GigaVUE-OS Upgrade Guide

GigaVUE-OS

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Gigamon Inc.
3300 Olcott Street
Santa Clara, CA 95054
408.831.4000

Change Notes

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

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GigaVUE-OS Upgrade

This guide describes how to upgrade GigaVUE-OS H Series and GigaVUE-OS TA Series nodes to the GigaVUE-OS 6.6.xx release. Refer to the following sections for details:

- Preparing for Your GigaVUE-OS Upgrade
- Upgrading GigaVUE-OS Nodes

Preparing for Your GigaVUE-OS Upgrade

This chapter describes how to upgrade GigaVUE-OS H Series and GigaVUE-OS TA Series nodes to the GigaVUE-OS 6.6.xx release. Refer to the following sections for details:

- Before You Begin – Required Items
- Supported Upgrade Path—Standalone Nodes
- Upgrade Summary – Clustered Nodes
- Bootloader Installation
- Gateway Ports Converted to Tool Ports

Before You Begin – Required Items

Use this upgrade guide to upgrade to software version 6.6.xx. This guide is for nodes running the previous General Availability (GA) releases or the previous Long Term Support (LTS) release, which is 6.1.01.04.

Obtaining Software Images

To obtain software images, register on the Gigamon Community portal and download the software. You will need to provide the serial number of any one of the nodes to register and download the software. Use the **show chassis** command to retrieve a node's serial number.

To reach the Gigamon Community portal, use the following link:

https://community.gigamon.com/gigamoncp/

For assistance, contact Technical Support at the following email address:

support@gigamon.com

Separate Software Images for Different Nodes

The software image upgrade procedure is slightly different depending on the node you are upgrading. Relevant files and documentation are available on the Gigamon Customer Portal. Note the filenames in Table 2: Required Items for System Upgrade.

Table 1: Software Image Filenames Unique to the Node

Control Card or Node	Required Items	Description
GigaVUE-HC1-Plus	hc1p_6.6.00.img	Binary image file containing the updated software for the GigaVUE-HC1-Plus. The **xx** indicates the exact build number.
GigaVUE-HC1	hc1_6.6.00.img	Binary image file containing the updated software for the GigaVUE-HC1. The **xx** indicates the exact build number.
GigaVUE-HC2	hc2_6.6.00.img	Binary image file containing the updated software for the GigaVUE-HC2. The **xx** indicates the exact build number.
GigaVUE-HC3	hc3_6.6.00.img	Binary image file containing the updated software for the GigaVUE-HC3. The **xx** indicates the exact build number.
GigaVUE-TA25	ta25_6.6.00.img	Binary image file containing the updated software for the GigaVUE-TA25. The **xx** indicates the exact build number.
GigaVUE-OS-TA100	ta100_6.6.00.img	Binary image file containing the updated software for the GigaVUE-OS-TA100. The **xx** indicates the exact build number.
GigaVUE-OS-TA200	ta200_6.6.00.img	Binary image file containing the updated software for the GigaVUE-OS-TA200. The **xx** indicates the exact build number.
GigaVUE-TA400	ta400_6.6.00.img	Binary image file containing the updated software for the GigaVUE-TA400. The **xx** indicates the exact build number.
G-TAP A Series 2	gtapa_6.6.00.img	Binary image file containing the updated software for the G-TAP A Series 2. The **xx** indicates the exact build number.

Required Items for Upgrades

The following table summarizes the items you will need to perform the upgrade to GigaVUE-OS 6.6.xx:

Table 2: Required Items for System Upgrade

Node Type/ Version	Protocols	Description
All	FTP, TFTP, SFTP, SCP, HTTP, HTTPS	You will need to fetch the GigaVUE-OS nodes' software packages from a file server using one of the supported protocols. The GigaVUE-OS nodes will need the file server's IP address so that it can connect to the server and download the image. **NOTE:** There are freeware file servers available on the Internet for a variety of operating systems. A Web search will provide links to many implementations. You can also upload a new software build directly from your PC using GigaVUE-FM.

Supported Upgrade Path—Standalone Nodes

Use the GigaVUE-OS Upgrade Summary table to determine the path to upgrade your GigaVUE-OS H Series and GigaVUE-OS TA Series nodes to GigaVUE-OS6.6.xx.

UPGRADE NOTES:

- All upgrades start and end by saving the node's configuration with the **write memory** command.
- Refer to Upgrade Summary – Clustered Nodes for considerations when upgrading nodes in a cluster.
- It is recommended that you enable the syslogs with the minimum severity level set to 'info' to help with troubleshooting upgrade issues, if any. After successful upgrade, you can revert to the desired severity level for the syslogs.
- Upgrading to a fresh image install will reboot the device twice. This behavior is noted in GigaVUE-HC1,GigaVUE-HC3,GigaVUE-TA100 and GigaVUE-TA200.

IMPORTANT— BEFORE ANY UPGRADE, SAVE YOUR CURRENT CONFIGURATION. Refer to "Device Configuration Backup" in the *GigaVUE Administration Guide*for guidance.

GigaVUE-OS Upgrade Summary

To upgrade GigaVUE TA Series, GigaVUE-HC1, GigaVUE-HC2, and GigaVUE-HC3 nodes to a 6.6.xx release:

1. Use the **show images** command to display the existing image file names. For the maximum number of images allowed, refer to Check Number of Images
2. Delete the available image files using the **image delete <filename.img>** command, to create space for the new images.
3. Fetch and install the 6.6.xx software image (based on the node information) and bootloader, set next boot, and reload.

IMPORTANT—Before upgrading to 6.6.xx, verify the recommended upgrade path below. For the latest Long Term Support (LTS) release information, refer to the Gigamon Software Life Cycle FAQ article on the Gigamon Community.

Table 3: GigaVUE-OS Upgrade Summary

To upgrade to 6.6.xx from...	Use the recommended upgrade path for the device...		
	GigaVUE-HC3, GigaVUE TA Series, and G-TAP A Series 2	GigaVUE-HC1	GigaVUE-HC1-Plus
v6.5.xx	**6.5.xx**▶ 6.6.xx	**6.5.xx**▶ 6.6.xx	**6.5.xx**▶ 6.6.xx

To upgrade to 6.6.xx from…	Use the recommended upgrade path for the device…		
	GigaVUE-HC3, GigaVUE TA Series, and G-TAP A Series 2	GigaVUE-HC1	GigaVUE-HC1-Plus
v6.4.xx	6.4.xx▶ 6.5.xx▶ 6.6.xx	6.4.xx▶ 6.5.xx▶ 6.6.xx	6.4.xx▶ 6.5.xx▶ 6.6.xx
v6.3.xx	6.3.xx▶ 6.5.xx▶ 6.6.xx	6.3.xx▶ 6.5.xx▶ 6.6.xx	6.3.xx▶6.5.xx▶ 6.6.xx
v6.2.00.04	6.2.00.04▶ 6.5.xx▶ 6.6.xx	6.2.00.04▶ 6.5.xx▶ 6.6.xx	6.2.00.04▶ 6.5.xx▶ 6.6.xx
v6.1.xx	6.1.xx▶ 6.5.xx▶ 6.6.xx	6.1.xx▶ 6.5.xx▶ 6.6.xx	6.1.xx▶ 6.5.xx▶ 6.6.xx
v6.0.xx	6.0.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	6.0.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	6.0.xx▶ 6.1.xx▶ ▶ 6.5.xx6.6.xx
v5.16.xx	5.16.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	5.16.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	NA
v5.15.xx	5.15.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	5.15.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	NA
v5.14.xx	5.14.xx ▶ 5.15.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	5.14.xx ▶ 5.15.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	NA
v5.13.xx	5.13.xx ▶ 5.15.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	5.13.xx ▶ 5.15.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	NA
v5.12.xx	5.12.xx▶ 5.13.xx or 5.15.xx▶6.1.xx▶ 6.5.xx▶ 6.6.xx	5.12.xx▶ 5.13.xx or 5.15.xx▶6.1.xx▶ 6.5.xx▶ 6.6.xx	NA
v5.11.xx	5.11.xx▶ 5.13.xx or 5.15.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	5.11.xx ▶ 5.13.xx or 5.15.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	NA
v5.10.xx	5.10.xx*** ▶ 5.13.xx or 5.15.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	5.10.xx▶ 5.13.xx or 5.15.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	NA
v5.9.xx	5.9.xx ▶ 5.10.xx*** ▶ 5.13.xx or 5.15.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	5.9.xx▶ 5.9.01.16** ▶ 5.10.xx ▶ 5.13.xx or 5.15.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	NA
v5.8.xx	5.8.xx ▶ 5.10.xx*** ▶ 5.13.xx or 5.15.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	5.8.xx ▶ 5.9.01.16** ▶ 5.10.xx ▶ 5.13.xx or 5.15.xx▶ 6.1.xx▶ 6.5.xx▶ 6.6.xx	NA

To upgrade to 6.6.xx from...	Use the recommended upgrade path for the device...		
	GigaVUE-HC3, GigaVUE TA Series, and G-TAP A Series 2	GigaVUE-HC1	GigaVUE-HC1-Plus
v5.7.xx	**5.7.xx** ▶ 5.10.xx*** ▶ **5.13.xx or 5.15.xx▶ 6.1.xx▶ 6.5.xx▶** 6.6.xx	**5.7.xx** ▶ 5.9.01.16** ▶ 5.10.xx ▶ **5.13.xx or 5.15.xx▶ 6.1.xx▶ 6.5.xx ▶** 6.6.xx	NA
v5.6.xx	**5.6.xx** ▶ 5.7.xx▶ 5.10.xx*** ▶ **5.13.xx or 5.15.xx▶ 6.1.xx▶ 6.5.xx▶** 6.6.xx	**5.6.xx** ▶ 5.7.xx ▶ 5.9.01.16** ▶ 5.10.xx ▶ **5.13.xx or 5.15.xx▶ 6.1.xx▶ 6.5.xx▶** 6.6.xx	NA
	NOTE: For older versions of GigaVUE-OS, refer to GigaVUE-OS Legacy Upgrades.		

VERSION NOTES—The upgrade paths are mostly the same across platforms, with one noted exception:

***6.2.00.04**: Software version 6.2.xx is replaced with 6.2.00.04.

****5.9.01.16 on GigaVUE-HC1 and GigaVUE-HC2**: When upgrading GigaVUE-HC1 and GigaVUE-HC2 to GigaVUE-OS 5.10.xx, add the 5.9.01.16 hot patch to increase the allowed image size to support the upgrade.

After 5.10.xx, the upgrade paths are the same across platforms.

*****5.10.04 on GigaVUE-HC3**: When upgrading GigaVUE-HC3 to GigaVUE-OS 5.13.xx or 5.15.xx you must upgrade to 5.10.04 to increase the allowed image size to support the upgrade.

NOTE: If you are installing the SMT-HC1-S module in a GigaVUE-HC1 Chassis, use the recommended upgrade path specific to this module. Refer to SMT-HC1-S (Gen 3 GigaSMART Card), for details.

GigaVUE-OS Legacy Upgrades

To upgrade GigaVUE TA Series, GigaVUE-HC1, GigaVUE-HC2, and GigaVUE-HC3 from older versions of GigaVUE-OS, prior to v5.6.xx, use the paths specified for the device in Table 3: GigaVUE-OS Upgrade Summary .

Table 4: GigaVUE-OS Legacy Upgrades

To upgrade to 6.6.xx from…	**Use the recommended upgrade path for the device…**		
	GigaVUE-HC3, GigaVUE-TA Series, and G-TAP A Series 2	**GigaVUE-HC1**	**GigaVUE-HC2**
v5.5.xx	**5.5.xx**▶ 5.7.xx ▶ 5.10.xx***▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx	**5.5.xx**▶ 5.7.xx ▶ 5.9.01.16** ▶ 5.10.xx ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx	**5.5.xx**▶ 5.6.xx* ▶ 5.7.xx ▶ 5.9.01.16** ▶ 5.10.xx ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx
v5.4.xx	**5.4.xx**▶ 5.7.xx ▶ 5.10.xx*** ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx	**5.4.xx** ▶ 5.7.xx ▶ 5.9.01.16** ▶ 5.10.xx ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx	**5.4.xx**▶ 5.6.xx* ▶ 5.7.xx ▶ 5.9.01.16** ▶ 5.10.xx ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx
v5.3.xx	**5.3.xx**▶ 5.4.xx ▶ 5.7.xx ▶ 5.10.xx** ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx	**5.3.xx**▶ 5.4.xx ▶ 5.7.xx ▶ 5.9.01.16** ▶ 5.10.xx ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx	**5.3.xx**▶ 5.4.xx ▶ 5.6.xx* ▶ 5.7.xx ▶ 5.9.01.16** ▶ 5.10.xx ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx
v5.2.xx	**5.2.xx**▶ 5.3.xx ▶ 5.4.xx ▶ 5.7.xx ▶ 5.10.xx*** ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx	**5.2.xx**▶ 5.3.xx ▶ 5.4.xx ▶ 5.7.xx ▶ 5.9.01.16** ▶ 5.10.xx ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶6.6.xx	**5.2.xx**▶ 5.3.xx ▶ 5.4.xx ▶ 5.6.xx* ▶ 5.7.xx ▶ 5.9.01.16** ▶ 5.10.xx ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶6.6.xx
v5.1.xx	**5.1.xx**▶ 5.4.xx ▶ 5.7.xx ▶ 5.10.xx*** ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx	**5.1.xx**▶ 5.4.xx ▶ 5.7.xx ▶ 5.9.01.16** ▶ 5.10.xx ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx	**5.1.xx**▶ 5.4.xx ▶ 5.6.xx* ▶ 5.7.xx ▶ 5.9.01.16** ▶ 5.10.xx ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx
pre-5.1	**pre-5.1**▶ 5.1.xx ▶ 5.4.xx ▶ 5.7.xx ▶ 5.10.xx*** ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx	**pre-5.1**▶ 5.1.xx ▶ 5.4.xx ▶ 5.7.xx ▶ 5.9.01.16** ▶ 5.10.xx ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx	**pre-5.1**▶ 5.1.xx ▶ 5.4.xx ▶ 5.6.xx* ▶ 5.7.xx ▶ 5.9.01.16** ▶ 5.10.xx ▶ **5.13.xx or 5.15.xx**▶ **6.1.xx**▶ 6.6.xx

Version Notes—The upgrade paths are mostly the same across platforms, with a few noted exceptions:

***6.2.00.04**: Software version 6.2.xx is replaced with 6.2.00.04.

***5.6 on GigaVUE-HC2**: GigaVUE-HC2 requires upgrading to 5.6.xx prior to upgrading to 5.7.xx due to an increase in the memory requirements.

