



Avid ISIS

ReadMe Version 4.7

Date Revised	Release	Changes Made
08/19/2014	v4.7	Update to “Hardware and Software Requirements” on page 8.
07/14/2014	v4.7	Added 2x10Gb Myricom card in “Dual 10 Gb Connection Support” on page 5, and ISIS 5000 Upgrade Path information from v4.0/4.0.1 in “Supported Upgrade Paths” on page 6.
06/12/2014	v4.7	Added “New in Avid ISIS v4.7” on page 5. Added “Supported Upgrade Paths” on page 6 and “System Configuration Limits” on page 8. Added “Applying the Microsoft HotFix KB2685007 on Windows 7” on page 22.
02/13/2014	v4.6.1	Added “New in Avid ISIS v4.6.1” on page 17, merged Final Release support information for 4.6 and 4.6.1, corrections/additions to Supported ISIS Client Operating Systems table.
12/20/2013	v4.6	Updated to add “Single Engine Configurations with Routed Clients” on page 23.
12/10/2013	v4.6	Updated “New in Avid ISIS v4.6” on page 19.

Important Information

Avid recommends that you read all the information in this ReadMe file thoroughly before installing software or attempting to use the Avid ISIS system. This ReadMe provides information that is not in the other Avid ISIS documentation.

This is a common ReadMe used for the ISIS | 7500 - 7000, ISIS | 5500 - 5000 and ISIS | 2500 - 2000 infrastructures. New installations and upgrades run the same AvidISISSetup.exe file in the kit for installing the ISIS | 7500 - 7000 System Director, ISIS | 2500 - 2000 System Director, and ISIS | 5500 - 5000 System Director or Engine, ISIS File Gateway, and Windows client software. The installer automatically detects any previously installed software and defaults to the appropriate software update.

References to ISIS | 5500 in this documentation apply to both ISIS | 5500 and ISIS 5000 with the exception of the following:

- ISIS | 5500-64. There was not an ISIS 5000-64.
- ISIS | 5500-16 has an installed 10 Gb Myricom board. In the ISIS 5000-16, the Myricom board was not installed with a shipping system. The Myricom board was an optional board in the ISIS 5000-16.



Search the Avid Knowledge Base for the most up-to-date ReadMe file, which contains the latest information that might have become available after the documentation was published. To view the online version, visit the Knowledge Base at www.avid.com/support.

This document provides hardware and software requirements, a hardware overview, and other important information. This document also lists limitations and known issues. Physical connection of the system and loading of the system and client software is explained in the appropriate *Avid ISIS Setup Guide*. You can access the documentation in the top-level AvidISISDocumentation folder on the Avid ISIS software installer kit.



Avid recommends that you purchase installation services with your Avid ISIS system.

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Accessing the Online Documentation

The Avid ISIS documentation is accessible in PDF format from the Help menu in the Avid ISIS Management Console browser window as well as on the top-level AvidISISDocumentation folder on the Avid ISIS software installer kit.

To access the online documentation from the installer kit:

1. Load the Avid ISIS software installer kit onto your computer.
2. Navigate to the `[drive]:\AvidISISDocumentation` folder, and double-click the PDF file for the document you want to view.

If You Need Help

If you are having trouble using your Avid product:

3. Retry the action, carefully following the instructions given for that task in this guide. It is especially important to check each step of your workflow.
4. Check the latest information that might have become available after the documentation was published.
New information is provided in the ReadMe file supplied on your Avid software kit as a PDF document and is also available online.
You should always check online for the most up-to-date release notes or ReadMe because the online version is updated whenever new information becomes available. To view the online versions, visit the Knowledge Base at www.avid.com/US/support.
5. Check the documentation that came with your Avid application or your hardware for maintenance or hardware-related issues.
6. Visit the online Knowledge Base at www.avid.com/US/support. Online services are available 24 hours per day, 7 days per week. Search this online Knowledge Base to find answers, to view error messages, to access troubleshooting tips, to download updates, and to read or join online message-board discussions.

Avid Training Services

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For information on courses/schedules, training centers, certifications, courseware, and books, please visit www.avid.com/support and follow the Training links, or call Avid Sales at 800-949-AVID (800-949-2843).

New in Avid ISIS v4.7

The v4.7 release includes the following new features and changes to existing features.

