



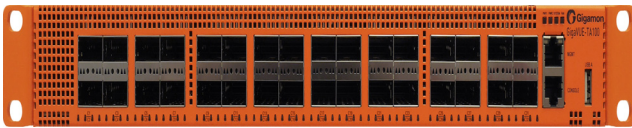
GigaVUE-TA10



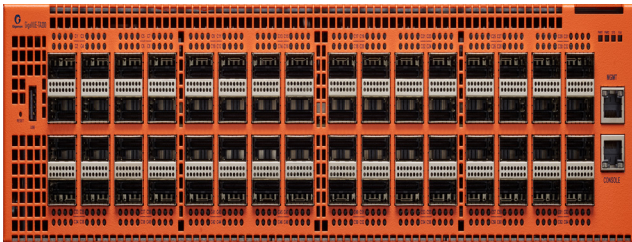
GigaVUE-TA40



GigaVUE-TA100



GigaVUE-TA200



GigaVUE-HC1



GigaVUE-HC2



GigaVUE-HC3



GigaVUE-OS Upgrade Guide

GigaVUE-OS 5.7.00

Document Version: 2.0 (*Change Notes*)

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DOCUMENT REVISION – 5/26/20

Change Notes

When a document is updated, the document revision number on the cover page will indicate a new revision number, the Document Revision date is updated on the title page, and this table will describe what changed.

Rev	Date	Change
1.0	08/02/2019	Original release of document with the 5.7.00 release.
2.0	05/22/2020	<ul style="list-style-type: none">Removed HD references and updated the upgrade path for GigaVUE-HC2 devices in <i>Upgrade Summary/Path – Standalone Nodes</i> on page 9.Removed HD references in <i>Separate Software Images for Different Nodes</i> on page 8.Removed HD references from the 5.7.00 software version section of the <i>Bootloader Code by GigaVUE-OS Release</i> on page 13.Replaced hdd57xx image file name with hc1_57xx file name in the examples in <i>Install the Software Image</i> on page 21.

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GigaVUE-OS Upgrade

This chapter describes how to upgrade GigaVUE H Series and GigaVUE TA Series nodes to the GigaVUE-OS 5.7.xx release. Refer to the following sections for details:

- [Before You Begin – Required Items on page 7](#)
- [Upgrade Summary/Path – Standalone Nodes on page 9](#)
- [Upgrade Summary – Clustered Nodes on page 10](#)
- [Bootloader Code by GigaVUE-OS Release on page 13](#)
- [Gateway Ports Converted to Tool Ports on page 16](#)
- [GigaVUE TA Series Licenses on page 17](#)

Before You Begin – Required Items

Use this upgrade guide to upgrade to software version 5.7.xx. This guide is for nodes running the previous General Availability (GA) releases or the previous Long Term Support (LTS) release, which is 5.4.xx.

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://gigamoncp.force.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 customer portal. Note the filenames in [Table 0-2](#).

NOTE: For installing GigaVUE-OS on a white box, follow the instructions highlighted in the *GigaVUE-OS Installation Guide on a White Box*.

Table 0-1: Software Image Filenames Unique to the Node

Control Card or Node	Required Items	Description
GigaVUE-HC1	hc1_57xx.img	Binary image file containing the updated software for the GigaVUE-HC1. The xx indicates the exact build number.
GigaVUE-HC2	hc2_57xx.img	Binary image file containing the updated software for the GigaVUE-HC2. The xx indicates the exact build number.
GigaVUE-HC3	hc3_57xx.img	Binary image file containing the updated software for the GigaVUE-HC3. The xx indicates the exact build number.
GigaVUE-TA1	ta1_57xx.img	Binary image file containing the updated software for the GigaVUE-TA1. The xx indicates the exact build number.
GigaVUE-TA10	ta10_57xx.img	Binary image file containing the updated software for the GigaVUE-TA10. The xx indicates the exact build number.
GigaVUE-TA40	ta40_57xx.img	Binary image file containing the updated software for the GigaVUE-TA40. The xx indicates the exact build number.
GigaVUE-TA100	ta100_57xx.img	Binary image file containing the updated software for the GigaVUE-TA100. The xx indicates the exact build number.
GigaVUE-TA100-CXP	tacx100_57xx.img	Binary image file containing the updated software for the GigaVUE-TA100-CXP. The xx indicates the exact build number.
GigaVUE-TA200	ta200_57xx.img	Binary image file containing the updated software for the GigaVUE-TA200. 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 5.7.xx:

