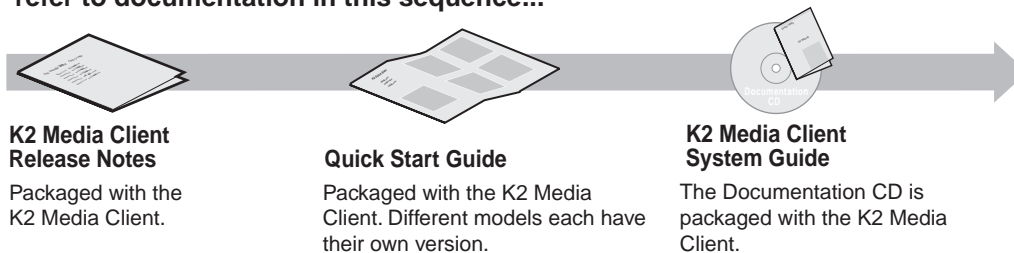# K2 Storage System Version 3.2.58 Release Notes & Upgrade Instructions
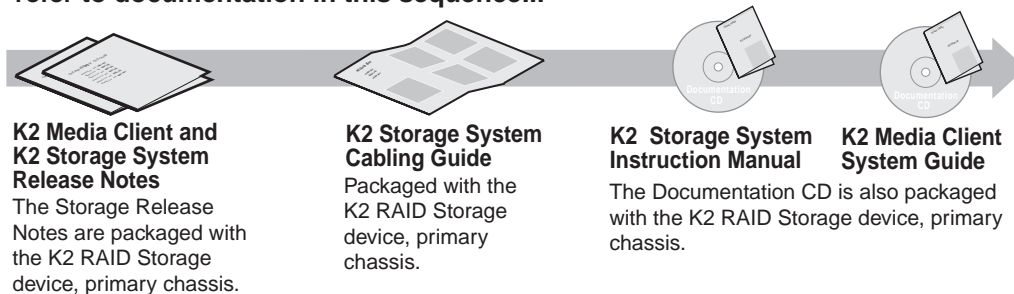
These release notes contain the most recent information and supersede previous publications, as of May 30, 2008. Check the Grass Valley website at *www.thomsongrassvalley.com/docs* for an updated version that contains additional important information.

For complete coverage of the latest information about shared storage K2 Media Clients, you must read these release notes and the *K2 Media Client Release Notes*. While these release notes contain information that relates to shared storage K2 Media Clients, the *K2 Media Client Release Notes* contain additional information that applies to both shared storage and stand-alone storage K2 Media Clients.

If you are installing new K2 Media Client models with stand-alone storage, refer to documentation in this sequence...

K2 Media Client Release Notes

Packaged with the K2 Media Client.

Quick Start Guide

Packaged with the K2 Media Client. Different models each have their own version.

K2 Media Client System Guide

The Documentation CD is packaged with the K2 Media Client.

If you are installing a K2 Storage System with connected K2 Media Clients, refer to documentation in this sequence...

K2 Media Client and K2 Storage System Release Notes

The Storage Release Notes are packaged with the K2 RAID Storage device, primary chassis.

K2 Storage System Cabling Guide

Packaged with the K2 RAID Storage device, primary chassis.

K2 Storage System Instruction Manual

The Documentation CD is also packaged with the K2 RAID Storage device, primary chassis.

K2 Media Client System Guide

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Grass Valley Product Support

To get technical assistance, check on the status of a question, or to report new issue, contact Grass Valley Product Support via e-mail, the Web, or by phone or fax.

Web Technical Support

To access support information on the Web, visit the product support Web page on the Grass Valley Web site. You can download software or find solutions to problems by searching our Frequently Asked Questions (FAQ) database.

World Wide Web: http://www.thomsongrassvalley.com/support/
Technical Support E-mail Address: gvgtechsupport@thomson.net.

Phone Support

Use the following information to contact product support by phone during business hours. Afterhours phone support is available for warranty and contract customers.

International (France)	+800 80 80 20 20 +33 1 48 25 20 20	Italy	+39 02 24 13 16 01 +39 06 87 20 35 42
International (United States, Canada)	+1 800 547 8949 +1 530 478 4148	Belarus, Russia, Tadzikistan, Ukraine, Uzbekistan	+7 095 258 09 20 +33 (0) 2 334 90 30
Hong Kong, Taiwan, Korea, Macau	+852 2531 3058	Indian Subcontinent	+91 11 515 282 502 +91 11 515 282 504
Australia, New Zealand	+61 1300 721 495	Germany, Austria, Eastern Europe	+49 6150 104 444
Central, South America	+55 11 5509 3440	Near East, Africa	+33 1 48 25 20 20
China	+861 066 0159 450	Netherlands	+31 (0) 35 62 38 421
Belgium	+32 (0) 2 334 90 30	Northern Europe	+45 45 96 88 70
Japan	+81 3 5484 6868	Singapore	+65 6379 1313
Malaysia	+603 7805 3884	Spain	+41 487 80 02
Middle East	+971 4 299 64 40	UK, Ireland, Israel	+44 118 923 0499

Authorized Support Representative

A local authorized support representative may be available in your country. To locate the support representative for your country, visit the product support Web page on the Grass Valley Web site.

What's new in release 3.2.58

- This version of K2 system software includes several improvements, in addition to correcting some problems that were present in earlier releases.

- **Catch server support** — The K2 Capture Service provides features for automatically importing media from DG and Pathfire catch servers. Refer to the *K2 Media Client System Guide* for procedures.

- **Control point PC** — The Grass Valley control point PC is now on the Dell 830 platform. To make a recovery disk image, you must use recovery CD 063-8245-03.

- **Lx0 RAID can expand L2 RAID** — If you have a K2 Storage System with L2 RAID, you can expand it using Lx0 RAID.

- **Media File System** — Upgrade to version 3.0.3b.56 SNFS (StorNext File System) software is required. This is the media file system software. Refer to the upgrade procedure later in these release notes.

- **Level 35** — An additional pre-defined level is available for the K2 Storage System. Refer to the relevant sections later in these release notes.

- **Documentation for this 3.2.58 release** — The following manuals have been revised for this release:

Document	Part number
K2 Media Client Service Manual	071-8468-04
K2 Media Client System Guide	071-8460-04

The revised manuals are on the December 2007 K2 Documentation CD, part number 063-8244-05, labeled "Software version 3.2".

Feature limitations in this release

The following information applies to the K2 Storage System. Refer to the *K2 Media Client Release Notes* for similar information that applies to the K2 Media Client.

- There is no centralized logging of the K2 Storage System. Logs are stored on each individual device.

Changes in previous releases

The following sections describe the changes in past releases.

Version 3.2.56

- **K2 Storage System levels 10, 20, 30** — A new storage infrastructure is available with pre-defined levels 10, 20, 30, and Nearline 10. Each level is available with both redundant and non-redundant configurations. New or changed devices with these levels are as follows:

  - L10, GS, and LS K2 Media Servers — Built on Dell platforms with configurations to support online K2 Storage Systems.

  - NH1 K2 Media Servers — Built on a Dell platform and configured to support

the role of FTP server on both online and nearline K2 Storage Systems.

- NH1-10GE K2 Media Servers — Built on a Dell platform. Provides 10 Gig bandwidth to support the role of FTP server on both online and nearline K2 Storage Systems.

- K2 RAID — These RAID storage devices provide 4 Gb/s bandwidth.

- GigE switch ISLs — On systems with two switches, it is now recommended to use three 1 Gig ISLs rather than the 10 Gig ISLs.

Refer to the *K2 Storage System Instruction Manual* for complete descriptions of the new storage infrastructure.

- **Media File System** — Upgrade to version 3.0.1b.39 SNFS (StorNext File System) software is required. This is the media file system software.

- **Storage Utility** — Enhancements for network settings allow two RAID controllers to be configured at once. Also, bound disks are now labeled as RANK, rather than LUN.