****5.9.01.16 on GigaVUE-HC1 and GigaVUE-HC2**: When upgrading GigaVUE-HC1 and GigaVUE-HC2 to GigaVUE-OS 5.10.xx, add the 5.9.01.16 hot patch to increase the allowed image size to support the upgrade.

*****5.10.03 on GigaVUE-HC3**: When upgrading GigaVUE-HC3 to GigaVUE-OS 5.13.xx or 5.15.xx, upgrade to 5.10.04 to increase the allowed image size to support the upgrade.

Upgrade Summary – Clustered Nodes

This section summarizes the upgrade procedure for nodes operating in a cluster.

The upgrade procedure for an individual node in a cluster is nearly identical to that for a standalone node. The only difference is that instead of reloading individual nodes as you upgrade them, you perform a single **cluster reload** after the leader has completed the image upgrade. For instructions about how to upgrade individual nodes, refer to Upgrading GigaVUE-OS Nodes Using GigaVUE-OS CLI.

Note that a GigaVUE-OS TA Series can never be a leader in a cluster configuration. However since the GigaVUE-OS versions are shared amongst the GigaVUE-OS nodes, it is important to upgrade all nodes per instructions prior to using the **cluster reload** command.

Licensing for Clustered Nodes in GigaVUE-OS

The license required for the clustering feature is Advanced Features License (AD_Features) in the GigaVUE TA Series devices.

- When upgrading to GigaVUE-OS v6.6.xx, if the node already has a Clustering License, it will automatically be updated to Advanced Features License (AD_Features) upon upgrade.
- If a license has not been generated yet, or if an earlier version of the license has been generated but not yet installed, then you need to generate (or regenerate) a license from the Gigamon Community portal after upgrading to 6.6.xx. Install and activate the new license.

> **NOTE:** The license requirement for clustering changed in GigaVUE-OS 5.4.00. If you are upgrading to 5.4.00 from a previous release, the name changed from “Clustering License” to “Advanced Features License”. However, the instructions remain the same.

Upgrade Sequence

Gigamon recommends the following upgrade sequence for clusters:

1. Use the **write memory** command on each node in the cluster to preserve settings that are stored locally rather than globally (for example, AAA and hostname settings).
2. Use the **image delete <filename.img>** command to delete all the available image files.

   > **NOTE:** Use the **show images** command to verify if there are any images existing on the node.

3. On the individual nodes including the leader, fetch and install 6.6.xx software image and bootloader, and set the next boot.

   > **NOTE:** Do not reload the nodes as you upgrade them.

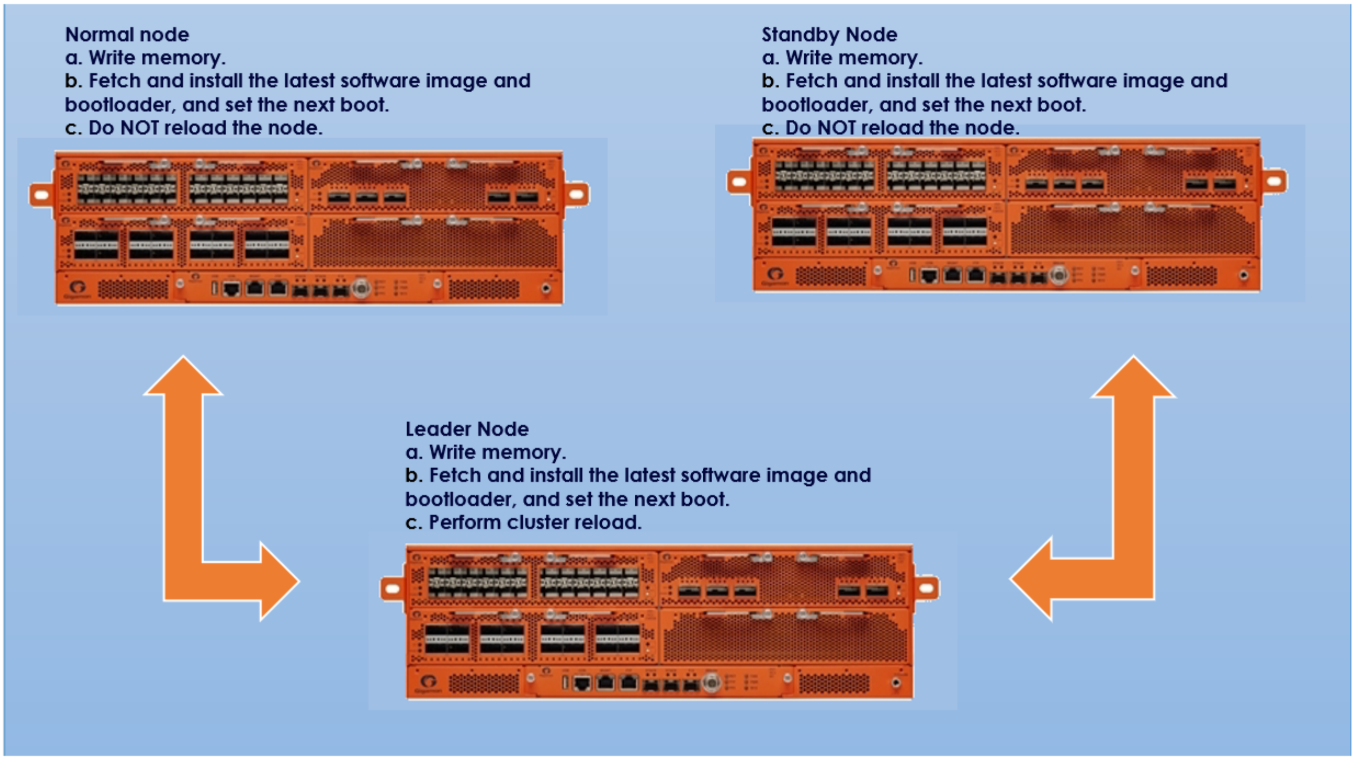
4. Use the **cluster reload** command from the leader to reestablish the cluster settings.

> **NOTE:** The time it takes for the cluster to complete the cluster reload and re-establish packet distribution will vary depending on the number of nodes in the cluster and the complexity of the packet distribution to restore. An average cluster reload will interrupt traffic for five minutes. However, an eight-node cluster with complex packet distribution in place can take as long as 20 minutes to reload completely.

> **NOTE:** After reloading the cluster, use the **show cluster global brief** command to determine the roles assigned to each node in the cluster.

5. After completing the upgrade, run the **show version** command on each node in the cluster to make sure they are all running a 6.6.xx build. If any node does not show the correct version number, upgrade it individually.

Figure 1Cluster Upgrade Summary summarizes the cluster upgrade sequence.



Normal node
a. Write memory.
b. Fetch and install the latest software image and bootloader, and set the next boot.
c. Do NOT reload the node.

Standby Node
a. Write memory.
b. Fetch and install the latest software image and bootloader, and set the next boot.
c. Do NOT reload the node.

Leader Node
a. Write memory.
b. Fetch and install the latest software image and bootloader, and set the next boot.
c. Perform cluster reload.

Figure 1 *Cluster Upgrade Summary*

Adding a New Node to an Existing Cluster

Before adding a new node to a cluster, make sure that the node is upgraded to the same version as other nodes in the cluster.

> **NOTE:** For a GigaVUE-OS TA Series nodes, ensure that the applicable licenses are activated.

Software Image Filenames for GigaVUE-OS Nodes

Refer to the following sections for more detailed information on Software Image Filename and GigaVUE-OS node type associated with each GigaVUE-OS version:

- Bootloader Code by GigaVUE-OS Release
- Coreboot version by GigaVUE-OS Release
- AMI BIOS version by GigaVUE-OS Release
- Yantra BIOS version by GigaVUE-OS Release
- Portwell BIOS version by GigaVUE-OS Release
- HCT BIOS version by GigaVUE-OS Release

Bootloader Code by GigaVUE-OS Release

The following table summarizes the version of bootloader code associated with each GigaVUE-OS node type and software release. Use the **show version** command to check the currently installed bootloader and software image versions.

SW Version	Node Type	Software Image Filename	Bootloader Filename	Bootloader Version
6.6.00	**GV-HC2**	hc2_6600.img	hc2_5500.bin	2011.06.10
6.5.00	**GV-HC2**	hc2_6500.img	hc2_5500.bin	2011.06.10
6.4.00	**GV-HC2**	hc2_6400.img	hc2_5500.bin	2011.06.10
6.3.00	**GV-HC2**	hc2_6300.img	hc2_5500.bin	2011.06.10
6.2.00.04	**GV-HC2**	hc2_620004.img	hc2_5500.bin	2011.06.10
6.1.01.04	**GV-HC2**	hc2_610104.img	hc2_5500.bin	2011.06.10
	GV-TA10	ta10_610104.img	ta10_5500.bin	2014.01.02
	GV-TA40	ta40_610104.img	ta40_5500.bin	2014.01.01
6.0.00	**GV-HC2**	hc2_6000.img	hc2_5500.bin	2011.06.10
	GV-TA10	ta10_6000.img	ta10_5500.bin	2014.01.02
	GV-TA40	ta40_6000.img	ta40_5500.bin	2014.01.01
5.16.00	**GV-HC2**	hc2_51600.img	hc2_5500.bin	2011.06.10
	GV-TA10	ta10_51600.img	ta10_5500.bin	2014.01.02
	GV-TA40	ta40_51600.img	ta40_5500.bin	2014.01.01

SW Version	Node Type	Software Image Filename	Bootloader Filename	Bootloader Version
5.15.00	**GV-HC2**	hc2_51500.img	hc2_5500.bin	2011.06.10
	GV-TA10	ta10_51500.img	ta10_5500.bin	2014.01.02
	GV-TA40	ta40_51500.img	ta40_5500.bin	2014.01.01
5.14.00	**GV-HC2**	hc2_51400.img	hc2_5500.bin	2011.06.10
	GV-TA10	ta10_51400.img	ta10_5500.bin	2014.01.02
	GV-TA40	ta40_51400.img	ta40_5500.bin	2014.01.01
5.13.00	**GV-HC2**	hc2_51300.img	hc2_5500.bin	2011.06.10
	GV-TA10	ta10_51300.img	ta10_5500.bin	2014.01.02
	GV-TA40	ta40_51300.img	ta40_5500.bin	2014.01.01
5.12.00	**GV-HC2**	hc2_51200.img	hc2_5500.bin	2011.06.10
	GV-TA10	ta10_51200.img	ta10_5500.bin	2014.01.02
	GV-TA40	ta40_51200.img	ta40_5500.bin	2014.01.01
5.11.00	**GV-HC2**	hc2_51100.img	hc2_5500.bin	2011.06.10
	GV-TA10	ta10_51100.img	ta10_5500.bin	2014.01.02
	GV-TA40	ta40_51100.img	ta40_5500.bin	2014.01.01
5.10.01	**GV-HC2**	hc2_51001.img	hc2_5500.bin	2011.06.10
	GV-TA10	ta10_51001.img	ta10_5500.bin	2014.01.02
	GV-TA40	ta40_51001.img	ta40_5500.bin	2014.01.01
5.10.00	**GV-HC2**	hc2_51000.img	hc2_5500.bin	2011.06.10
	GV-TA10	ta10_51000.img	ta10_5500.bin	2014.01.02
	GV-TA40	ta40_51000.img	ta40_5500.bin	2014.01.01
5.9.00	**GV-HC2**	hc2_5900.img	hc2_5500.bin	2011.06.9
	GV-TA10	ta10_5900.img	ta10_5500.bin	2014.01.02
	GV-TA40	ta40_5900.img	ta40_5500.bin	2014.01.01
5.8.00	**GV-HC2**	hc2_5800.img	hc2_5500.bin	2011.06.9
	GV-TA10	ta10_5800.img	ta10_5500.bin	2014.01.02
	GV-TA40	ta40_5800.img	ta40_5500.bin	2014.01.01