Table 0-2: Required Items for System Upgrade

Node Type/ Version	Protocols	Description
All	FTP, TFTP, SFTP, SCP, HTTP, HTTPS, or USB	<p>You will need to fetch the GigaVUE nodes' software packages from a file server using one of the supported protocols.</p> <p>NOTE: Only the GigaVUE-HC1, GigaVUE-HC3, GigaVUE-TA100, GigaVUE-TA100CXP, and GigaVUE-TA200 support the USB parameter.</p> <p>The GigaVUE nodes will need the file server's IP address so that it can connect to the server and download the image.</p> <p>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.</p> <p>You can also upload a new software build directly from your PC using H-VUE.</p>

Upgrade Summary/Path – Standalone Nodes

Use the procedures in this chapter to upgrade GigaVUE H Series and GigaVUE TA Series nodes to GigaVUE-OS 5.7.xx.

NOTE: All upgrades start and end by saving the node's configuration with the **write memory** command.

NOTE: Before any upgrade, save your current configuration.

Refer to [Upgrade Summary – Clustered Nodes on page 10](#) for considerations when upgrading nodes in a cluster.

Table 0-3: GigaVUE-OS Upgrade Summary from Different Software Versions

Starting Version	GigaVUE TA Series Upgrade Summary	GigaVUE-HC1/GigaVUE-HC2/GigaVUE-HC3 Upgrade Summary
From 5.6.xx to 5.7.xx	<p>GigaVUE TA Series nodes running 5.6.xx can be upgraded directly to a 5.7.xx release using the following procedure:</p> <ol style="list-style-type: none"> Delete all available image files using the image delete <filename.img> command. Use the show images command to display the existing image filenames. Fetch and install the 5.7.xx software image (based on the node information) and bootloader, set next boot, and reload. 	<p>GigaVUE-HC1, GigaVUE-HC2, and GigaVUE-HC3 nodes running 5.6.xx can be upgraded directly to a 5.7.xx release using the following procedure:</p> <ol style="list-style-type: none"> Delete all available image files using the image delete <filename.img> command. Use the show images command to display the existing image filenames. Fetch and install 5.7.xx software image and bootloader, set next boot, and reload.
From 5.5.xx to 5.7.xx¹	The recommended upgrade path is 5.5.xx > 5.6.xx > 5.7.xx.	The recommended upgrade path is 5.5.xx > 5.6.xx > 5.7.xx.
From 5.4.xx to 5.7.xx¹	The recommended upgrade path is 5.4.xx > 5.7.xx.	<p>The recommended upgrade path is 5.4.xx > 5.7.xx.</p> <p>For GigaVUE-HC2, the recommended upgrade path is 5.4.xx > 5.6.xx > 5.7.xx.</p>

Table 0-3: GigaVUE-OS Upgrade Summary from Different Software Versions

Starting Version	GigaVUE TA Series Upgrade Summary	GigaVUE-HC1/GigaVUE-HC2/GigaVUE-HC3 Upgrade Summary
From 5.3.xx to 5.7.xx¹	The recommended upgrade path is 5.3.xx > 5.4.xx > 5.7.xx.	The recommended upgrade path is 5.3.xx > 5.4.xx > 5.7.xx. For GigaVUE-HC2, the recommended upgrade path is 5.3.xx > 5.4.xx > 5.6.xx > 5.7.xx.
From 5.2.xx to 5.7.xx¹	The recommended upgrade path is 5.2.xx > 5.3.xx > 5.4.xx > 5.7.xx.	The recommended upgrade path is 5.2.xx > 5.3.xx > 5.4.xx > 5.7.xx. For GigaVUE-HC2, the recommended upgrade path is 5.2.xx > 5.3.xx > 5.4.xx > 5.6.xx > 5.7.xx.
From 5.1.xx to 5.7.xx¹	The recommended upgrade path is 5.1.xx > 5.4.xx > 5.7.xx.	The recommended upgrade path is 5.1.xx > 5.4.xx > 5.7.xx. For GigaVUE-HC2, the recommended upgrade path is 5.1.xx > 5.4.xx > 5.6.xx > 5.7.xx.
From pre-5.1.xx to 5.7.xx¹	The recommended upgrade path is pre-5.1.xx > 5.1.xx > 5.4.xx > 5.7.xx.	The recommended upgrade path is pre-5.1.xx > 5.1.xx > 5.4.xx > 5.7.xx. For GigaVUE-HC2, the recommended upgrade path is pre-5.1.xx > 5.1.xx > 5.4.xx > 5.6.xx > 5.7.xx.