- **Documentation for this 3.2.56 release** — Use the September 2007 K2 Documentation CD (part number 063-8244-04) with release 3.2.56. This CD is labeled "Software version 3.2", and contains the following documents:

Document	Part number
Fibre Channel Switch Installation Manual - QLogic 5202 SANbox	071-8429-01
K2 Level 2 RAID Instruction Manual	071-8462-01
K2 Level 3 RAID Instruction Manual	071-8463-00
K2 Lx0 RAID Instruction Manual	071-8614-00
K2 Media Client Field Kit Upgrade Instructions	071-8450-01
K2 Media Client Quick Start Guide for HD-00 models	071-8454-03
K2 Media Client Quick Start Guide for SD-00 models	071-8453-03
K2 Media Client Quick Start Guide for SDA-00 models	071-8576-01
K2 Media Client Service Manual	071-8468-03
K2 Media Client System Guide	071-8460-03
K2 Media Client User Manual	071-8459-02
K2 Storage System Instruction Manual	071-8461-03
K2 Storage System Level 10 Cabling Guide	071-8596-00
K2 Storage System Level 2 Cabling Guide	071-8593-00
K2 Storage System Level 20 Cabling Guide	071-8597-00
K2 Storage System Level 3 Cabling Guide	071-8594-00
K2 Storage System Level 30 Cabling Guide	071-8598-00
K2 Storage System Nearline 10 Cabling Guide	071-8599-00
K2 TimeDelay User Manual	071-8510-01
Monitoring the HP ProCurve Ethernet Switch with NetCentral	071-8466-01

Document	Part number
Monitoring the K2 Level 2 and Level 3 RAID with NetCentral	071-8467-00
Monitoring the K2 Lx0 RAID with NetCentral	071-8615-00
Monitoring the K2 Media Client with NetCentral	071-8464-01
Monitoring the K2 Media Server with NetCentral	071-8465-01
Monitoring the Qlogic SANbox Fibre Channel Switch with NetCentral	071-8471-00

Do not use documents from the July 2007 K2 Documentation CD. The July 2007 CD is also labeled "Software version 3.2".

Version 3.2.21

- **Licensing for K2 system software** — There are licensing requirements for version 3.2.58 system software. Refer to "About K2 system software licensing" later in these release notes.

- **Expansion by bandwidth** — You can add disks to increase bandwidth and expand the media file system. You can do this while retaining existing media. If you have media from Aurora products in your K2 Storage System, refer to "Bandwidth expansion for Aurora products" later in these release notes.

- **EULA at first startup** — When you receive a K2 Media Server new from Grass Valley, at first startup an End User License Agreement (EULA) dialog box opens automatically on the screen. This is normal behavior and occurs only at the first startup.

Version 3.1.14

- **SQL 2005** — This release of K2 system software is qualified to work with Microsoft SQL Server 2005, which is on new K2 Media Servers shipping from Grass Valley.

  To retain compatibility, this release is also qualified to work with SQL 2000, which is on previously shipped K2 Media Servers. Therefore, upgrading to K2 System Software version 3.1.14 on existing systems does not require an upgrade to SQL Server 2005.

- **RSTP GigE switch configuration** — Recent testing has revealed that the HP ProCurve Ethernet switches must have their Spanning Tree Protocol (STP) configured to RSTP, rather than STP. Some switch configuration procedures do not have this specified. You should check this setting on your switch or switches as soon as possible, as instructed in "Bandwidth expansion for Aurora products" on page 32.

Version 3.1.13

- **Factory installation** — This release provides updated software for pre-installation at the factory and for upgrade of existing systems at customer sites. The release contains quality and performance improvements.

- **Product compatibility** — This release is qualified with updated versions of Grass Valley News products. Refer to compatibility tables later in these release notes.

- **Media File System** — Upgrade to version 2.6.5b50 SNFS (StorNext File System) software is required. This is the media file system software.

- **2900 series switch** — A new Gigabit Ethernet switch, the "ProCurve Networking Switch 2900 Series" is qualified for use with K2 Storage Systems. Its use and configuration are the same as the existing 3400cl series switch, as documented in the *K2 Storage System Instruction Manual* part number 071-8461-01, with the following exceptions:

  - *Set Flow Control to Enable* for all ports and trunks on the 2900 series switch. This is an important difference from the configuration of the 3400cl series switch, in which Flow Control is set to Disable.

    NOTE: You must set Flow Control to Enable. Failure to do so results in unacceptably low performance for record operations.

  - The switch has been qualified with *firmware version T.11.12*. Check the firmware version on the switch and downgrade or upgrade as necessary.

  - The two 10 Gigabit ports are standard on the 2900 series switch.

  2900 series switches and 3400cl series switches are fully compatible and can coexist on the network. Having the Flow Control setting different on ports and/or trunks between the two different models of switches (enable for 2900 series, disable for 3400cl series) does not cause problems. If your existing 3400cl series switches are properly configured, it is not necessary to reconfigure them in order to make them work with 2900 series switches.

Version 3.1.12

- **RAID controller firmware and disk drive microcode** — New versions are supported and ship pre-installed on new systems. Refer to compatibility tables later in these release notes. Upgrade to these new versions is not required. The changes in these versions do not effect functionality as a K2 RAID storage device. The new versions are compatible with all previous versions.

- **Dell 2950** — The Dell 2950 PowerEdge server is now qualified as a platform for the K2 Media Server.

Version 3.1.9 and lower

Refer to previous release notes for information about these older releases.

K2 system version compatibility

Versions qualified for compatibility with this 3.2.58 release of K2 software are summarized in the following tables.

Components on K2 Storage System devices

Versions of components that reside on K2 Storage System devices are compatible with this 3.2.58 release of K2 software as follows:

K2 device	Component	Version	Comment
K2 Media Client	Windows Operating System	Windows XP	With the latest updates
	AppCenter	3.2.58	—
	Media file system (SNFS)	3.0.3b.56	—
	QuickTime	7	—
K2 Media Server	Windows Operating System	Windows 2003 Server	With the latest updates
	K2 Server software	3.2.58	—
	Media file system (SNFS)	3.0.3b.56	—
	QuickTime	7	—
	SQL Server	2000 or 2005 SP2	Systems with multiple K2 Media Servers must be at the same SQL version on all servers. Contact Grass Valley Support for more information.
HP ProCurve GigE switch	Firmware	M.08.66	This older version is still compatible.
		M.08.86	Upgrade to this version is recommended.
Level 2 RAID	Controller firmware	RV62	Filename: 03FHRV62.BIN This older version is still compatible.
		RV70	Filename: 03FHRV70.BIN Upgrade to this version is recommended.
	LAN card firmware	GS05	Filename: 03SPGS05.bin Upgrade to this version is recommended.
Level 3 RAID	Controller firmware for online systems	04VJ	Filename: 04FH04VJ.BIN This older version is still compatible.
		05VD	Filename: 04FH05VD.BIN Upgrade to this version is recommended.
		05VG	Filename: 04FH05VG.BIN Upgrade to this version is optional.
	Controller firmware for nearline primary chassis	05ND	Filename: 04FH05ND.BIN This older version is still compatible.
		05NG	Filename: 04FH05VN.BIN Upgrade to this version is optional.
	Controller firmware for nearline expansion chassis	06F	Filename: DEA_AP.06F

K2 device	Component	Version	Comment
Level 10 RAID	Controller firmware for online and nearline primary chassis	07VG	Filename:D1_07VG.BIN
	Controller firmware for online and nearline expansion chassis	010G	Filename: ENCL_010G.BIN
Level 20/30 RAID	Controller firmware for online and nearline primary chassis	07VG	Filename:D3_07VG.BIN
	Controller firmware for online and nearline expansion chassis	010G	Filename: ENCL_010G.BIN

Level 2 RAID disk drive microcode

Versions of disk drive microcode are compatible with this 3.2.58 release of K2 software as summarized in the following table:

Disk Drive Capacity	Microcode Type	Microcode Version	Microcode File Name[a]	Comments
73G	Interface	0003	ST373207FC 0003.bin	These older versions are still compatible.
	Servo	B58		
	Interface	DB90	ST373207FC DB90.bin	Upgrade to these versions is optional.
	Servo	B5A		
146G	Interface	0003	ST3146707FC 0003.bin	These older versions are still compatible.
	Servo	B58		
	Interface	DB90	ST3146707FC DB90.bin	Upgrade to these versions is optional.
	Servo	B5A		
300G	Interface	0003	ST3300007FC 0003.bin	These older versions are still compatible.
	Servo	B58		
	Interface	DB90	ST3300007FC DB90.bin	Upgrade to these versions is optional.
	Servo	B5A		

[a.] For Level 2 RAID, interface and servo microcode are combined in one file

Be aware that Storage Utility can report inconsistent disk drive microcode versions. This can be a normal condition, since the Level 2 RAID system supports multiple drive capacities and microcode versions. Be sure to compare the version numbers with this table, and update only as required.

