

K2 Summit Production Client, K2 Solo Media Server, and K2 Summit SAN Version 7.3.8 Release Notes & Upgrade Instructions

These release notes contain the most recent information and supersede previous publications, as of 10 February 2011. Check the Grass Valley website at www.grassvalley.com/docs for an updated version that contains additional important information.

These release notes contain information for the following:

- K2 Summit models with internal storage
- K2 Summit models with direct-connect storage
- K2 Solo Media Server
- The K2 Storage Area Network (SAN) with connected shared storage K2 Summit Production Clients

Documentation path to install K2 system with internal storage



Documentation path to install K2 client with shared or direct-connect storage



*Cabling Guide packed with RAID primary chassis

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Grass Valley Product Support

To get technical assistance, check on the status of a question, or to report a 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.

World Wide Web: <http://www.grassvalley.com/support/>

Technical Support E-mail Address: gvgtechsupport@grassvalley.com

Grass Valley Knowledge Base: <http://grassvalley.novosolutions.net/>

In the Knowledge Base you can search by topic, search by product, or browse the Table of Contents to find Frequently Asked Questions (FAQ).

Telephone Support

Use the following information to contact Product Support by phone.

International Support Centers

Our international support centers are available 24 hours a day, 7 days a week.

| Support Center | Toll free | In country |
|----------------|------------------|-------------------|
| France | +800 80 80 20 20 | +33 1 48 25 20 20 |
| United States | +1 800 547 8949 | +1 530 478 4148 |

Authorized Local Support Representative

A local support representative may be available in your country. To locate a support center during normal local business hours, refer to the following list. This list is regularly updated on the website for Grass Valley Product Support

(<http://www.grassvalley.com/support/contact/phone/>)

After-hours local phone support is also available for warranty and contract customers.

| Region | Country | Telephone |
|--------|---------------------------------|------------------|
| Asia | China | +86 10 5883 7575 |
| | Hong Kong, Taiwan, Korea, Macau | +852 2531 3058 |
| | Japan | +81 3 6848 5561 |
| | Southeast Asia - Malaysia | +603 7492 3303 |
| | Southeast Asia - Singapore | +65 6379 1313 |

| Region | Country | Telephone |
|--------------------------------|---|--|
| Pacific | India | +91 22 676 10324 |
| | Australia | 1 300 721 495 |
| | New Zealand | 0800 846 676 |
| | For callers outside Australia or New Zealand | +61 3 8540 3650 |
| Central America, South America | All | +55 11 5509 3440 |
| North America | North America, Mexico, Caribbean | +1 800 547 8949; +1 530 478 4148 |
| Europe | UK, Ireland, Israel | +44 1189 230 499 |
| | Benelux – Netherlands | +31 (0) 35 62 38 421 |
| | Benelux – Belgium | +32 (0) 2 334 90 30 |
| | France | +800 80 80 20 20; +33 1 48 25 20 20 |
| | Germany, Austria, Eastern Europe | +49 6150 104 444 |
| | Belarus, Russia, Tadjikistan, Ukraine, Uzbekistan | +7 495 258 09 20 |
| | Northern Europe | +45 404 72 237 |
| | Southern Europe – Italy | +39 06 87 20 35 28 |
| | Southern Europe – Spain | +34 91 512 03 50 |
| | Middle East, Near East, Africa | Middle East |
| Near East and Africa | | +800 80 80 20 20; +33 1 48 25 20 20 |

Release Summary

Release note revisions for this release

This release of software has multiple versions of release notes, as follows:

| Part number | Description |
|-------------|--|
| 071-8781-00 | Initial release notes for K2 7.3.8 software |
| 071-8781-01 | Topics added/modified as follows: <ul style="list-style-type: none">• Configuring Server 2008 for domain on page 14 — New topic.• Compatible K2 Media Server components on page 34 — SiteConfig Discovery Agent version updated.• Compatible Grass Valley products on page 40 — NetCentral version updated.• Operation considerations on page 31 — Server 2008 discovery requirement and 64-bit MPIO file name added. |

What's new in version 7.3.8

The following features are available with the initial software release:

- **Licensing for K2 system software** — When upgrading, version 7.3.8 K2 system software installs with a 30 day trial license. You must obtain a permanent license from Grass Valley. Version 7.3.8 is a free upgrade for anyone under a service contract or SLA. Customers with previous versions who are outside the 1 year warranty can purchase an upgrade. When upgrading to version 7.3.8, make sure that you carefully follow the upgrade and licensing procedures later in these release notes, so that licensing features are correctly installed.
- **HotBin Export** – Automatically export K2 clips in any format that the K2 system supports. The feature requires the K2-HotBinExportService license. Refer to [About the Export capture service](#) on page 16.
- **P2 Export** – AppCenter export supports P2 format.
- **QuickTime Video+Key Import** – Import QuickTime files with an alpha video channel encoded using the Apple Animation codec for Video+Key (key-fill) clips. This feature requires the AppCenterElite license. Refer to [QuickTime video and key import specification](#) on page 21.
- **MXF reference files** — When you create a simple K2 clip on a K2 system, K2 software can create a corresponding reference file. The reference file is stored in a directory in the clip's folder on the V: drive. You can configure the software to create QuickTime reference files, MXF reference files, or no reference files. Refer to [About MXF reference files](#) on page 14.
- **MXF and QuickTime export of complex movies** – Complex movies are flattened during MXF and QuickTime streaming export, as these formats do not directly support complex movies. [MXF interchange specification](#) on page 19.
- **Storage Utility features** — Clean Unreferenced Files and Clean Unreferenced Movies are now supported.

- **Continuous record export** — You can export a completed continuous (loop) record clip as MXF or QuickTime, with the result being a flattened stream file. Recording must be complete before you export the clip, however you can make sub-clips while record is underway and export the sub-clips. For this feature, MPEG-2 long GoP is not supported.
- **More robust performance** — Improved recovery from interrupted video inputs.
- **Turbo iDDR** — Compatibility with Turbo iDDR no longer supported.
- **K2 SAN Quality of Service (QOS)** — A third level of QOS is available for better management of generic iSCSI clients, such as editing workstations. Refer to the *K2 SAN Installation and Service Manual*.
- **SNFS file system** — Upgrade to version 3.5.2.1b15620 is required. This version supports 64-bit systems.
- **K2 Dyno PA DLC tool** — A DLC (Distributed LAN Client) tool streamlines the configuration of a stand-alone K2 Summit system with the K2 Dyno PA application. For more information, see the K2 Dyno PA documentation.

The following hardware components and systems are available at some time after the initial software release:

- **K2 10G SAN systems with K2 10G RAID storage** — A new storage infrastructure for SAN systems provides increased bandwidth. Devices include the following:
 - K2 10G RAID storage (NEC Condor) with 8 Gig (D4) controllers
 - K2 Media Server (Dell 610) with 10 Gig iSCSI interface adapter (TOE) and SFP+ connection
 - 2910 HP Switch with 10 Gig SFP+ connections

Features include the following:

- 10 Gig iSCSI connection between K2 Media Server and Ethernet switch.
- 8 Gig Fibre Channel connection for SAN between K2 Media Server and K2 10G RAID storage.
- K2 Media Servers are 64-bit Windows Server 2008 operating system.
- Licensing of a single K2 Media Server provides multiple bandwidth levels without requiring additional iSCSI interface adapters and K2 Media Servers. This leads to an overall system simplification.
- **K2 10G RAID for K2 client direct-connect** — Provides 8 Gig Fibre Channel connection for direct-connect between K2 client and K2 10G RAID storage.
- **K2 Summit Transmission models** — New SD and HD/SD models provide high value for transmission and play-to-air solutions. All models support agile playback of DV/DCVPRO, MPEG-2, SD and HD at bit rates up to 50Mbps. Channels for MPEG-2 record at up to 50Mbps vary by model. Both SAN and stand-alone models are available. Stand-alone models offer 4 TB and 16 TB storage.

In addition to these release notes, the following documentation is available for existing and new systems with this version 7.3.8 release of software:

- *K2 Documentation CD* 063-8289-05 has been revised for use with this release of software.
- *K2 Lx0 RAID Instruction Manual* 071-8614-01. This manual has not been revised. Use this manual for K2 Level 10-40 RAID storage (NEC Condor with 4 Gig D1 and D3 controllers).
- *K2 10G RAID Instruction Manual* 071-8778-00. This manual has been revised. Use this manual for the new K2 10G RAID storage (NEC Condor with 8 Gig D4 controllers).
- *K2 Storage Area Network Installation and Service Manual* 071-8724-01. This manual has not been revised. Use this manual for K2 Level 10-40 SAN systems (1 Gig TOEs and 4 Gig controllers).

- *K2 Storage Area Network Installation and Service Manual* 071-8779-00. This manual has been revised. Use this manual for K2 10G SAN systems (10 Gig TOEs and 8 gig controllers).
- *K2 Storage Cabling Guide* 071-8713-01. This manual has not been revised. Use this manual for K2 Level 10-40 SAN systems (1 Gig TOEs and 4 Gig controllers) and K2 client direct-connect storage with K2 Level 10-30 RAID storage (4 Gig controllers).
- *K2 Storage Cabling Guide* 071-8780-00. This manual has been revised. Use this manual for K2 10G SAN systems (10 Gig TOEs and 8 gig controllers) and K2 client direct-connect storage with K2 10G RAID storage (8 gig controllers).
- *Fibre Channel Switch Installation Manual* 071-8713-02. This manual has been revised.
- *K2 Summit/Solo Field Kit Upgrade Instructions* 071-8721-01. This document has been revised. Use it for all field kit upgrades.
- *K2 AppCenter User Manual* 071-8723-01, *K2 System Guide* 071-8726-01, *Quickstart Guides*, and *Service Manuals* have not been revised. Use these manuals with this release of software, with new features/changes as documented in these release notes.

Not supported in this release

The following devices and functionality are not supported with 7.x versions of K2 software. Check with your Grass Valley representative regarding availability.

- K2 Media Client — Compatible with 3.x versions of K2 software only.

Changes and features in previous releases

The following sections describe changes and features in past releases.

Version 7.2.7

- **ChannelFlex Suite** — Multiple inputs and outputs per channel are enabled by the AppCenter Elite license. This license must be ordered from Grass Valley. The license is not included with this version of software as a 30 day trial license. Refer to [About introducing ChannelFlex Suite on existing K2 systems](#) on page 23 for more information. ChannelFlex Suite features are summarized as follows:
 - **Super Slo-Mo** — 2x and 3x frame rate record. Also requires HD license.
 - **Multi-Cam** — Two SDI video inputs on a single channel.
 - **Video + Key** — Record and playback.
 - **3D** — Left + Right eye. Record and playback.
- **Super Out** — This feature is enhanced with the display of additional information. Requires AppCenter Pro license.
- **K2 Summit Transmission Package** — This model has 1 TB drives and is limited to DV and MPEG formats at maximum 50 Mbps. Also limited to 1-IN/3-OUT or 4-OUT channel configurations. Refer to the *K2 System Guide* for more information.
- **K2 Dyno Replay Controller** — The 1.6 Dyno software version is compatible with this release of K2 software. Refer to compatibility information later in these release notes.

- **AVC-Intra on K2 Solo Media Server** — AVC-Intra 50/100 record/play is available on a K2 Solo Media Server as the K2-SOLO-ELITE model or as a field-kit upgrade.
- **QuickTime AVC-Intra import** — K2 storage supports import of QuickTime AVC-Intra. This completes the AVC-Intra workflow, as export of QuickTime AVC-Intra is already supported.
- **Nearline K2 SAN** — The Nearline 120 redundant (NL120R) K2 SAN replaces the Nearline 10 and Nearline 10R K2 SAN. If using the *K2 Storage Cabling Guide* to cable the NL120R SAN, the instructions for Nearline 10R apply.
- **SNFS file system** — Upgrade to version 3.5.2 is required.
- **Compact Flash** — The internal storage K2 system now supports multiple varieties of Compact Flash for the system drive. To accommodate these varieties, when you re-image you must resize partitions. Refer to your K2 product's Service Manual for instructions.
- **K2 Dyno Production Assistant support** — K2 Dyno PA can transfer a file from a stand-alone K2 system to an Apple Xsan. The file can be edited while streaming. Also, on new systems and if you make a new file system on existing systems, unique disk labels are created, which is required for control by K2 Dyno PA. The disk labels and the file system name must be unique.
- **Documentation** – In addition to these release notes, use K2 Documentation CD 063-8289-04 April 2010 with this release of K2 software. The following manuals are revised:
 - K2 Solo Media Server Service Manual 071-8709-01
 - K2 Solo Media Server Quick Start Guide 071-8710-01
 - K2 Storage Cabling Guide 071-8713-01
 - K2 AppCenter User Manual 071-8723-01
 - K2 Storage Area Network Installation and Service Manual 071-8724-01
 - K2 Summit Client Service Manual 071-8725-01
 - K2 System Guide 071-8726-01
 - K2 Summit Client Quick Start Guide 071-8722-01

Version 7.1.14

- **AVC-Intra** — AVC-Intra 50/100 record/play is available as an option or as a field-kit upgrade. Requires HD license.
- **P2 Import Capture Service** — P2 material can be imported to K2 storage.
- **QuickTime MPEG export/stream** — The K2 system can export MPEG formats and stream MPEG Long GoP.
- **GPI** — The commands Take Next Event, and Take Next Scheduled Event are supported.
- **4 GB USB Recovery Drive** — A larger capacity recovery drive is available to ship on new systems sometime after this release.
- **K2 Summit drives** — A new family of drives for K2 Summit Production Client internal storage is available, with 600 GB and 450 GB capacities. 300 GB drives are no longer available.
- **K2 Summit/Solo drive firmware** — New systems have new drive firmware versions. If you are upgrading an existing system, you must upgrade to the new version. Refer to compatibility information later in these release notes.
- **External storage drives** — The Cheetah 7 family of drives for direct-connect and SAN storage is available, with 600 GB, 450 GB, and 300 GB capacities. Larger drive capacities require multiple LUNs per rank. For systems with multiple LUNs per RANK, expansion by bandwidth is supported. Expansion by capacity is not supported.
- **K2 Dyno Replay Controller** — The 1.5 Dyno software version is compatible with this release of K2 software. Refer to compatibility information later in these release notes.

- **Event Scheduler** — When licensed for Event Scheduler, the Event Monitor application is available. This application is a monitor-only application that displays the list of events scheduled in Event Server for a channel. The events must be scheduled by an application developed by a third party application developer. There is Start menu item and desktop icon for licensing Event Scheduler. Do not attempt to license Event Scheduler unless instructed to do so by Grass Valley or your application developer.
- **Documentation** – In addition to these release notes, use either of following with this release of K2 software:
 - K2 Documentation CD – 063-8289-02 – November 2009
 - K2 Documentation CD – 063-8289-03 – February 2010

Both CDs contain the same set of K2 Summit/SAN manuals that document this release of K2 software. K2 Documentation CD 063-8289-03 additionally provides a manual set for the 1.5 release of K2 Dyno software.

Version 7.1.9

- **MPEG-2 play** — MPEG-2 Playback is a standard feature on all models, relative to current licensing. MPEG-2 SD Playback is standard with or without the HD license. MPEG-2 HD Playback is available only on systems that are licensed for HD.
- **MPEG-2 record** — MPEG-2 recording is a standard feature on MPEG models or as a field-kit upgrade, relative to current licensing. MPEG-2 SD recording is standard with or without the HD license. MPEG-2 HD recording is available only on systems that are licensed for HD.
- **Solid State Disks** — Solid State Disks (SSD) available.
- **Super out** — Timecode burn-in on monitor output. This is an AppCenter Pro feature.
- **AFD support** — Active Format Description (AFD) is supported for control of aspect ratio.
- **Ancillary data** — Support for SD ancillary data, including SD/HD data bridging.
- **Capture services** — The K2 Pathfire capture service and the K2 DG capture service are supported.
- **Security** — Based on Windows user accounts and groups, you can set permissions on bins and on channels.
- **SNFS** — Upgrade to SNFS version 3.5.1 is required. With this version there is a change to SNFS services, as displayed in the Service control panel. Also, on new systems and if you make a new file system on existing systems, the name that Storage Utility creates for the SNFS volume (the V: drive) is *gvfs_hostname*, where *hostname* is the name of the primary SNFS file system server.
- **QuickTime update** — Upgrade to QuickTime version 7.6 or higher is required.
- **Licensing for K2 system software** — When upgrading, version 7.1.9 K2 system software installs with a 30 day trial license. You must obtain a permanent license from Grass Valley. When upgrading to version 7.1.9, make sure that you carefully follow the upgrade and licensing procedures later in these release notes, so that licensing features are correctly installed.
- **2910a1 series switch** — A new Gigabit Ethernet switch, the “ProCurve Networking Switch 2910a1 Series” is qualified for use with K2 Storage Systems. Its use and configuration are the same as the existing 2900 series switch, as documented in the *K2 Storage Area Network Installation and Service Manual*.
- **K2 Coder** — The K2 Coder is supported on the K2 SAN. The K2 Coder compatible with this version of K2 software does not have watch folders pre-configured, so you must create them yourself, as documented in the *K2 Storage Area Network Installation and Service Manual*.

- **Preroll setting** — For mixed compression format playout (DV/MPEG/AVC-Intra), the preroll is increased to 1 second. For same compression format playout, preroll remains at 10 frames. This applies to AMP protocol, VDCP protocol, and Harris settings Disk Prerolls, Frames to send Play early, and Frames to send Record early. These specifications supersede those in the *K2 System Guide* part number 071-8726-00.

Version 7.0.13

- **K2 Media Servers** — Dell PowerEdge R710 and R610 are supported as K2 Media Server platforms.
- **Live Production option** — In K2Config, you can now create a Live Production K2 SAN. This type of SAN has a shorter minimum delay between start record and start playout when the record and play are on different SAN K2 Summit Production Clients. To support this feature, the K2 SAN must be sized for increased bandwidth. Contact your Grass Valley representative for specifications relative to your needs.

Version 7.0.12

- **K2 Dyno Reply Controller** — For live event replay, the K2 Dyno Replay System includes a K2 Dyno Controller and a K2 Summit Product Client.
- **Final Cut Pro support** — K2 FCP Connect is a licensable feature that allows your Macintosh Final Cut Pro system to become a K2 SAN iSCSI client. This enables edit in place functionality for K2 media via QuickTime reference files. Supports DV, IMX, HD, and XDCAM formats.

Version 7.0.11

- **K2 Summit Production Client** — This new product is a SD/HD K2 client for replay in sports, news, live, and live-to-tape applications. Its features are similar to the current K2 Media Client.
 - **Live Play** — Extremely fast record-to-playout performance. Also known as Chase Play. Playout to within ½ second of record point.
 - **DV formats** — Supports the DV25, DV50, and DV100 (DVCPROHD) P2 acquisition formats natively. Does not support MPEG.
 - **Transition effects** — Dissolves and audio fades can be assigned to clip playout transitions. This is an AppCenter Pro feature.
 - **Graphical User Interface design** — AppCenter has a gray/brown color scheme with improved buttons and fonts.
 - **Media file system** — The file system with this release allows nested bins for better media management and is supported on the K2 Summit Production Client only. It is not supported on the K2 Media Client.
 - **Write filter** — A file-based write filter prevents accidental or unintended changes. It must be disabled before changes are made and enabled after changes are made.
 - **Metadata server role** — The role of metadata server replaces the role of media database server for a K2 Media Server. The metadata server role is required to support the media file system with this release.
 - **AppCenter Video Monitor** — Active video is provided on a locally connected VGA monitor for AppCenter channels. You can also select the AppCenter view to display a four pane active video monitor of all four channels. This is an AppCenter Pro feature.
 - **Modular channels** — Codec and real-time functionality is combined on a two channel module, allowing for two and four channel options.
 - **CompactFlash** — The system drive is CompactFlash.

Additional notes

The following sections contain additional information about this release.

Configuring Server 2008 for domain

Systems with the Microsoft Windows Server 2008 operating system require special configuration when on a domain, as explained in this topic.

A K2 Media Server must have its firewall disabled for proper K2 SAN operation. This includes the Windows firewall that is only in effect for systems on a domain. On Microsoft Windows Server 2008 K2 Media Servers, the domain firewall setting does not appear in any configuration dialog box until the K2 Media Server is on the domain. Therefore you must do the following steps after the K2 Media Server is operating on the domain.

1. Log in to the K2 Media Server with Windows administrator privileges.
2. From the Windows desktop click **Start | Control Panel | System and Security | Windows Firewall**.
3. On the left side, click **Turn Windows Firewall on or off**.
4. Under the new **Domain network location settings**, select the **Turn off Windows Firewall setting** and then click **OK**.

Using reference files

When you create a simple K2 clip on a K2 system, K2 software can create a corresponding reference file. The reference file is stored in a directory in the clip's folder on the V: drive. You can configure the software to create QuickTime reference files, MXF reference files, or no reference files. The following topics provide information about reference files on K2 systems.

About QuickTime reference files

For QuickTime reference files, the K2 clip must be a DV, AVC-Intra, XDCAM-EX, XDCAM-HD, XDCAM-HD 422, or IMX format simple clip in order to create the reference file. With the QuickTime reference file you can open the K2 clip with QuickTime tools, such as Final Cut Pro, for playback and editing. The QuickTime tool must be run on another system. Running the QuickTime player or other QuickTime tools on the K2 system is not supported. You have options for connections, access, and software to support your workflow requirements.

About MXF reference files

For MXF reference files, the K2 clip can be any supported format simple clip. K2 software creates the MXF reference file when you create a new simple clip by recording, importing, or copying. K2 software does not create the MXF reference file when you create a playlist, a program with continuous-recorded material, or a clip with tracks having a duration less than the clip duration. The reference file is a MXF OP1b file with external essence. The reference file gives you options for connections, access, and software to support your workflow requirements.

Configuring reference file type on a stand-alone K2 system

1. In AppCenter, click **File | System | Configuration**.
Configuration Manager opens.
2. In Configuration Manager, click the **System** tab.
3. In Reference Files settings, for the **Reference file type** setting, select one of the following:
 - None — K2 software does not create reference files.
 - QuickTime — K2 software creates QuickTime reference files.
 - MXF — K2 software creates MXF reference files.
4. Click **OK** to apply the setting.
5. Restart the stand-alone K2 system to put the change into effect.

Configuring reference file type on a K2 SAN system

1. In the K2Config application, for the K2 Media Server with role of file system server, access the File System Server Configuration page as follows:
 - On a SAN that is already configured, in the tree view click **File System Server**.
 - On a SAN that is not yet fully configured, work through the Configure K2 Server wizard until you reach the File System Server Configuration page.
2. On the File System Server Configuration page select one of the following:
 - No reference file — K2 software does not create reference files.
 - QuickTime reference file — K2 software creates QuickTime reference files.
 - MXF reference file — K2 software creates MXF reference files.
3. Click **Check** to apply the setting.
4. Manage the required K2 Media Server restart as follows:
 - On a SAN that is already configured, you must restart the K2 Media Server to put the change into effect. Follow the restart procedure appropriate for the basic or redundant K2 SAN.
 - On a SAN that is not yet fully configured, continue to work through the Configure K2 Server wizard. The restart at the end of the configuration process is sufficient.

If a redundant K2 SAN, you must configure similarly and restart both K2 Media Servers with role of file system server.

Using the Export capture service

The following topics provide information for the Export capture service.

About the Export capture service

The Export capture service provides a way to have media automatically exported from a K2 system. The capture service has a watched bin. The watched bin is a K2 storage system bin. You place the media in the bin and it is exported from the K2 system.

You configure the watched bin to export the K2 media as your desired clip format. After you place the K2 clip in the watched bin, the capture service goes into action and validates the media to make sure it has the proper structure for the desired file format. If it is valid, the capture service then does the necessary processing to export the clip to the destination folder.

The Export capture service and its watched bin must be on a K2 system that hosts the K2 FTP interface, as follows:

- Stand-alone K2 system — When you place a K2 clip in the watched bin, the capture service exports the clip from the internal storage or direct-connect media storage of the K2 system. The watched bin must be on the K2 system's V: drive.
- K2 Media Server with role of FTP server — When you place a K2 clip in the watched bin, the capture service exports the clip from the shared media storage of the K2 SAN. The watched bin must be on the K2 Media Server's V: drive.

Prerequisites for using the Export capture service

Before you can configure and use the Export capture service, the following requirements must be satisfied:

- The K2 system must support the clip format you plan to export. This could require specific hardware and/or licenses.
- K2 system software must be at a version that supports the Export capture service. Refer to *K2 Release Notes* for information on Export capture service version compatibility.
- The capture service must be licensed on the stand-alone K2 system or K2 Media Server. This is a Grass Valley software license.

Use topics in this section as appropriate to satisfy prerequisites.

