

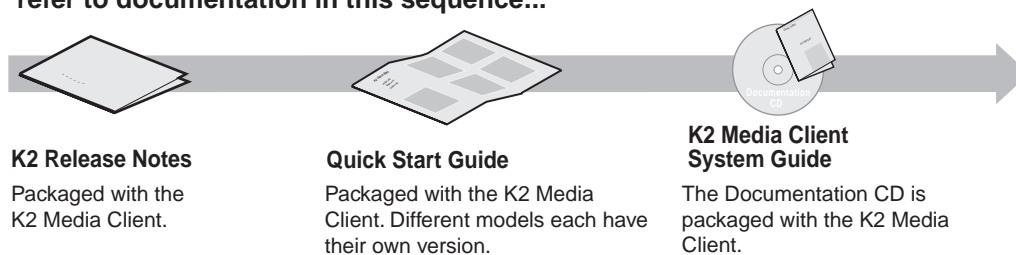
# K2 Media Client and K2 Storage System (SAN) Version 3.3.1 Release Notes & Upgrade Instructions

These release notes contain the most recent information and supersede previous publications, as of 13 October 2009. Check the Grass Valley website at [www.grassvalley.com/docs](http://www.grassvalley.com/docs) for an updated version that contains additional important information.

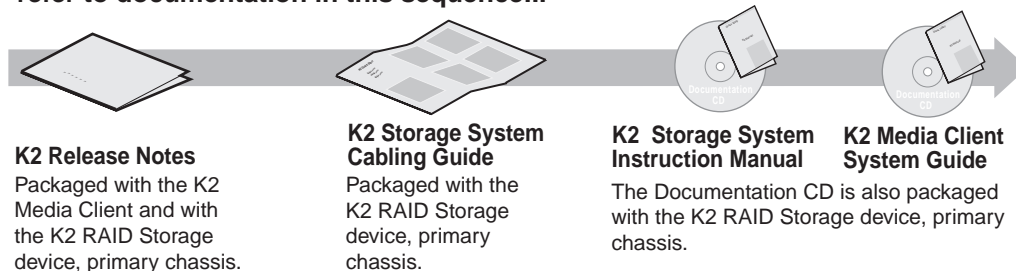
These release notes contain information for the following:

- K2 Media Clients with internal storage
- K2 Media Clients with direct-connect storage
- The K2 Storage System (SAN) with connected shared storage K2 Media Clients

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



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



Copyright © Grass Valley, Inc. All rights reserved. Printed in the United States of America. Portions of software © 2000 – 2009, Microsoft Corporation. All rights reserved. This document may not be copied in whole or in part, or otherwise reproduced except as specifically permitted under U.S. copyright law, without the prior written consent of Grass Valley, Inc., P.O. Box 59900, Nevada City, California 95959-7900. This product may be covered by one or more U.S. and foreign patents.

Product options and specifications subject to change without notice. The information in this manual is furnished for informational use only, is subject to change without notice, and should not be construed as a commitment by Grass Valley, Inc. Grass Valley, Inc. assumes no responsibility or liability for any errors or inaccuracies that may appear in this publication.

Grass Valley, K2, Aurora, Summit, Solo, Dyno, Turbo, M-Series, Profile, Profile XP, NetCentral, NewsBrowse, NewsEdit, NewsQ, NewsShare, NewsQ Pro, and Media Manager are either registered trademarks or trademarks of Grass Valley, Inc. in the United States and/or other countries. Grass Valley, Inc. products are covered by U.S. and foreign patents, issued and pending. Additional information regarding Grass Valley, Inc.'s trademarks and other proprietary rights may be found at [www.grassvalley.com](http://www.grassvalley.com). Other trademarks and logos used in this document are either registered trademarks or trademarks of the manufacturers or vendors of the associated products, such as Microsoft® Windows® operating system, Windows Media® player, Internet Explorer® internet browser, and SQL Server™. QuickTime and the QuickTime logo are trademarks or registered trademarks of Apple Computer, Inc., used under license therefrom.

# Contents

Grass Valley Product Support.....	4
Release note revisions for this release.....	6
Release Summary.....	7
Upgrading K2 systems.....	26
Upgrading a K2 SAN.....	26
About upgrading the K2 SAN with SiteConfig.....	26
Make recovery images.....	27
Prepare SiteConfig for software deployment to K2 SAN devices.....	27
Deploy control point PC software.....	27
Take SAN clients offline.....	28
Manage multiple K2 Media Servers.....	28
Upgrade K2 Media Server.....	29
Upgrade RAID firmware.....	36
Upgrade K2 client.....	36
Upgrade Aurora Edit, Ingest, and Playout systems.....	43
Upgrade NAS systems.....	43
Upgrade Browse and MediaFrame systems.....	43
Upgrade other SAN clients.....	43
Make recovery images.....	44
Upgrading stand-alone K2 clients with SiteConfig.....	44
About upgrading stand-alone K2 clients with SiteConfig.....	44
Make recovery images.....	45
Prepare for K2 client upgrade.....	45
Install High Priority Windows updates (recommended).....	46
Configure SNFS default.cfg file on K2 client.....	46
Prepare SiteConfig for software deployment to stand-alone K2 clients.....	47
Check all currently installed software on stand-alone K2 clients.....	47
Add software package to deployment group for stand-alone K2 clients.....	48
Upgrade software on stand-alone K2 clients.....	49
Verify network adapter order.....	51
Configure settings for protocol control on K2 Media Clients.....	51
Make recovery images.....	52
Deploy control point PC software.....	52
Upgrading stand-alone K2 clients without SiteConfig.....	52
Make recovery images.....	53
Prepare for K2 client upgrade.....	53
Install High Priority Windows updates (recommended).....	53
Configure SNFS default.cfg file on K2 client.....	54
Uninstall K2 software from K2 Client.....	55
Uninstall SNFS versions lower than 3.0 from a K2 client.....	55
Uninstall SNFS version 3.0.1b.39 or 3.0.3b.56 from K2 client.....	56
Install K2 software.....	56
Install SNFS on K2 client.....	59
Verify network adapter order.....	59
Upgrade MPIO.....	59
Upgrade remaining K2 clients.....	61
Upgrade software on Control Point PC.....	61
Configure settings for protocol control on K2 Media Clients.....	61
Make recovery images.....	61

Licensing K2 products.....	62
Additional notes.....	67
Passwords and security on K2 systems.....	67
About credentials in SiteConfig.....	68
About custom K2 SANs.....	68
Driver installation on generic image versions.....	69
K2 FCP Connect.....	71
About K2 FCP Connect.....	71
Install and configure Macintosh Final Cut Pro systems on a K2 SAN.....	71
Using Final Cut Pro on a K2 SAN.....	93
Maintaining K2 FCP Connect.....	94
Creating K2 Coder watch folders.....	96
Operation considerations.....	99
Known Problems.....	100

# Grass Valley Product Support

To get technical assistance, check on the status of a question, or to report a new issues, 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](mailto:gvgtechsupport@grassvalley.com)

## 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	County	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

<b>Region</b>	<b>County</b>	<b>Telephone</b>
	Southeast Asia - Singapore	+65 6379 1769
	Indian Subcontinent	+91 11 515 282 502; +91 11 515 282 504
Pacific	Australia, New Zealand	+61 1300 721 495
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	+44 118 923 0499
	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, Tadzhikistan, Ukraine, Uzbekistan	+7 095 258 09 20; +33 (0) 2 334 90 30
	Nordics (Norway, Sweden, Finland, Denmark, Iceland)	+45 40 47 22 37
	Southern Europe – Italy	+39 02 24 13 16 01; +39 06 87 20 35 42
	Southern Europe – Spain	+34 91 512 03 50
Middle East, Near East, Africa	Middle East	+971 4 299 64 40
	Near East and Africa	+800 80 80 20 20; +33 1 48 25 20 20

## Release note revisions for this release

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

Part number	Description
071-8704-01	Initial release notes for K2 3.3.1 software
071-8704-02	K2 FCP Connect topics added/modified, with the following changes: <ul style="list-style-type: none"><li>• <a href="#">Final Cut Pro on K2 SAN quick start installation checklist</a> on page 71 updated with additional steps. This topic replaces the document "K2 Final Cut Pro Connect Quick Start Guide".</li><li>• <a href="#">Configure Macintosh hosts files</a> on page 75 updated with Apple host file requirements.</li><li>• Topics <a href="#">Compatible K2 FCP Connect components</a> on page 24, <a href="#">Configure Macintosh systems for Active Directory Domain</a> on page 77, <a href="#">Enable Access Control Lists on the K2 Media Server (FSM)</a> on page 83, <a href="#">Verify bandwidth of SAN connection</a> on page 88, <a href="#">Verify Access Control Lists</a> on page 89, and <a href="#">Connecting via SAMBA/CIFS</a> on page 91 added. These topics replace the document "Enabling Cross Platform ACL support for Windows and Mac Active Directory Users".</li></ul> <p><a href="#">Known Problems</a> on page 100 updated with CR106979 and CR101794.</p>

---

# Release Summary

## What's new in version 3.3.1

### Version 3.3.1

- **K2 Media Servers** — Dell PowerEdge R710 and R610 are supported as K2 Media Server platforms.

## Feature limitations in this release

- Combining play channels and record channels in one gang is not supported.
- The gang feature does not support playlists.
- The track mapping feature does not support playlists.
- AVI import/export is supported only via AppCenter import/export features and only for DVCAM/DV25/DV50 clips.
- QuickTime FTP import/export is not supported.
- There is no centralized logging of the K2 SAN. Logs are stored on each individual device.

## Changes and features in previous releases

The following sections describe changes and features in past releases.

### Version 3.3.0

- **AFD support** — Active Format Description (AFD) is supported on the K2 Media Client for control of aspect ratio. Refer to the *K2 Media Client System Guide* for more information.
- **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. Note: when configuring the Mac Client on the K2 SAN using K2Config, on the Xsan Licensing Information page enter *only* the information as received from Apple with your Xsan license. If a one-seat license, enter only the Serial number and leave the Registered To and Organization fields blank. If a multi-seat license, enter all three fields. Refer to the *K2 Storage System Instruction Manual* for more information.
- **SiteConfig support** — Network configuration and software deployment across all K2 products is supported by SiteConfig, Grass Valley's system management tool. SiteConfig is required for K2 SAN upgrades.

- **Simplified configuration for external storage K2 Media Clients** — After the release of version 3.3.0, direct-connect and shared (SAN) storage K2 Media Clients that do not have a SCSI controller adapter or a SCSI backplane begin shipping from Grass Valley. Instead, RAID controller functionality is provided by the motherboard and backplane functionality is provided by two SATA drive connector boards. These K2 Media Clients can be identified by the absence of the SCSI controller adapter in slot six of the rear panel. K2 Media Clients with this configuration are compatible with K2 software version 3.3.0 and higher only. They can not be downgraded to a lower version. Refer to the *K2 Media Client Service Manual* part number 071-8468-07 for more information.
- **Pinnacle support** — You can import native Pinnacle clips. Refer to the *K2 Media Client System Guide* for more information.
- **Licensing for K2 system software** — When upgrading, version 3.3.0 K2 system software installs with a 30 day trial license. You must obtain a permanent license from Grass Valley. Version 3.3.0 is a free upgrade from version 3.2 or for anyone under a service contract or SLA. Customers with version 3.0 or 3.1 or who are outside the 1 year warranty can purchase an upgrade. When upgrading to version 3.3.0, make sure that you carefully follow the upgrade and licensing procedures later in these release notes, so that licensing features are correctly installed.
- **Protocol command** — The behavior of the AMP and BVW "device type" command has changed. Refer to the *K2 Media Client System Guide* Remote control protocol Appendix for more information.
- **Documentation for this release** — The following manuals have been revised or are new:
  - K2 Media Client User Manual 071-8459-04
  - K2 Media Client Service Manual 071-8468-07
  - K2 Media Client System Guide 071-8460-06
  - K2 Storage System Instruction Manual 071-8461-05
  - SiteConfig User Manual 071-8693-01
  - SiteConfig Migration Instructions 071-8705-00

The manuals are on K2 Documentation CD part number 063-8244-07.

## Version 3.2.74

- **Ancillary timecode** — Supports VITC and LTC ancillary timecode on HD channels for record and playout. SD ancillary timecode is preserved only.
- **SD Compressed VBI** — Support for Standard Definition (SD) Compressed VBI closed captioning.
- **Subtitles** — An API is provided for access to subtitling data, allowing Closed Captioning and Teletext systems to produce timecode correlated subtitles for an existing K2 clip.
- **House LTC Input** — HD-00 models have an updated codec board that provides a House LTC input. With this connector you can input LTC time code as a Time of Day source. The part number of the new codec board is 691-0031-51. Contact your Grass Valley representative for information on upgrading existing systems to the new codec board.



- **K2 XML Import capture service** — Imports media from 3rd party applications, as defined by an XML file.
- **K2 Pathfire capture service** — The K2 Pathfire capture service now supports SD content. This is in addition to the HD content currently supported.
- **HotBin sub-directories** — In the watched folder, the HotBin service creates directories named *Archive*, *Fail*, and *Success*.
- **XDCAM support** — XDCAM-HD422, XDCAM-HD, and XDCAM-EX are supported.
- **Media File System** — Upgrade to version 3.1.2.RC25225.6138 SNFS (StorNext File System) software is required.
- **Windows operating system qualification** — K2 control point software is now qualified on Windows Vista and Windows 2003 Server operating systems. Control point software remains qualified on the Windows XP operating system. Upgrade from Windows XP is not required. If you are using NetCentral on the control point PC, be advised that NetCentral is not qualified on Windows Vista.
- **Windows operating system licensing** — The type of license used for Microsoft Windows has changed. It is no longer necessary to activate the license after restoring from the generic recovery disk image.
- **15 K drives** — K2 Media Clients shipping from the factory can contain 15K drives, rather than the previous 10K drives. The 15K drives are identified as model “MBA” by a label on the drive. 15K drives are also provided as Field Replaceable Units (FRU). If you have a LUN of 10K drives, you may replace one of the 10K drive with a 15K drive. If you have a LUN of 15K drives, you must *not* replace one of the 15K drives with a 10K drive.
- **Playlist enhancement** — For the AppCenter Pro “Import text file as playlist” feature, the clip name can now include a path. The format for specifying a path with the clip name is volume:/binname/clipname. For example, *v:/default/Clip\_1*.
- **ProductFrame support** — Microsoft .NET Framework 3.5 SP1 and SiteConfig Network Configuration Connect Kit is required on the K2 Media Client, K2 Media Server, and Control Point PC.. These software components provide support for Grass Valley system management tools.
- **K2 ASI Media Client** — The K2 ASI Media Client is a K2 appliance on a K2 Storage System. The K2 ASI Media Client is a MPEG-2 transport stream capture device.
- **K2 Coder** — The K2 Coder is a K2 appliance on a K2 Storage System. The K2 Coder provides an option to import formats that are not otherwise supported by the K2 system. You can also export.
- **Edius workgroup** — This K2 Storage System is now available as a pre-defined system in the K2 System Configuration application. Only qualified Grass Valley personnel should configure this type of system.
- **Aurora Mirrored System Manager** — An application for managing mirrored K2 Storage Systems and associated devices is available. It is installed by default with K2 Control Point PC software.
- **Windows operating system qualification** — K2 control point software is now qualified on Windows Vista and Windows 2003 Server operating systems. Control point software remains qualified on the Windows XP operating system. Upgrade from Windows XP is not required.
- **Documentation for this 3.2.74 release** — Use the documents on the K2 Documentation CD part number 063-8244-06.

## Version 3.2.58

- **Catch server support** — The K2 Capture Service provides licensable features for automatically importing media from DG and Pathfire catch servers. Refer to the K2 Media Client System Guide for procedures.
- **Playlist enhancements** — Playlist has new features. Refer to the K2 Media Client User Manual.
- **AppCenter Pro track management enhancement** — Audio track mapping in the licensable AppCenter Pro option has new rules. Refer to the K2 Media Client User Manual.
- **Timecode labeling enhancement** — On the SD-00 K2 Media Client, AppCenter provides additional information to clarify timecode settings. The channel Options dialog box Timecode tab has modified text and layout. On the channel pane, the Timecode Source indicator reports source during playout.
- **E-to-E (LoopThru) mode** — On the SD-00 K2 Media Client, the Player/Recorder application has a new “E-to-E (LoopThru) mode” selection on the Control menu. This mode applies when the channel is under local AppCenter control as well as when it is under remote control, for all protocols.

When E-to-E is selected, the channel behaves as follows:

- “EE” is displayed on the channel pane, next to the Timecode Source indicator.
- When no clip is loaded, the signal that is currently present at the channel input plays out.
- When a record operation stops, Recorder stays Recorder and the clip remains in the Recorder. The signal that is currently present at the channel input plays out.

When E-to-E is not selected, the channel behaves as follows:

- “PB” is displayed on the channel pane, next to the Timecode Source indicator.
- When no clip is loaded, black plays out.
- When a record operation stops, Recorder becomes Player and the clip remains in the Player. The clip’s last frame plays out.
- **Media File System** — Upgrade to version 3.0.3b.56 SNFS (StorNext File System) software is required. This is the media file system software.
- **RS-422 connection** — RS-422 connectivity reverts to the pre-3.2.56 configuration, which is two dual-port USB cards. The motherboard has been modified to resolve all RS-422 and USB compatibility issues. This modified motherboard is known as the Type III motherboard. Refer to the K2 Media Client Service Manual.
- **Restoring from a generic recovery disk image on E:** — An issue with Windows operating system licensing has been discovered. The problem occurs only when restoring the K2 Media Client from the generic recovery disk image stored on the E partition. To avoid the problem, make sure you follow the procedure in the K2 Media Client Service Manual part number 071-8468-03 or higher.
- **Control point PC** — The Grass Valley control point PC is now on the Dell 830 platform. To make a recovery disk image, you must use recovery CD 063-8245-03.
- **Lx0 RAID can expand L2 RAID** — If you have a K2 Storage System with L2 RAID, you can expand it using Lx0 RAID.
- **Level 35** — An additional pre-defined level is available for the K2 Storage System.