Level 3 RAID disk drive microcode

Versions of disk drive microcode are compatible with this 3.2.58 release of K2 software as summarized in the following table:

Disk Drive Capacity	Microcode Type	Microcode Version	Microcode File Name[a]	Comments
73G	Interface	0003	CH7_10K_Interface.0003	These older versions are still compatible.
	Servo	B58	CH7_10K_ST373207FC_Servo.B58	
	Interface	DB90	CH7_10K_Interface.DB90	Upgrade to these versions is optional.
	Servo	B5A	CH7_10K_ST373207FC_Servo.B5A	
146G	Interface	0003	CH7_10K_Interface.0003	These older versions are still compatible.
	Servo	B58	CH7_10K_ST3146707FC_Servo.B58	
	Interface	DB90	CH7_10K_Interface.DB90	Upgrade to these versions is optional.
	Servo	B5A	CH7_10K_ST3146707FC_Servo.B5A	
300G	Interface	0003	CH7_10K_Interface.0003	These older versions are still compatible.
	Servo	B58	CH7_10K_ST3300007FC_Servo.B58	
	Interface	DB90	CH7_10K_Interface.DB90	Upgrade to these versions is optional.
	Servo	B5A	CH7_10K_ST3300007FC_Servo.B5A	

a. For Level 3 RAID, interface microcode and servo microcode each have their own file

When loading Level 3 RAID disk drive microcode, select the controller to load microcode on all drives. Do not select an individual drive to load microcode. First load the servo file for the specific drive capacity, then load the interface file. After loading the interface file, wait several minutes while the drives automatically re-power themselves.

Be aware that Storage Utility can report inconsistent disk drive microcode versions. This can be a normal condition, since the Level 3 RAID system supports multiple drive capacities and microcode versions. Be sure to compare the version numbers with this table, and update only as required.

Level 10/20/30 RAID disk drive microcode

Versions of disk drive microcode are compatible with this 3.2.58 release of K2 software as summarized in the following table:

Disk Drive Capacity	Microcode Type	Microcode Version	Microcode File Name[a]	Comments
73G	Interface	0002	CT15K5SAS.01_	
	Servo	0002	CT15K5SAS_73.__1	
300G	Interface	0002	CT15K5SAS.01_	
	Servo	0002	CT15K5SAS_300.__1	

[a.] Interface microcode and servo microcode each have their own file

When loading RAID disk drive microcode for Level 10, 20, and 30 RAID devices, select the controller to load microcode on all drives. Do not select an individual drive to load microcode. First load the servo file for the specific drive capacity, then load the interface file. After loading the interface file, wait several minutes while the drives automatically re-power themselves.

Be aware that Storage Utility can report inconsistent disk drive microcode versions. This can be a normal condition, since the RAID system supports multiple drive capacities and microcode versions. Be sure to compare the version numbers with this table, and update only as required.

Grass Valley products

Grass Valley products are compatible with this 3.2.58 release of K2 software as follows:

Product	Version	Comments
Profile XP Media Platform	5.4.8 or higher	From a K2 system you can browse/transfer assets on a Profile XP system.
M-Series iVDR	2.0.13 or higher	Some transfer limitations
Aurora products	6.3	Check with Grass Valley Support regarding version availability.
NetCentral	4.1.18 or higher	Upgrade to the latest Service Pack is recommended. Information is provided when you license NetCentral.
UIM	2.1.1.223 or higher	—
K2 InSync	4.0.0.12	Refer to licensing information in *K2 Media Client Release Notes* for special procedures.
K2 TimeDelay	2.1.3	—
K2 Avid plug-in	1.0.0.6	—
ContentShare	—	Not supported

Recovery CD compatibility

To create a recovery disk image of a K2 Storage System device, use a compatible version of the recovery CD, as follows:

Device	Platform	CPU	Compatible Recovery CD(s), by part number
K2 Media Client	All	All	063-8245-00 063-8245-01
K2 Media Server	Dell 860, Dell 2850	All	063-8246-00 063-8246-01 063-8246-02
	Dell 1950, Dell 2950	Woodcrest, Clovertown	063-8246-00 063-8246-01 063-8246-02
		Harpertown	063-8246-03
Control point PC	Dell 820	All	063-8245-00 063-8245-01 063-8245-02 063-8245-03
	Dell 830	All	063-8245-03

About custom K2 Storage Systems

Custom systems are those that do not fit one of the pre-defined Level 2, 3, 10, 20, or 30 configurations. For example, a K2 Storage System with Fibre Channel attached K2 Media Clients is considered a custom system. Custom systems that are an extension of Level 2 or 3 are considered to be Level 4 systems. Custom systems that are an extension of Level 10, 20, or 30 are considered to be Level 40 systems. Only qualified Grass Valley personnel should attempt to design, install, and configure custom systems.

The K2 documentation set is intended for customers with pre-defined Level 2, 3, 10, 20, or 30 systems. While much of the information also applies to custom systems, consult your Grass Valley representative before using Level 2, 3, 10, 20, or 30 procedures on a custom system.

About K2 system software licensing

K2 system software version 3.2.58 must be licensed. Licensing is enforced at the K2 Media Client, so every K2 Media Client running version 3.2.58 must have a valid license in place. Also, you must upgrade a control point PC to version 3.2.58 in order to access a version 3.2.58 K2 Media Client. No license is required on the K2 Media Server.

K2 Media Clients shipping new from the factory have version 3.2.58 pre-installed with a permanent license in place, so no licensing steps are required. However, if you upgrade an existing K2 Media Client from a version lower than 3.2 to version 3.2.58, the software installs with a trial license in place. You must procure a permanent license from Grass Valley and install it on the K2 Media Client before the trial period expires. For licensing procedures, refer to the *K2 Media Client Release Notes*.

Upgrading software on the K2 Storage System

NOTE: These upgrade instructions assume that current K2 software is at version 3.0.1.4 or higher. If you have a lower version of software, contact Grass Valley Support before upgrading.

K2 system software version 3.2.58 is installed on new K2 systems as they come from the factory. If you have a new K2 system, you should not need to upgrade software. For general information about K2 software, refer to the *K2 Storage System Instruction Manual* and the *K2 Media Client System Guide*.

Do not attempt to upgrade software incrementally across the devices of a K2 Storage System while media access is underway. Online software upgrading is not supported.

The following installation steps provide information specifically for the upgrade to version 3.2.58 software. Read the information in these sections carefully before attempting any upgrade to software on any of the devices of a K2 Storage Systems, including K2 systems, Aurora Edit systems, or other clients.

NOTE: When upgrading from a version lower than 3.2, K2 system software installs with a trial license. You will need a permanent license to operate beyond the trial period. Before beginning this upgrade process, read licensing information elsewhere in these release notes.

Step 1: Make recovery disk images of K2 Media Clients

Do not do this step if:

- You previously made a disk images of your K2 Media Clients at their current software version. Skip ahead to "Step 2: Take K2 Media Clients offline".

Do this step if:

- You do not have disk images of your K2 Media Clients at their current software version.

The recommended procedure is to make a recovery disk image immediately after a software upgrade. If you neglected to do this when you last upgraded software you should make the recovery disk image now, before upgrading to the new version. Refer to the *K2 Media Client Service Manual* for instructions.

Step 2: Take K2 Media Clients offline

When upgrading software on a K2 Storage System, you upgrade software on K2 Media Servers before you upgrade software on the connected K2 Media Clients. While you are upgrading software on K2 Media Servers you must keep all connected K2 Media Clients shut down. Do not power up K2 Media Clients until the upgrade on K2 Media Servers is complete and the media file system/database server is fully operational.

Do the following on each K2 Media Client on the K2 Storage System:

1. Stop all media access.

2. Shut down the K2 Media Client.

Step 3: Manage multiple K2 Media Servers

Do not do this step if:

- You are upgrading a K2 Storage System with only one K2 Media Server. Skip ahead to "Step 4: Disable OpForce service" and begin the upgrade on the K2 Media Server.