¹Refer to the GigaVUE-OS Upgrade Guides of the respective versions (GigaVUE H Series Upgrade Guide or GigaVUE TA Series Upgrade Guide) for details.

NOTE: Upgrades of the GigaVUE-HC1, GigaVUE-HC2, and GigaVUE-HC3 can skip all steps related to Control Card Version 2.

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 master node has completed the image upgrade.

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

To add a GigaVUE TA Series node to a cluster, apply the Advanced Features License to each GigaVUE TA Series node either using the CLI or H-VUE prior to adding the node to a cluster.

NOTE: Instructions to obtain and apply the licenses are available in the *GigaVUE TA Series Hardware Installation Guide*. White boxes with the same version of GigaVUE-OS software can also be added to a cluster.

Licensing for Clustered Nodes in GigaVUE-OS

The license required for the clustering feature is Advanced Features License (AD_Features).

- When upgrading to GigaVUE-OS v5.7.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 5.7.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 master node, fetch and install 5.7.xx software image and bootloader, and set the next boot.

IMPORTANT: Do not reload the nodes as you upgrade them.

4. Use the **cluster reload** command from the master 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, it is possible that a new physical node will claim the master role. Use the **show cluster global brief** command to determine the roles used by each node in the cluster. If you want to transfer the master role to the current standby node, use the **cluster master yield** command.

5. After completing the upgrade, run the **show version** command on each node in the cluster to make sure they are all running a 5.7.xx build. If any node does not show the correct version number, upgrade it individually.

Figure 0-1 summarizes the cluster upgrade sequence.