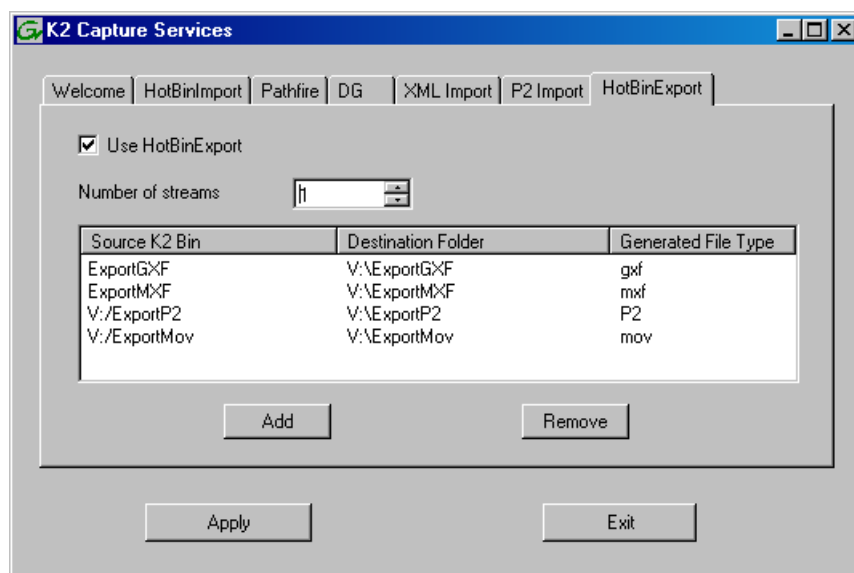
Considerations for using the Export capture service

When you are configuring and using the Export capture service, bear in mind the following considerations:

- You must be logged in with administrator privileges on the stand-alone K2 system or the K2 Media Server as well as having the appropriate security permissions to access the watched folder or bin.
- If you have multiple source folders (for import) or destination folders (for export) on external systems, use the same user account for all capture service access to all systems.
- If using the export capture service on a K2 SAN, the K2 Capture Services utility must be on a K2 Media Server that is also an FTP server. If your K2 SAN has multiple FTP servers, the utility must be on the primary FTP server.

Configuring the Export Capture Service

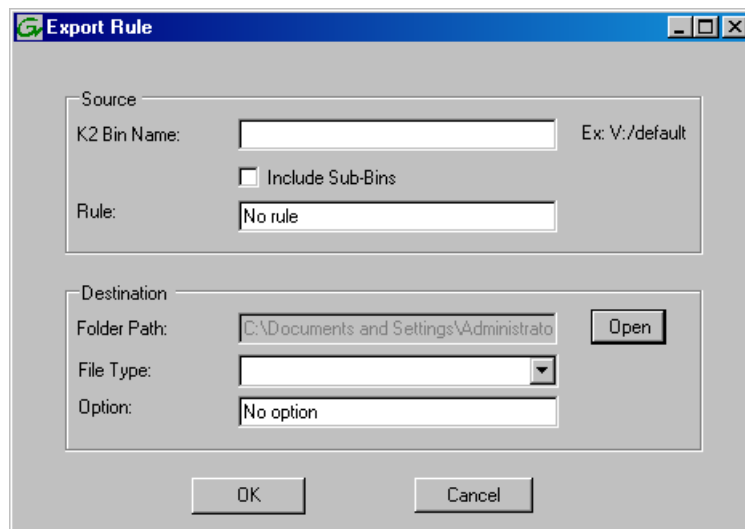
1. From the **Start** menu, access the **Programs** menu and select **Grass Valley | K2 Capture Services**.
If the write filter is enabled, a message appears that informs you about the write filter and prompts you to restart.
2. If the write filter is enabled, restart as prompted, then repeat previous steps.
The K2 Capture Services utility dialog box is displayed.
3. Click the **HotBin Export** tab.



4. Select **Use HotBin Export**.
If you have not yet licensed the HotBin Export capture service, a "...start the process of getting a license now?" message appears. Follow on-screen instructions to obtain a license. After licensing, restart the K2 Capture Services utility and continue with this procedure. Make sure the write filter is disabled.
5. Select the number of streams.
Exports run serially. If you select one stream, only one export can occur at a time. If you select multiple streams, multiple exports can occur at one time.

6. Click **Add**.

The Export Rule dialog box opens.



7. Configure as follows:

- Source K2 Bin Name — Required. This is the watched bin. The bin must be on the K2 system's V: drive. It must be in the K2 media database and appears in AppCenter as a media bin. When valid clips are placed in this bin, the HotBin Export capture service automatically exports the clips.
- Include Sub-Bins — Optional. When selected, clips are exported if they are in a bin nested inside the Source K2 Bin.
- Rule — Do not configure this field. Leave the default value as it is.
- Destination Folder Path — Required. This is a standard file system directory. It receives the files/directories exported by the Export capture service. If you specify a destination folder that does not yet exist, the K2 system creates it when exporting. If the destination folder is not on the local K2 system, you are prompted to enter user account credentials to access the source directory. If part of a domain, enter the domain name.
NOTE: You must use the same user account for all capture service access to all systems.
- File Type — Required. Select the file format in which K2 clips are exported.
- Option — Do not configure this field. Leave the default value as it is.

8. Click **OK** to save settings and close the Export Rule dialog box.

9. Repeat previous steps to add additional Export HotBins.

10. When your capture service settings are complete, click **Apply**.

A message appears that informs you about the write filter and prompts you to restart.

11. Click **OK**.

The K2 system restarts.

Testing the Export Capture Service

1. Place the clips to export into the watched bin.
2. Verify that the media appears in the destination.
3. Play to verify success.

Export capture service components

The following table describes the components that support Export capture service functionality.

| Name | Description |
|-----------------------------|--|
| Grass Valley Import Service | This is the service that provides the functionality for the capture service. It is the service that automatically exports K2 clips from the K2 media storage. |
| K2 Capture Services utility | Configures K2 capture services. |
| Source K2 bin | This is the watched bin. It is a bin in K2 media storage. When files are placed in this directory, the capture service automatically exports them from K2 media storage. |
| Destination folder | The folder that receives the files exported from the K2 media storage. |

MXF interchange specification

This specification applies to MXF file transfer, import, and export on K2 Summit, Solo, and SAN systems.

MXF does not support multiple video tracks, such as 3D/Video + Key.

Formats are supported are as follows:

| Supported formats | Notes | |
|-------------------|-----------|--|
| Video | DVCPRO25 | — |
| | DVCPRO50 | — |
| | DVCPRO HD | Super Slo-Mo requires software version 7.1.x or higher |
| | DVCAM | — |
| | D10 | See MXF export behavior for eVTR style D10AES3. |
| | MPEG-2 | Includes all MPEG-2 formats (IMX, XDCAM, etc.) that can be stored on a K2 system |
| | AVC-Intra | — |
| Audio | 48 kHz | — |

| Supported formats | | Notes |
|-------------------|--------------------|---|
| | 16 bit, 24 bit | — |
| | PCM, Dolby-E, AC-3 | — |
| Data | VBI | MXF supports either ancillary data packets or VBI lines in the data track but not both, so if ancillary data packets and VBI lines have been recorded into the K2 clip's data track, then the VBI lines will be dropped from the MXF data track on an MXF export. |
| | Ancillary | — |

Interchange mechanisms are supported as follows:

| Mechanism | | Support |
|------------|--------|---------|
| File based | Import | Yes |
| | Export | Yes |
| FTP stream | Import | Yes |
| | Export | Yes |

You can export a completed continuous (loop) record clip as MXF or QuickTime, with the result being a flattened stream file. Recording must be complete before you export the clip, however you can make sub-clips while record is underway and export the sub-clips. For this feature, MPEG-2 long GoP is not supported.

MXF export behavior on K2 systems

Upon MXF export the K2 system checks media for specifications as they apply to industry standard formats such as XDCAM and eVTR style D10AES3. If specifications match, the media is exported as the appropriate format.

The K2 system allows you to alter clips so that they no longer match the specifications for the industry-standard format. For example, you can add audio tracks to exceed the “# of Audio Tracks” specification. If you alter a clip in this way, on MXF export the K2 system exports the clip but it is not compatible with the industry-standard format.

QuickTime interchange specification

This specification applies to QuickTime file transfer, import, and export on K2 Summit, Solo, and SAN systems.

Formats are supported are as follows:

| Supported formats | | Notes |
|-------------------|----------|-------|
| Video | DVCPRO25 | — |
| | DVCPRO50 | — |

| Supported formats | | Notes |
|-------------------|------------------------------|--|
| | DVCPRO HD | Super Slo-Mo requires software version 7.1.x or higher |
| | DVCAM | — |
| | AVC-Intra | — |
| | D10/IMX | — |
| | XDCAM-HD | — |
| | XDCAM-EX | — |
| | XDCAM-HD422 | — |
| Audio | 48 kHz 16 bit, 24 bit PCM | Audio tracks handled as stereo pairs on export |
| Data | None | — |

Interchange mechanisms are supported as follows:

| Mechanism | | Support |
|------------|--------|---------|
| File based | Import | Yes |
| | Export | Yes |
| FTP stream | Import | No |
| | Export | No |

You can export a completed continuous (loop) record clip as MXF or QuickTime, with the result being a flattened stream file. Recording must be complete before you export the clip, however you can make sub-clips while record is underway and export the sub-clips. For this feature, MPEG-2 long GoP is not supported.

QuickTime video and key import specification

This specification applies to importing a QuickTime file with two video tracks for video and key playout. This is a licensed feature.

The imported file must be QuickTime 32 with alpha RLE 32-bit raster encoding, as produced by the Apple Animation Codec.

Supported video formats for import are as follows:

| Format | | Scan | Frame Rate |
|----------|-------------|-------------|------------|
| SD video | 720 x 480 | Interlaced | 29.97 |
| | 720 x 512 | Interlaced | 29.97 |
| | 720 x 576 | Interlaced | 25 |
| | 720 x 608 | Progressive | 25 |
| HD video | 1920 x 1080 | Interlaced | 29.97, 25 |

| Format | Scan | Frame Rate |
|------------|-------------|------------|
| 1280 x 720 | Progressive | 59.94, 50 |

Supported audio formats for import are as follows:

| Format | | |
|------------------------------|----------------|----------------|
| Audio tracks (if present) | 48 kHz | Mono or stereo |
| | 16 bit, 24 bit | |
| | PCM | |

Interchange mechanisms are supported as follows:

| Mechanism | | Support |
|------------|--------|---------|
| File based | Import | Yes |
| | Export | No |
| FTP stream | Import | No |
| | Export | No |

When K2 software imports a file that meets the above requirements, it creates a K2 clip with two video tracks, in formats as follows:

| Format | | | Frame Rate | Data Rate |
|----------|------------------|-------------|------------|-----------|
| SD video | D10/IMX | 720 x 512 | 29.97 | 50 CBR |
| | D10/IMX | 720 x 608 | 25 | 50 CBR |
| HD video | AVC-Intra 100 | 1920 x 1080 | 29.97, 25 | 100 Mbps |
| | AVC-Intra 100 | 1280 x 720 | 29.97, 25 | 100 Mbps |

Audio tracks, if present are imported.

Timecode data is imported as K2 striped timecode. The first timecode value is the starting value and subsequent timecode is continuous.

The import process consumes system resource. Be aware of this if running other resource intensive processes during import.

P2 interchange specification

This specification applies to P2 file transfer, import, and export on K2 Summit, Solo, and SAN systems.

Formats are supported are as follows:

| Supported formats | | Notes |
|-------------------|--------------------|--|
| Video | AVC-Intra | Directory structure as specified by P2 |
| | DVCPRO25 | |
| | DVCPRO50 | |
| | DVCPRO HD | |
| | DVCAM | |
| Audio | 48 kHz | |
| | 16 bit, 24 bit PCM | |

Interchange mechanisms are supported as follows:

| Mechanism | | Support |
|------------|--------|---------|
| File based | Import | Yes |
| | Export | Yes |
| FTP stream | Import | No |
| | Export | No |

About introducing ChannelFlex Suite on existing K2 systems

When you upgrade to a K2 system software version that supports ChannelFlex Suite and then begin to use ChannelFlex Suite features, you increase the number of inputs and outputs on the K2 system. To support this increased load on system resources, you must adjust your system, as follows:

- Stand-alone K2 systems – This includes internal storage K2 Summit Production Clients, direct-connect storage K2 Summit Production Clients, and K2 Solo Media Servers. These system require an updated RTIO setting. You must update this setting when you upgrade.
- K2 SANs – These system might require additional disks for bandwidth and additional K2 Media Servers to act as iSCSI bridges (TOEs), depending on the number and type of inputs and outputs you are adding by your use of ChannelFlex Suite features. Contact your Grass Valley representative to evaluate your system and its suitability for supporting your use of ChannelFlex Suite.

Codec option matrix

Standard and optional codec functionality is specified in the following table. You can order codec functionality on a new system as an option or add it to an existing system as a field kit upgrade.

Codec options

| Option | SD | HD | DV encode | DV decode | MPEG encode | MPEG decode | AVC-I encode | AVC-I decode |
|------------------------------------|----|----|-----------|-----------|-------------|-------------|--------------|--------------|
| Standard | X | | X | X | | X | | |
| With HD license | X | X | X | X | | X | | |
| With MPEG card | X | | X | X | X | X | | |
| With HD license and MPEG card | X | X | X | X | X | X | | |
| With HD license and AVC-Intra card | X | X | X | X | | X | X | X |

Product nomenclature for options

| Option | K2 Summit Production Client nomenclature | K2 Solo Media Server nomenclature |
|------------------------------------|--|-----------------------------------|
| Standard | K2-XDP-2SD, K2-XPD-4SD | NA |
| With HD license | K2-XDP-2HD, K2-XPD-4HD | K2-SOLO |
| With MPEG card | K2-XDP-2SD-MPG, K2-XPD-4SD-MPG | NA |
| With HD license and MPEG card | K2-XDP-2HD-MPG, K2-XPD-4HD-MPG | K2- SOLO-MPEG |
| With HD license and AVC-Intra card | K2-XDP-2HD-AVCI, K2-XPD-4HD-AVCI | K2- SOLO-ELITE |

Managing the write filter

The following topics describe the K2 Summit Production Client and K2 Solo Media Client write filter.

About the write filter

The K2 Summit Production Client and K2 Solo Media Server have a file-based write filter, which is a feature of the Windows embedded operating system. With the write filter enabled, files can be created, modified, and deleted, but these changes are held in a memory cache. When the K2 system restarts, these changes are lost and the K2 system returns to its original state. This protects the K2 system from changes and increases on-air reliability. For any system configuration change the write filter must be disabled otherwise changes are lost at the next restart.

Some directories, such as *C:\logs*, *C:\Profile\config*, and *C:\Profile\ChannelSuites*, are excluded from write filter protection, so that channel configuration and logs are saved. Do not attempt to alter this list of excluded directories. If you suspect that write filter configuration has been altered, use the recovery image process to restore to the default configuration.

To enable the write filter, the K2 Summit Production Client or K2 Solo Media Server must be restarted. Likewise, to disable the write filter, the K2 system must be restarted. You can enable/disable the write filter remotely using the SiteConfig lock/unlock feature on one K2 system at a time or on a group of K2 systems all at once. You can also enable/disable the write filter from a local K2 system, but if you use the local method, do not also use the SiteConfig method. If you enable/disable the write filter locally, the change is not automatically sent to SiteConfig, so SiteConfig can not reliably indicate the current lock/unlock state.

Local software installation and the write filter

When you manually install K2 client software at the local K2 Summit Production Client or K2 Solo Media Server, the installation program helps you manage the write filter. Both the uninstall program and the install program have the same behavior. When you run either the uninstall or the install program, the program behaves as follows:

- If the write filter is enabled, the program notifies you and sets the write filter to disabled, then prompts you to restart. To continue the uninstall or install process, you must restart and then run the program again, this time with the write filter disabled.
- If the write filter is disabled, the program sets it to be enabled so that after next restart the K2 system starts up with the write filter enabled.

In this way the write filter is disabled while software is installed. Changes made to system settings or to the system drive before the restart following an install are preserved.

Once you have uninstalled or installed K2 Client software, at the next restart the write filter is enabled. If you want to keep the write filter disabled after an install, run the Write Filter Utility and disable the write filter before restarting.

SiteConfig software installation and the write filter

When you use SiteConfig to install K2 client software on a K2 Summit Production Client or K2 Solo Media Server, SiteConfig helps you manage the write filter. The SiteConfig "Lock" feature enables the write filter and the "Unlock" feature disables the write filter. In addition, both uninstall deployment tasks and install deployment tasks behave the same way in how they manage the write filter, as follows:

- If the write filter is enabled (the K2 system is locked), SiteConfig does not allow the task to be deployed. To deploy software, you must first disable (unlock) the write filter on the K2 system.
- If the write filter is disabled (the K2 system is unlocked), when the deployment task completes SiteConfig keeps the write filter disabled. If you then restart the K2 system, the write filter is still disabled after the restart. This allows you to deploy additional software.

When you are finished deploying software, use SiteConfig to enable (lock) the write filter on the K2 system.

Disable write filter

1. If you have not already done so, log on to the K2 system with Windows administrator privileges.
2. From the Windows desktop, click **Start | All Programs | Grass Valley | Write Filter Utility**.
FBWF Manager opens.
3. Under Filter Settings, set Filter to **Disable**.
Do not modify other settings.
4. Click **OK**.
5. When prompted, restart the K2 system.

Enable write filter

1. If you have not already done so, log on to the K2 Summit Production Client or K2 Solo Media Server with Windows administrator privileges.
2. From the Windows desktop, click **Start | All Programs | Grass Valley | Write Filter Utility**.
FBWF Manager opens.
3. Under Filter Settings, set Filter to **Enable**.
4. Under Protected Volumes, set C: to **Protected**.
Do not modify other settings.
5. Click **OK**.
6. When prompted, restart the K2 Summit Production Client or K2 Solo Media Server.

Passwords and security on K2 systems

To provide a basic level of security, K2 systems recognize four different security levels based on Windows users and groups, and the systems ship from the factory with accounts pre-configured accordingly. To access the system you must login with the username and password for one of the pre-configured accounts.

The following table shows the different types of K2 users and their privileges. Passwords are case sensitive. The term “unknown user” applies to any user who logs in to the K2 System without using the Windows administrator, K2 administrator, or K2 user login and password

| | Windows administrator | K2 administrator | K2 user | Unknown user |
|----------|------------------------------|-------------------------|----------------|---------------------|
| Login | Administrator | K2Admin | K2User | N/A ¹ |
| Password | adminK2 | K2admin | K2user | N/A |

¹ The unknown user, like all others who access the K2 system, must have a valid Windows login for the K2 client or the control point PC through which the K2 system is being accessed.

| | Windows administrator | K2 administrator | K2 user | Unknown user |
|---------------------------------|-----------------------|--|--|--|
| AppCenter Configuration Manager | Full access | Full access | Can view | Can't access |
| AppCenter | Full access | Full access | Full access; requires an account on the K2 Media Client(s) | Can view channel suites, channel status, on-line help and System Status pane. Can export logs. |
| Storage Utility | Full access | Full access | Can't access | Can't access |
| K2Config | Full access | Full access | Can't access | Can't access |
| Windows Operating System | Full access | Limited access (based on Windows login privileges) | Limited access (based on Windows login privileges) | Limited access (based on Windows login privileges) |

To support FTP and security features, K2 systems also have *movie*, *mxfmovie*, and *mpgmovie* accounts. Do not use these accounts to log in to the Windows operating system on K2 systems.

About application security on the K2 SAN

The K2Config application and the Storage Utility application both require that you be logged in to the application with administrator privileges in order to modify any settings. These privileges are based on the Windows account that you use when you log in to the K2Config application. When you open Storage Utility from within the K2Config application, the account information is passed to Storage Utility, so you do not need to log in separately to Storage Utility.

In SiteConfig you configure global and/or device-type credentials for device access. These credentials are likewise based on Windows accounts.

You must use a Windows account that has local administrator privileges on the machine to be configured. For example, when you are on a control point PC and you run the K2Config application for the purpose of configuring a K2 Media Server, the account with which you log in to the K2Config application must be present on the K2 Media Server and must have administrator privileges on the K2 Media Server.

By default, all K2 SAN machines are set up with the following accounts:

| Account | Username | Password | K2 Configuration permissions | Storage Utility permissions |
|-----------------------|---------------|----------|------------------------------|-----------------------------|
| Windows Administrator | Administrator | adminK2 | Run/change | Run/change |
| K2 Administrator | K2Admin | K2admin | Run/change | Run/change |
| K2 User | K2User | K2user | No access | No access |

For initial setup and configuration, you can use the default Windows Administrator username and password to log in to applications and machines as you work on your K2 SAN. However, for ongoing security you should change the username/password and/or create unique accounts with similar privileges. When you do this, you must ensure that the accounts are present locally on all K2 SAN machines, including control point PCs, K2 Media Servers, K2 Media Clients, K2 Summit Production Clients, and other iSCSI clients.

NetCentral also has accounts for security levels, as follows:

- NetCentral Administrator
- NetCentral Technician
- NetCentral User

Grass Valley recommends mapping the NetCentral administrator with the K2 administrator level. If you are using the Grass Valley Control Point PC, this mapping is already done for you at the factory, so you can log on to NetCentral as administrator using the K2 administrator (K2Admin/K2admin) logon. You can also assign other NetCentral groups to users, as necessary for your site's security policies. You need Windows administrator privileges to add or modify a user's privileges. For more information on NetCentral security, see the *NetCentral User Guide*.

About credentials in SiteConfig

SiteConfig requires administrative privileges on devices in order to perform most of the network configuration and deployment tasks. If you add a device based on a known device type, SiteConfig knows the default administrator login and password to use. Then, when you use remote desktop or perform software deployment to the device, SiteConfig automatically uses these credentials. These credentials are called "global" credentials for the device since the same credentials are used on all devices of that type in the system.

You can choose to override the default credentials for a given device type. For example, if you have specified a different administrator account or a different password on the devices when commissioning the system, then you want SiteConfig to use these modified credentials.

It is possible to also override the default credentials for a single device.

Upgrading firmware on HP switch

1. If you have not already done so, install a TFTP Server.
For example, to install `tftpd32.exe`, go to <http://tftpd32.jounin.net/>.
2. Open the TFTP Server.
3. Make sure your current working directory includes the `*.swi` file that you are using for the upgrade.

- Execute the copy command with the following syntax:

```
copy tftp flash <ip-address> <remote-os-file> [ < primary | secondary
> ]
```

Note that if you do not specify the flash destination, the TFTP download defaults to the primary flash.

For example, to download a software file named T_13_23.swi from a TFTP server with the IP address of 10.16.34.3 1, use the following:

```
ProCurve # copy tftp flash 10.16.34.3 T_13_23.swi
```

- When prompted The primary OS image will be deleted. continue [y/n]?, press **Y**.

When the switch finishes downloading the software file from the server, it displays the progress message Validating and Writing System Software to FLASH...

- Wait until the CLI prompt re-appears, then continue with the next step in this procedure.
- Check the version of firmware on the switch. To do this, 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   : 6737518     07/25/08    T.13.23
Secondary Image : 5886358     10/26/06    T.11.12
Boot Rom Version: K.12.12
Current Boot    : Primary
```

- Verify that the new software version is in the expected flash area (primary or secondary).
- Restart the switch from the flash area that holds the new software (primary or secondary).

Configuring QOS on the GigE switch

Prerequisites for this procedure are as follows:

- The switch is HP ProCurve switch 29xx series.
- Trunks, VLANs and all other configuration is complete.
- The switch has an IP address
- You have network access to the switch

Use this procedure to make the Quality of Service (QOS) setting on the HP ProCurve switch 29xx series.

- If you have not already done so, from a network connected PC open the MS-DOS command prompt and login to the switch as administrator, as follows:
 - Telnet to the switch. For example, if the switch's IP address is 192.168.40.12, you type the following, then press **Enter**.