Do this step if:

- You are upgrading a non-redundant K2 Storage System with multiple servers. This means you have just one K2 Media Server that takes the role of media file system/ database server and one or more other K2 Media Servers dedicated to other roles, such as FTP server.

- You are upgrading a redundant K2 Storage System. This means you have two K2 Media Servers (primary and backup) that take the role of media file system/ database server.

NOTE: If the K2 Storage System has multiple K2 Media Servers, you must upgrade all to the same version.

If you are upgrading a non-redundant K2 Storage System with multiple servers, do the following:

1. Upgrade the server that takes the role of media file system/database server first.

The upgrade starts with the next step "Step 4: Disable OpForce service".

2. After the media file system/database server is upgraded and when instructed to do so in "Step 13: Upgrade remaining K2 Media Servers" later in this section, upgrade your other servers.

If you are upgrading a redundant K2 Storage System, do the following:

Apply the remainder of this step and subsequent steps to your two K2 Media Servers that take the role of media file system/database server. If you have additional servers, upgrade them later, when instructed to do so in "Step 13: Upgrade remaining K2 Media Servers".

To prevent triggering failover mechanisms, you must manage primary/backup roles and upgrade media file system/database servers in the proper sequence, as follows:

1. Determine the current primary/backup roles of the servers. You can use Server Control Panel (via the K2 System Configuration application or on the local K2 Media Server) or NetCentral to make this determination.

2. Shut down the backup server.

3. Upgrade the primary server, beginning with the next step "Step 4: Disable OpForce service".

Step 4: Disable OpForce service

If you have not already done so, it is recommended that you disable the OpForce service, to make system startup faster. Refer to the procedure in the *K2 Storage System Instruction Manual*.

Step 5: Make recovery disk image

Do not do this step if:

• You previously made a disk image of the K2 Media Server at its current software version. Skip ahead to "Step 6: Install "High Priority" Windows updates (recommended)".

Do this step if:

• You do not have a disk image of the K2 Media Server at its current software version.

The recommended procedure is to make a recovery disk image immediately after a software upgrade. If you neglected to do this when you last upgraded software you should make the recovery disk image now, before upgrading to the new version. Refer to the *K2 Storage System Instruction Manual* for instructions.

If your K2 Media Server has multiple disk images on the E: partition, you might need to delete some to make room for a new disk image. If some of these images are the generic recovery disk image that shipped with the system, refer to "Using generic recovery disk images" on page 24 of these release notes to determine which images you can delete.

Step 6: Install "High Priority" Windows updates (recommended)

Windows "High Priority" updates are recommended, but not required, for version 3.2.58. While you have K2 Media Servers in an offline state to upgrade software, you should check to see if there are any new updates that you need to install. Use standard Windows procedures.

⚠️ *CAUTION: Only "High Priority Updates" should be installed. Do not install other Windows or driver updates.*

Step 7: Upgrade QuickTime

Do not do this step if:

- QuickTime is currently at version 7. This is the case if the current K2 software is a 3.1.x.x version or higher, as QuickTime 7 is required starting with version 3.1. Skip ahead to "Step 8: Uninstall K2 software".

Do this step if:

- QuickTime is at a version lower than 7. This is the case if the current K2 software is a 3.0.1 version.

To upgrade QuickTime, do the following:

1. Insert the version 3.2.58 K2 System Software CD in the K2 Media Server's CD drive, if it is not already inserted, or otherwise access the version 3.2.58 installation files.

2. Locate and open the following QuickTime install file:

   QuickTimeInstaller.exe

3. Work through the install wizard. Choose **English** and respond with **Next**, **Yes**, **Next**, **Finish**, and **No Thanks**.

Step 8: Uninstall K2 software

1. Make sure all connected K2 Media Clients are shut down.

2. Use the Windows **Add/Remove Programs** control panel and uninstall K2 software.

   It is not necessary to restart the K2 Media Server at this point. The restart after you uninstall SNFS in the next step is sufficient.

3. Identify the currently installed version of SNFS software. If you are not sure, check **Start | Programs | StorNext File System | Version Information**.

4. Depending on the version of SNFS currently installed, proceed to one of the following steps:

   - "Step 9: Uninstall SNFS versions lower than 3.0"

   - "Step 9: Uninstall SNFS version 3.0.1b.39"

Step 9: Uninstall SNFS versions lower than 3.0

Do not do this step if:

- SNFS version 3.0.1b.39 is currently installed. Instead do the next "Step 9: Uninstall SNFS version 3.0.1b.39".

Do this step if:

- A SNFS version lower than 3.0.x is currently installed.

1. Make sure all connected K2 Media Clients are shut down.

2. Make sure you are logged in to the K2 Media Server with an administrator account.

3. Insert the version 3.2.58 K2 System Software CD in the K2 Media Server's CD drive or otherwise access the version 3.2.58 installation files.

4. Locate and open the following file:

    gvRemoveSnfs26.bat

5. When prompted, follow on-screen instructions to confirm removal of SNFS software. Click Yes, OK, and press any key to proceed.

NOTE: Do not uninstall a SNFS version lower than 3.0 using Windows Add/ Remove Programs.

6. Restart the K2 Media Server using the Windows operating system restart procedure.

7. Proceed to "Step 10: Install K2 software".

Step 9: Uninstall SNFS version 3.0.1b.39

Do not do this step if:

- A SNFS version lower than 3.0.x is currently installed. Instead do the previous "Step 11: Install SNFS".

Do this step if:

- SNFS version 3.0.1b.39 is currently installed.

1. Make sure all connected K2 Media Clients are shut down.

2. Make sure you are logged in to the K2 Media Server with an administrator account.

3. Use the Windows **Add/Remove Programs** control panel and uninstall SNFS.

4. Restart the K2 Media Server using the Windows operating system restart procedure.

5. Proceed to "Step 10: Install K2 software".

Step 10: Install K2 software

Before upgrading K2 Media Server system software, make sure that QuickTime is at the required version, as instructed in the previous steps. If QuickTime 7 is not installed, the installation program pops up an informative message and you are prevented from completing the installation.

Before installing a new version of K2 system software, make sure that the K2 Media Server has been restarted at least once since the previous version of K2 system software was uninstalled.

1. Make sure all connected K2 Media Clients are shut down.

2. Log in to the K2 Media Server with a local administrator account. This is required to support K2 System Software licensing.

NOTE: When installing K2 system software, you must be logged in with a local administrator account. Do not install software using a domain account.

3. Insert the version 3.2.58 K2 System Software CD in the K2 Media Server's CD drive, if it is not already inserted, or otherwise access the version 3.2.58 installation files.

4. Locate and open the following file:

    \K2Server\setup.exe

5. Follow the onscreen instructions, and work through each page.

6. Depending on the state of the system when upgrading, you might see one or more of the following screens or messages as you work through the installation wizard. Proceed as instructed, and then continue with this procedure:

    If a "…insert disk…" message appears while installing from a CD, cancel the installation wizard and do one of the following:

    • Uninstall the current version of software, then repeat this procedure.

    • Copy the directory that contains the installation files from the CD to the local hard drive, then repeat this procedure, opening the local *setup.exe* file rather than the file on the CD.

    If a "…non-standard installation…" message is displayed in the installation wizard in blue text, as in the image below, follow the instructions in the message, as follows:
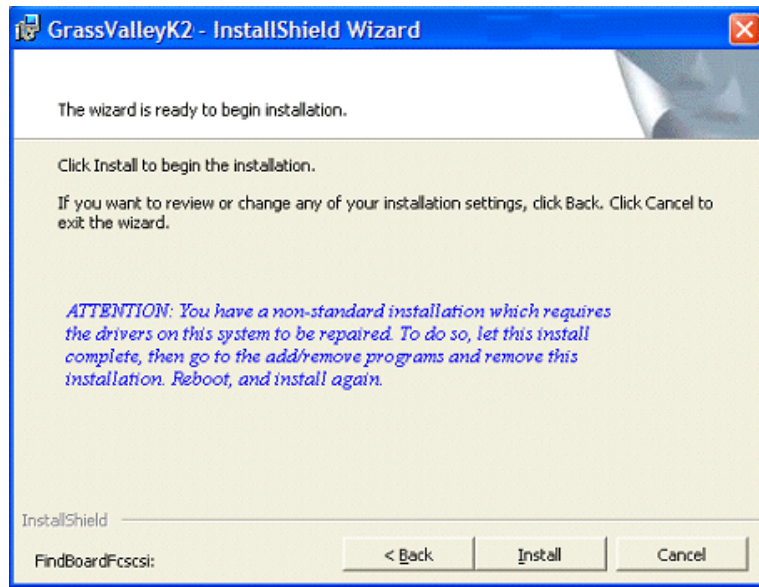
- Complete the installation wizard.
- Uninstall K2 Media Server software.
- Restart the K2 Media Server using the Windows operating system restart procedure.
- Repeat this procedure and install software again.