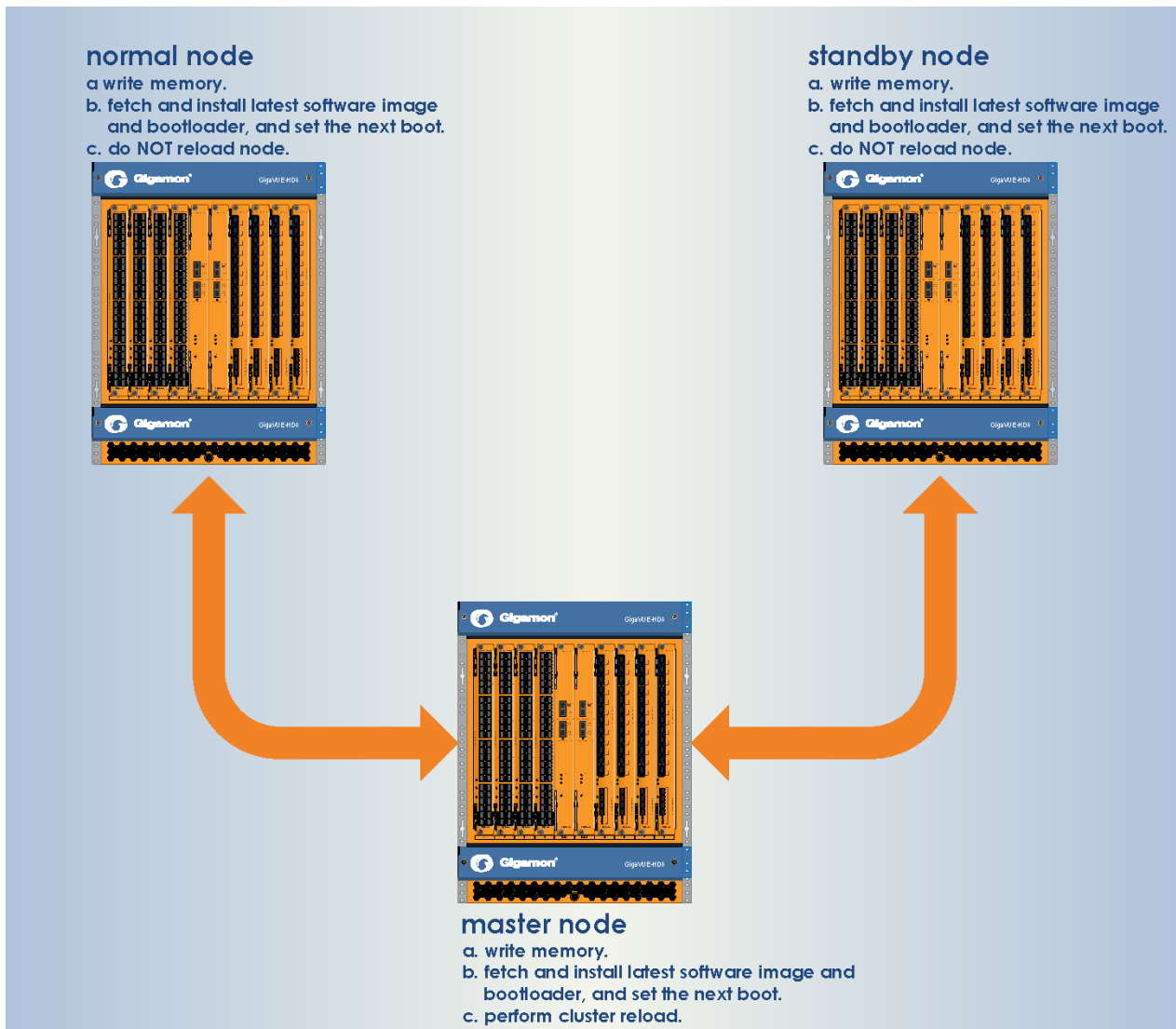


Figure 0-1: Cluster Upgrade Summary

Adding a New Node to an Existing Cluster

Before adding a new node to a cluster, make sure you upgrade it to the same major and minor version the other nodes in the cluster are running. All nodes in the cluster must run the same major and minor version for successful operations.

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

Bootloader Code by GigaVUE-OS Release

The following table summarizes the version of bootloader code associated with each GigaVUE 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
5.7.00	GV-HC1	hc1_5700.img	N/A*	N/A*
	GV-HC2	hc2_5700.img	hc2_5500.bin	2011.06.9
	GV-HC3	hc3_5700.img	N/A*	N/A*
	GV-TA10	ta10_5700.img	ta10_5500.bin	2014.01.01
	GV-TA40	ta40_5700.img	ta40_5500.bin	2014.01.01
	GV-TA100	ta100_5700.img	N/A*	N/A*
	GV-TA100-CXP	tacx100_5700.img	N/A*	N/A*
	GV-TA200	ta200_5700.img	N/A**	N/A**
5.6.00	GV-HC1	hc1_5600.img	N/A*	N/A*
	GV-HC2	hc2_5600.img	hc2_5500.bin	2011.06.9
	GV-HC3	hc3_5600.img	N/A*	N/A*
	GV-TA10	ta10_5600.img	ta10_5500.bin	2014.01.01
	GV-TA40	ta40_5600.img	ta40_5500.bin	2014.01.01
	GV-TA100	ta100_5600.img	N/A*	N/A*
	GV-TA100-CXP	tacx100_5600.img	N/A*	N/A*
	GV-TA200	ta200_5600.img	N/A**	N/A**
5.5.00	GV-HC1	hc1_5500.img	N/A*	N/A*
	GV-HC2	hc2_5500.img	hc2_5500.bin	2011.06.9
	GV-HC3	hc3_5500.img	N/A*	N/A*
	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	2014.01.01
	GV-TA40	ta40_5500.img	ta40_5500.bin	2014.01.01
	GV-TA100	ta100_5500.img	N/A*	N/A*
	GV-TA100-CXP	tacx100_5500.img	N/A*	N/A*
	GV-TA200	ta200_5500.img	N/A**	N/A**

SW Version	Node Type	Software Image Filename	Bootloader Filename	Bootloader Version
5.4.00	GV-HB1	hb1_5400.img	hb1_5400.bin	2010.06.5
	GV-HC1	hc1_5400.img	N/A*	N/A*
	GV-HC2	hc2_5400.img	hc2_5400.bin	2011.06.9
	GV-HC3	hc3_5400.img	N/A*	N/A*
	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	2014.01.01
	GV-TA40	ta40_5400.img	ta40_5400.bin	2014.01.01
	GV-TA100	ta100_5400.img	N/A*	N/A*
	GV-TA100-CXP	tacx100_5400.img	N/A*	N/A*
	GV-TA200	ta200_5400.img	N/A**	N/A**
5.3.00	GV-HB1	hb1_5300.img	hb1_5300.bin	2010.06.5
	GV-HC1	hc1_5300.img	N/A*	N/A*
	GV-HC2	hc2_5300.img	hc2_5300.bin	2011.06.9
	GV-HC3	hc3_5300.img	N/A*	N/A*
	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
	GV-TA100	ta100_5300.img	N/A*	N/A*
	GV-TA100-CXP	tacx100_5300.img	N/A*	N/A*
	GV-TA200	ta200_5300.img	N/A**	N/A**
5.2.00	GV-HB1	hb1_5200.img	hb1_5200.bin	2010.06.5
	GV-HC1	hc1_5200.img	N/A*	N/A*
	GV-HC2	hc2_5200.img	hc2_5200.bin	2011.06.9
	GV-HC3	hc3_5200.img	N/A*	N/A*
	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
	GV-TA100	ta100_5200.img	N/A*	N/A*
	GV-TA100-CXP	tacx100_5200.img	N/A*	N/A*

