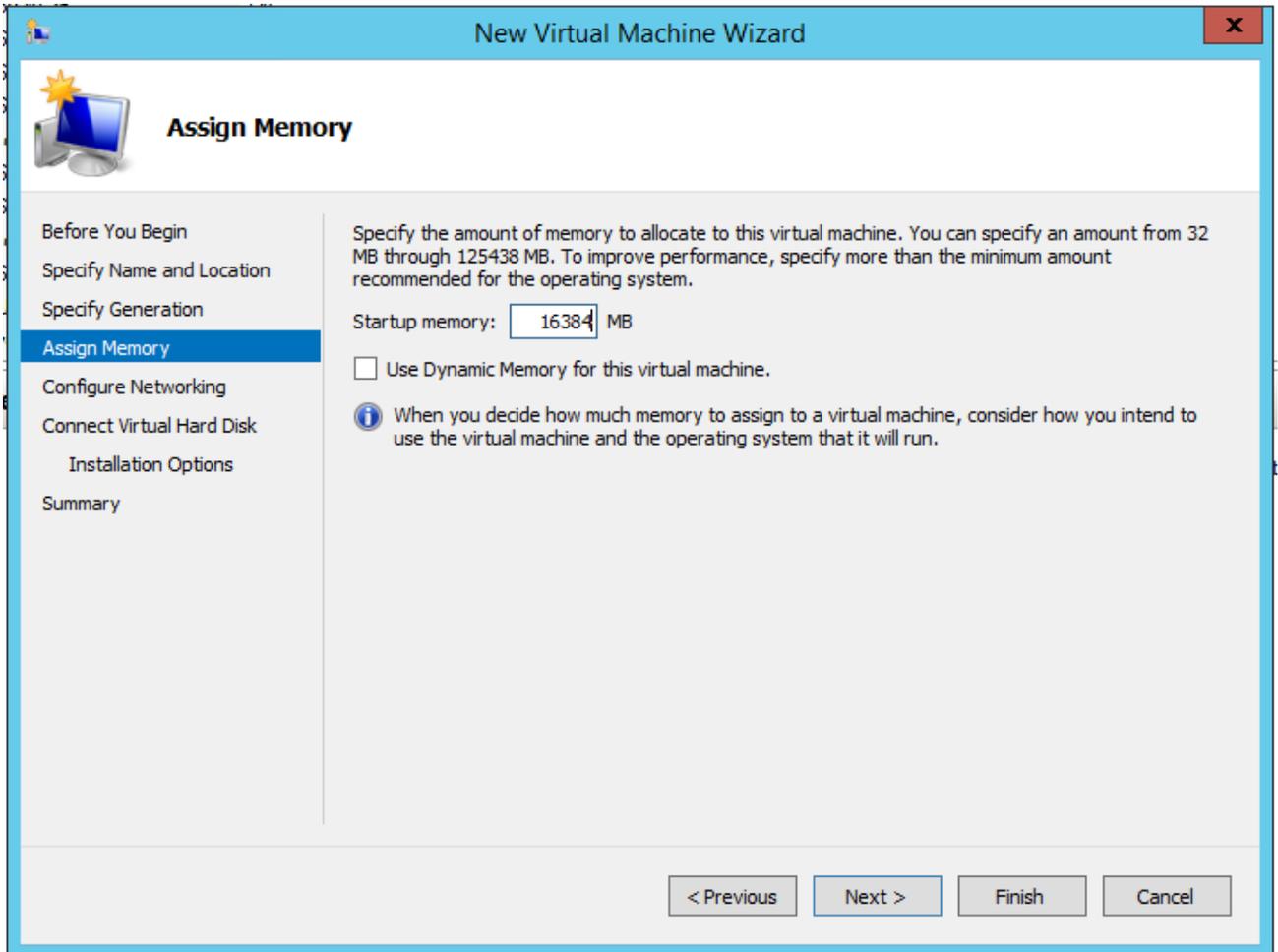
Figure 5: Assign Memory Page

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

   The **Configure Networking** page of the **New Virtual Machine Wizard**opens, which is shown
   in Figure 6: Configure Networking Page.
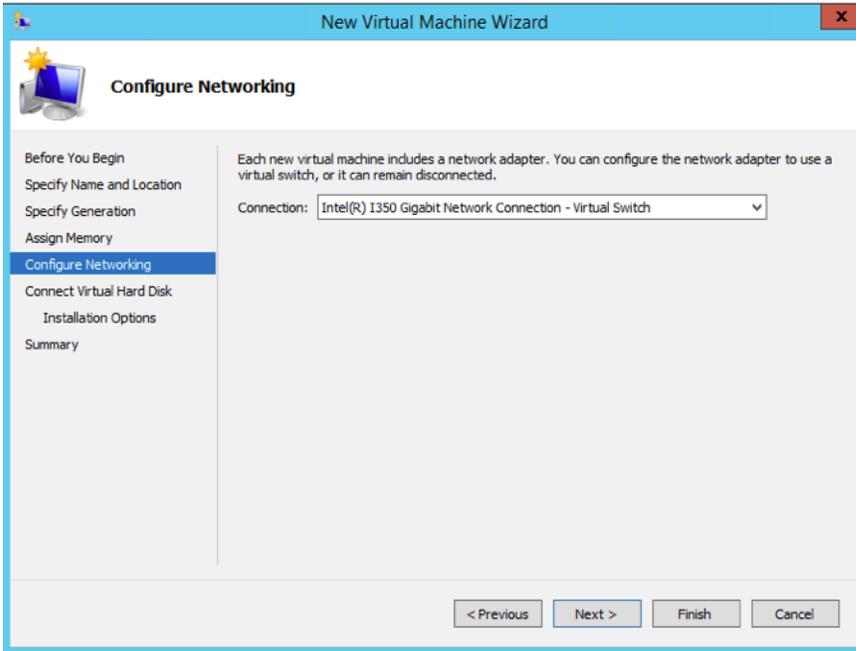
Figure 6: Configure Networking Page

8. From the Connection drop-down list, select the virtual network to which GigaVUE-FM will con-
   nect 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 7: Connect Virtual Hard Disk Page.
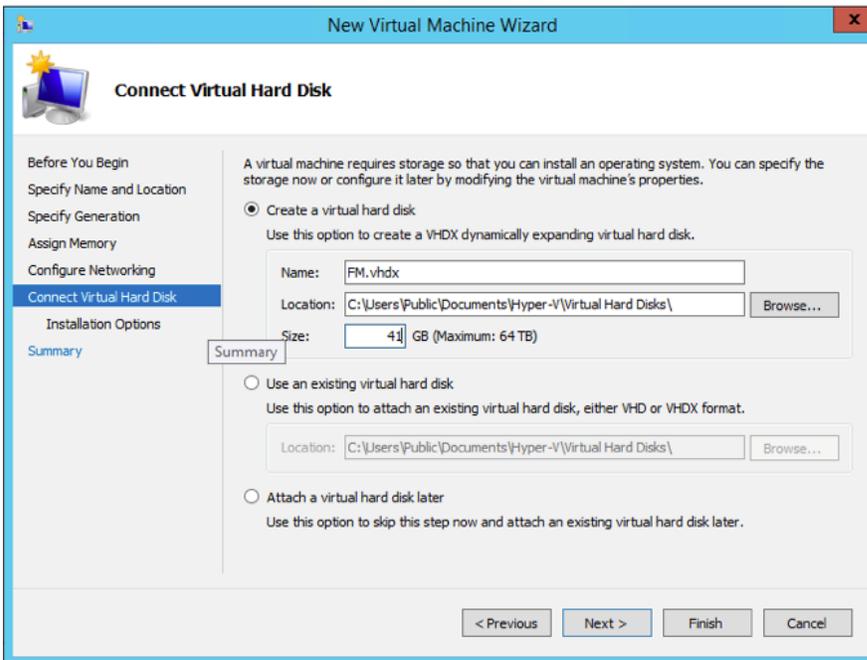
Figure 7: Connect Virtual Hard Disk Page

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 8: Install Options Page.

10. Use this dialog box to select the ISO image file for GigaVUE-FM. As shown in the figure Figure 8: Install Options Page, set the following options:

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

    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.
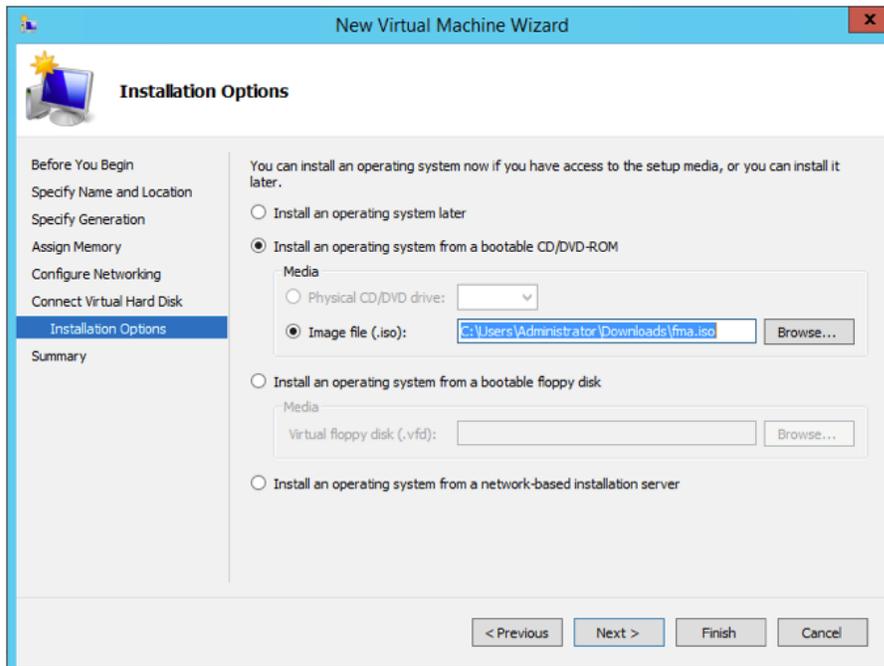
Figure 8: Install Options Page

   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. An example is shown in Figure 9: Summary Page.
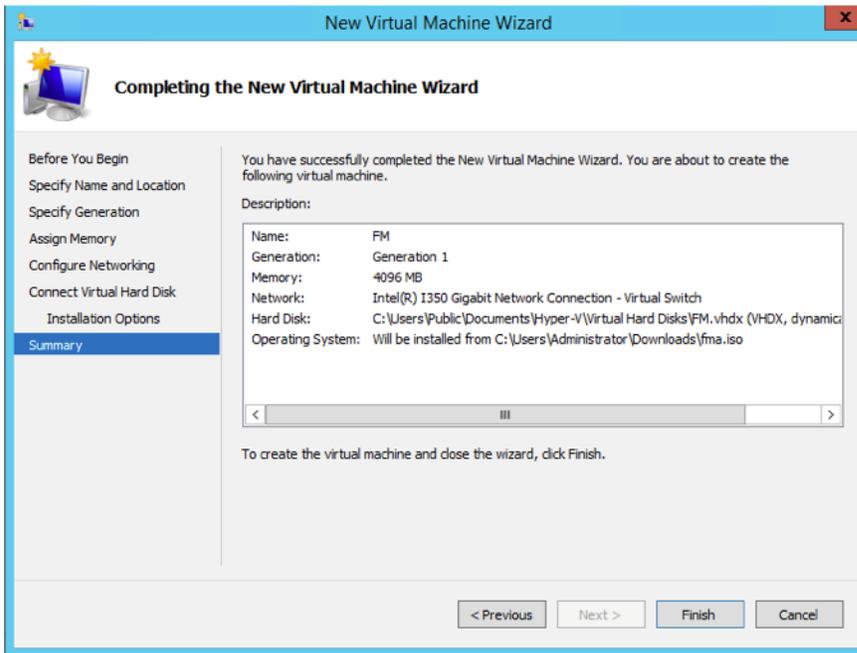
Figure 9: Summary Page

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 **IDE Controller 0**.
3. In the IDE Controller pane that appears to the right, select **Hard Drive**, and then click **Add**. Refer to the following figure:
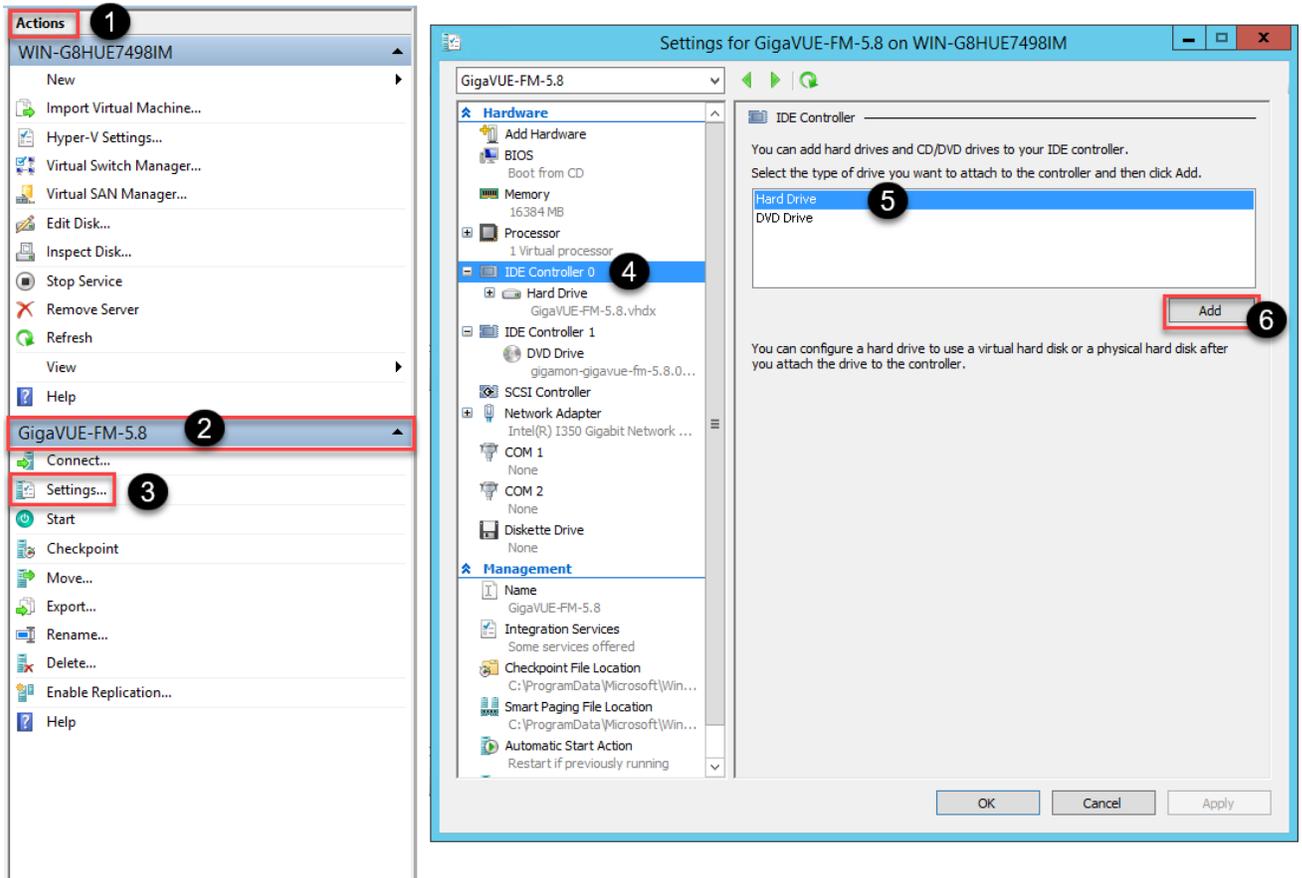
Figure 10: Navigating to Add Additional Hard Disk

A new Hard Drive entry is added under IDE Controller 0.

4. Select the Hard Drive entry.
5. In the Hard Drive pane that appears to the right, select **Virtual hard disk**, and then click **New** as shown in the following figure:
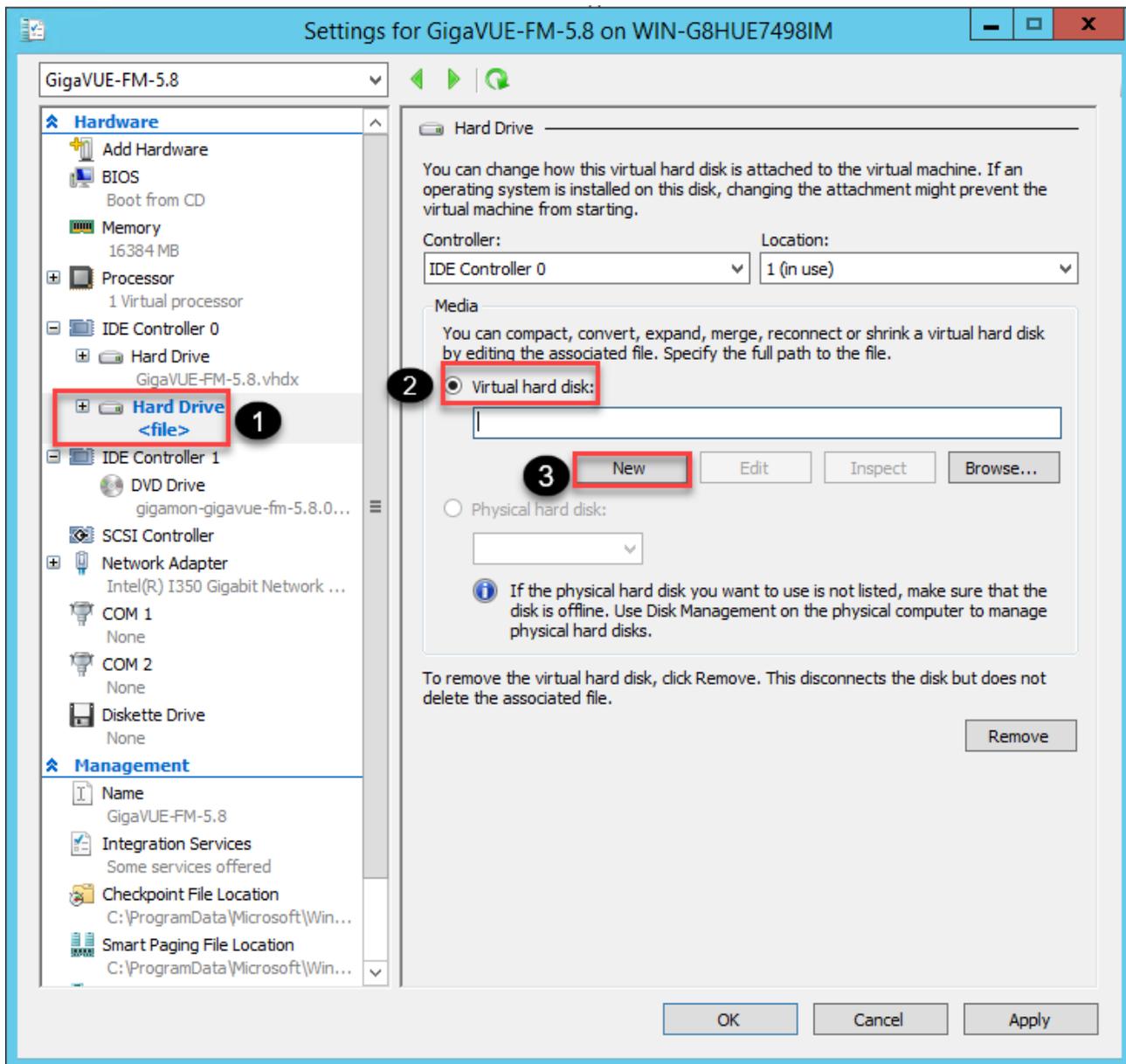
Figure 11: Navigating to the New Virtual Hard Disk Wizard