SW Version	Node Type	Software Image Filename	Bootloader Filename	Bootloader Version
5.7.00	**GV-HC2**	hc2_5700.img	hc2_5500.bin	2011.06.9
	HCCv2	hdd5700.img	hdd5500.bin	2011.06.22
	GV-TA10	ta10_5700.img	ta10_5500.bin	2014.01.02
	GV-TA40	ta40_5700.img	ta40_5500.bin	2014.01.01
5.6.00	**GV-HC2**	hc2_5600.img	hc2_5500.bin	2011.06.9
	HCCv2	hdd5600.img	hdd5500.bin	2011.06.22
	GV-TA10	ta10_5600.img	ta10_5500.bin	2014.01.02
	GV-TA40	ta40_5600.img	ta40_5500.bin	2014.01.01
5.5.00	**GV-HC2**	hc2_5500.img	hc2_5500.bin	2011.06.9
	HCCv2	hdd5500.img	hdd5500.bin	2011.06.20
	GV-TA1	ta1_5500.img	ta1_5500.bin	2010.06.16
	GV-TA10	ta10_5500.img	ta10_5500.bin	2014.01.02
	GV-TA40	ta40_5500.img	ta40_5500.bin	2014.01.01
5.4.00	**GV-HB1**	hb1_5400.img	hb1_5400.bin	2010.06.5
	GV-HC2	hc2_5400.img	hc2_5400.bin	2011.06.9
	HCCv2	hdd5400.img	hdd5400.bin	2011.06.20
	GV-TA1	ta1_5400.img	ta1_5400.bin	2010.06.16
	GV-TA10	ta10_5400.img	ta10_5400.bin	2014.01.02
	GV-TA40	ta40_5400.img	ta40_5400.bin	2014.01.01
5.3.00	**GV-HB1**	hb1_5300.img	hb1_5300.bin	2010.06.5
	GV-HC2	hc2_5300.img	hc2_5300.bin	2011.06.9
	HCCv2	hdd5300.img	hdd5300.bin	2011.06.20
	GV-TA1	ta1_5300.img	ta1_5300.bin	2010.06.16
	GV-TA10	ta10_5300.img	ta10_5300.bin	2014.01.01
	GV-TA40	ta40_5300.img	ta40_5300.bin	2014.01.01

SW Version	Node Type	Software Image Filename	Bootloader Filename	Bootloader Version
5.2.00	**GV-HB1**	hb1_5200.img	hb1_5200.bin	2010.06.5
	GV-HC2	hc2_5200.img	hc2_5200.bin	2011.06.9
	HCCv2	hdd5200.img	hdd5200.bin	2011.06.20
	GV-TA1	ta1_5200.img	ta1_5200.bin	2010.06.16
	GV-TA10	ta10_5200.img	ta10_5200.bin	2014.01.01
	GV-TA40	ta40_5200.img	ta40_5200.bin	2014.01.01
5.1.00	**GV-HB1**	hb1_5100.img	hb1_5100.bin	2010.06.5
	GV-HC2	hc2_5100.img	hc2_5100.bin	2011.06.8
	HCCv2	hdd5100.img	hdd5100.bin	2011.06.20
	GV-TA1	ta1_5100.img	ta1_5100.bin	2010.06.16
	GV-TA10	ta10_5100.img	ta10_5100.bin	2014.01.01
	GV-TA40	ta40_5100.img	ta40_5100.bin	2014.01.01

Coreboot version by GigaVUE-OS Release

* GigaVUE-HC1, GigaVUE-HC3, GigaVUE-OS-TA100, and GigaVUE-OS-TA100-CXP do not have U-boot. They are preloaded with coreboot. The following table summarizes the coreboot versions for GigaVUE-HC1, GigaVUE-HC3, GigaVUE-OS-TA100, and GigaVUE-OS-TA100-CXP:

SW Version	Node Type	Software Image Filename	Coreboot Version
6.5.00	**GV-HC3**	hc3_6500.img	1.0.4
	GV-HC1	hc1_6500.img	1.0.1
	GV-TA100	ta100_6500.img	0.2.5/1.0.0
6.4.00	**GV-HC3**	hc3_6400.img	1.0.4
	GV-HC1	hc1_6400.img	1.0.1
	GV-TA100	ta100_6400.img	0.2.5/1.0.0

SW Version	Node Type	Software Image Filename	Coreboot Version
6.3.00	**GV-HC3**	hc3_6300.img	1.0.4
	GV-HC1	hc1_6300.img	1.0.1
	GV-TA100	ta100_6300.img	0.2.5/1.0.0
6.2.00.04	**GV-HC3**	hc3_620004.img	1.0.4
	GV-HC1	hc1_620004.img	1.0.1
	GV-TA100	ta100_620004.img	0.2.5/1.0.0
6.1.01.04	**GV-HC3**	hc3_610104.img	1.0.4
	GV-HC1	hc1_610104.img	1.0.1
	GV-TA100	ta100_610104.img	0.2.5/1.0.0
6.0.00	**GV-HC3**	hc3_6000.img	1.0.4
	GV-HC1	hc1_6000.img	1.0.1
	GV-TA100	ta100_6000.img	0.2.5/1.0.0
5.16.00	**GV-HC3**	hc3_51600.img	1.0.4
	GV-HC1	hc1_51600.img	1.0.1
	GV-TA100	ta100_51600.img	0.2.5/1.0.0
5.15.00	**GV-HC3**	hc3_51500.img	1.0.4
	GV-HC1	hc1_51500.img	1.0.1
	GV-TA100	ta100_51500.img	0.2.5/1.0.0
5.14.00	**GV-HC3**	hc3_51400.img	1.0.4
	GV-HC1	hc1_51400.img	1.0.1
	GV-TA100	ta100_51400.img	0.2.5/1.0.0
5.13.00	**GV-HC3**	hc3_51300.img	1.0.4
	GV-HC1	hc1_51300.img	1.0.1
	GV-TA100	ta100_51300.img	0.2.5/1.0.0

SW Version	Node Type	Software Image Filename	Coreboot Version
5.12.00	**GV-HC3**	hc3_51200.img	1.0.4
	GV-HC1	hc1_51200.img	1.0.1
	GV-TA100	ta100_51200.img	0.2.5/1.0.0
	GV-TA100-CXP	tacx100_51200.img	1.0.0
5.11.00	**GV-HC3**	hc3_51100.img	1.0.4
	GV-HC1	hc1_51100.img	1.0.1
	GV-TA100	ta100_51100.img	0.2.5/1.0.0
	GV-TA100-CXP	tacx100_51100.img	1.0.0
5.10.01	**GV-HC3**	hc3_51001.img	1.0.4
	GV-HC1	hc1_51001.img	1.0.1
	GV-TA100	ta100_51001.img	0.2.5/1.0.0
	GV-TA100-CXP	tacx100_51001.img	1.0.0
5.10.00	**GV-HC3**	hc3_51000.img	1.0.4
	GV-HC1	hc1_51000.img	1.0.1
	GV-TA100	ta100_51000.img	0.2.5/1.0.0
	GV-TA100-CXP	tacx100_51000.img	1.0.0
5.9.00	**GV-HC3**	hc3_5900.img	1.0.4
	GV-HC1	hc1_5900.img	1.0.1
	GV-TA100	ta100_5900.img	0.2.5/1.0.0
	GV-TA100-CXP	tacx100_5900.img	1.0.0
5.8.00	**GV-HC3**	hc3_5800.img	1.0.4
	GV-HC1	hc1_5800.img	1.0.1
	GV-TA100	ta100_5800.img	0.2.5/1.0.0
	GV-TA100-CXP	tacx100_5800.img	1.0.0

SW Version	Node Type	Software Image Filename	Coreboot Version
5.7.00	**GV-HC3**	hc3_5700.img	1.0.4
	GV-HC1	hc1_5700.img	1.0.1
	GV-TA100	ta100_5700.img	0.2.5/1.0.0
	GV-TA100-CXP	tacx100_5700.img	1.0.0
5.6.00	**GV-HC3**	hc3_5600.img	1.0.4
	GV-HC1	hc1_5600.img	1.0.1
	GV-TA100	ta100_5600.img	0.2.5/1.0.0
	GV-TA100-CXP	tacx100_5600.img	1.0.0
5.5.00	**GV-HC3**	hc3_5500.img	1.0.4
	GV-HC1	hc1_5500.img	1.0.1
	GV-TA100	ta100_5500.img	0.2.5/1.0.0
	GV-TA100-CXP	tacx100_5500.img	1.0.0
5.4.00	**GV-HC3**	hc3_5400.img	1.0.3
	GV-HC1	hc1_5400.img	1.0.1
	GV-TA100	ta100_5400.img	0.2.5/1.0.0
	GV-TA100-CXP	tacx100_5400.img	1.0.0
5.3.00	**GV-HC3**	hc3_5300.img	1.0.3
	GV-HC1	hc1_5300.img	1.0.1
	GV-TA100	ta100_5300.img	0.2.5
	GV-TA100-CXP	tacx100_5300.img	1.0.0
5.2.00	**GV-HC3**	hc3_5200.img	1.0.3
	GV-HC1	hc1_5200.img	1.0.1
	GV-TA100	ta100_5200.img	0.2.5
	GV-TA100-CXP	tacx100_5200.img	1.0.0
5.1.00	**GV-HC3**	hc3_5100.img	1.0.3
	GV-HC1	hc1_5100.img	1.0.1
	GV-TA100	ta100_5100.img	0.2.5
	GV-TA100-CXP	tacx100_5100.img	1.0.0

AMI BIOS version by GigaVUE-OS Release

** GigaVUE-OS-TA200, GigaVUE-OS-TA200E, GigaVUE-OS-TA400, GigaVUE-OS-TA25, and GigaVUE-OS-TA25E do not have U-boot. They are preloaded with AMI BIOS.

GigaVUE-OS-TA200, GigaVUE-OS-TA200E, GigaVUE-OS-TA400, GigaVUE-OS-TA25, and GigaVUE-OS-TA25E devices are loaded with both primary BIOS version and secondary BIOS version. The secondary BIOS version is booted up when the primary BIOS version fails. However, secondary BIOS version is the BIOS version that is available when the chassis is manufactured. Primary BIOS version can be upgraded to the latest version available. However, the secondary BIOS version cannot be upgraded.

The following table summarizes the AMI BIOS versions for GigaVUE-OS-TA200, GigaVUE-OS-TA200E, GigaVUE-OS-TA400, GigaVUE-OS-TA25, and GigaVUE-OS-TA25E:

Table 5: AMI BIOS Version for GigaVUE-OS-TA200, GigaVUE-OS-TA200E, GigaVUE-OS-TA400, GigaVUE-OS-TA25, and GigaVUE-OS-TA25E

SW Version	Node Type	Software Image Filename	AMI BIOS Version
6.5.00	**GV-TA200**	ta200_6500.img	1.2.0
	GV-TA25	ta25_6500.img	2.0.2
	GV-TA400	ta400_6500.img	1.1.0
	GV-TA200E	ta200e_6500.img	v40.01.01.01
	GV-TA25E	ta25e_6500.img	v40.01.01.01
6.4.00	**GV-TA200**	ta200_6400.img	1.2.0
	GV-TA25	ta25_6400.img	2.0.2
	GV-TA400	ta400_6400.img	1.1.0
	GV-TA200E	ta200e_6400.img	v40.01.01.01
	GV-TA25E	ta25e_6400.img	v40.01.01.01
6.3.00	**GV-TA200**	ta200_6300.img	1.2.0
	GV-TA25	ta25_6300.img	2.0.2
	GV-TA400	ta400_6300.img	1.1.0
	GV-TA200E	ta200e_6300.img	v40.01.01.01
	GV-TA25E	ta25e_6300.img	v40.01.01.01

SW Version	Node Type	Software Image Filename	AMI BIOS Version
6.2.00.04	**GV-TA200**	ta200_620004.img	1.2.0
	GV-TA25	ta25_620004.img	2.0.2
	GV-TA400	ta400_620004.img	1.1.0
	GV-TA200E	ta200e_620004.img	v40.01.01.01
	GV-TA25E	ta25e_620004.img	v40.01.01.01
6.1.01.04	**GV-TA200**	ta200_610104.img	1.2.0
	GV-TA25	ta25_610104.img	2.0.2
	GV-TA400	ta400_610104.img	1.1.0
	GV-TA200E	ta200e_610104.img	v40.01.01.01
	GV-TA25E	ta25e_610104.img	v40.01.01.01
6.0.98	**GV-TA200E**	ta200e_6100.img	v40.01.01.01
	GV-TA25E	ta25e_6100.img	v40.01.01.00
6.0.00	**GV-TA200**	ta200_6000.img	1.2.0
	GV-TA25	ta25_6000.img	2.0.2
	GV-TA400	ta400_6000.img	1.1.0
5.16.00	**GV-TA200**	ta200_51600.img	1.2.0
	GV-TA25	ta25_51600.img	2.0.2
	GV-TA400	ta400_51600.img	1.1.0
5.15.00	**GV-TA200**	ta200_51500.img	1.2.0
	GV-TA25	ta25_51500.img	2.0.2
	GV-TA400	ta400_51500.img	1.1.0
5.14.00	**GV-TA200**	ta200_51400.img	1.2.0
	GV-TA25	ta25_51400.img	2.0.2
5.13.00	**GV-TA200**	ta200_51300.img	1.2.0
	GV-TA25	ta25_51300.img	2.0.2
5.12.00	**GV-TA200**	ta200_51200.img	1.2.0
	GV-TA25	ta25_51200.img	2.0.2