SW Version	Node Type	Software Image Filename	Bootloader Filename	Bootloader Version
5.1.00	GV-HB1	hb1_5100.img	hb1_5100.bin	2010.06.5
	GV-HC1	hc1_5100.img	N/A*	N/A*
	GV-HC2	hc2_5100.img	hc2_5100.bin	2011.06.8
	GV-HC3	hc3_5100.img	N/A*	N/A*
	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
	GV-TA100	ta100_5100.img	N/A*	N/A*
	GV-TA100-CXP	tacx100_5100.img	N/A*	N/A*

* GigaVUE-HC1, GigaVUE-HC3, GigaVUE-TA100, and GigaVUE-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-TA100, and GigaVUE-TA100-CXP:

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

SW Version	Node Type	Software Image Filename	Coreboot Version
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

** GigaVUE-TA200 does not have U-boot. They are preloaded with AMI BIOS. The following table summarizes the versions for GigaVUE-TA200:

Table 0-4: AMI BIOS Version for GigaVUE-TA200

SW Version	Node Type	Software Image Filename	AMI BIOS Version
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

Gateway Ports Converted to Tool Ports

During an upgrade to 4.7.xx or higher release (from a prior software version), gateway ports and gateway mirrors are automatically converted to tool ports and tool mirrors.

Refer to the following notes and considerations for GigaVUE TA Series nodes starting in software version 4.7.00 (including GigaVUE-TA10, GigaVUE-TA40, GigaVUE-TA100, and Certified Traffic Aggregation White Box):

- Gateway ports on GigaVUE 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 TA Series nodes can continue to be used to aggregate traffic.
- Tool ports on GigaVUE TA Series nodes can also be used to directly connect to tools, such as firewalls, Intrusion Prevention Systems, or Application Performance Monitors.

- GigaVUE TA Series nodes support network, tool, stack, and hybrid port types.
- Hybrid ports are fully supported in both standalone and cluster mode on GigaVUE TA Series nodes. When a GigaVUE TA Series node is in a cluster, hybrid ports can be configured.
- GigaVUE TA Series nodes can continue to be clustered with GigaVUE H Series nodes. Tool ports are supported on GigaVUE TA Series nodes in a cluster.
- When GigaVUE TA Series nodes are in a cluster, bidirectional traffic flow is enabled on the stack links of GigaVUE TA Series nodes.

GigaVUE TA Series Licenses

There are two types of licenses: Port Licenses and Advanced Features Licenses.

Port Licenses

The GigaVUE-TA10 can have either twenty-four (24) or forty-eight (48) 1Gb/10Gb ports enabled. The 24-port GigaVUE-TA10 is called the GigaVUE-TA10A. A port license is available to expand the GigaVUE-TA10A to include all 48 1Gb/10Gb ports as well as the four (4) 40Gb ports. For details, refer to the *GigaVUE TA Series Hardware Installation Guide*.

On the GigaVUE-TA100, only the first 16 out of 32 ports are enabled. Two port licenses are available to enable an additional 8 or 16 ports to expand to 24 or 32 ports. For details, refer to the *GigaVUE TA Series Hardware Installation Guide*.

On the GigaVUE-TA200, only the first 32 out of 64 ports are enabled. A port license is available to enable an additional 32 ports.

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

Advanced Features Licenses

GigaVUE-TA10 and GigaVUE-TA10A, GigaVUE-TA40, GigaVUE-TA100, and GigaVUE-TA200 nodes require an Advanced Features License to be enabled when clustering with other Gigamon nodes. For details, refer to the *GigaVUE TA Series Hardware Installation Guide*.

NOTE: After an upgrade, licenses may need to be reapplied.

Upgrading GigaVUE Nodes

Use the procedures in this chapter to upgrade GigaVUE H Series and GigaVUE TA Series nodes to GigaVUE-OS 5.7.xx.

To begin, prepare the GigaVUE nodes for upgrade by following the procedure in [Preparing for the Upgrade on page 19](#).

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 5.7.xx, and then upgrade the nodes to 5.7.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.