If one or more messages appear referring to software unsigned or untested, as in the following examples, you can safely continue.

- Click **Yes** or **Continue...** to allow the installation to progress.

If installation progress stops after about a minute and does not proceed, look in the Windows taskbar for a Hardware Update Wizard window that has opened.
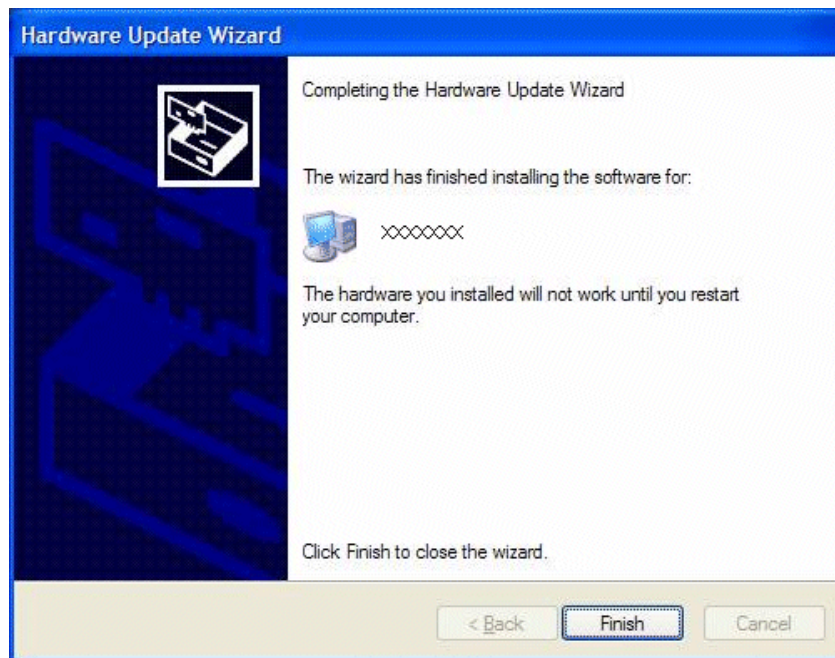
- Click **Finish** on the Hardware Update Wizard to continue installation.

7. Click **Next** and **Finish** to complete the K2 software installation.

8. When prompted, you do not need to restart the machine.

It is not necessary to restart the K2 Media Server at this point. The restart after you install SNFS in the next step is sufficient.

Step 11: Install SNFS

Before installing a new version of SNFS software, make sure that the K2 Media Server has been restarted at least once since the previous version of SNFS software was uninstalled.

1. Make sure all connected K2 Media Clients are shut down.

2. Insert the version 3.2.58 K2 System Software CD in the K2 Media Server's CD drive or otherwise access the version 3.2.58 installation files.

3. Locate and open the following file:

   gvSnfs303SetupK2.bat

   The command window appears. After a pause, messages confirm setup complete.

4. Press any key to proceed.

5. When the automatic installation pauses at the License Agreement page, click **Yes**.

6. Restart the K2 Media Server using the Windows operating system restart procedure.

The upgrade to the K2 Media Server is now complete.

Step 12: Manage redundancy on K2 Media Servers

Do not do this step if:

- You are upgrading a non-redundant K2 Storage System. This means you have just one K2 Media Server that takes the role of media file system/database server. Skip ahead to "Step 13: Upgrade remaining K2 Media Servers".

Do this step if:

- You are upgrading a redundant K2 Storage System. To prevent triggering failover mechanisms, you must manage primary/backup roles as instructed in this step.

If you have completed the upgrade to the primary server but you have not yet upgraded the backup server, do the following:

1. Make sure the backup server is still shut down.

2. Put the primary server in service as follows:

   a. On the primary server, run Server Control Panel. You can do this at the local server or through the K2 System Configuration application.

      The Failover Monitor service should currently be off, as this is the normal state of the service at system startup.

   b. Use the **Start** button on Server Control Panel to start Failover Monitor. This makes the primary server qualified to take the role of media file system/database server.

   c. Make sure that Server Control Panel reports that the media file system and the media database is active and fully functional and that the server on which you have upgraded software is indeed the current primary server.

3. Power up the backup server. Wait until startup processes complete before

continuing.

4. Upgrade the backup server by returning to "Step 4: Disable OpForce service" earlier in this section and performing that step *and subsequent steps* on the backup server.

If you have completed the upgrade to both the primary and backup servers, do the following:

1. Make sure the primary server is powered up.

2. Run Server Control Panel. You can do this at the local server or through the K2 System Configuration application. Make sure that the media file system and the media database is active and fully functional and that the first server on which you upgraded software is still the current primary server.

3. Put the backup server in service as follows:

   a. Run Server Control Panel. You can do this at the local server or through the K2 System Configuration application.

   The Failover Monitor service should currently be off on the backup server, as this is the normal state of the service at system startup.

   b. Use the **Start** button on Server Control Panel to start Failover Monitor. This makes the backup server qualified to take the role of media file system/database server.

   c. Make sure that Server Control Panel reports that the media file system and the media database is active and fully functional and that servers are correctly taking primary/backup roles.

4. Continue with the next step "Step 13: Upgrade remaining K2 Media Servers".

Step 13: Upgrade remaining K2 Media Servers

Do not do this step if:

• All the K2 Media Servers on the K2 Storage System have been upgraded. Skip ahead to "Step 14: Upgrade connected K2 Media Clients".

Do this step if:

• There are K2 Media Servers that do not take the role of media file system/database server on the K2 Storage System that have not yet been upgraded.

Upgrade each of the remaining K2 Media Servers as follows:

1. Return to "Step 4: Disable OpForce service" earlier in this section and perform that step and subsequent steps on the K2 Media Server.

2. When all the K2 Media Servers on the K2 Storage System have been upgraded, continue with the next step "Step 14: Upgrade connected K2 Media Clients"

Step 14: Upgrade connected K2 Media Clients

After K2 Media Servers are upgraded, upgrade all connected K2 Media Clients to the same version of software, as instructed in the *K2 Media Client Release Notes.* Do not resume media access on a K2 Media Client until it is upgraded.

NOTE: You must restart after installing K2 software.

After upgrading all connected K2 Media Clients, continue with the upgrade steps in these *K2 Storage System Release Notes* and complete the upgrade to the K2 Storage System.

Step 15: Upgrade connected generic clients

Do not do this step if:

- The only clients on the K2 Storage System are K2 Media Clients. Skip ahead to "Step 16: Upgrade software on Control Point PC".

Do this step if:

- You have clients on the K2 Storage System that are not K2 Media Clients. This is the case if you have Aurora Edit workstations or other Aurora products that use the shared storage of the K2 Storage System.

Upgrade all remaining client devices on the K2 Storage System. Refer to the release notes or other upgrade instructions for the client product.

NOTE: You must restart after installing K2 software.

Step 16: Upgrade software on Control Point PC

To upgrade Control Point software, do the following:

1. Use the Windows **Add/Remove Programs** control panel and remove K2 control point software.

2. Insert the version 3.2.58 K2 System Software CD in the Control Point PC's CD drive or otherwise access the version 3.2.58 installation files.

3. Run the Control Point installation program (setup.exe). No special procedures are required.

4. From the K2 System Configuration application, use Server Control Panel to verify that the media file system and the media database is active and fully functional.

You must upgrade the control point PC if it is to access an upgraded K2 Media Client. K2 software versions lower than 3.2 do not support K2 security features, therefore a control point PC at a lower version is not authorized to access an upgraded K2 Media Client.

The K2 software upgrade on the K2 Storage System is now complete. Continue with the next step "Step 17: Make recovery disk images".

Step 17: Make recovery disk images

After you have upgraded software as instructed in these release notes and verified that your system is working properly, you should always make a recovery disk image of each of your K2 systems. Use a sequence of events similar to those you followed for upgrading software, so that as you take systems offline you manage redundancy, servers, and clients, as appropriate for your K2 Storage System.