The **New Virtual Hard Disk Wizard** opens.
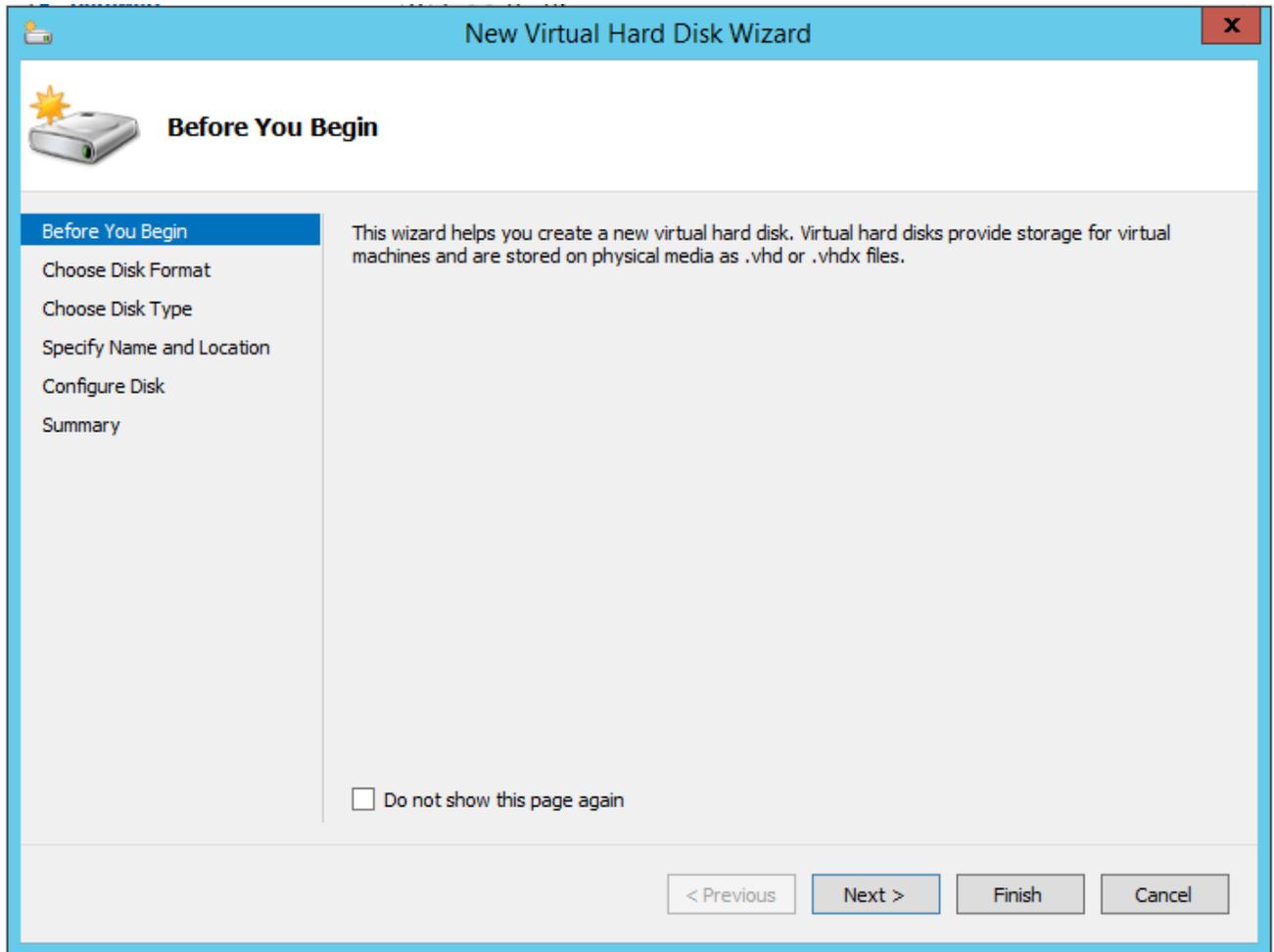
Figure 12: New Virtual Hard Disk Wizard

6. Click **Next** to go to the Choose Disk Format page of the wizard.
7. 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.

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

    The Specify Name and Location page of the wizard appears.

9. Specify a unique name for the virtual hard disk, and then browse and select the location where you want to save the disk.
10. Click **Next**. The Configure Disk page of the wizard appears.
11. You can choose one of the following options to configure the virtual hard disk:

    • Create a blank virtual hard disk of size 41 GB.
    • 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.

12. Click **Next** to exit the New Virtual Hard Disk Wizard.
13. Click **OK**. The GigaVUE-FM installation begins as shown in the following figure:
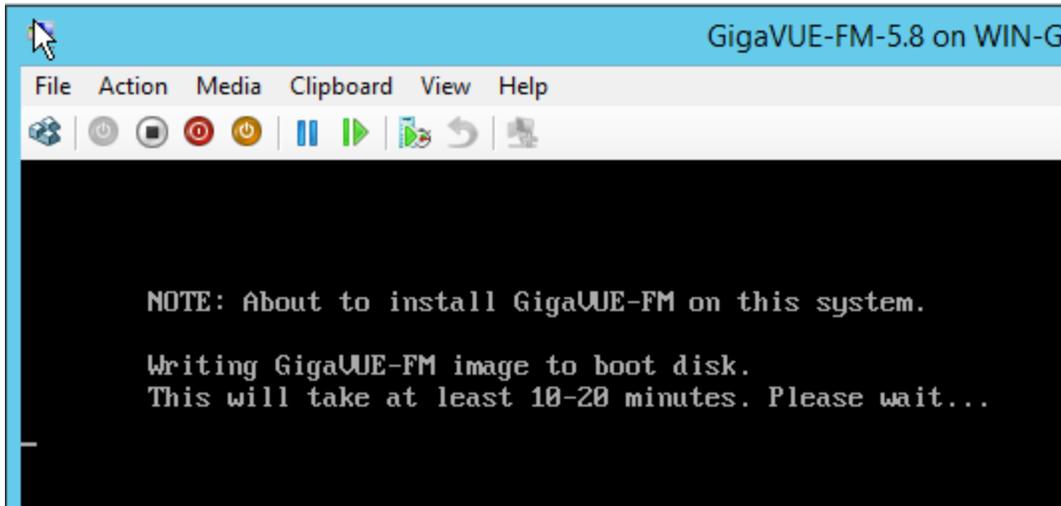
Figure 13: GigaVUE-FM Installation Begins

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.
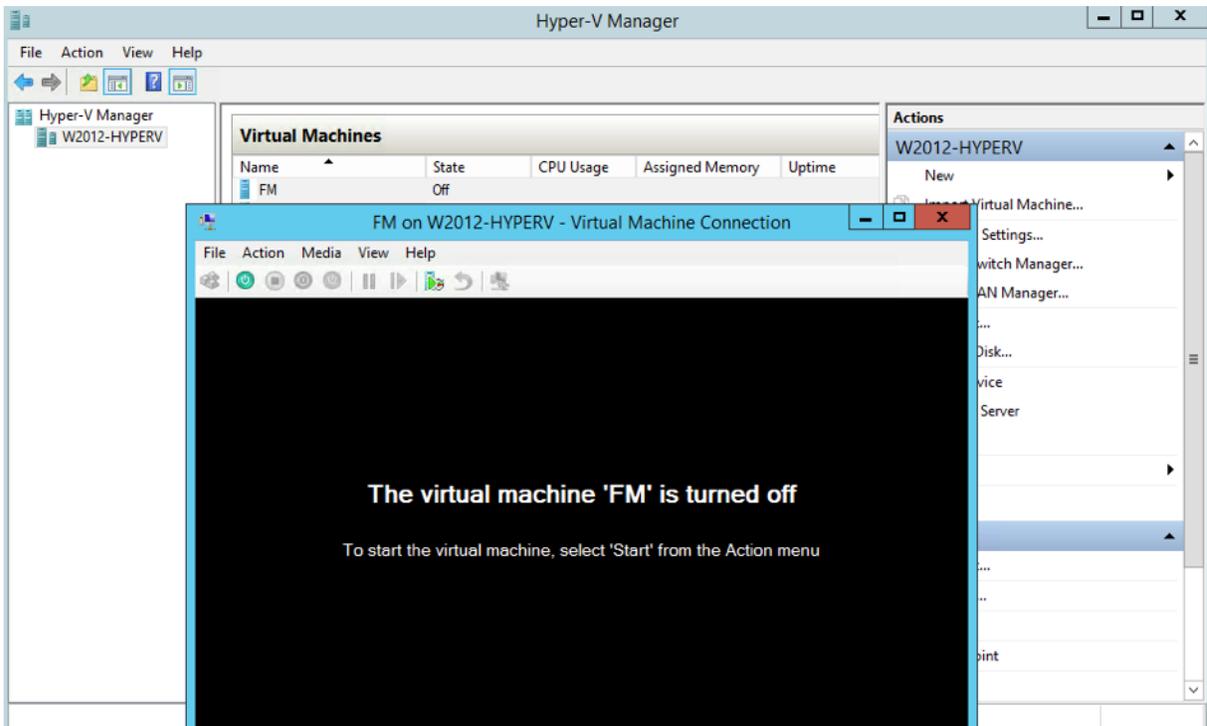
3. Select **Action > Start** to start the GigaVUE-FM virtual machine from the Virtual Machine Connection tool.

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:
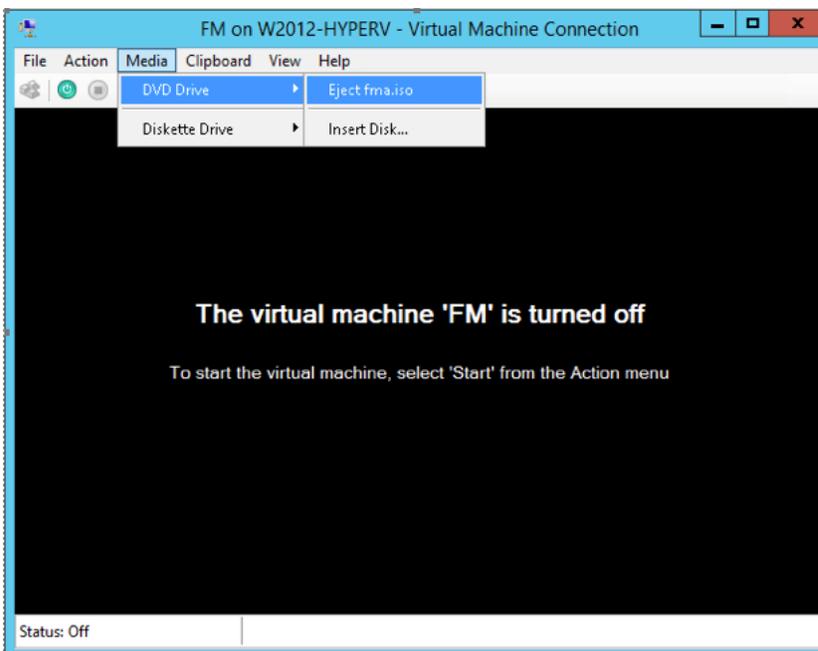
Disconnect the ISO Image File

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 a 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. Run the `fmctl jump-start` command. The Initial System Configuration screen appears as shown in the following figure:

   b. 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.

   c. Enter the required domain name.

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

      - If you enter **yes**, the **IPv4 Address** or **IPv6 Address**, **CIDR**, **Gateway**, **DNS Servers**, and **Search Domains** are dynamically set up for the management interface.
      - If you enter **no**, you must provide the following:
        i. **IPv4 Address** or **IPv6 Address**, and the respective **CIDR** and **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.
        iii. In the **Search Domains** field, provide the required DNS domains with spaces in between.

e. You can choose to either enable or disable NTP. In the **Enable NTP** field, enter one of the following:

- **Yes**—Use NTP to synchronize the time between GigaVUE-FM virtual machine and the NTP server. In the **NTP Servers** and **NTP Version** fields, enter the NTP server address and the version number of the NTP server.
- **No**—you can skip the next step and directly save your configurations.

f. Select **OK** to save your configurations.

g. 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).

Install 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:

- System Requirements describes the hardware requirements.
- Install GigaVUE-FM for KVM describes the steps to install and deploy GigaVUE-FM.
- Initial GigaVUE-FM Configuration describes the steps to start GigaVUE-FM instance and configure it.

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

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.

Minimum Hardware Requirements	
RAM	At least 16GB.
Disk Space	At least 80GB shared (FC, iSCSI, NFS, or FCoE) or locally attached storage (PATA, SATA, SCSI).
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	80GB • System Disk - 40GB • Data Disk - 40GB
Virtual Network Interfaces	One vNIC

GigaVUE-FM has been tested on the following browsers:

Browser	Version
Mozilla Firefox™	• Version 47
Apple® **Safari**®	• Version 9.1
Google® **Chrome**®	• Version 52
Microsoft Edge	• Version 38

Notes:

- Only the browsers that support TLS v1.2 can access GigaVUE-FM.
- Internet Explorer 11 (IE11) is deprecated for security reasons and is no longer supported. IE users are strongly encouraged to switch to Microsoft Edge.

Install GigaVUE-FM for KVM

The GigaVUE-FM software package for KVM environments is distributed as an **ISO image** file. The following sections describes how to deploy a fresh installation of GigaVUE-FM on a KVM host and perform its initial configuration:

- Install GigaVUE-FM from an ISO Image File
- Initial GigaVUE-FM Configuration

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

Install GigaVUE-FM from an ISO Image File

Use the Virtual Machine 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 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:
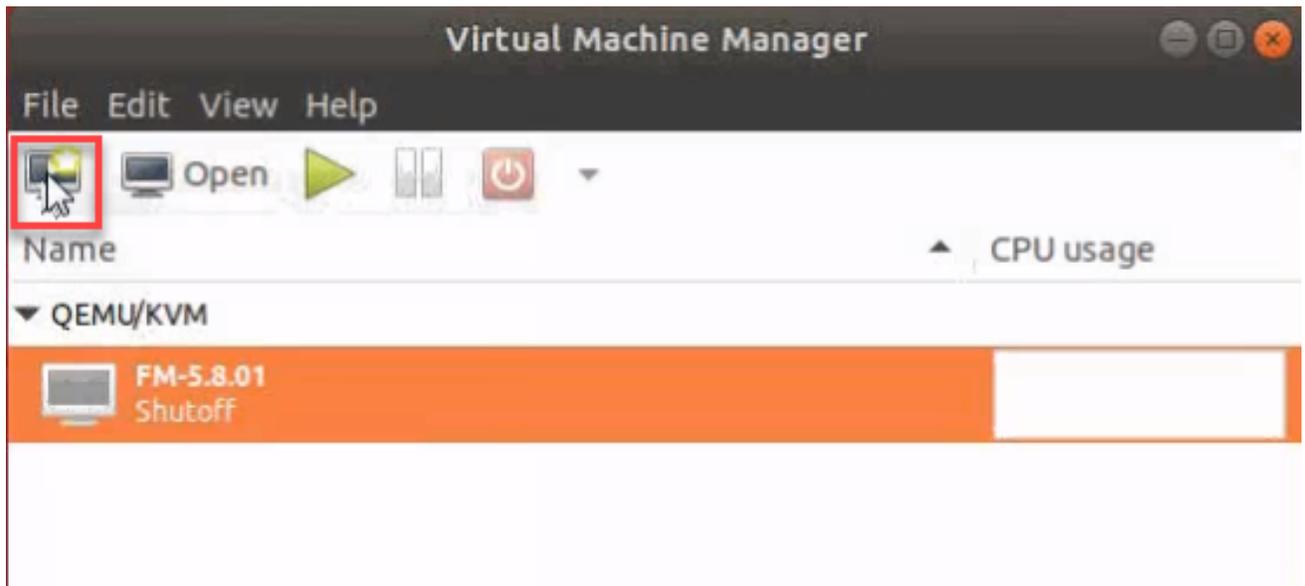
   The **New Virtual Machine Wizard** opens.

2. Select **Local install media (ISO image or CDROM)**, and then click **Forward** to continue.
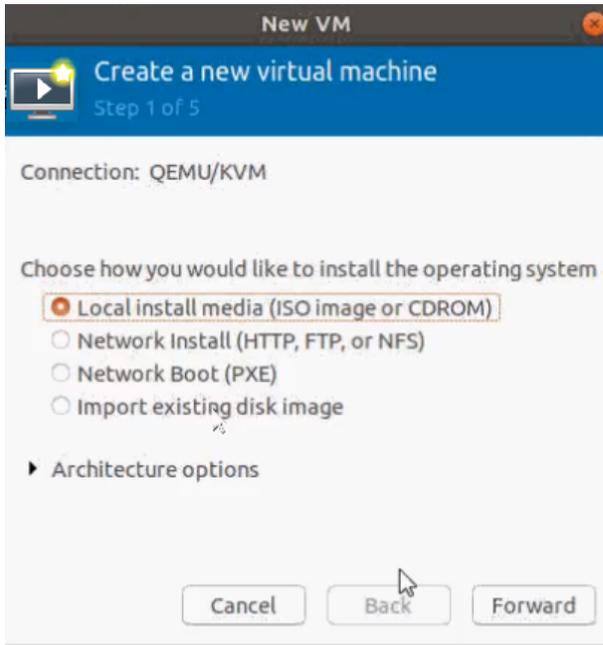
3. Browse and select the location from where to upload the GigaVUE-FM ISO image, and then select the **Automatically detect operating system based on install media** check box.
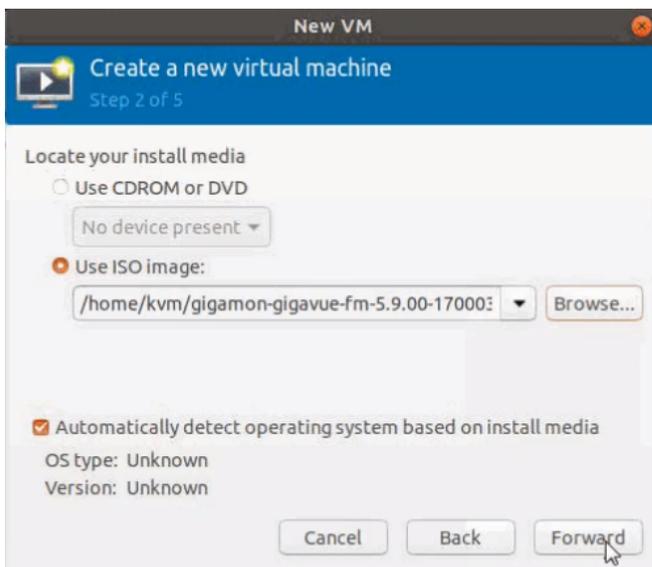
Click **Forward** to continue.