Preparing for the Upgrade

1. Copy the 5.7.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 upload ftp://myuser:mypass@192.168.1.49/ftp/config.txt

3. Next, follow the procedure: [Upgrading GigaVUE Nodes Using GigaVUE-OS CLI on page 20](#) to upgrade GigaVUE H Series nodes.

Upgrading GigaVUE Nodes Using GigaVUE-OS CLI

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

- [Before You Begin on page 20](#)
- [Install the Software Image on page 21](#)
- [Install U-Boot \(If a Newer Version is Available\) on page 22](#)
- [Install Coreboot \(If a Newer Version is Available\) on page 23](#)
- [Verify Version Numbers on page 23](#)

Before You Begin

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

- [Change Default admin Password on page 20](#)
- [Check Number of Images on page 20](#)
- [Check U-Boot Version on page 21](#)
- [Check Coreboot Version on page 21](#)

Change Default admin Password

Check the password on the **admin** account. If it is the default password (admin123A!), change it.

Starting in software version 4.7.00, the default password on the **admin** account is no longer allowed. If you are using the default password on this account, the best practice is to change it to a non-default password before you upgrade to 4.7.xx or higher release.

When the upgrade to 4.7.xx or higher release 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 H 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 [Bootloader Code by GigaVUE-OS Release on page 13](#) 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 \(If a Newer Version is Available\) on page 22](#).

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-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 [Bootloader Code by GigaVUE-OS Release on page 13](#) 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 \(If a Newer Version is Available\) on page 23](#).