```
telnet 192.168.40.12
```
 - Press **Enter** one or more times until the switch's username prompt appears.
 - Type the switch's administrator username and press **Enter**, then type the switch's administrator password and press **Enter**. The switch console command (CLI) prompt appears.

2. Type the following, then press **Enter**:
config
You are now in configuration mode.
3. Type the following, then press **Enter**:
qos queue-config 2-queues
This limits the number of active queues within the switch giving the most buffering to VLANs 1 and 60
4. Type the following, then press **Enter**:
show qos vlan
The screen displays VLAN information. Note the ID number of the Media (iSCSI) VLAN. It should be 60, as follows:
VLAN priorities

| VLAN ID | Apply rule | DSCP | Priority |
|---------|-------------|------|-------------|
| 1 | No-override | | No-override |
| 60 | No-override | | No-override |
5. a) Assign the Media VLAN the QOS priority of 3. For example, if the VLAN ID is 60, you type the following, then press **Enter**.
vlan 60 qos priority 3
b) Type the following, then press **Enter**:
show qos vlan
The screen displays VLAN information. Make sure that the Priority column reports that the Media VLAN has a value of 3.

Next, verify flow control settings.

Operation considerations

- If you have problems using SiteConfig to discover a Windows Server 2008 K2 Media Server, make sure the server has an IP address. SiteConfig cannot discover Windows Server 2008 systems that do not have an IP address, such as those configured for DHCP.
- When installing MPIO on a 64-bit K2 Media Server (required only for a redundant nearline SAN), the file name is *gdsminstall64.exe*.
- Do not neglect to make a “first birthday” image of each K2 product shortly after installation and configuration is complete.
- Changing system video standards (NTSC/PAL) requires a restart as part of the channel changes as soon as the new standard is selected. Configuration Manager causes an immediate restart of the K2 client if the system reference standard is changed and AppCenter is being used.
- Refer to the “Remote control protocols” appendix in the *K2 System Guide* for operation considerations related to AMP, VDCP, BVW, Harris, RS-422, etc.
- To import/export between systems using AppCenter, in Configuration Manager on the Remote tab, add each system that you want to have available as a source or a destination. Do this for K2 systems as well as non-K2 systems, such as Profile XP.
- When transferring between K2 systems and other types of systems, such as Profile XP, you must specify the IP address, path, and file name to initiate a transfer.
- Constrain media names and filepaths for support across systems. For example, on a K2 Summit Production Client, AppCenter allows you to create bin names and clip names longer than 32 characters. However, names of this length are not supported on Aurora products.
- Tri-level sync is not supported on K2 systems.
- Before configuring audio tracks on a channel, eject all clips. This is required to put changes into effect.
- The K2 client and K2 Media Server can operate continuously for a long period of time, but the recommended operational practice is to restart at least once every three to six months.
- When restoring from a system-specific recovery image (an image you have created from your K2 system or the image on your K2 system's USB recovery flash drive), follow the procedure in the K2 product's service manual. When restoring from a generic recovery image (a baseline image for the K2 product), you must also restore network configuration, install K2 software, install SNFS software, and make a new file system.
- Mix effects (an AppCenter Pro feature) are supported as follows:
 - Supported between like compression formats: DV-to-DV, MPEG-to-MPEG, etc.
 - Not supported between different compression formats.
 - Not supported for MPEG long GoP.
- A 3D/Video+Key player channel does not support agile play, mix effects, or a two-head player model.
- On a K2 Solo Media Server, before making a new file system, first upgrade drive firmware to the latest version, as specified in *Compatible K2 Summit/Solo components* on page 32. Failure to do so generates a Storage Utility error.
- Grass Valley recommends that you use a frame synchronizer on incoming video sources that are recorded in AVC-Intra format.
- If Dyno PA connects to an internal storage K2 system, there are special requirements for media disk labels. Refer to the *Dyno Production Assistant Configuration Manual*.
- When configuring editors on a K2 SAN with 1 Gig TOEs, do not assign editors and K2 clients (K2 Summit or K2 Media Client) to the same TOE. Instead, assign editors to their own TOE.
- To export AVI format files to a shared CIFS drive, first export to the local disk, then copy the file to the share.

Version compatibility

Versions qualified for compatibility with this version 7.3.8 release of K2 software are summarized in the following sections.

Compatible K2 Summit/Solo components

The following components are part of K2 Summit Production Client, K2 Solo Media Server, or K2 Summit Transmission Client/Server products. Components are compatible with this release of K2 software as listed in the following table. Compatible versions are pre-installed on the K2 system when you receive it new from Grass Valley.

Component versions

| Component | Version | Comments |
|--|------------------------------|---|
| GrassValley K2 Client software | 7.3.8 | Includes AppCenter |
| Media File System (SNFS) | 3.5.2.1b15620 | — |
| SiteConfig Discovery Agent, also known as SiteConfig Network Configuration Connect Kit | 1.0.8 and higher | A minimum version of 1.0.8 is required to support device discovery. Then when you deploy software to the device, the SiteConfig application prompts you to upgrade to the correct version of the Discovery Agent on the device. |
| Windows Operating System | Windows XP embedded 2002 SP3 | — |
| Windows update | 2.0.50727.4022 | — |
| Microsoft .NET Framework | 2.0 SP2, 3.0 SP2, 3.5 SP1 | — |
| QuickTime | 7.6 and higher | — |
| Intel Network Connections | 13.3 | — |
| Microsoft iSCSI Initiator | 2.08 | — |
| MS XML | 4.0 SP2, 6.0 | — |
| MegaRAID Storage Manager (internal storage only) | v2.91-05 | — |
| RAID controller microcode (internal storage only) | 1.40.52-0629 | See table below for locations and filenames. |
| RAID disk drive firmware (Summit internal storage only) Hitachi ViperB drives | 570 | See table below for locations and filenames. |
| RAID disk drive firmware (Summit internal storage only) Hitachi ViperC drives | 510 | See table below for locations and filenames. |

| Component | Version | Comments |
|---|-----------|--|
| RAID disk drive firmware (Solo internal storage only) | 4101 | See table below for locations and filenames. |
| RAID disk drive firmware (Solid State drives) | 2269 | — |
| LSI RAID controller driver (internal storage only) | 3.10.0.32 | — |

K2 Summit Production Client internal storage RAID controller microcode file names

Find files at *C:\profile\microcode\Internal Storage\LSI Controller*.

| Version | Microcode file |
|--------------|-----------------------------------|
| 1.40.52-0629 | SAS1078_FW_Image_1.40.52.0629.rom |

K2 Summit Production Client internal storage drive firmware file names

Find files at *C:\profile\microcode\Internal Storage\Hitachi*.

| Drive type | Drive size | Storage Utility Identifier | Version | Firmware file |
|------------|------------|----------------------------|---------|-----------------------------|
| ViperB | 300GB | HUS154530VLS300 | 570 | HITACHI_ViperB_15K_A570.bin |
| | 450GB | HUS154545VLS300 | 570 | HITACHI_ViperB_15K_A570.bin |
| ViperC | 300GB | HUS156030VLS600 | 510 | HITACHI_ViperC_15K_A510.bin |
| | 450GB | HUS156045VLS600 | 510 | HITACHI_ViperC_15K_A510.bin |
| | 600GB | HUS156060VLS600 | 510 | HITACHI_ViperC_15K_A510.bin |

K2 Solo Media Server drive firmware file names

Find files at *C:\profile\microcode\Internal Storage\Fujitsu*.

| Drive size | Storage Utility Identifier | Version | Firmware file |
|------------|----------------------------|---------|-------------------------|
| 136GB | MBE2147RC | 4101 | FUJITSU_15K_25_4101.frm |

K2 Summit Transmission internal storage 7.2K SAS drives

Find files at *C:\profile\microcode\External Storage\K2_L10-L40 Condor\Drive\7.2K*.

| Disk Drive | Storage Utility Identifier | Firmware Version | Firmware file |
|------------|----------------------------|------------------|----------------------------|
| 500G | ST3500414SS | N004 | MU_7K_SAS_1T_500G_N004.bin |
| 1TB | ST31000424SS | N004 | MU_7K_SAS_1T_500G_N004.bin |
| 2TB | ST32000444SS | N004 | MU_7K_SAS_2T_N004.bin |

Compatible K2 Media Server components

The following components reside on the K2 Media Server and are compatible with this release of K2 software as listed in the following table. Compatible versions are pre-installed on the K2 Media Server when you receive it new from Grass Valley.

| Component | Version | Comments |
|--|---|--|
| Grass Valley K2 Server software | 7.3.8 | — |
| Media File System (SNFS) | 3.5.2.1b15620 | — |
| SiteConfig Discovery Agent, also known as SiteConfig Network Configuration Connect Kit | 1.1.0.190 with Windows 2008 Server | This version required for device discovery on systems with the Microsoft® Windows® Server 2008 operating system |
| | 1.0.8 and higher with Windows 2003 Server | A minimum version of 1.0.8 is required to support device discovery on systems with the Microsoft® Windows® Server 2003 operating system. Then when you deploy software to the device, the SiteConfig application prompts you to upgrade to the correct version of the Discovery Agent on the device. |
| Windows Operating System | Windows 2003 Server | With the latest update |
| | Windows 2008 Server | With the latest update |
| Windows update | 2.0.50727.4022 | — |
| Microsoft .NET Framework | 2.0 SP2, 3.0 SP2, 3.5 SP1 | — |
| QuickTime | 7.6 and higher | — |
| Adobe Acrobat Reader | 7.0 and higher | — |
| ATI Display Driver | 8.24.3.0 | — |
| Dell OpenManage | 5.3.0 | — |
| J2SE Runtime Environment | 6, Update 3 | — |
| MSXML | 4.0 and higher | — |
| Dell Server Models | R710, R610, 2950, 1950 | As provided by Grass Valley for specific K2 storage levels and applications. |

Compatible K2 Control Point PC components

The following components reside on the K2 Control Point PC and are compatible with this release of K2 software as listed in the following table. Compatible versions are pre-installed on the K2 Control Point PC when you receive it new from Grass Valley.

| Software | Version | Comments |
|--|--|---|
| K2 control point | 7.3.8 | — |
| Windows operating system | Server 2003 SP 1 | — |
| Windows update | 2.0.50727.4022 | — |
| NetCentral | 5.2.0.17 | Check with your Grass Valley representative for the specific version. |
| SQL Server Express | 2005 | — |
| .NET Framework | 1.1, 1.1 Hotfix, 2.0 SP2, 3.0 SP2, 3.5 SP1 | — |
| QuickTime | 7.6 and higher | — |
| MS XML | 4.0 | — |
| Windows Installer | 3.1 | — |
| SiteConfig application | 1.4.0.463 and higher | Upgrade to this version before deploying software to any devices. |
| SiteConfig Discovery Agent, also known as SiteConfig Network Configuration Connect Kit | 1.0.8 and higher | A minimum version of 1.0.8 is required to support device discovery. Then when you deploy software to the device, the SiteConfig application prompts you to upgrade to the correct version of the Discovery Agent on the device. |
| 7-ZIP | — | — |
| Adobe Reader | 9.0 | — |

Compatible HP ProCurve GigE switch components

Components that reside on the HP ProCurve 3400cl series GigE switch and the HP ProCurve 29xx series GigE switch are compatible with this release of K2 software as follows:

| Product | Version | Comments |
|------------------------------------|---------|---|
| HP ProCurve 2910al series firmware | W_14_30 | This is the only version available on this model of switch. |
| HP ProCurve 2900 series firmware | T.11.12 | This older version is no longer recommended. |

| Product | Version | Comments |
|------------------------------------|---------|---|
| | T.13.23 | Upgrade to this version is required. After upgrade, configure QOS settings. |
| HP ProCurve 3400cl series firmware | M.08.66 | This older version is still compatible |
| | M.08.86 | Upgrade to this version is recommended |

Related Links

[Upgrading firmware on HP switch](#) on page 28

[Configuring QOS on the GigE switch](#) on page 29

[Verify/upgrade switch firmware](#) on page 55

Compatible K2 RAID components

This compatibility specification applies to K2 Lx0 RAID (Condor with 4 Gig controllers) and K2 10G RAID (Condor with 8 Gig controllers) on a K2 SAN, both basic and redundant. RAID firmware is compatible with this release of K2 software as follows:

Find firmware on the K2 client (for direct-connect storage) or the K2 Media Server (for shared storage) at `C:\profile\microcode\External Storage\K2_L10-L40 Condor\Controller`.

| Component | Version | File Name | Comments |
|--|---------|---------------|---|
| Level 10/20 controller firmware for primary chassis with 15K SAS drives or SATA drives | 07VS | D1_07VS.BIN | This version is still compatible for 300 and 450 GB drives |
| | 07VV | D1_07VV.BIN | This version is still compatible for 300 and 450 GB drives |
| | 07VW | D1_07VW.BIN | This version required for 600 GB drives, recommended for 300 and 450 GB drives. Requires version 050B for expansion chassis. |
| Level 10/20 controller firmware for expansion chassis with 15K SAS drives or SATA drives | 030F | ENCL_030F.BIN | This version is still compatible for 300 and 450 GB drives with 07VS or 07VV controller firmware. |
| | 050B | ENCL_050B.BIN | This version is compatible for 300 and 450 GB with 07VS, 07VV, or 07VW controller firmware. Required for 600 GB drives with 07VW controller firmware. |
| Level 10/20 controller firmware for primary chassis with 7.2K SAS drives | 07VV | D1_07VV.BIN | 7.2K SAS drives are used in K2 Production Storage and K2 Nearline Storage. |
| Level 10/20 controller firmware for expansion chassis with 7.2K SAS drives | 050B | ENCL_050B.BIN | |

| Component | Version | File Name | Comments |
|--|---------|---------------|---|
| Level 30/35 controller firmware for primary chassis with 15K SAS drives or SATA drives | 07VS | D3_07VS.BIN | This version is still compatible for 300 and 450 GB drives |
| | 07VV | D3_07VV.BIN | This version is still compatible for 300 and 450 GB drives |
| | 07VW | D3_07VW.BIN | This version required for 600 GB drives, recommended for 300 and 450 GB drives. Requires 050B for expansion chassis. |
| Level 30/35 controller firmware for expansion chassis with 15K SAS drives or SATA drives | 030F | ENCL_030F.BIN | This version is still compatible for 300 and 450 GB drives with 07VS or 07VV controller firmware. |
| | 050B | ENCL_050B.BIN | This version is compatible for 300 and 450 GB with 07VS, 07VV, or 07VW controller firmware. Required for 600 GB drives with 07VW controller firmware. |
| Level 30/35 controller firmware for primary chassis with 7.2K SAS drives | 07VV | D3_07VV.BIN | 7.2K SAS drives are used in K2 Production Storage and K2 Nearline Storage. |
| Level 30/35 controller firmware for expansion chassis with 7.2K SAS drives | 050B | ENCL_050B.BIN | |
| 10G controller firmware for primary chassis with either 7.2K or 15K drives | 01VP | D4_01VP.BIN | — |
| 10G controller firmware for expansion chassis with either 7.2K or 15K drives | 020F | ENCL_020F.BIN | — |

Compatible K2 RAID disk drive firmware

This compatibility specification applies to K2 Lx0 RAID (Condor with 4 Gig controllers) and K2 10G RAID (Condor with 8 Gig controllers) on a K2 SAN, both basic and redundant.

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

Disk drive firmware is compatible with this release of K2 software as summarized in the following tables:

15K SAS Cheetah 5 drives with 4G controllers compatible versions

Find files for these versions at `C:\profile\microcode\External Storage\K2_L10-L40 Condor\Drive\15K\Cheetah 5`. Refer to "Firmware file names" below to identify files.

| Disk Drive | Storage Utility Identifier | Firmware Version | Comments |
|------------|----------------------------|------------------|----------|
| 73G | ST373685SS | 0002 | — |
| 146G | ST3146685SS | 0002 | — |
| 300G | ST3300655SS | 0002 | — |

15K SAS Cheetah 6 drives with 4G controllers compatible versions

Find files for these versions at *C:\profile\microcode\External Storage\K2_L10-L40 Condor\Drive\15K\Cheetah 6*. Refer to "Firmware file names" below to identify files.

| Disk Drive | Storage Utility Identifier | Firmware Version | Comments |
|------------|----------------------------|------------------|--|
| 146G | ST3146356SS | 0004 | This version is still compatible |
| | | N005 | This is the currently shipping version. Upgrade is recommended but not required. |
| 300G | ST3300656SS | 0004 | This version is still compatible |
| | | N005 | This is the currently shipping version. Upgrade is recommended but not required. |
| 450G | ST3450856SS | 0004 | This version is still compatible |
| | | N005 | This is the currently shipping version. Upgrade is recommended but not required. |

15K SAS Cheetah 7 drives with 4G controllers compatible versions

Find files for these versions at *C:\profile\microcode\External Storage\K2_L10-L40 Condor\Drive\15K\Cheetah 7*, except for N005² versions. The files for these N005 versions are removed from *C:\profile\microcode\...* directories when you upgrade your K2 software. Refer to "Firmware file names" below to identify files.

| Disk Drive | Storage Utility Identifier | Firmware Version | Comments |
|------------|----------------------------|------------------|--|
| 300G | ST3300657SS | N005 | N005 is compatible with 4G controllers only. Not compatible with 8G controllers. |
| | | N006 | This is the currently shipping version and is compatible with 4G controllers. Upgrade is recommended. If you must load disk firmware, load version N006. |
| 450G | ST3450857SS | N005 | N005 is compatible with 4G controllers only. Not compatible with 8G controllers. |

² Do not use file CH_15K7_SAS.N005 for any drive

| Disk Drive | Storage Utility Identifier | Firmware Version | Comments |
|------------|----------------------------|------------------|--|
| | | N006 | This is the currently shipping version and is compatible with both 4G and 8G controllers. Upgrade is recommended. If you must load disk firmware, load version N006. |
| 600G | ST3600057SS | N005 | N005 is compatible with 4G controllers only. Not compatible with 8G controllers. |
| | | N006 | This is the currently shipping version and is compatible with both 4G and 8G controllers. Upgrade is recommended. If you must load disk firmware, load version N006. |

15K SAS Cheetah 7 drives with 8G controllers compatible versions

Find files for these versions at *C:\profile\microcode\External Storage\K2_L10-L40 Condor\Drive\15K\Cheetah 7*. Refer to "Firmware file names" below to identify files.

| Disk Drive | Storage Utility Identifier | Firmware Version | Comments |
|------------|----------------------------|------------------|---|
| 450G | ST3450857SS | N006 | This is the currently shipping version and is compatible with both 4G and 8G controllers. |
| 600G | ST3600057SS | N006 | This is the currently shipping version and is compatible with both 4G and 8G controllers. |

7.2K SAS drives with 4G controllers compatible versions

Find files for these versions at *C:\profile\microcode\External Storage\K2_L10-L40 Condor\Drive\7.2K*. Refer to "Firmware file names" below to identify files.

| Disk Drive | Storage Utility Identifier | Firmware Version | Comments |
|------------|----------------------------|------------------|----------|
| 500G | ST3500620SS | N001 | — |
| 1TB | ST31000640SS | N001 | — |

7.2K SAS drives with 8G controllers compatible versions

Find files for these versions at *C:\profile\microcode\External Storage\K2_L10-L40 Condor\Drive\7.2K*. Refer to "Firmware file names" below to identify files.

| Disk Drive | Storage Utility Identifier | Firmware Version | Comments |
|------------|----------------------------|------------------|----------|
| 500G | ST3500414SS | N004 | — |

Version compatibility

| Disk Drive | Storage Utility Identifier | Firmware Version | Comments |
|------------|----------------------------|------------------|----------|
| 2TB | ST32000444SS | N004 | — |

Firmware file names

| Disk Drive | Firmware Version | Firmware Type | Firmware File Name |
|------------------------|------------------|-----------------|---------------------------------|
| Cheetah 5 15K SAS 73G | 0002 | Interface | CT15K5SAS.01_ |
| | | Servo | CT15K5SAS_73.__1 |
| Cheetah 5 15K SAS 146G | 0002 | Interface | CT15K5SAS.01_ |
| | | Servo | CT15K5SAS_146.__1 |
| Cheetah 5 15K SAS 300G | 0002 | Interface | CT15K5SAS.01_ |
| | | Servo | CT15K5SAS_300.__1 |
| Cheetah 6 15K SAS 146G | 0004 | Interface/Servo | CH_15K6_SAS.N004 |
| | N005 | Interface/Servo | CH_15K6_SAS.N005 |
| Cheetah 6 15K SAS 300G | 0004 | Interface/Servo | CH_15K6_SAS.N004 |
| | N005 | Interface/Servo | CH_15K6_SAS.N005 |
| Cheetah 6 15K SAS 450G | 0004 | Interface/Servo | CH_15K6_SAS.N004 |
| | N005 | Interface/Servo | CH_15K6_SAS.N005 |
| Cheetah 7 15K SAS 300G | N006 | Interface/Servo | CH_15K7_SAS_300G_N006.bin |
| Cheetah 7 15K SAS 450G | N006 | Interface/Servo | CH_15K7_SAS_450G_N006.bin |
| Cheetah 7 15K SAS 600G | N006 | Interface/Servo | CH_15K7_SAS_600G_N006.bin |
| 7.2K SAS 500G | N001 | Interface | BA_7K_ Interface.N001 |
| | | Servo | BA_7K_ ST3500620SS_ Servo.C30D |
| 7.2K SAS 1TB | N001 | Interface | BA_7K_ Interface.N001 |
| | | Servo | BA_7K_ ST31000640SS_ Servo.B30D |
| 7.2K SAS 500G | N004 | Interface/Servo | MU_7K_SAS_1T_500G_N004.bin |
| 7.2K SAS 1TB | N004 | Interface/Servo | MU_7K_SAS_1T_500G_N004.bin |
| 7.2K SAS 2TB | N004 | Interface/Servo | MU_7K_SAS_2T_N004.bin |

Compatible Grass Valley products

Grass Valley products are compatible with this version 7.3.8 release of K2 software as follows:

| Product | Version | Comments |
|---------------------------|-----------|----------|
| K2 Dyno Replay Controller | 1.6.5.128 | |

| Product | Version | Comments |
|---|----------------------|---|
| K2 Dyno PA | 1.5.0.1595 | |
| Aurora Browse | 7.1.0.18 | Check with your Grass Valley representative for version availability. |
| Aurora Suite | 7.1.0.273 | |
| Aurora Ingest | 7.1.0.68 | |
| Aurora Playout | 7.1.0.39 | |
| Profile XP Media Platform | 5.4.8 or higher | Media assets can be transferred to/from a Profile XP system but cannot be browsed. |
| NetCentral | 5.2.0.17 or higher | Check with your Grass Valley representative for the specific version. |
| SiteConfig application | 1.4.0.460 and higher | — |
| UIM | 2.1.1 | — |
| K2 TimeDelay | 7.1.1 and higher | — |
| K2 InSync | 4.0.3 | Check with your Grass Valley representative for version availability |
| K2 Avid plug-in | 7.0.0 | On the Avid Editor install the <i>K2AvidIngest</i> module and on the device that runs the Avid Transfer Manager/Interplay Engine install the <i>K2AvidDhm</i> module. |
| K2 FCP Connect | 2.0 | — |
| K2-Aurora FTP | 7.1.0.273 | — |
| Grass Valley LDK8300 Super SloMo Camera | — | 3x and 2x frame rates supported. Requires AppCenter Elite license. |
| Grass Valley LDK8000 SportElite HD Super SloMo Camera | — | 2x frame rate. Requires AppCenter Elite license. |
| Sony 3300 Super SloMo Camera | — | 3x frame rate only; 2x is not supported. Requires AppCenter Elite license. |
| Edius | 6.0.2 | — |
| ClipStore | — | Check with your Grass Valley representative for version availability. |

Compatible third party products

Products by manufacturers other than Grass Valley are compatible with this release of software as follows:

| Product | Version | Comments |
|---------------------------|-------------------|---|
| Pathfire Transfer Service | 5.4.3.0 | This version required for operation with the licensable K2 Pathfire capture service option. |
| DG | 1.4.7.0 or higher | This version required for operation with the licensable K2 DG capture service option. |

Compatible recovery applications

To create a recovery image of a K2 device, use compatible versions of the recovery application, as follows:

| Product | Recovery application and version | Comments |
|-------------------------------|---|---|
| K2 Summit Production Client | Recovery Flash Drive part number 86205900 | Use the Recovery Flash Drive that you received with the product. It is identified with the product's serial number and is to be used on that specific K2 Summit Production Client only. |
| K2 Media Server | Recovery CD part number 063-8246-04 | — |
| Grass Valley Control Point PC | Recovery CD part number 063-8246-04 | — |

Upgrading K2 systems

This section contains the tasks necessary for the upgrade to this release of software.

NOTE: *If installing an MPEG encode card or an AVC-Intra codec card field kit upgrade, do so after the K2 software upgrade, not before.*

K2 software downgrade is supported only via the recovery image process. If you must downgrade and you do not have a recovery image at the desired software version, obtain a recovery image from Grass Valley Support.

Upgrading a K2 SAN

This section contains the tasks necessary to upgrade a K2 SAN to this release of K2 software. Work through the tasks sequentially to complete the upgrade.

NOTE: *These upgrade instructions assume that the current K2 software is at version 7.0.11 or higher. If the current K2 software is a 7.x version lower than 7.0.11, contact Grass Valley Support before upgrading. If a K2 Media Client or any K2 device with current K2 software at a 3.x version, do not upgrade, as version 7.x is not supported on these devices.*

NOTE: *When upgrading from a version lower than 7.1, K2 system software installs with a 30 day trial license. You need a permanent license to operate beyond the trial period.*

About upgrading the K2 SAN with SiteConfig

This section provides instructions to upgrade the following K2 SAN devices:

- K2 Media Servers
- K2 Summit Production Clients

With these upgrade instructions, you use SiteConfig from a network connected control point PC and remotely upgrade software simultaneously on multiple K2 devices. This is the required process for software upgrades. Do not upgrade software on a K2 SAN locally at each device or via any other process.

If this is the first time using SiteConfig for software upgrade, follow instructions in *K2 SAN Installation and Service Manual* rather than instruction in these release notes. You must first have SiteConfig set up for system management and software deployment of the K2 SAN. Also refer to the *SiteConfig User Manual* or *SiteConfig Help Topics*. Then, after you have completed this initial SiteConfig set up, you can follow the instructions in this section to upgrade software.

NOTE: *If this is the first time using SiteConfig for software upgrade do not follow instructions in these release notes alone.*

NOTE: *Do not attempt to upgrade software incrementally across the devices of a K2 SAN while media access is underway. Online software upgrading is not supported.*

The following installation tasks provide information specifically for the upgrade to this 7.3.8 version of software. Read the information in these sections carefully before attempting any upgrade to software on any of the devices of a K2 SAN, including K2 systems, Aurora Edit systems, or other clients.

Make recovery images

Do not do this task if:

- You previously made a recovery image at the current software version for each computer you are upgrading.

Do this task if:

- You do not have a recovery image at the current software version for one or more of the computers you are upgrading.

The recommended procedure is to make a recovery image immediately after a software upgrade. If you neglected to do this when you last upgraded software you should make the recovery image now, before upgrading to the new version.

Refer to the Grass Valley product's *Service Manual* for recovery image procedures.

△ CAUTION: *If you upgrade and then decide you do not want to stay with this version of K2 system software, you must use the recovery disk image process to downgrade to your previous version.*

Prepare SiteConfig for software deployment to K2 SAN devices

Do the following to prepare SiteConfig for the software upgrade.

1. Make the following files accessible to the SiteConfig control point PC:
 - K2 Summit Client SAN software installation (*.cab) file.
 - K2 Media Server software installation (*.cab) file. Use file with *x86* in filename for 32-bit systems and file with *x64* in filename for 64-bit systems.
 - SNFS software installation (*.cab) file. Use file with *x86* in filename for 32-bit systems and file with *x64* in filename for 64-bit systems.
 - Summit SNFS software installation (*.cab) file.
 - Control Point software installation (*.cab) file.
2. On the K2 Media Server, check for the *C:\SNFS* directory and then proceed as follows:
 - If *C:\SNFS* exists on the K2 Media Server, then SNFS 3.5.1 is on the C: drive. In this case you must move SNFS to the D: drive. To do this you must procure the *35c235d.reg* file and use it as instructed with special tasks in the upgrade process below. The *35c235d.reg* file is on the version 7.3.8.xxxx K2 software CD in the SNFS directory. It can also be obtained at <http://www.grassvalley.com/downloads>.
 - If *C:\SNFS* does not exist on the K2 Media Server, continue with this procedure. No special tasks are required.
3. If a newer version of SiteConfig is available for upgrade and you have not yet upgraded SiteConfig, do the following:
 - a) From Windows Add/Remove programs, uninstall the current version of SiteConfig from the control point PC.
 - b) Install the new version of SiteConfig on the control point PC.

4. If not already present in the SiteConfig system description, configure deployment groups as follows:
 - A deployment group that contains your SAN K2 clients
 - A deployment group that contains your K2 Media Servers
 - A deployment group that contains your control point PC

Deploy control point PC software

Use SiteConfig to upgrade control point software on the K2 control point PC. In most cases, the K2 control point PC is also the SiteConfig control point PC, so you are in effect using SiteConfig to upgrade software on its own local system.

For this release of K2 software, the install task identifies the control point software in the Managed Package column as follows:

- GrassValleyControlPoint 7.3.8.xxxx

The software deployment process for the control point PC is similar to that used to upgrade software on other K2 devices. Use similar procedures and adjust accordingly to do the following:

1. Add the K2 control point software package to the deployment group that contains the control point PC.
2. Check software on the control point PC.
3. Configure and run deployment tasks to upgrade software.

Unlock K2 Summit Production Clients

This task disables the write filter on one or more K2 Summit Production Clients.

Prerequisites for this task are as follows:

- The device or all the devices in the group are communicating correctly in SiteConfig. This is indicated by the green star icon overlay.
 - The device or all the devices in the group are currently locked. This is indicated by the gray lock icon overlay.
1. If you have not already done so, stop all media access on the K2 systems. This includes record, play, and transfer operations.
 2. In either the **Network Configuration | Devices** tree view or the **Software Deployment | Deployment Groups** tree view, identify the device or the group of devices that you intend to unlock.
 3. Right-click the device or the group and select **Unlock**.
A "...may require restart..." message appears.
 4. Click **Yes** to allow SiteConfig to restart the device or devices.
The Set Administrative Credentials dialog box opens.
 5. Enter a username and password with administrator level privileges on the device or devices and click **OK**.
The Unlocking Devices window opens and displays progress.

6. When the Unlocking Devices window reports that the unlock process completed successfully, click **Close**.

The device or devices are now unlocked. For K2 Summit Production Clients, this also disables the write filter, which enforces a restart.

Take SAN clients offline

When upgrading software on a K2 SAN, you upgrade software on K2 Media Servers before you upgrade software on the connected SAN clients. This includes K2 clients, K2 appliances, Aurora clients, and generic clients. While you are upgrading software on K2 Media Servers you must keep all connected client devices offline (all media access stopped) or shut down. Do not power up or start media access on connected devices until the upgrade on K2 Media Servers is complete and the media file system/database server is fully operational.

1. If you have not already done so, stop all media access on SAN clients. This includes all record, play, and transfer operations
2. For K2 Summit Production Clients, if you have not already done so, disable (unlock) the write filter.
3. Shutdown all the SAN K2 clients on the SAN. To do this in SiteConfig, right-click a client device in the tree view and select **Shutdown**.

Next upgrade K2 Media Servers. If you have multiple K2 Media Servers you must manage them properly for the upgrade process.

Manage multiple K2 Media Servers

Do not do this task if:

- You are upgrading a K2 SAN with only one K2 Media Server. Skip ahead and begin upgrading your K2 Media Server.

Do this task if:

- You are upgrading a basic (non-redundant) K2 SAN 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 SAN. 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 SAN has multiple K2 Media Servers, you must upgrade all to the same version.*

If you are upgrading a basic K2 SAN with multiple servers:

1. Upgrade the server that takes the role of media file system/database server first.
2. After the media file system/database server is upgraded and when instructed to do so in a later task, upgrade your other servers.

If you are upgrading a redundant K2 SAN:

Use the following steps to manage primary/backup roles and upgrade your two media file system/database servers in the proper sequence. This avoids triggering a failover event.

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.
4. Continue with upgrade tasks on 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 a later task.

Upgrade K2 Media Server

Prerequisites for the upgrade are as follows:

- From the SiteConfig control point PC, you must have access to the software installation files for this release.

Install required Windows update

Do this task if:

- A K2 Media Server, Control Point PC, or K2 Coder with Windows update at a version lower than 2.0.50727.4022.

NOTE: In addition to this required update, Grass Valley recommends that you also install "High Priority" updates.

1. If you are not sure of the Windows update version currently installed, do the following:
 - a) Navigate to `C:\Windows\Microsoft.NET\Framework\v2.0.50727`.
 - b) Check file properties. The following properties indicate that version 2.0.50727.4022 is already installed:

| File name | File version | File size | Date | Time | Platform |
|-----------------|----------------|-----------|-------------|-------|----------|
| mscordacwks.dll | 2.0.50727.4022 | 989,000 | 11-Mar-2009 | 04:56 | x86 |
| mscorlib.dll | 2.0.50727.4022 | 4,550,656 | 11-Mar-2009 | 04:56 | x86 |
| mscorwks.dll | 2.0.50727.4022 | 5,812,544 | 11-Mar-2009 | 04:56 | x86 |
| sos.dll | 2.0.50727.4022 | 388,936 | 11-Mar-2009 | 04:56 | x86 |

- c) If your properties are different than those specified above, the update is necessary. This is true even if your version numbers are higher or your dates are later. Continue with this procedure.

NOTE: You must update even if your version numbers are higher or your dates are later.

2. Access the upgrade files and double-click `NDP20SP2-KB968760-x86.exe`.
The installation wizard opens.
3. Work through the wizard, accepting all default settings, and finish.
4. Restart as prompted.

Install High Priority Windows updates (recommended)

- Windows “High Priority” updates are recommended, but not required. While you have devices 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 unless specifically directed by product documentation or by Grass Valley Support.

Upgrade QuickTime

Do not do this task if:

- QuickTime is currently at version 7.6 or higher.

Do this task if:

- QuickTime is at a version lower than 7.6.
1. Access the QuickTime installation files.
 2. Locate and open the following QuickTime install file:

QuickTimeInstaller-7.6.exe

3. Work through the install wizard.

Configure settings so that the software does not automatically update Quicktime and other Apple software.

NOTE: Unless instructed to do so by Grass Valley, do not update or install Apple software.

Accept the default destination folder and other default settings.

Configure GlobalSuperUser in SNFS default.cfg file on K2 Media Servers

In this task you open the media file system (SNFS) configuration file and verify/modify settings.

Do not do this task if:

- You have already modified the configuration file with the required settings.

Do this task if:

- The configuration file does not have the required settings.

Prerequisites for this task are as follows:

- K2 systems must be offline

You can verify and, if necessary, modify the media file system (SNFS) configuration file and still keep your media file system intact if you carefully follow the steps in this procedure.

As an alternative to manually modifying the configuration file, if you need to make a new file system after upgrading K2 software, the required values are set automatically by the upgraded version of Storage Utility.

This task applies to the following devices:

- K2 Media Servers with role of file system server. If a redundant SAN, you must do this task on both primary and backup K2 Media Server.

1. On a K2 Media Server, using Notepad, open the media file system (SNFS) configuration file:
The configuration file can be either `D:\SNFS\config\default.cfg`. or
`D:\SNFS\config\gvfs_hostname.cfg`, where `hostname` is the name of the primary file system server (FSM).

2. On a K2 Media Server, verify, and if necessary modify, settings for required values as follows:

```
# *****
# A global section for defining file system-wide parameters
# *****
GlobalSuperUser Yes
.
.
.
.
.

InodeDeleteMax 1000
.

BufferCacheSize 64M
.
.
.
.
InodeCacheSize 32K
.
ReservedSpace No
```

3. Close, and if necessary save, the SNFS configuration file.

If you made changes, the K2 system must be restarted for the changes to take effect.

The restart later in this upgrade procedure is sufficient to put the changes into effect.

Configure Macintosh access in SNFS configuration file on K2 Media Servers

In this task you open the media file system (SNFS) configuration file and verify/modify settings.

Do not do this task if:

- The K2 SAN has no iSCSI or Fibre Channel connected Macintosh clients
- The K2 SAN has iSCSI connected or Fibre Channel connected Macintosh clients and Windows Security is configured to Yes on the SNFS file system.

Do this task if:

- The K2 SAN has iSCSI connected or Fibre Channel connected Macintosh clients and Windows Security is configured to No on the SNFS file system.

Prerequisites for this task are as follows:

- The Macintosh client connection requires K2 FCP Connect.
- The K2 SAN must be offline

You can verify and, if necessary, modify the media file system (SNFS) configuration file and still keep your media file system intact if you carefully follow the steps in this procedure.

This task applies to the following devices:

- K2 Media Servers with role of file system server. If a redundant SAN, you must do this task on both primary and backup K2 Media Server.

1. On a K2 Media Server, using Notepad, open the media file system (SNFS) configuration file:

The configuration file can be either `D:\SNFS\config\default.cfg`. or
`D:\SNFS\config\gvfs_hostname.cfg`, where *hostname* is the name of the primary file system server (FSM).

2. On a K2 Media Server, verify, and if necessary modify, settings for required values as follows:

```
# *****  
# A global section for defining file system-wide parameters  
# *****  
.  
.  
WindowsSecurity No  
  
UnixDirectoryCreationModeOnWindows 0777  
UnixFileCreationModeOnWindows 0666
```

3. Close, and if necessary save, the SNFS configuration file.

If you made changes, the K2 system must be restarted for the changes to take effect.

The restart later in this upgrade procedure is sufficient to put the changes into effect.

If you made changes to `UnixDirectoryCreationModeOnWindows` and `UnixFileCreationModeOnWindows` parameters, to apply changes to existing assets you must delete and then re-create files and/or bins, such as HotBins.

If SNFS is on C: uninstall SNFS manually

Do not do this task if:

- SNFS is on the D: drive of the K2 Media Server.

Do this task if:

- SNFS 3.5.1 is on the C: drive of the K2 Media Server. If `C:\SNFS` exists on the K2 Media Server, then SNFS 3.5.1 is on the C: drive.

If SNFS 3.5.1 is on the C: drive of the K2 Media Server, you must move it to the D: drive. This is best accomplished as part of the upgrade process. After you uninstall SNFS, you must reset registry settings, install SNFS, then copy files from C: to D:. To do this, use the following procedure and other steps as instructed later in the upgrade process.

1. If you have not already done so, procure the `35c235d.reg` file.

The `35c235d.reg` file is on the version 7.3.8.xxxx K2 software CD in the SNFS directory. It can also be obtained at <http://www.grassvalley.com/downloads>.

2. Copy `35c235d.reg` to the local K2 Media Server.

3. On the local K2 Media Server open Windows **Add/Remove Programs** and uninstall SNFS.

4. Double-click `35c235d.reg` to run the file.
The file resets registry entries in preparation for moving SNFS from C: to D:.
5. When prompted "Are you sure...", answer **Yes**.
6. When a message confirms the registry change, dismiss the message.
7. Restart the K2 Media Server.

Check all currently installed software on K2 Media Servers

Prerequisites for this task are as follows:

- The device is assigned in the SiteConfig system description and network connectivity is present.
- SiteConfig is able to log in to the device using the username/password credentials assigned to the device.
- The SiteConfig control point PC does not have a network drive mapped to an administrative share (such as C\$) on a device on which you are checking software.

Do the following steps on the K2 Media Servers that you are upgrading.

1. In the **Software Deployment | Deployment Groups** tree view, right-click the top-most node for the group or any individual device and select **Check Software**.

NOTE: *If you have access problems, verify that the administrator account on the device has credentials as currently configured in SiteConfig. By default credentials on the device should be administrator/adminGV! for Aurora devices and Administrator/adminK2 for K2 devices.*

The Check Software dialog box appears. SiteConfig searches for software on the selected device or devices and gathers information. Progress is reported.

2. When the check is complete for the selected device or devices, close the Check Software dialog box.

An updated list of all currently installed software is displayed in the **Software Deployment | Devices | Installed Software** list view. If software is a SiteConfig managed software package, information is displayed in the Managed Package and Deployment Group columns.

Add software package to deployment group for K2 Media Servers

Prerequisites for this task are as follows:

- You can access the software package file from the SiteConfig control point PC.
- The K2 Media Servers to which you are deploying software are in a deployment group.

Use the following procedure to add one or more software packages to the deployment group that contains your K2 Media Servers. For this release of K2 software, identify and add software installation files as follows:

| Software | File name |
|---------------------------------------|---|
| K2 Server software for 32-bit systems | <code>GrassValleyK2Server_x86_7.3.8.xxxx.cab</code> |
| K2 Server software for 64-bit systems | <code>GrassValleyK2Server_x64_7.3.8.xxxx.cab</code> |
| SNFS software for 32-bit systems | <code>SNFS_x86_3.5.2.1b15620.cab</code> |

| Software | File name |
|----------------------------------|---|
| SNFS software for 64-bit systems | <code>SNFS_x64_3.5.2.1b15620.cab</code> |

You can add files for both 32 bit and 64 bit systems because when SiteConfig deploys software it automatically deploys the 32 bit or 64 bit software appropriate for the target device. You must install SNFS as a separate cab file.

1. In the **Software Deployment | Deployment Groups** tree view, select a deployment group.
2. Click the **Add** button.
The Add Package(s) dialog box opens.
3. Do one of the following to select the software package:
 - Select from the list of packages then click **OK**.
 - Click **Browse**, browse to and select the package, then click **Open**.
4. If one or more EULAs are displayed, accept them to proceed. If you do not accept a EULA, the associated software is not assigned to the deployment group.
SiteConfig adds the package to the deployment group.

The package appears in the Managed Packages list for the selected deployment group. SiteConfig creates new software deployment tasks for the package and displays them in the Tasks list view.

Upgrade software on K2 Media Servers

Prerequisites for this task are as follows:

- The devices that you are upgrading are in a deployment group.
- For the software you are upgrading, you have added a newer version of that managed software package to the deployment group.
- If SNFS was on C:, you have uninstalled SNFS manually as instructed earlier in this upgrade procedure.
- You have recently done the SiteConfig "Check Software" operation on the devices you are upgrading.
- **NOTE: On a K2 system, if a SNFS version lower than 3.0 is installed, do not uninstall using SiteConfig. You must manually uninstall using a special batch file. Follow instructions in the release notes for your current version of K2 software.**

If you are upgrading multiple software components for which there is a required sequence, you must check and uncheck tasks and run multiple deployment sessions to control the sequence. For some software components, SiteConfig aids you by enforcing dependencies. For each individual software component, SiteConfig enforces an uninstall of the current version of software before installing the upgrade version. SiteConfig provides uninstall deployment tasks and install deployment tasks to indicate the taskflow. SiteConfig can do the uninstall/install in a single deployment session.

1. In the **Software Deployment | Deployment Groups** tree view, select the device or the group of devices to which you are deploying software.
The corresponding software deployment tasks are displayed in the Tasks list view.
2. For the software you are deploying, select the **Deploy** check box in the row for the uninstall task.

3. For the software you are installing, select the **Deploy** check box in the row for the install task.

For upgrading a K2 Media Server to this release, deploy the following tasks:

| Deploy | Managed Package | Action |
|--------|--|-----------|
| ✓ | GrassValleyK2Server xxxxx.xxxx or GrassValleyK2Server_x86 xxxxx.xxxx or GrassValleyK2Server_x64 xxxxx.xxxx | Uninstall |
| ✓ | GrassValleyK2Server_x86 7.3.8.xxxx | Install |
| ✓ | GrassValleyK2Server_x64 7.3.8.xxxx | Install |

You can deploy packages for both 32 bit and 64 bit systems because when SiteConfig deploys software it automatically deploys the 32 bit or 64 bit software appropriate for the target device. You must install SNFS as a separate cab file.

Also, when upgrading SNFS, configure deployment tasks to upgrade (uninstall/install) SNFS. Deploy the following tasks to K2 Media Servers with role of file system server:

| Deploy | Managed Package | Action |
|--------|--|-----------|
| ✓ | SNFS xxxxxx or SNFS x86 xxxxxx or SNFS x64 xxxxxx | Uninstall |
| ✓ | SNFS x86 3.5.2.1b15620 | Install |
| ✓ | SNFS x64 3.5.2.1b15620 | Install |

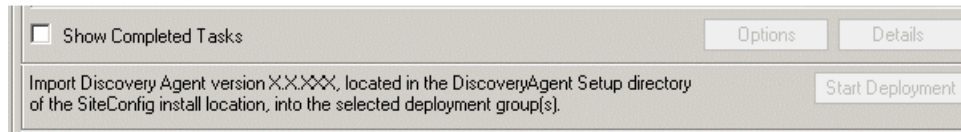
If you previously uninstalled SNFS manually and then did a Check Software operation, only the install task is present.

You can deploy packages for both 32 bit and 64 bit systems because when SiteConfig deploys software it automatically deploys the 32 bit or 64 bit software appropriate for the target device. You must install SNFS as a separate cab file.

If using K2-Aurora FTP and an upgrade to a compatible version is required, deploy the K2-Aurora FTP software while you are upgrading K2 software. Refer to [Compatible Grass Valley products](#) on page 40 to determine if an upgrade is required.

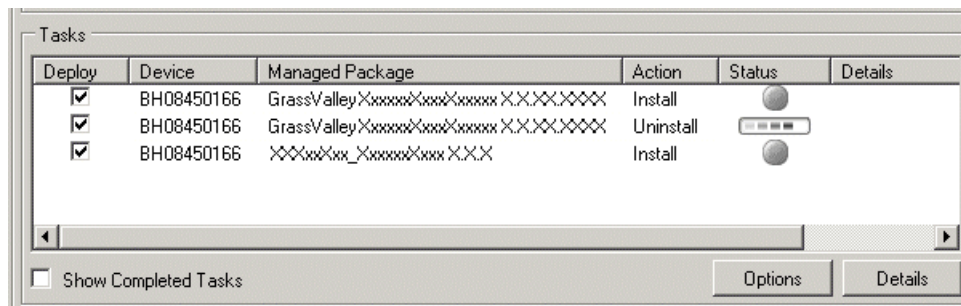
NOTE: *If there are dependencies, SiteConfig can enforce that some tasks be deployed together.*

4. Check the area next to the Start Deployment button for a message.



If a message instructs you to upgrade the Discovery Agent, on the control point PC go to the directory to which SiteConfig is installed, find the *DiscoveryAgent_x.x.x.x.cab* file, add it to the deployment group, and deploy the Discovery Agent software as well.

5. Click the **Start Deployment** button.



Deployment tasks run and software is uninstalled. Progress is reported and next steps are indicated in both the Status and Details columns. If an error appears regarding prerequisite software, install the prerequisite files on the control point PC and then repeat this step.

When upgrading both K2 and SNFS software, SiteConfig uninstalls both in the proper sequence.

6. When the Status or Details columns indicate next steps, identify the software in the row, then do one of the following:

- For K2 software, when Details displays a **Restart required** link, click the link and when prompted "...are you sure...", click **Yes**.

The K2 Media Server restarts. This restart is required by the K2 software uninstall.

When upgrading SNFS software, this is also the restart required by the SNFS uninstall.

Deployment tasks run and software is installed. Progress is reported and next steps are indicated in both the Status and Details columns.

If upgrading both K2 and SNFS software, SiteConfig uninstalls both in the proper sequence.

7. When the Status or Details columns indicate next steps, identify the software in the row, then do one of the following:

- For K2 software, when Details displays a **Restart required** link, click the link and when prompted "...are you sure...", click **Yes**.

The K2 Media Server restarts. This restart is required by the K2 software install.

If upgrading both K2 and SNFS software, SiteConfig uninstalls both in the proper sequence.

8. Monitor progress as indicated by both the Status and Details column. When finished, the Status column indicates complete.

9. If you previously uninstalled SNFS manually because SNFS was on C:, copy directories/files from C: to D:, overwriting files on D:, as follows.
 - a) Copy the `C:\SNFS\config` directory to `D:\SNFS\config`.
 - b) Copy the `C:\SNFS\data` directory to `D:\SNFS\data`. This directory can be large, so allow adequate time to complete the copy operation.
 - c) A restart is required to put the change into effect. If you do a subsequent upgrade task that also requires a restart, that restart is sufficient. Otherwise restart now.
 - d) After the entire K2 SAN upgrade process is complete, test media access. If successful, delete the `C:\SNFS` directory and its files on the K2 Media Server.

Verify/upgrade switch firmware

Do not do this task if:

- Your HP ProCurve 29xx series switch already has the current required firmware version.

Do this task if:

- Your HP ProCurve 29xx series switch does not have the current required firmware version.

Refer to compatibility information earlier in these release notes for firmware version requirements.

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. Check the version of firmware on the switch. To do this, 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   : 6737518     07/25/08    T.13.23
Secondary Image : 5886358     10/26/06    T.11.12
Boot Rom Version: K.12.12
Current Boot    : Primary
```

5. Check the Primary Image Version and refer to compatibility information earlier in these release notes. If instructed to change the firmware on the switch, do so before continuing.

Related Links

[Upgrading firmware on HP switch](#) on page 28

[Configuring QOS on the GigE switch](#) on page 29

[Compatible HP ProCurve GigE switch components](#) on page 35

Upgrade RAID controller microcode

Do not do this task if:

- The K2 RAID controller and expansion chassis microcode is already at compatible versions, as listed in [Compatible K2 RAID components](#) on page 36.
- The K2 RAID is a Level 2 or Level 3.

Do this task if:

- The K2 RAID controller and/or expansion chassis microcode is at a version that is not compatible.

The microcode files are copied on to the K2 Media Server when the K2 system software is installed.

1. Refer to the K2 RAID compatibility specifications earlier in these release notes for the version to which you must upgrade and for the file names for the microcode files.