- To make a recovery disk image of the K2 Media Server, refer to the *K2 Storage*

System Instruction Manual for procedures.

• To make a recovery disk image of the K2 Media Client or Control Point PC, refer to the *K2 Media Client Service Manual* for procedures.

The upgrade to the K2 Storage System is now complete.

Using generic recovery disk images

K2 Media Servers recently shipping from Grass Valley have multiple versions of the generic recovery disk image on the E: partition. The most recent (highest number) version is the image that is on the K2 Media Server when you receive it from Grass Valley, so in most cases that is the image you should use if you need to restore the system to its factory default state. Older versions are for use by Grass Valley Support only. Unless directed otherwise by Grass Valley Support, you should delete the older versions of the generic recovery disk image. This makes disk space available for the first birthday disk image and other images you make as part of normal backup processes.

If you need to use the generic recovery disk image, follow the procedure in the *K2 Storage System Instruction Manual*, with considerations for the type of K2 Media Server and the disk image version, as explained in the following sections.

Driver installation on generic disk image versions

At first startup after installing a generic disk image, you are prompted to install hardware drivers by "New Hardware Found" wizards and other messages. Respond to these prompts as follows:.

For this type of K2 Media Server…	Using this disk image version…	Respond to prompts as follows…
L10, LS, GS, NH1, NH1-10GE	2.10.0	1. If the new HW is identified as a Ethernet Controller or Network Controller, click Cancel. NOTE: For systems with Qlogic Dual Port TOE cards, two wizards open for each port on the card; one for the Ethernet Adapter, and one for the Network Controller.
		2. If the new HW is identified as "LSI Adapter, 4Gb FC, models 7104, 7204, 7404 with 949E-StorPort", select the "Install the software automatically" radio button and click Next.
		3. If a Hardware Installation window is be displayed indicating that the SW has not passed the windows logo testing, click the Continue Anyway button.
		4. Ensure that the "Completing the Found New Hardware Wizard" window indicates that the wizard has finished installing the SW and then click Finish.
		5. If additional New HW Found Wizards are displayed for the LSI Adapter repeat the steps above.
		If NH1-10GE proceed to "Network configuration for NH1-10GE K2 Media Server" on page 25.
Level 2/3 K2 Media Server	2.6 or lower	Dismiss all wizards and messages. Do not install any drivers. Hardware support is provided when you install K2 system software.
	2.10.0	1. If the new HW is identified as a Ethernet Controller or Network Controller, click Cancel. NOTE: For systems with Qlogic Dual Port TOE cards, two wizards open for each port on the card; one for the Ethernet Adapter, and one for the Network Controller.
		2. If the new HW is identified as "GVG SCSI", select the "Install the software automatically" radio button and click Next.
		3. If a Hardware Installation window is be displayed indicating that the SW has not passed the windows logo testing, click the Continue Anyway button.
		4. Ensure that the "Completing the Found New Hardware Wizard" window indicates that the wizard has finished installing the SW and then click Finish.

Network configuration for NH1-10GE K2 Media Server

After using the generic recovery disk image on a NH1-10GE K2 Media Server, use the following procedure rather than the procedure in the *K2 Storage System Instruction Manual*.

1. In the Network Connections window, right-click **Local Area Connection 3** and Rename the Intel 10GigE NIC to FTP-10

2. In the Network Connections window, right-click **FTP-10 | Properties**.

3. Check the checkbox on **Show icon in notification area when connected**.

4. Click **Configure** to open the adapter properties window.

5. Select the **Link Speed** Tab and ensure that **10Gbps/Full Duplex** is indicated

6. Click the **Advanced** Tab

7. Select **Performance Options** from the Settings list and click the **Properties** button

8. Select **Receive Descriptors** from the Settings list & select **512** from the Value drop down list.

9. Select **Transmit Descriptors** from the Settings list & select **1024** from the Value drop down list.

10.Click **OK** to close the Performance Options window

11.Click **OK** to close the adapter properties window.

L35 system description

K2 Media Clients

Media
Control

Media
Control

Media
Control

FTP/streaming

Control

Gigabit Ethernet Switch

Control
FTP

Control point PC

Control

Control
Media

Media
Media

FTP
Control
Media

Media
Media

NH1-10GE Server (optional)

1   **2**

GS K2 Media Servers

L30 RAID Primary Chassis

Fibre Channel

RAID Expansion Chassis (optional)
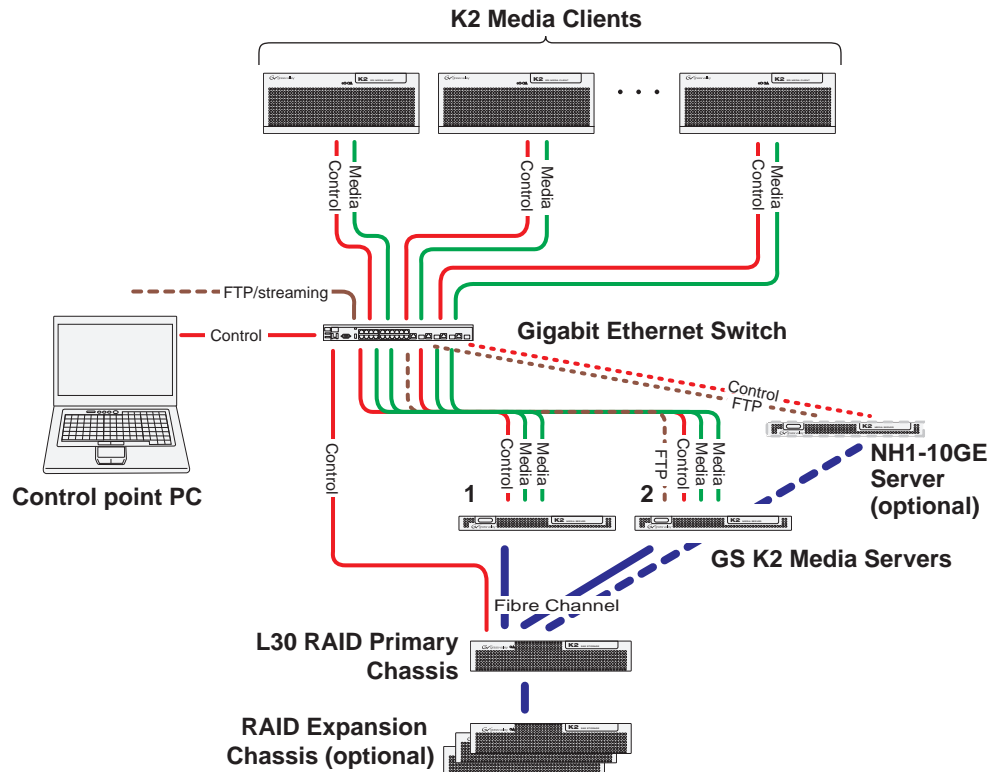
The K2 Level 35 (L35) and Level 35 Redundant (L35R) storage system is initially released April 2008 and is supported by K2 system software version 3.2.58. The following description applies to the non-redundant Level 35 (L35) system.

The Level 35 storage system has one Gigabit Ethernet switch, two GS K2 Media Servers, one optional NH1-10GE K2 Media Server, and one L30 RAID chassis. Up to seven RAID Expansion chassis are optional for increased storage capacity.

K2 Media Clients and other iSCSI clients, such as Aurora Edits, are connected to the GigE switch. Each K2 Media Client has one GigE connection for media (iSCSI) and one GigE connection for control. The GigE switch is configured with V-LANs to keep the control/FTP traffic and the media (iSCSI) traffic separate.

Each GS K2 Media Server has two GigE connections for media (iSCSI), one GigE connection for control, one GigE connection for FTP, and one Fibre Channel connection to the RAID storage. The server hosts a dual-port iSCSI interface card for the GigE media connections and a Fibre Channel card for the RAID storage connection. The iSCSI interface card provides a bridge between GigE iSCSI and Fibre Channel SCSI. The server also hosts software components that allow it to function in various roles, including media file system manager, media database server, and FTP server.