4. Set the **Memory** and **CPU** Settings.
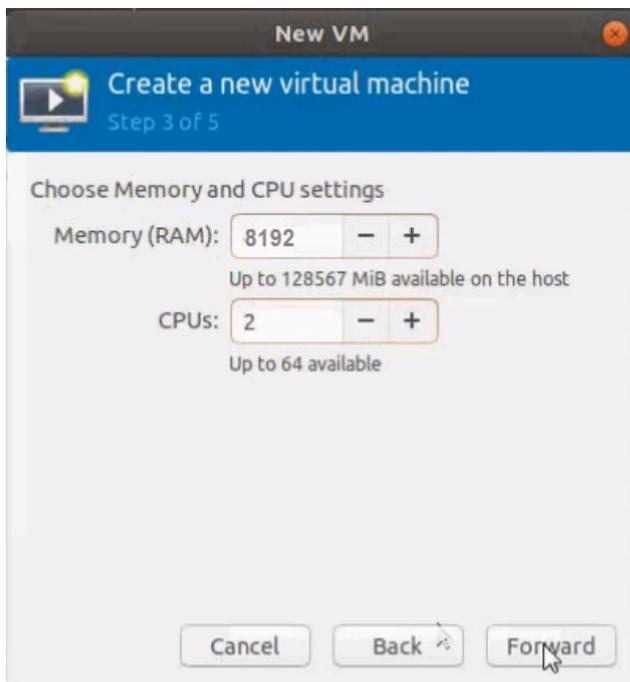
Click **Forward** to continue.

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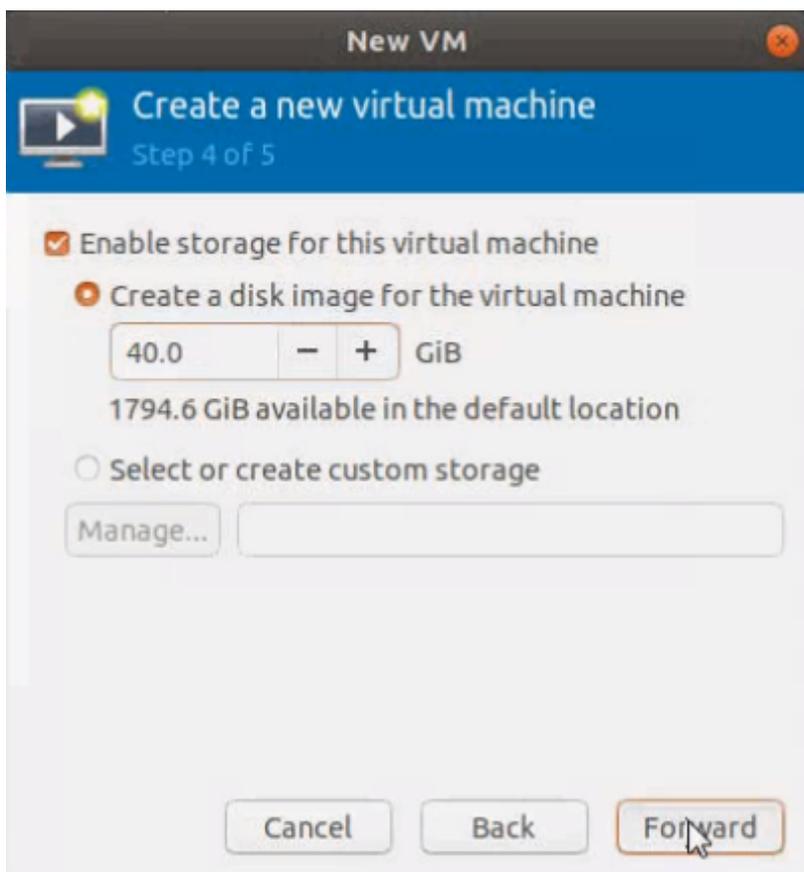
Click **Forward** to continue.

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**.
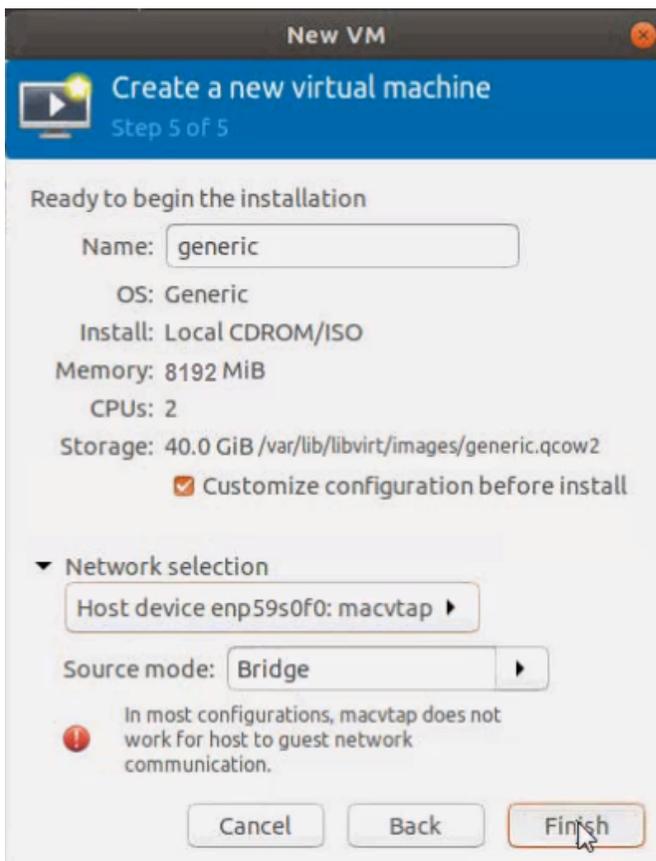
The summary screen appears as shown in the following figure:
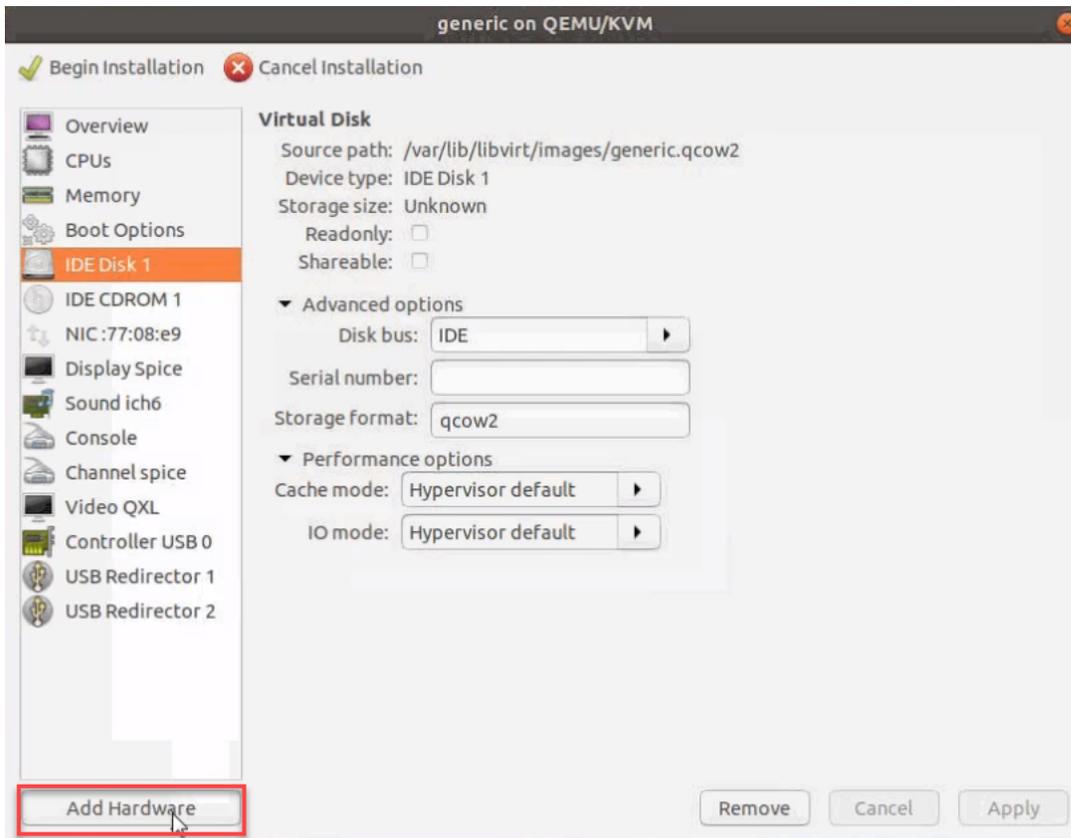
7. Verify the options that you have selected, and then click **Add Hardware** to add the second disk.

8. In the Add New Virtual Hardware screen, set the disk size to **40**Gb.
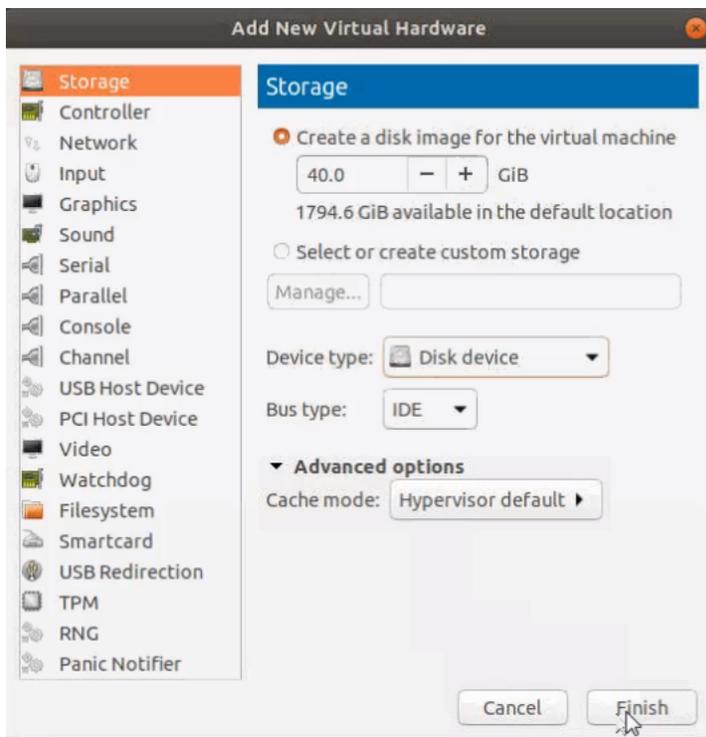
9. Click **Finish**. The summary screen appears again where you can verify the details of IDE Disk 2 that you added. Click **Begin Installation**.
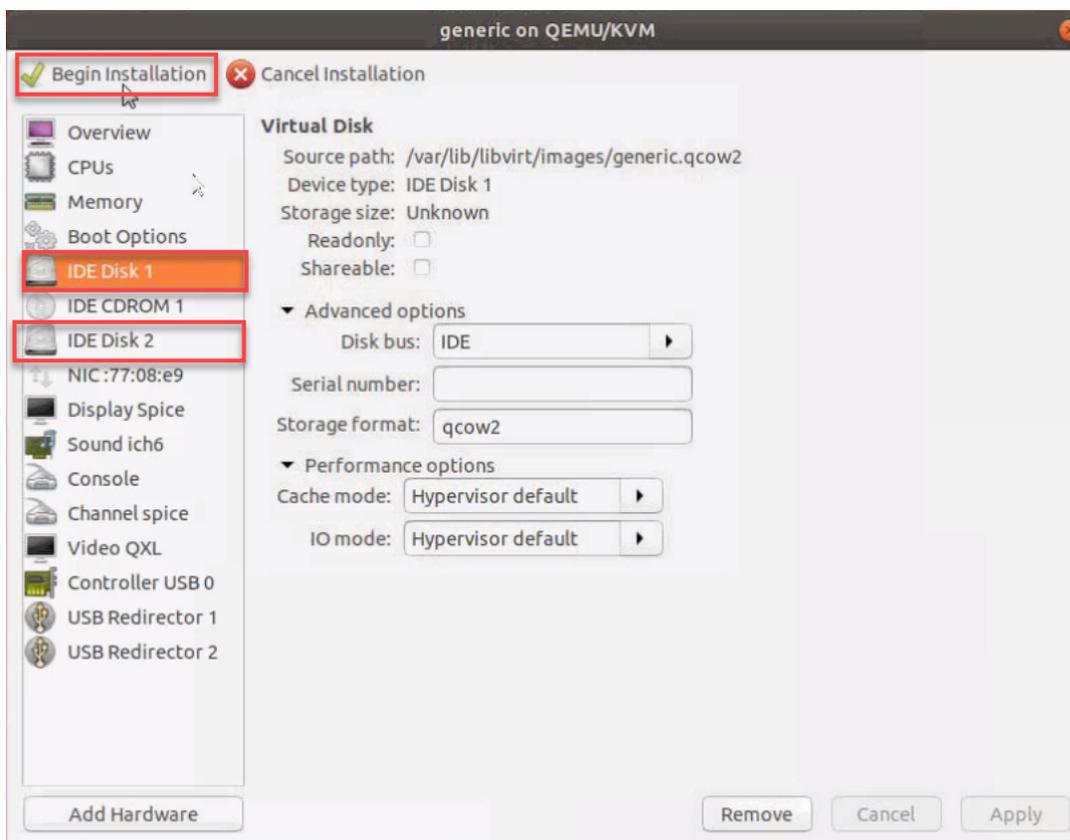
Once the installation is complete, the virtual machine launches.

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. Run the `fmctl jump-start` command. The Initial System Configuration screen appears as shown in the following figure:

   b. 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.

    c. Enter the required domain name.

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

- If you enter **yes**, the **IPv4 Address** or **IPv6 Address**, **CIDR**, **Gateway**, **DNS Servers**, and **Search Domains** are dynamically set up for the management interface.
- If you enter **no**, you must provide the following:
  - i. **IPv4 Address** or **IPv6 Address**, and the respective **CIDR** and **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.
  - iii. In the **Search Domains** field, provide the required DNS domains with spaces in between.

    e. You can choose to either enable or disable NTP. In the **Enable NTP** field, enter one of the following:

- **Yes**—Use NTP to synchronize the time between GigaVUE-FM virtual machine and the NTP server. In the **NTP Servers** and **NTP Version** fields, enter the NTP server address and the version number of the NTP server.
- **No**—you can skip the next step and directly save your configurations.

    f. Select **OK** to save your configurations.

    g. 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).

Migrate GigaVUE-FM

This section provides information about migrating your GigaVUE-FM to release 5.9.00. Refer to the following sections for details:

- Migration Overview
- Plan Your Migration
- Rules and Notes
- Supported Upgrade Paths
- GigaVUE-FM Migration on VMware
- GigaVUE-FM Migration on Hardware Appliance
- GigaVUE-FM Migration on AWS

Migration to GigaVUE-FM 5.9.00 is supported only on VMware ESXi, GigaVUE-FM Hardware Appliance, and AWS platforms.

Migration Overview

Starting with release 5.8.00, GigaVUE-FM introduces several significant changes, which include improvements in usability and performance. These changes include upgrading and replacing databases and changing the underlying operating system. So, you must migrate your existing configurations and data such as audit logs, events, syslogs, and statistics from your current GigaVUE-FM version (either 5.7 or lower) to GigaVUE-FM 5.9.00. You cannot directly upgrade your GigaVUE-FM instance to release 5.9.00. You must first upgrade to GigaVUE-FM 5.7.02.11, a special release that provides the tools to manage and perform the migration. You can then upgrade to GigaVUE-FM 5.9.00.

Plan Your Migration

This section will help you plan your migration. It provides details about the scope of the migration, the best migration method to use for your deployment, and how to complete the migration process.

Refer to the following sections for details:

S.No	Purpose	Refer to:
1.	Ensure that meets the requirements for migrating to GigaVUE-FM 5.9.00. Also, keep in mind the limitations before starting the migration process.	• Rules and Notes
2.	Determine the migration and upgrade path.	• Supported Upgrade Paths
4.	Complete the migration process.	• GigaVUE-FM Migration on VMware • GigaVUE-FM Migration on Hardware Appliance • GigaVUE-FM Migration on AWS

Rules and Notes

Keep in mind the following notes before proceeding with the migration:

- Migration to GigaVUE-FM 5.9.00 is supported only on VMware ESXi, GigaVUE-FM Hardware Appliance, and AWS platforms.

- The minimum size of hard disk for VMware, AWS, and GigaVUE-FM Hardware Appliance is 40Gb.

- Ensure that you plan for a maintenance window depending on the size of the data that you plan to migrate and the network latency.

  Following table provides a guideline for the maintenance window that you can refer to when you plan for migration:

> Note that the actual migration time may vary depending on your configurations.

Data Set		Statistics Loss Time	Management Loss Time	Estimated Migration Time
Environment 1				
No.of nodes	2	10 minutes	5 minutes	• 2 hours (for 25 days of data) • 35 minutes (for 7 days of data)
No.of Ports	6			
No.of Maps	6			
No.of Events	1000			
No.of Syslogs	1000			
No.of Audit logs	1000			

Data Set		Statistics Loss Time	Management Loss Time	Estimated Migration Time

Environment 2

No.of nodes	40	1 hour	5 minutes	• 8 hours (for 25 days of data) • 4 hours (for 7 days of data)
No.of Ports	2000			
No.of Maps	1000			
No.of Events	10000			
No.of Syslogs	10000			
No.of Audit logs	10000			

Environment 3

No.of nodes	300	3 hours	5 minutes	• 10 hours (for 7 days of data)
No.of Ports	12000			
No.of Maps	6000			
No.of Events	10000			
No.of Syslogs	10000			
No.of Audit logs	10000			

- The custom SSL certificates and private keys will not be migrated to GigaVUE-FM 5.9.00. You must upload them manually. For instructions, refer to Install Third-Party Certificate.

- Any configurations that you have set up using DHCP will not be migrated.

- If you have IP interface configured with the IP address of your current version of GigaVUE-FM, after the migration is completed, you must manually associate the IP address of the new GigaVUE-FM to the IP interface.

- It is recommended to upgrade GigaVUE-FM using the local admin credentials and set the **First Priority** field under the Authentication Priority section to **Local**. Refer to the *"Configure AAA Authentication Options"* section in the *GigaVUE Administration Guide.*

Supported Upgrade Paths

Use the following table to determine the supported upgrade path for your current version of GigaVUE-FM:

GigaVUE-FM Version	Recommended Upgrade Path
From 5.8.xx to 5.9.00	5.8.xx > 5.9.00
From 5.7.xx to 5.9.00	5.7.xx > 5.7.02.11 > 5.9.00
From 5.6.xx to 5.9.00	5.6.xx > 5.7.02.11 > 5.9.00
From 5.5.xx to 5.9.00	5.5.xx > 5.6.01 > 5.7.02.11 > 5.9.00 or 5.5.xx > 5.7.02 > 5.7.02.11 > 5.9.00
From 5.4.xx to 5.9.00	5.4.xx > 5.6.01 > 5.7.02.11 > 5.9.00 or 5.4.xx > 5.7.02 > 5.7.02.11 > 5.9.00

NOTE: For deployments with GigaVUE-FM 5.3.xx or lower, upgrade to GigaVUE-FM 5.4.xx and then follow the upgrade path listed in the above table to migrate to GigaVUE-FM 5.9.00. Refer to the *"Installation and Upgrade"* section in the *GigaVUE-FM and GigaVUE-VM User's Guide* of the respective versions.

GigaVUE-FM Migration on VMware

Use this option if your current instance of GigaVUE-FM is running on VMware ESXi. Migrating using this option minimizes the downtime and the loss of statistical data.

System Requirements and Prerequisites

- Upgrade your existing GigaVUE-FM instance to GigaVUE-FM 5.7.02.11. Before upgrading, ensure that you have two Virtual CPUs (vCPU) and a minimum of 8Gb RAM.

- Deploy a new GigaVUE-FM 5.9.00 using an OVA file.

NOTE: To obtain the required software images, register on the customer portal and download the software. To reach the customer portal, go to https://community.gigamon.com/gigamoncp/.