Install the Software Image

1. Log in on the GigaVUE 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 **hc1_57xx** image from the **builds** folder on 192.168.1.25:

```
(config) # image fetch scp://user:password@192.168.1.25/builds/hc1_57xx.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 hc1_57xx.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 node which node image to load at the next system boot. The GigaVUE 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 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 master), reload the cluster using the following CLI command.

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

7. Save the current configuration with the following command:

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

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 *Bootloader Code by GigaVUE-OS Release* on page 13. Use this procedure in particular when you are upgrading from an older software version.

After the image installation of 5.7.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.

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 [Bootloader Code by GigaVUE-OS Release on page 13](#). Use this procedure in particular when you are upgrading from an older software version.

After the image installation of 5.7.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.

Verify Version Numbers

After completing the upgrade to GigaVUE-OS 5.7.xx, run the **show version** command on all upgraded nodes to make sure they are all running a 5.7.xx build. If any node does not show the correct version number, upgrade it individually.

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

This section describes the steps to upgrade the software on GigaVUE 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. G Series nodes can only be upgraded with an external image server. Refer to [Upgrade G Series Node on page 26](#).

NOTE: When using GigaVUE-FM to upgrade software on the nodes, it is imperative that the minimum version on the node be at version 4.3.xx. If the software is not updated to version 4.3.xx, refer to the *H Series Upgrade Guide* and use either the CLI or GigaVUE-FM at the node level to upgrade the node to the latest revision.

Refer to the following sections

- [Before You Begin on page 24](#)
- [Upgrade from an External Image Server on page 25](#)
- [Upgrade G Series Node on page 26](#)
- [Upgrade with GigaVUE-FM as the Image Server on page 28](#)

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. The 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.
- 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 H 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 H 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. Refer to the GigaVUE H Series Upgrade Guide and GigaVUE TA Series Upgrade Guide for the upgrade procedures and to check the bootloader version changes.

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 H series or GigaVUE 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 User’s Guide for instructions on how to enable the physical bypass.

NOTE: Starting in GigaVUE-OS software version 4.7, 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 to software version 4.7 or later 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 nodes and clusters from an image stored on an external server. The image can be transferred from the server to the node using either SCP or TFTP file protocols.

In a cluster configuration, to upgrade the software on the GigaVUE 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 customer portal (<https://gigamoncp.forc.com/gigamoncp/>) 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 H-VUE 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 0-1: Image Upgrade

Menu	Description
Task Name	The name of the upgrade task.
Image Server	<p>The location from where the image can be uploaded.</p> <p>Do the following:</p> <ol style="list-style-type: none">1. For Image Server, choose External Server.2. From the drop-down list, select the external image server added to GigaVUE-FM in Step 1..3. If the external image server is not available, click Add External Server. In the Add External Server quick view, enter the following:<ol style="list-style-type: none">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.4. In the text box, enter the image path and the image name. <p>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.</p>
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	<p>The time for performing the upgrade.</p> <p>There are two options:</p> <ul style="list-style-type: none">• 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.

5. Click **Upgrade**.

Upgrade G Series Node

When upgrading a G Series node from GigaVUE-FM, the Image Upgrade page includes a **File Type** field for specifying the type of file to use for the upgrade. Refer to [Figure 0-1 on page 27](#).

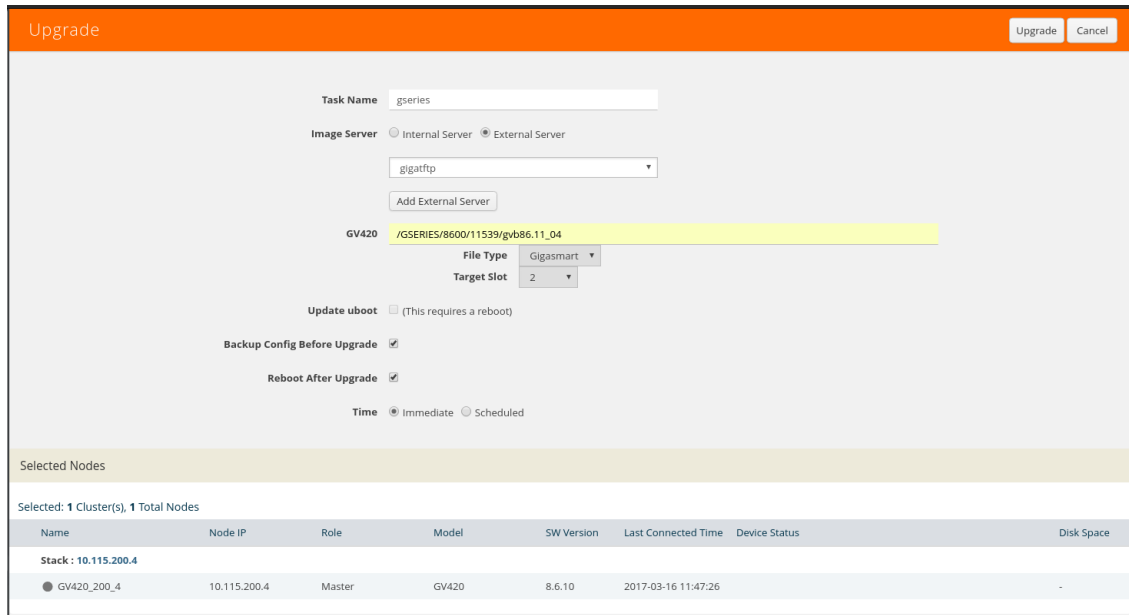
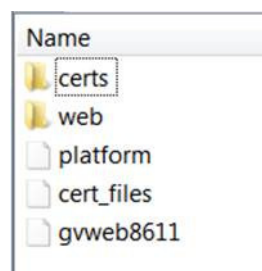


Figure 0-1: Image Upgrade Page for a G Series Node

The possible selections for **File Type** are as follows:

- If you do not make any selection (that is, File Type field is left blank), the CLI image file is used to upgrade the node. The name of the file depends on the model that is being upgraded. The following are example filenames for each model:
 - GV212: gvd8611
 - GV216: gve8611
 - GV420: gvb8611
 - GV2404: gvc8611
- Select **Web** to upgrade the Web server on the node with the Web server image file. Web server image files starts with gwweb. This file is contained in a .tgz file (for example, gwweb8511.tgz) that you must expand on the image serve. After the file is expanded make sure that you have the files and directories shown in the following figure:



- Select **GigaSMART** to upgrade the GigaSMART card on the node with the GigaSMART image file. The GigaSMART image file name starts with gs. For example, gsc86_08_27.tgz. If you select this option, the **Target Slot** field displays (refer to [Figure 0-1 on page 27](#)). Use this field to specify the slot where the GigaSMART card is located.