Server roles are distributed between the two GS K2 Media Server. In this way the Level 35 system is similar to the Level 3 system. One server runs as the media file system and database server while the other server can run as an FTP server. This

boosts performance, as the system resources of each server can be optimized for specific roles. In addition, both servers take the role of iSCSI bridge, so that there are a total of four iSCSI media connections for increased bandwidth.

The optional NH1-10GE K2 Media Server is available to provide additional FTP bandwidth. This server has a ten Gigabit connection to the Ethernet switch. If the NH1-10GE is used, all FTP traffic goes to this server, so neither GS K2 Media Server is cabled or configured for FTP.

The controller in the L30 RAID chassis has the four optional Fibre Channel expansion ports installed, making a total of six Fibre Channel ports on the controller. This allows the controller to act in a limited way as a Fibre Channel switch. Two ports connect the GS K2 Media Servers and one port connects the optional NH1-10GE K2 Media Server. The remaining three ports are unused. The L30 RAID chassis is also connected to the GigE control network, which is required for SNMP (NetCentral) monitoring.

The K2 configuration control point PC is connected to the GigE control network. The K2 System Configuration application runs on this PC for configuring the storage system.

FTP/streaming traffic accesses the K2 Storage System via the FTP GigE port on K2 Media Servers. FTP/streaming traffic does not go to K2 Media Clients.

L35 cabling

Refer to the *K2 Storage System Instruction Manual* for detailed cabling procedures.

For a non-redundant system (L35) connect cables as you would a Level 20 K2 Storage System, with the following specifications:

- On each GS K2 Media Server, connect both iSCSI ports to media ports on the GigE switch.

- On the GS K2 Media Server that is the media file system and database server, do not connect the FTP port. This port is unused.

- If there is no optional NH1-10GE K2 Media Server, on the GS K2 Media Server that is not the media file system and database server, connect the FTP port to a control port on the GigE switch.

- If there is an optional NH1-10GE K2 Media Server, on the GS K2 Media Server that is not the media file system and database server, do not connect the FTP port. This port is unused.

- If there is an optional NH1-10GE K2 Media Server, connect the ten Gigabit connection on the NH1-10GE server to the ten Gigabit connection on the back of the GigE switch. Use the included ten Gigabit cable.

- Cable the L30 RAID using the Level 30 instructions. Make the Fibre Channel connection from each GS K2 Media Server to one of the standard Fibre Channel ports on the controller. Make the Fibre Channel connection from the optional NH1-10GE K2 Media Server to one of the Fibre Channel expansion ports.

For a redundant system (L35R), connect cables as you would a Level 20R K2 Storage System, taking the above specifications into consideration.

L35 network configuration

Refer to the *K2 Storage System Instruction Manual* for detailed configuration procedures.

For a non-redundant system (L35) configure you would a Level 20 K2 Storage System, with the following specifications:

- GigE switch configuration is the same as Level 20.

- On each GS K2 Media Servers, configure for the control network (one IP address) and the media (iSCSI) network (two IP addresses).

- On the GS K2 Media Server that is the media file system and database server, do not configure for the streaming (FTP) network.

- If there is no optional NH1-10GE K2 Media Server, on the GS K2 Media Server that is not the media file system and database server, configure for the streaming (FTP) network (one IP address).

- If there is an optional NH1-10GE K2 Media Server, on the GS K2 Media Server that is not the media file system and database server, do not configure for the streaming (FTP) network**.**

- If there is an optional NH1-10GE K2 Media Server, configure the NH1-10GE server for control network (one IP address) and the streaming (FTP) network (one IP address)**.**

For a redundant system (L35R), configure as you would a Level 20R K2 Storage System, taking the above specifications into consideration.

L35 K2 Storage System configuration

Refer to the *K2 Storage System Instruction Manual* for detailed configuration procedures.

For a non-redundant system (L35), use the K2 System Configuration application to configure as you would a Level 20 K2 Storage System, with the following specifications:

1. For K2 System Type, select **Custom**.

2. Define the system with the following:

   - One Gigabit Ethernet switch

   - Two K2 Media Servers

   - Optionally, one additional NH K2 Media Server

   - The number and type of clients appropriate for your system.

3. First configure the GS K2 Media Server that is the media file system and database server, selecting the following roles:

   - SNFS file system server

   - iSCSI bridge

   - Media database server

4. Configure RAID the same as Level 30.

5. If there is no optional NH1-10GE K2 Media Server, for the GS K2 Media Server that is not the media file system and database server, select the following roles:

   - iSCSI bridge

   - FTP server

   - NAS server

6. If there is an optional NH1-10GE K2 Media Server, for the GS K2 Media Server that is not the media file system and database server, select the following role:

   - iSCSI bridge

7. For the optional NH1-10GE K2 Media Server, select the following roles:

   - FTP server

   - NAS server

For a redundant system (L35R), configure as you would a Level 20R K2 Storage System, taking the above specifications into consideration.

Bandwidth expansion for Aurora products

The "Expansion by bandwidth" feature is supported on K2 Storage Systems that store media from both K2 products and Aurora products. If the storage system contains media from Aurora products and you want to retain that media, additional steps are required, as follows:

1. Follow procedures in the *K2 Storage System Instruction Manual* to accomplish the following tasks:

   • Add disks and/or RAID equipment.

   • Bind disks

   • Use Storage Utility to expand file system by bandwidth

2. After Storage Utility reports the file system expansion succeeded, do not restart K2 Media Servers.

3. Using Notepad or another text editor, open the following file:

   V:\VolumeConfig.xml

4. To the existing XML content, add lines with XML tags `<MainFolder>` and `<AtticFolder>` to specify the main folder and attic folder for your Aurora media. For example, if the main folder is "VibrintAVFiles" and the attic folder is "VibrintAttic", the resulting XML content is as follows:

   ```
   <VolumeConfig>

     <Type>K2 Storage</Type>

     <Model>Grass Valley PFR700</Model>

     <StripeSize>512</StripeSize>

     <Security>Not Supported</Security>

     <MainFolder>V:\VibrintAVFiles</MainFolder>

     <AtticFolder>V:\VibrintAttic</AtticFolder>

   </VolumeConfig>
   ```

5. Save and close the *VolumeConfig.xml* file.

6. Continue with procedures in the *K2 Storage System Instruction Manual* to complete the process as follows:

   • Restart K2 Media Servers using the Windows operating system restart procedure.

   • The Restripe Utility automatically launches and begins restriping media.

Verifying spanning tree settings

Use the following procedures to check and (if necessary) set your HP ProCurve Ethernet switches to have the proper spanning tree settings. These procedures apply to both the 3400cl series switches and the 2900 series switches. Refer to the *K2 Storage System Instruction Manual* for the complete switch configuration procedures.

Check the firmware version

You must have the proper version of firmware on the switch to be able to check and make the settings.

1. Telnet to the switch and login with the administrator username and password.

2. At the switch console command (CLI) prompt, type the following, then press **Enter**:

   ```
   menu
   ```

   If prompted to save the current configuration, answer no (press the n key) to proceed.

   The main menu opens.

3. From the main menu, tab to **Command Line (CLI)** and press **Enter**. The command prompt appears.

4. Type the following, then press **Enter**:

   ```
   show flash
   ```

   Information is displayed similar to the following example:

   ```
   HP_iSCSI_switch1# show flash

   Image            Size(Bytes)   Date     Version

   -----            ----------   --------  -------

   Primary Image   : 3287779     03/15/05 M.08.86

   Secondary Image : 3287779     03/15/05 M.08.86

   Boot Rom Version: I.08.07

   Current Boot    : Primary
   ```

5. Check the Primary Image Version and proceed as follows:

   • If the version is not M.08.86, you must change to version M.08.86 before continuing. These procedures are qualified only with version M.08.86. Refer to the documentation you received with the switch for instructions to change the firmware. After you have changed the firmware, continue with the next procedure.

   • If the version is M.08.86, continue with the next procedure.

Check spanning tree settings

1. If you have not already done so, telnet to the switch and login with the administrator username and password.

2. At the switch console command (CLI) prompt, type the following and press **Enter**:

   ```
   show spanning-tree
   ```

   Spanning tree information is displayed.

3. Check the spanning tree information and make sure that settings are correct, as follows:

   ```
   STP Enabled:  Yes

   Force Version:  RSTP-operation
   ```

4. If settings are correct, no further configuration is required.

5. If settings are not correct, you have the following options:

   • If you have one switch only and the switch is not connected to any other switches, these spanning tree settings are recommended, but not required. You should make the correct settings at your next opportunity when it is convenient.