SW Version	Node Type	Software Image Filename	AMI BIOS Version
5.12.00	**GV-TA200**	ta200_51200.img	1.2.0
	GV-TA25	ta25_51200.img	2.0.2
5.11.00	**GV-TA200**	ta200_51100.img	1.1.2a
	GV-TA25	ta25_51100.img	1.2.0
5.10.04	**GV-TA25**	ta25_51004.img	2.0.2
5.10.01	**GV-TA200**	ta200_51001.img	1.1.2a
	GV-TA25	ta25_51001.img	1.2.0
5.10.00	**GV-TA200**	ta200_51000.img	1.1.2a
5.9.00	**GV-TA200**	ta200_5900.img	1.1.2a
5.8.00	**GV-TA200**	ta200_5800.img	1.1.2a
5.7.00	**GV-TA200**	ta200_5700.img	1.0.9
5.6.00	**GV-TA200**	ta200_5600.img	1.0.9
5.5.00	**GV-TA200**	ta200_5500.img	1.0.9
5.4.00	**GV-TA200**	ta200_5400.img	1.0.9
5.3.00	**GV-TA200**	ta200_5300.img	1.0.9

Yantra BIOS version by GigaVUE-OS Release

** GigaVUE-HC1-Plus does not have U-boot. It is preloaded with Yantra BIOS. The following table summarizes the Yantra BIOS versions for GigaVUE-HC1-Plus:

Table 6: Yantra BIOS Version for GigaVUE-HC1-Plus

SW Version	Node Type	Software Image Filename	Yantra BIOS Version
6.5.00	**GV-HC1P**	hc1p_6500.img	Yantra.41.011p.0
6.4.00	**GV-HC1P**	hc1p_6400.img	Yantra.41.011p.0
6.3.00	**GV-HC1P**	hc1p_6300.img	Yantra.41.011p.0
6.2.00.04	**GV-HC1P**	hc1p_620004.img	Yantra.41.011p.0
6.1.01.04	**GV-HC1P**	hc1p_610104.img	Yantra.41.011p.0
6.0.00	**GV-HC1P**	hc1p_6000.img	Yantra.41.011p.0

Portwell BIOS version by GigaVUE-OS Release

** G-TAP A Series 2 does not have U-boot. It is preloaded with Portwell BIOS. The following table summarizes the Portwell BIOS versions for G-TAP A Series 2:

Table 7: Portwell BIOS Version for G-TAP A Series 2

SW Version	Node Type	Software Image Filename	Portwell BIOS Version
6.5.00	**G-TAP A Series 2**	gtapa_6500.img	0.0.16
6.4.00	**G-TAP A Series 2**	gtapa_6400.img	0.0.16
6.3.00	**G-TAP A Series 2**	gtapa_6300.img	0.0.16
6.2.00.04	**G-TAP A Series 2**	gtapa_620004.img	0.0.16
6.1.01.04	**G-TAP A Series 2**	gtapa_610104.img	0.0.16
6.0.00	**G-TAP A Series 2**	gtapa_6000.img	0.0.16
5.16.00	**G-TAP A Series 2**	gtapa_51600.img	0.0.16
5.15.00	**G-TAP A Series 2**	gtapa_51500.img	0.0.16
5.14.00	**G-TAP A Series 2**	gtapa_51400.img	0.0.16
5.13.00	**G-TAP A Series 2**	gtapa_51300.img	0.0.16
5.12.00	**G-TAP A Series 2**	gtapa_51200.img	0.0.16
5.11.00	**G-TAP A Series 2**	gtapa_51100.img	0.0.16
5.10.00	**G-TAP A Series 2**	gtapa_51000.img	0.0.16
5.9.00	**G-TAP A Series 2**	gtapa_5900.img	0.0.16

HCT BIOS version by GigaVUE-OS Release

GigaVUE-HCT does not have U-boot. It is preloaded with HCT BIOS. The following table summarizes the HCT BIOS versions for GigaVUE-HCT:

Table 8: HCT BIOS Version for GigaVUE-HCT

SW Version	Node Type	Software Image Filename	Portwell BIOS Version
6.5.00	GigaVUE-HCT	hct_6500.img	HCT.46.003p.0

Gateway Ports Converted to Tool Ports

During an upgrade (from earlier software versions) , gateway ports and gateway mirrors are automatically converted to tool ports and tool mirrors.

Refer to the following notes and considerations for GigaVUE-OS TA Series nodes (i GigaVUE-OS-TA100):

- Gateway ports on GigaVUE-OS TA Series nodes are removed and converted to tool ports. In addition, gateway mirrors are removed and converted to tool mirrors.
- Tool ports on GigaVUE-OS TA Series nodes can continue to be used to aggregate traffic.
- Tool ports on GigaVUE-OS TA Series nodes can also be used to directly connect to tools, such as firewalls, Intrusion Prevention Systems, or Application Performance Monitors.
- GigaVUE-OS TA Series nodes support network, tool, stack, and hybrid port types.
- Hybrid ports are fully supported in both standalone and cluster mode on GigaVUE-OS TA Series nodes. When a GigaVUE-OS TA Series node is in a cluster, hybrid ports can be configured.
- GigaVUE-OS TA Series nodes can continue to be clustered with GigaVUE-OS H Series nodes. Tool ports are supported on GigaVUE-OS TA Series nodes in a cluster.
- When GigaVUE-OS TA Series nodes are in a cluster, bidirectional traffic flow is enabled on the stack links of GigaVUE-OS TA Series nodes.

Upgrading GigaVUE-OS Nodes

Use the procedures in this chapter to upgrade GigaVUE-OS H Series and GigaVUE-OS TA Series nodes to GigaVUE-OS 6.6.xx.

To begin, prepare the GigaVUE-OS nodes for upgrade by following the procedure in Important: Back Up Your Configuration.

> **NOTE:** If your nodes and GigaVUE-FM instance are running software version 5.6.xx or earlier, ensure that you add all the nodes to GigaVUE-FM, upgrade the GigaVUE-FM to 6.6.xx, and then upgrade the nodes to 6.6.xx. This is to ensure that the flexible inline maps added to the nodes before the upgrade are visible in the canvas in GigaVUE-FM. For the recommended upgrade path, refer to Supported Upgrade Path—Standalone Nodes.

Important: Back Up Your Configuration

1. Copy the 6.6.xx installation file to your file server.
2. Use the **write memory** command on each node in the cluster to preserve settings that are stored locally rather than globally (for example, AAA and hostname settings).

Back up the running configuration using either of the following methods:

Back Up by Copying and Pasting	**`(config) # show running-config`** This command displays the commands necessary to recreate the node's running configuration on the terminal display. You can copy and paste the output from this command into a text file and save it on your client system. The file can later be pasted back into the CLI to restore the configuration.
Back up to FTP/TFTP/SCP/SFTP Server	**`(config) # configuration text generate active running upload <upload URL> <filename>`** This command uses FTP, TFTP, SCP, or SFTP to upload the running configuration to a text file on remote storage. The format for the **<upload URL>** is as follows: **`[protocol]://username [:password]@hostname/path/filename`** For example, the following command uploads a text configuration file based on the active running configuration and uploads it to an FTP server at 192.168.1.49 with the name **config.txt**:

```
(config) # configuration text generate active
running
```

	uploadftp://myuser:mypass@192.168.1.49/ftp/config.txt

3. Next, follow the procedure: Upgrading GigaVUE-OS Nodes Using GigaVUE-OS CLI to upgrade GigaVUE-OS H Series nodes.

Upgrading GigaVUE-OS Nodes Using GigaVUE-OS CLI

Refer to the following sections to upgrade GigaVUE-OS H Series and GigaVUE-OS TA Series nodes:

- Before You Begin
- Install the Software Image
- Install U-Boot (If a Newer Version is Available)
- Install Coreboot (If a Newer Version is Available)
- Verify Version Numbers

Before You Begin

Before you start installing the software image, perform the following checks:

- Change Default admin Password
- Check Number of Images
- Check U-Boot Version
- Check Coreboot Version

Change Default admin Password

Check the password on the **admin** account. If you are using the default password on this account (admin123A!), the best practice is to change it to a non-default password before you upgrade. Refer to the Password Policies section in the *GigaVUE-OS CLI Reference Guide* for more details.

When the upgrade is complete and the node has rebooted, log in with your non-default password.

If you have not changed the default password before the upgrade, when the upgrade is complete and the node has rebooted, you will be prompted to enter a non-default password. The **jump-start** script will automatically launch and prompt the system administrator to change the password on the **admin** account.

Check Number of Images

Check the number of images currently available for installation on the node with the following command:

```
(config) # show images
```

The maximum number of images allowed on GigaVUE HC Series or GigaVUE TA Series nodes at any one time is three.

If there is already the maximum number of images listed in the **Images available to be installed** section of the **show images** output, use the **image delete** command to remove at least one of the existing images before you fetch a new one.

The recommendation is to delete any unused images.

NOTE: Once an image is installed, you can delete the uploaded image.

Check U-Boot Version

If you are upgrading from an older software version, check the U-Boot version using the following command:

```
(config) # show version
```

For example on a GigaVUE-HC2 node, the following output is displayed:

```
U-Boot version: 2011.06.8
```

Check that the U-Boot version matches the version listed in Software Image Filenames for GigaVUE-OS Nodes in the Bootloader Version column.

If you do not have the same version, you will have to do a U-Boot installation, after the image installation. Refer to Install U-Boot (If a Newer Version is Available).

Check Coreboot Version

If you are upgrading from an older software version, check the coreboot version using the following command:

```
(config) # show version
```

For example on a GigaVUE-OS-TA100 node, the following output is displayed:

```
1st flash version: coreboot-ta100-0.2.4 Wed Jan 20 15:19:09 CST 2016 **2nd flash version:
coreboot-ta100-0.2.5 Fri Sep 25 19:54:15 CST 2015
```

Check that the coreboot version matches the version listed in Software Image Filenames for GigaVUE-OS Nodes in the Coreboot Version column.

If you do not have the same version, you will have to do a coreboot installation, after the image installation. Refer to Install Coreboot (If a Newer Version is Available).

Install the Software Image

1. Log in on the GigaVUE-OS node to be updated as an admin user and switch to Configure mode.
2. Use the **image fetch** command to retrieve the software image from your file server. For example, the following command uses SCP to retrieve the **hc16.6.00** image from the **builds** folder on 192.168.1.25:

   ```
   (config) # image fetch scp://user:password@192.168.1.25/builds/hc16.6.00.img
   ```

   The CLI shows you the progress of the image fetch with a series of hash marks, returning you to the system prompt when complete.
3. Use the **image install** command to install the downloaded image file. For example, to install the image downloaded in the previous step:

   ```
   (config) # image install hc16.6.00.img
   ```

   The GigaVUE-OS CLI presents a series of status messages as it verifies and uncompresses the image, creates file systems, and extracts the image, returning you to the system prompt when complete.
4. The next step is to tell the GigaVUE-OS node which node image to load at the next system boot. The GigaVUE-OS node has two partitions, each of which has a separate image installed. When you install a new image, it automatically installs on the "next" partition – the one you are not using now. The **image boot next** command tells the GigaVUE-OS node to boot from the next partition after the one currently booted – the one where you just installed the new image:

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

> **NOTE:** In order for sync to work properly following a reload, ensure that the installation file for the active configuration is present after the **image boot next** command in the previous step.

5. Save the current configuration with the following command:

   ```
   (config) # write mem
   ```

6. Is this node part of a cluster?
   - **No** – Reboot with the following command.

     ```
     (config) # reload
     ```

     When the node comes back up, save the configuration with **write memory**.
   - **Yes** – Is this the last node in the cluster?
     - **No** - Do not the reload at this time. Proceed to upgrade the next node in the cluster.
     - **Yes** - If this the last node to be upgraded in the cluster (that is, it is the leader), reload the cluster using the following CLI command.

       ```
       (config) # cluster reload
       ```

7. Save the current configuration with the following command:

   ```
   (config) # write mem
   ```

Bootloader Installation

GigaVUE-FM supports the installation of bootloader on GigaVUE HC Series and GigaVUE TA Series nodes during the GigaVUE-OS image upgrade, but it does not automatically activate it.

NOTE: Depending on your configuration, you may need to enable physical bypass mode before performing the GigaVUE-OS image upgrade, and then restore it after the upgrade is complete.

During the GigaVUE-OS image upgrade, GigaVUE-FM v5.6.xx (and above) first upgrades the GigaVUE-OS image and then reboots the system. After the GigaVUE HC Series or GigaVUE TA Series node has rebooted with the new GigaVUE-OS image, the bootloader installation will automatically initiate from GigaVUE-FM.

NOTE: The bootloader upgrade will only apply if there is a bootloader version change in the specific GigaVUE-OS software release.

When the process completes, a message about the bootloader installation will appear in the GigaVUE-FM Task Log Details, such as, “New bootloader version may have been staged based on device bootloader version. Any future reload of device will pick the new version.” This means that the bootloader binary has been installed on the device and is ready to become active upon the next reload.

Important: The newer bootloader version only goes into effect after an additional manual reboot. You must explicitly reload the GigaVUE-OS H series or GigaVUE-OS TA series device to update the bootloader version. This additional reboot will cause the optical-protection switches of relevant the Bypass Modules to change states multiple times (close > open > close > open). (Table 1 provides the list of relevant modules.)
Recommendation: To avoid this state-change behavior, enable the physical bypass before performing the GigaVUE-OS image upgrade.