- Set up your remote authentication servers to work with the GigaVUE-FM 5.9.00.

- Both instances of GigaVUE-FM must be identical in terms of hardware resources and that they must be reachable to each other.

- Set up the same username and password to access both, GigaVUE-FM UI and GigaVUE-FM Shell at least till the migration is complete.

- Configure NTP to synchronize the time of both the GigaVUE-FM instances.

- Ensure that you use the same password for both GigaVUE-FM 5.7.02.11 and GigaVUE-FM 5.9.00.

At-a-Glance

Following is an at-a-glance view of the tasks that you must perform to migrate to GigaVUE-FM 5.9.00:

Step 1: Perform the GigaVUE-FM backup to an archive server. For instructions on how to backup the data, refer to the *"Backup Immediately"* section in the *GigaVUE-OS and GigaVUE-FM Administration Guide*.

Step 2: Upgrade your existing GigaVUE-FM instance to GigaVUE-FM 5.7.02.11. For details about the recommended upgrade path, refer to Supported Upgrade Paths. For upgrade instructions, refer to the Upgrade an Existing GigaVUE-FM Deployment.

Step 3: Deploy a new GigaVUE-FM 5.9.00 using an OVA file. For installation instructions, refer to the Deploy GigaVUE-FM from an OVA File. Ensure that the password has a minimum of 11 characters and they must include at least:

- One numerical character
- One upper case character
- One lower case character
- One special character

Step 4: Log in to GigaVUE-FM 5.7.02.11 and start the migration process. The data and the configuration files migrate to GigaVUE-FM 5.9.00.

Step 5: After the migration is complete, decommission the GigaVUE-FM 5.7.02.11 instance immediately to avoid dual connection from both GigaVUE-FM 5.7.02.11 and GigaVUE-FM 5.9.00.

Step 6: This step is applicable only for VMware NSX-V platform managed by GigaVUE-FM 5.7.02.11. Configure the IP address and SHA-1 Thumbprint of the GigaVUE-FM 5.9.00 as the service manager so that GigaVUE-FM 5.9.00 and VMware NSX-V can communicate with each other. For instructions, refer to Configure IP Address of GigaVUE-FM as Service Manager for VMware NSX-V.

Figure 1: GigaVUE-FM Migration on VMware ESXi illustrates the GigaVUE-FM migration process on VMware ESXi.
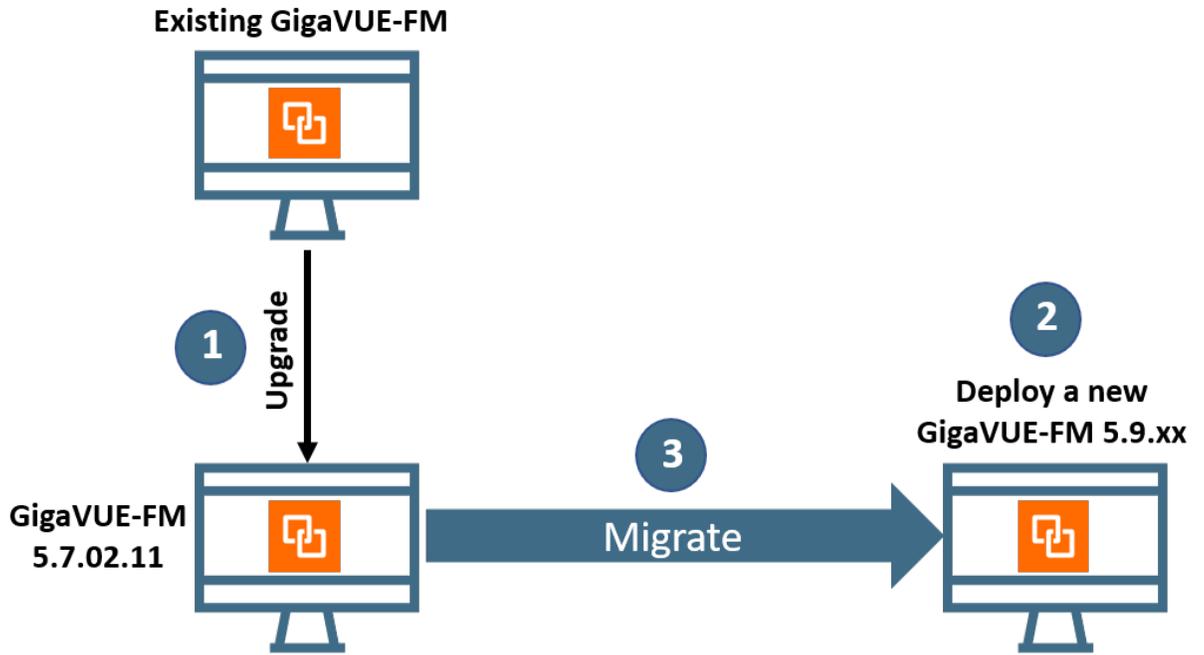
Figure 1: GigaVUE-FM Migration on VMware ESXi

Migrate GigaVUE-FM on VMware ESXi

Before proceeding with the migration, ensure that you meet the recommended system requirements and prerequisites. Refer to System Requirements and Prerequisites.

To migrate GigaVUE-FM on VMware ESXi:

1. Log in to GigaVUE-FM 5.7.02.11.

2. On the right side of the top navigation bar, click the **Admin** drop-down list, and then select **Software Upgrade**. The Software Upgrade Wizard appears.

Figure 2: Accessing the Software Upgrade Wizard

3. Ensure that you meet all the prerequisites listed on the **Requirements** screen of the Wizard.
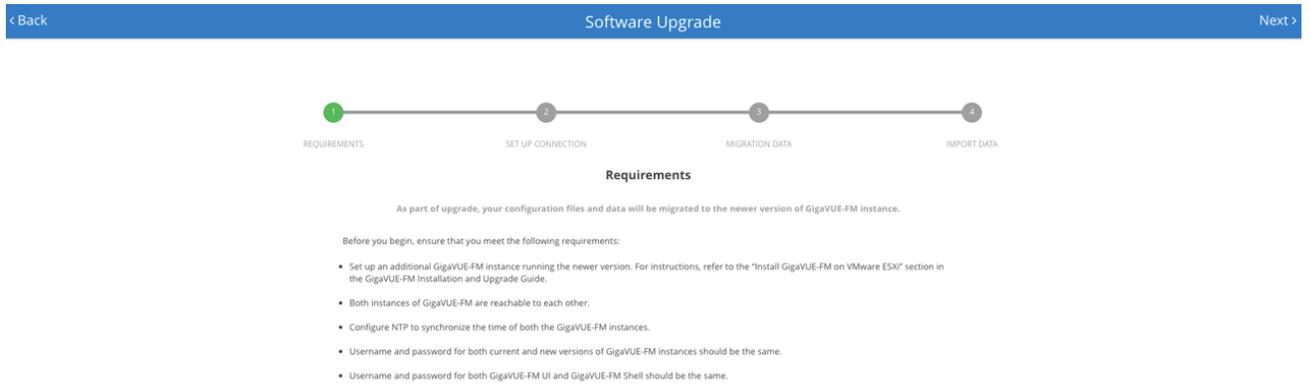
Figure 3: Requirements Screen

4. Click **Next**. The Set Up Connection screen of the Software Upgrade Wizard appears.

5. Enter the IP Address or Hostname of GigaVUE-FM 5.9.00.

6. Enter the login credentials such as the Username and Password, and then click **Connect**. The connection is established between both the GigaVUE-FM instances.

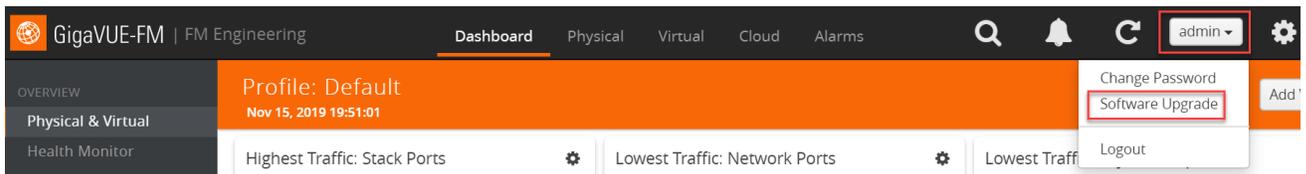7. Click **Next**. The Migration Data screen of the Software Upgrade Wizard appears.

8. Select the **Data Files** check box to migrate the statistics, events, audit logs, and syslogs. By default, all the configuration files will be migrated.

9. Enter the number of days for which you want the data to be migrated. The estimated time for migration appears in the Wizard.

Figure 4: Estimated Migration Time

10. Click **Next**. The data migration process begins. All the files will be exported from GigaVUE-FM 5.7.02.11 and then imported to GigaVUE-FM 5.9.00.

> **NOTE:** The migration process will continue in the background even if you close the browser. You can login again to check the migration status.

11. After the migration is complete, Click **Finish**.
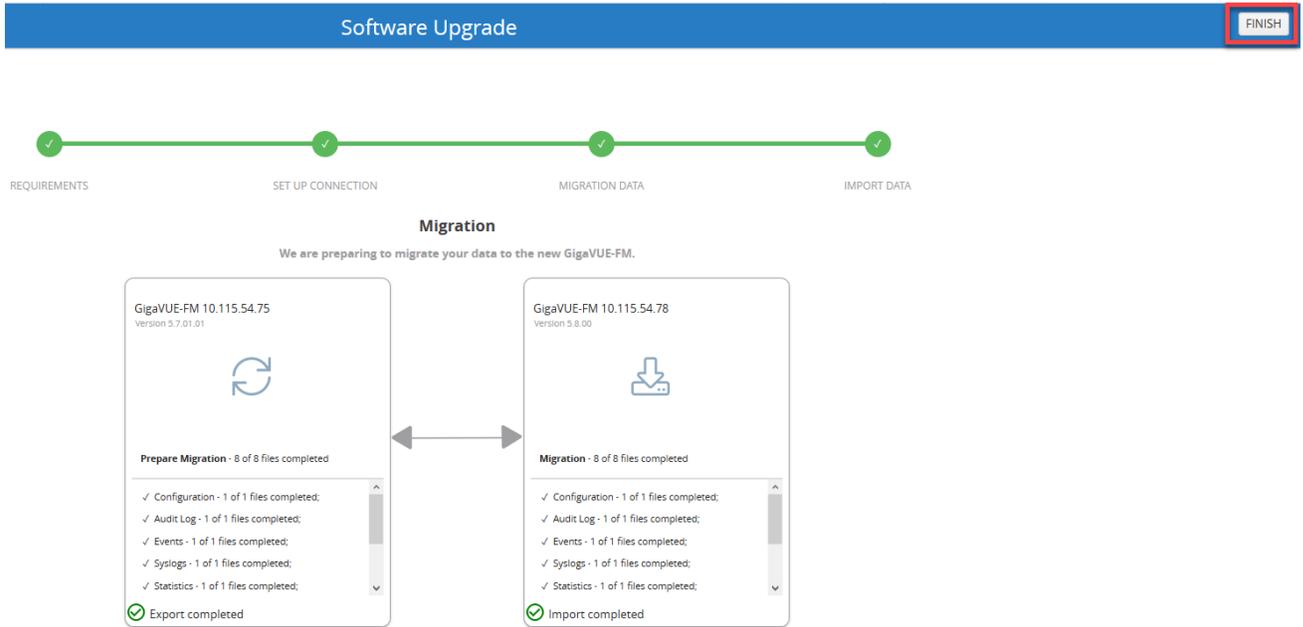
Figure 5: Migration Process Complete for VMware ESXi

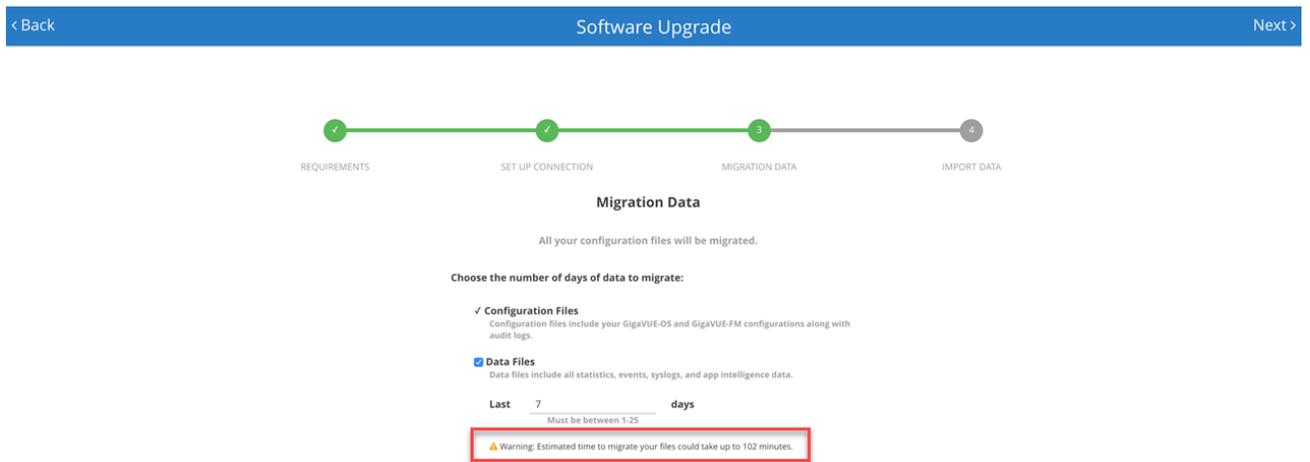After the migration is successful, you can decommission the GigaVUE-FM 5.7.02.11 instance.

Configure IP Address of GigaVUE-FM as Service Manager for VMware NSX-V

GigaVUE-FM and VMware NSX-V communicate with each other using the GigaVUE-FM's IP address, which acts as a service manager. When you migrate from GigaVUE-FM 5.7.02.11 to GigaVUE-FM 5.9.00, the IP address that is configured as the Service Manager in VMware NSX-V does not change. You must manually configure the IP address and SHA-1 Thumbprint of GigaVUE-FM 5.9.00.

Before you proceed with the configuration, ensure that you meet the following prerequisites:

- You have decommissioned the GigaVUE-FM 5.7.02.11 instance.
- You have made a note of the IP address and SHA-1 Thumbprint of GigaVUE-FM 5.9.00. You can get the IP address and SHA-1 Thumbprint from the About GigaVUE-FM page of the GigaVUE-FM 5.9.00. To access the About GigaVUE-FM page, click ⚙ on the top navigation bar, and then from the left navigation pane, select About.
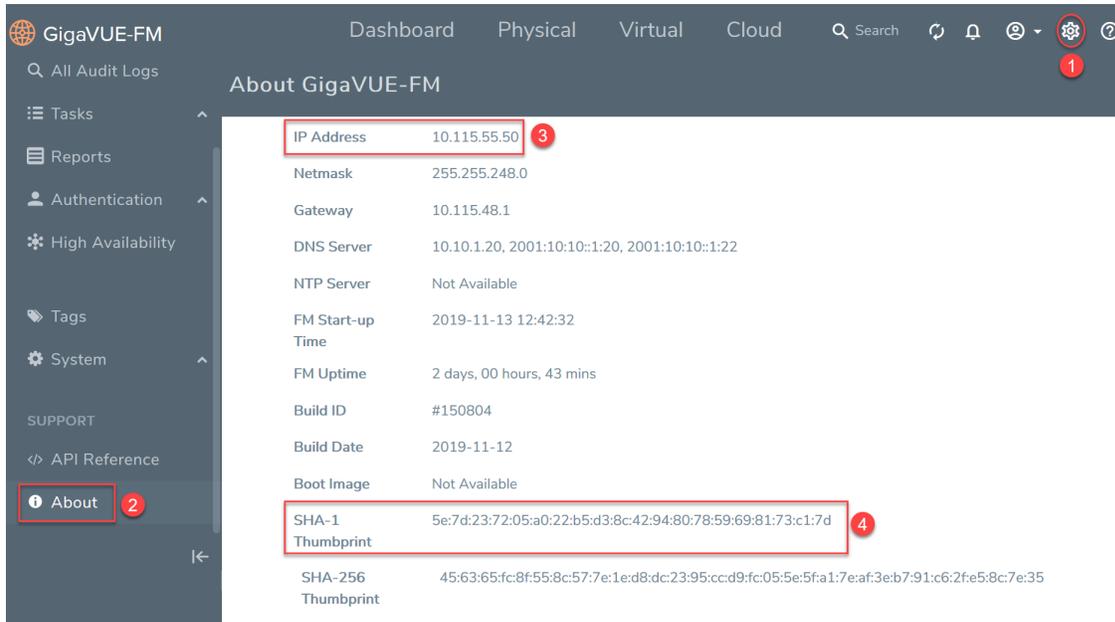
Figure 6: Accessing About GigaVUE-FM Page

To configure GigaVUE-FM 5.9.00 IP address as Service Manager for VMware NSX-V:

1. Launch the VMware vSphere Web Client.

2. Go to **Networking & Security > Service Definitions > Service Managers**.

3. Select **Gigamon Traffic Visibility Manager**, and then click the Edit Service Manager icon. The Edit Service Manager page appears.

4. In the **Administration URL** and the **Base API URL** fields, replace only the IP address with the GigaVUE-FM 5.9.00 IP.

5. In the **Thumbprint** field, enter the SHA-1 Thumbprint of GigaVUE-FM 5.9.00. Refer to Figure 7: Service Manager Configuration in VMware NSX-V

6. Click **OK**.
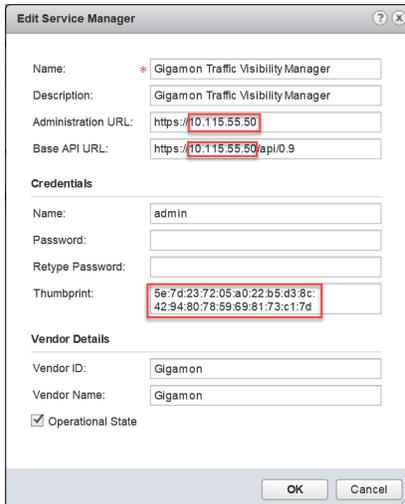
Figure 7: Service Manager Configuration in VMware NSX-V

GigaVUE-FM Migration on Hardware Appliance

Use this option if you have a GigaVUE-FM Hardware Appliance running on GigaVUE-FM version 5.7 or lower that you want to migrate to GigaVUE-FM 5.9.00.

At-A-Glance

Step 1: Backup your data and configuration files from your GigaVUE-FM instance to an archive server. For instructions on how to backup the data, refer to the *"Backup Immediately"* section in the *GigaVUE-OS and GigaVUE-FM Administration Guide.*

Step 2: Upgrade your existing GigaVUE-FM instance to GigaVUE-FM 5.7.02.11. For the upgrade path, refer to Supported Upgrade Paths. For upgrade instructions, refer to Upgrade an Existing GigaVUE-FM Deployment.

Step 3: Log in to GigaVUE-FM 5.7.02.11 and start the migration process.

Step 4: Install the GigaVUE-FM Hardware Appliance with GigaVUE-FM 5.9.00 using an ISO file. For installation instructions, refer to the Migrate GigaVUE-FM Hardware Appliance.

> **NOTE:** To obtain the required software images, register on the customer portal and download the software. To reach the customer portal, go to https://community.gigamon.com/gigamoncp/.

Step 5: After the GigaVUE-FM 5.9.00 is installed, the restoration process gets triggered automatically.