   • If your switch is connected to another switch, either because you have a multi-switch K2 Storage System or for any other reason, these spanning tree settings are required. You must correct your spanning tree settings as soon as possible.

6. Changing spanning tree settings requires a restart of the switch, so you must make the settings while the K2 Storage System is offline. When you can take your system offline, continue with the next procedure.

Configure RSTP

1. Stop all media access on the K2 Storage System.

2. If you have not already done so, telnet to the switch and login with the administrator username and password.

3. At the switch console command (CLI) prompt, type the following and then press **Enter**:

   ```
   configure
   ```

   You are now in configuration mode.

4. To set spanning tree to RSTP, type the following and then press **Enter**:

   ```
   spanning-tree force-version rstp-operation
   ```

   This configures spanning tree, but it does not turn spanning tree on.

5. Type the following, then press **Enter**:

   ```
   menu
   ```

   When prompted, save the configuration by pressing the y key.

   The main menu opens.

6. Proceed as follows, depending on the STP Enabled setting that you discovered when you checked spanning tree settings:

   • If STP Enabled is already set to Yes, no further configuration is required. Restart the switch to put changes into effect.

   • If STP Enabled is set to No, you must turn spanning tree on using the switch's Web interface. Continue with the next procedure.

Enable spanning tree

1. From the control point PC or another PC, make sure that you have a direct Ethernet cable connection to the switch, with no switches, routers, proxies, or other networking devices in between.

2. On the PC, open Internet Explorer and type the switch's IP address in the Address field, as in the following example.

   ```
   http://192.168.100.61
   ```

   This should be the name or IP address as currently configured on the switch.

3. Press **Enter** to open the switch's configuration application.

NOTE: The configuration application for the HP ProCurve switch requires Java.

You can also access the switch's configuration application from the K2 System Configuration application.

4. In the switch's configuration application, choose **Configuration**, then **Device Features**.
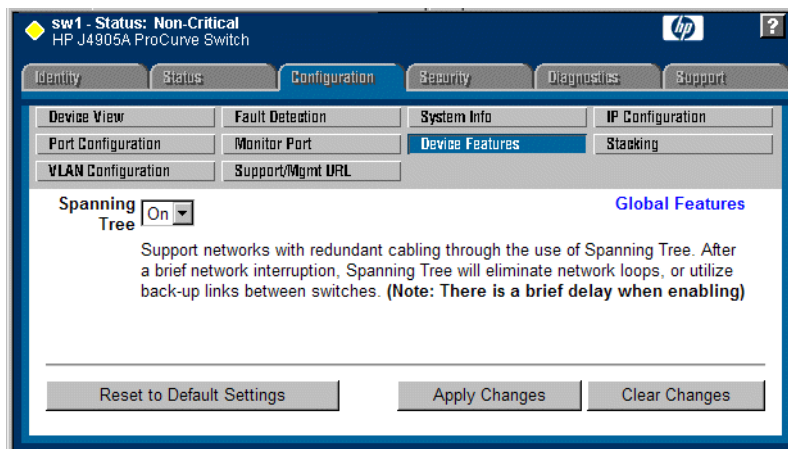
5. Set Spanning Tree to **On** and click **Apply Changes**. If prompted, log in with the switch's administrator username and password.

6. Close the configuration application.

7. Restart the switch to put changes into effect.

K2 Media Server pre-installed software

The following software is pre-installed on the K2 Media Server when you receive it new from Grass Valley.

Software	Version	Software	Version
Adobe Reader	8.0	MS J# Redistributable Package	1.1
QuickTime	7	MS SQL 2005	SP2
ATI Display Driver	8.08-041111a-020816C-Dell	MS XML	6.0
Dell OpenManage	4.2.0	OSA BMC Management Utility	—
Dell OpenManage Array Manager	4.2.0	SQL XML	3.0 - 80.1529.1
Dell OpenManage IT Assistant	4.2.0	StorNext	3.0.3b.56
Intel Pro Network Adapters & Drivers	12.2	SanSurfer Control	1.0.0.0
IT Assistant	6.5 SP3	Windows Server 2003	SP2
J2SE Runtime Environment	6, Update 2	Windows PowerShell	1.0

Operation considerations

• Do not neglect to make a "first birthday" disk image shortly after the K2 Media Server is installed and configured. Refer to the *K2 Storage System Instruction Manual* for procedures. If there are multiple generic disk images on the E: partition, you should delete un-needed images to make room for the first birthday image. Refer to "Using generic recovery disk images" on page 24.

• If you are using the Grass Valley control point PC, you should also make a first birthday image of the control point PC. Use a compatible version of the recovery CD, as specified in "Recovery CD compatibility" on page 12. Refer to the instruction in the *K2 Media Client Service Manual* for creating a recovery disk image.

• Level 2 and 3 K2 Media Servers can have either one dual-port iSCSI interface card or two single-port iSCSI interface cards. These cards are also called TOEs. The configuration depends on the manufacturing run during which your machine was built. K2 System Software version 3.1 and higher supports either configuration, and there is no difference in functionality. When using cabling diagrams and other artwork to reference the iSCSI ports, make the necessary adjustments if your machine is different than that illustrated.

Known problems

The following limitations are present in this 3.2.58 release of the K2 Storage System. If you wish to obtain more information about these limitations, please mention the reference numbers that follow the description of each limitation.

Documentation

Description: In the K2 Storage System Instruction Manual, the procedures for expanding the media file system are incomplete. (CR88346)

Workaround: Before connecting an additional expansion chassis to existing RAID devices, do the following:
-Make sure that the expansion chassis has unbound disks.
-Power down all devices of the K2 Storage System, including all RAID storage devices.

K2 System Configuration

Description: A "Could not locate...file..." message is displayed in the K2 System Configuration application. (CR86757)

Workaround: On the control point PC, copy all xml files found in C:\profile to C:\Documents and Settings\Administrator\Desktop.

Description: When configuring a K2 Media Server, the K2 System Configuration application provides instructions to "Enter the hostname or IP address of the server to configure". If the K2 Media Server has the role of FTP server, these instructions are incorrect. (CR88284)

Workaround: Enter the hostname only. Do not enter the IP address. Entering the IP address can cause FTP transfers to K2 Media Clients to fail.

NetCentral

Description: NetCentral reports a Failover Monitor fault, even though Failover Monitor is actually running with no problem. Also, there is no report of database replication currently underway. (CR 62119)

Workaround: Verify that Failover Monitor is still running and database replication is under-way by using the Server Control Panel in the K2 System Configuration appli-cation.

RAID

Description: Loading controller firmware simultaneously on two controllers in different chassis fails. (CR63092)

Workaround: Load firmware on one chassis at a time. Do not load in parallel. Do not use Storage Utility for other tasks while firmware is loading.

Description: On a Level 3 RAID Expansion Chassis, the expansion adapter fault LED can stay on, even though no fault is present. (CR73601)

Workaround: This problem does not occur on all expansion adapters. If it occurs on your expansion adapter, contact Grass Valley Support to fix the problem.

System

Description: A K2 Media Server with a dual-port iSCSI interface adapter (TOE card) can suffer a blue screen fault. (CR83861)

Workaround: Update the firmware on the iSCSI interface adapter (TOE card). Go to URL ftp://ftp.thomsongrassvalley.com/K2/Images/DualTOE_3.0.1.24 for proce-dures.

Description: A "...service or driver failed..." message appears when the K2 Media Server starts up. (CR68251)

Workaround: Check Windows Event Viewer to identify the problem service. If you unin-stalled K2 software, the problem service is likely GVGSCSI, in which case the solution is to install K2 software and restart. If you used an early version of the K2 System Configuration application to configure the server, the problem service is likely MSSQLADHELPER, in which case the solution is to disable the service.

Description: During failover testing a Failover Monitor error occurs, indicated by a "COM1 initialization failed" log message on redundant K2 Media Servers. (CR88881)

Workaround: Uninstall a serial port mouse driver. The driver is evidenced only when the error state occurs. On both K2 Media Servers, in Device Manager, look under Mouse Input devices. Identify the Serial Mouse, disable it, and then uninstall it. In addition check the boot.ini to make sure that the /fastdetect flag is enabled.