Refer to"Configure Inline Bypass Examples" section in the *GigaVUE-OS CLI Reference Guide* for instructions on how to enable the physical bypass.

Install U-Boot (If a Newer Version is Available)

After checking the U-Boot version, if a newer version is available, you will have to do a U-Boot installation.

Install U-Boot after the image installation if it does not match the Bootloader Version column in Software Image Filenames for GigaVUE-OS Nodes. Use this procedure in particular when you are upgrading from an older software version.

After the image installation of 6.6.xx, use the following command (type **uboot** in full):

```
(config) # show uboot
```

If there is a newer U-Boot version available, the output of the **show uboot** command displays it. For example in the following output, the installed U-Boot is 2011.06.8, but 2011.06.9 is available for installation.

```
* Installed U-Boot binary: 2011.06.8 (Dec 06 2016 - 04:35:29)* U-Boot binary from
active/booted image: 2011.06.9 (Feb 09 2017-02:16:26)
```

If there is a newer U-Boot version available, use the following command to install it:

```
(config) # uboot install
```

The binary bootloader code included with the installed image is installed.

NOTE: The newer U-Boot version only goes into effect after a reload

Uboot Update Notification for Gen3 GS card in Standalone Mode:
When you try to execute any CLI command when uboot update is in progress, you will get the following notification during bootup or card configuration.

```
% GS Card uboot upgrade is happening. Cannot execute CLI command now
```

You cannot execute any CLI command until the uboot update is complete or until a timer of 15 minutes expires.

Install Coreboot (If a Newer Version is Available)

After checking the coreboot version, if a newer version is available, you will have to do a coreboot installation.

Install coreboot after the image installation if it does not match the Coreboot Version column in Software Image Filenames for GigaVUE-OS Nodes. Use this procedure in particular when you are upgrading from an older software version.

After the image installation of 6.6.xx, use the following command:

```
(config) # show version
```

If there is a newer coreboot version available, the output of the **show version** command displays it.

If there is a newer coreboot version available, use the following command to install it:

```
(config) # coreboot install
```

The binary bootloader code included with the installed image is installed.

> **NOTE:** The newer coreboot version only goes into effect after a reload.

Install PLD (If a Newer Version is Available)

GigaVUE-HC3 and GigaVUE-HC1 devices include field programmable gate arrays (FPGAs). PLD upgrade packages are included within the GigaVUE-OS image upgrades of these devices (no separate package or file to download).

Before upgrading PLD, chek if a newer version of PLD is available. Use the **show pld** command to determine the same.

```
(config) # show pld
```

If the **show pld** output indicates "Need Upgrade: yes", plan and perform the upgrade for one PLD slot at a time. Use the **pld upgrade slot <boxid>/<slot>** command to upgrade.

> **NOTE:** During each PLD slot upgrade do not power cycle the chassis, remove the card, shutdown the card.

Refer to the pld section in the GigaVUE-OS CLI Guide for details.

Rules, Notes, and Limitations for PLD upgrade

Refer to the following rules and notes for PLD upgrades:

- In clusters: Executing the PLD commands on the cluster leader will only show or upgrade PLDs for card modules directly inserted into the cluster leader. Therefore, log into each device with PLD capable modules to inspect or upgrade those modules.
- The show pld output will continue to indicate "**Need Upgrade: yes**" for a slot after a successful PLD upgrade until the chassis is power cycled and the new PLD version is being used.
- When upgrading multiple slots in a chassis keep a careful note of which slots you have already upgraded during the process.
- Although the pld upgrade command identifies a slot to upgrade using <boxid>/<slot>, in a cluster this command only upgrades card modules directly inserted into the local chassis.
- Each PLD upgrade will take several minutes to complete.
- Upgrading the PLD on a single GigaVUE-HC3 SMT-HC3-C05 module will take approximately 2 to 3 minutes.

- If a PLD upgrade fails on the first attempt, immediately repeat the PLD upgrade on the same PLD slot a second time. No chassis power cycle is required between the two PLD upgrade attempts on the same PLD slot. If the second PLD upgrade attempt also fails, then contact Gigamon Technical Support for further troubleshooting and recommendations.
- The card module that failed the PLD upgrade will likely need to be replaced via RMA. Contact Gigamon Technical Support for assistance.
- It is not recommended to power cycle a chassis or remove/re-insert a card module after a failed PLD upgrade - the module may not return to an operational state or operate with issues.
- After the PLD upgrades are successfully completed on all the modules in the chassis, the chassis must be power cycled.
- Multiple PLD upgrades can be executed sequentially, followed by a single chassis power cycle.
- Reloading the chassis without a power cycle is not sufficient. The chassis must be completely powered down, and then powered back on.
- For chassis with multiple power supplies, all the power supplies must be powered off.
- For DC powered chassis, temporarily remove the DC fuses in the top-of-rack fuse panel.

Verify Version Numbers

After completing the upgrade to GigaVUE-OS 6.6.xx, run the **show version** command on all upgraded nodes to make sure they are all running a 6.6.xx build. If any node does not show the correct version number, upgrade it individually.

Upgrade Software on a GigaVUE-OS Node or a Cluster from GigaVUE-FM

This section describes the steps to upgrade the software on GigaVUE-OS nodes and clusters using GigaVUE-FM. You can upgrade software by using an image that is located on an external image server, or you can use GigaVUE-FM as the image server for H Series and TA Series nodes.

Refer to the following sections

- Before You Begin
- Upgrade from an External Image Server
- Upgrade with GigaVUE-FM as the Image Server

Before You Begin

Before upgrading a node or a cluster, it is important to note the following:

- GigaVUE-FM can upgrade up to 32 nodes at a time. For example, if you select a cluster with 8 nodes and 28 standalone nodes, GigaVUE-FM will fail to upgrade as the total number of nodes exceeds the limit.
- Check if the device that you want to upgrade has enough disk space. Disk space is computed based on the last synchronized time. A newly added node may sometimes show low disk space. Wait for approximately 5 minutes for the configuration sync to complete or rediscover the device and then check the disk space.
- GigaVUE-HC2 and GigaVUE-HC2-Plus devices have 4GB RAM and can go into a low memory condition. It is always recommended to do a reload before the image install as part of the upgrade process.
- When the upgrade process is complete, a post-upgrade sanity check is performed. Physical inventory snapshot of nodes, cards, ports, maps, and GigaSMART operations are captured and the numbers from before and after the upgrade are compared. Sometimes, these numbers do not match immediately after the upgrade, as the device is still being configured. GigaVUE-FM checks every minute whether the nodes have joined the cluster. If the nodes joined do not increment in 30 minutes, then the sanity check will fail.

  After the nodes join the cluster, GigaVUE-FM again checks every minute for other configuration objects to come up. If the configuration objects do not increment in 10 minutes, the sanity check will fail. When the sanity check fails, GigaVUE-FM provides an ability to view the configuration object that failed the sanity check.
- GigaVUE-FM v5.5.00 supports the installation of bootloader on GigaVUE HC Series and GigaVUE TA Series nodes during the GigaVUE-OS image upgrade, but it does not automatically activate it.

> **NOTE:** Depending on your configuration, you may need to enable physical bypass mode before performing the GigaVUE-OS image upgrade, and then restore it after the upgrade is complete.

During the GigaVUE-OS image upgrade, GigaVUE-FM v5.5.00 first upgrades the GigaVUE-OS image and then reboots the system. After the GigaVUE HC Series or GigaVUE TA Series node has rebooted with the new GigaVUE-OS image, the bootloader installation will automatically initiate from GigaVUE-FM.

> **NOTE:** The bootloader upgrade will apply only if there is a bootloader version change in the specific GigaVUE-OS software release.

When the installation process completes, a message about the bootloader installation will appear in the GigaVUE-FM Task Log Details.

IMPORTANT: The newer bootloader version only goes into effect after an additional manual reboot. You must explicitly reload the GigaVUE-OS H series or GigaVUE-OS TA series device to update the bootloader version. This additional reboot will cause the optical-protection switches of the relevant Bypass Modules to change states multiple times.

RECOMMENDATION: To avoid this state-change behavior, enable the physical bypass before performing the GigaVUE-OS image upgrade. Refer to “Configuring Inline Bypass Examples: Protected Inline Bypass Using Bypass Combo Modules” in the *GigaVUE-OS CLI Reference Guide* for instructions on how to enable the physical bypass.

> **NOTE:** The default password admin123A! for the admin user is no longer valid when logging in to the node. When upgrading from the CLI, the configuration jump-start script requires the user to change the default password for the admin user. However, if the node is upgraded using GigaVUE-FM, the admin password on the node is not changed.

Upgrade from an External Image Server

This section provides the steps for upgrading the GigaVUE-OS nodes and clusters from an image stored on an external server. The image can be transfered from the server to the node using either SCP or TFTP file protocols.

In a cluster configuration, to upgrade the software on the GigaVUE-OS nodes, all the relevant images must be available to GigaVUE-FM. All nodes should be updated to the same version of software.

To upgrade a node or a cluster from an image stored on an external image server, do the following:

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

To obtain software images, register on the Gigamon Customer Portal and download the software. You must provide the serial number for each node you want to update.

To view the chassis serial number, login to GigaVUE-FM and select **Chassis** from the navigation pane. Click **List View**.

2. Click **Physical** on the top navigation link.
3. On the Physical Nodes page, select one or more nodes or clusters to upgrade.
4. Select **Actions > Image Upgrade**.
5. Enter the following information:

Table 1: Image Upgrade

Menu	Description
Task Name	The name of the upgrade task.
Image Server	The location from where the image can be uploaded. Do the following: 1. For Image Server, choose **External Server**. **1.** From the drop-down list, select the external image server added to GigaVUE-FM in Step 1. **2.** If the external image server is not available, click **Add External Server.** In the Add External Server quick view, enter the following: **a.** In the **Alias** field, enter the name of the external server. **b.** In the **Server Address** field, enter the host IP address of the server. **c.** In the Type drop-down list, select SCP or TFTP as the file transfer protocol. **d.** If you select SCP, enter the username and password of the server in the **Username** and **Password** fields respectively. **e.** Click **Add**. **6.** In the text box, enter the image path and the image name. **NOTE:** For a cluster, the images can reside on different paths. However, the image server and the protocol for file transfer should be the same for all the nodes.
Backup Config Before Upgrade	The check box to back up the configuration changes prior to performing the upgrade.
Reboot After Upgrade	The check box to reboot the server after performing the upgrade.
Time	The time for performing the upgrade. There are two options: ● Immediate—The upgrade is performed immediately. ● Scheduled—The upgrade is performed at a scheduled time. Select the date and time.

NOTE: If the disk space of a physical node or a node in a cluster is low, a message is displayed indicating that the node will not be upgraded due to low disk space.

2. Click **Upgrade**.

Upgrade with GigaVUE-FM as the Image Server

This section provides the steps for upgrading the GigaVUE-OS nodes and clusters when GigaVUE-FM is used as the file server instead of an external server.

> **NOTE:** You cannot upgrade GigaVUE-HC1-Plus using GigaVUE-FM as the image server. To upgrade GigaVUE-HC1-Plus image you must use an external server. Refer to Upgrade from an External Image Server for step by step instructions on how to upgrade using external image server. This issue occurs only when upgrading from version 6.0.00 to 6.1.00 or 6.2.00 or 6.3.00, when upgrading from version 6.1.00 to 6.2.00 or 6.3.00, or when upgrading from 6.2.00 to 6.3.00.

To upgrade a node or a cluster 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 Gigamon Customer Portal and download the software. You must provide the serial number for each node you want to update.

   To view the chassis serial number, login to GigaVUE-OS and select **Chassis** from the navigation pane. Click **List View**.
2. Click **Physical** on the top navigation link.
3. On the Physical Nodes page, select one or more nodes or clusters to upgrade.
4. Select **Actions > Image Upgrade**. Under Selected Nodes, the disk space, software version, and hardware type of all the nodes are displayed. When you upgrade a GigaSMART card, under Selected Nodes, additional details like the GigaSMART Build Number, Related GigaSMART Group, GigaSMART Version, GigaSMART Build Date, and GigaSMART Build Release of all the nodes are also displayed. If a device has multiple engine ports then, the GigaSMART card details for all the ports will be displayed.

> **NOTE:** ***Applicable for GigaVUE-HC1, GigaVUE-HC1-Plus, and GigaVUE-HC3 devices:***
> When upgrading GigaSMART cards with Gen2 and Gen3 cards in the same chassis, in the GigaVUE-FM GUI:
> - Use the first text box to enter the upgrade path URL for the Gen2 card.
> - Use the second text box to enter the upgrade path URL for the Gen3 card.

> **NOTE:** If the disk space of the selected node or a node in the cluster is low, a message will be displayed indicating that the node will not be upgraded due to low disk space. Delete the unused internal image files to free up the disk space.