- **Documentation for this release** — The following manuals have been revised:
  - K2 Media Client Service Manual 071-8468-04
  - K2 Media Client System Guide 071-8460-04

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

## Version 3.2.56

- **K2 Media Client motherboard** — The previous K2 Media Client motherboard (now known as the Type I motherboard) has reached end of life status, so a new “Type II” motherboard has been qualified and is installed in new systems. The Type II motherboard supports USB 2.0. To identify the motherboard in a K2 Media Client, view the rear panel. The Type I motherboard has a parallel port. The Type II motherboard does not have a parallel port.
- **RS-422 connection** — In this release, RS-422 connectivity is provided by a single PCI card. This is required for compatibility with the Type II motherboard. The PCI card replaces the previous configuration of two dual-port USB cards. The PCI card includes an 8-port external interface. On the external interface, only ports 1–4 are active.
- **Direct-connect storage** — There is a new model of K2 Media Client, with its own external RAID storage directly connected. Like a K2 Media Client with internal storage, this model is referred to as “stand-alone” storage, as opposed to K2 Media Clients that connect to external shared storage.
- **HotBins feature** — A watched folder can be configured to automatically import clips into the K2 System. Refer to the K2 Media Client System Guide for complete specifications.
- **Media File System** — Upgrade to version 3.0.1b.39 SNFS (StorNext File System) software is required. This is the media file system software.
- **QuickTime support** — AppCenter import supports QuickTime D10/IMX, XDCAM-HD, and HDV.
- **K2 Storage System levels 10, 20, 30** — A new storage infrastructure is available with pre-defined levels 10, 20, 30, and Nearline 10. Each level is available with both redundant and non-redundant configurations. New or changed devices with these levels are as follows:
  - L10, GS, and LS K2 Media Servers — Built on Dell platforms with configurations to support online K2 Storage Systems.
  - NH1 K2 Media Servers — Built on a Dell platform and configured to support the role of FTP server on both online and nearline K2 Storage Systems.
  - NH1-10GE K2 Media Servers — Built on a Dell platform. Provides 10 Gig bandwidth to support the role of FTP server on both online and nearline K2 Storage Systems.
  - K2 RAID — These RAID storage devices provide 4 Gb/s bandwidth.
  - GigE switch ISLs — On systems with two switches, it is now recommended to use three 1 Gig ISLs rather than the 10 Gig ISLs.

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

- **Storage Utility** — Enhancements for network settings allow two RAID controllers to be configured at once. Also, bound disks are now labeled as RANK, rather than LUN.
- **Documentation for this 3.2.56 release** — Use the September 2007 K2 Documentation CD (part number 063-8244-04) with release 3.2.56. This CD is labeled “Software version 3.2”.

## Version 3.2.21

- **SDA-00 K2 Media Client** — There is a new model of Standard Definition (SD) K2 Media Client that records and plays analog media as well as the digital media types supported by the SD-00 K2 Media Client. The SDA-00 K2 Media Client has two fixed recorder channels and two fixed player channels. Refer to the K2 Media Client System Guide for complete specifications.
- **Licensing for K2 system software** — There are licensing requirements for version 3.2 system software.
- **Four channels 720p** — 720p material on four channels is supported on the following HD-00 models:
  - HD-13 — One record channel, three play channels
  - HD-22 — Two record channels, two play channels
- **Player/Recorder application** — On the SD-00 K2 Media Client, a Player/Recorder application replaces the Player application and the Recorder application.
- **Channel protocol control** — To configure a channel for protocol control, click the Options button and find settings on the Control tab. There are no longer separate applications for protocol control.
- **AppCenter Pro** — The AppCenter Pro product is a licensed software plug-in for version 3.2.74 K2 system software. The plug-in adds the following features to AppCenter:
  - **Channel ganging** — You can combine channels in a gang for synchronous record/play operations.
  - **Track management** — You can add and remove video and audio tracks to a clip. You can also label audio tracks and configure rules for playout on different channels.
  - **GPI features** — You can set GPI output triggers as follows:
    - On a channel basis
    - On Start Of Material (SOM), End of Material (EOM), SOM + x seconds, or EOM – x seconds
    - On channel state idle, cued-for-play, playing, cued-for-record, and recording
  - **Schedule play/record** — You can start play and record operations based on time of day.
- **Support for 32 audio tracks** — A clip with up to 32 audio tracks can be stored on a K2 system. Standard features support record and playout of up to 16 audio tracks. AppCenter Pro features are required to create and playout more than 16 audio tracks.

- **Channel connect for protocols** — Even if AppCenter is not running, such as when a K2 Media Client starts up, channels are available for connection by remote control protocols.
- **1440 resolution support** — Recording and playout of 1440 resolution (XDCAM-HD) material is supported.
- **HDV support** — If HDV format material is transferred to a K2 system, it can be played out.
- **MPS/MTS support** — Select MPEG Program/Transport Streams (MPS/MTS) can be imported. This supports the import of graphics.
- **Security** — Based on Windows user accounts and groups, you can set permissions on bins and on channels.
- **Improved downconvert** — Video quality has been improved on downconversion from HD to SD.
- **Clip aspect ratio** — In clip properties there is an aspect ratio setting that overrides the channel's aspect ratio conversion setting.
- **Auto logon** — If you set the K2 Media Client to automatically log on to Windows at startup, AppCenter honors the setting by bypassing its log on dialog box and opening automatically as well. For more information about automatic logon in Windows XP, refer to the related Microsoft knowledge base article (KB 315231).
- **Internal storage options** — On an internal storage K2 Media Client, you have the option of 5 or 10 media drives, configured as RAID 0 or RAID 1.
- **MXF HD support** — MXF transfers now support High Definition material. DMS metadata is not supported.
- **AMP enhancements** — Developers can take advantage of new AMP protocol functionality.
- **EULA at first startup** — When you receive a K2 Media Client new from Grass Valley, at first startup an End User License Agreement (EULA) dialog box opens automatically on the screen. This is normal behavior and occurs only at the first startup.
- **Time of Day source** — The system clock and LTC are available as the source for time of day. VITC is no longer available.
- **Expansion by bandwidth** — You can add disks to increase bandwidth and expand the media file system. You can do this while retaining existing media. If you have media from Aurora products in your K2 Storage System, refer to the section about bandwidth expansion for Aurora products in the K2 Storage System Instruction Manual.

### Version 3.1.14

- **SQL Server 2005** — This release of K2 system software is compatible with both Microsoft SQL Server 2005, which is on new systems shipping from Grass Valley, and with Microsoft SQL Server 2000, which is on previously shipped systems. For systems currently running SQL Server 2000, there is no requirement to upgrade to SQL Server 2005.
- **RSTP GigE switch configuration** — Recent testing has revealed that the HP ProCurve Ethernet switches must have their Spanning Tree Protocol (STP) configured to RSTP, rather than STP. Some switch configuration procedures do not have this specified. You should check this setting on your switch or switches as soon as possible, as instructed in the K2 Storage System Instruction Manual.

## Version 3.1.13

- **Factory installation** — This release provides updated software for pre-installation at the factory and for upgrade of existing systems at customer sites. The release contains quality and performance improvements.
- **Product compatibility** — This release is qualified with updated versions of Grass Valley News products. Refer to compatibility tables later in these release notes.
- **Media File System** — Upgrade to version 2.6.5b50 SNFS (StorNext File System) software is required. This is the media file system software.
- **2900 series switch** — A new Gigabit Ethernet switch, the “ProCurve Networking Switch 2900 Series” is qualified for use with K2 Storage Systems. Its use and configuration are the same as the existing 3400cl series switch, as documented in the K2 Storage System Instruction Manual part number 071-8461-01, with the following exceptions:

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

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

- The switch has been qualified with firmware version T.11.12. Check the firmware version on the switch and downgrade or upgrade as necessary.
- The two 10 Gigabit ports are standard on the 2900 series switch.

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

## Older versions

For information about older software versions not listed in these release notes, refer to the release notes for those versions.

# Version compatibility

Versions qualified for compatibility with this version 3.3.1 release of K2 software are summarized in the following sections.

## Compatible K2 Media Client components

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

Product	Version	Comments
GrassValley K2 Client software	3.3.1	Includes AppCenter
Media File System (SNFS)	3.1.2.RC25225.6138	—
SiteConfig Discovery Agent, also known as SiteConfig	1.0.8	This version is still compatible
Network Configuration Connect Kit	1.1 and higher	Upgrade to this version is enforced when deploying software with SiteConfig version 1.1 and higher
Windows Operating System	Windows XP	With the latest update
Microsoft .NET Framework	1.1, 1.1 Hotfix, 2.0 SP2, 3.0 SP2, 3.5 SP1	—
QuickTime	7.0 and higher	—
Adobe Acrobat Reader	7.0 and higher	
ATI video driver for Radeon 9250	8.252.0.0	
Intel Pro Software	13.1.2	
Microsoft iSCSI Initiator	2.07	
MS XML	4.0 6	
MS-SQL Desktop Engine	8.00.761 SP3	
Power Console Plus <sup>1</sup>	5.00n	
J2SE Runtime Environment	6, Update 7	

<sup>1</sup> Do not use this utility on a K2 Media Client. This utility is for use by Grass Valley Service personnel only. When this utility is opened it scans the SCSI bus and interferes with record and play operations.

Product	Version	Comments
Supero Doctor	3	

## 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	3.3.1	—
Media File System (SNFS)	3.1.2.RC25225.6138	—
SiteConfig Discovery Agent, also known as SiteConfig	1.0.8	This version is still compatible
Network Configuration Connect Kit	1.1 and higher	Upgrade to this version is enforced when deploying software with SiteConfig version 1.1 and higher
Windows Operating System	Windows 2003 Server	With the latest update
Microsoft .NET Framework	2.0 SP2, 3.0 SP2, 3.5 SP1	—
QuickTime	7.0 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	—

## 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	3.3.1	—
Windows operating system	Server 2003 SP 1	—



Software	Version	Comments
NetCentral	5.0	—
SQL Server Express	2005	—
.NET Framework	1.1, 1.1 Hotfix, 3.5 SP1	—
QuickTime	7.0 and higher	—
MS XML	4.0	—
Windows Installer	3.1	—
SiteConfig Discovery Agent, also known as SiteConfig Network Configuration Connect Kit	1.0.8 1.1 and higher	This version is still compatible Upgrade to this version is enforced when deploying software with SiteConfig version 1.1 and higher
7-ZIP	—	—
Adobe Reader	9.0	—

## Compatible Grass Valley products

Grass Valley products are compatible with this version 3.3.1 release of K2 software as follows:

Product	Version	Comments
Aurora Browse	6.5.1 or 6.5.2	Check with your Grass Valley representative for version availability
Aurora Edit	6.5.1 or 6.5.2	
Aurora Ingest	6.5.1 or 6.5.2	
Aurora Payout	6.5.1 or 6.5.2	
Profile XP Media Platform	5.4.8 or higher	Media assets can be transferred to/from a Profile XP system.
NetCentral	5.0.0	—
SiteConfig application	1.1 or higher	—
K2 Coder	3.2.0	—
UIM	2.1.1	—
K2 TimeDelay	2.1.3	—
K2 InSync	4.0.2.1	Check with your Grass Valley representative for version availability

Product	Version	Comments
K2 Avid plug-in	1.0.0	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	3.3.0	—

## Compatible HP ProCurve GigE switch components

Components that reside on the 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 3400cl series firmware	M.08.66	This older version is still compatible
	M.08.86	Upgrade to this version is recommended
HP ProCurve 2900 series firmware	T.11.12	This older version is still compatible
	T.13.23	Upgrade to this version is recommended

## Compatible K2 Lx0 RAID components

This compatibility specification applies to the K2 RAID device on a Level 10, Level 20, Level 30 and Level 35 (both basic and redundant) K2 SAN. RAID firmware is compatible with this release of K2 software as follows:

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
	07VV	D1_07VV.BIN	Upgrade to this version is recommended
Level 10/20 controller	030F	ENCL_030F.BIN	This version is still compatible

Component	Version	File Name	Comments
firmware for expansion chassis with 15K SAS drives or SATA drives	050B	ENCL_050B.BIN	Upgrade to this version is recommended
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	
Level 30/35 controller firmware for primary chassis with 15K SAS drives or SATA drives	07VS	D3_07VS.BIN	This version is still compatible
	07VV	D3_07VV.BIN	Upgrade to this version is recommended
Level 30/35 controller firmware for expansion chassis with 15K SAS drives or SATA drives	030F	ENCL_030F.BIN	This version is still compatible
	050B	ENCL_050B.BIN	Upgrade to this version is recommended
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	

Find firmware on the K2 client (for direct-connect storage) or the K2 Media Server (for shared storage) at *C:\profile\microcode\NEC\Condor*.

## Compatible K2 Lx0 RAID disk drive microcode

This compatibility specification applies to the K2 RAID device on a Level 10, Level 20, Level 30 and Level 35 K2 SAN. Disk drive microcode is compatible with this release of K2 software as summarized in the following table:

Disk Drive	Microcode Type	Microcode Version	Microcode File Name	Comments
73G 15K SAS	Interface	0002	CT15K5SAS.01_	—
	Servo	0002	CT15K5SAS_73_1	
146G 15K SAS	Interface	0002	CT15K5SAS.01_	—
	Servo	0002	CT15K5SAS_146_1	
300G 15K SAS	Interface	0002	CT15K5SAS.01_	—
	Servo	0002	CT15K5SAS_300_1	
450G 15K SAS <sup>2</sup>	—	0004	CH_15K6_SAS.0004	This version is still compatible.
	—	N005	CH_15K6_SAS.N005	Upgrade to this version is recommended.
500G 7.2K SAS	Interface	N001	BA_7K_ Interface.N001	—
	Servo	N001	BA_7K_ ST3500620SS_ Servo.C30D	
1TB 7.2K SAS	Interface	N001	BA_7K_ Interface.N001	—
	Servo	N001	BA_7K_ ST31000640SS_ Servo.B30D	

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

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

Find microcode on the K2 client (for direct-connect storage) or the K2 Media Server (for shared storage) at `C:\profile\microcode\NEC\Seagate`.

<sup>2</sup> This type of microcode has a single microcode file, rather than separate Interface and Servo files.

## Compatible Level 3 RAID components

Components that reside on the the K2 Level 3 RAID storage device are compatible with this release of software as follows:

Product	Version	File Name	Comments
Controller firmware for online systems	04VJ	04FH04VJ.BIN	This older version is still compatible.
Controller firmware for online systems	05VD	04FH05VD.BIN	Upgrade to this version is recommended.
Controller firmware for online systems	05VG	04FH05VG.BIN	Upgrade to this version is optional.
Controller firmware for nearline primary chassis	05ND	04FH05ND.BIN	This older version is still compatible.
Controller firmware for nearline primary chassis	05NG	04FH05VN.BIN	Upgrade to this version is optional.
Controller firmware for nearline expansion chassis	06F	DEA_AP.06F	—

Find firmware on the K2 client (for direct-connect storage) or the K2 Media Server (for shared storage) at `C:\profile\microcode\K2-L3`.

## Compatible Level 3 RAID disk drive microcode

Versions of K2 Level 3 RAID disk drive microcode are compatible with this release of software as summarized in the following tables:

Disk Drive Capacity	Microcode Type	Microcode Version	Microcode File Name	Comments
73G	Interface	0003	CH7_10K_Interface.0003	These older versions are still compatible.
	Servo	B58	CH7_10K_ST373207FC_Servo.B58	

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

Find microcode on the K2 Media Server at `C:\profile\microcode\K2-L3\seagate`.

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

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

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

## Compatible Level 2 RAID components

Components that reside on the the K2 Level 2 RAID storage device are compatible with this release of software as follows:

Product	Version	Comments
Controller firmware	RV62	Filename: 03FHRV62.BIN  This older version is still compatible.
Controller firmware	RV70	Filename: 03FHRV70.BIN  Upgrade to this version is recommended.
LAN card firmware	GS05	Filename: 03SPGS05.bin  Upgrade to this version is recommended.

Find firmware on the K2 Media Server at *C:\profile\microcode\K2-L2*.

## Compatible Level 2 RAID disk drive microcode

Versions of K2 Level 2 RAID disk drive microcode are compatible with this release of software as summarized in the following tables:

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

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

Find microcode on the K2 Media Server at `C:\profile\microcode\K2-L2\seagate`.

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

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

## 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 K2 FCP Connect components

The following components are compatible when integrating K2 systems and Macintosh systems using K2 FCP Connect.

Component	Product/Version	Comments
K2 software	3.3 or higher	—
K2 Media File System (SNFS) software	3.1.2.RC25225.6138	—
K2 RAID	K2 Lx0 RAID (Condor)	Level 2 and Level 3 K2 RAID not supported.



Component	Product/Version	Comments
Macintosh system	Mac Pro with Intel Processor, two GigE ports	—
Macintosh operating system	OS X 10.5.6	—
Final Cut Pro software	6.0.5 or higher	—
Apple Xsan software	2.1	—

## 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 Media Client	Recovery CD part number 063-8245-04	—
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.

## 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 current K2 system software is at version 3.1.9 or higher. If you have a lower version of software, contact Grass Valley Support before upgrading.*

**NOTE:** *When upgrading from a version lower than 3.3.0, K2 system software installs with a 30 day trial license. You need a permanent license to operate beyond the trial period.*

### Related Links

[About K2 software licensing](#) on page 62

## About upgrading the K2 SAN with SiteConfig

These topics apply to K2 SANs with instructions to upgrade software on the following K2 SAN devices.