2. Use Storage Utility to upgrade microcode.

Refer to the *K2 SAN Installation and Service Manual* for procedures.

3. On 100% completion, proceed as follows:

- If the RAID controller chassis has redundant controllers, no power cycle is required. The microcode download is complete.
- If the RAID controller chassis does not have redundant controllers, power cycle the RAID controller chassis, then restart the K2 Media Server.

Upgrade RAID disk drive firmware

Do not do this task if:

- The K2 RAID disk drive firmware is already at compatible versions, as listed in [Compatible K2 RAID disk drive firmware](#) on page 37.
- The K2 RAID is Level 2 or Level 3 SAN.

Do this task if:

- The K2 RAID disk drive firmware is at a version that is not compatible.

Prerequisites:

- The RAID system is offline.
- Only the primary K2 Media Server is powered up.
- K2 software has been upgraded on the K2 Media Server. This is required because the firmware files are copied onto the K2 Media Server when the K2 software is installed.

1. Determine if disk drive firmware upgrades are required as follows:

- a) Select a disk drive icon in the Storage Utility tree view, then note the drive properties reported in the right-hand pane.
- b) Refer to the K2 RAID compatibility specifications earlier in these release notes for drive-type identifiers and firmware versions.

2. If an upgrade is required, continue with this procedure to upgrade disk drive firmware.
Refer to the *K2 SAN Installation and Service Manual* for complete procedures.
3. In Storage Utility, right-click a controller in the tree view, then select **Advanced | Download Disk Firmware** in the context menu.
NOTE: You can download firmware to a single disk by right-clicking a disk icon in the tree view.
The Open File dialog box opens.
4. In the Open File dialog box, browse to the desired firmware file for your disks, select the file, and click **OK**.
As instructed by a message that appears, watch the lights on the drives. For each drive, one at a time, the lights flash as firmware loads. Wait until the lights on all the drives on which you are downloading firmware have completed their flashing pattern. This can take several minutes.
The Progress Report window appears showing the disk firmware download task and the percentage complete.
5. When finished, restart the K2 Media Server.

Reset Capture Services

Do not do this task if:

- You do not use any of the K2 Capture Services.

Do this task if:

- You are using one or more K2 Capture Services, such HotBin, Pathfire, DG, XML Import, Export, P2, etc

Do this task on the K2 system running your K2 Capture Service, which is the K2 system that receives the media to be imported into K2 storage. This can be a K2 Solo Media Server, a stand-alone K2 Summit Production Client, or the K2 Media Server with the role of primary FTP server on a K2 SAN.

When you configure a K2 Capture Service for the first time, the service is set to startup type Automatic. However, if you upgrade or otherwise re-install your K2 System Software, the service is re-set to startup type Manual. Therefore, you must re-configure the service after K2 System Software upgrade/ reinstall in order to set the startup type back to Automatic.

1. From the **Start** menu, access the **Programs** menu and select **Grass Valley | K2 Capture Services**.
On a K2 Summit/Solo system, if the write filter is enabled, a message appears that informs you about the write filter and prompts you to restart. Restart as prompted, then repeat this step.
The K2 Capture Services utility dialog box is displayed.
2. Click **Apply**.
On a K2 Summit/Solo system, a message appears that informs you about the write filter and prompts you to restart. Click **OK** and the K2 Summit/Solo system restarts.
For import capture services, the service checks the source directory for files. If files are present, the service moves them to the Archive sub-directory. It does not import the files into the destination bin on the K2 system.

Manage redundancy on K2 Media Servers

Do not do this task if:

- You are upgrading a basic (non-redundant) K2 SAN. This means you have just one K2 Media Server that takes the role of media file system/database server. Skip ahead and begin upgrading your other K2 Media Servers or SAN K2 clients.

Do this task if:

- You are upgrading a redundant K2 SAN. To prevent triggering failover mechanisms, you must manage primary/backup roles as instructed.

If primary upgrade only is complete

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.
 - b) Use the **Start** button on Server Control Panel. This makes the primary server qualified to take the role of media file system/database server.
 - c) Make sure that Server Control Panel shows green LEDs 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.
The Failover Monitor should currently be off, as this is the normal state of the service at system startup.

Next upgrade the backup server. Perform all K2 Media Server upgrade tasks on the backup server.

If primary and backup upgrades are complete

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 Server Control Panel shows green LEDs 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 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. This makes the backup server qualified to take the role of media file system/database server.
 - c) Make sure that Server Control Panel shows green LEDs and that servers are correctly taking primary/backup roles.

Next upgrade any remaining K2 Media Servers.

Upgrade remaining K2 Media Servers

Do not do this task if:

- All the K2 Media Servers on the K2 SAN have been upgraded.

Do this task if:

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

Perform all upgrade tasks on the remaining K2 Media Servers.

Upgrade K2 client

Work through the following topics sequentially to upgrade K2 clients.

Prepare for K2 system upgrade

Before upgrading K2 systems, do the following:

- Procure the software installation files for this release via the appropriate distribution method, such as download, CD-ROM, network drive, or external drive.
- Start up the K2 systems you are upgrading, if they are not already started.
- For K2 Summit Production Client or K2 Solo Media Server, if you have not already done so, disable (unlock) the write filter.
- Stop all media access on K2 systems.
- Shut down all applications on K2 systems.

Upgrade QuickTime

Do not do this task if:

- QuickTime is currently at version 7.6 or higher.

Do this task if:

- QuickTime is at a version lower than 7.6.

1. Access the QuickTime installation files.
2. Locate and open the following QuickTime install file:

QuickTimeInstaller-7.6.exe

3. Work through the install wizard.

Configure settings so that the software does not automatically update Quicktime and other Apple software.

NOTE: Unless instructed to do so by Grass Valley, do not update or install Apple software.

Accept the default destination folder and other default settings.

Check all currently installed software on SAN K2 clients

Prerequisites for this task are as follows:

- The device is assigned in the SiteConfig system description and network connectivity is present.

- SiteConfig is able to log in to the device using the username/password credentials assigned to the device.
- The SiteConfig control point PC does not have a network drive mapped to an administrative share (such as C\$) on a device on which you are checking software.

Do the following steps on the SAN K2 clients that you are upgrading.

1. In the **Software Deployment | Deployment Groups** tree view, right-click the top-most node for the group or any individual device and select **Check Software**.

NOTE: *If you have access problems, verify that the administrator account on the device has credentials as currently configured in SiteConfig. By default credentials on the device should be administrator/adminGV! for Aurora devices and Administrator/adminK2 for K2 devices.*

The Check Software dialog box appears. SiteConfig searches for software on the selected device or devices and gathers information. Progress is reported.

2. When the check is complete for the selected device or devices, close the Check Software dialog box.

An updated list of all currently installed software is displayed in the **Software Deployment | Devices | Installed Software** list view. If software is a SiteConfig managed software package, information is displayed in the Managed Package and Deployment Group columns.

Add software package to deployment group for SAN K2 clients

Prerequisites for this task are as follows:

- You can access the software package file from the SiteConfig control point PC.
- The SAN K2 clients to which you are deploying software are in a deployment group.

Use the following procedure to add one or more software packages to the deployment group that contains your SAN K2 clients. For this release of K2 software, identify and add software installation files as follows:

| Software | File name |
|--------------------|--|
| K2 client software | <i>GrassValleyK2SummitSANClient_7.3.8.xxxx.cab</i> |
| SNFS software | <i>SNFS_Summit_3.5.2.1b15620.cab</i> |

1. In the **Software Deployment | Deployment Groups** tree view, select a deployment group.
2. Click the **Add** button.
The Add Package(s) dialog box opens.
3. Do one of the following to select the software package:
 - Select from the list of packages then click **OK**.
 - Click **Browse**, browse to and select the package, then click **Open**.
4. If one or more EULAs are displayed, accept them to proceed. If you do not accept a EULA, the associated software is not assigned to the deployment group.

SiteConfig adds the package to the deployment group.

The package appears in the Managed Packages list for the selected deployment group. SiteConfig creates new software deployment tasks for the package and displays them in the Tasks list view.

Upgrade software on SAN K2 clients

Prerequisites for this task are as follows:

- The devices that you are upgrading are in a deployment group.
- For the software you are upgrading, you have added a newer version of that managed software package to the deployment group.
- You have recently done the SiteConfig "Check Software" operation on the devices you are upgrading.
- For the K2 Summit Production Client, the write filter is disabled (unlocked).
- **NOTE: On a K2 system, if a SNFS version lower than 3.0 is installed, do not uninstall using SiteConfig. You must manually uninstall using a special batch file. Follow instructions in the release notes for your current version of K2 software.**

If you are upgrading multiple software components for which there is a required sequence, you must check and uncheck tasks and run multiple deployment sessions to control the sequence. For some software components, SiteConfig aids you by enforcing dependencies. For each individual software component, SiteConfig enforces an uninstall of the current version of software before installing the upgrade version. SiteConfig provides uninstall deployment tasks and install deployment tasks to indicate the taskflow. SiteConfig can do the uninstall/install in a single deployment session.

1. In the **Software Deployment | Deployment Groups** tree view, select the device or the group of devices to which you are deploying software.
The corresponding software deployment tasks are displayed in the Tasks list view.
2. For the software you are deploying, select the **Deploy** check box in the row for the uninstall task.
3. For the software you are installing, select the **Deploy** check box in the row for the install task.

For upgrading SAN K2 clients to this release, configure **Deploy** check boxes as follows:

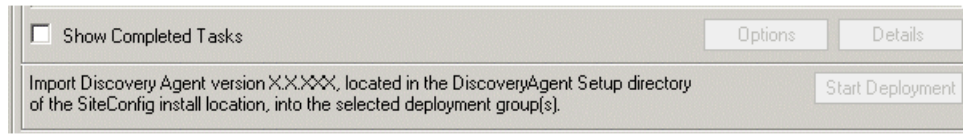
| Deploy | Managed Package | Action |
|--------|--|--|
| ✓ | GrassValleyK2SummitSANClient xxxx.xxxx | Uninstall |
| ✓ | GrassValleyK2SummitSANClient 7.3.8.xxxx | Install |
| ✓ | WRegMon_SummitSANClient x.x.x | Install (there is no uninstall task for this software) |

Also, when upgrading SNFS, configure deployment tasks to upgrade (uninstall/install) SNFS. Deploy the following tasks at the same time:

| Deploy | Managed Package | Action |
|--------|---------------------------|-----------|
| ✓ | SNFS Summit xxxxxx | Uninstall |
| ✓ | SNFS Summit 3.5.2.1b15620 | Install |

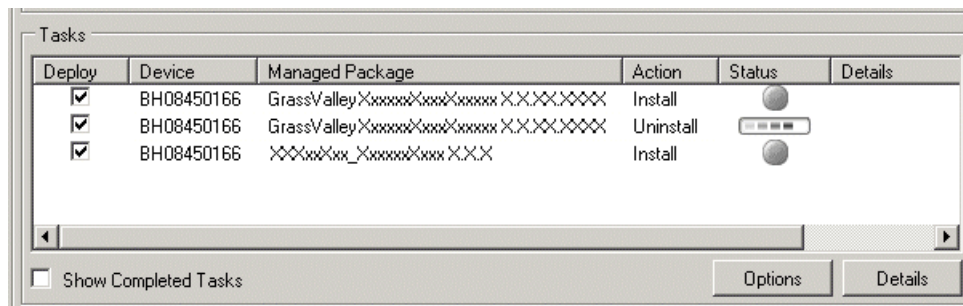
NOTE: If there are dependencies, SiteConfig can enforce that some tasks be deployed together.

4. Check the area next to the Start Deployment button for a message.



If a message instructs you to upgrade the Discovery Agent, on the control point PC go to the directory to which SiteConfig is installed, find the *DiscoveryAgent_x.x.x.x.cab* file, add it to the deployment group, and deploy the Discovery Agent software as well.

5. Click the **Start Deployment** button.



Deployment tasks run and software is uninstalled. Progress is reported and next steps are indicated in both the Status and Details columns. If an error appears regarding prerequisite software, install the prerequisite files on the control point PC and then repeat this step.

When upgrading both K2 and SNFS software, SiteConfig uninstalls both in the proper sequence.

6. When the Status or Details columns indicate next steps, identify the software in the row, then do one of the following:
 - For SNFS software, when Details displays a **Restart required** link, click the link and when prompted "...are you sure...", click **Yes**. After this restart, continue with other restarts as indicated.
 - For K2 software, if the version from which you are upgrading is lower than 7.1.0.1153, do not restart. Do not click the **Restart required** link displayed in Details. Instead, you must power cycle the K2 system, as instructed in the next task.
 - For K2 software, if the version from which you are upgrading is 7.1.0.1153 or higher, when Details displays a **Restart required** link, click the link and when prompted "...are you sure...", click **Yes**.
7. Monitor progress as indicated by both the Status and Details column. When finished, the Status column indicates complete.

Power cycle K2 system

Do not do this task if:

- The standard, SiteConfig-supported Restart operation is sufficient for the required restart after installing software.

Do this task if:

- You must power cycle, rather than restart, the K2 system after installing software.

When you must shutdown and then power up (power cycle) a device, rather than restart the device, you must use a combination of SiteConfig and manual operations.

1. In the SiteConfig tree-view, right-click the device and select **Shutdown**.
SiteConfig initiates the Windows shutdown operation on the device and the device powers off.
2. At the local device, verify that shutdown operations are complete, then press the standby button or otherwise manually power up the device.
The device starts up.
3. Verify that startup operations are complete on the device.
4. In SiteConfig, in the tree-view, right-click the device and select **Set Restart Complete**.
This re-synchronizes SiteConfig regarding the current state of the device. If software deployment tasks were waiting for the restart to occur, SiteConfig now allows them to proceed.

Install required Windows update

Do not do this task if one of the following is true:

- A K2 Summit Production Client or K2 Solo Media Server received new from Grass Valley with K2 software version 7.3.x or higher pre-installed, in which case the required Windows update is pre-installed.

Do this task if:

- A K2 Summit Production Client or K2 Solo Media Server being upgraded from a version of K2 software version lower than 7.3.x.

NOTE: *Do not install general Windows updates as available from Microsoft. Update only as directed by Grass Valley.*

1. Extract the contents of the *RunUpdates.zip* file into the *C:\Temp* directory.
This creates a folder named *RunUpdates* that includes all of the Windows update files.
2. Within the *RunUpdates* folder run *RunUpdates.exe*.
A command shell starts.
3. When prompted enter *Y* to start the update process
For each of the updates, the shell displays a line showing the update installing. A window showing the progress of an update opens and then closes when complete. The shell then updates with the completion status of the update.
4. If you interrupt the Windows update process, run *RunUpdates.exe* to start it again. Updates continue from the point of interruption.
5. When updates complete and the shell displays the prompt “Do you want to reboot now?”, enter *Y* to restart.
6. Log on to the K2 system with Windows administrator privileges.
7. Delete the *RunUpdates* folder and files.
8. Empty the Recycle Bin.

Lock K2 Summit Production Clients

This task enables the write filter on a K2 Summit Production Client or on a group of K2 Summit Production Clients.

Prerequisites for this task are as follows:

- The device or all the devices in the group are communicating correctly in SiteConfig. This is indicated by the green star icon overlay.
 - The device or all the devices in the group are currently unlocked. This is indicated by the red lock icon overlay.
1. In the **Network Configuration | Devices** tree view or the **Software Deployment | Deployment Groups** tree view, identify the device or the group of devices that you intend to lock.
 2. Right-click the device or the group and select **Lock**.
A "...may require restart..." message appears.
 3. Click **Yes** to allow SiteConfig to restart the device or devices.
The Locking Devices window opens and displays progress.
 4. When the Locking Devices window reports that the lock process completed successfully, click **Close**.

The device or devices are now locked. For K2 Summit/Solo, this also enables the write filter, which enforces the restart.

Install MPEG-2/AVC-Intra field kit

If you are installing an MPEG-2 or AVC-Intra field kit upgrade on one or more of your K2 Summit Production Clients or K2 Solo Media Servers, do so now. Follow the procedure in the Field Kit Upgrade Instructions document that you received with the field kit.

Upgrade Aurora Edit, Ingest, and Playout systems

Prerequisites for this task are as follows:

- K2 systems are upgraded to the compatible version of K2 system software.
- All Aurora Browse and MediaFrame devices are offline (all media access stopped) or shut down.

Upgrade your Aurora Edit, Ingest, and Playout systems to the compatible versions of software. Refer to each Aurora product's release notes for procedures.

Upgrade NAS systems

Prerequisites for this task are as follows:

- K2 systems are upgraded to the compatible version of K2 system software.
- Aurora Edit, Ingest, and Playout systems are upgraded to the compatible versions of software.

Upgrade the MediaFrame Proxy NAS (K2 Nearline SAN) to the compatible version of K2 software. Use SiteConfig and deploy software, using steps similar to those for other systems.

- a) Check software on the Nearline SAN's K2 Media Servers.
- b) Add software *.cab file to the deployment group that contains the K2 Media Servers.
- c) Upgrade software on K2 Media Servers via a SiteConfig deployment session.

Upgrade Browse and MediaFrame systems

Prerequisites for this task are as follows:

- K2 systems are upgraded to the compatible version of K2 system software.
- Aurora Edit, Ingest, and Playout systems are upgraded to the compatible versions of software.
- K2 Nearline SAN (NAS) systems are upgraded to the compatible version of K2 system software.

Upgrade your Browse and MediaFrame systems to the compatible versions of software. Refer to *Aurora Browse Release Notes* for procedures.

Upgrade other SAN clients

Do this task if:

- You have clients on the K2 SAN that have not yet been upgraded. This is the case if you have K2 appliances or other products that use the shared storage of the K2 SAN.

Prerequisites for this task are as follows:

- You have access to the software installation files for this release. Procure the files via the appropriate distribution method, such as download, CD-ROM, network drive, or external drive.

Refer to upgrade procedures for K2 clients and similarly upgrade all remaining client devices on the K2 SAN.

NOTE: *You must restart after installing K2 software.*

Make recovery images

After you have upgraded software as instructed in these procedures and verified that your system is working properly, you should always make a recovery image of each of your upgraded computers. Use a sequence of tasks 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 system.

Refer to the Grass Valley product's *Service Manual* for recovery image procedures.

Upgrading stand-alone K2 systems with SiteConfig

This section contains the tasks for using SiteConfig to upgrade stand-alone K2 systems to this release of K2 software.

Work through the tasks sequentially to complete the upgrade.

NOTE: *These upgrade instructions assume that the current K2 software is at version 7.0.11 or higher. If the current K2 software is a 7.x version lower than 7.0.11, contact Grass Valley Support before upgrading. If a K2 Media Client or any K2 device with current K2 software at a 3.x version, do not upgrade, as version 7.x is not supported on these devices.*

NOTE: *When upgrading from a version lower than 7.1, K2 system software installs with a 30 day trial license. You need a permanent license to operate beyond the trial period.*

About upgrading stand-alone K2 systems with SiteConfig

These upgrade instructions apply to stand-alone K2 systems as follows:

- K2 Summit Production Client internal storage
- K2 Summit Production Client direct-connect storage
- K2 Solo Media Server

With these upgrade instructions, you use SiteConfig from a network connected control point PC and remotely upgrade software simultaneously on multiple K2 systems.

NOTE: *A control point PC is required.*

This is the recommended process for software upgrades. If you choose to upgrade manually instead, you can go to each local K2 system and use keyboard, monitor, and mouse to upgrade software. You can find instructions for a manual upgrade without SiteConfig at [Upgrading stand-alone K2 systems with SiteConfig](#) on page 65 in these release notes.

If this is the first time using SiteConfig for software upgrade, follow instructions in *K2 System Guide* rather than instruction in these release notes. You must first have SiteConfig set up for system management and software deployment of the stand-alone K2. Also refer to the *SiteConfig User Manual* or *SiteConfig Help Topics*. Then, after you have completed this initial SiteConfig set up, you can follow the instructions in this section to upgrade software.

NOTE: *If this is the first time using SiteConfig for software upgrade do not follow instructions in these release notes alone.*

The following installation tasks provide information specifically for the upgrade to this version of 7.3.8 software. Read the information in these sections carefully before attempting any upgrade to software on a stand-alone K2 system.

Make recovery images

Do not do this task if:

- You previously made a recovery image at the current software version for each computer you are upgrading.

Do this task if:

- You do not have a recovery image at the current software version for one or more of the computers you are upgrading.

The recommended procedure is to make a recovery image immediately after a software upgrade. If you neglected to do this when you last upgraded software you should make the recovery image now, before upgrading to the new version.

Refer to the Grass Valley product's *Service Manual* for recovery image procedures.

⚠ CAUTION: *If you upgrade and then decide you do not want to stay with this version of K2 system software, you must use the recovery disk image process to downgrade to your previous version.*

Prepare for K2 system upgrade

Before upgrading K2 systems, do the following:

- Procure the software installation files for this release via the appropriate distribution method, such as download, CD-ROM, network drive, or external drive.
- Start up the K2 systems you are upgrading, if they are not already started.
- For K2 Summit Production Client or K2 Solo Media Server, if you have not already done so, disable (unlock) the write filter.
- Stop all media access on K2 systems.
- Shut down all applications on K2 systems.

Upgrade QuickTime

Do not do this task if:

- QuickTime is currently at version 7.6 or higher.

Do this task if:

- QuickTime is at a version lower than 7.6.
1. Access the QuickTime installation files.
 2. Locate and open the following QuickTime install file:

QuickTimeInstaller-7.6.exe

3. Work through the install wizard.

Configure settings so that the software does not automatically update Quicktime and other Apple software.

NOTE: *Unless instructed to do so by Grass Valley, do not update or install Apple software.*

Accept the default destination folder and other default settings.

Configure SNFS default.cfg file on stand-alone K2 system

In this task you open the media file system (SNFS) configuration file and verify/modify settings.

Do not do this task if:

- You have already modified the configuration file with the required settings.

Do this task if:

- The configuration file does not have the required settings.

Prerequisites for this task are as follows:

- K2 systems must be offline

You can verify and, if necessary, modify the media file system (SNFS) configuration file and still keep your media file system intact if you carefully follow the steps in this procedure.

As an alternative to manually modifying the configuration file, if you need to make a new file system after upgrading K2 software, the required values are set automatically by the upgraded version of Storage Utility.

This task applies to the following devices:

- K2 Solo Media Servers and stand-alone K2 Summit Production Clients. This includes internal storage and direct-connect storage K2 Summit Production Clients.

NOTE: Make sure the write filter is disabled.

1. On a stand-alone K2 system, using Notepad, open the media file system (SNFS) configuration file:

On a stand-alone K2 system, the configuration file can be either `C:\SNFS\config\default.cfg` or `C:\SNFS\config\gvfs_hostname.cfg`, where `hostname` is the name of the K2 system.

2. On a stand-alone K2 system, verify, and if necessary modify, settings for required values as follows:

```
# *****
# A global section for defining file system-wide parameters
# *****
GlobalSuperUser Yes
.
.
.
.
.

InodeDeleteMax 1000
.
ReservedSpace No
```

3. Close, and if necessary save, the SNFS configuration file.

If you made changes, the K2 system must be restarted for the changes to take effect.

The restart later in this upgrade procedure is sufficient to put the changes into effect.

Prepare SiteConfig for software deployment to stand-alone K2 systems

Do the following to prepare SiteConfig for the software upgrade.

1. Make the following files accessible to the SiteConfig control point PC:
 - K2 Summit Client Standalone software installation (*.cab) file.
 - Summit SNFS software installation (*.cab) file.
2. If a newer version of SiteConfig is available for upgrade and you have not yet upgraded SiteConfig, do the following:
 - a) From Windows Add/Remove programs, uninstall the current version of SiteConfig from the control point PC.
 - b) Install the new version of SiteConfig on the control point PC.

3. If not already present in the SiteConfig system description, configure deployment groups as follows:
 - A deployment group that contains your stand-alone K2 systems
 - A deployment group that contains your control point PC

Check all currently installed software on stand-alone K2 systems

Prerequisites for this task are as follows:

- The device is assigned in the SiteConfig system description and network connectivity is present.
- SiteConfig is able to log in to the device using the username/password credentials assigned to the device.
- The SiteConfig control point PC does not have a network drive mapped to an administrative share (such as C\$) on a device on which you are checking software.

Do the following steps on the stand-alone K2 systems that you are upgrading.

1. In the **Software Deployment | Deployment Groups** tree view, right-click the top-most node for the group or any individual device and select **Check Software**.

***NOTE:** If you have access problems, verify that the administrator account on the device has credentials as currently configured in SiteConfig. By default credentials on the device should be administrator/adminGV! for Aurora devices and Administrator/adminK2 for K2 devices.*

The Check Software dialog box appears. SiteConfig searches for software on the selected device or devices and gathers information. Progress is reported.