5. Enter the following information:

Table 2: Image Upgrade

Menu	Description
Task Name	The name of the upgrade task.
Image Server	The location from where the image can be uploaded. Do the following: **1.** Choose Internal Server. **2.** From the Version drop-down list, select the version to which you want to upgrade. **3.** Click **Add Image Files**. **4.** In the Add Image File quick view, click **Choose Files** and select the image files that you downloaded in Step 1. Click **Add**. **NOTE:** If there is an image file missing in a cluster configuration, the Image file missing error is displayed.
Backup Config Before Upgrade	The check box to back up the configuration changes prior to performing the upgrade.
Reboot After Upgrade	The check box to reboot the server after performing the upgrade. If you do not select **Reboot After Upgrade**, you must reload the node manually. To reload the node manually, select the node on the Physical Nodes page and click **Actions > Reboot**.
Time	The time for performing the upgrade. There are two options: ● Immediate—The upgrade is performed immediately. ● Scheduled—The upgrade is performed at a scheduled time. Select the date and time.

6. Click **Upgrade**.

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

Orchestrated Upgrade of Devices from GigaVUE-FM

Upgrading devices from GigaVUE-FM GUI is an internal task and has few limitations[1] which makes it difficult for the users performing the upgrade. Starting from software version 6.3.00, you can perform orchestrated upgrade of the devices using the GigaVUE-FM GUI, in which the upgrade is performed in stages. The orchestrated upgrade process provides the following advantages:

- Ability to upgrade a maximum of six hundred (600) devices at a time.
- Monitor the device upgrade status using the dashboard page.
- Re-run possible stages or execute specific stages later based on the maintenance windows.

> **NOTE:** For the orchestrated upgrade functionality to work, GigaVUE-FM must be running software version 6.3.00. Devices must be running software version 5.4.00 and above.

How Orchestrated Upgrade Works

In the orchestrated upgrade process, the tasks that happen internally during the upgrade are available as options in the Node Upgrade page. This provides control for the users on the entire upgrade process.

The orchestrated upgrade consists of the following stages:

Fetch	Device image is fetched.
Install	Device image is installed.
Activate	● Sets the boot next variable. ● Device is reloaded with the new installed image. ● uboot/coreboot install is performed.
Verify	Post upgrade verifications are performed.

The order of stage execution in the orchestrated upgrade for a specific standalone or cluster node is sequential. That is, after selecting the required standalone nodes and cluster nodes, you must first execute the **Fetch** and **Install** stages. You will be allowed to proceed with the

---

[1] Limitations include long maintenance windows to upgrade a large number of devices, inability to re-run specific stages of the upgrade process, and image incompatibility failures being identified in the later stages of the upgrade.

Activate and **Verification** stages only on successful completion of these stages. Refer to the Upgrade Images for Standalone Nodes and Clusters for detailed information about the stages.

Notes:

- During the **Activate** and **Verify** stages, the device moves in to the maintenance window and you cannot perform any operation on the device using GigaVUE-FM. It is not recommended to not perform any operation using device CLI.
- The device moves out of the maintenance window only upon successful completion of the orchestrated upgrade.
- To manually move the device out of the maintenance window:
    1. On the left navigation pane, click on 🗄 and select **Physical > Nodes**.
    2. Select the required node, and click **Connect Node**.

Rules, Notes, and Limitations

Refer to the following rules, notes and limitations:

- With orchestrated upgrade, you can upgrade up to 600 nodes at a time. Ensure to accordingly select the number of clusters and standalone nodes so that the total number of nodes does not exceed 600.
- You can also upgrade the nodes using the existing node upgrade process. In case the orchestrated upgrade process fails or if you intentionally want to switch over to the existing upgrade process, you must reset (using the **Reset** button) the orchestrated upgrade process prior to switching over to the existing upgrade process. Refer to the Upgrade Control Options section for details.
- During the upgrade process, all devices belonging to a cluster will be in the same stage of the upgrade. **For example**: Consider a cluster with 10 devices. Trigger orchestrated upgrade on the cluster by selecting **Fetch** and **Install**. Image fetch will happen on all 10 devices. Image install will happen only if all the members in the cluster complete the image fetch stage. That is, even if some of the members have completed fetching the image (and for some of the members the fetch is in progress) the upgrade stage of all the devices will be displayed as Fetch.

- As upgrade is performed in a staged manner, you cannot combine different devices pending for different stages of upgrade. All devices in a single upgrade schedule must belong to the same stage. **For example:** Consider Cluster 1 with five devices and Cluster 2 with seven devices. Trigger orchestrated upgrade on the clusters. The upgrade stage of the devices is as follows:
  - Cluster 1: All five devices in the cluster are in fetch stage.
  - Cluster 2: All seven devices in the cluster are in fetch and install stage.
  - You cannot resume upgrade by selecting all 12 devices. To resume upgrade:
    - Select all devices in Cluster 1 that have completed fetch, and resume upgrade.
    - Select all devices in Cluster 2 that have completed fetch and install, and resume upgrade.
- In a GigaVUE-FM High Availability group: During the upgrade process, if one of the GigaVUE-FM instance becomes not-reachable or in case of FM HA failover, the upgrade stage of the devices at the time of failover of GigaVUE-FM instance will be marked as 'Failed'. Retry the upgrade process using the Retry option.
- Step upgrade[1] is not supported in this release. You must perform multiple GigaVUE-OS upgrades on the same device using sequential non-overlapping orchestrated upgrade schedules.
- The GigaSMART image is upgraded in conjunction with the GigaVUE-OS software upgrade. Orchestrated upgrade of standalone GigaSMART image is not supported. Use the legacy upgrade option in the Nodes page to upgrade the GigaSMART image.
- During scheduled upgrade, nodes might become unreachable at the time of execution. Refer to the Upgrade Cluster with Not-reachable Nodes in the Fabric Management Guide for more details.
- **Important Recommendations**
  - Reset the upgrade process for the cluster if new nodes are added to the cluster during the orchestrated upgrade process.
  - Manually remove the PCAP configuration (for Tx traffic) before initiating the orchestrated upgrade process. Failure to do so will result in Post Upgrade Verification failure due to a mismatch in the operational status of the channel port.

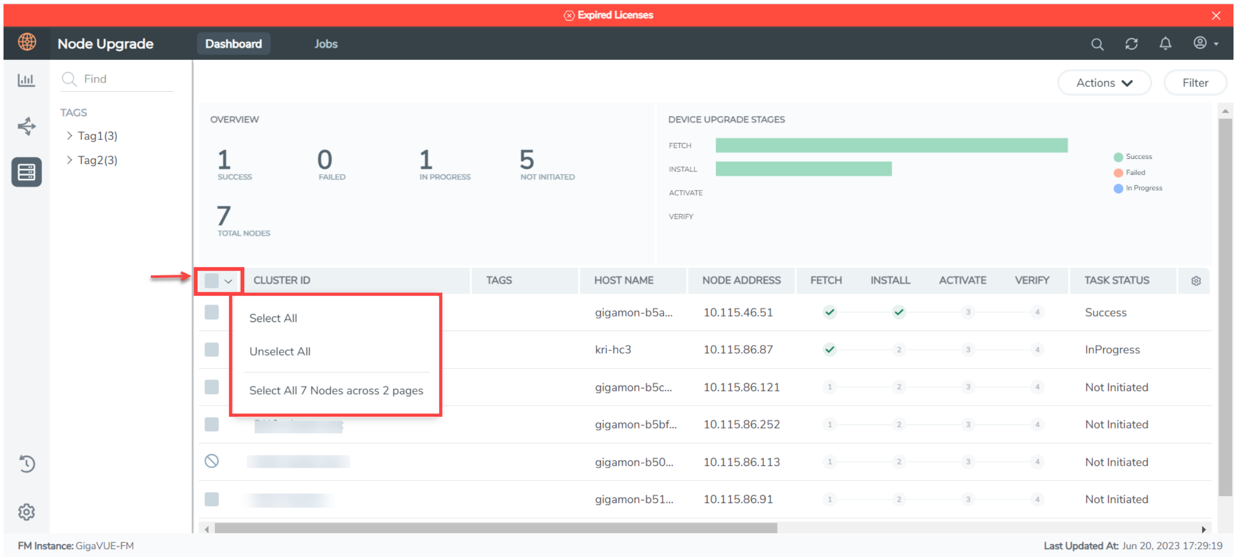
Upgrade Images for Standalone Nodes and Clusters

To perform orchestrated upgrade of stand alone nodes and clusters, perform the following steps.

---

[1] Automated sequential upgrade of devices through multiple GigaVUE-OS software releases.

1. On the left navigation pane, click , and then select **Physical > Node Upgrade**. The Dashboard Page appears with the list of devices managed in GigaVUE-FM.
2. Select the required devices that you want to upgrade. You can filter the devices as required. You can also filter the devices based on the tags (you cannot sort the devices based on the Tags field).
3. Click the drop-down icon in the first column to select the devices. Use one of the options listed below:
   - **Select All**: All nodes in a particular page are selected.
   - **Unselect All**: All nodes in a particular page are unselected.
   - **Select <number of nodes> across <no of pages>**: All nodes across all the pages are selected.

   
   Expired Licenses
   Node Upgrade
   Dashboard
   Jobs
   Find
   TAGS
   Tag1(3)
   Tag2(3)
   Actions
   Filter
   OVERVIEW
   1 SUCCESS
   0 FAILED
   1 IN PROGRESS
   5 NOT INITIATED
   7 TOTAL NODES
   DEVICE UPGRADE STAGES
   FETCH
   INSTALL
   ACTIVATE
   VERIFY
   Success
   Failed
   In Progress
   Select All
   Unselect All
   Select All 7 Nodes across 2 pages

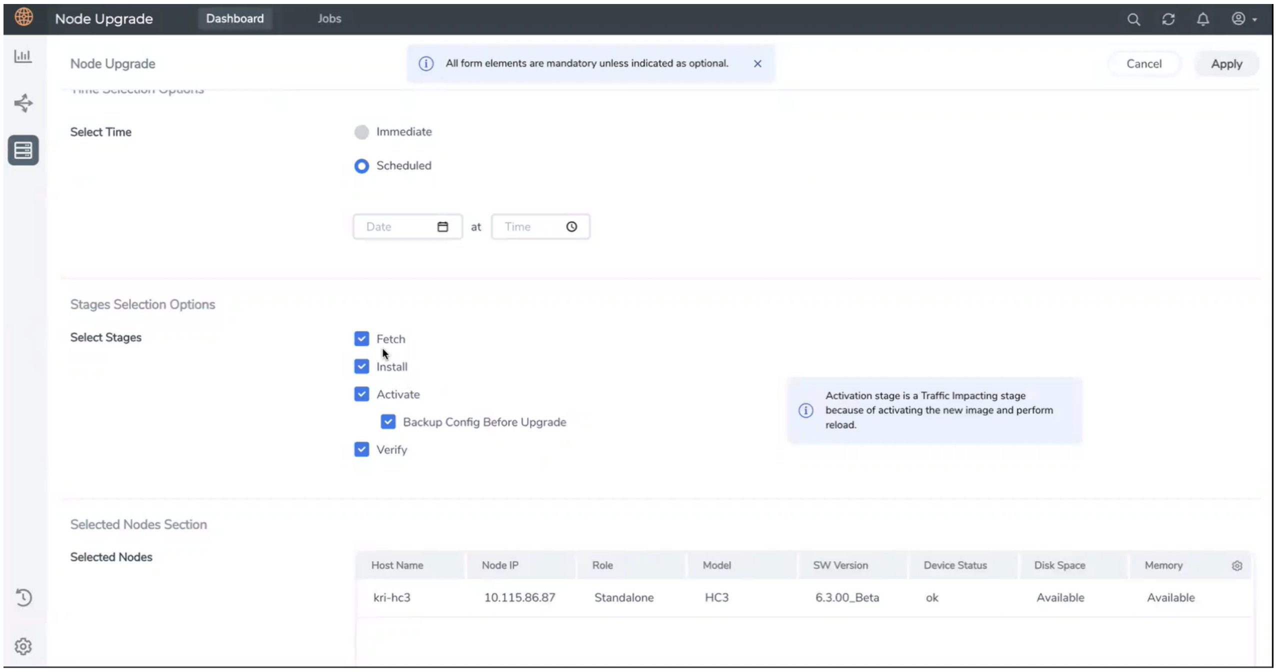
CLUSTER ID	TAGS	HOST NAME	NODE ADDRESS	FETCH	INSTALL	ACTIVATE	VERIFY	TASK STATUS
		gigamon-b5a...	10.115.46.51	✓	✓	3	4	Success
		kri-hc3	10.115.86.87	✓	2	3	4	InProgress
		gigamon-b5c...	10.115.86.121	1	2	3	4	Not Initiated
[redacted]		gigamon-b5bf...	10.115.86.252	1	2	3	4	Not Initiated
[redacted]		gigamon-b50...	10.115.86.113	1	2	3	4	Not Initiated
[redacted]		gigamon-b51...	10.115.86.91	1	2	3	4	Not Initiated

   FM Instance: GigaVUE-FM
   Last Updated At: Jun 20, 2023 17:29:19

   Once you select all nodes across all pages, you cannot deselect individual nodes. Use the **Clear** button to clear the selection.

   > **NOTE:** If the number of filtered nodes exceeds 600, then this option will be disabled.

4. Click **Actions** and select **Upgrade**. The Node Upgrade page appears.



All form elements are mandatory unless indicated as optional.

Select Time
○ Immediate
● Scheduled

Date at Time

Stages Selection Options

Select Stages
☑ Fetch
☑ Install
☑ Activate
  ☑ Backup Config Before Upgrade
☑ Verify

Activation stage is a Traffic Impacting stage because of activating the new image and perform reload.