Figure 8: GigaVUE-FM Hardware Appliance Migration illustrates the migration process on the GigaVUE-FM Hardware Appliance.
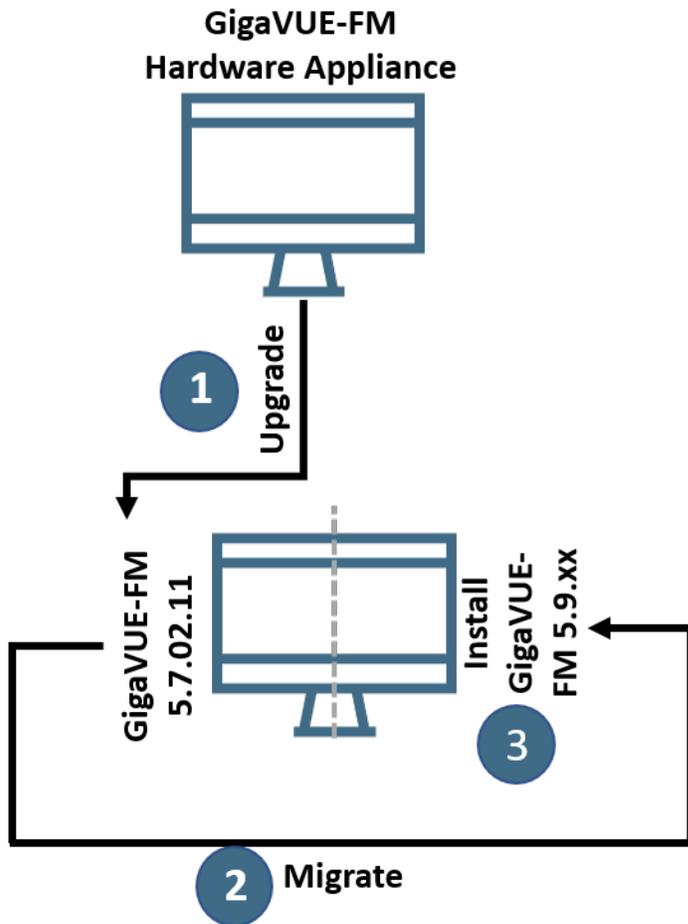
Figure 8: GigaVUE-FM Hardware Appliance Migration

Migrate GigaVUE-FM Hardware Appliance

Before proceeding with the migration, ensure that you meet the following prerequisites:

• Upgrade your GigaVUE-FM Hardware Appliance to GigaVUE-FM 5.7.02.11.

> **NOTE:** To obtain the required software images, register on the customer portal and download the software. To reach the customer portal, go to https://community.gigamon.com/gigamoncp/.

If you choose to set up the ISO image of GigaVUE-FM 5.9.00 using the automated process:

- Ensure that you have the login credentials of i-DRAC that is managing the GigaVUE-FM Hardware Appliance.
- Download the ISO image of GigaVUE-FM 5.9.00 from the customer portal and save it to your Remote File Sharing (RFS) server.

To migrate the GigaVUE-FM Hardware Appliance to GigaVUE-FM 5.9.00:

1. Log in to the GigaVUE-FM Hardware Appliance running on GigaVUE-FM 5.7.02.11.

2. On the right side of the top navigation bar, click the **Admin** drop-down list, and then select **Software Upgrade**. Refer to Figure 9: Accessing the Software Upgrade Wizard.

   The Software Upgrade Wizard appears.
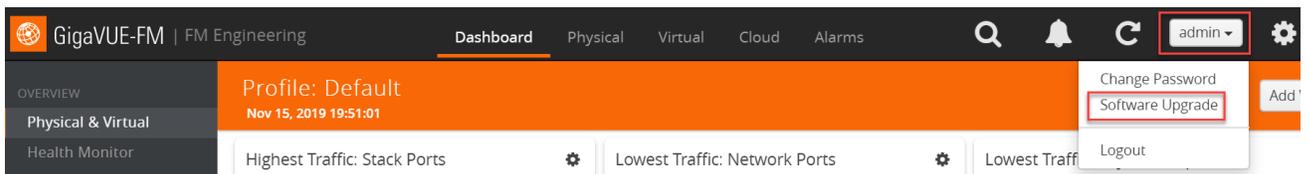
Figure 9: Accessing the Software Upgrade Wizard

3. In the Setup ISO Image screen of the Software Upgrade Wizard, choose one of the following methods to set up the ISO image of GigaVUE-FM 5.9.00:

   - Manual—You must download the ISO image of GigaVUE-FM 5.9.00 from the customer portal. Mount the ISO image to your Hardware Appliance. The Hardware Appliance reboots after the ISO image is loaded. For instructions, refer to Set Up the GigaVUE-FM 5.9.00 ISO Image Manually.
   - Automatically—Set up the ISO image using an automated process.

   Complete the following steps if you choose to set up the ISO image automatically (refer to Figure 10: GigaVUE-FM Hardware Appliance—Automatic ISO Image Setup):

   a. Under the i-DRAC section, enter the IP Address, Username, and Password for i-DRAC that is managing the GigaVUE-FM Hardware Appliance.

   b. Under the RFS section, enter the IP Address, Username, and Password of the Remote File Sharing server in which you have downloaded the ISO image of GigaVUE-FM 5.9.00.

   c. In the **ISO Image Path** field, enter the absolute path of the ISO image.

   d. From the **Protocol** drop-down list, select **NFS** or **CIFS**.

   e. Click **Connect**.
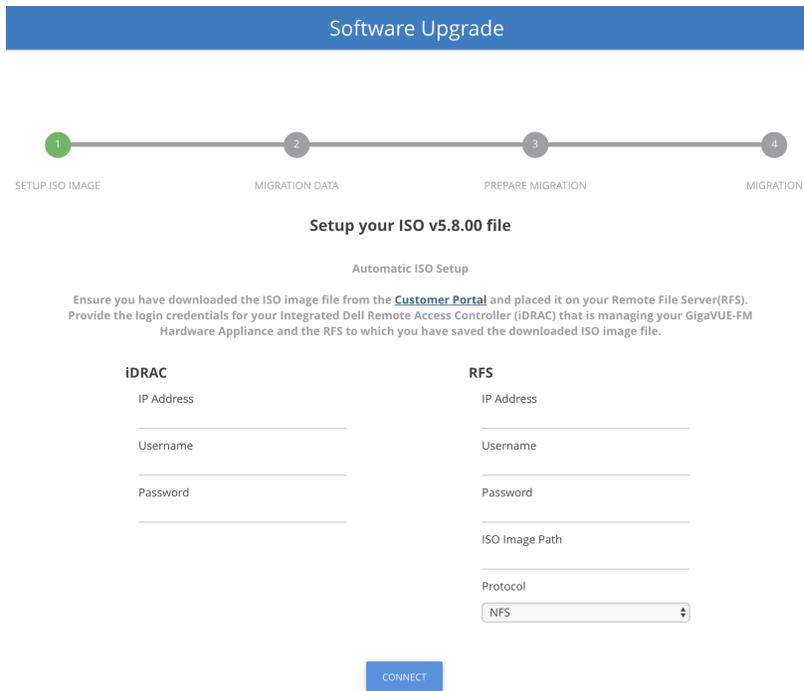
Figure 10: GigaVUE-FM Hardware Appliance—Automatic ISO Image Setup

4. In the Migration Data screen of the Software Upgrade Wizard, select the **Data Files** check box to migrate the statistics, events, audit logs, and syslogs. By default, all the configuration files will be migrated.

5. Enter the number of days for which you want the data to be migrated. By default, seven days of data will be migrated.

6. Click **Next**. The data migration process begins. All the files will be converted to the GigaVUE-FM 5.9.00 format and will be restored on the Hardware Appliance.

Set Up the GigaVUE-FM 5.9.00 ISO Image Manually

You can perform a manual installation of ISO image either from local file system or RFS server. Before proceeding with the ISO installation, it is recommended that you set up the boot sequence in the following order:

1. Hard disk

2. Physical DVD

3. Virtual DVD

Refer to the following sections for details:

- Set Up First Boot Device
- Install ISO Image from Local File System

- Install ISO Image from Remote File Sharing Server

Set Up First Boot Device

To set up the first boot device:

1. Log in to the iDRAC web interface.

2. Go to **Overview > Server > Setup**. The First Boot Device page appears. Refer to Figure 11: First Boot Device

Figure 11: First Boot Device

3. From the **First Boot Device** drop-down list, select **Virtual CD/DVD/ISO**.

4. Select the **Boot Once** check box, and then click **Apply**.

Install ISO Image from Local File System

Before proceeding with the ISO installation, ensure that you have downloaded the GigaVUE-FM 5.9.00 ISO image to your local file system.

> **NOTE:** To obtain the required software images, register on the customer portal and download the software. To reach the customer portal, go to https://community.gigamon.com/gigamoncp/.

To install ISO image from a local file system:

1. In the iDRAC web interface, go to **Overview > Server > Virtual Console**. The Virtual Console page appears.

2. Click **Launch Virtual Console**. The Virtual Console Viewer is launched.

3. Go to **Virtual Media > Connect Virtual Media**. The Virtual Media session is established and the Virtual Media menu displays the list of devices available for mapping. Refer to Figure 12: Connecting to Virtual Media.

GigaVUE-FM Installation, Migration, and Upgrade Guide
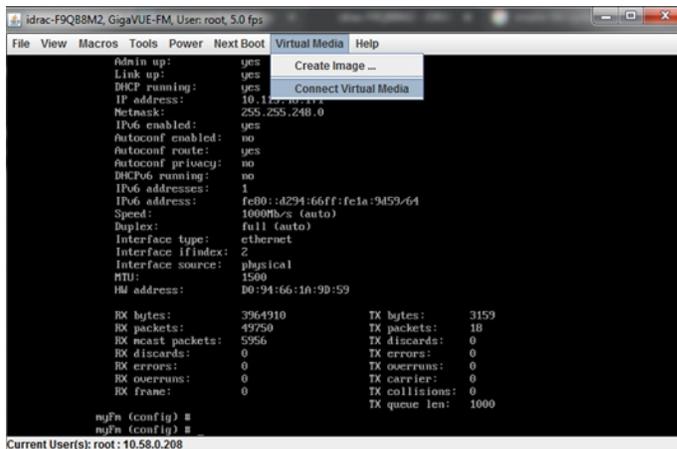
Figure 12: Connecting to Virtual Media

4. Go to **Virtual Media > Map CD/DVD**. The Virtual Media - Map CD/DVD pop-up window appears. Refer to Figure 13: Map CD/DVD.
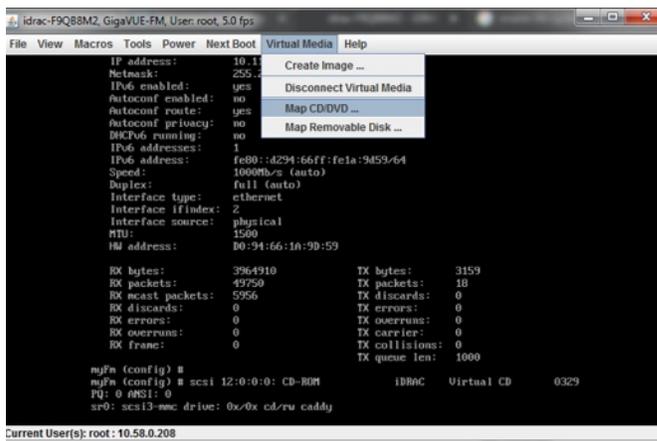
Figure 13: Map CD/DVD

5. Browse and select the GigaVUE-FM 5.9.00 ISO image that you have downloaded to your local file system, and then click **Map Device**. Refer to Figure 14: Select ISO Image From Local File System.
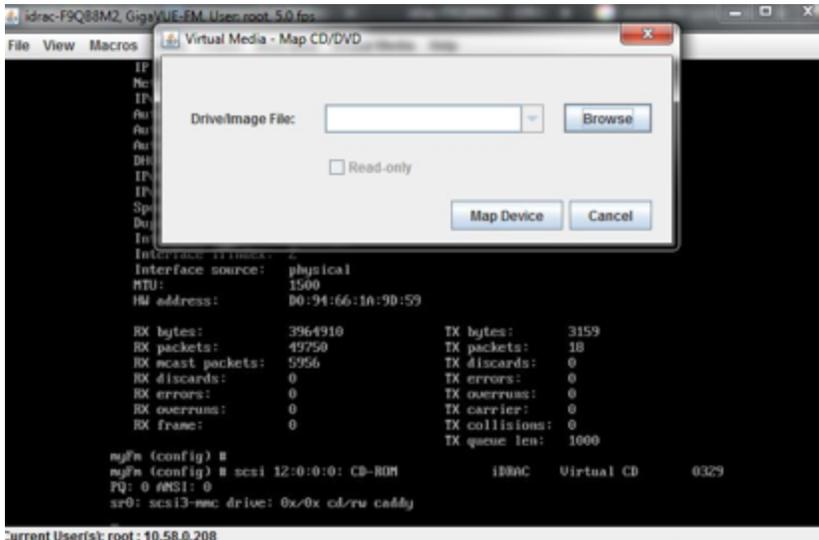
Figure 14: Select ISO Image From Local File System

6. Go to **Power > Power Cycle System (cold boot)** to power cycle GigaVUE-FM. Refer to Figure 15: Power Cycle GigaVUE-FM.

Figure 15: Power Cycle GigaVUE-FM

Wait for 30-45 minutes for the ISO image to install and the data to be migrated.

> **NOTE:** It may take 2 to 3 reboot cycles for the migration process to be completed. After the migration process is completed, you will see the GigaVUE-FM login prompt in which the hostname of the GigaVUE-FM appears. You must now disconnect the virtual media.

Install ISO Image from Remote File Sharing Server

Before proceeding with the ISO installation, ensure that you have downloaded the GigaVUE-FM 5.9.00 ISO image to a RFS server—NFS or CIFS.

> **NOTE:** To obtain the required software images, register on the customer portal and download the software. To reach the customer portal, go to
> https://community.gigamon.com/gigamoncp/.

To install ISO image from RFS:

1. In the iDRAC web interface, go to **Overview > Server > Attached Media**. The Attached Media page appears. Refer to Figure 16: Select ISO Image from RFS.
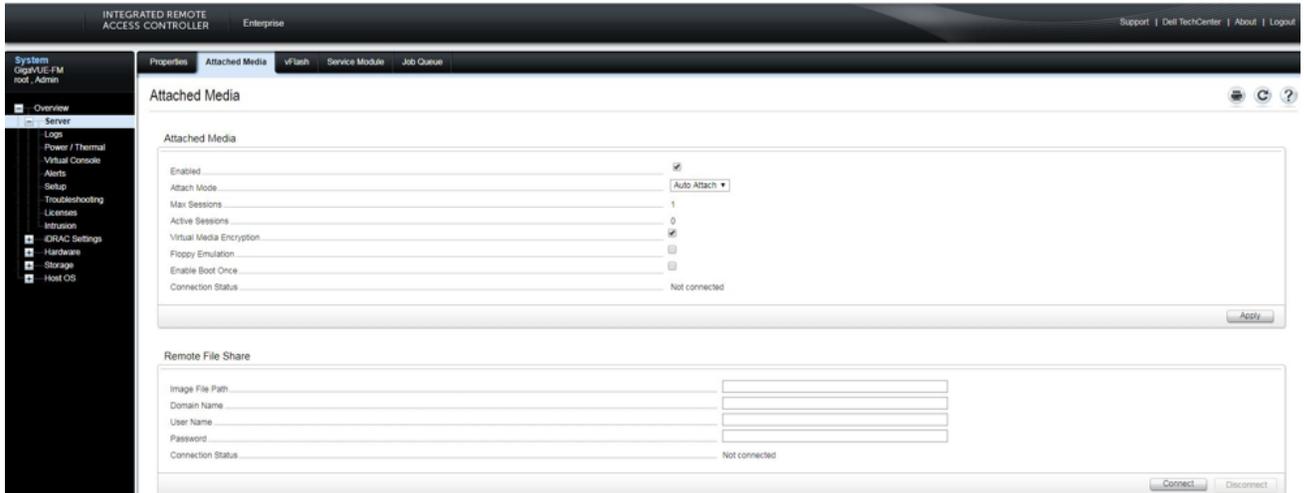
Figure 16: Select ISO Image from RFS

2. In the Remote File Share area, enter the absolute file path of the ISO image, domain name, user name, and password of your NFS or CIFS server.

> **NOTE:** The file path format for NFS server is *<nfs server IP>:<path> eg 10.10.10.10:/home/admin/gigavue-fm-5800.iso*

   The file path format for CIFS is *\\<cifs server IP>\<path to iso> eg. //10.10.10.10/Downloads/gigavue-fm-5800.iso*

3. Click **Connect**. After connection is established with RFS, the Connection Status changes to **Connected**.

4. Set up the First Boot Device to Virtual CD/DVD/ISO. Refer to Set Up First Boot Device.

5. Go to **Power > Power Cycle System (cold boot)** to power cycle GigaVUE-FM. Refer to Figure 17: Power Cycle GigaVUE-FM.
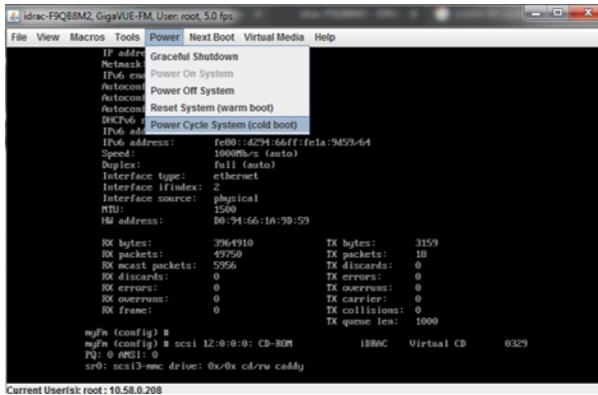
Figure 17: Power Cycle GigaVUE-FM
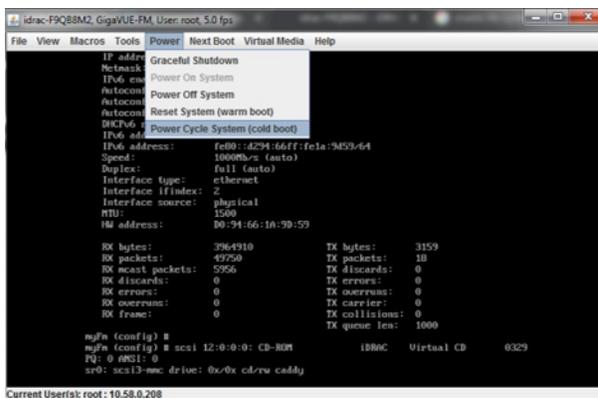
Wait for 30-45 minutes for the ISO image to install and the data to be migrated.

GigaVUE-FM Migration on AWS

Use this option if you want to migrate your GigaVUE-FM instance running on the AWS platform.

> **NOTE:** The migration process is applicable only if your current deployment has GigaVUE-FM 5.7. For deployments with GigaVUE-FM 5.6 or lower, you must deploy a fresh installation of GigaVUE-FM 5.9.00 and create the configurations again.