- K2 Media Servers
- K2 Media Clients
- K2 appliances

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.

Before you upgrade software using SiteConfig, your K2 SAN must be migrated to become a SiteConfig managed system. This includes installing SiteConfig support on system devices and setting up SiteConfig for system management and software deployment. Refer to *SiteConfig Migration Instructions*. Also refer to the *SiteConfig User Manual* or *SiteConfig Help Topics*.

**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 3.3.1 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 K2 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 Media Client SAN software installation (\*.cab) file.
  - K2 Media Server software installation (\*.cab) file.
  - Control Point 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 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 3.3.1.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.

## 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. 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 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:

- 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.

**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.**

**Configure 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:

- The K2 system was installed new with the following K2 software version:
  - A version at 3.3 or higher  
At these versions, K2 tools (Storage Utility and K2Config) automatically configure settings as required.
  - — OR —
  - You have already modified the configuration file with the required settings.

Do this task if:

- You are upgrading from a current version of K2 software as follows:
  - Version 3.2.74 or lower
  - — OR —
  - You are not sure if the configuration file has already been modified with the required settings.

In this task you manually modify or add values to the media file system (SNFS) configuration file. Doing so keeps your media file system intact. However, 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:

- 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. Using Notepad, open the media file system (SNFS) configuration file:  
On a K2 Media Server, open `D:\SNFS\config\default.cfg`.
  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

```

3. Close, and if necessary save, the `default.cfg` file.

If you made changes, SNFS services must be restarted for the changes to take effect.

As part of the upgrade procedure, SNFS services are restarted when you restart the K2 device.

### 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.

#### Related Links

[About credentials in SiteConfig](#) on page 68

### 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	<i>GrassValleyK2Server_3.3.1.xxxx.cab</i>

SNFS software is bundled with the K2 software 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.
- You have recently done the SiteConfig "Check Software" operation on the devices you are upgrading.

When you upgrade software, SiteConfig enforces an uninstall of the current version of software before installing the upgrade version. SiteConfig can do the uninstall/install in a single deployment session. If you are upgrading multiple software components, SiteConfig enforces any dependencies by sequencing deployment tasks. SiteConfig provides uninstall deployment tasks and install deployment tasks to indicate the taskflow.

1. In the **Software Deployment | Deployment Groups** tree view, select the device or the group of devices for which you are upgrading software.  
The corresponding software deployment tasks are displayed in the Tasks list view.



2. For the software you are uninstalling, 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	Uninstall
✓	GrassValleyK2Server 3.3.1.xxxx	Install

Also, if SiteConfig generates deployment tasks to upgrade SNFS, you must upgrade SNFS. Deploy the following tasks to K2 Media Servers with role of file system server:

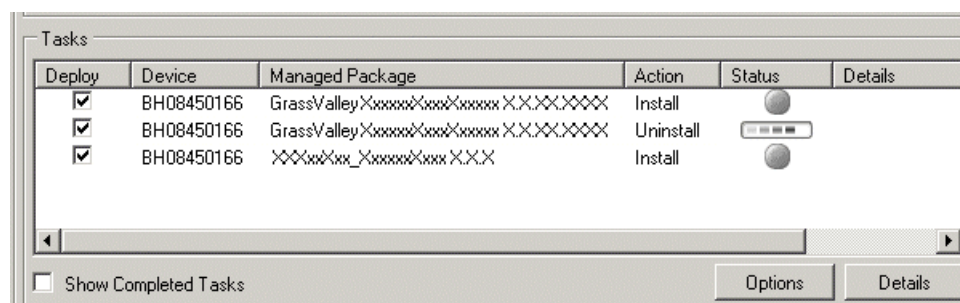
Deploy	Managed Package	Action
✓	SNFS xxxxxx	Uninstall
✓	SNFS 3.1.2.6138	Install

When using SiteConfig for upgrades, the SNFS upgrade is required even if you are already at version 3.1.2.RC25225.6138. The upgrade resets SNFS version information for SiteConfig.

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

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

4. 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.

Since you are upgrading both K2 and SNFS software, SiteConfig uninstalls both in the proper sequence.

5. When the Status or Details columns indicate next steps, proceed as follows:
  - 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.

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.

Since you are upgrading both K2 and SNFS software, SiteConfig installs both in the proper sequence.

6. When the Status or Details columns indicate next steps, proceed as follows:
  - 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.

Since you are also upgrading SNFS software, this is also the restart required by the SNFS install.

7. Monitor progress as indicated by both the Status and Details column. When finished, the Status column indicates complete.
8. If the K2 Media Server has the role of media file system and metadata (database) server, open the Services Control Panel and make sure that Failover Monitor is set correctly. If necessary, change the Startup Type, as follows:

<b>This service ...</b>	<b>On this type of K2 SAN...</b>	<b>Should have Startup Type set as follows:</b>
Grass Valley FSM Failover Monitor	Basic (non-redundant)	Automatic
	Redundant	Manual

### 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.

When all the K2 Media Servers on the K2 SAN have been upgraded, next upgrade connected K2 clients.

## Upgrade RAID firmware

Do not do this task if:

- The K2 SAN is a Level 10, 20, 30, or 35 SAN with RAID controller and expansion chassis firmware already at compatible versions, as listed in K2 Lx0 RAID compatibility specifications earlier in these release notes.
- The K2 SAN is a Level 2 or Level 3 SAN.

Do this task if:

- The K2 SAN is a Level 10, 20, 30, or 35 SAN with RAID controller and/or expansion chassis firmware at a version that is not compatible.

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

1. Refer to the K2 Lx0 RAID compatibility specifications earlier in these release notes for the version to which you must upgrade and for the file names for the firmware files.
2. From the K2 Media Server, use Storage Utility to upgrade firmware. 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 firmware 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 K2 client

Work through the following topics sequentially to upgrade K2 clients.

### Prepare for K2 client upgrade

Before upgrading K2 clients, 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 clients you are upgrading, if they are not already started.
- Stop all media access on K2 clients.

- Shut down all applications on K2 clients.

#### 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.**

#### 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.

#### Related Links

[About credentials in SiteConfig](#) on page 68

### 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>GrassValleyK2MediaClientSAN_3.3.1.xxxx.cab</i>

SNFS software is bundled with the K2 software 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 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.

When you upgrade software, SiteConfig enforces an uninstall of the current version of software before installing the upgrade version. SiteConfig can do the uninstall/install in a single deployment session. If you are upgrading multiple software components, SiteConfig enforces any dependencies by sequencing deployment tasks. SiteConfig

provides uninstall deployment tasks and install deployment tasks to indicate the taskflow.

1. In the **Software Deployment | Deployment Groups** tree view, select the device or the group of devices for which you are upgrading software.  
The corresponding software deployment tasks are displayed in the Tasks list view.
2. For the software you are uninstalling, 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, deploy the following tasks:

Deploy	Managed Package	Action
✓	GrassValleyK2MediaClientSAN xxxx.xxxx	Uninstall
✓	GrassValleyK2MediaClientSAN 3.3.1.xxxx	Install

Also, if SiteConfig generates deployment tasks to upgrade SNFS, you must upgrade SNFS. Deploy the following tasks at the same time:

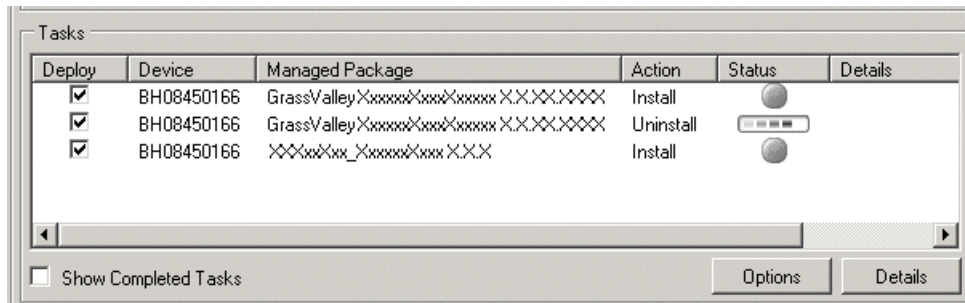
Deploy	Managed Package	Action
✓	SNFS xxxxxx	Uninstall
✓	SNFS 3.1.2.6138	Install

When using SiteConfig for upgrades, the SNFS upgrade is required even if you are already at version 3.1.2.RC25225.6138. The upgrade resets SNFS version information for SiteConfig.

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

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

4. 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.

Since you are upgrading both K2 and SNFS software, SiteConfig uninstalls both in the proper sequence.

5. When the Status or Details columns indicate next steps, proceed as follows:
  - When Details displays a **Restart required** link, click the link and when prompted "...are you sure...", click **Yes**.

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

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.

Since you are upgrading both K2 and SNFS software, SiteConfig installs both in the proper sequence.

6. When the Status or Details columns indicate next steps, proceed as follows:
  - When Details displays a **Restart required** link, click the link and when prompted "...are you sure...", click **Yes**.

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

Since you are also upgrading SNFS software, this is also the restart required by the SNFS install.

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

#### Verify network adapter order

Upgrades can alter network adapter order. Before proceeding, you must check the order of the network adapters and reorder them if necessary.

1. On the Windows desktop right-click **My Network Places** and select **Properties**.  
The Network Connections window opens.
2. On the menu bar at the top of the window, select **Advanced**, then **Advanced Settings....**



- On the **Adapters and Bindings** tab, depending on the K2 client's storage, make sure that adapters are ordered as follows. Reorder if necessary.

Internal storage unteamed	Internal storage teamed	Direct-connect storage	Shared (SAN) storage
Loopback	Loopback	Loopback	Control Team
Control Connection #1	Control Team	Control Connection #1	Media Connection #1
Control Connection #2	FTP Team	Media Connection #1	Media Connection #2
Media Connection #1	—	—	Loopback
Media Connection #2	—	—	—

### Upgrade MPIO

Do not do this task if:

- The K2 client has internal storage.
- The K2 client has shared storage on a non-redundant K2 SAN.
- The K2 client has a 2 Gb/s GVG SCSI Fibre Channel card with shared (SAN) storage or direct-connect storage.
- The K2 client has a dual port 4 Gb/s LSI Fibre Channel card with direct-connect storage, but only one port is connected to a RAID controller.

Do this task if:

- The K2 client has iSCSI-connected shared storage on a redundant K2 SAN.
- The K2 client has a dual port 4 Gb/s LSI Fibre Channel card with shared storage on a redundant K2 SAN.
- The K2 client has a dual port 4 Gb/s LSI Fibre Channel card with direct-connect storage with each port connected to a different RAID controller.

The installation files for the Multi-Path I/O software are copied on to the K2 client when the K2 software is installed.

- On the K2 client, click **Start | Run**, type `cmd` and press **Enter**. The MS-DOS command prompt window opens.
- From the command prompt, navigate to the `C:\profile\mpio` directory.
- Type the following at the command prompt:  

```
gdsminstall.exe -i c:\profile\mpio gdsm.inf Root\GDSM
```
- Press **Enter**. The software is installed. The command prompt window reports the following:  

```
Pre-Installing the Multi-Path Adapter Filter...
Success
```

Installing the Multi-Path Bus Driver...  
Success

Installing the Device Specific Module...  
Success

Installing the Multi-Path Device Driver...  
Success

Restarting all SCSI adapters...  
Success (but need a reboot)

5. Restart the K2 Media Client.
6. After restart, to verify that the software is installed, on the Windows desktop right-click **My Computer** and select **Manage**. The Computer Management window opens.
7. In the left pane select **Device Manager**.
8. In the right pane open the **System devices** node and verify that **GVG ISCSI Multi-Path Device Specific Module** is listed.

#### Upgrade remaining K2 clients

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

#### Configure settings for protocol control on K2 Media Clients

Do not do this task if:

- You do not control any K2 Media Client channels with remote control protocols.

Do this task if:

- You have upgraded from a version lower than 3.2 and you control one or more K2 Media Client channels with remote control protocols.

With K2 system software release 3.2 and higher, there are no longer protocol applications for each channel. Instead, you configure settings for protocol control in each channel's Options dialog box. Therefore, if you had a protocol application assigned to a channel in a pre-3.2 version of K2 system software, your protocol settings are lost when you upgrade to a version higher than 3.2.

To configure a channel's settings for protocol control, click the channel's **Options** button and find settings on the **Control** tab. Select the protocol type and control setting. Refer to the *K2 Media Client User Manual* for detailed instructions.

## 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 events similar to those you followed for upgrading software, so that as you take systems offline you manage redundancy, servers, and clients, as appropriate for your system.

## Upgrading stand-alone K2 clients with SiteConfig

This section contains the tasks for using SiteConfig to upgrade stand-alone K2 clients to this release of K2 software. Work through the tasks sequentially to complete the upgrade.

**NOTE:** *These upgrade instructions assume that current K2 system software is at version 3.1.9 or higher. If you have a lower version of software, contact Grass Valley Support before upgrading.*

**NOTE:** *When upgrading from a version lower than 3.3.0, K2 system software installs with a 30 day trial license. You need a permanent license to operate beyond the trial period.*

### Related Links

[About K2 software licensing](#) on page 62

## About upgrading stand-alone K2 clients with SiteConfig

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

- K2 Media Client internal storage
- K2 Media Client direct-connect storage

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

**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 client and use keyboard, monitor, and mouse to upgrade software. You can find instructions for a manual upgrade without SiteConfig elsewhere in these release notes.

Before you upgrade software using SiteConfig, your stand-alone K2 client must be migrated to become SiteConfig managed devices. This includes installing SiteConfig support on devices and setting up SiteConfig for system management and software deployment. Refer to *SiteConfig Migration Instructions*. Also refer to the *SiteConfig User Manual* or *SiteConfig Help Topics*.

The following installation tasks provide information specifically for the upgrade to this version of 3.3.1 software. Read the information in these sections carefully before attempting any upgrade to software on a stand-alone K2 client.

#### Related Links

[Upgrading stand-alone K2 clients without SiteConfig](#) on page 52

## 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 K2 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 client upgrade

Before upgrading K2 clients, 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 clients you are upgrading, if they are not already started.
- Stop all media access on K2 clients.
- Shut down all applications on K2 clients.

## 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.*

## Configure SNFS default.cfg file on K2 client

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

Do not do this task if:

- The K2 system was installed new with the following K2 software version:
  - A version at 3.3 or higher  
At these versions, K2 tools (Storage Utility and K2Config) automatically configure settings as required.
  - — OR —
  - You have already modified the configuration file with the required settings.

Do this task if:

- You are upgrading from a current version of K2 software as follows:
  - Version 3.2.74 or lower
  - — OR —
  - You are not sure if the configuration file has already been modified with the required settings.

In this task you manually modify or add values to the media file system (SNFS) configuration file. Doing so keeps your media file system intact. However, 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 Media Clients. This includes internal storage and direct-connect storage K2 Media Clients.
1. Using Notepad, open the media file system (SNFS) configuration file:  
On a stand-alone K2 Media Client, open `D:\SNFS\config\default.cfg`.
  2. On a stand-alone K2 client, verify, and if necessary modify, settings for required values as follows:

```

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

InodeDeleteMax 1000

```

3. Close, and if necessary save, the `default.cfg` file.

If you made changes, SNFS services must be restarted for the changes to take effect.

As part of the upgrade procedure, SNFS services are restarted when you restart the K2 device.

## Prepare SiteConfig for software deployment to stand-alone K2 clients

Do the following to prepare SiteConfig for the software upgrade.

1. Make the following files accessible to the SiteConfig control point PC:
  - K2 Media Client Standalone 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 clients
  - A deployment group that contains your control point PC

## Check all currently installed software on stand-alone 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 stand-alone 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.

**Related Links**

[About credentials in SiteConfig](#) on page 68

## Add software package to deployment group for stand-alone K2 clients

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 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 stand-alone K2 clients. For this release of K2 software, identify and add software installation files as follows:

Software	File name
K2 Client software	<i>GrassValleyK2MediaClientStandalone_3.3.1.xxxx.cab</i>

SNFS software is bundled with the K2 software 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 stand-alone 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.

When you upgrade software, SiteConfig enforces an uninstall of the current version of software before installing the upgrade version. SiteConfig can do the uninstall/install in a single deployment session. If you are upgrading multiple software components, SiteConfig enforces any dependencies by sequencing deployment tasks. SiteConfig provides uninstall deployment tasks and install deployment tasks to indicate the taskflow.

1. In the **Software Deployment | Deployment Groups** tree view, select the device or the group of devices for which you are upgrading software.  
The corresponding software deployment tasks are displayed in the Tasks list view.
2. For the software you are uninstalling, 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 clients to this release, deploy the following tasks:

Deploy	Managed Package	Action
✓	GrassValleyK2MediaClientStandalone xxxx.xxxx	Uninstall
✓	GrassValleyK2MediaClientStandalone 3.3.1.xxxx	Install

Also, if SiteConfig generates deployment tasks to upgrade SNFS, you must upgrade SNFS. Deploy the following tasks at the same time:

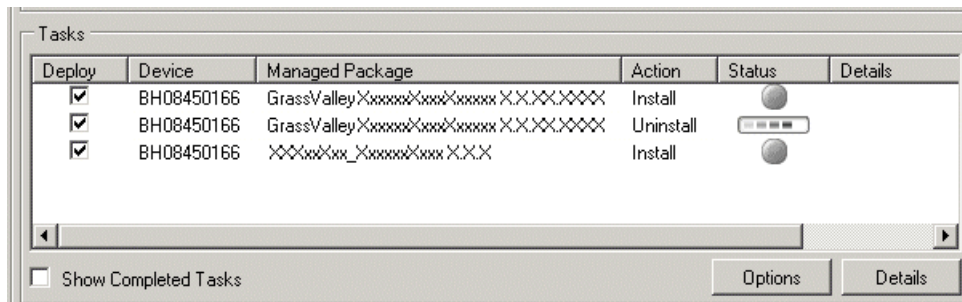
Deploy	Managed Package	Action
✓	SNFS xxxxxx	Uninstall
✓	SNFS 3.1.2.6138	Install

When using SiteConfig for upgrades, the SNFS upgrade is required even if you are already at version 3.1.2.RC25225.6138. The upgrade resets SNFS version information for SiteConfig.

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

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

- 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.

Since you are upgrading both K2 and SNFS software, SiteConfig uninstalls both in the proper sequence.

- When the Status or Details columns indicate next steps, proceed as follows:
  - When Details displays a **Restart required** link, click the link and when prompted "...are you sure...", click **Yes**.

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

Since you are upgrading both K2 and SNFS software, SiteConfig installs both in the proper sequence.

- When the Status or Details columns indicate next steps, proceed as follows:

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

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

Since you are also upgrading SNFS software, this is also the restart required by the SNFS install.

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

## Verify network adapter order

Upgrades can alter network adapter order. Before proceeding, you must check the order of the network adapters and reorder them if necessary.

1. On the Windows desktop right-click **My Network Places** and select **Properties**.  
The Network Connections window opens.
2. On the menu bar at the top of the window, select **Advanced**, then **Advanced Settings....**
3. On the **Adapters and Bindings** tab, depending on the K2 client's storage, make sure that adapters are ordered as follows. Reorder if necessary.

<b>Internal storage unteamed</b>	<b>Internal storage teamed</b>	<b>Direct-connect storage</b>	<b>Shared (SAN) storage</b>
Loopback	Loopback	Loopback	Control Team
Control Connection #1	Control Team	Control Connection #1	Media Connection #1
Control Connection #2	FTP Team	Media Connection #1	Media Connection #2
Media Connection #1	—	—	Loopback
Media Connection #2	—	—	—

## Configure settings for protocol control on K2 Media Clients

Do not do this task if:

- You do not control any K2 Media Client channels with remote control protocols.

Do this task if:

- You have upgraded from a version lower than 3.2 and you control one or more K2 Media Client channels with remote control protocols.

With K2 system software release 3.2 and higher, there are no longer protocol applications for each channel. Instead, you configure settings for protocol control in each channel's Options dialog box. Therefore, if you had a protocol application assigned to a channel in a pre-3.2 version of K2 system software, your protocol settings are lost when you upgrade to a version higher than 3.2.

To configure a channel's settings for protocol control, click the channel's **Options** button and find settings on the **Control** tab. Select the protocol type and control setting. Refer to the *K2 Media Client User Manual* for detailed instructions.

## 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 events similar to those you followed for upgrading software, so that as you take systems offline you manage redundancy, servers, and clients, as appropriate for your system.

## 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 3.3.1.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 clients without SiteConfig

This section contains the tasks for upgrading stand-alone K2 clients to this release of K2 software. With these instructions you go to each local K2 client 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 current K2 system software is at version 3.1.9 or higher. If you have a lower version of software, contact Grass Valley Support before upgrading.*

**NOTE:** When upgrading from a version lower than 3.3.0, K2 system software installs with a 30 day trial license. You need a permanent license to operate beyond the trial period.

#### Related Links

[About upgrading stand-alone K2 clients with SiteConfig](#) on page 44

[About K2 software licensing](#) on page 62

## 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 K2 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 client upgrade

Before upgrading K2 clients, 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 clients you are upgrading, if they are not already started.
- Stop all media access on K2 clients.
- Shut down all applications on K2 clients.

## 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.*

## Configure SNFS default.cfg file on K2 client

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

Do not do this task if:

- The K2 system was installed new with the following K2 software version:
  - A version at 3.3 or higher  
At these versions, K2 tools (Storage Utility and K2Config) automatically configure settings as required.
  - — OR —
  - You have already modified the configuration file with the required settings.

Do this task if:

- You are upgrading from a current version of K2 software as follows:
  - Version 3.2.74 or lower
  - — OR —
  - You are not sure if the configuration file has already been modified with the required settings.

In this task you manually modify or add values to the media file system (SNFS) configuration file. Doing so keeps your media file system intact. However, 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 Media Clients. This includes internal storage and direct-connect storage K2 Media Clients.

1. Using Notepad, open the media file system (SNFS) configuration file:

On a stand-alone K2 Media Client, open `D:\SNFS\config\default.cfg`.

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

```
# *****  
# A global section for defining file system-wide parameters  
# *****  
GlobalSuperUser Yes  
.  
.  
.  
.  
.  
  