2. When the check is complete for the selected device or devices, close the Check Software dialog box.

An updated list of all currently installed software is displayed in the **Software Deployment | Devices | Installed Software** list view. If software is a SiteConfig managed software package, information is displayed in the Managed Package and Deployment Group columns.

Add software package to deployment group for stand-alone K2 systems

Prerequisites for this task are as follows:

- You can access the software package file or files from the SiteConfig control point PC.
- The stand-alone K2 systems to which you are deploying software are in a deployment group.

Use the following procedure to add one or more software packages to the deployment group that contains your stand-alone K2 systems. For this release of K2 software, identify and add software installation files as follows:

| Software | File name |
|--------------------|--|
| K2 Client software | <i>GrassValleyK2SummitStandalone_7.3.8.xxxx .cab</i> |
| SNFS software | <i>SNFS_Summit_3.5.2.1b15620.cab</i> |

1. In the **Software Deployment | Deployment Groups** tree view, select a deployment group.

2. Click the **Add** button.
The Add Package(s) dialog box opens.
3. Do one of the following to select the software package:
 - Select from the list of packages then click **OK**.
 - Click **Browse**, browse to and select the package, then click **Open**.
4. If one or more EULAs are displayed, accept them to proceed. If you do not accept a EULA, the associated software is not assigned to the deployment group.
SiteConfig adds the package to the deployment group.

The package appears in the Managed Packages list for the selected deployment group. SiteConfig creates new software deployment tasks for the package and displays them in the Tasks list view.

Unlock K2 Summit Production Clients or K2 Solo Media Servers

This task disables the write filter on one or more K2 Summit Production Clients or K2 Solo Media Servers.

Prerequisites for this task are as follows:

- The device or all the devices in the group are communicating correctly in SiteConfig. This is indicated by the green star icon overlay.
 - The device or all the devices in the group are currently locked. This is indicated by the gray lock icon overlay.
1. If you have not already done so, stop all media access on the K2 systems. This includes record, play, and transfer operations.
 2. In either the **Network Configuration | Devices** tree view or the **Software Deployment | Deployment Groups** tree view, identify the device or the group of devices that you intend to unlock.
 3. Right-click the device or the group and select **Unlock**.
A "...may require restart..." message appears.
 4. Click **Yes** to allow SiteConfig to restart the device or devices.
The Set Administrative Credentials dialog box opens.
 5. Enter a username and password with administrator level privileges on the device or devices and click **OK**.
The Unlocking Devices window opens and displays progress.
 6. When the Unlocking Devices window reports that the unlock process completed successfully, click **Close**.

The device or devices are now unlocked. For K2 Summit Production Clients, this also disables the write filter, which enforces a restart.

Upgrade software on stand-alone K2 systems

Prerequisites for this task are as follows:

- The devices that you are upgrading are in a deployment group.

- For the software you are upgrading, you have added a newer version of that managed software package to the deployment group.
- You have recently done the SiteConfig "Check Software" operation on the devices you are upgrading.
- For the K2 Summit Production Client or K2 Solo Media Server, the write filter is disabled (unlocked).
- **NOTE: On a K2 system, if a SNFS version lower than 3.0 is installed, do not uninstall using SiteConfig. You must manually uninstall using a special batch file. Follow instructions in the release notes for your current version of K2 software.**

If you are upgrading multiple software components for which there is a required sequence, you must check and uncheck tasks and run multiple deployment sessions to control the sequence. For some software components, SiteConfig aids you by enforcing dependencies. For each individual software component, SiteConfig enforces an uninstall of the current version of software before installing the upgrade version. SiteConfig provides uninstall deployment tasks and install deployment tasks to indicate the taskflow. SiteConfig can do the uninstall/install in a single deployment session.

1. In the **Software Deployment | Deployment Groups** tree view, select the device or the group of devices to which you are deploying software.
The corresponding software deployment tasks are displayed in the Tasks list view.
2. For the software you are deploying, select the **Deploy** check box in the row for the uninstall task.
3. For the software you are installing, select the **Deploy** check box in the row for the install task.

For upgrading stand-alone K2 systems to this release, configure **Deploy** check boxes as follows:

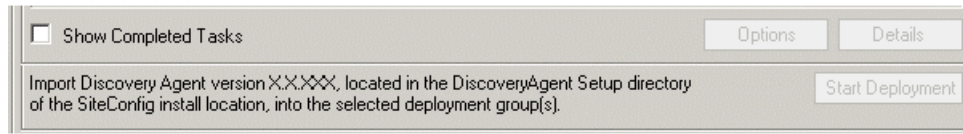
| Deploy | Managed Package | Action |
|--------|---|--|
| ✓ | GrassValleyK2SummitStandalone xxxx.xxxx | Uninstall |
| ✓ | GrassValleyK2SummitStandalone 7.3.8.xxxx | Install |
| ✓ | WRegMon_SummitStandalone x.x.x | Install (there is no uninstall task for this software) |

Also, when upgrading SNFS, configure deployment tasks to upgrade (uninstall/install) SNFS. Deploy the following tasks at the same time:

| Deploy | Managed Package | Action |
|--------|---------------------------|-----------|
| ✓ | SNFS Summit xxxxxx | Uninstall |
| ✓ | SNFS Summit 3.5.2.1b15620 | Install |

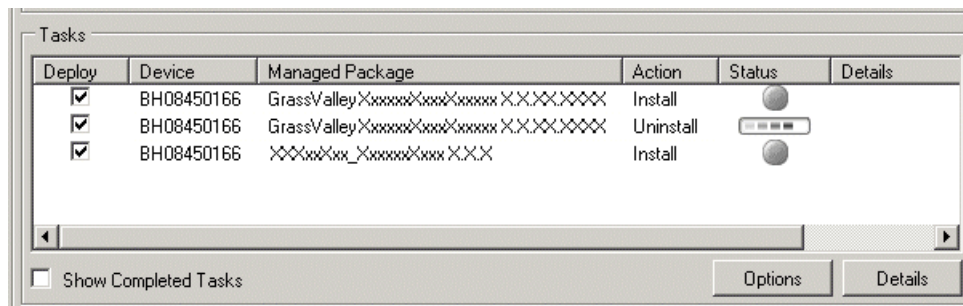
NOTE: If there are dependencies, SiteConfig can enforce that some tasks be deployed together.

4. Check the area next to the Start Deployment button for a message.



If a message instructs you to upgrade the Discovery Agent, on the control point PC go to the directory to which SiteConfig is installed, find the *DiscoveryAgent_x.x.x.x.cab* file, add it to the deployment group, and deploy the Discovery Agent software as well.

5. Click the **Start Deployment** button.



Deployment tasks run and software is uninstalled. Progress is reported and next steps are indicated in both the Status and Details columns. If an error appears regarding prerequisite software, install the prerequisite files on the control point PC and then repeat this step.

When upgrading both K2 and SNFS software, SiteConfig uninstalls both in the proper sequence.

6. When the Status or Details columns indicate next steps, identify the software in the row, then do one of the following:
 - For SNFS software, when Details displays a **Restart required** link, click the link and when prompted "...are you sure...", click **Yes**. After this restart, continue with other restarts as indicated.
 - For K2 software, if the version from which you are upgrading is lower than 7.1.0.1153, do not restart. Do not click the **Restart required** link displayed in Details. Instead, you must power cycle the K2 system, as instructed in the next task.
 - For K2 software, if the version from which you are upgrading is 7.1.0.1153 or higher, when Details displays a **Restart required** link, click the link and when prompted "...are you sure...", click **Yes**.
7. Monitor progress as indicated by both the Status and Details column. When finished, the Status column indicates complete.

Power cycle K2 system

Do not do this task if:

- The standard, SiteConfig-supported Restart operation is sufficient for the required restart after installing software.

Do this task if:

- You must power cycle, rather than restart, the K2 system after installing software.

When you must shutdown and then power up (power cycle) a device, rather than restart the device, you must use a combination of SiteConfig and manual operations.

1. In the SiteConfig tree-view, right-click the device and select **Shutdown**.
SiteConfig initiates the Windows shutdown operation on the device and the device powers off.
2. At the local device, verify that shutdown operations are complete, then press the standby button or otherwise manually power up the device.
The device starts up.
3. Verify that startup operations are complete on the device.
4. In SiteConfig, in the tree-view, right-click the device and select **Set Restart Complete**.
This re-synchronizes SiteConfig regarding the current state of the device. If software deployment tasks were waiting for the restart to occur, SiteConfig now allows them to proceed.

Install required Windows update

Do not do this task if one of the following is true:

- A K2 Summit Production Client or K2 Solo Media Server received new from Grass Valley with K2 software version 7.3.x or higher pre-installed, in which case the required Windows update is pre-installed.

Do this task if:

- A K2 Summit Production Client or K2 Solo Media Server being upgraded from a version of K2 software version lower than 7.3.x.

NOTE: Do not install general Windows updates as available from Microsoft. Update only as directed by Grass Valley.

1. Extract the contents of the *RunUpdates.zip* file into the *C:\Temp* directory.
This creates a folder named *RunUpdates* that includes all of the Windows update files.
2. Within the *RunUpdates* folder run *RunUpdates.exe*.
A command shell starts.
3. When prompted enter *Y* to start the update process
For each of the updates, the shell displays a line showing the update installing. A window showing the progress of an update opens and then closes when complete. The shell then updates with the completion status of the update.
4. If you interrupt the Windows update process, run *RunUpdates.exe* to start it again. Updates continue from the point of interruption.
5. When updates complete and the shell displays the prompt “Do you want to reboot now?”, enter *Y* to restart.
6. Log on to the K2 system with Windows administrator privileges.
7. Delete the *RunUpdates* folder and files.
8. Empty the Recycle Bin.

Upgrade LSI RAID controller driver

Do not do this task if:

- A K2 Solo Media Server
- A K2 Summit Production Client with direct-connect storage
- A K2 Summit Production Client installed new with K2 software version 7.1.x or higher, in which case the driver is pre-installed at version 3.10.0.32.
- A K2 Summit Production Client with the driver already upgraded to version 3.10.0.32.

Do this task if:

- A K2 Summit Production Client with internal storage and a driver at a version lower than 3.10.0.32.
1. If you are not sure of the driver version currently installed, do the following:
 - a) open Windows **Device Manager | SCSI and RAID controllers | LSI MegaRAID SAS PCI Express ROMB | Properties | Driver**.
 - b) Check file properties. The following properties indicate that version 3.10.0.32 is already installed:

| Version | Date |
|-----------|-----------|
| 3.10.0.32 | 7/22/2009 |

- c) If the upgrade is necessary, continue with this procedure.
2. Open Windows **Device Manager | SCSI and RAID controllers**.
 3. Right-click **LSI MegaRAID SAS PCI Express ROMB** and select **Update driver**.
An install wizard opens.
 4. Select **No, not this time** and click **Next**.
 5. Select **Install from a list or specific location [Advanced]** and click **Next**.
 6. Select **Don't search. I will choose the driver to install** and click **Next**.
 7. Click **Have disk**.
 8. Click **Browse**, navigate to the `LSI_1078_winxp` directory, select `oemsetup.inf`, and click **OK**.
 9. Click **Next**.
 10. When prompted regarding Windows Logo Compatibility, select **Continue Anyway** and click **Finish**.
 11. Restart as prompted.

Upgrade MegaRAID Storage Manager

Do not do this task if:

- A K2 Solo Media Server
- A K2 Summit Production Client with direct-connect storage
- A K2 Summit Production Client installed new with K2 software version 7.1.x or higher, in which case MegaRAID Storage Manager is pre-installed at version 2.91-05.

- A K2 Summit Production Client with MegaRAID Storage Manager already upgraded to version 2.91-05.

Do this task if:

- A K2 Summit Production Client with internal storage and with the MegaRAID Storage Manager at a version lower than 2.91-05.
1. If you are not sure of the MegaRAID Storage Manager version currently installed, open Windows **Add/Remove Programs** Control Panel and identify the version. Continue if the upgrade is necessary.
 2. Access the installation file at `.. \Drivers\MegaRAID29105\DISK1\` and double-click `setup.exe`. An install wizard opens.
 3. Work through wizard pages, accepting defaults.
 4. When prompted, select **Custom Installation** and click **Next**.
 5. Select the **StandAlone** option and click **Next**.
 6. Click **Install**.
 7. When prompted "...continue?" click **Yes**.
The software installs.

Upgrade RAID Controller microcode on stand-alone K2 system

Do not do this task if one of the following is true:

- A K2 Solo Media Server
- A K2 Summit Production Client installed new with K2 software version 7.1.x or higher, in which case a compatible version of RAID controller microcode is pre-installed.
- A K2 Summit Production Client with internal storage and with RAID controller microcode already upgraded to a compatible version, as listed in compatibility specifications.
- A K2 Summit Production Client with direct-connect storage and with RAID controller and/or expansion chassis microcode already at compatible versions, as listed in compatibility specifications.

Do this task if:

- A K2 Summit Production Client with internal storage and with RAID controller microcode that you need to upgrade, as listed in compatibility specifications.
- A K2 Summit Production Client with direct-connect storage and with RAID controller and/or expansion chassis microcode that you need to upgrade, as listed in compatibility specifications.

For internal storage K2 Summit/Solo systems, find compatibility specifications at [Compatible K2 Summit/Solo components](#) on page 32. For a K2 Summit Production Client with direct-connect storage, find compatibility specifications at [Compatible K2 RAID components](#) on page 36.

1. Open AppCenter Workstation, either on the local K2 system or on the control point PC and logon.

Make sure you logon to AppCenter with appropriate privileges, as this logon is passed to Storage Utility. Administrator-level permission is necessary for most Storage Utility operations. If you log in with user-level permissions, the Storage Utility menu item is disabled.

2. If you are running AppCenter from a control point PC and you have channels from multiple K2 systems in your channel suite, select a channel from the stand-alone K2 system whose storage you intend to configure with Storage Utility. This is important as Storage Utility automatically connects to the K2 system that hosts the currently selected channel.

NOTE: Make sure you are connecting to a stand-alone K2 system. You should never connect Storage Utility directly to a K2 system that uses shared (SAN) storage.

3. From the AppCenter **System** menu, select **Storage Utility**.
Storage Utility opens.
4. If you are connecting from a control point PC, you should verify that you are connected to the correct K2 system. To verify this, use the Identify feature to flash the disks on the K2 system.
5. Select the controller in the Storage Utility tree view, then in the properties reported in the right-hand pane, note the controller microcode version. Proceed if you need to upgrade the controller microcode.
6. Right-click the controller in the tree view and do one of the following:
 - For internal storage, select **Load Controller Microcode** in the context menu.
 - For direct-connect storage, select **Advanced | Load Controller Microcode** in the context menu.
7. If online, messages appear "...offline mode now?" and "...continue?". Click **Yes** to put the K2 system in offline mode.
AppCenter channels go offline. The Open File dialog box opens.
8. In the Open File dialog box, browse to and select the microcode file for the required version. Refer to the following for locations and filenames:
 - For internal-storage, refer to [Compatible K2 Summit/Solo components](#) on page 32.
 - For direct-connect storage, refer to [Compatible K2 RAID components](#) on page 36.
9. Click **OK**.
The Progress Report window appears showing the microcode download task and the percentage completion.
10. If direct-connect storage and upgrading expansion chassis microcode, do the following:
 - a) Right-click the controller in the tree view, then select **Advanced | Load Disk Enclosure Microcode** in the context menu.
 - b) In the Open File dialog box, browse to the directory and file as listed in K2 RAID compatibility specifications earlier in these release notes.
 - c) Click **OK**.
The Progress Report window appears showing the microcode download task and the percentage completion.
11. When finished, exit Storage Utility.
12. If direct-connect storage, on 100% completion, proceed as follows:
 - If the RAID controller chassis has redundant controllers, no power cycle is required. The microcode download is complete.
 - If the RAID controller chassis does not have redundant controllers, power cycle the RAID controller chassis.

13. Put AppCenter channels back online.
14. Restart.

Upgrade disk drive firmware on stand-alone K2 system

Do not do this task if:

- A K2 system with disk drive firmware already at a compatible version, as listed in compatibility specifications.

Do this task if:

- A K2 system with disk drive firmware that you need to upgrade, as listed in compatibility specifications.

For internal storage K2 Summit/Solo systems, find compatibility specifications at [Compatible K2 Summit/Solo components](#) on page 32. For a K2 Summit Production Client with direct-connect storage, find compatibility specifications at [Compatible K2 RAID components](#) on page 36.

NOTE: The disk drives are upgraded one at a time which can take as long as 2 minutes per drive. Take this into consideration when scheduling the upgrade.

1. Open AppCenter Workstation, either on the local K2 system or on the control point PC and logon.

Make sure you logon to AppCenter with appropriate privileges, as this logon is passed to Storage Utility. Administrator-level permission is necessary for most Storage Utility operations. If you log in with user-level permissions, the Storage Utility menu item is disabled.

2. If you are running AppCenter from a control point PC and you have channels from multiple K2 systems in your channel suite, select a channel from the stand-alone K2 system whose storage you intend to configure with Storage Utility. This is important as Storage Utility automatically connects to the K2 system that hosts the currently selected channel.

NOTE: Make sure you are connecting to a stand-alone K2 system. You should never connect Storage Utility directly to a K2 system that uses shared (SAN) storage.

3. From the AppCenter **System** menu, select **Storage Utility**.
Storage Utility opens.
4. If you are connecting from a control point PC, you should verify that you are connected to the correct K2 system. To verify this, use the Identify feature to flash the disks on the K2 system.
5. Select a disk drive icon in the Storage Utility tree view, then note the firmware version in drive properties reported in the right-hand pane. Proceed if you need to download disk drive firmware.
6. Right-click a disk in the tree view, then select **Advanced | Download Disk Firmware** in the context menu.
7. If online, messages appear "...offline mode now?" and "...continue?". Click **Yes** to put the K2 system in offline mode.
AppCenter channels go offline. The Open File dialog box opens.
8. In the Open File dialog box browse to the directory and file as listed in compatibility tables earlier in these release notes. You must select the correct file for the device, storage type, and drive size/type.

9. Click **OK**.

For internal drives, watch the lights on the drive to which you are downloading firmware. The lights flash as firmware loads. Wait until the lights have completed their flashing pattern. This can take several minutes.

The Progress Report window appears showing the disk firmware download task and the percentage completion.

10. Repeat this procedure on each drive.
11. When finished, exit Storage Utility.
12. Put AppCenter channels back online.
13. Restart.

Configure RTIO

In this task you set the Real Time Input/Output (RTIO) value for the SNFS file system to support K2 software features. This setting is required for all stand-alone K2 systems.

Do not do this task if:

- A shared storage (SAN client) K2 system.
- A stand-alone K2 system that was installed new with K2 software version 7.2 or higher. On these systems the RTIO setting is already at the required value.
- A stand-alone K2 system on which you have already set RTIO to the required value.

Do this task if:

- The K2 software from which you are upgrading is version 7.1.x or lower.
- — OR —
- You are not sure if the RTIO setting is already at the required value.

Prerequisites for this task are as follows:

- K2 systems must be offline

In this task you manually modify the SNFS configuration file. You can do this and still keep your media file system intact if you carefully follow the steps in this procedure.

If you need to make a new file system after upgrading K2 software, the values are set automatically by the upgraded version of Storage Utility.

This task applies to the following devices:

- Stand-alone K2 Summit Production Clients. This includes internal storage and direct-connect storage K2 Summit Production Clients.
 - K2 Solo Media Server
1. Open Storage Utility on the K2 Solo Media Server or stand-alone K2 Summit Production Client.
 2. In Storage Utility click **Tools | Modify File System**.
 3. When prompted "...offline mode now?" click **Yes**.
 4. When prompted "...continue?" click **Yes**.

The Modify File System window opens and displays the text of the configuration file.

5. In the text of the configuration file, identify the RTIO setting and if necessary modify the value as follows:

- On a K2 Summit Production Client the required RTIO value is 370 and is configured as follows:

```
# *****
# A stripe section for defining stripe groups.
# *****
[StripeGroup VStripe]
.
.
.
Rtios 370
.
```

- On a K2 Solo Media Server with standard Hard Disk Drives (HDD) the required RTIO value is 170 and is configured as follows:

```
# *****
# A stripe section for defining stripe groups.
# *****
[StripeGroup VStripe]
.
.
.
Rtios 170
.
```

- On a K2 Solo Media Server with optional Solid State Drives (SSD) or on a K2 Summit Production Client the required RTIO value is 250 and is configured as follows:

```
# *****
# A stripe section for defining stripe groups.
# *****
[StripeGroup VStripe]
.
.
.
Rtios 250
.
```

6. Do one of the following:

- If you modified the configuration file, click **Modify** and when prompted "...restarted now" click **OK**. The K2 system restarts.
- If you did not modify the configuration file, click **Cancel** and then exit Storage Utility. When prompted "...back to online mode?" click **Yes**.

Reset Capture Services

Do not do this task if:

- You do not use any of the K2 Capture Services.

Do this task if:

- You are using one or more K2 Capture Services, such HotBin, Pathfire, DG, XML Import, Export, P2, etc

Do this task on the K2 system running your K2 Capture Service, which is the K2 system that receives the media to be imported into K2 storage. This can be a K2 Solo Media Server, a stand-alone K2 Summit Production Client, or the K2 Media Server with the role of primary FTP server on a K2 SAN.

When you configure a K2 Capture Service for the first time, the service is set to startup type Automatic. However, if you upgrade or otherwise re-install your K2 System Software, the service is re-set to startup type Manual. Therefore, you must re-configure the service after K2 System Software upgrade/ reinstall in order to set the startup type back to Automatic.

1. From the **Start** menu, access the **Programs** menu and select **Grass Valley | K2 Capture Services**.
On a K2 Summit/Solo system, if the write filter is enabled, a message appears that informs you about the write filter and prompts you to restart. Restart as prompted, then repeat this step.
The K2 Capture Services utility dialog box is displayed.

2. Click **Apply**.

On a K2 Summit/Solo system, a message appears that informs you about the write filter and prompts you to restart. Click **OK** and the K2 Summit/Solo system restarts.

For import capture services, the service checks the source directory for files. If files are present, the service moves them to the Archive sub-directory. It does not import the files into the destination bin on the K2 system.

Upgrade K2 Dyno Server software

Do not do the tasks in this section if:

- The K2 Summit Production Client or K2 Solo Media Server is not controlled by a K2 Dyno Controller and therefore K2 Dyno Server software is not installed.

Do the tasks in this section if:

- The K2 Summit Production Client or K2 Solo Media Server is controlled by a K2 Dyno Controller and you need to upgrade the K2 Dyno Server software. Refer to compatibility specifications to determine if you need to upgrade.

Check the K2 Dyno Controller release notes for any updated information regarding the upgrade process, then proceed with the tasks in this section.

About K2 Dyno software

There are two software components in the K2 Dyno Replay system, as follows:

- K2 Dyno Server software – This software runs on the K2 Summit/Solo that is controlled by the K2 Dyno Controller.
- K2 Dyno Client software – This software runs on the K2 Dyno Controller.

When installing/upgrading K2 Dyno software you must consider versions and compatibility for both components: one on the K2 Summit/Solo and one on the K2 Dyno Controller.

Uninstall K2 Dyno Server software

If you have not already done so, disable the write filter on the K2 Summit Production Client or K2 Solo Media Server.

On the K2 Summit Production Client or K2 Solo Media Server, use the Windows **Add/Remove Programs** control panel and uninstall K2 Dyno Server software.

The display name of the software is **K2 Dyno**.

Do not restart the K2 Summit Production Client or K2 Solo Media Server.

Install K2 Dyno Server software

If the K2 Dyno Server software was previously installed, you must uninstall the software before you use these steps to install.

If you have not already done so, disable the write filter on the K2 Summit Production Client or K2 Solo Media Server.

1. From the K2 Summit Production Client or K2 Solo Media Server, access the K2 Dyno Server software installation files.
2. In the Server directory, locate and open the following file:
`setup.exe`
3. Follow the onscreen instructions, and work through each page.
4. Click **Next** and **Finish** to complete the installation.
5. Restart the K2 Summit Production Client or K2 Solo Media Server.
6. On the K2 Summit Production Client or K2 Solo Media Server, in Configuration Manager on the Ganging tab, make sure that **Use a single channel to control the gang** or **Record/play same clip on all channels of Gang** is *not* selected.

NOTE: *The K2 Dyno Controller can exhibit behavior that is difficult to troubleshoot if this checkbox is selected.*

Lock K2 Summit Production Clients

This task enables the write filter on a K2 Summit Production Client or on a group of K2 Summit Production Clients.