Figure 18: GigaVUE-FM Migration on AWS illustrates the GigaVUE-FM migration process on AWS.
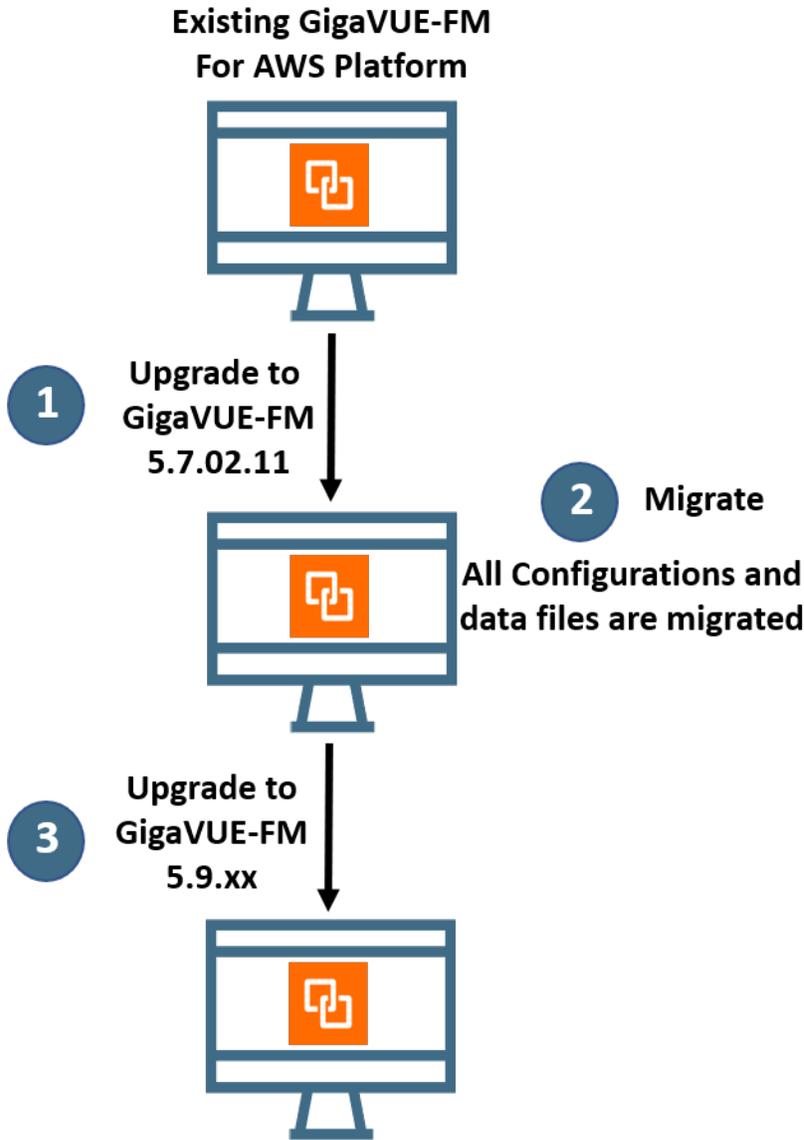
Figure 18: GigaVUE-FM Migration on AWS

At-a-Glance

Following is an at-a-glance view of the tasks that you must perform to migrate to GigaVUE-FM 5.9.00:

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

Step 2: Create a snapshot of the second disk (dev/sdb) of the FM instance. Ensure to make a note of the snapshot ID. Refer to Create Snapshot of the GigaVUE-FM Instance.

Step 3: Upgrade your GigaVUE-FM 5.7 instance to GigaVUE-FM 5.7.02.11. Refer to Upgrade GigaVUE-FM Instance. To get the software image, contact customer support.

Step 4: Launch GigaVUE-FM 5.7.02.11. While launching the instance, enter the snapshot ID of the old version of the GigaVUE-FM instance (that you have made a note of in Step 2) in **Add Storage > Add New Volume**.

Step 5: Verify if the data from the previous GigaVUE-FM instance is restored in the new instance. Ensure that you set up the same password that you used to access the old GigaVUE-FM instance.

Step 6: Initiate the migration process in GigaVUE-FM 5.7.02.11. Refer to Migrate GigaVUE-FM on AWS.

Step 7: After the migration is complete, stop the GigaVUE-FM 5.7.02.11 instance. Refer to Stop GigaVUE FM Instance.

Step 8: Create a snapshot of the second disk (dev/sdb) of the GigaVUE-FM 5.7.02.11 instance. Ensure to make a note of the snapshot ID. Refer to Create Snapshot of the GigaVUE-FM Instance.

Step 9: Upgrade your GigaVUE-FM 5.7.02.11 instance to GigaVUE-FM 5.9.00. Refer to Upgrade GigaVUE-FM Instance. You can get the software image from AWS Marketplace or Community AMIs.

Step 10: Launch GigaVUE-FM 5.9.00. While launching the instance, enter the snapshot ID of the GigaVUE-FM 5.7.02.11 instance (that you have made a note of in Step 8) in **Add Storage > Add New Volume**.

Step 11: Wait for about 10 minutes for the restore process to get completed before you login to the GigaVUE-FM 5.9.00 instance. Verify if the data from the GigaVUE-FM 5.7.02.11 instance is restored in the GigaVUE-FM 5.9.00 instance. Ensure that you use the same password that you used to access the old GigaVUE-FM instances.

Step 12: Terminate the old GigaVUE-FM and the GigaVUE-FM 5.7.02.11 instances.

Refer to the following sections for details:

- Stop GigaVUE FM Instance
- Create Snapshot of the GigaVUE-FM Instance
- Upgrade GigaVUE-FM Instance
- Migrate GigaVUE-FM on AWS

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**. Refer to Figure 19: Selecting Instances.
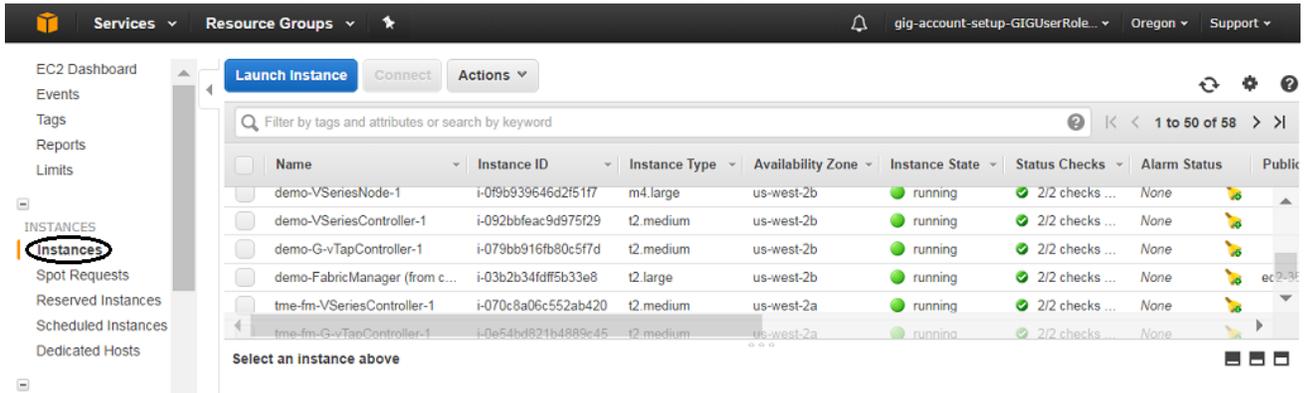
Figure 19: Selecting Instances

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. Refer to Figure 20: Searching for the GigaVUE-FM Instance.
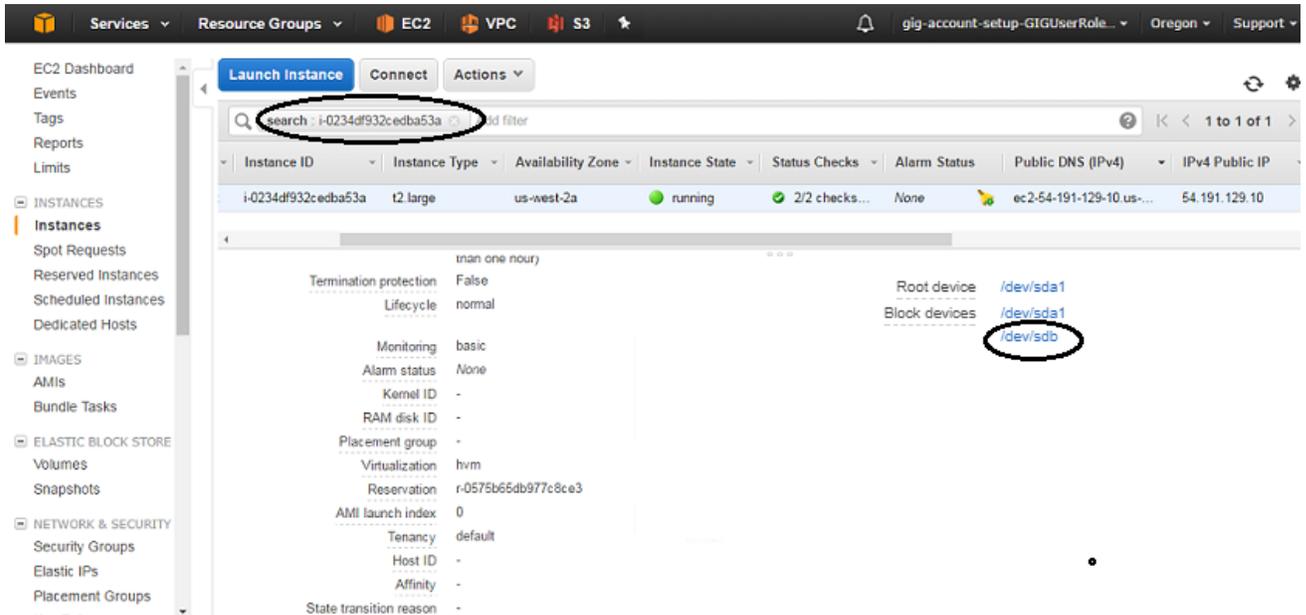
Figure 20: Searching for the GigaVUE-FM Instance

2. Scroll down and locate Block Devices. Refer to Figure 20: Searching for the GigaVUE-FM Instance.

3. Click the **/dev/sdb** link. The Block Device dialog box is displayed with the volume ID link. Refer to Figure 21: Opening Block Device Dialog Box.
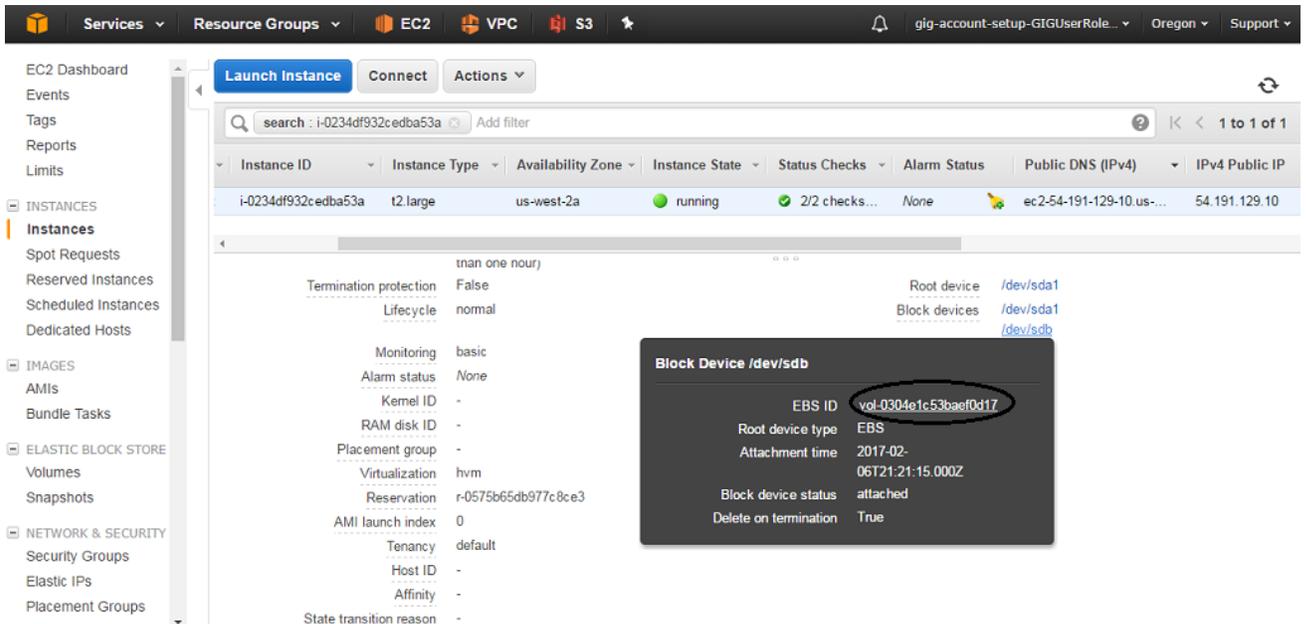
Figure 21: Opening Block Device Dialog Box

4. In the Block Device dialog box, click the volume ID link. The Volumes page is displayed. Refer to Figure 22: Viewing the Volumes Page.
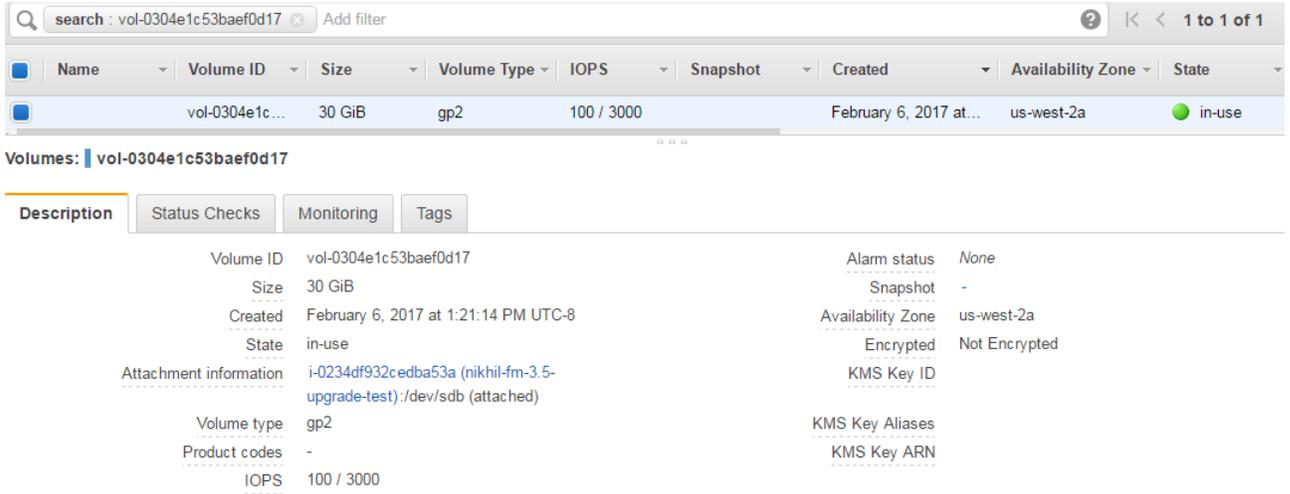
Figure 22: Viewing the Volumes Page

5. Click **Actions** and select **Create Snapshot.** Refer to Figure 23: Selecting Create Snapshot.
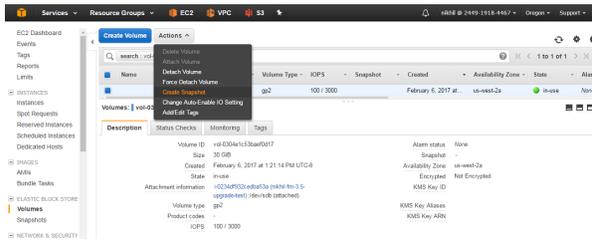
Figure 23: Selecting Create Snapshot

The Create Snapshot page appears. Refer to Figure 24: Creating a Snapshot.
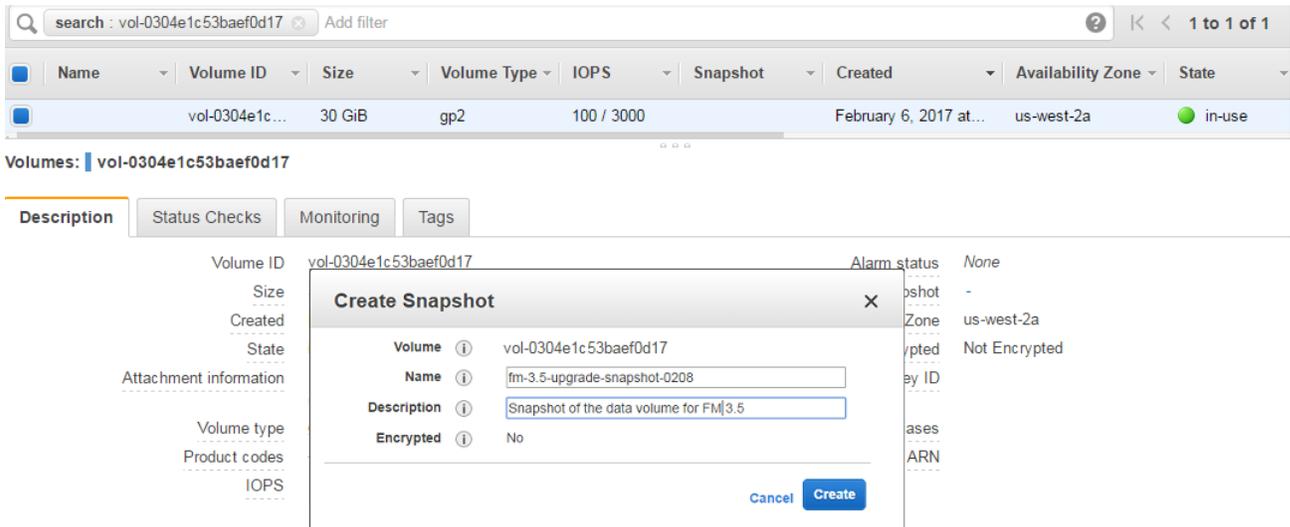
Figure 24: Creating a Snapshot

6. Enter the description of the snapshot.

7. Click **Add Tag** to add the required key and value.

8. Click **Create Snapshot**. It will take several minutes for the snapshot to be created. Refer to Figure 25: Viewing the Snapshot Page.
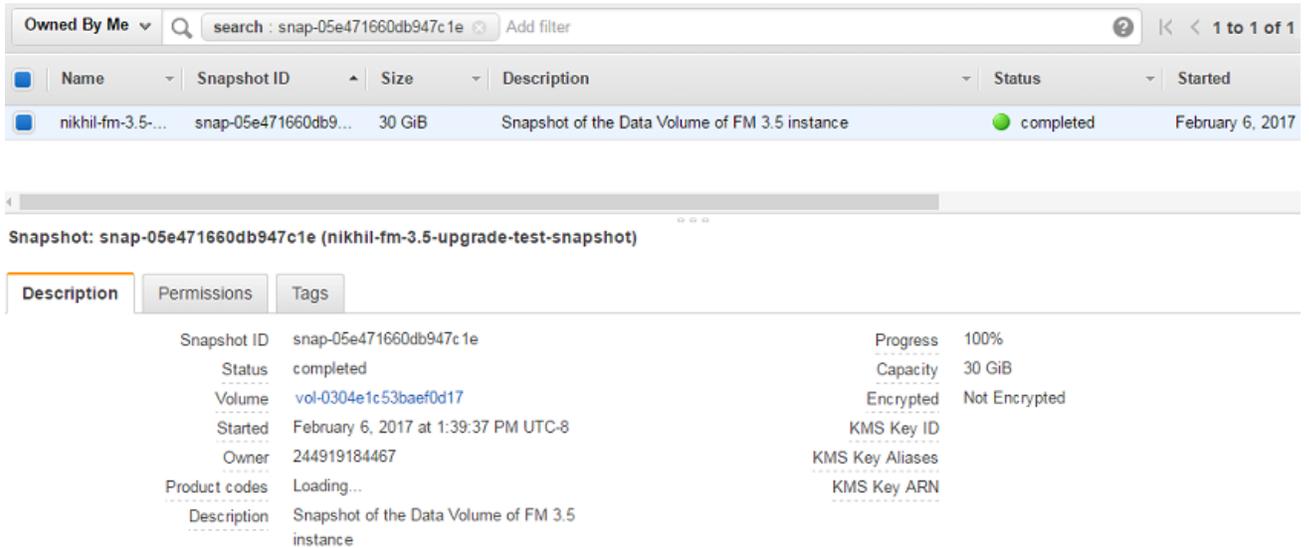
Figure 25: Viewing the Snapshot Page

> **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**.