InodeDeleteMax 1000
```

3. Close, and if necessary save, the `default.cfg` file.

If you made changes, SNFS services must be restarted for the changes to take effect.

As part of the upgrade procedure, SNFS services are restarted when you restart the K2 device.

## Uninstall K2 software from K2 Client

1. Open the Windows **Add/Remove Programs** control panel.
2. Select **GrassValleyK2Client**. and click **Remove**.
3. When prompted "Are you sure...?", click **Yes**.
4. 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.
5. Manage the required restart as follows:
  - Restart later, to combine this restart with those required by other tasks. This is appropriate when you have other tasks next that also require a restart, such as uninstalling SNFS.

Before proceeding, identify the currently installed version of SNFS software. If you are not sure, check **Start | Programs | StorNext File System | Version Information**. When you uninstall SNFS, make sure you use the procedure appropriate for the version of SNFS currently installed.

## Uninstall SNFS versions lower than 3.0 from a K2 client

Do not do this task if:

- SNFS version 3.0.1b.39 or 3.0.3b.56 is currently installed.

Do this task if:

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

**NOTE: Do not use Windows Add/Remove programs to uninstall.**

1. Make sure you are logged in with an administrator account.
2. Insert the K2 System Software CD in the CD drive or otherwise access the installation files.
3. Locate and open the following file:  
`gvRemoveSnfs26.bat`
4. When prompted, follow on-screen instructions to confirm removal of SNFS software. Click Yes, OK, and press any key to proceed.

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

5. Restart using the Windows operating system restart procedure.

### Uninstall SNFS version 3.0.1b.39 or 3.0.3b.56 from K2 client

Do not do this task if:

- A SNFS version lower than 3.0.x is currently installed.
- SNFS version 3.1.2.RC25225.6138 is already installed and you did not uninstall SNFS software earlier in this procedure.

Do this task if:

- SNFS version 3.0.1b.39 or 3.0.3b.56 is currently installed.
1. Make sure you are logged in with an administrator account.
  2. Use the Windows **Add/Remove Programs** control panel and uninstall SNFS.
  3. Restart using the Windows operating system restart procedure.

### Install K2 software

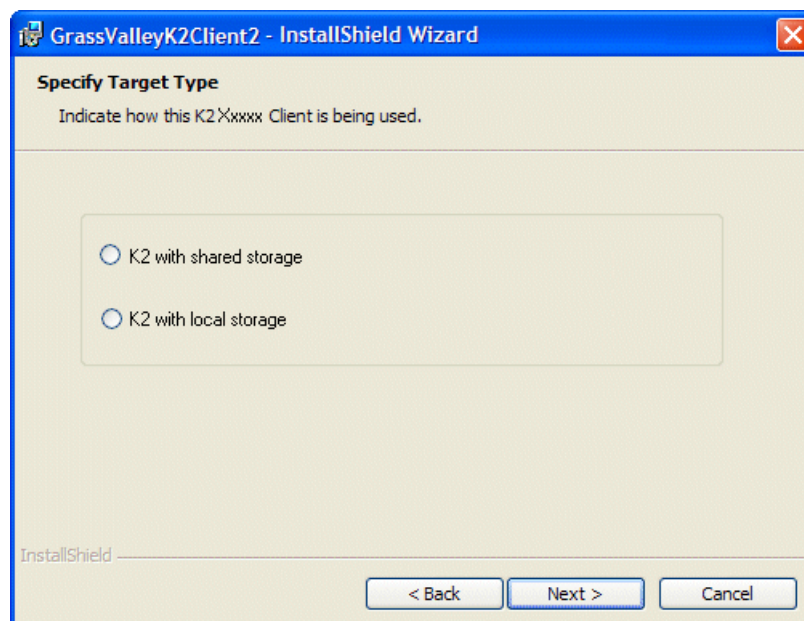
Prerequisites for this task are as follows:

- 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. Access the installation files.
3. Locate and open the following file:  
For a K2 Media Client — `\K2Client\setup.exe`
4. Follow the install wizard onscreen instructions, and work through each page.

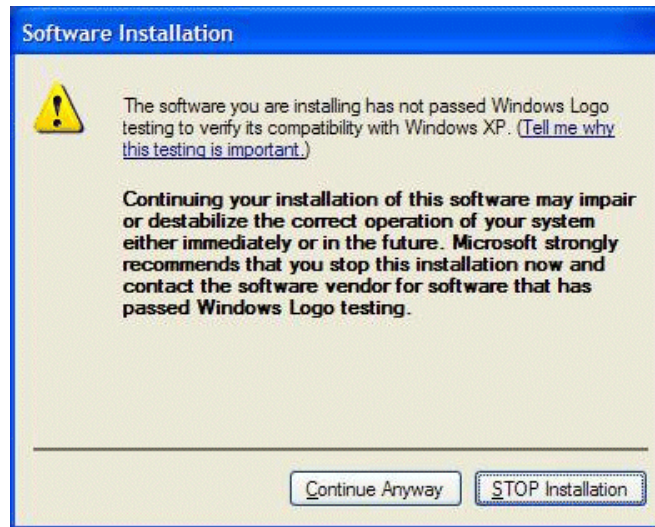




5. When you arrive at the Specify Target Type page, select the option as follows:

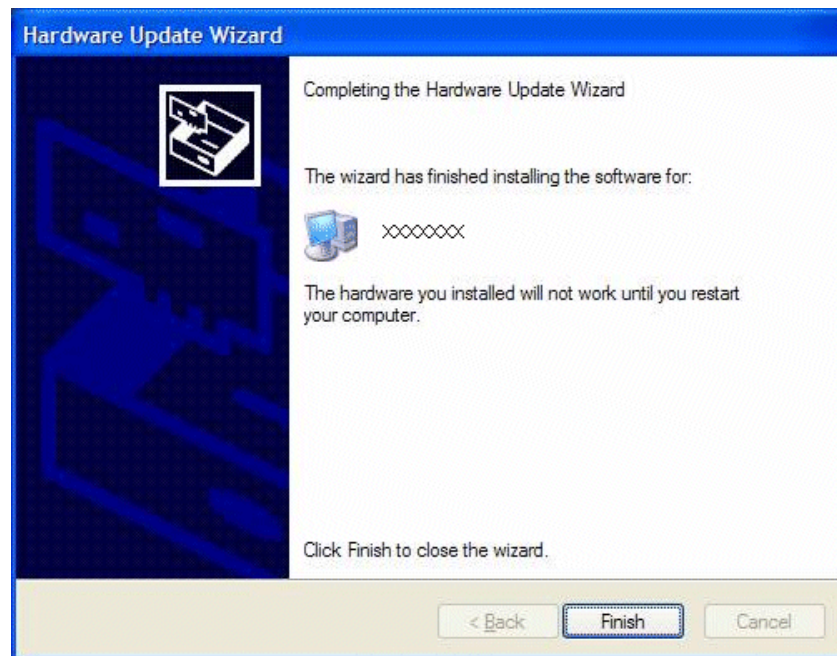
Option	Description
<b>K2 with local storage</b>	For installing on an internal storage K2 client or on a direct-connect storage K2 client.

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

- 7. Click **Next** and **Finish** to complete the installation.
- 8. When prompted to restart, proceed as follows:
  - Do not restart. The restart after you install SNFS in a later task is sufficient.

## Install SNFS on K2 client

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 following file:

*gvSnfs312SetupK2.bat*

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

3. Press any key to proceed.
4. Restart the computer using the Windows operating system restart procedure.

## Verify network adapter order

Upgrades can alter network adapter order. Before proceeding, you must check the order of the network adapters and reorder them if necessary.

1. On the Windows desktop right-click **My Network Places** and select **Properties**.

The Network Connections window opens.

2. On the menu bar at the top of the window, select **Advanced**, then **Advanced Settings...**
3. On the **Adapters and Bindings** tab, depending on the K2 client's storage, make sure that adapters are ordered as follows. Reorder if necessary.

Internal storage unteamed	Internal storage teamed	Direct-connect storage	Shared (SAN) storage
Loopback	Loopback	Loopback	Control Team
Control Connection #1	Control Team	Control Connection #1	Media Connection #1
Control Connection #2	FTP Team	Media Connection #1	Media Connection #2
Media Connection #1	—	—	Loopback
Media Connection #2	—	—	—

## Upgrade MPIO

Do not do this task if:

- The K2 client has internal storage.
- The K2 client has shared storage on a non-redundant K2 SAN.
- The K2 client has a 2 Gb/s GVG SCSI Fibre Channel card with shared (SAN) storage or direct-connect storage.
- The K2 client has a dual port 4 Gb/s LSI Fibre Channel card with direct-connect storage, but only one port is connected to a RAID controller.

Do this task if:

- The K2 client has iSCSI-connected shared storage on a redundant K2 SAN.
- The K2 client has a dual port 4 Gb/s LSI Fibre Channel card with shared storage on a redundant K2 SAN.
- The K2 client has a dual port 4 Gb/s LSI Fibre Channel card with direct-connect storage with each port connected to a different RAID controller.

The installation files for the Multi-Path I/O software are copied on to the K2 client when the K2 software is installed.

1. On the K2 client, click **Start | Run**, type `cmd` and press **Enter**. The MS-DOS command prompt window opens.
2. From the command prompt, navigate to the `C:\profile\mpio` directory.
3. Type the following at the command prompt:  
`gdsminstall.exe -i c:\profile\mpio gdsm.inf Root\GDSM`
4. Press **Enter**. The software is installed. The command prompt window reports the following:  
Pre-Installing the Multi-Path Adapter Filter...  
Success  
  
Installing the Multi-Path Bus Driver...  
Success  
  
Installing the Device Specific Module...  
Success  
  
Installing the Multi-Path Device Driver...  
Success  
  
Restarting all SCSI adapters...  
Success (but need a reboot)
5. Restart the K2 Media Client.
6. After restart, to verify that the software is installed, on the Windows desktop right-click **My Computer** and select **Manage**. The Computer Management window opens.
7. In the left pane select **Device Manager**.
8. In the right pane open the **System devices** node and verify that **GVG ISCSI Multi-Path Device Specific Module** is listed.

## Upgrade remaining K2 clients

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

## Upgrade software on Control Point PC

Prerequisites for this task are 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.
1. Use the Windows **Add/Remove Programs** control panel and remove K2 control point software.
  2. Insert the K2 System Software CD in the Control Point PC's CD drive or otherwise access the installation files.
  3. Run the Control Point installation program (setup.exe). No special procedures are required.

## Configure settings for protocol control on K2 Media Clients

Do not do this task if:

- You do not control any K2 Media Client channels with remote control protocols.

Do this task if:

- You have upgraded from a version lower than 3.2 and you control one or more K2 Media Client channels with remote control protocols.

With K2 system software release 3.2 and higher, there are no longer protocol applications for each channel. Instead, you configure settings for protocol control in each channel's Options dialog box. Therefore, if you had a protocol application assigned to a channel in a pre-3.2 version of K2 system software, your protocol settings are lost when you upgrade to a version higher than 3.2.

To configure a channel's settings for protocol control, click the channel's **Options** button and find settings on the **Control** tab. Select the protocol type and control setting. Refer to the *K2 Media Client User Manual* for detailed instructions.

## 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 events similar to those you followed for upgrading software, so that as you take systems offline you manage redundancy, servers, and clients, as appropriate for your system.

# Licensing K2 products

The following sections contain instructions for managing K2 product licenses.

## About K2 software licensing

K2 system software version 3.3.1 requires a license from Grass Valley. Licensing is enforced at the K2 Media Client, so every K2 client running version 3.3.1 must have a valid license in place. No license is required on the K2 Media Server or on the control point PC.

K2 clients shipping new from the factory have version 3.3.1 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. However, if you upgrade an existing K2 client to version 3.3.1, the software installs with a trial license in place. You must obtain a permanent license from Grass Valley and install it on the K2 client before the trial period expires.

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

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 a 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, 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](mailto: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. Click on the License Manager icon on the Windows Desktop. The SabreTooth License Manager opens.

The SabreTooth License Manager opens.
2. 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.

Once you have added the permanent license, you can delete the temporary license. If the temporary license is still in SabreTooth you will continue to get temporary license notifications, even with the permanent license installed, unless you delete the temporary license.

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. Select the license in the SabreTooth License Manager.
2. Use the Delete key on your keyboard or right click with your mouse and select **Delete**.

## 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 the licensed 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.

## 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 Media Client licenses**

<b>License</b>	<b>License type</b>
K2 System Software	SabreTooth
AppCenter Pro	SabreTooth
K2 TimeDelay	SabreTooth
K2 InSync	SabreTooth
K2 Pathfire Capture Service	SabreTooth
K2 DG Capture Service	SabreTooth
K2 XML Import Capture Service	SabreTooth
50 Mbs/D10/DV50 Codec Upgrade	Codec Upgrade CD
Avid-TM	SabreTooth
K2 FCP Connect	SabreTooth

# Additional notes

The following sections contain additional information about this release

## 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

	<b>Windows administrator</b>	<b>K2 administrator</b>	<b>K2 user</b>	<b>Unknown user</b>
Login	Administrator	K2Admin	K2User	N/A <sup>3</sup>
Password	adminK2	K2admin	K2user	N/A
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)

For more information about Storage Utility or K2 System Configuration application security, see the *K2 SAN Installation and Service Manual*.

<sup>3</sup> 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.

AppCenter also provides security features for restricting access to channels and media in bins. These features are also based on Windows users and groups. By default these features are configured to grant full access to everyone.

To support FTP security features, K2 clients have *movie* and *mxmovie* accounts.

When using K2 with NetCentral, keep in mind that NetCentral has its own levels of security. 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 information on mapping a NetCentral administrator to the K2 administrator level, see the *K2 System Guide*. 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.

## **About custom K2 SANs**

Custom systems are those that do not fit one of the pre-defined Level 2, 3, 10, 20, 30, or 35 configurations. For example, a K2 SAN with Fibre Channel attached K2 clients is considered a custom system. Custom systems that are an extension of Level 2 or 3 are considered to be Level 4 systems. Custom systems that are an extension of Level 10, 20, or 30 are considered to be Level 40 systems. Only qualified Grass Valley personnel should attempt to design, install, and configure custom systems.

The K2 documentation set is intended for customers with pre-defined Level 2, 3, 10, 20, 30, or 35 systems. While much of the information also applies to custom systems, consult your Grass Valley representative before using Level 2, 3, 10, 20, 30, or 35 procedures on a custom system.

## Driver installation on generic image versions

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

For this type of K2 Media Server...	Using this disk image version...	Respond to prompts as follows...
LS, GS, NH1, NH1-10GE	2.10.0 or higher	<ol style="list-style-type: none"> <li>1. If the new HW is identified as a Ethernet Controller or Network Controller, click Cancel. NOTE: For systems with Qlogic Dual Port TOE cards, two wizards open for each port on the card; one for the Ethernet Adapter, and one for the Network Controller</li> <li>2. If the new HW is identified as “LSI Adapter, 4Gb FC, models 7104, 7204, 7404 with 949E-StorPort”, select the “Install the software automatically” radio button and click Next</li> <li>3. If a Hardware Installation window is displayed indicating that the SW has not passed the windows logo testing, click the Continue Anyway button.</li> <li>4. Ensure that the “Completing the Found New Hardware Wizard” window indicates that the wizard has finished installing the SW and then click Finish.</li> <li>5. If additional New HW Found Wizards are displayed for the LSI Adapter repeat the steps above.</li> </ol>

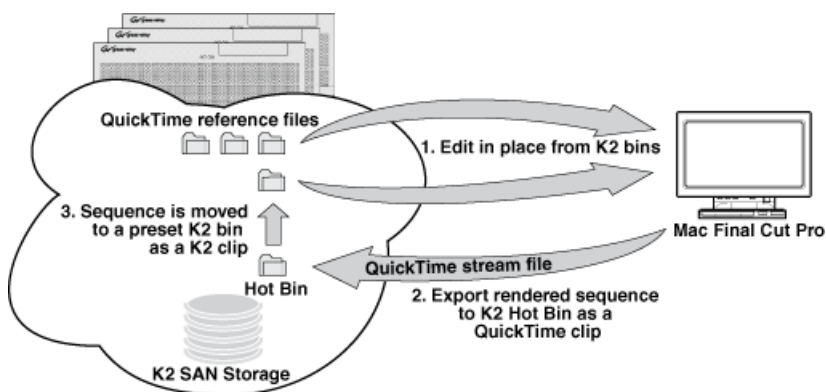
For this type of K2 Media Server...	Using this disk image version...	Respond to prompts as follows...
Level 2/3 K2 Media Server	2.6 or lower	If NH1-10GE, configure network as instructed in the <i>K2 SAN Installation and Service Manual</i> .
	2.10.0 or higher	<p>Dismiss all wizards and messages. Do not install any drivers. Hardware support is provided when you install K2 system software.</p> <ol style="list-style-type: none"> <li>1. If the new HW is identified as a Ethernet Controller or Network Controller, click Cancel. NOTE: For systems with Qlogic Dual Port TOE cards, two wizards open for each port on the card; one for the Ethernet Adapter, and one for the Network Controller.</li> <li>2. If the new HW is identified as "GVG SCSI", select the "Install the software automatically" radio button and click Next.</li> <li>3. If a Hardware Installation window is displayed indicating that the SW has not passed the windows logo testing, click the Continue Anyway button.</li> <li>4. Ensure that the "Completing the Found New Hardware Wizard" window indicates that the wizard has finished installing the SW and then click Finish.</li> </ol>

## K2 FCP Connect

### About K2 FCP Connect

K2 FCP Connect enables an efficient workflow. You can quickly and easily locate QuickTime files on the K2 SAN and then edit the QuickTime files from the K2 SAN without a file transfer. This capability is called Edit in Place.

The workflow is illustrated as follows:



The K2 FCP Connect product has the following features:

- Seamless browsing of K2 content
- Support growing files editing
- Export/render/flattening of Final Cut Pro finished sequences on the K2 SAN for sharing or playout
- Final Cut Pro and Aurora sequence sharing

It is also possible to use a subset of the K2 FCP Connect features via CIFS mount to a stand-alone K2 client or a K2 Nearline SAN, but this is not the configuration that Grass Valley recommends. Contact your Grass Valley representative to evaluate your needs if you require a CIFS mount.

### Install and configure Macintosh Final Cut Pro systems on a K2 SAN

Read the following topics to get systems connected and file interchange operational.

#### Final Cut Pro on K2 SAN quick start installation checklist

Use the following sequence of tasks to set up Final Cut Pro on a K2 SAN. This checklist assumes that the K2 SAN has been installed/commissioned and is fully operational.

**Prerequisites**

Task	Comment
<input type="checkbox"/> Verify K2 SAN and Macintosh system requirements.	—

**On all Macintosh client computers**

Task	Comment
<input type="checkbox"/> Install Final Cut Pro, if not already installed.	—
<input type="checkbox"/> Install Xsan software, if not already installed.	Xsan must be installed before K2 FCP Connect.
<input type="checkbox"/> Install K2 FCP Connect software.	The software install file is <i>K2FCPConnect.pkg</i> .
<input type="checkbox"/> Cable network connections.	—
<input type="checkbox"/> Configure for control network, if not already done.	—
<input type="checkbox"/> Configure the hosts file for networking.	Copy in host table information from the K2 SAN's hosts file.
<input type="checkbox"/> Configure Active Directory Domain, if desired.	This is optional. If you do this task, you must also enable Access Control Lists on the K2 Media Server (FSM).

**On the K2 Media Server (FSM)**

Task	Comment
<input type="checkbox"/> Request a K2 FCP Connect license from Grass Valley for each K2 Media Server with role of media file system server (FSM) on the SAN.	Make the license request early to ensure that the license file is received and installed before configuring the Mac Client in K2Config.
<input type="checkbox"/> When the license XML is received, install it on the K2 Media Server (FSM).	—
<input type="checkbox"/> Configure hosts files on SAN devices.	Enter Macintosh devices in hosts files.
<input type="checkbox"/> Enable Access Control Lists, if desired.	This is optional. If you do this task, you must also configure Active Directory Domain on the Macintosh systems.

**On the Control Point PC**

Task	Comment
<input type="checkbox"/> Configure hosts file.	Enter Macintosh devices in hosts file.



Task	Comment
<input type="checkbox"/> In K2Config, add and configure Mac Client(s) onto K2 SAN.	The K2 FCP Connect license must be installed on K2 Media Server(s). K2Config can not proceed if the license is not installed.

#### On selected Macintosh computer(s)

Task	Comment
<input type="checkbox"/> Test access to K2 SAN storage.	From the Macintosh system, create, modify, delete a text file.
<input type="checkbox"/> Verify bandwidth of SAN connection	—

#### Final tasks

Task	Comment
<input type="checkbox"/> If used, verify Access Control Lists.	—
<input type="checkbox"/> If desired, configure K2 SAN HotBin to receive finished Final Cut Pro files.	Refer to the <i>K2 System Guide</i> .

### K2 SAN System Requirements

To support K2 FCP Connect, your K2 SAN must meet requirements as follows. Products and versions listed are compatible at the time of this writing. Refer to compatibility information in release notes for updates.

- K2 SAN devices have K2 software version 3.3 or higher. Refer to your K2 product release notes for specific version compatibility information.
- On K2 SAN K2 Media Servers (FSMs), the SNFS configuration file is configured to *GlobalSuperUser Yes*.
- The K2 SAN has unused iSCSI (TOE) bandwidth sufficient to support the Mac clients.
- Storage is K2 Lx0 RAID (Condor). Level 1 and Level 2 RAID not supported.

### Macintosh System Requirements

To support K2 FCP Connect for iSCSI connection to a K2 SAN, your Final Cut Pro Macintosh systems must meet the requirements as follows. Products and versions listed are compatible at the time of this writing. Refer to compatibility information in release notes for updates.

- Mac Pro
- Intel processor
- Two GigE ports
- Mac OS X 10.5.6

- Final Cut Pro version 6.0.5 or higher
- Apple Xsan 2.1

#### Install Xsan software

If you have not already done so, install Xsan software on each Macintosh system.

#### Install K2 FCP Connect software on Macintosh systems

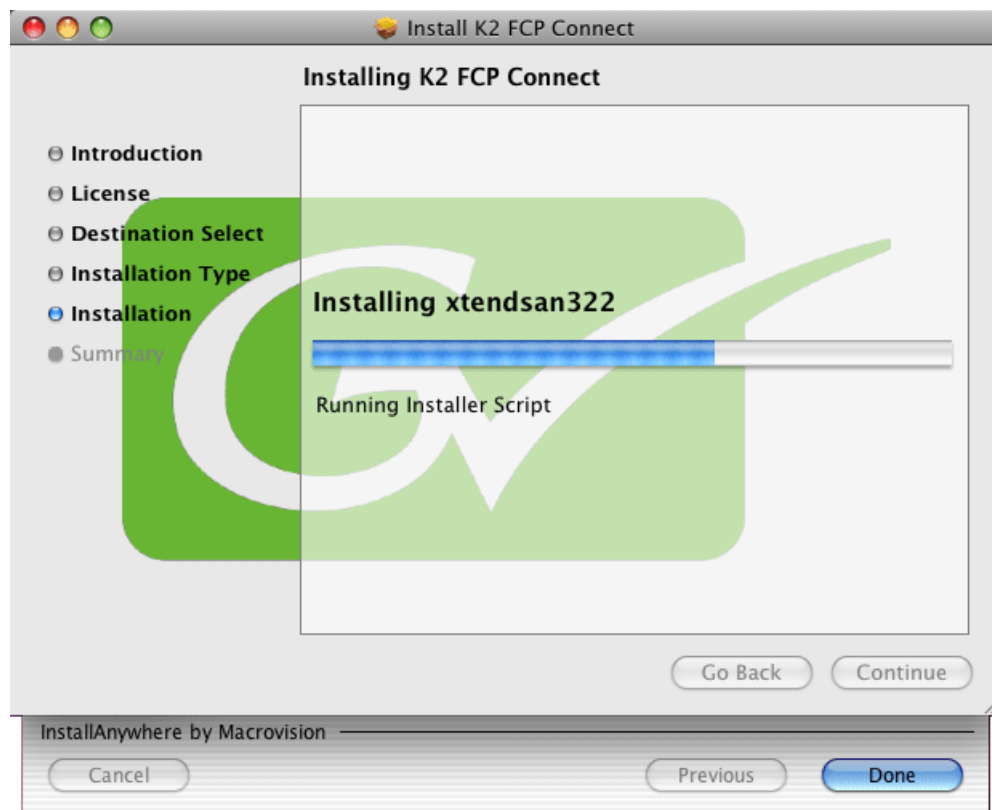
Before doing this task, procure the K2 FCP Connect installation files via download or CD distribution, as appropriate for your Grass Valley product.

1. From the Macintosh system , access the K2 FCP Connect installation files.
2. Double-click *K2FCPConnect.pkg*.

The Installer opens.

3. Click **Continue**, agree to software license terms as appropriate, and accept default packages.
4. Click **Install** and when prompted enter the Macintosh system's administrator username and password.

Software installs.



5. On the Xtend SAN install screen, make sure you click **Done**. If you do not do so, the K2 FCP Connect installation stalls.

**NOTE:** *The Xtend SAN install screen can be partially obscured behind the K2 FCP Connect install screen.*

6. Click **Close** when the installation completes successfully.

#### **Cable Macintosh systems**

Connect each Macintosh system as follows. If you have multiple Macintosh systems and a redundant K2 SAN, balance Macintosh systems between A and B switches.

1. Connect GigE port 1 to a control port on the K2 SAN Ethernet switch.
2. Connect GigE port 2 to a media port on the K2 SAN Ethernet switch.  
This connection is for the media (iSCSI) network.

#### **Configure Macintosh systems for control network**

Configure each Macintosh system as follows:

1. Open System Preferences, Network settings.
2. Set Ethernet 1 to configure manually (static IP).
3. Configure IP address, subnet mask, and other settings as required for the K2 SAN control network.

#### **Configure Macintosh hosts files**

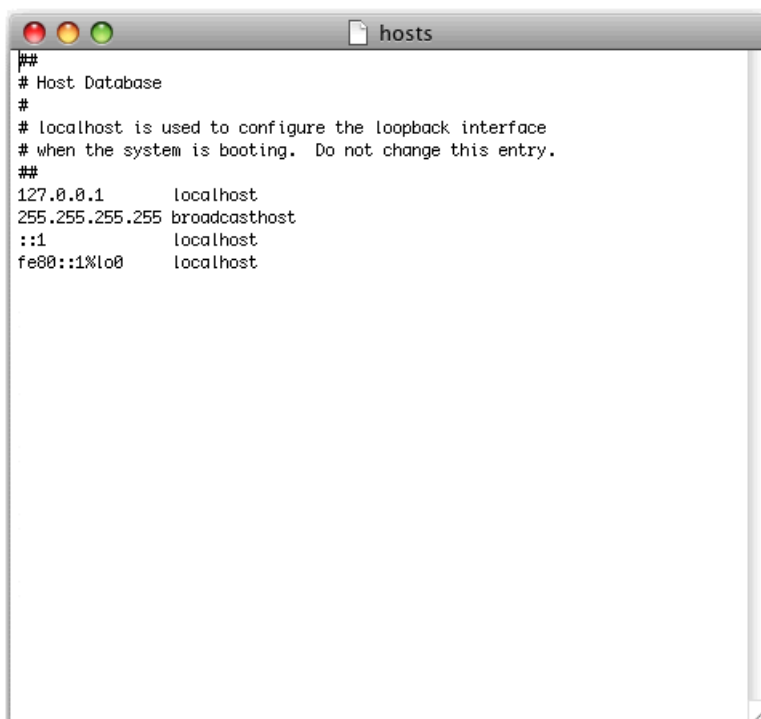
On each Macintosh Final Cut Pro system, enter K2 SAN host table information as follows:

1. Open `Applications\Grass Valley\EditHosts`  
Terminal opens.



```
Terminal — sudo — 80x24
Last login: Fri May 1 09:47:07 on ttys000
/Applications/Grass\ Valley/EditHosts ; exit;
mut3:~ admin$ /Applications/Grass\ Valley/EditHosts ; exit;
Password:
```

2. Enter the Macintosh system's administrator password.  
The hosts file opens in a text editor.