Selected Nodes Section

Selected Nodes

Host Name	Node IP	Role	Model	SW Version	Device Status	Disk Space	Memory
kri-hc3	10.115.86.87	Standalone	HC3	6.3.00_Beta	ok	Available	Available

5. Select or enter the following details:

Table 1: Image Upgrade

Menu	Description
Task Name	The name of the upgrade task.
Task Type	Type of upgrade task. For this release version, only software option is supported.
Image Server Type	The location from where the image can be uploaded. Available options are: ● **Internal Server** ● **External Server**
- Internal Server	**Internal Server**: If you select Internal Server, GigaVUE-FM acts as the internal server. You must have downloaded the images from the Gigamon website and placed them from where they can be available for uploading to GigaVUE-FM. Refer to the "Images" section in the *GigaVUE Administration Guide* for details. **NOTE:** To obtain software images, register on the Gigamon Customer Portal and download the software. You must provide the serial number for each node you want to update. To view the chassis serial number, login to GigaVUE-OS and select **Chassis** from the navigation pane. Click **List View**. **1.** Choose Internal Server. **2.** From the Version drop-down list, select the version to which you want to upgrade. **3.** Select the required image file. If the image file is missing, click **Upload image** button. In the Upload Internal Images Files

Menu	Description
	quick view, click **Choose File** and select the image files that you downloaded. Click **OK**
- External Server	**External Server**: From the drop-down list, select the external image server added to GigaVUE-FM. If the external image server is not available, click **Add External Server.** In the Add External Server quick view, enter the following: **a.** In the **Alias** field, enter the name of the external server. **b.** In the **Server IP/Hostname** field, enter the host IP address or the host name of the server. **c.** In the Type drop-down list, select SCP as the file transfer protocol. **d.** Enter the username and password of the server in the **Username** and **Password** fields respectively. **e.** Click **Ok**. **f.** In the text box, enter the image path and the image name. **NOTE:** For a cluster, the images can reside on different paths. However, the image server should be the same for all the nodes.
Time	The time for performing the upgrade. There are two options: ● **Immediate**—The upgrade is performed immediately. ● **Scheduled**—The upgrade is performed at a scheduled time. Select the date and time.
Select Stages	Select the required stage for performing the upgrade.
- Fetch	The image file is downloaded from the selected image server. ● If the image file is placed in the internal server, the image is pushed to the device from the GigaVUE-FM instance. ● If the image file is placed in the external server, the device pulls the image from the external server.
- Install	Installs the image file on the device. When you install a new image, it automatically installs on the “next” partition (the one that is not currently being used). **NOTE:** Boot next is not set at this stage. Therefore, any unplanned device reboot that happens outside the context of orchestrated device upgrade after the execution of **Install** stage and prior to the execution of **Activate** stage will not load the new image.
- Activate	The Activate stage involves the following: ● GigaVUE-FM sets the boot next variable. ● Device is reloaded with the new installed image. ● The uboot/coreboot install is performed after the device has been reloaded. ● GigaVUE-FM checks the software version of the device with the image version installed on the device. Device upgrade will succeed only if the device software version is lower than the installed image version. **NOTE:** Traffic flow is interrupted in this stage. You cannot perform any operation on the device at this stage.

Menu	Description
	Enable the **Backup Config Before Upgrade** checkbox to perform a backup of the device configuration before the device is rebooted.
- **Verify**	Performs upgrade sanity check on the selected devices. This includes the following tasks: ● Physical inventory snapshot of nodes, cards, ports, maps, and GigaSMART operations are captured and the numbers from before and after the upgrade are compared. Sometimes, these numbers do not match immediately after the upgrade, as the device is still being configured. ● GigaVUE-FM checks every minute whether the nodes have re-joined the cluster. If the nodes fail to rejoin the cluster with in 15 minutes, sanity check will fail. ● After the nodes join the cluster, GigaVUE-FM again checks every minute for other configuration objects to come up. The config snapshot taken prior to and after the upgrade must match with in 15 minutes. Otherwise, sanity check will fail. When the sanity check fails, GigaVUE-FM provides an ability to view the configuration object that failed the sanity check.
Selected Nodes section	You can view the list of nodes selected for the upgrade task. This section provides an overview of the nodes/cluster health status, available disk space and memory information.

6. Click **Apply** to start the upgrade.

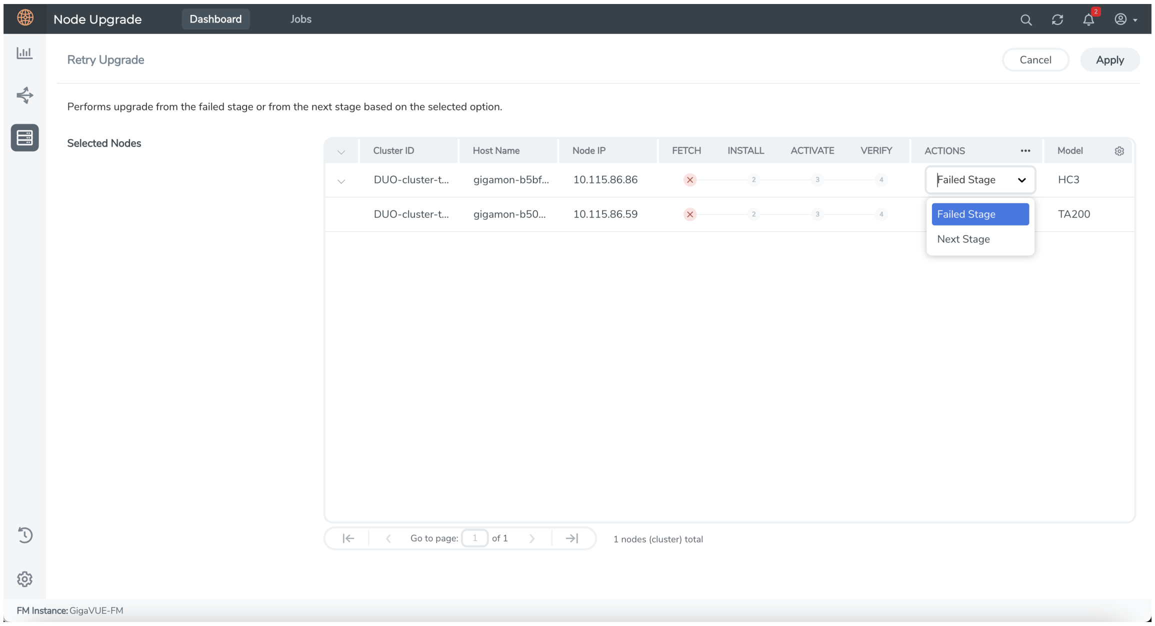
Device upgrade is initiated. You can view the status of the upgrade from the following pages:

- Dashboard page. Refer to the View Upgrade Status section for details.
- Jobs page. Refer to the View Orchestrated Upgrade Tasks section for details.

Upgrade Control Options

Use the following buttons in the Node Upgrade Dashboard page to perform specific actions:

Button	Description
Actions	Select the required nodes and clusters. Click the **Actions** drop-down to perform the following actions:
	Upgrade: Use to upgrade the standalone nodes and clusters.
	Resume Upgrade: Use to resume the upgrade operation after a specific stage is completed.
	Retry: Use to retry the orchestrated upgrade. You can retry from failed stage or from the next stage.



Performs upgrade from the failed stage or from the next stage based on the selected option.

Cluster ID	Host Name	Node IP	FETCH	INSTALL	ACTIVATE	VERIFY	ACTIONS	Model
DUO-cluster-t...	gigamon-b5bf...	10.115.86.86	✕	2	3	4	Failed Stage	HC3
DUO-cluster-t...	gigamon-b50...	10.115.86.59	✕	2	3	4		TA200

- **Retry from failed stage**: In case of problems during the upgrade process, rectify the problem and select this option to proceed with upgrade from the current stage. Refer to the following examples:

  Example 1: The image fetch stage may fail due to insufficient free storage space on the device. You can manually delete unnecessary files on the device such as device sysdumps, and then retry the image fetch stage again.

  Example 2: The post-upgrade verify stage may fail due to unrelated maintenance work causing some ports to be link status down. You can manually resolve this issue, then retry the post-upgrade verify stage to confirm a successful orchestrated upgrade.

- **Retry from next stage**: If a specific operation cannot be performed from GigaVUE-FM (due to certain reasons), then the user can complete those tasks using device CLI, and select **Retry from Next Stage** in GigaVUE-FM. Refer to the following examples:

  Example: The activate stage fails after the device has started rebooting due to an unrelated network issue. This causes the device to be unreachable from GigaVUE-FM and a device timeout is detected. You can either manually resolve the network issue, or wait until it is resolved, and then use Retry from Next Stage to run the verify stage once the network path is restored.

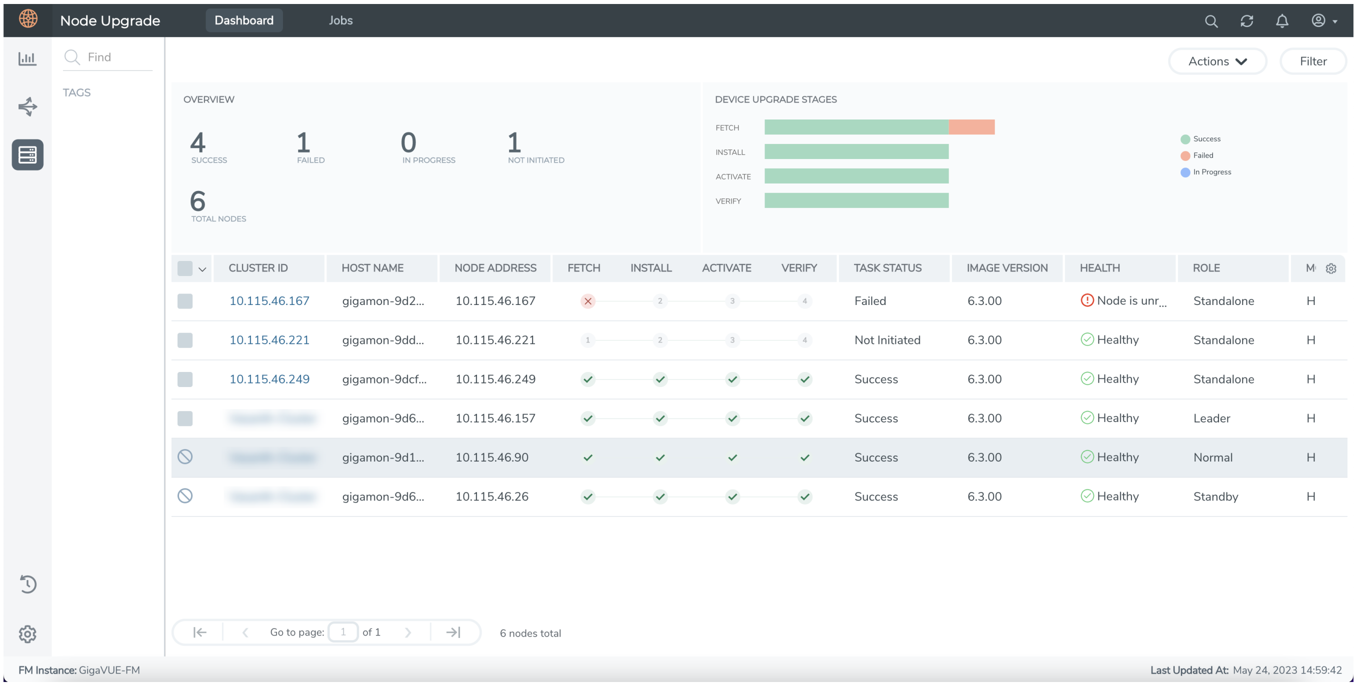
NOTE: Ensure to manually resolve the current stage before using the **Retry from Next Stage** option.

- **Reset:** Removes current upgrade settings in GigaVUE-FM. Clicking the **Reset** button does not reset or reload the device. The device will also not be rolled back to the previous software version.

	Use the **Reset** button to clear the existing upgrade for the cluster. The Reset button does the following: • Clears the stage flags in summary screen • Marks the current on-going upgrade on the cluster as completed. • Releases the maintenance mode, if it is set. • Clears out the alarms raised for upgrade failure, if any.
Filter	Use to filter the nodes based on the following criteria: • Software Version • Task Status • Health Status • Role • Cluster ID • Host Name • Node IP • Serial Number

View Upgrade Status

You can view the status of the upgrade from the Dashboard page.