Prerequisites for this task are as follows:

- The device or all the devices in the group are communicating correctly in SiteConfig. This is indicated by the green star icon overlay.
 - The device or all the devices in the group are currently unlocked. This is indicated by the red lock icon overlay.
1. In the **Network Configuration | Devices** tree view or the **Software Deployment | Deployment Groups** tree view, identify the device or the group of devices that you intend to lock.
 2. Right-click the device or the group and select **Lock**.
A "...may require restart..." message appears.

3. Click **Yes** to allow SiteConfig to restart the device or devices.
The Locking Devices window opens and displays progress.
4. When the Locking Devices window reports that the lock process completed successfully, click **Close**.

The device or devices are now locked. For K2 Summit/Solo, this also enables the write filter, which enforces the restart.

Upgrade K2 Dyno Controller

Do not do the tasks in this section if:

- The K2 Summit Production Client or K2 Solo Media Server is not controlled by a K2 Dyno Controller.

Do the tasks in this section if:

- The K2 Summit Production Client or K2 Solo Media Server is controlled by a K2 Dyno Controller and you need to upgrade software on the K2 Dyno Controller. Refer to compatibility specifications to determine if you need to upgrade.

Before upgrading a K2 Dyno Controller, verify the following:

- You have access to the software installation files for this release. Procure the files via the appropriate distribution method, such as download, CD-ROM, network drive, or external drive.
- You have a recovery image for the K2 Dyno Controller at the current software version.
- Media access is stopped.

About K2 Dyno Replay Controller modes

The K2 Dyno Reply Controller operates in the following modes:

- Dyno mode – The Dyno application is open for normal operations such as capturing and replaying highlight clips.
- Maintenance mode – The Dyno application is closed and the Windows operating system desktop is available for system tasks such as network configuration and software update.

By default, the K2 Dyno Replay Controller is in the Dyno mode. You must manually put the unit in the maintenance mode, which requires a restart. Once you are in the maintenance mode, if you shutdown or restart, you are prompted to confirm the switch back to the Dyno mode at next startup. You can also choose to stay in the maintenance mode at next startup.

Uninstall K2 Dyno Controller Client software

1. On the K2 Dyno Controller, switch to the maintenance mode as follows:
 - a) At the startup screen, press the **Shift** button and then touch **SHUTDOWN**.
 - b) Touch **MAINTENANCE MODE**.
The K2 Dyno Client software closes and the Windows OS desktop is displayed after a restart.
2. Use the Windows **Add/Remove Programs** control panel and remove K2 Dyno Client software.

Install software on K2 Dyno Controller

Before you install K2 Dyno Client software you must first uninstall the current version.

1. Copy the directory that contains the K2 Dyno Client software onto a portable USB drive, such as a Flash drive.
2. Connect the USB drive to the K2 Dyno Controller and copy the Client directory to the K2 Dyno Controller desktop.
3. In the Client directory, locate and open the following file:
setup.exe
4. Follow the onscreen instructions, and work through each page.
 - If this is the first install after a re-image, enter the K2 Dyno Replay Controller serial number when prompted.
 - If the K2 Dyno System Configuration Tool opens, do not enter any information. Remove any text from the serial number field, as it must be blank. Then click **OK** and when prompted "...number is empty. Continue?", click **OK**.
 - If prompted "...update to new firmware?" click **Yes**, observe progress on the K2 Dyno Controller Firmware Updater, and when a Success message displays, click **OK**.
5. Click **Next** and **Close** to complete the installation.
6. Remove the portable USB drive, if it is still connected.
7. Restart using standard Windows procedures.
8. When prompted "...back to K2 Dyno mode...?", click **Yes**.
The K2 Dyno Controller restarts.

Install MPEG-2/AVC-Intra field kit

If you are installing an MPEG-2 or AVC-Intra field kit upgrade on one or more of your K2 Summit Production Clients or K2 Solo Media Servers, do so now. Follow the procedure in the Field Kit Upgrade Instructions document that you received with the field kit.

Make recovery images

After you have upgraded software as instructed in these procedures and verified that your system is working properly, you should always make a recovery image of each of your upgraded computers. Use a sequence of tasks 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 system.

Refer to the Grass Valley product's *Service Manual* for recovery image procedures.

Deploy control point PC software

Use SiteConfig to upgrade control point software on the K2 control point PC. In most cases, the K2 control point PC is also the SiteConfig control point PC, so you are in effect using SiteConfig to upgrade software on its own local system.

For this release of K2 software, the install task identifies the control point software in the Managed Package column as follows:

- GrassValleyControlPoint 7.3.8.xxxx

The software deployment process for the control point PC is similar to that used to upgrade software on other K2 devices. Use similar procedures and adjust accordingly to do the following:

1. Add the K2 control point software package to the deployment group that contains the control point PC.
2. Check software on the control point PC.
3. Configure and run deployment tasks to upgrade software.

Upgrading stand-alone K2 systems without SiteConfig

This section contains the tasks for upgrading stand-alone K2 systems to this release of K2 software.

With these instructions you go to each local K2 system and upgrade software using locally connected keyboard, monitor, and mouse. Work through the tasks sequentially to complete the upgrade.

NOTE: *These upgrade instructions assume that the current K2 software is at version 7.0.11 or higher. If the current K2 software is a 7.x version lower than 7.0.11, contact Grass Valley Support before upgrading. If a K2 Media Client or any K2 device with current K2 software at a 3.x version, do not upgrade, as version 7.x is not supported on these devices.*

NOTE: *When upgrading from a version lower than 7.1, K2 system software installs with a 30 day trial license. You need a permanent license to operate beyond the trial period.*

Make recovery images

Do not do this task if:

- You previously made a recovery image at the current software version for each computer you are upgrading.

Do this task if:

- You do not have a recovery image at the current software version for one or more of the computers you are upgrading.

The recommended procedure is to make a recovery image immediately after a software upgrade. If you neglected to do this when you last upgraded software you should make the recovery image now, before upgrading to the new version.

Refer to the Grass Valley product's *Service Manual* for recovery image procedures.

⚠ CAUTION: *If you upgrade and then decide you do not want to stay with this version of K2 system software, you must use the recovery disk image process to downgrade to your previous version.*

Prepare for K2 system upgrade

Before upgrading K2 systems, do the following:

- Procure the software installation files for this release via the appropriate distribution method, such as download, CD-ROM, network drive, or external drive.
- Start up the K2 systems you are upgrading, if they are not already started.

- For K2 Summit Production Client or K2 Solo Media Server, if you have not already done so, disable (unlock) the write filter.
- Stop all media access on K2 systems.
- Shut down all applications on K2 systems.

Disable write filter

1. If you have not already done so, log on to the K2 system with Windows administrator privileges.
2. From the Windows desktop, click **Start | All Programs | Grass Valley | Write Filter Utility**.
FBWF Manager opens.
3. Under Filter Settings, set Filter to **Disable**.
Do not modify other settings.
4. Click **OK**.
5. When prompted, restart the K2 system.

Upgrade QuickTime

Do not do this task if:

- QuickTime is currently at version 7.6 or higher.

Do this task if:

- QuickTime is at a version lower than 7.6.

1. Access the QuickTime installation files.
2. Locate and open the following QuickTime install file:

QuickTimeInstaller-7.6.exe

3. Work through the install wizard.

Configure settings so that the software does not automatically update Quicktime and other Apple software.

NOTE: Unless instructed to do so by Grass Valley, do not update or install Apple software.

Accept the default destination folder and other default settings.

Configure SNFS default.cfg file on stand-alone K2 system

In this task you open the media file system (SNFS) configuration file and verify/modify settings.

Do not do this task if:

- You have already modified the configuration file with the required settings.

Do this task if:

- The configuration file does not have the required settings.

Prerequisites for this task are as follows:

- K2 systems must be offline

You can verify and, if necessary, modify the media file system (SNFS) configuration file and still keep your media file system intact if you carefully follow the steps in this procedure.

As an alternative to manually modifying the configuration file, if you need to make a new file system after upgrading K2 software, the required values are set automatically by the upgraded version of Storage Utility.

This task applies to the following devices:

- K2 Solo Media Servers and stand-alone K2 Summit Production Clients. This includes internal storage and direct-connect storage K2 Summit Production Clients.

NOTE: Make sure the write filter is disabled.

1. On a stand-alone K2 system, using Notepad, open the media file system (SNFS) configuration file:

On a stand-alone K2 system, the configuration file can be either `C:\SNFS\config\default.cfg`, or `C:\SNFS\config\gvfs_hostname.cfg`, where `hostname` is the name of the K2 system.

2. On a stand-alone K2 system, verify, and if necessary modify, settings for required values as follows:

```
# *****  
# A global section for defining file system-wide parameters  
# *****  
GlobalSuperUser Yes  
.  
.  
.  
.  
.  
  
InodeDeleteMax 1000  
.  
ReservedSpace No
```

3. Close, and if necessary save, the SNFS configuration file.

If you made changes, the K2 system must be restarted for the changes to take effect.

The restart later in this upgrade procedure is sufficient to put the changes into effect.

Uninstall K2 software from stand-alone K2 system

1. Disable the write filter, if not already disabled.
2. Open the Windows **Add/Remove Programs** control panel.
3. Select **GrassValleyK2Client**, and click **Remove**.
4. When prompted "Are you sure...?", click **Yes**.
5. When prompted to restart, do not restart.

While a restart is required after installing K2 Client software, you can delay the restart until after other tasks are complete.

6. On a K2 Summit Production Client or K2 Solo Media Server, disable the write filter.
Disabling the write filter at this point keeps it disabled after the required restart. This is helpful because it must be disabled in order to uninstall or install software, which you will be doing after the restart.
7. Manage the required restart as follows:
 - Restart now.

Uninstall SNFS from K2 client

Do not do this task if:

- The desired version of SNFS is already installed and the installation (including required restarts) is complete.

Do this task if:

- A SNFS version lower than 3.5.2.1b15620 is currently installed

If you have not already done so, disable the write filter on the K2 Summit Production Client or K2 Solo Media Server.

1. Make sure you are logged in with an administrator account.
2. Use the Windows **Add/Remove Programs** control panel and uninstall SNFS.
3. Disable the write filter.
Disabling the write filter at this point keeps it disabled after the required restart. This is helpful because it must be disabled in order to install software, which you will be doing after the restart.
4. Restart using the Windows operating system restart procedure.

Install K2 software

Prerequisites for this task are as follows:

- If you uninstalled the previous version of K2 software, you must restart the K2 client at least once before installing the new version of K2 software.

1. Log in 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.

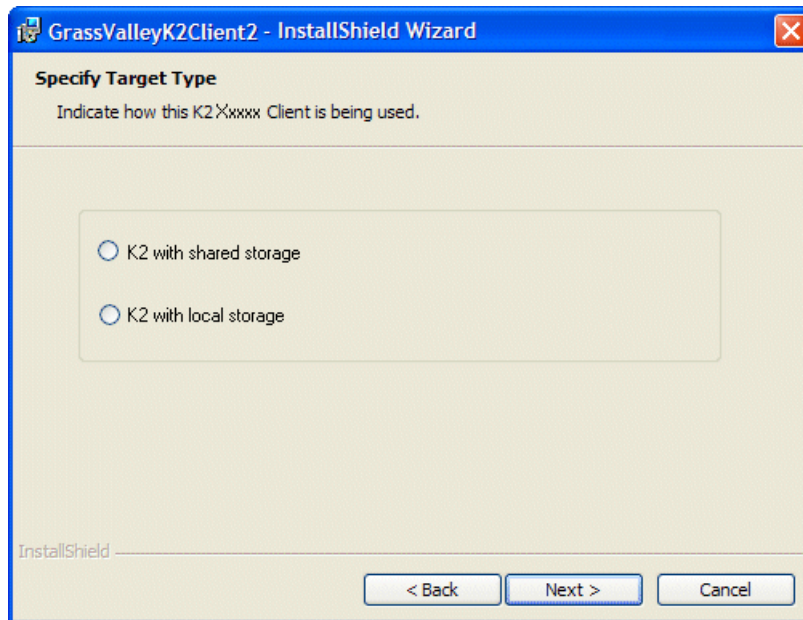
2. Disable the write filter, if not already disabled.
3. If installation files are on a connected external USB drive, copy the installation files to the local drive before proceeding.
4. Access the installation files.

5. Locate and open the following file:

For K2 Summit Production Client or K2 Solo Media Server —

- If a message appears informing you that you must restart, click **OK** to restart. If an external USB drive is currently connected, disconnect it before startup processes begin. Then repeat previous steps as necessary to run the install program again before continuing with the next step in this procedure.
- If no message appears, the install wizard opens. Continue with the next step in this procedure.

6. Follow the install wizard onscreen instructions, and work through each page.



7. When you arrive at the Specify Target Type page, select the option as follows:

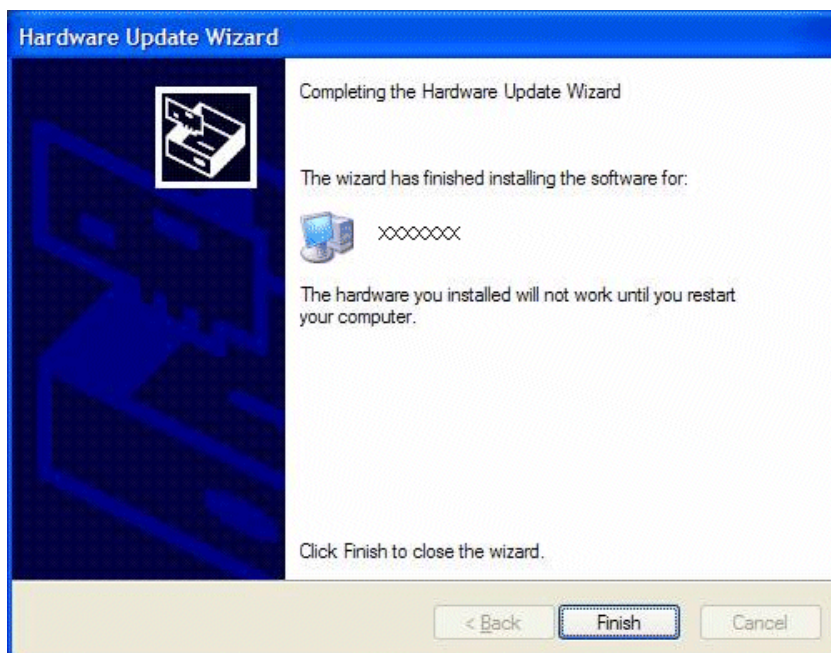
| Option | Description |
|------------------------------|---|
| K2 with local storage | For installing on an internal storage K2 system or on a direct-connect storage K2 system. |

8. 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:
 - a) If one or more messages appear referring to "...has not passed Windows logo testing...", you can safely continue. This is a normal part of the upgrade.



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

- b) 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. If multiple Hardware Update Wizards open, finish them similarly.

9. Click **Next** and **Finish** to complete the installation.
10. When prompted to restart, proceed as follows:
 - Disable the write filter.

Disabling the write filter before the restart keeps it disabled after restart. This is helpful because it must be disabled in order to install software, which you will be doing after the restart.
 - Do one of the following:
 - If the version from which you are upgrading is lower than 7.1.0.1153, shut down the system. After the system is shut down, press the standby button to power up the system. You must shutdown/powerup (power cycle), rather than restart.
 - If the version from which you are upgrading is 7.1.0.1153 or higher, restart.

Install SNFS on stand-alone K2 system

Prerequisites for this task are as follows:

- Before installing a new version of SNFS software, make sure that the computer has been restarted at least once since the previous version of SNFS software was uninstalled.
1. Access the installation files.
 2. Locate and open the file appropriate for your system:

| File | Description |
|---------------------------------|--|
| <i>gvSnfs352SetupK2.bat</i> | Use this file for K2 Media Client |
| <i>gvSnfs352SetupSummit.bat</i> | Use this file for K2 Summit Production Client and K2 Solo Media Server |

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

3. Press any key to proceed.
4. Restart media file system services as follows:
 - a) Click **Start | Programs | SNFS File System | Services Stop.**
 - b) Click **Start | Programs | SNFS File System | Services Start.**
5. Restart the computer using the Windows operating system restart procedure.

Verify upgraded software

When the K2 client starts up, you can verify that the correct versions of software are installed as follows:

1. Log on to AppCenter.
2. In AppCenter click **Help | About.**

The About dialog box opens.

3. Identify versions as follows

| | | |
|-------------------|---------------|--|
| System Version | 7.3.8.xxx | These should both report the same version number. This is the K2 System Software version number. |
| RTS Version | 7.3.8.xxx | |
| Media File System | 3.5.2.1b15620 | This is the SNFS version. |

Install required Windows update

Do not do this task if one of the following is true:

- A K2 Summit Production Client or K2 Solo Media Server received new from Grass Valley with K2 software version 7.3.x or higher pre-installed, in which case the required Windows update is pre-installed.

Do this task if:

- A K2 Summit Production Client or K2 Solo Media Server being upgraded from a version of K2 software version lower than 7.3.x.

NOTE: Do not install general Windows updates as available from Microsoft. Update only as directed by Grass Valley.

1. Extract the contents of the *RunUpdates.zip* file into the *C:\Temp* directory.
This creates a folder named *RunUpdates* that includes all of the Windows update files.
2. Within the *RunUpdates* folder run *RunUpdates.exe*.
A command shell starts.
3. When prompted enter *Y* to start the update process
For each of the updates, the shell displays a line showing the update installing. A window showing the progress of an update opens and then closes when complete. The shell then updates with the completion status of the update.
4. If you interrupt the Windows update process, run *RunUpdates.exe* to start it again. Updates continue from the point of interruption.
5. When updates complete and the shell displays the prompt “Do you want to reboot now?”, enter *Y* to restart.
6. Log on to the K2 system with Windows administrator privileges.
7. Delete the *RunUpdates* folder and files.
8. Empty the Recycle Bin.

Upgrade LSI RAID controller driver

Do not do this task if:

- A K2 Solo Media Server
- A K2 Summit Production Client with direct-connect storage
- A K2 Summit Production Client installed new with K2 software version 7.1.x or higher, in which case the driver is pre-installed at version 3.10.0.32.

- A K2 Summit Production Client with the driver already upgraded to version 3.10.0.32.

Do this task if:

- A K2 Summit Production Client with internal storage and a driver at a version lower than 3.10.0.32.
1. If you are not sure of the driver version currently installed, do the following:
 - a) open Windows **Device Manager | SCSI and RAID controllers | LSI MegaRAID SAS PCI Express ROMB | Properties | Driver**.
 - b) Check file properties. The following properties indicate that version 3.10.0.32 is already installed:

| Version | Date |
|-----------|-----------|
| 3.10.0.32 | 7/22/2009 |

- c) If the upgrade is necessary, continue with this procedure.
2. Open Windows **Device Manager | SCSI and RAID controllers**.
 3. Right-click **LSI MegaRAID SAS PCI Express ROMB** and select **Update driver**.
An install wizard opens.
 4. Select **No, not this time** and click **Next**.
 5. Select **Install from a list or specific location [Advanced]** and click **Next**.
 6. Select **Don't search. I will choose the driver to install** and click **Next**.
 7. Click **Have disk**.
 8. Click **Browse**, navigate to the `LSI_1078_winxp` directory, select `oemsetup.inf`, and click **OK**.
 9. Click **Next**.
 10. When prompted regarding Windows Logo Compatibility, select **Continue Anyway** and click **Finish**.
 11. Restart as prompted.

Upgrade MegaRAID Storage Manager

Do not do this task if:

- A K2 Solo Media Server
- A K2 Summit Production Client with direct-connect storage
- A K2 Summit Production Client installed new with K2 software version 7.1.x or higher, in which case MegaRAID Storage Manager is pre-installed at version 2.91-05.
- A K2 Summit Production Client with MegaRAID Storage Manager already upgraded to version 2.91-05.

Do this task if:

- A K2 Summit Production Client with internal storage and with the MegaRAID Storage Manager at a version lower than 2.91-05.
1. If you are not sure of the MegaRAID Storage Manager version currently installed, open Windows **Add/Remove Programs** Control Panel and identify the version. Continue if the upgrade is necessary.

2. Access the installation file at `.. \Drivers\MegaRAID29105\DISK1\` and double-click `setup.exe`. An install wizard opens.
3. Work through wizard pages, accepting defaults.
4. When prompted, select **Custom Installation** and click **Next**.
5. Select the **StandAlone** option and click **Next**.
6. Click **Install**.
7. When prompted "...continue?" click **Yes**.
The software installs.

Upgrade RAID Controller microcode on stand-alone K2 system

Do not do this task if one of the following is true:

- A K2 Solo Media Server
- A K2 Summit Production Client installed new with K2 software version 7.1.x or higher, in which case a compatible version of RAID controller microcode is pre-installed.
- A K2 Summit Production Client with internal storage and with RAID controller microcode already upgraded to a compatible version, as listed in compatibility specifications.
- A K2 Summit Production Client with direct-connect storage and with RAID controller and/or expansion chassis microcode already at compatible versions, as listed in compatibility specifications.

Do this task if:

- A K2 Summit Production Client with internal storage and with RAID controller microcode that you need to upgrade, as listed in compatibility specifications.
- A K2 Summit Production Client with direct-connect storage and with RAID controller and/or expansion chassis microcode that you need to upgrade, as listed in compatibility specifications.

For internal storage K2 Summit/Solo systems, find compatibility specifications at [Compatible K2 Summit/Solo components](#) on page 32. For a K2 Summit Production Client with direct-connect storage, find compatibility specifications at [Compatible K2 RAID components](#) on page 36.

1. Open AppCenter Workstation, either on the local K2 system or on the control point PC and logon.
Make sure you logon to AppCenter with appropriate privileges, as this logon is passed to Storage Utility. Administrator-level permission is necessary for most Storage Utility operations. If you log in with user-level permissions, the Storage Utility menu item is disabled.
2. If you are running AppCenter from a control point PC and you have channels from multiple K2 systems in your channel suite, select a channel from the stand-alone K2 system whose storage you intend to configure with Storage Utility. This is important as Storage Utility automatically connects to the K2 system that hosts the currently selected channel.
NOTE: Make sure you are connecting to a stand-alone K2 system. You should never connect Storage Utility directly to a K2 system that uses shared (SAN) storage.
3. From the AppCenter **System** menu, select **Storage Utility**.
Storage Utility opens.
4. If you are connecting from a control point PC, you should verify that you are connected to the correct K2 system. To verify this, use the Identify feature to flash the disks on the K2 system.

5. Select the controller in the Storage Utility tree view, then in the properties reported in the right-hand pane, note the controller microcode version. Proceed if you need to upgrade the controller microcode.
6. Right-click the controller in the tree view and do one of the following:
 - For internal storage, select **Load Controller Microcode** in the context menu.
 - For direct-connect storage, select **Advanced | Load Controller Microcode** in the context menu.
7. If online, messages appear "...offline mode now?" and "...continue?". Click **Yes** to put the K2 system in offline mode.

AppCenter channels go offline. The Open File dialog box opens.
8. In the Open File dialog box, browse to and select the microcode file for the required version. Refer to the following for locations and filenames:
 - For internal-storage, refer to [Compatible K2 Summit/Solo components](#) on page 32.
 - For direct-connect storage, refer to [Compatible K2 RAID components](#) on page 36.
9. Click **OK**.

The Progress Report window appears showing the microcode download task and the percentage completion.
10. If direct-connect storage and upgrading expansion chassis microcode, do the following:
 - a) Right-click the controller in the tree view, then select **Advanced | Load Disk Enclosure Microcode** in the context menu.
 - b) In the Open File dialog box, browse to the directory and file as listed in K2 RAID compatibility specifications earlier in these release notes.
 - c) Click **OK**.

The Progress Report window appears showing the microcode download task and the percentage completion.
11. When finished, exit Storage Utility.
12. If direct-connect storage, on 100% completion, proceed as follows:
 - If the RAID controller chassis has redundant controllers, no power cycle is required. The microcode download is complete.
 - If the RAID controller chassis does not have redundant controllers, power cycle the RAID controller chassis.
13. Put AppCenter channels back online.
14. Restart.

Upgrade disk drive firmware on stand-alone K2 system

Do not do this task if:

- A K2 system with disk drive firmware already at a compatible version, as listed in compatibility specifications.

Do this task if:

- A K2 system with disk drive firmware that you need to upgrade, as listed in compatibility specifications.

For internal storage K2 Summit/Solo systems, find compatibility specifications at [Compatible K2 Summit/Solo components](#) on page 32. For a K2 Summit Production Client with direct-connect storage, find compatibility specifications at [Compatible K2 RAID components](#) on page 36.

NOTE: The disk drives are upgraded one at a time which can take as long as 2 minutes per drive. Take this into consideration when scheduling the upgrade.

1. Open AppCenter Workstation, either on the local K2 system or on the control point PC and logon.

Make sure you logon to AppCenter with appropriate privileges, as this logon is passed to Storage Utility. Administrator-level permission is necessary for most Storage Utility operations. If you log in with user-level permissions, the Storage Utility menu item is disabled.