```
hosts
###
# Host Database
#
# localhost is used to configure the loopback interface
# when the system is booting. Do not change this entry.
###
127.0.0.1    localhost
255.255.255.255 broadcasthost
::1        localhost
fe80::1%lo0 localhost
```

The following lines must remain in the Macintosh hosts file:  
127.0.0.1 localhost

255.255.255 broadcasthost

::1 localhost

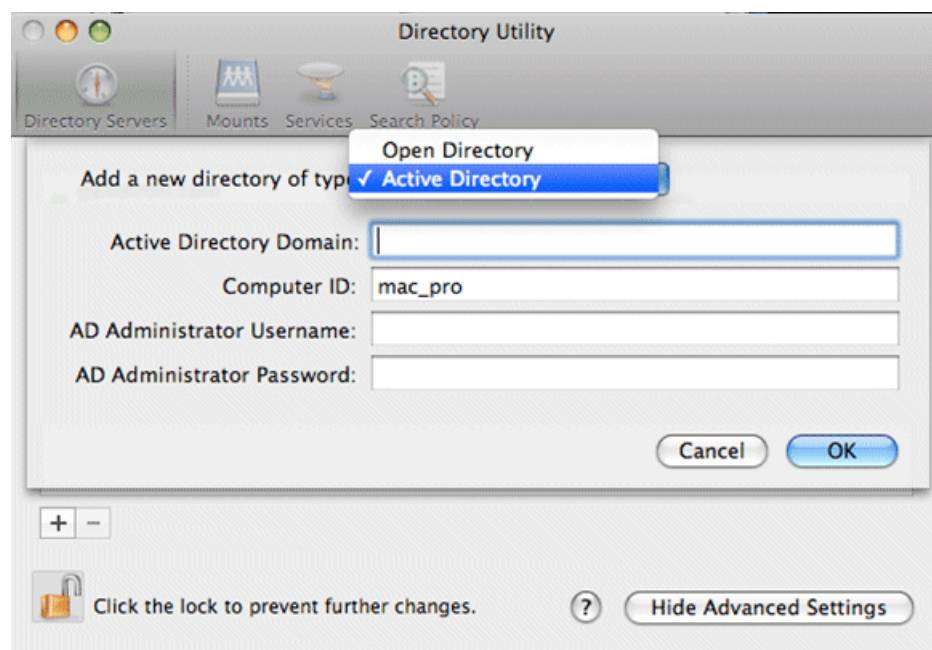
fe80::1%lo0 localhost

3. From the K2 SAN's hosts file, copy the host table information for all the K2 SAN devices and paste it into the Macintosh hosts file.
4. Save and close the hosts file.
5. Close the Terminal window.
6. Copy the new hosts file contents into hosts files on all the other Macintosh Final Cut Pro systems.

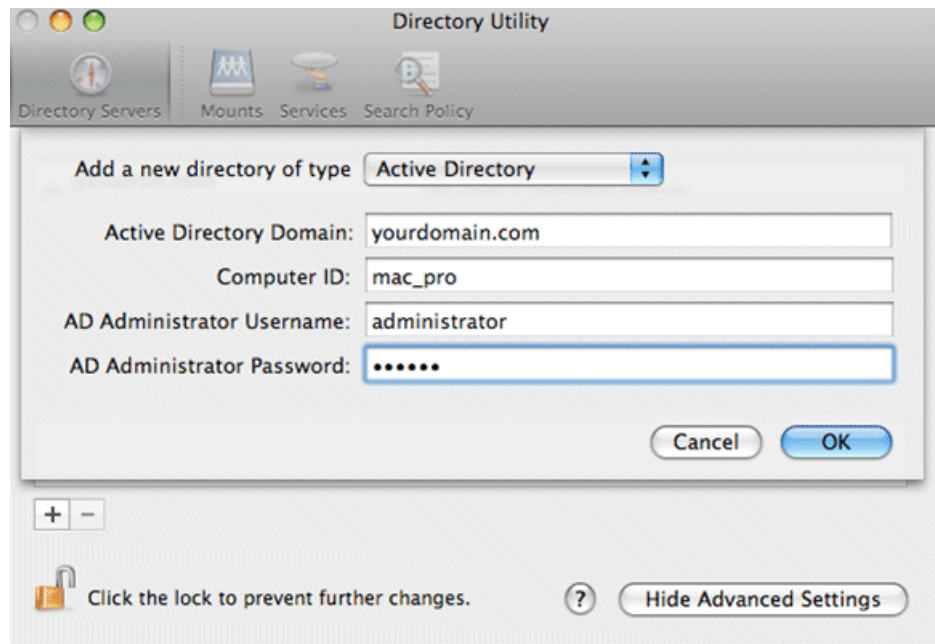
### Configure Macintosh systems for Active Directory Domain

If desired, MAC OS X can be configured to use Active Directory (AD) resources such as users and groups. Once a computer is bound to an AD domain, users belonging to that domain may login to the Macintosh system at the main login prompt. If you do this task, you must also enable Access Control Lists on the K2 Media Server (FSM).

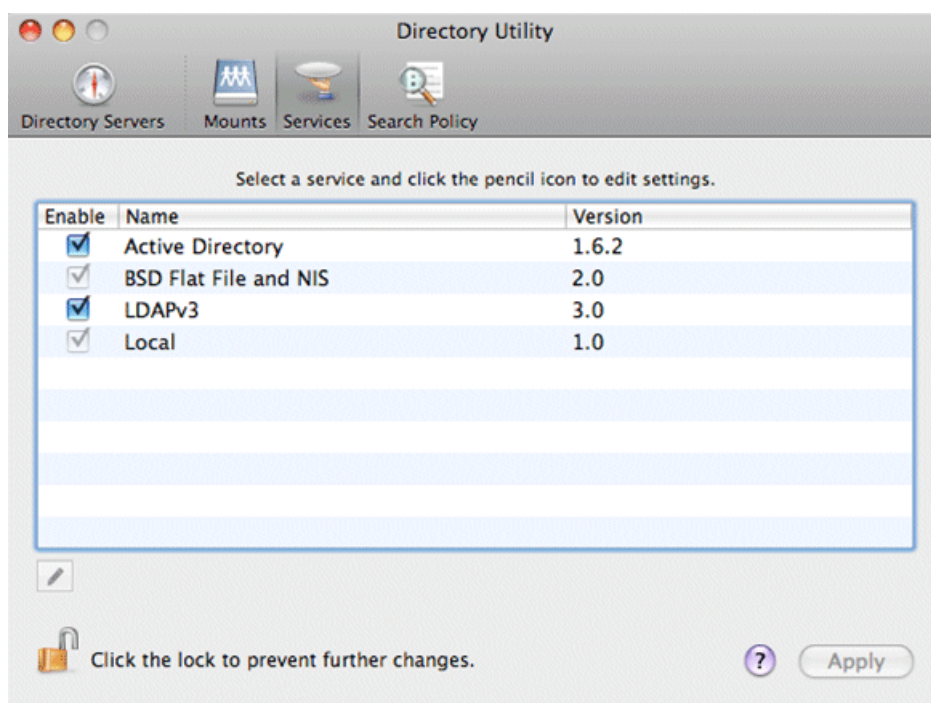
1. In the *Applications/Utilities* folder, open the **Directory Utility**.



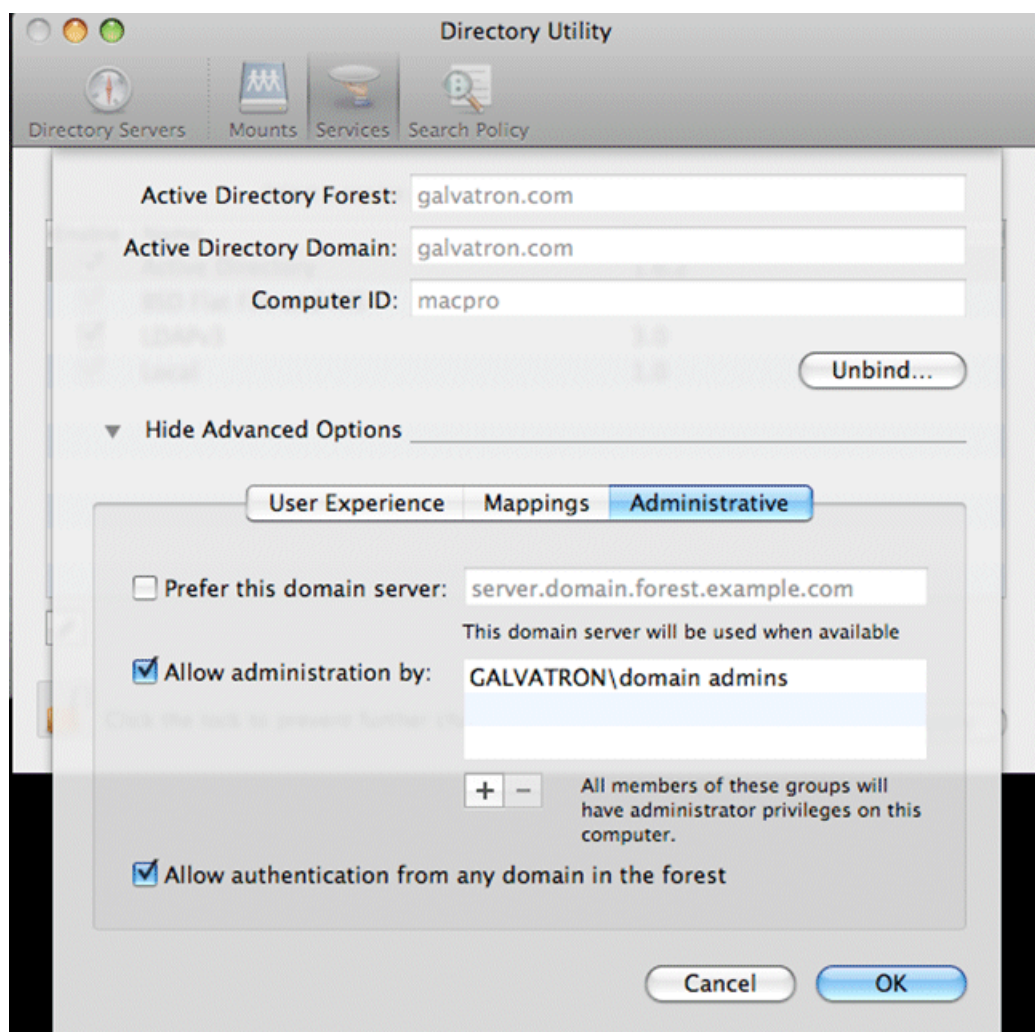
2. Click the **Directory Servers** tab.
3. Click the **+** icon in the lower left, above the padlock icon, to add a new domain binding.
4. In the **Add a new directory of type** drop-down list, select **Active Directory**.



5. Fill in the Active Directory information for the domain administrator account. The administrator account is only needed at the time of binding. Once the computer is bound to a domain, all users of the domain can be used to log in to the Macintosh system.
6. Click **OK**.  
The Macintosh computer goes through the binding process. If successful, the domain name is listed with the status message, "This server is responding normally".
7. Click **Services**.



8. Verify that the Active Directory option is checked.  
If you need to change options, first double-click the padlock icon on the lower left hand corner and authenticate as administrator.
9. If desired, add AD accounts or groups as administrators of the Macintosh computer as follows:
  - a) In the **Services** tab, double-click on the **Active Directory** name.
  - b) Open the advanced options and click on the **Administrative** tab.



- c) Verify that **Allow administration by:** checkbox is checked.
- d) Add any AD user or group of the domain to the list.  
You must type the user or group name, then a backslash, before the domain name.

### Licensing K2 FCP Connect on the K2 SAN

The following sections contain instructions for managing the K2 FCP Connect license.

### About K2 FCP Connect software licensing

K2 FCP Connect requires a license from Grass Valley. For iSCSI access, the license is installed on the K2 SAN's K2 Media Server that takes the role of file system server. If a redundant K2 SAN, the license is installed on primary and backup K2 Media Servers. The license is made available via a Grass Valley SabreTooth licensing service,



so when the Macintosh system attempts to connect to the K2 SAN as an iSCSI client, the connection is verified with the service and either allowed or disallowed.

No Grass Valley license is required to be installed on the Macintosh system or on the control point PC.

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.

For iSCSI access, The License Wizard and the SabreTooth License Manager are installed on the K2 SAN's K2 Media Server that takes the role of file system server. If a redundant K2 SAN, they are installed on primary and backup K2 Media Servers.

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.

### **Requesting a license**

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 a 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.

### **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. Click on the License Manager icon on the Windows Desktop. The SabreTooth License Manager opens.

The SabreTooth License Manager opens.

2. 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.

You should save the permanent license to a backup system.

#### Add Macintosh systems to SAN hosts file

1. On the K2 SAN's control point PC, open the hosts file in a text editor.
2. Following the convention in the hosts file, enter text in one line for each Final Cut Pro Macintosh system as follows:
  - a) On a text line, type a Macintosh system's control network IP address.
  - b) Use the TAB key or Space bar to insert a few spaces.
  - c) On that same text line after the space, type the machine name, such as MacClient01.  
The machine name cannot have any spaces in it.

This sets up the host file for resolving the machine name on the control network.

3. Save the hosts file.
4. Similarly configure the hosts file on the other devices of the K2 SAN.
5. Copy the hosts file or otherwise make the hosts file accessible to each Final Cut Pro Macintosh system.

#### Enable Access Control Lists on the K2 Media Server (FSM)

Prerequisites for the K2 Media Server are as follows:

- Current compatible versions of the Windows operating system and SNFS software.
- Standard C:, D:, E: and V: disk volumes.
- SNFS has been configured with Grass Valley's Storage Utility.
- The SNFS configuration file is located at `D:\SNFS\config\default.cfg`.

If desired, you can enable Access Control Lists (ACLs). If you do this task, you must also configure Active Directory Domain on the Macintosh systems.

1. If a redundant K2 SAN, take FSM K2 Media Servers out of service and manage redundancy as directed in documented procedures.
2. Navigate to `D:\SNFS\config\` and open `default.cfg` in a text editor.
3. Enter/modify text lines as necessary to configure as follows:

```
WindowsSecurity Yes
EnforceACLs Yes
UnixIdFabricationOnWindows Yes
UnixDirectoryCreationModeOnWindows 0700
UnixFileCreationModeOnWindows 0600
```