> **NOTE:** The GigaVUE-FM 5.7.02.11 software image will not be available in the AWS Marketplace or Community AMIs. To get the software image, contact customer support.

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.** Refer to Figure 26: Configuring an Instance.

Figure 26: Configuring an Instance

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 **Next: Add Storage** and click **Add New Volume**. Refer to Figure 27: Adding New Volume.

Figure 27: Adding New Volume

8. Enter the following storage device settings as shown in Figure 27: Adding New Volume:

    - **Snapshot**—Enter the name of the snapshot that is created in step 6 in the section Create Snapshot of the GigaVUE-FM Instance.

- **Size (GiB)**— Enter the storage size of the volume.

> **NOTE:** When upgrading from GigaVUE-FM 5.7 to GigaVUE-FM 5.7.02.11, ensure that the size of the volume is double the volume selected while launching the GigaVUE-FM 5.7 instance.

When upgrading from GigaVUE-FM 5.7.02.11 to GigaVUE-FM 5.9.00, ensure that the size of the volume is same as the volume selected while launching GigaVUE-FM 5.7.02.11.

- **Volume Type**— Select a volume type. The recommended volume is General Purpose SSD (GP2).
- **Delete on Termination**— Select this check box to make sure the volumes are cleaned up when the GigaVUE-FM instance is removed.

9. Click **Next: Tag Instance,** and then add a key-value pair to identify the instance. Refer to Figure 28: Adding a Tag to an Instance.

| 1. Choose AMI | 2. Choose Instance Type | 3. Configure Instance | 4. Add Storage | 5. Tag Instance | 6. Configure Security Group | 7. Review |

Step 5: Tag Instance

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. Learn more about t

Key (127 characters maximum)	**Value** (255 characters maximum)
Name	Gigamon Fabric Manager 1

Create Tag   (Up to 50 tags maximum)

Figure 28: Adding a Tag to an 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 *GigaVUE Cloud Suite for AWS Quick Start Guide*.

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** as shown in Figure 29: Selecting an SSH Key Pair.

Figure 29: Selecting an SSH Key Pair

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.

Migrate GigaVUE-FM on AWS

Before proceeding with the migration, ensure that you meet the following prerequisites:

• Ensure that you have upgraded your current GigaVUE-FM instance to GigaVUE-FM 5.7.02.11.

> **NOTE:** To obtain the required software images, contact customer support.

To migrate using this option:

1. Log in to GigaVUE-FM 5.7.02.11.

2. On the right side of the top navigation bar, click the **Admin** drop-down list, and then select **Software Upgrade**. The Software Upgrade Wizard appears. Refer to Figure 30: Accessing the Software Upgrade Wizard.
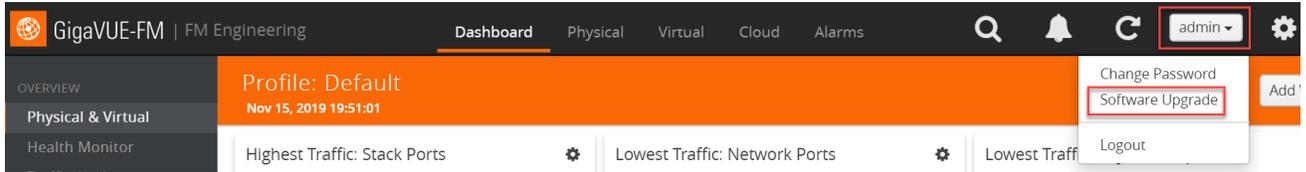
Figure 30: Accessing the Software Upgrade Wizard

3. In the Migration Data screen of the Wizard, select the **Data Files** check box to migrate the statistics, events, audit logs, and syslogs. By default, all the configuration files will be migrated.

4. Enter the number of days for which you want the data to be migrated.

5. Click **Next**. The Migration process begins. The Migration Data screen displays the estimated migration time for the specified number of days of data. All the selected data files along with the configuration files will be exported. This may take several minutes.

6. After the export is complete, you must upgrade the GigaVUE-FM instance to GigaVUE-FM 5.9.00 to complete the migration. Refer Figure 31: Migration Process on AWS.

   For information about how to upgrade GigaVUE-FM in AWS, refer to Upgrade GigaVUE-FM Instance.
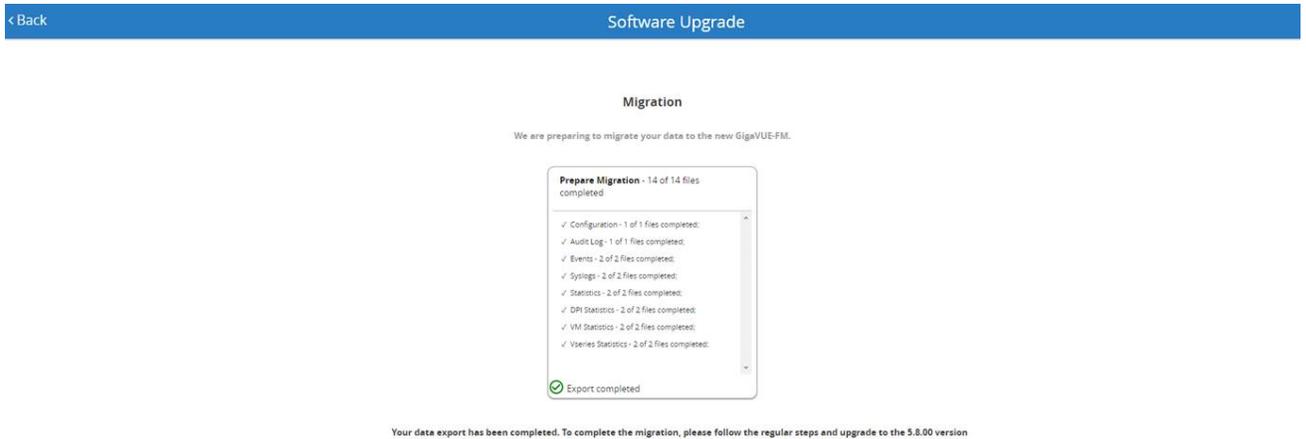
Figure 31: Migration Process on AWS

Upgrade GigaVUE-FM

Starting with release 5.8.00, GigaVUE-FM introduces several significant changes, which include improvements in usability and performance. These changes include upgrading and replacing databases and changing the underlying operating system. So, you must migrate your existing configurations and data such as audit logs, events, syslogs, and statistics from your current GigaVUE-FM version (either 5.7 or lower) to GigaVUE-FM5.9.00. You cannot directly upgrade your GigaVUE-FM instance to release 5.9.00. You must first upgrade to GigaVUE-FM5.7.02.11, a special release that provides the tools to manage and perform the migration. You can then upgrade to GigaVUE-FM5.9.00. For instructions, refer to Migrate 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. Starting with release 3.1, Gigamon supports KVM environments. Previous versions of GigaVUE-FM have not been tested in the KVM environment.

NOTE: To upgrade software on H Series or TA Series nodes, refer to the *"Upgrading Software on a GigaVUE Node or a Cluster from GigaVUE-FM"* section in the *GigaVUE-FM User's Guide*.

Refer to the following sections for details:

- Upgrade an Existing GigaVUE-FM Deployment, which describes the overall upgrade path from an existing GigaVUE-FM deployment.

- How to Use the Snapshot Feature, which describes how to upgrade GigaVUE-FM 3.1 and above to the current version of GigaVUE-FM.

Upgrade an Existing GigaVUE-FM Deployment

Before starting an upgrade to GigaVUE-FM version, be sure to get the latest image, upgrade information, and release notes from the customer portal. Be sure to review the release notes for the latest release prior to upgrading your instance of GigaVUE-FM.

Once the GigaVUE-FM image is obtained, download it to a server within your environment from which the current instance of GigaVUE-FM can upload it. It is important to save your current running configuration using the facilities provided by the hypervisor before upgrading.

> **NOTE:** When upgrading from any version of GigaVUE-FM lower than 5.4.00, be aware of the minimum memory requirements in the new release. Earlier releases specified 4GB of memory for the OVA template; whereas versions after 5.4.00 require 8GB. 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.

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

You can upgrade the existing deployment of GigaVUE-FM either from the CLI or from the GigaVUE-FM UI.

> **NOTE:** When upgrading GigaVUE-FM, you must also upgrade GigaVUE-VM. For the steps to upgrade GigaVUE-VM, refer to the "*Bulk Upgrading GigaVUE-VM Nodes*" section in the *GigaVUE Cloud Suite for VMware Configuration Guide*.

Upgrade from CLI

There are five steps on how to upgrade an existing GigaVUE-FM deployment to the current release.

1. Verify that less than two images are present on the GigaVUE-FM server.
2. Download the new image into GigaVUE-FM using either HTTP, HTTPS, FTP, TFTP, SCP, or SFTP.
3. Install the new image.
4. Change boot partition.
5. Reboot GigaVUE-FM.

Notes:

- It is important to log in with the **admin** account/username when upgrading the image on the existing GigaVUE-FM.
- GigaVUE-FM 3.2 and higher versions compute node health status differently than previous versions. After the upgrade completes, rediscover the nodes to recompute node health status.
- Prior to GigaVUE-FM 3.2, backup files for physical nodes were in a binary format. Starting with GigaVUE-FM 3.2, backup and restore files use a text based format and binary backup or restore on physical nodes is not supported. When upgrading from a version lower than version 3.2, backup your configuration prior to upgrading to the current version of GigaVUE-FM if you desire, but the files will be in a binary format. Existing binary backups are not visible to GigaVUE-FM. For binary backups, you must back up the node using the CLI commands rather than GigaVUE-FM. For more information about the CLI commands, refer to the *GigaVUE-OS-CLI Reference Guide*.

- When using the Firefox or IE browser, clear the cache before upgrading to prevent issues with the browser.

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

> **NOTE:** It is important that you log in with the **admin** account/username when upgrading the image on the existing GigaVUE-FM.

1. To begin an upgrade, open a SSH session or console session within the vSphere Client, and log int o GigaVUE-FM and change to configure mode, by entering the following on the command line:

   a. Type **en <Enter>** to switch to Enable mode.

      The system prompt changes from *[hostname] >* to *[hostname] #*.

   b. Type **config t <Enter>** to switch to Configure mode.

      The system prompt changes from *[hostname] #* to *[hostname] (config) #*

   Figure 1: Console Login to vSphere Clientshows an example of the login console.

2. Check the number of images currently available for installation with the following command from the GigaVUE-FM CLI:

   `(config) # show images`

   Important: If there are more than two images listed in the **Images available to be installed** section of the **show images** output, Gigamon recommends that you use the **image delete** command to remove existing images until the system has only a single image. Both GigaVUE-FM and GigaVUE-VM will display a warning if you attempt to fetch a third image.

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

   `(config) # image delete fma3300.img`

4. Go to Step 2: Fetch the latest release of GigaVUE-FM.
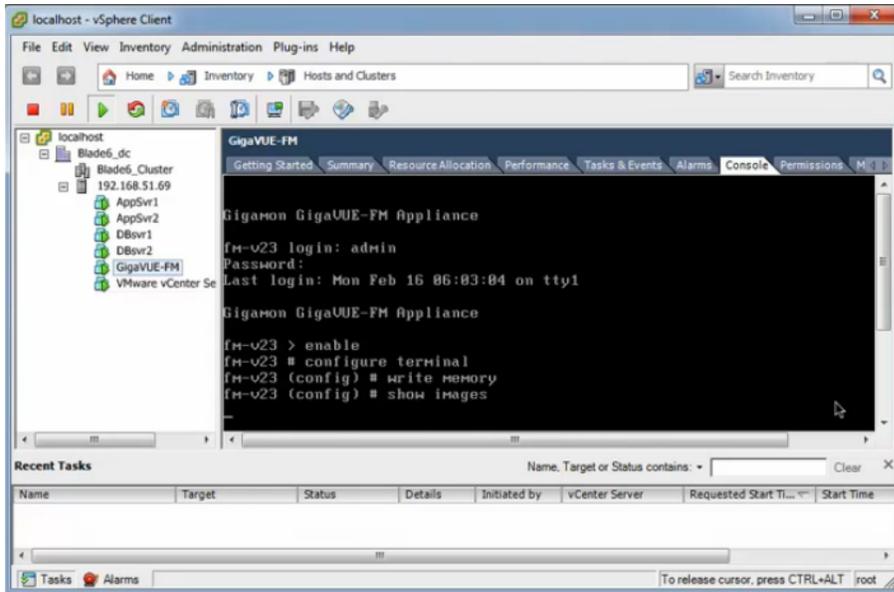
Figure 1: Console Login to vSphere Client

Step 2: Fetch the latest release of GigaVUE-FM

Gigamon provides an FTP site where the new release image file resides. To fetch the latest release, do the following:

1. Locate the image file for the new release. Image files are named using a fma**xxxx**.img format. The **xxxx** indicates the version and build number (for example, **fma3500.img** for the v3.5 release).

2. Copy the image to your file server.

3. Use the **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, TFTP, SCP, or SFTP for the transfer of images.

   a. The following command uses SCP to retrieve the **fma3500** image from the image server with the IP address of 10.115.0.100 using login and password.

   ```
   (config) # image fetch scp://user:password@10.115.0.100/fma3500.img
   ```

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

   ```
   (config) # image fetch ftp://user:password@10.115.0.100/fma3500.img
   ```

   c. The following command uses TFTP to retrieve the same image without using a password but using a DNS server instead of an IP address for the download server.

```
(config) # image fetch tftp://myserver.gigamon.com/tftpboot/fma3500.img
```

Ensure that you specify the base directory when using TFTP

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:

```
(config) # image install fma3400.img
```

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.

```
(config) # image boot next
```

Step 5: Reboot

The following command shuts down the current instance of GigaVUE-FM and reloads. If Step 4 is performed, upon reboot, the new image is used.

```
(config) # reload
```

Step 6: Upgrade GigaVUE-VM

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 for VMware Configuration Guide.*

CLI Summary of the Upgrade Path

The following summarizes the CLI commands used to upgrade an image after logging in from the console:

```
> en
# config t
(config) # write memory
(config) # show images
(config) # image delete fma3400.img
(config) # image fetch tftp://192.158.51.41/fma3500.img
(config) # image install fma3500.img
```

```
(config) # image boot next
(config) # reload
```

Upgrade from GigaVUE-FM 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.

> **NOTE:**
>
> - 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

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 either SCP or TFTP file protocols.

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 customer portal and download the software. To reach the customer portal, go to https://gigamoncp.force.com/gigamoncp/.

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. In GigaVUE-FM, click ⚙ on the top navigation bar.

   b. Select **System** on the left navigation panel and go to **Images > External Servers**. The External Servers page displays as shown in Figure 2: Adding Image Servers.
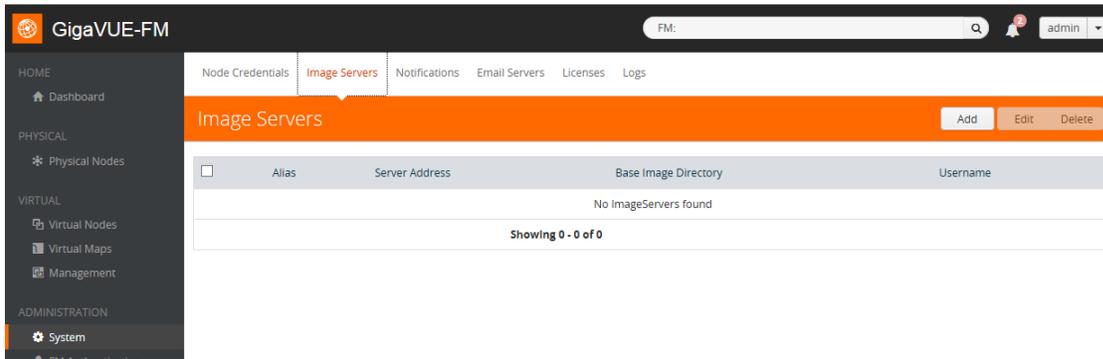
Figure 2: Adding Image Servers

   c. Click **Add**. The Add External Server page displays as shown in Figure 3: Add External Server
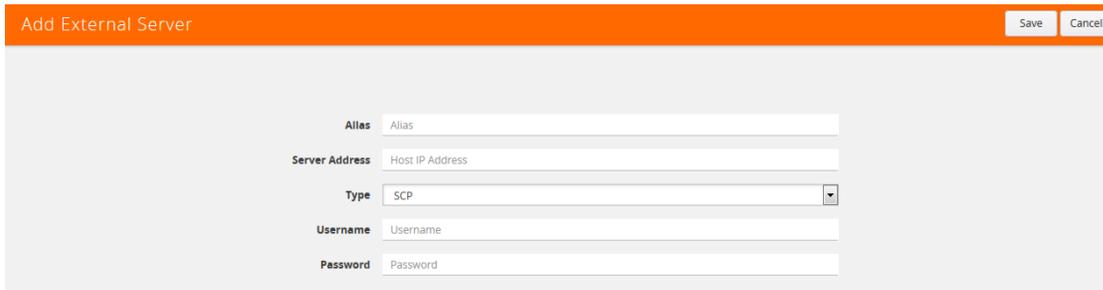
Figure 3: Add External Server

   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 or TFTP.
- The user name and password if you selected SCP. They are not needed for TFTP.

   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 FM Image Upgrade page shown in Figure 4: FM Image Upgrade Page.

Figure 4: FM Image Upgrade Page

To monitor the progress and status of the upgrade, click ⚙️ "GigaVUE-OS and GigaVUE-FM Administration Guide".

3. On the 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-VMs.

   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 for VMware Configuration Guide*.

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 instead of an external 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 use the GigaVUE-FM internal storage to store the GigaVUE-FM image, and point to it as if it were an external server as follows :

1. Add the GigaVUE-FM 5.7 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, do the following:

1. Download the images from the Gigamon website and place them where they can be available for uploading to GigaVUE-FM.

   To obtain software images, register on the customer portal and download the software. To reach the customer portal, go to https://gigamoncp.force.com/gigamoncp/.

2. Upload the images file to GigaVUE-FM.

   a. Click ⚙ on the top navigation bar. In the left navigation panel, go 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.
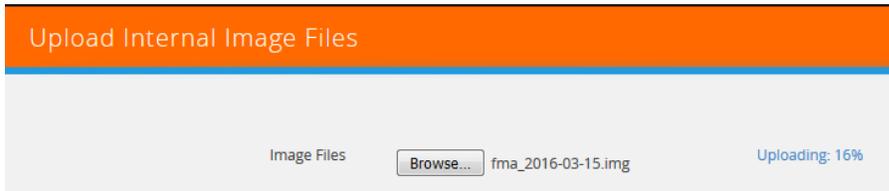
After the upload completes, you can see the GigaVUE-FM image to use for the upgrade on the Internal Images Files page.