2. If you are running AppCenter from a control point PC and you have channels from multiple K2 systems in your channel suite, select a channel from the stand-alone K2 system whose storage you intend to configure with Storage Utility. This is important as Storage Utility automatically connects to the K2 system that hosts the currently selected channel.

NOTE: Make sure you are connecting to a stand-alone K2 system. You should never connect Storage Utility directly to a K2 system that uses shared (SAN) storage.

3. From the AppCenter **System** menu, select **Storage Utility**.

Storage Utility opens.

4. If you are connecting from a control point PC, you should verify that you are connected to the correct K2 system. To verify this, use the Identify feature to flash the disks on the K2 system.
5. Select a disk drive icon in the Storage Utility tree view, then note the firmware version in drive properties reported in the right-hand pane. Proceed if you need to download disk drive firmware.
6. Right-click a disk in the tree view, then select **Advanced | Download Disk Firmware** in the context menu.
7. If online, messages appear "...offline mode now?" and "...continue?". Click **Yes** to put the K2 system in offline mode.

AppCenter channels go offline. The Open File dialog box opens.

8. In the Open File dialog box browse to the directory and file as listed in compatibility tables earlier in these release notes. You must select the correct file for the device, storage type, and drive size/type.
9. Click **OK**.

For internal drives, watch the lights on the drive to which you are downloading firmware. The lights flash as firmware loads. Wait until the lights have completed their flashing pattern. This can take several minutes.

The Progress Report window appears showing the disk firmware download task and the percentage completion.

10. Repeat this procedure on each drive.
11. When finished, exit Storage Utility.
12. Put AppCenter channels back online.

13. Restart.

Configure RTIO

In this task you set the Real Time Input/Output (RTIO) value for the SNFS file system to support K2 software features. This setting is required for all stand-alone K2 systems.

Do not do this task if:

- A shared storage (SAN client) K2 system.
- A stand-alone K2 system that was installed new with K2 software version 7.2 or higher. On these systems the RTIO setting is already at the required value.
- A stand-alone K2 system on which you have already set RTIO to the required value.

Do this task if:

- The K2 software from which you are upgrading is version 7.1.x or lower.
- — OR —
- You are not sure if the RTIO setting is already at the required value.

Prerequisites for this task are as follows:

- K2 systems must be offline

In this task you manually modify the SNFS configuration file. You can do this and still keep your media file system intact if you carefully follow the steps in this procedure.

If you need to make a new file system after upgrading K2 software, the values are set automatically by the upgraded version of Storage Utility.

This task applies to the following devices:

- Stand-alone K2 Summit Production Clients. This includes internal storage and direct-connect storage K2 Summit Production Clients.
 - K2 Solo Media Server
1. Open Storage Utility on the K2 Solo Media Server or stand-alone K2 Summit Production Client.
 2. In Storage Utility click **Tools | Modify File System**.
 3. When prompted "...offline mode now?" click **Yes**.
 4. When prompted "...continue?" click **Yes**.

The Modify File System window opens and displays the text of the configuration file.

5. In the text of the configuration file, identify the RTIO setting and if necessary modify the value as follows:

- On a K2 Summit Production Client the required RTIO value is 370 and is configured as follows:

```
# *****
# A stripe section for defining stripe groups.
# *****
[StripeGroup VStripe]
.
.
.
Rtios 370
.
```

- On a K2 Solo Media Server with standard Hard Disk Drives (HDD) the required RTIO value is 170 and is configured as follows:

```
# *****
# A stripe section for defining stripe groups.
# *****
[StripeGroup VStripe]
.
.
.
Rtios 170
.
```

- On a K2 Solo Media Server with optional Solid State Drives (SSD) or on a K2 Summit Production Client the required RTIO value is 250 and is configured as follows:

```
# *****
# A stripe section for defining stripe groups.
# *****
[StripeGroup VStripe]
.
.
.
Rtios 250
.
```

6. Do one of the following:

- If you modified the configuration file, click **Modify** and when prompted "...restarted now" click **OK**. The K2 system restarts.
- If you did not modify the configuration file, click **Cancel** and then exit Storage Utility. When prompted "...back to online mode?" click **Yes**.

Reset Capture Services

Do not do this task if:

- You do not use any of the K2 Capture Services.

Do this task if:

- You are using one or more K2 Capture Services, such HotBin, Pathfire, DG, XML Import, Export, P2, etc

Do this task on the K2 system running your K2 Capture Service, which is the K2 system that receives the media to be imported into K2 storage. This can be a K2 Solo Media Server, a stand-alone K2 Summit Production Client, or the K2 Media Server with the role of primary FTP server on a K2 SAN.

When you configure a K2 Capture Service for the first time, the service is set to startup type Automatic. However, if you upgrade or otherwise re-install your K2 System Software, the service is re-set to startup type Manual. Therefore, you must re-configure the service after K2 System Software upgrade/ reinstall in order to set the startup type back to Automatic.

1. From the **Start** menu, access the **Programs** menu and select **Grass Valley | K2 Capture Services**.
On a K2 Summit/Solo system, if the write filter is enabled, a message appears that informs you about the write filter and prompts you to restart. Restart as prompted, then repeat this step.
The K2 Capture Services utility dialog box is displayed.
2. Click **Apply**.

On a K2 Summit/Solo system, a message appears that informs you about the write filter and prompts you to restart. Click **OK** and the K2 Summit/Solo system restarts.

For import capture services, the service checks the source directory for files. If files are present, the service moves them to the Archive sub-directory. It does not import the files into the destination bin on the K2 system.

Upgrade K2 Dyno Server software

Do not do the tasks in this section if:

- The K2 Summit Production Client or K2 Solo Media Server is not controlled by a K2 Dyno Controller and therefore K2 Dyno Server software is not installed.

Do the tasks in this section if:

- The K2 Summit Production Client or K2 Solo Media Server is controlled by a K2 Dyno Controller and you need to upgrade the K2 Dyno Server software. Refer to compatibility specifications to determine if you need to upgrade.

Check the K2 Dyno Controller release notes for any updated information regarding the upgrade process, then proceed with the tasks in this section.

About K2 Dyno software

There are two software components in the K2 Dyno Replay system, as follows:

- K2 Dyno Server software – This software runs on the K2 Summit/Solo that is controlled by the K2 Dyno Controller.
- K2 Dyno Client software – This software runs on the K2 Dyno Controller.

When installing/upgrading K2 Dyno software you must consider versions and compatibility for both components: one on the K2 Summit/Solo and one on the K2 Dyno Controller.

Disable write filter

1. If you have not already done so, log on to the K2 system with Windows administrator privileges.
2. From the Windows desktop, click **Start | All Programs | Grass Valley | Write Filter Utility**.
FBWF Manager opens.
3. Under Filter Settings, set Filter to **Disable**.
Do not modify other settings.
4. Click **OK**.
5. When prompted, restart the K2 system.

Uninstall K2 Dyno Server software

If you have not already done so, disable the write filter on the K2 Summit Production Client or K2 Solo Media Server.

On the K2 Summit Production Client or K2 Solo Media Server, use the Windows **Add/Remove Programs** control panel and uninstall K2 Dyno Server software.

The display name of the software is **K2 Dyno**.

Do not restart the K2 Summit Production Client or K2 Solo Media Server.

Install K2 Dyno Server software

If the K2 Dyno Server software was previously installed, you must uninstall the software before you use these steps to install.

If you have not already done so, disable the write filter on the K2 Summit Production Client or K2 Solo Media Server.

1. From the K2 Summit Production Client or K2 Solo Media Server, access the K2 Dyno Server software installation files.
2. In the Server directory, locate and open the following file:
`setup.exe`
3. Follow the onscreen instructions, and work through each page.
4. Click **Next** and **Finish** to complete the installation.
5. Restart the K2 Summit Production Client or K2 Solo Media Server.
6. On the K2 Summit Production Client or K2 Solo Media Server, in Configuration Manager on the Ganging tab, make sure that **Use a single channel to control the gang** or **Record/play same clip on all channels of Gang** is *not* selected.

NOTE: *The K2 Dyno Controller can exhibit behavior that is difficult to troubleshoot if this checkbox is selected.*

Upgrade remaining stand-alone K2 systems

For stand-alone storage K2 systems, repeat the previous steps to upgrade your remaining stand-alone storage K2 systems.

For the K2 Summit Production Client or K2 Solo Media Server, after you are done with the upgrade process, enable the write filter.

Enable write filter

1. If you have not already done so, log on to the K2 Summit Production Client or K2 Solo Media Server with Windows administrator privileges.
2. From the Windows desktop, click **Start | All Programs | Grass Valley | Write Filter Utility**. FBWF Manager opens.
3. Under Filter Settings, set Filter to **Enable**.
4. Under Protected Volumes, set C: to **Protected**. Do not modify other settings.
5. Click **OK**.
6. When prompted, restart the K2 Summit Production Client or K2 Solo Media Server.

Upgrade K2 Dyno Controller

Do not do the tasks in this section if:

- The K2 Summit Production Client or K2 Solo Media Server is not controlled by a K2 Dyno Controller.

Do the tasks in this section if:

- The K2 Summit Production Client or K2 Solo Media Server is controlled by a K2 Dyno Controller and you need to upgrade software on the K2 Dyno Controller. Refer to compatibility specifications to determine if you need to upgrade.

Before upgrading a K2 Dyno Controller, verify the following:

- You have access to the software installation files for this release. Procure the files via the appropriate distribution method, such as download, CD-ROM, network drive, or external drive.
- You have a recovery image for the K2 Dyno Controller at the current software version.
- Media access is stopped.

About K2 Dyno Replay Controller modes

The K2 Dyno Reply Controller operates in the following modes:

- Dyno mode – The Dyno application is open for normal operations such as capturing and replaying highlight clips.
- Maintenance mode – The Dyno application is closed and the Windows operating system desktop is available for system tasks such as network configuration and software update.

By default, the K2 Dyno Replay Controller is in the Dyno mode. You must manually put the unit in the maintenance mode, which requires a restart. Once you are in the maintenance mode, if you shutdown or restart, you are prompted to confirm the switch back to the Dyno mode at next startup. You can also choose to stay in the maintenance mode at next startup.

Uninstall K2 Dyno Controller Client software

1. On the K2 Dyno Controller, switch to the maintenance mode as follows:
 - a) At the startup screen, press the **Shift** button and then touch **SHUTDOWN**.
 - b) Touch **MAINTENANCE MODE**.The K2 Dyno Client software closes and the Windows OS desktop is displayed after a restart.
2. Use the Windows **Add/Remove Programs** control panel and remove K2 Dyno Client software.

Install software on K2 Dyno Controller

Before you install K2 Dyno Client software you must first uninstall the current version.

1. Copy the directory that contains the K2 Dyno Client software onto a portable USB drive, such as a Flash drive.
2. Connect the USB drive to the K2 Dyno Controller and copy the Client directory to the K2 Dyno Controller desktop.
3. In the Client directory, locate and open the following file:
setup.exe
4. Follow the onscreen instructions, and work through each page.
 - If this is the first install after a re-image, enter the K2 Dyno Replay Controller serial number when prompted.
 - If the K2 Dyno System Configuration Tool opens, do not enter any information. Remove any text from the serial number field, as it must be blank. Then click **OK** and when prompted "...number is empty. Continue?", click **OK**.
 - If prompted "...update to new firmware?" click **Yes**, observe progress on the K2 Dyno Controller Firmware Updater, and when a Success message displays, click **OK**.
5. Click **Next** and **Close** to complete the installation.
6. Remove the portable USB drive, if it is still connected.
7. Restart using standard Windows procedures.
8. When prompted "...back to K2 Dyno mode...?", click **Yes**.
The K2 Dyno Controller restarts.

Install MPEG-2/AVC-Intra field kit

If you are installing an MPEG-2 or AVC-Intra field kit upgrade on one or more of your K2 Summit Production Clients or K2 Solo Media Servers, do so now. Follow the procedure in the Field Kit Upgrade Instructions document that you received with the field kit.

Make recovery images

After you have upgraded software as instructed in these procedures and verified that your system is working properly, you should always make a recovery image of each of your upgraded computers. Use a sequence of tasks 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 system.

Refer to the Grass Valley product's *Service Manual* for recovery image procedures.

Licensing K2 products

The following sections contain instructions for managing K2 product licenses.

K2 licenses

The Grass Valley licenses available at the time of this writing that can be installed on a K2 product are as follows. Contact your Grass Valley representative for more information about licenses.

K2 Summit Production Client licenses

| License | License type |
|---|---|
| K2 System Software | SabreTooth |
| HD license for two channels of High Definition input/output | SabreTooth |
| AppCenter Pro | SabreTooth |
| AppCenter Elite | SabreTooth |
| K2 FCP Connect | SabreTooth |
| K2 TimeDelay | SabreTooth |
| K2 InSync | SabreTooth |
| K2 Pathfire Capture Service | SabreTooth provided by Grass Valley. Pathfire Transfer Service license also required. |
| Pathfire Transfer Service license | Provided by Pathfire. K2 Pathfire Capture Service also required. |
| K2 DG Capture Service | SabreTooth |
| K2 XML Import Capture Service | SabreTooth |
| Avid-TM | SabreTooth |
| K2 HotBin Export Service | SabreTooth |

K2 Media Server licenses

| License | License type |
|------------------|--------------|
| K2 SAN bandwidth | SabreTooth |

About K2 system software licensing

K2 system software version 7.3.8 requires a license from Grass Valley. Licensing is enforced at the K2 Summit Production Client or K2 Solo Media Server, so every K2 client running version 7.3.8 must have a valid license in place. No software version license is required on the control point PC. The K2 Media Server can be licensed for K2 SAN bandwidth, but no K2 system software version license is required on the K2 Media Server.

K2 clients shipping new from the factory have version 7.3.8 pre-installed with a permanent license in place, so no licensing tasks are required unless you want to add optional features such as AppCenter Pro/Elite. When upgrading from a 7.0.x version to version 7.3.8, you do not need to obtain a new HD license or AppCenter Pro/Elite license. If these licenses were permanent and valid before the upgrade, the licenses are still valid after the upgrade.

Licenses are requested through the License Wizard and managed through the SabreTooth License Manager, which is installed on the Grass Valley product with the Grass Valley software. The License Wizard and SabreTooth License Manager must be located on the Grass Valley product.

License information is stored in text files that you can manage just like any other file on your system. Licenses are unique to the system for which they are requested and cannot be used on any other machine. You should back up the license text files to a separate drive or as part of a recovery image.

Licenses are based on your system's unique identifier, which is partially derived from your system's Media Access Control (MAC) address. If you change your system's MAC address by performing operations such as changing the System Processor card, you must obtain a new license based on the new MAC address.

After temporary licenses expire

After the temporary license expires, if you have not yet obtained a permanent license, the following occurs:

- The K2 system software temporary license will expire. You will not be able to start AppCenter once the license has expired. If running, AppCenter will not stop working, and any remote control protocols will continue to function. However, you will not be able to make any changes in AppCenter, such as altering the configuration.
- The AppCenter Pro temporary license will expire and the AppCenter Pro features will stop functioning.

Requesting a license

This topic applies to Grass Valley Sabretooth licenses. Software licenses are unique to the system for which they are purchased. They cannot be used on any other system. This requires that you provide a generated unique ID for the desired system to Grass Valley, which is then used to create your unique license.

1. Log on to the device that you want to license.
You must log in as a Windows administrator with a local account, not a domain account.
 2. Open the License Request Wizard.
Find the License Request Wizard shortcut on the Windows desktop.
The License Request Wizard displays.
 3. Read the on-screen instructions, then click **Next**.
The Customer dialog box displays.
 4. Enter the information requested on this page then click **Next**.
You must provide a valid email address to receive your license file.
The Sales Number dialog box displays.
 5. Enter the Sales Order Number in the field then click **Next**.
Typically the Sales Order Number is found on the Software License sheet that you received with your Grass Valley product.
The Summary dialog box displays.
 6. Review the License Request information and click **Finish**.
A License Request text file, *License_Request_<SalesNumber>.txt*, is generated and saved to the Windows Desktop.
NOTE: If you are requesting licenses for more than one application, be sure to modify the name of the first License Request text file before saving it to your desktop. (In Notepad, use the Save As command.) Otherwise, the second License Request text file will overwrite it.
 7. If you have K2 Summit Production Client or K2 Solo Media Server and if the write filter is currently enabled, be aware that files on the desktop are lost on restart. Therefore do one of the following:
 - Save the License Request text file(s) to a different location.
 - Keep the K2 system running (do not restart) until after you have requested the license(s).
 8. Do one of the following:
 - Attach the License Request text file to an email.
 - Paste the text directly into an email message.

You might want to keep a copy of the message for your records.
 9. Send the email as instructed by the License Request Wizard.
An email will be sent from Grass Valley to the return email address you specified; your SabreTooth software license will be provided as a text file.
 10. Save this email in case you ever need to re-image this machine.
- Next add the license to the SabreTooth License Manager.

If you encounter difficulties when requesting a license

If you encounter difficulties running the License wizard, or the License wizard is not available, try this alternate method:

1. Generate a unique ID of the device where you will install software, as follows:
 - a) Click on the License Manager icon on the Windows Desktop.
The SabreTooth License Manager opens.
 - b) Choose **File | Generate Unique Id** in the License Manager.
 - c) Click **Copy to clipboard** to copy the generated ID, and **OK** to exit.
2. Prepare an email that includes the following information:
 - Customer Name
 - Customer Email
 - Sales Order Number
 - Unique ID of the device where you will install software.
3. Send the email to K2License@grassvalley.com.

The SabreTooth license number will be emailed to the email address you specified.

Adding a license

Your software license, *Licenses_<SalesNumber>.txt*, is provided as a text file. Use the License Manager to add this file to your system and enable the desired feature.

1. If adding a license on the K2 Summit Production Client, if you have not already done so, disable the write filter.
2. Click on the License Manager icon on the Windows Desktop.
The SabreTooth License Manager opens.
3. Do one of the following:
 - Choose **File | Import License** and navigate to the file location to open the text file.
 - Drag and drop the text file onto the License Manager.

You will now see the permanent license in SabreTooth, as well as any other licenses, permanent or temporary, that have been installed on this machine.

4. On the K2 Summit Production Client, if you have completed your changes, enable the write filter.

You should save the permanent license to a backup system.

Deleting licenses

Deleting a license disables the feature that it enabled. You might want to delete a temporary license prior to its expiry if you have decided not to purchase the feature. You can delete a temporary license after the permanent license has been installed without disabling the licensed product.

1. If deleting a license on the K2 Summit Production Client, if you have not already done so, disable the write filter.

2. Select the license in the SabreTooth License Manager.
3. Use the Delete key on your keyboard or right click with your mouse and select **Delete**.
4. On the K2 Summit Production Client, if you have completed your changes, enable the write filter.

Archiving licenses

You can archive your licenses to a secure external location. This allows you to quickly re-install a license should it be deleted or should you have to downgrade and then re-license the software. You can archive multiple licenses at the same time.

NOTE: *If you downgrade to an earlier version of the licensed software, make sure to archive the licenses first.*

1. In the SabreTooth License Manager, select the license or licenses.
2. Choose **File | Export License** to open the Save As dialog box.
3. Assign a meaningful name to the file, and save it to the desired location. Grass Valley recommends saving the license file to a USB drive or other external location.

Known Problems

The following limitations are present in this release of software. If you wish to obtain more information about these limitations, please mention the reference numbers.

AppCenter

| | | |
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| CR102538 | Description: | When attempting to create a sub-bin eleven levels deep, an error is displayed. |
| | Workaround: | Constrain nested sub-bins to ten levels deep or less. |
| CR105208 | Description: | Closed captioning and/or ancillary data not present in the last few seconds of a growing clip's playout. This occurs when playing out a clip that is being recorded, and the recording stops. |
| | Workaround: | Stop playout of growing clip before stopping recording. In any case the closed captioning and/or ancillary data is full-length in the recorded clip and present in subsequent playout. |
| CR108294 | Description: | When reconfiguring channel security settings on Configuration Manager Security tab, AppCenter does not allow username/password fields to be blank. |
| | Workaround: | Enter username/password for a valid user account. Once configured, the fields require valid information. |
| CR109197 | Description: | Recorded video is one frame late relative to timecode. This occurs if you record using Time-of-day timecode and the source is from channel four's LTC input. |
| | Workaround: | Connect the house LTC input to channel 1 and use it as the Time-of-day source. |
| CR110369 | Description: | AppCenter does not allow a clip to be deleted if the clip is associated with a playlist, program, or subclip. |
| | Workaround: | First use the "Consolidate Media" feature on the clip, then delete the clip. |
| CR110998 | Description: | Video faults continue to occur if Super Slo-Mo inputs lose and then regain phase alignment while recording is underway. |
| | Workaround: | If inputs lose phase alignment, first restore phase alignment and then stop and restart the recording. |

Storage Utility

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| CR101794 | Description: | Storage Utility does not open for a nearline SAN. This occurs when in K2 Config you select the name of the K2 SAN, which is the top node of the storage system tree, when attempting to open Storage Utility. |
| | Workaround: | In K2Config tree view, under the nearline SAN's K2 Media Server, select the File System Server node to open its property page. On the property page click Launch Storage Utility . |
| CR109691 | Description: | The Expansion by bandwidth feature is not supported on K2 SANs with RANKs that contain multiple LUNs. |

Workaround: Do not attempt to expand by bandwidth on these K2 SANs. The feature will be available in a future release.

K2 RAID

CR109174 Description: Firmware file CH_15K6_SAS.N004 has a problem. This is the disk firmware file for K2 RAID Cheetah 6 15K SAS drives.

Workaround: Do not load CH_15K6_SAS.N004 onto drives. Instead, refer to compatibility tables in release notes and load the file with the updated version, which is version N005 at the time of this writing.

System

CR90857 Description: The K2 Media Server displays an error because the Dell OpenManage server log fills up.

Workaround: Manually clear the log and then configure OpenManage to overwrite the log when full.

CR108389 Description: Slow operations after restarting with a USB device connected.

Workaround: Disconnect then reconnect USB device. Normal operation speed is restored.

CR110558 Description: Macintosh systems cannot write to a HotBin directory on the V: drive of an iSCSI or Fibre Channel connected K2 SAN. GV Connect export to the HotBin fails.

Workaround: Delete the HotBin, configure Macintosh access in the SNFS configuration file, then recreate the HotBin from the K2 Media Server. Configure the SNFS configuration file as part of the upgrade to this version of K2 software, as instructed in the upgrade procedure earlier in these release notes. If not upgrading, take systems offline, make the change as instructed in the upgrade procedure, then restart the K2 Media Server to put the change into effect.

CR110466 Description: On a K2 Media Server with SNFS on the C: drive, media is lost if you re-image the C: drive

Workaround: Before re-imaging, copy C:\SNFS\config and C:\SNFS\data to another location. After re-imaging, copy back to the C: drive.

CR112234 Description: AppService fails to start after software installation.

Workaround: Restart the K2 system.

PR3277 Description: Green flashes can occur when using AVC-Intra QuickTime reference file.

Workaround: Export and re-import the clip.

Installation

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| CR102800 | Description: | If uninstalling or installing K2 client software while applications or connections to AppService are open, the installation program becomes unresponsive. |
| | Workaround: | Use Task Manager to stop AppService. To prevent the problem from occurring, shutdown all applications and connections before uninstalling or installing. |

Compatibility

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| CR108742 | Description: | M-Series iVDR transfers fail. |
| | Workaround: | Do not attempt to transfer to/from M-Series iVDR. |
| PR25753 | Description: | MXF streaming transfer to XDCAM recorder fails. |
| | Workaround: | None. Some Sony deck models do not comply with the MXF standard. |

Dyno PA

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| CR111042 | Description: | On a stand-alone K2 Summit/Solo configured for K2 Dyno PA, the V: drive is not available. This occurs if the K2 system is started without a network connection or otherwise used outside of the Dyno PA system. |
| | Workaround: | Remove the DLC configuration from the K2 Summit/Solo as instructed in Dyno PA documentation. Verify that the loopback adapter is at the top of the adapter order list. This is required for a stand-alone K2 system that is not part of a Dyno PA system. |
| CR112249 | Description: | On a K2 Solo Media Server or stand-alone K2 Summit Production Client configured for K2 Dyno PA, imports and exports fail. |
| | Workaround: | If currently used with Dyno PA, after every installation of K2 software on the K2 Summit/Solo system, go to the Windows Services Control Panel and configure the Grass Valley FTP Daemon service to Startup Type Automatic. If no longer used with Dyno PA, remove the DLC configuration from the K2 Summit/Solo as instructed in Dyno PA documentation and then reinstall K2 software. |