```
UnixNobodyGidOnWindows 60001  
UnixNobodyUidOnWindows 60001
```

Avoid duplicate settings.

**NOTE: Once ACLs are enabled on the K2 Media Server (WindowsSecurity set to Yes), they cannot be disabled.**

4. Save the `default.cfg` file.
5. Restart the K2 Media Server.
6. If a redundant K2 SAN, repeat these steps on the redundant FSM K2 Media Server.
7. After restart of K2 Media Server(s) is complete, restart all clients of the K2 SAN.

### Add Mac Client to K2 SAN

Prerequisites for this task are as follows:

- You must be logged in to the K2 System Configuration application with permissions equivalent to K2 administrator or higher.
  - The devices of the K2 SAN do not need to be offline, and there is no restart of devices required.
1. In the K2 System Configuration application tree view, select the name of the K2 SAN, which is the top node of the storage system tree.
  2. Click **Add Device**  
The Add Device dialog box opens.
  3. Select **Mac Client**.
  4. Click **OK**.

The new client appears in the tree view.

Next, configure the new client on the K2 SAN.

### Configure Mac Client on K2 SAN

Use this procedure to configure each of your Macintosh Final Cut Pro systems on the K2 SAN as a SAN client device.

Prerequisites for this task are as follows:

- The K2 SAN's K2 Media Server(s) with role of file system server (FSMs) have the K2 FCP Connect license installed.
- You are logged in to the K2 System Configuration (K2Config) application with permissions equivalent to K2 administrator or higher.
- The client device is added to the K2 SAN and appears in the K2 System Configuration application tree view.
- The K2 SAN has adequate bandwidth available to meet the bandwidth needs of the client device you are adding.
- The client device is connected to appropriate networks and is powered up.

- The client device's IP address and other network properties are configured for the control network.
- Host table information for K2 SAN devices, the control point PC, and the client device is in the hosts file on the client device.
- The devices of the K2 SAN do not need to be offline, and there is no restart of devices required.

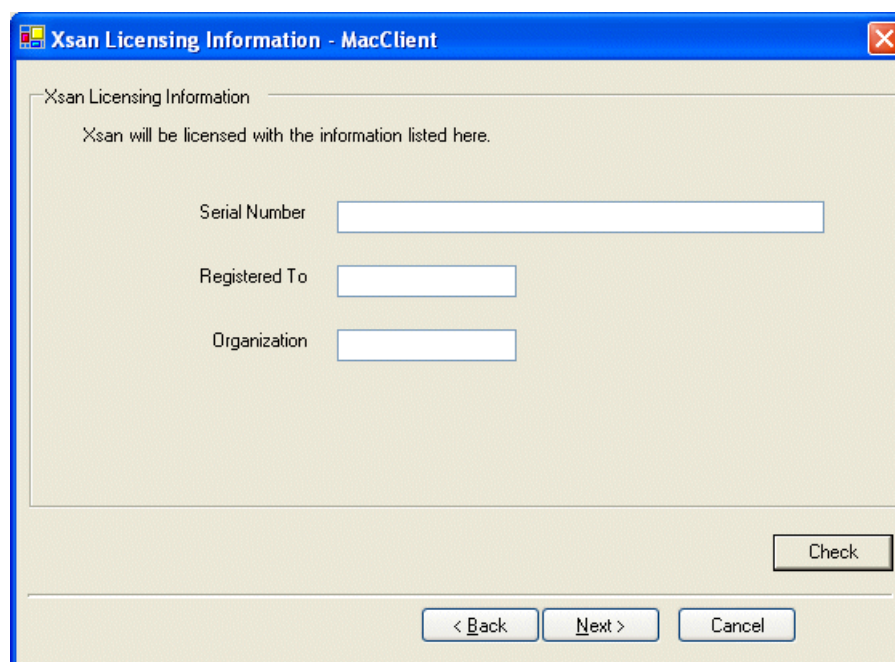
1. In the K2Config tree view, select the client device.
2. Click the **Configure** button.

The Client Configuration wizard opens.

**NOTE:** *If your system has a large number of iSCSI clients, you are prompted to restart the K2 Media Server when you configure clients and cross the following thresholds: 64 clients; 80 clients; 96 clients.*

3. Enter the network name for the client device, as currently configured on the device. If you have multiple client devices to configure, you should configure your highest bandwidth devices first, as this ensures load balancing is correct.
4. For Storage Access, leave **iSCSI** selected.
5. Click **Next**.

The Xsan Licensing Information page opens.



Xsan Licensing Information - MacClient

Xsan Licensing Information

Xsan will be licensed with the information listed here.

Serial Number

Registered To

Organization

Check

< Back   Next >   Cancel

6. Enter information exactly as received from Apple with your Xsan license. If you did not receive information for a field on this page, leave the field blank. For example, if a one-seat license, enter only the Serial number and leave the Registered To and Organization fields blank.

7. Click **Next**.

The Software Configuration page opens.

This page checks the client device for required software.

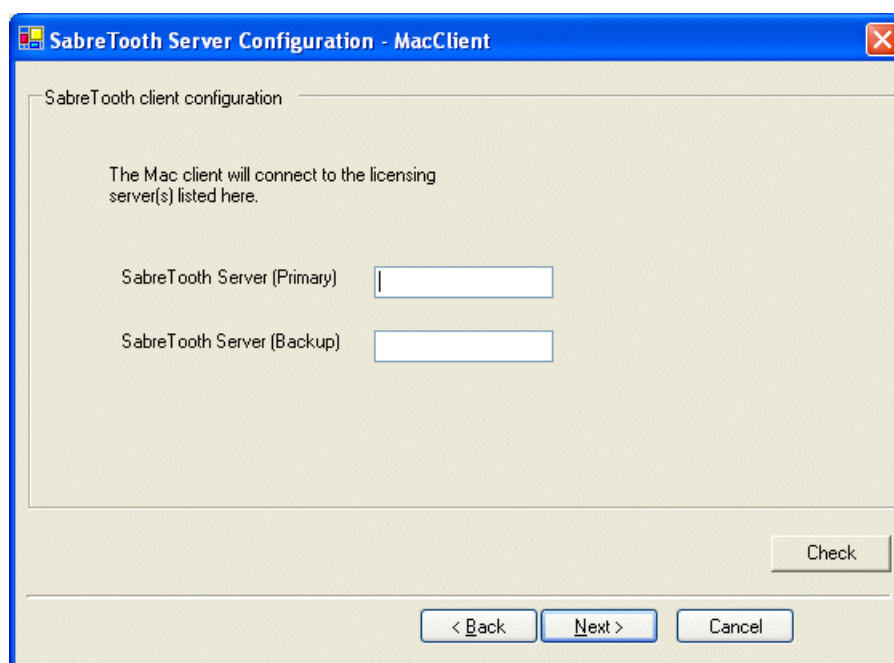
8. Identify software installed on the client device and proceed as follows:

- If any software with Yes in the Required column reports as Not Installed, you must install it on the client device. After installing the software, click Check Software.
- If all software with Yes in the Required column reports as Installed, click Check Software.

When all required software reports as Installed, continue with the next step in this procedure.

9. Click **Next**.

The SabreTooth Server Configuration page opens.



10. Enter the K2 Media Server (FSM) as follows:

- If a basic (non-redundant) K2 SAN, enter the media file system K2 Media Server as primary.
- If a redundant K2 SAN, enter primary and backup media file system K2 Media Servers.

11. Click **Next**.

The Network Configuration page opens.

This page configures both control and media (iSCSI) network connections. The top port is the port over which the K2 System Configuration application is communicating with the client device. If correctly configured, it is already assigned the control network IP address, which is displayed in the window.

12. Select the media (iSCSI) port and click **Modify**.  
A network configuration dialog box opens.
13. Enter the media network IP address and subnet mask and then click **OK**.
14. Click **Check**.  
The iSCSI Initiator Configuration page opens.  
This page load balances the client device's iSCSI connection to the K2 SAN. The iSCSI adapters on your K2 Media Server or servers are listed here as iSCSI targets.  
On redundant systems, if you have multiple client devices, they should be balanced between A and B.  
For pre-defined K2 SAN levels, K2Config determines the iSCSI target to which each client device subscribes, based on the bandwidth values that you enter. This enforces policies by which each client device has sufficient bandwidth for its intended use and no individual iSCSI target is oversubscribed.  
For custom K2 SANs (Level 4 or 40), qualified system designers can view subnets to help assign iSCSI targets.
15. Click **Modify**.  
The Bandwidth Input dialog box opens.
16. Enter the bandwidth of the Mac Client. This is calculated according to your system design, and provided to you by your Grass Valley representative.
17. Click **Assign TOE**.  
K2Config automatically chooses an iSCSI target to assign to the client device. A message appears that specifies the chosen iSCSI target, but allows you to choose a different iSCSI target.
18. Respond to the message as follows:
  - In most cases you should accept the iSCSI target chosen by K2Config. Click **Yes**, then **OK** to continue.
  - If your system design specifies a different iSCSI target, click **No**, then select the iSCSI target on the iSCSI Initiator Configuration page.
19. When the wizard reports that the configuration check is successful, click **Next**.  
The File System Client Configuration page opens.  
This page connects the client device as a media file system client to the K2 Media Server taking the role of media file system server. If there are redundant K2 Media Servers, both are listed on this page as file system servers.
20. Verify that the client device is connecting to the correct K2 Media Server or Servers, as follows:

- For non-redundant K2 Storage Systems, the client connects to the only server.
- For iSCSI redundant K2 Storage Systems, the client connects to server A as file system server 1 and server B as file system server 2, so that if there is a problem with one server, the other server is available.

21. Click **Next**.

The Completing the Configuration Wizard page opens.

22. Click **Finish**.

When prompted, restart the client device.

### **Test K2 SAN file access**

From a Macintosh system, perform create, read, write, and delete operations on a file on the V: drive. This verifies the media file system.

1. On the Macintosh desktop, verify that the hard drive icon labeled "default" is present.



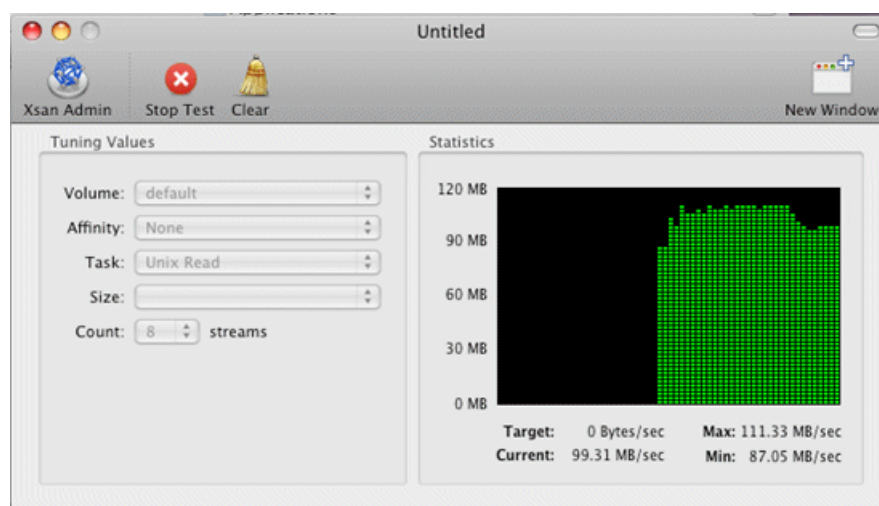
This is the K2 SAN storage, also known as the V: drive.

2. From the Macintosh system, open a text editor, create a text file, enter text, and save it on the V: drive.
3. Close the text editor.
4. In Finder, browse to the V: drive and open the text file.
5. Make a change to the text in the text file and then save and close the text file.
6. Delete the text file.

### **Verify bandwidth of SAN connection**

1. Install Xsan Tuner (distributed by Grass Valley) on the Macintosh by copying to */Applications/Server*.
2. Open Xsan Tuner under */Applications/Server/Xsan Tuner*.





3. Configure the Task field to **Unix Read** and the Count field to **8** streams.
4. Click **Start Test**.  
It might take several minutes to create the test files.
5. After test files are created click **Start Read Test**.
6. Let the Read test run for 1 minute. Report the min, max and current bandwidth.
7. Configure the Task field to **Unix Write** and Count field to **8** streams.
8. Click **Start Test**.  
It might take several minutes to create the test files.
9. After test files are created click **Start Write Test**.
10. Let the Write test run for 1 minute. Report the min, max and current bandwidth.

### Verify Access Control Lists

Prerequisites:

- Two domain users
- A correctly configured K2 SAN
- At least one Macintosh SAN client attached

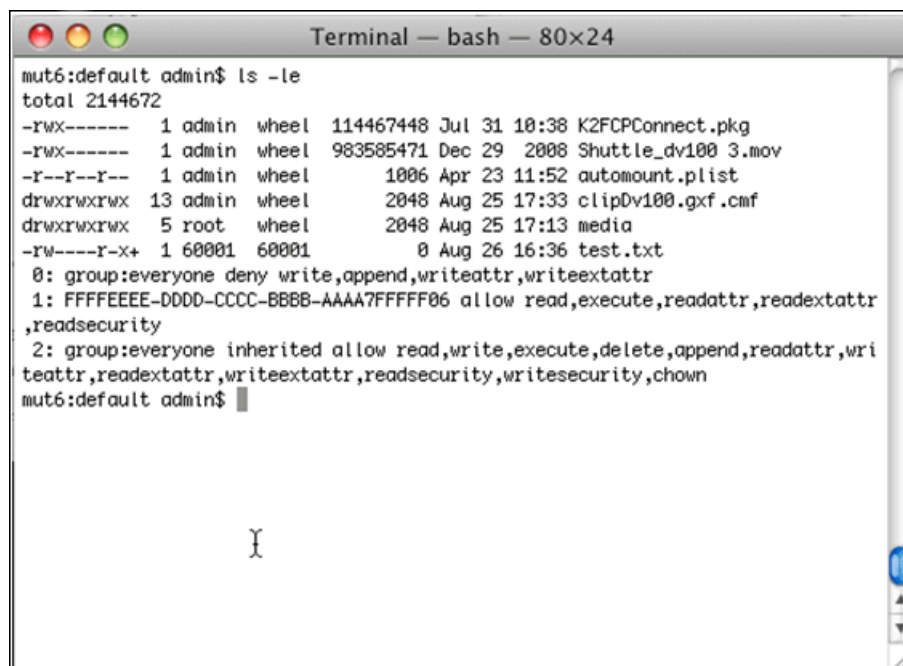
If you are using Access Control Lists on Macintosh OS X and the Windows operating system, use this task to verify.

1. On the FSM K2 Media Server, do the following:
  - a) Create a new text file on the V: drive.
  - b) Right-click on the text file and select **Properties**.
  - c) Click the **Permissions** tab.
  - d) Select **Everyone** and then for the **Write** permission select the **Deny** check box.
  - e) Create a folder on the V: drive.

- f) Give full permissions to the first user (designated in this procedure as userA) on the domain.
  - g) Give read only permissions to the second user (designated in this procedure as userB) on the domain.
2. On the Macintosh system, do the following:
- a) Login as userA.
  - b) Right-click on the text file and select **Properties**.
  - c) Open up **Terminal** and change directory to the default volume, as follows:  

```
cd /Volumes/default
```
  - d) Type the following command:  