3. Click the **Admin** drop-down list on the top right of the window and select **Upgrade** as shown in Figure 5: Selecting Upgrade.
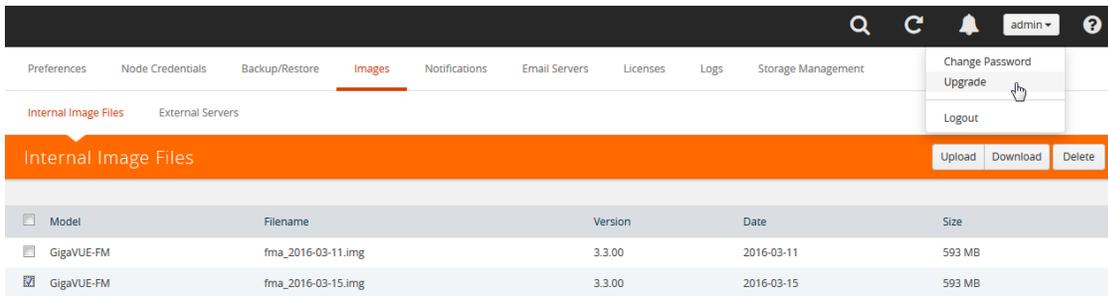
Figure 5: Selecting Upgrade

4. On the FM Image Upgrade page, click in the **Image Server** field and select **Internal Image Server**.
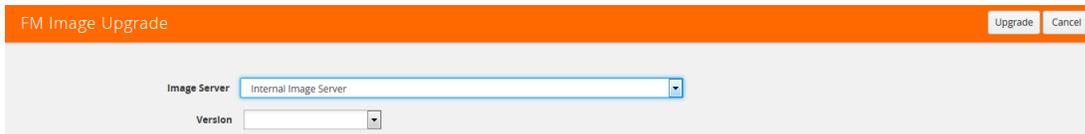
5. From the **Version** drop-down list, select the version to which you are upgrading.

> **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**.

    To monitor the progress and status of the upgrade, click ⚙ on the top navigation bar and select **Events** on the left navigation panel. Also, email notifications are sent if email notifications have been configured.Upgrade any deployed GigaVUE-VMs.

    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-FM, refer to the *"Bulk Upgrading GigaVUE-VM Nodes"* section in the *GigaVUE Cloud Suite for VMware Configuration Guide*.

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

How to Use the Snapshot Feature

This procedure is only valid for upgrading from GigaVUE-FM v3.0 and above. For upgrades from pre-3.0 releases, review the GigaVUE-FM v3.0 User's Guide and upgrade to release GigaVUE-FM v3.1. Then follow the steps below to upgrade to the current release version of GigaVUE-FM.

> **NOTE:** You cannot directly upgrade from a pre-3.3 releases to the current release. You can only upgrade from GigaVUE-FM v3.3 or v3.4 release.

1. Prior to upgrading, ensure that the available **memory size is at least 8GB** prior to upgrading to the new GigaVUE-FM release. If the available memory size is less than 8GB, it will cause out of memory issues. Also, at least 2 vCPU are required.

2. When upgrading from v3.1, it's a good idea to use the vSphere client's **Snapshot** feature to record the current state of the GigaVUE-FM virtual machine. Steps to use **Snapshot** feature are as follows:

   a. Log into the vSphere client and navigate to the Datacenter or Cluster level where the GigaVUE-FM installation is located.

   b. Right-click the GigaVUE-FM entry in the vSphere client and select the **Take Snapshot** option.
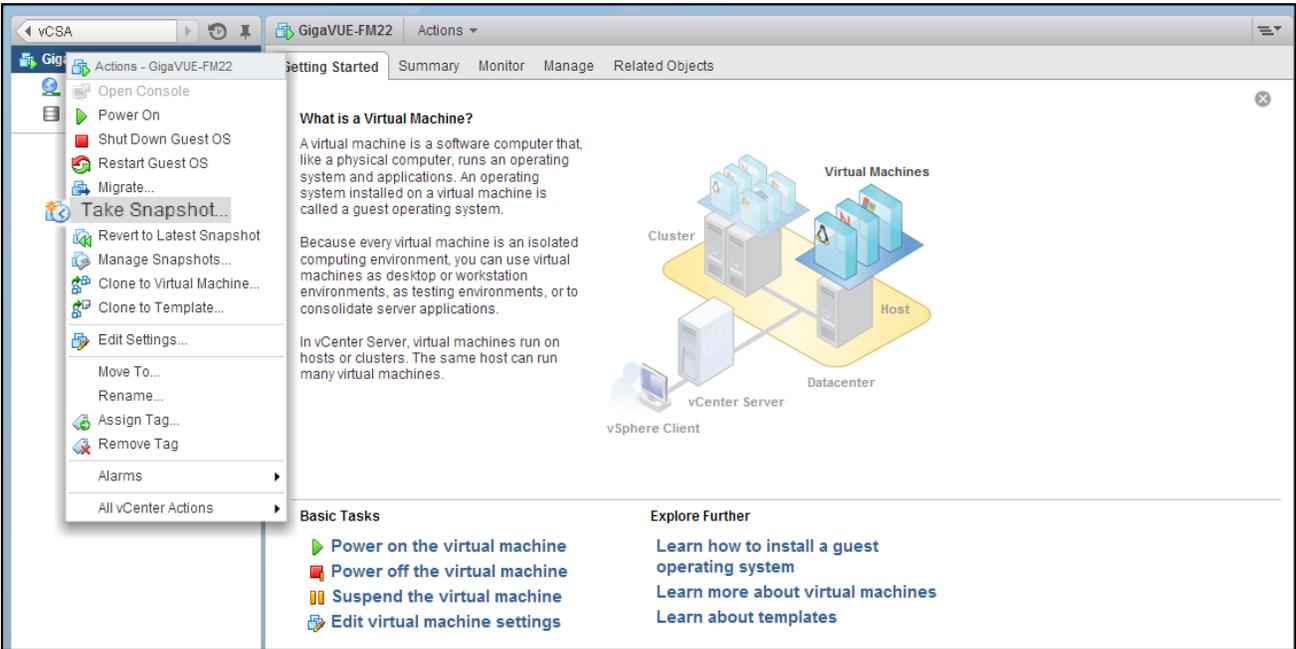
Figure 6: "Take Snapshot" Command to Preserve Current Settings Prior to Upgrade

c. Follow the system prompts to record a snapshot of GigaVUE-FM's current state.
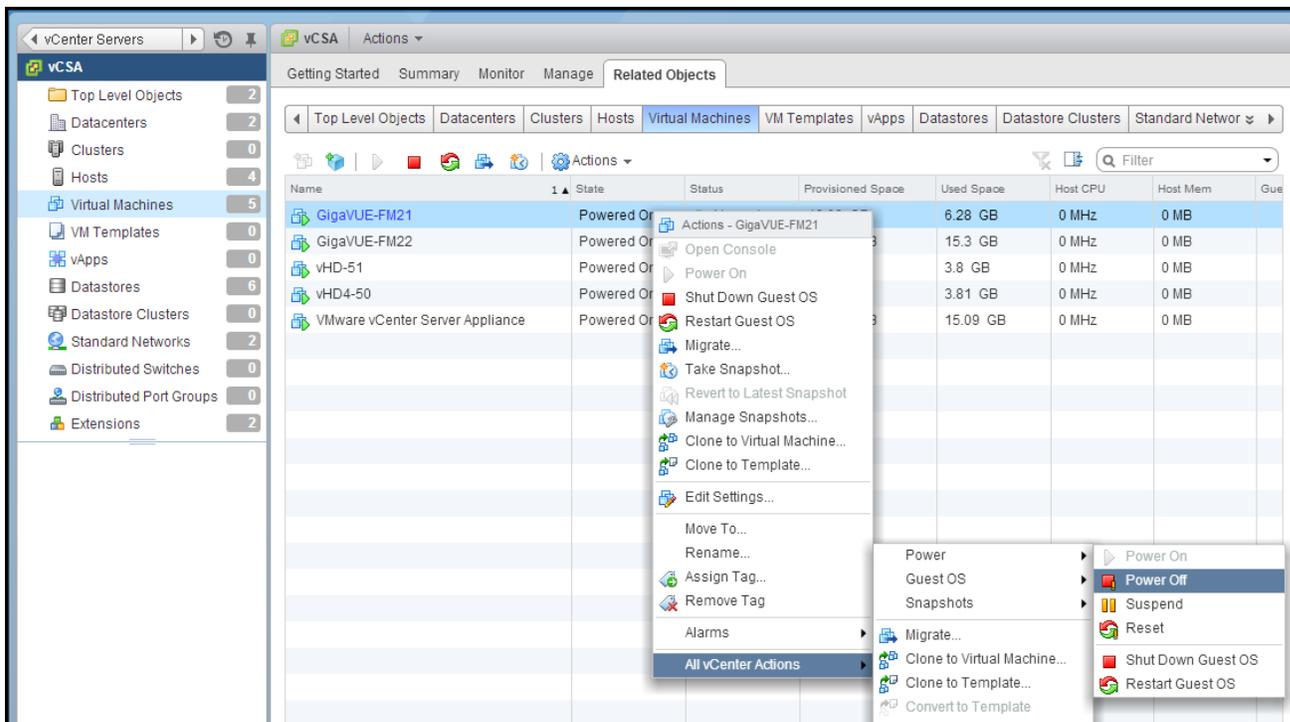
Figure 7: Power Off Command

Related Commands

This section describes the related commands for GigaVUE-FM.

fmctl

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

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

fmctl

    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

    jump-start

    logging [<fqdn>[:<port>]] [facility <facility>] [priority <priority>] [udp|tcp]

    no logging <fqdn>[:<port>]

    reset factory halt

    {get|show} interface [{mgmt|management}]

    set interface {mgmt|management} <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 ntp {disable|[enable] <server1>[,<server2>[,...]}

    set hostname <hostname>

    set domain <domain>

    set fqdn <hostname> <domain>

    set/get/show searchdomains [<domain1>[,<domain2>[,...]]]

    set/get/show nameservers [<dns1>[,<dns2>[,...]]]

    --interface <interface name>

    show backup [<absolute pathname of backup file>]

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:
	
	    fmctl configuration backup <absolute path name of backup file>
	
	Use the following command to restore the system configurations from the backup:
	
	    fmctl configuration restore <absolute path name of backup file>

image fetch <download URI> [<filename>]	Retrieves a saved configuration file from a remote host. Use HTTP(S), FTP, TFTP, 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 configuration file named myconfig from the FTP server at 192.168.1.10 using the **robh** account with the **xray** password:
	
	    fmctl image fetch ftp://robh:xray@192.168.1.10/myconfig
	
	You can also use the **<filename>** argument to give the retrieved file a new name on the GigaVUE H Series node. For example, the following command retrieves **myconfig** and names it **newconfig** on the node:
	
	    fmctl image fetch scp://bbochy:catch1@192.168.1.75/myconfig newconfig
	
	> **NOTE:** You cannot retrieve a file with the same name as the currently active configuration file.

image list	Provides the list of image file names available in GigaVUE-FM. For example: **fmctl 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: **fmctl 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:

Argument	Description
	fmctl 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 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: **fmctl image boot next** Use the folloaing command to boot the image file on the specified partition: **fmctl image boot location 1** NOTE: GigaVUE-FM reboots immediately.
image delete [force] <filename>	Deletes the named image file. For example: **fmctl 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: **fmctl image rename myimage newimage**
image show	Displays the last boot partition. For example: **fmctl image show**
jump-start	Runs the configuration wizard for the initial setup of GigaVUE-FM. Refer to Perform Initial Configuration.
logging [<fqdn>[:<port>]] [facility <facility>] [priority <priority>] [udp|tcp]	Configures the logging server. For example: **fmctl logging 1.2.3.4:9514 facility * priority debug tcp**
no logging <fqdn>[:<port>]	Removes the logging server configuration. For example: **fmctl no logging 1.2.3.4:9514**
reset factory halt	Resets the GigaVUE-FM instance to the default configuration and shuts down the system. For example:

Argument	Description
	fmctl reset factory halt
{get|show} interface [{mgmt|management}]	Displays the management interface configured for the GigaVUE-FMinstance. For example: **fmctl 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: **fmctl set interface management eth1** NOTE: You cannot use the **--interface** syntax with the **set interface management** argument.
set mapping <fqdn> <IP address>	Maps the FQDN with the IP address of GigaVUE-FM. For example: **fmctl set mapping fm 10.10.10.1** Use the following command to remove the mapping: **fmctl set mapping fm**
{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: **fmctl get {ip|ntp|hostname|domain|fqdn}** **fmctl show {ip|ntp|hostname|domain|fqdn}**
set [ip|ip6] dhcp	Configures the management interface to use DHCP. For example: **fmctl set ip dhcp**
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: **fmctl set ip static 10.115.46.72/21 10.115.40.1 10.10.1.20**
set ntp {disable|[enable] <server1> [,<server2>[,...]}	Use to enable or disable NTP for synchronization of the system's clock. For example, the following command disables NTP: **fmctl set ntp disable** You choose to enable NTP and add NTP servers. For example, the following command enables NTP and adds

Argument	Description
	a NTP server: **fmctl set ntp enable 192.168.1.10**
set hostname <hostname>	Configures the hostname. For example: **fmctl set hostname myfm** NOTE: Ensure that you log out and re-login to the GigaVUE-FM to view the changes.
set domain <domain>	Configures the domain for GigaVUE-FM. For example: **fmctl set domain gigamon.com**
set fqdn <hostname> <domain>	Configures the Fully Qualified Domain Name (FQDN) for the current GigaVUE-FM. **fmctl set fqdn myfm gigamon.com**
set/get/show searchdomains [<domain1>[,<domain2>[,...]]]	Displays a list of domains for the current GigaVUE-FM For example: **fmctl set searchdomains** **fmctl get | show searchdomains**
set/get/show nameservers [<dns1>[,<dns2>[,...]]]	Displays a list of name servers for the current GigaVUE-FM For example: **fmctl set nameservers** **fmctl get | show nameservers**
--interface <interface name>	Allows various configurations that can be set for the management interface. For example, use the following command to ensure that eth1 management interface uses DHCP: **fmctl --interface eth1 ip dhcp**
show backup	Displays the configurations that were backed up. For example: **fmctl show backup <absolute path name of backup file>**

Additional Sources of Information

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

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

Documentation

The following table provides a list of the additional documentation provided for GigaVUE H Series and TA Series nodes. "*" indicates new documents in this release. "**" indicates documents that are renamed in this release.

> **NOTE**: Release Notes are not included in the online documentation. Registered Customers can download the Release Notes from the Software & Docs page on to My Gigamon. Refer to How to Download PDFs from My Gigamon.

> **TIP**: If you keep all PDFs for a particular 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.

Table 1: Documentation Suite for Gigamon Products

Summary	Document
Hardware Installation Guides	
• how to unpack, assemble, rack-mount, connect, and initially configure the respective GigaVUE devices • reference information and specifications for the respective GigaVUE devices	****G-TAP A Series 2 Installation Guide**
	GigaVUE-HC1 Hardware Installation Guide
	GigaVUE-HC2 Hardware Installation Guide

Summary	Document
	GigaVUE-HC3 Hardware Installation Guide
	GigaVUE TA Series Hardware Installation Guide
Software Installation and Upgrade Guides	
• how to install GigaVUE-FM on VMware ESXi, MS Hyper-V, and KVM • how to migrate GigaVUE-FM on VMware ESXi, Hardware Appliance, and AWS	****GigaVUE-FM Installation, Migration, and Upgrade Guide**
• how to upgrade the embedded GigaVUE-OS on GigaVUE H Series and GigaVUE TA Series nodes	**GigaVUE-OS Upgrade Guide**
Administration Guide	
• how to administer the GigaVUE-OS and GigaVUE-FM software	**GigaVUE-OS and GigaVUE-FM Administration Guide**
Configuration and Monitoring Guides	
• how to install, deploy, and operate GigaVUE-FM • how to configure GigaSMART operations	**GigaVUE-FM User's Guide**
• how to deploy the GigaVUE Cloud Suite solution in any cloud platform	**GigaVUE Cloud Suite for AnyCloud Configuration Guide**
• how to configure the GigaVUE Cloud Suite components and set up traffic monitoring sessions for the respective cloud platform	**GigaVUE Cloud Suite for AWS Configuration Guide**
	GigaVUE Cloud Suite for AWS QuickStart Guide
	*GigaVUE Cloud Suite for AWS SecretRegions Configuration Guide
	GigaVUE Cloud Suite for Azure Configuration Guide
	GigaVUE Cloud Suite for Kubernetes Configuration Guide
	*GigaVUE Cloud Suite for Nutanix Configuration Guide
	GigaVUE Cloud Suite for OpenStack Configuration Guide
	GigaVUE Cloud Suite for VMware Configuration Guide
Reference Guides	
• library of GigaVUE-OS CLI (Command Line Interface) commands used to configure and operate GigaVUE H Series and TA Series devices	**GigaVUE-OS-CLI Reference Guide**

Summary	Document
• guidelines for the different types of cables used to connect Gigamon devices	**GigaVUE-OS Cabling Quick Reference Guide**
• compatibility information and interoperability requirements for Gigamon devices	**GigaVUE-OS Compatibility and Interoperability Matrix**
• samples uses of the GigaVUE-FM Application Program Interfaces (APIs)	**GigaVUE-FM REST API Reference in GigaVUE-FM User's Guide**
Release Notes	
• new features, resolved issues, and known issues in this release • important notes regarding installing and upgrading to this release	**GigaVUE-OS, GigaVUE-FM, GigaVUE-VM, and GigaVUE Cloud Suite Release Notes**
In-Product Help	
• how to install, deploy, and operate GigaVUE-FM. Provided from the GigaVUE-FM interface.	**GigaVUE-FM Online Help**
• the web-based GUI for the GigaVUE-OS. Provided from the GigaVUE-OS H-VUE interface.	**GigaVUE-OS H-VUE Online Help**

> **NOTE:** Registered customers can log in to My Gigamon to download documentation for specific releases under Software & Documentation Downloads. Refer to How to Download PDFs from My Gigamon.

How to Download PDFs from My Gigamon

To download release-specific PDFs:

1. Log in to My Gigamon
2. Click on the **Software & Documentation** link.
3. Use the **Product** and **Release** filters to find documentation for the current release. For example, select Product: "GigaVUE-FM" and Release: "5.7," enter "pdf" in the search box, and then click **GO** to view all PDF documentation for GigaVUE-FM 5.7.xx.

Documentation Feedback

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

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

Contact Technical Support

See https://www.gigamon.com/support-and-services/contact-support for Technical Support hours and contact information. You can also email Technical Support at support@gigamon.com.

Contact Sales

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

Telephone: +1.408.831.4025

Sales: inside.sales@gigamon.com

Partners: www.gigamon.com/partners.html

Premium Support

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

The Gigamon Community

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

Visit the Gigamon Community site to:

- Find knowledge base articles and documentation
- Ask and answer questions and learn best practices from other members.
- Join special-interest groups to have focused collaboration around a technology, use-case, vertical market or beta release
- Take online learning lessons and tutorials to broaden your knowledge of Gigamon products.

- Submit and vote on feature enhancements and share product feedback. (Customers only)

- Open support tickets (Customers only)

- Download the latest product updates and documentation (Customers only)

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

Register today at community.gigamon.com

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