Node Upgrade
Dashboard
Jobs
Find
TAGS
Actions
Filter
OVERVIEW
4 SUCCESS
1 FAILED
0 IN PROGRESS
1 NOT INITIATED
6 TOTAL NODES
DEVICE UPGRADE STAGES
FETCH
INSTALL
ACTIVATE
VERIFY
Success
Failed
In Progress
Go to page: 1 of 1
6 nodes total
FM Instance: GigaVUE-FM
Last Updated At: May 24, 2023 14:59:42

☐	CLUSTER ID	HOST NAME	NODE ADDRESS	FETCH	INSTALL	ACTIVATE	VERIFY	TASK STATUS	IMAGE VERSION	HEALTH	ROLE	M
☐	10.115.46.167	gigamon-9d2...	10.115.46.167	✕	2	3	4	Failed	6.3.00	Node is unr...	Standalone	H
☐	10.115.46.221	gigamon-9dd...	10.115.46.221	1	2	3	4	Not Initiated	6.3.00	Healthy	Standalone	H
☐	10.115.46.249	gigamon-9dcf...	10.115.46.249	✓	✓	✓	✓	Success	6.3.00	Healthy	Standalone	H
☐	[redacted]	gigamon-9d6...	10.115.46.157	✓	✓	✓	✓	Success	6.3.00	Healthy	Leader	H
⃠	[redacted]	gigamon-9d1...	10.115.46.90	✓	✓	✓	✓	Success	6.3.00	Healthy	Normal	H
⃠	[redacted]	gigamon-9d6...	10.115.46.26	✓	✓	✓	✓	Success	6.3.00	Healthy	Standby	H

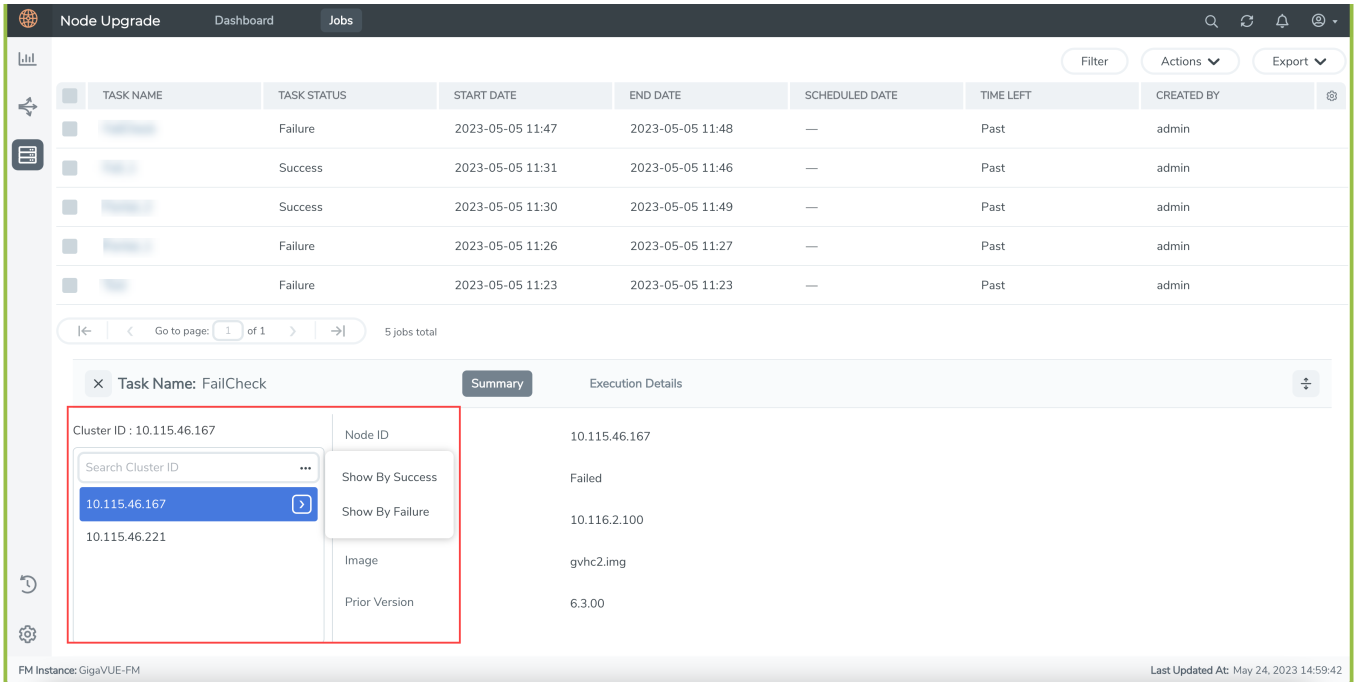
The Dashboard page provides the following details:

- The **Overview** tab displays the metrics on the number of nodes that got upgraded successfully, number of nodes that failed to upgrade, number of nodes that are in the upgrade progress, and the total number of nodes. Click on the number to filter the devices in the table below.
- The **Device Upgrade Stages** tab is a graphical representation of the number of nodes that are in the various upgrade stages. Hover over the horizontal bars to know the status of the upgrade. Click on the bar to filter the nodes based on the criteria.
- Click on a Cluster-id in the Dashboard page. The page split view appears with the Summary and Execution Timeline tabs at the bottom of the page.
  - **Summary**: Displays details of the current upgrade process.
  - **Execution Timeline**: Displays details about the past three upgrades on the selected node.

View Orchestrated Upgrade Tasks

Whenever an upgrade is triggered, a job runs in the background and is captured in the Jobs page. The Jobs page displays the list of the tasks scheduled from the Node Upgrade page and provides details on the status of the tasks.

Parameters	Description
Task Name	Name of the task
Task Status	Status of the task
Start Date	Date and time the task was started
End Date	Date and time the task ended
Scheduled Date	Date when the task was scheduled.
Time Left	Date when the task was scheduled.
Created By	Date when the task was scheduled.



☐	TASK NAME	TASK STATUS	START DATE	END DATE	SCHEDULED DATE	TIME LEFT	CREATED BY
☐	[redacted]	Failure	2023-05-05 11:47	2023-05-05 11:48	—	Past	admin
☐	[redacted]	Success	2023-05-05 11:31	2023-05-05 11:46	—	Past	admin
☐	[redacted]	Success	2023-05-05 11:30	2023-05-05 11:49	—	Past	admin
☐	[redacted]	Failure	2023-05-05 11:26	2023-05-05 11:27	—	Past	admin
☐	[redacted]	Failure	2023-05-05 11:23	2023-05-05 11:23	—	Past	admin

5 jobs total

Task Name: FailCheck

Cluster ID : 10.115.46.167

10.115.46.167

10.115.46.221

Node ID	10.115.46.167
	Failed
	10.116.2.100
Image	gvhc2.img
Prior Version	6.3.00

FM Instance: GigaVUE-FM

Last Updated At: May 24, 2023 14:59:42

Click on a task to view the following details:

- **Summary**: Displays upgrade summary details of the nodes/clusters associated with the selected task. Click the ellipses in the node selector pane and select the **Show by Success** and **Show by Failure** options to further narrow down the nodes based on the upgrade status.
- **Execution Details**: Displays execution state details with time stamp for the standalone nodes/cluster member nodes.

Jobs Control Options

Use the following buttons in the Jobs page to perform specific actions:

Button	Description
Filter	Use to filter the tasks based on the following criteria: ● Task Name ● Task status ● Start Date ● End Date Click the **Clear** button to clear the filter.
Actions	Select the required tasks in the Jobs page. Click **Actions** > **Delete** to delete the tasks.
Export	Use to export all the tasks or selected tasks as a CSV or XLSX file.

Credentials for Admin Account on New GigaVUE-OS Systems

All GigaVUE HC Series and TA Series devices shipped have the following default login credentials:

- Username: admin
- Password: admin123A!

Downgrading GigaVUE-OS Nodes

IMPORTANT: It is highly recommended to **not** downgrade GigaVUE nodes from higher software versions to lower software versions.

When downgrading a node from 6.0.00 or higher to lesser than 6.0.00 software version, the device can occasionally get in to in a reboot loop. Use the following procedure to exit from the reboot loop:

1. Use the **`reset factory all`** command on the specific node that is to be downgraded to a lower version.
2. Replace the image in the next partition with the image of the required version to be downloaded. This prevents the script file from wrongly fetching the template file from the next version.

After resetting the node, if the node gets stuck in reboot loop:

- Modify the kernel param by pressing “ESC” key while the node boots up.
- Press “e” to edit kernel param.
- Modify the rw to “ro”.

kernel /vmlinuz ro root=/dev/sda5 img_id=1 loglevel=3 panic=10 pci=noaer mem=34668M memmap=2176M$1920M console=tty0 console=ttyS0,115200n8 pcie_aspm=off

Additional Sources of Information

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

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

Documentation

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

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

Table 1: Documentation Set for Gigamon Products

GigaVUE-OS 6.6 Hardware and Software Guides
DID YOU KNOW? If you keep all PDFs for a release in common folder, you can easily search across the doc set by opening one of the files in Acrobat and choosing **Edit > Advanced Search** from the menu. This opens an interface that allows you to select a directory and search across all PDFs in a folder.
Hardware how to unpack, assemble, rack-mount, connect, and initially configure ports the respective GigaVUE-OS devices; reference information and specifications for the respective GigaVUE-OS devices
GigaVUE-HC1 Hardware Installation Guide
GigaVUE-HC3 Hardware Installation Guide
GigaVUE-HC1-Plus Hardware Installation Guide
GigaVUE-HCT Hardware Installation Guide
GigaVUE-TA25 Hardware Installation Guide
GigaVUE-TA25E Hardware Installation Guide
GigaVUE-TA100 Hardware Installation Guide
GigaVUE-TA200 Hardware Installation Guide

GigaVUE-OS 6.6 Hardware and Software Guides
GigaVUE-TA200E Hardware Installation Guide
GigaVUE-TA400 Hardware Installation Guide
GigaVUE-OS Installation Guide for DELL S4112F-ON
G-TAP A Series 2 Installation Guide
GigaVUE M Series Hardware Installation Guide
GigaVUE-FM Hardware Appliances Guide
Software Installation and Upgrade Guides
GigaVUE-FM Installation, Migration, and Upgrade Guide
GigaVUE-OS Upgrade Guide
GigaVUE V Series Migration Guide
Fabric Management and Administration Guides
GigaVUE Administration Guide covers both GigaVUE-OS and GigaVUE-FM
GigaVUE Fabric Management Guide how to install, deploy, and operate GigaVUE-FM; how to configure GigaSMART operations; covers both GigaVUE-FM and GigaVUE-OS features
Cloud Guides how to configure the GigaVUE Cloud Suite components and set up traffic monitoring sessions for the cloud platforms
GigaVUE V Series Applications Guide
GigaVUE V Series Quick Start Guide
GigaVUE Cloud Suite Deployment Guide - AWS
GigaVUE Cloud Suite Deployment Guide - Azure
GigaVUE Cloud Suite Deployment Guide - OpenStack
GigaVUE Cloud Suite Deployment Guide - Nutanix
GigaVUE Cloud Suite Deployment Guide - VMware (ESXi)
GigaVUE Cloud Suite Deployment Guide - VMware (NSX-T)
GigaVUE Cloud Suite Deployment Guide - Third Party Orchestration
Universal Cloud Tap - Container Deployment Guide
Gigamon Containerized Broker Deployment Guide

GigaVUE-OS 6.6 Hardware and Software Guides
GigaVUE Cloud Suite for Nutanix Guide—GigaVUE-VM Guide
GigaVUE Cloud Suite Deployment Guide - AWS Secret Regions
GigaVUE Cloud Suite Deployment Guide - Azure Secret Regions
Reference Guides
GigaVUE-OS CLI Reference Guide library of GigaVUE-OS CLI (Command Line Interface) commands used to configure and operate GigaVUE HC Series and GigaVUE TA Series devices
GigaVUE-OS Security Hardening Guide
GigaVUE Firewall and Security Guide
GigaVUE Licensing Guide
GigaVUE-OS Cabling Quick Reference Guide guidelines for the different types of cables used to connect Gigamon devices
GigaVUE-OS Compatibility and Interoperability Matrix compatibility information and interoperability requirements for Gigamon devices
GigaVUE-FM REST API Reference in GigaVUE-FM User's Guide samples uses of the GigaVUE-FM Application Program Interfaces (APIs)
Release Notes
GigaVUE-OS, GigaVUE-FM, GigaVUE-VM, G-TAP A Series, and GigaVUE Cloud Suite Release Notes new features, resolved issues, and known issues in this release ; important notes regarding installing and upgrading to this release **NOTE:** Release Notes are not included in the online documentation. **NOTE:** Registered Customers can log in to My Gigamon to download the Software and Release Notes from the Software and Docs page on to My Gigamon. Refer to How to Download Software and Release Notes from My Gigamon.
In-Product Help
GigaVUE-FM Online Help how to install, deploy, and operate GigaVUE-FM.

How to Download Software and Release Notes from My Gigamon

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

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

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

1. Log in to My Gigamon.
2. Click on the **Software & Release Notes** link.
3. Use the **Product** and **Release** filters to find documentation for the current release. For example, select Product: "GigaVUE-FM" and Release: "6.6," enter "pdf" in the search box, and then click **GO** to view all PDF documentation for GigaVUE-FM 6.6.xx.

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

Documentation Feedback

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

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

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

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

Contact Technical Support

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

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

Email Technical Support at support@gigamon.com.

Contact Sales

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

Telephone: +1.408.831.4025

Sales: inside.sales@gigamon.com

Partners: www.gigamon.com/partners.html

Premium Support

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

The VÜE Community

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

Visit the VÜE Community site to:

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

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

Register today at community.gigamon.com

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

Glossary

D

decrypt list

need to decrypt (formerly blacklist)

decryptlist

need to decrypt - CLI Command (formerly blacklist)

drop list

selective forwarding - drop (formerly blacklist)

F

forward list

selective forwarding - forward (formerly whitelist)

L

leader

leader in clustering node relationship (formerly master)

M

member node

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

N

no-decrypt list

no need to decrypt (formerly whitelist)

nodecryptlist

no need to decrypt- CLI Command (formerly whitelist)

P

primary source

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

R

receiver

follower in a bidirectional clock relationship (formerly slave)

S

source

leader in a bidirectional clock relationship (formerly master)