```
ls -le
```



```
mut6:default admin$ ls -le
total 2144672
-rwx----- 1 admin wheel 114467448 Jul 31 10:38 K2FCPCConnect.pkg
-rwx----- 1 admin wheel 983585471 Dec 29 2008 Shuttle_dv100 3.mov
-r--r--r-- 1 admin wheel 1006 Apr 23 11:52 automount.plist
drwxrwxrwx 13 admin wheel 2048 Aug 25 17:33 clipDv100.gxf.cmf
drwxrwxrwx 5 root wheel 2048 Aug 25 17:13 media
-rw----r-x+ 1 60001 60001 0 Aug 26 16:36 test.txt
0: group:everyone deny write,append,writeattr,writeextattr
1: FFFFFFFE-DDDD-CCCC-BBBB-AAAA7FFFFFF06 allow read,execute,readattr,readextattr,readsecurity
2: group:everyone inherited allow read,write,execute,delete,append,readattr,wri
teattr,readextattr,writeextattr,readsecurity,writesecurity,chmod
mut6:default admin$
```

- e) Verify that there is a "+" next the text file, plus a list of permissions below. If this is true then cross-platform ACLs are enabled.
- f) Open the Finder, go to the default volume and try to edit the text file. This should fail as the file should not be writeable.
- g) In the Finder, go to the folder you created earlier in this procedure and create a text file in the folder. This operation should be successful.
- h) Log out and then log back in as userB.
- i) In the Finder, go to the folder you created earlier in this procedure and try to create a text file in the folder. This operation should fail.

## Configure HotBin

Configure a HotBin on the K2 SAN to receive the finished media from Final Cut Pro.

1. Set up SNFS as follows:  
Add "GlobalSuperUser = Yes" to *default.cfg* file.
2. In K2 AppCenter, create a bin with an appropriate name, such as "dstBin".
3. Configure *dstBin* as a HotBin.  
Refer to the *K2 System Guide* for instructions.
4. When you configure a HotBin, in the Capture Services Utility you can adjust QuickTime Import Delay. The recommended setting is 15 seconds. Refer to the next topic for more information.

## About QuickTime import delay

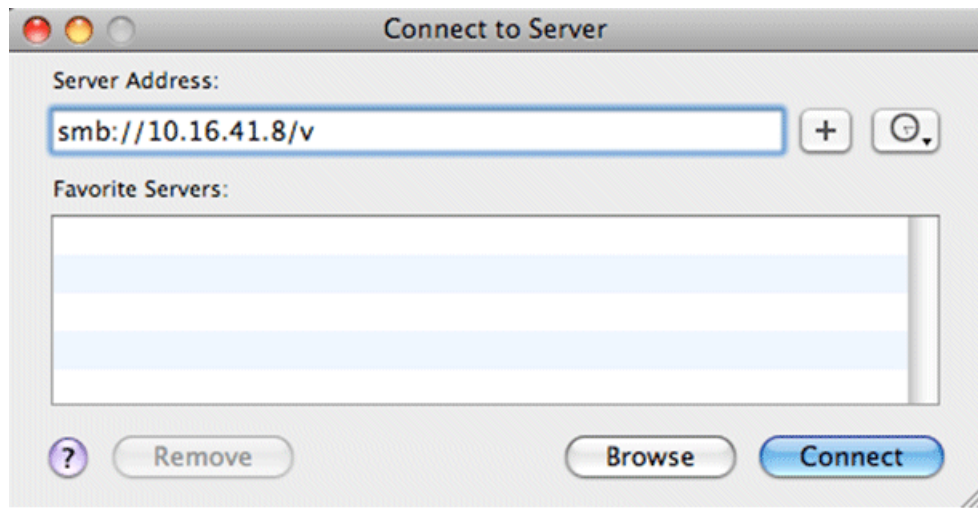
When you copy a file into a K2 HotBin, the HotBin watches for the file to close and the copy operation to stop, which should indicate the file is complete, before it begins to import the file into K2 storage. However, Final Cut Pro repeatedly opens and closes any QuickTime file as it exports the file, so it is possible that the K2 HotBin can detect a file closed event and begin to import the file before Final Cut Pro is done. If this occurs, the K2 HotBin import for that file fails.

To avoid this problem, the QuickTime import delay allows you to adjust how long a QuickTime file must be idle (no data being written to the file) before the HotBin begins to import the file into K2 storage. The recommended default value is 15 seconds. If you have problems with failed imports and you suspect that Final Cut Pro is holding on to the file with pauses longer than 15 seconds, you should increase the QuickTime import delay time and re-try the import. The HotBin process constrains the QuickTime import delay range to between 10 and 60 seconds.

## Connecting via SAMBA/CIFS

This is an alternative to connecting to the SNFS volume via iSCSI. Once the Macintosh computer has been bound to a domain it can then connect to any domain controlled, shared volume via SAMBA. If connecting via SAMBA, XSan and K2 FCP Connect software do not need to be installed or configured.

1. On the Macintosh computer open the Finder program and at the top menu click **Go | Connect to Server**.  
The Connect to Server dialog box opens.



2. In the Server Address field, type `smb://`, then type the IP or DNS name of the server to which you are connecting, then type `/v` ( this is the volume name).
3. Click **Connect**.  
If the volume is shared and behind a domain, you are prompted to authenticate.



The volume should be mounted in the `/Volumes` directory and viewable in the Finder program. Rights to files and folders are enforced based on the security profile of the user you authenticated with when connecting with SAMBA, not the user you are logged in as on the Macintosh computer.

## Using Final Cut Pro on a K2 SAN

Read the following topics to use access and edit K2 media with Final Cut Pro.

### Operation guidelines

Take the following into consideration as you use Final Cut Pro on the K2 SAN.

- Do not use the K2 AppCenter "Erase Unused Media" operation on clips that you are accessing on the K2 SAN.

### Media access

Access media on a K2 system as follows:

1. To open a QuickTime reference file, from the Macintosh system on which you are running Final Cut Pro, access K2 storage.  
For iSCSI access, this is the hard drive icon on the desktop labeled "default". This is also known as the V: drive.
2. Browse to the location of the media in your bin structure. The QuickTime reference file is named according to the following convention:  
`V:\Assets\<bin name>\<clip name>\<clip name>.mov`
3. When you have finished material that you have created in Final Cut Pro, export it to the K2 system.

### Export to K2 SAN

When exporting media to a K2 SAN, Final Cut Pro export options must be constrained so that the resulting media is playable on a K2. The exported media must match the frame rate of movies supported on the K2 system. This is especially important in XDCAM where there are 25, 29.97/30, 50 and 59.94/60 rates.

1. Create the Final Cut Pro clip with a single track of video.
2. Save the Final Cut Pro clip with a `.mov` extension.
3. Use the Final Cut Pro "Using QuickTime Conversion" method to export the Final Cut Pro clip as a stream movie to the K2 HotBin.  
Make sure the frame rate is supported on the K2 system.

For material originally recorded on a K2 system, supported frame rates are as follows:

- If you are exporting 1080i material the frame rate must be "Current" or 29.97.
- If you are exporting 720p material for 720p conversions the frame rate must be "Current" or 59.94.
- If you are exporting 720p material for 1080i conversions the frame rate must be 29.97 or 59.94.

The HotBin imports the clip into the K2 system and then the K2 system creates a QuickTime reference file of the clip.

## Maintaining K2 FCP Connect

Read the following topics to evaluate and maintain K2 FCP Connect operations.

### About the GV Helper Tool

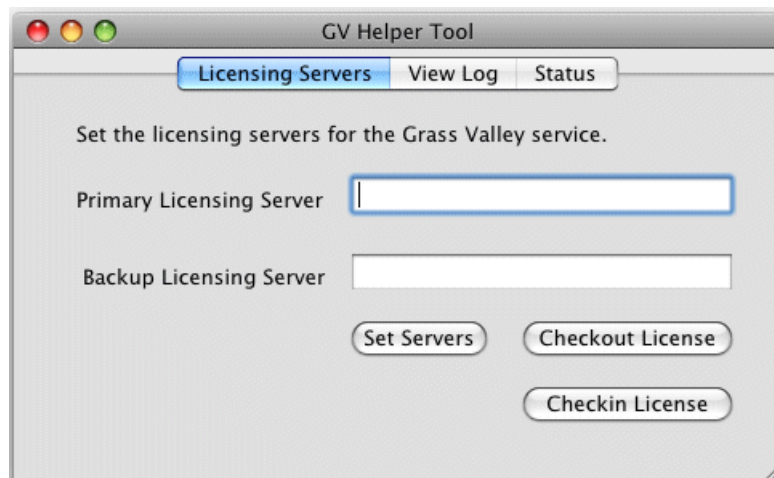
When you install K2 FCP Connect on your Macintosh system, the GV Helper Tool is also installed. You can open the GV Helper Tool from the *Applications\Grass Valley* directory. This utility provides features for maintaining K2 FCP Connect operations on the Macintosh system, as follows:

- Check license in/out to manage licensing on multiple Final Cut Pro Macintosh systems.
- Controls for stopping and starting the K2Config for Mac Daemon
- Access to logs

### Managing K2 FCP Connect licenses

You can drop the K2 FCP Connect license for a Final Cut Pro Macintosh system, and then later pick that license up again.

1. Open the GV Helper Tool.
2. Click the **Licensing Servers** tab.



3. For CIFS mount access, to drop the license currently used by the local Macintosh system to allow the iSCSI client connection to the K2 SAN, click **Checkin License**

4. For CIFS mount access, to assign an unused license to the local Macintosh system to allow it to make an iSCSI client connection to the K2 SAN, click **Checkout License**
5. You can also change the licensing server, which is the machine to which the Macintosh system looks to get its license, however take the following into consideration:
  - You can change the licensing server in K2Config as well as here in the GV Helper Tool.

Therefore it is recommended that you use K2Config, rather than the GV Helper Tool, to change the licensing server.

### Stopping and starting the K2Config for Mac Daemon service

To start and stop the K2Config for Mac Daemon service, run scripts in the */Applications/Grass Valley* directory.

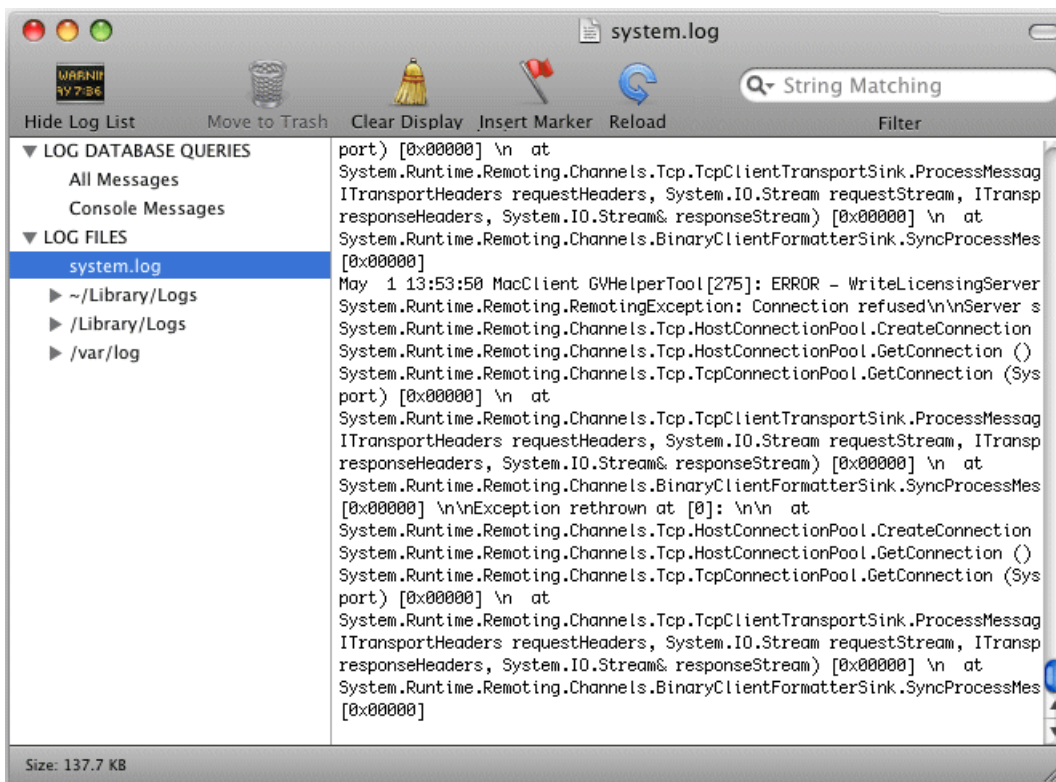
When you stop the K2Config for Mac Daemon, the service is stopped permanently, even after the Macintosh system is restarted. Once you have stopped the service, you must re-start it using the scripts.

### Accessing logs

1. Open the GV Helper Tool.
2. Click the **View Log** tab.



3. Click **View Log**.  
A Console window opens and displays logs.



4. Select **system.log**.  
The system log displays. This is the log that contains entries relevant to the iSCSI connection to the K2 SAN.
5. To send log information to Grass Valley for analysis, copy text from the Console window, paste it into a text file and send the text file.

## Creating K2 Coder watch folders

The K2 Coder comes from Grass Valley pre-configured with watch folders. If you need to re-create these watch folders, use the topics in this section. Refer to the *K2 Storage System Instruction Manual* for more information about the K2 Coder.

### Creating the import watch folder

1. Run Carbon Coder Admin.
2. Select the **Watch Folders** tab.
3. Click the **Add Watch** button.
4. Select **General Properties** on the left pane.
5. Enter `ImportWatchFolderTemplate` as the name for the watch folder.  
The name is for display purposes only.



6. To set the Watch Folder location, select **Browse Folders** to `V:\K2Coder\SourceFiles`.
7. Select **Create New File** if target file exists.
8. Under **Advanced Settings**, select **Delete Local Source after Conversion**.
9. In the left pane expand **Remote Retrieve**, then **File Retrieve**, then under **File Retrieve** click **Add...**
10. Select **Remote Patch (UNC)**. Browse and go to `V:\K2Coder\ShortCuts` and **OK**.
11. Select **Create Shortcut instead of Local Copy**.
12. In Retrieval Settings set Wildcard to `"*"`, Watch Interval (sec.) to `10`, Trigger File Size (kB) to `0`.
13. Click the **Update** button.
14. Expand **Target File** on the left pane, then click **Add...**
15. On the right pane Preset Category, select **System**, then select a preset such as `K2_SD_NYSD_IFRAME_50Mbps_Template` from the list.
16. Click on the **Preset Editor** page.
17. Set the Target Folder to `V:\K2Coder\FilesToK2`.
18. Click the **Update** button.
19. Click **Save Watch** to save settings and close.

The new Watch folder is added to the Carbon Admin UI. Make sure that the check box for "Active" column is selected.

## Creating the export watch folder

1. In AppCenter, create bin "K2-Coder-Export".
2. Run Carbon Coder Admin.
3. Select **Watch Folder** tab.
4. Select **General Properties** on the left pane.
5. Enter `ExportWatchFolderTemplate` as the name for the Watch Folder. The name is for display purposes only.
6. Set the Watch Folder location to `V:\K2Coder\FilesFromK2`.
7. Select **Create New File** if the target file exists.
8. Expand **Remote Retrieve** and then **FTP Retrieve** on the left pane, then click **Add...**
9. On the right pane, click the **Edit** button.
10. In the ServerConfig window that pops up, enter `localhost` for FTP Server Address, enter `movie` as username, `21` for FTP server port, leave Password and Use Passive FTP empty.
11. Click **Connect** button.
 

The ServerConfig windows close automatically.

In the Watch Folder setup window, the Server Status should show "Connected to XXX".

12. Expand the Current Folder drop down list, select bin **K2-Coder-Export** then click the **Select** button.  
The Selected Folder should show “V:\GXF\K2-Coder-Export\”.
13. Enter “\*” for Wildcard.
14. Enter 15 for Watch Interval (sec).
15. Click the **Update** button.
16. Select **Target File** on the left pane, then click **Add...**
17. On the right pane, select **system** in the tree view, then select a preset such as **AVI Target**.
18. Set the Target Folder to **V:\K2Coder\DestFiles**.
19. Click the **Update** button.
20. Click **Save Watch** to save settings and close.

The new Watch Folder is added to the Carbon Admin UI. Make sure the check box for "Active" column is selected.

# Operation considerations

- 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 and M-Series.
- To create clips from still images (graphics), import as MPEG transport stream.
- Tri-level sync is not supported on K2 systems.
- On the K2 Media Client, use the CD drive to burn CDs only as part of the recovery image process, while booted from the Recovery CD. Do not attempt to burn CDs for other purposes.
- 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.

# 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

---

CR70382	Description:	AppCenter does not launch on a K2 Media Client controlled by IngestStation.
---------	--------------	---

---

Workaround:	This occurs if both the IngestStation PC and the K2 Media Client are logged in to the "administrator" account, but the accounts have different passwords. To solve the problem, assign the same password to both administrator accounts, or use a different account on the IngestStation PC.
-------------	--

---

CR78336	Description:	QuickTime reference files are not created for those DV clips recorded on ganged channels.
---------	--------------	---

---

Workaround:	To create QuickTime reference files, record clips on channels that are not ganged.
-------------	--

---

CR85903	Description:	Only 4 tracks of embedded audio are operational on a channel.
---------	--------------	---

---

Workaround:	The problem occurs as a result of multiple configuration changes between Embedded and AES audio input. To make all 16 audio tracks operational, do the following:
-------------	---

1. Open Configuration Manager, change the number of audio tracks to 6 tracks, then click OK to save the configuration.
  2. Open Configuration Manager, change the number of audio tracks to 16 tracks, then click OK to save the configuration.
- 

CR104310	Description:	In AppCenter Configuration Manager, the Data Track settings allow six uncompressed VBI lines to be selected, yet only five lines are supported.
----------	--------------	---

---

Workaround:	Select five lines only.
-------------	-------------------------

---

CR106979	Description:	Timecode is incorrect if Time of Day source is set to LTC but LTC is disconnected or not present.
----------	--------------	---

---

Workaround:	Provide LTC or else set Time of Day source to System Clock.
-------------	---

---

## Capture Services

---

CR85666	Description:	When a Pathfire or DG Capture Service transfer loses connectivity, such as when a network cable is unplugged mid-transfer, the transfer stalls and the directory or bin that receives the transfer becomes unresponsive. This state persists long-term.
---------	--------------	---

---

---

	Workaround:	Restore connectivity and the transfer resumes.
CR96822	Description:	Pathfire software install deletes files in C:\temp.
	Workaround:	Before installing Pathfire Software Service software, if you have any files in C:\temp that you want to save, copy the files to a different location.

---

### Generic iSCSI Clients

---

CR97009	Description:	When installing K2 Generic iSCSI Client software, a message informs that SNFS is not installed and the installation program does not proceed.
	Workaround:	Make sure that the correct version of SNFS is already installed, then do the following: <ol style="list-style-type: none"> <li>1. Click Start   Programs   SNFS File System   Stop File System Services.</li> <li>2. Click Start   Programs   SNFS File System   Start File System Services.</li> <li>3. Install K2 Generic iSCSI Client software.</li> </ol>

---

### Installation

---

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 application and connections before uninstalling or installing.

---

### K2 Appliances

---

CR97358	Description:	A K2 Coder or other K2 appliance does not have the movie user account.
	Workaround:	<ol style="list-style-type: none"> <li>1. Create new user account "movie" if it doesn't already exist.</li> <li>2. For the new user movie account, enter password "M0vieK2M0vie". That is M ZERO v I e.</li> <li>3. Set the new user movie account to "User cannot change password" and "Password never expires".</li> <li>4. Add user "movie" to both Administrator &amp; K2 Administrator groups.</li> <li>5. Change the logon of user "Nexus Server" service from Local System Account to account "movie" and password "M0vieK2M0vie".</li> </ol>

---

---

CR97559	Description:	The K2 ASI Media Client is not configured to the correct K2 directory.
	Workaround:	In the K2 ASI Media Client Video Client application, click Options   Add FTP connection. The FTP Server Configuration dialog box opens. For Ftp subdirectory, enter v:/mpg/default.
CR97560	Description:	On K2 ASI Media Client startup, a Found New Hardware wizard opens, but the hardware is unknown and the wizard does not finish successfully.
	Workaround:	Cancel the wizard. Doing so does not effect the operation of the K2 ASI Media Client.

---

### Macintosh

---

CR72939	Description:	On an Apple system, can't open .MOV files exported from K2 system
	Workaround:	Set the identity of the transfer session to "interactive user" instead of "launching user", as follows: <ol style="list-style-type: none"><li>1. On the K2 system, in the Windows operating system Control Panel, open Administrative Tools   Component Services. The Component Services window opens.</li><li>2. In the Component Services window tree view, expand Component Services   Computers   DCOM Config, right-click movsession and select Properties. The Properties dialog box opens.</li><li>3. On the Identity tab, select The interactive user.</li><li>4. Click OK to save settings and close windows.</li></ol>
CR84274	Description:	When using an Apple system to simultaneously placing multiple .MOV files into a HotBin, the first file is not transferred to the HotBin.
	Workaround:	After placing multiple .MOV files into a HotBin, check for the first file. If necessary, re-transfer it to the HotBin.

---

### NetCentral

---

CR62119	Description:	NetCentral reports a Failover Monitor fault, even though Failover Monitor is actually running with no problem. Also, there is no report of database replication currently underway.
	Workaround:	Verify that Failover Monitor is still running and database replication is underway by using the Server Control Panel in the K2 System Configuration application.

---

**Protocols**

CR79653	Description:	AMP PlayAt and StopAt commands do not work on a SD-00 K2 Media Client channel that is cued for play or is playing, if the channel is configured for VITC timecode.
	Workaround:	Under these conditions the VITC-input reader is not connected. To make those commands work, configure the channel for a different timecode source.
CR85193	Description:	When running down a playlist under AMP control, the thumbnail that appears in AppCenter is not correct.
	Workaround:	Ignore the thumbnail in AppCenter. The playlist payout is correct.

**RAID**

CR63092	Description:	Loading controller firmware simultaneously on two controllers in different chassis fails.
	Workaround:	Load firmware on one chassis at a time. Do not load in parallel. Do not use Storage Utility for other tasks while firmware is loading.
CR73601	Description:	On a Level 3 RAID Expansion Chassis, the expansion adapter fault LED can stay on, even though no fault is present.
	Workaround:	This problem does not occur on all expansion adapters. If it occurs on your expansion adapter, contact Grass Valley Support to fix the problem.

**Storage Utility**

CR61478	Description:	The "Make New File System" operation in Storage Utility fails on a stand-alone (local) storage K2 Media Client.
	Workaround:	From the local K2 Media Client, close AppCenter, wait two minutes, and then open Storage Utility as a stand-alone application. In this stand-alone mode the "Make New File System" operation succeeds. (This operation is supported only on local storage models.)
CR64486	Description:	The bind process fails when binding 73 Gig disks into LUNs.
	Workaround:	Do not unbind LUNs, especially with 73 Gig disks. If you must unbind or bind LUNs with 73 Gig disks, contact your Grass Valley Support representative for assistance.
CR76576	Description:	When making a new file system, occasionally a "Failed to remove the media database ..." message appears. Then after restart, the clips that were present in the former file system are still displayed in AppCenter.
	Workaround:	The new file system is made successfully. No additional Storage Utility procedures are necessary. In AppCenter, delete

all bins except the default bin and the recycle bin. Then delete all clips in the default bin and the recycle bin.

---

CR94255    Description:    Bandwidth expansion of a K2 SAN can fail if the media file system is overly fragmented.

---

Workaround:    Before attempting bandwidth expansion, contact Grass Valley Support for an audit of your file system.

---

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**.

---

### System

---

CR63016    Description:    On K2 Media Clients shipped from Grass Valley before September 2007, when teaming Ethernet ports, due to a bug in the Intel teaming software, one of the following conditions can occur:

- A. Virtual adapter installed when control team is setup
- B. No virtual adapter installed during team is setup
- C. Device manager gets into a "loop" mode where it constantly refreshes the NIC list

---

Workaround:    Make disk images of the K2 Media Client so if there is a need for recovery, you do not need to team. If you do need to team, use the procedure in the K2 Media Client Service Manual. This procedure assumes condition A, as it is most common. If the other conditions occurs, contact Grass Valley Support.

---

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

---

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

---

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

---

Workaround:    Update the firmware on the iSCSI interface adapter (TOE card). Go to URL [ftp://ftp.thomsongrassvalley.com/K2/Images/DualTOE\\_3.0.1.24](ftp://ftp.thomsongrassvalley.com/K2/Images/DualTOE_3.0.1.24) for procedures.

---



CR85385	<p><b>Description:</b> When bringing a backup K2 Media Server online using Server Control Panel, a "DB exception description: Cannot perform this operation while SQLServerAgent is starting. Try again later." message is displayed and the server shuts down.</p>
	<p><b>Workaround:</b> Upgrade to software version 3.2.7 or else on both redundant K2 Media Servers set the startup type for the SQLSERVERAGENT service to Automatic.</p>
CR88881	<p><b>Description:</b> During failover testing a Failover Monitor error occurs, indicated by a "COM1 initialization failed" log message on redundant K2 Media Servers.</p>
	<p><b>Workaround:</b> Uninstall a serial port mouse driver. The driver is evidenced only when the error state occurs. On both K2 Media Servers, in Device Manager, look under Mouse Input devices. Identify the Serial Mouse, disable it, and then uninstall it. In addition check the boot.ini to make sure that the /fastdetect flag is enabled.</p>
CR90857	<p><b>Description:</b> The K2 Media Server displays an error because the Dell OpenManage server log fills up.</p>
	<p><b>Workaround:</b> Manually clear the log and then configure OpenManage to overwrite the log when full.</p>
CR88881	<p><b>Description:</b> During failover testing a Failover Monitor error occurs, indicated by a "COM1 initialization failed" log message on redundant K2 Media Servers.</p>
	<p><b>Workaround:</b> Uninstall a serial port mouse driver. The driver is evidenced only when the error state occurs. On both K2 Media Servers, in Device Manager, look under Mouse Input devices. Identify the Serial Mouse, disable it, and then uninstall it. In addition check the boot.ini to make sure that the /fastdetect flag is enabled.</p>