Upgrade with GigaVUE-FM as the Image Server

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

NOTE: Only H Series and TA Series devices can be upgraded using GigaVUE-FM as the image server. To upgrade G Series devices with GigaVUE-FM, you must use an external server.

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 customer portal (<https://gigamoncp.forc.com/gigamoncp/>) 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 of all the nodes are displayed.

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.

5. Enter the following information:

Table 0-2: Image Upgrade

Menu	Description
Task Name	The name of the upgrade task.
Image Server	<p>The location from where the image can be uploaded.</p> <p>Do the following:</p> <ol style="list-style-type: none">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. <p>NOTE: If there is an image file missing in a cluster configuration, the Image file missing error is displayed.</p>
Backup Config Before Upgrade	The check box to back up the configuration changes prior to performing the upgrade.

Table 0-2: Image Upgrade

Menu	Description
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: <ul style="list-style-type: none">• Immediate—The upgrade is performed immediately.• Scheduled—The upgrade is performed at a scheduled time. Select the date and time.

5. Click **Upgrade**.

NOTE: When the GigaVUE-FM IP address is changed through jump-start configuration, the GigaVUE-FM internal database and in-memory caches are not be updated. The Database continues to have the old GigaVUE-FM IP address, and attempting an image upgrade with the internal server option doesn't work. To fix this, you must restart the GigaVUE-FM.

Additional Sources of Information

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

- [Documentation](#) on page 31
- [Documentation Feedback](#) on page 33
- [Contacting Technical Support](#) on page 33
- [Contacting Sales](#) on page 33
- [The Gigamon Community](#) on page 33

Documentation

[Table A-1](#) lists the documents that are provided for the various Gigamon products. You can download the PDF versions of these documents from the [Gigamon Customer Portal](#).

Table A-1: Documentation Suite for Gigamon Products

Document	Summary
Hardware Installation Guides	
GigaVUE-HC1 Hardware Installation Guide	
GigaVUE-HC2 Hardware Installation Guide	Describes how to unpack, assemble, rack-mount, connect, and perform the initial configuration of the various GigaVUE nodes. Also provides reference information for the respective GigaVUE nodes, including specifications.
GigaVUE-HC3 Hardware Installation Guide	
GigaVUE TA Series Hardware Installation Guide	
GigaVUE-OS Installation Guide on a White Box	Describes how to install the GigaVUE-OS on a white box.
Software Installation and Upgrade Guides	
GigaVUE-FM Installation and Upgrade Guide	Provides instructions for installing GigaVUE-FM on VMware ESXi, MS Hyper-V, and KVM. Also, provides instructions to upgrade GigaVUE-FM.
GigaVUE-OS Upgrade Guide	Describes how to upgrade a GigaVUE H Series node or a GigaVUE TA Series node to the latest GigaVUE-OS.

Document	Summary
Administration Guide	
GigaVUE-OS and GigaVUE-FM Administration Guide	Describes how to use the GigaVUE-FM interface to administer the GigaVUE H Series and GigaVUE TA Series software.
Configuration and Monitoring Guides	
GigaVUE-FM User's Guide	Provides instructions for installing, deploying, and operating the GigaVUE [®] Fabric Manager (GigaVUE-FM).
GigaVUE Cloud Suite for VMware Configuration Guide	Provides instructions for installing, deploying, and operating the GigaVUE [®] Virtual Machine (GigaVUE-VM).
GigaVUE Cloud Suite for AWS Configuration Guide	
GigaVUE Cloud Suite for Azure Configuration Guide	Provides instructions on configuring the GigaVUE Cloud components and setting up traffic monitoring sessions for the respective Cloud platform.
GigaVUE Cloud Suite for OpenStack Configuration Guide	
GigaVUE Cloud Suite for Kubernetes Container Configuration Guide	
GigaVUE Cloud Suite for AnyCloud Configuration Guide	Describes how to deploy the GigaVUE Cloud solution in any of the cloud platforms available in the market.
Reference Guides	
GigaVUE-OS CLI Reference Guide	Describes how to use the CLI (Command Line Interface) to configure and operate the GigaVUE H Series and TA Series software.
GigaVUE-OS Cabling Quick Reference Guide	Provides guidelines to the different types of cables to be used to connect the Gigamon devices as well as connect Gigamon devices to third-party devices.
GigaVUE-OS Compatibility and Interoperability Matrix	Provides information about the compatibility and interoperability requirements for the Gigamon devices.
REST API Getting Started Guide	Introduction to the Application Program Interfaces (APIs) for GigaVUE-FM and provides an overview of these REST APIs, basic work flows, and use cases. The APIs are implemented with the Representational State Transfer (REST) architecture. (Deprecation announcement: This has not been updated since 5.4. The content will be merged into the GigaVUE-FM User's Guide in a subsequent release.)
Release Notes	
GigaVUE-OS, GigaVUE-FM, GigaVUE-VM, and GigaVUE Cloud Suite Release Notes	Summarizes new features, resolved issues, and known issues in this release for GigaVUE-OS, GigaVUE-FM, and GigaVUE Cloud Suite. Also provides important notes regarding installing and upgrading to this release.

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>

Contacting Technical Support

Refer to <http://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.

Premium Support

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

Contacting Sales

Table i shows how to reach the Sales Department at Gigamon.

Table i: Sales Contact Information

Telephone	+1 408.831.4025
Sales	inside.sales@gigamon.com

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