High Resolution Workflows

The v4.7 release supports real-time, collaborative high-resolution workflows with third-party creative applications with ISIS online systems.

12 Engines in ISIS | 5500 and ISIS 5000

The ISIS | 5500 and ISIS 5000 now support up to 12 Engines in an ISIS System.

Introducing ISIS | 2500

This release introduces the ISIS | 2500 in the following configurations:

- ISIS | 2500-320, with 82 x 4 TB drives, providing 320 TB of raw storage which equates to 256 TB of usable storage
- ISIS | 2500-160, with 42 x 4 TB drives, providing 160 TB of raw storage which equates to 128 TB of usable storage
- Upgrade pack (of drives) to expand an ISIS | 2500-160 to an ISIS | 2500-320

Support for Red Hat 6.5 as an ISIS Client

This release supports Red Hat Enterprise Linux versions 6.2, 6.3, and 6.5 on ISIS clients. For a full list of supported operating systems on ISIS clients, see “[Supported ISIS Client Operating Systems](#)” on page 10.

Dual 10 Gb Connection Support

The v4.7 release supports dual 10 Gb network connections on all ISIS systems for higher bandwidth and high availability. To support dual 10 Gb connections, Avid has qualified the Myricom 10G-PCIE2-8B2-2S. For more information, see the KB article "Avid Configuration Guidelines and Slot Configurations" at the following URL: http://avid.force.com/pkb/articles/en_US/user_guide/en269631

Preloaded USB Drive

Starting in v4.7, the Avid ISIS recovery software is supplied on a USB drive shipped with a system, along with a blank 8 GB USB drive for you to download the application software.

GUI and ISIS Installer Changes

- **New Redistribution Monitor**—Under the Tools heading, a new feature called the Redistribution Monitor was added. This link opens the Redistribution Monitor tool, which displays the progress of redistributions triggered by configuration changes to Storage Managers and Workspaces.
- **Show/Hide Status Console Before Login**—Administrators can now control whether the Status Console panel is displayed on the login screen of the Management Console (by changing the setting on the Advanced > Preferences screen). Prior to this release, the Status Console was visible even before a user logged in, but no links were accessible until the user logged in.
- **Storage Elements Removed**—In the Avid ISIS Management Console, the Storage Elements link was removed from the System heading; all Storage Element information has been combined with Storage Managers.
- **Redesigned and Refreshed System Director Control Panel**—The entire Control Panel has a new look. The performance graphs and Metadata Usage panel were removed, as that information is available elsewhere. All the configuration operations have been consolidated into one area of the Control Panel UI. The functions to

stop and start the System Director, change the password, change the System Director name, and dump metadata have changed from text buttons to icons. Finally, the Launch Viewer and Reset Event buttons have been removed.

- Heartbeat Timeout Feature Moved—The Heartbeat Timeout feature has been moved to the Advanced tab on the Switch Blade Agent page.
- Low Disk Space Warning—If the C:\ or D:\ drives on the System Director run low on space, a warning is displayed in the Status panel in the Management Console.
- Renamed Avid ISIS installer—Formerly Autorun.exe, now AvidISISSetup.exe.

The Avid ISIS Administration Guide has been updated to reflect these changes.

Temperature Sensor Information Added for ISIS | 2500 - 2000

The ISIS | 2500 - 2000 Setup Guide now includes figures and a table describing the locations of the temperature sensors in the Engines. The sensors are also displayed on the Agent page for each Engine. This information can help you and Avid Support identify which component must be replaced depending on which temperature sensor has failed.

Fixed in this Release

The following issues were corrected in this release.

- Captures could fail intermittently during an add or remove redistribution resulting in an error such as the following from the editor: “Video/Audio no longer coming into the system.”
- Removed the restriction on changing the Delete Logging setting only during maintenance periods. You can now change the setting at any time.
- The drive numbers on the i4000 and i8000 (ISIS | 7500) are now set correctly.
- Improved the launch speed of the ISIS Toolbox, LDAP Sync Tool, and Monitoring Tool.

Corrections from Previous Release

The note in the v4.6.1 ReadMe about the Intel NIC version required for systems running Windows v8.1 has been clarified as follows:




A new Intel 1Gb Network version (18.6) is required if you are running Windows v8.1 on the following platforms: HP Z230, HP Z1 Gen2, HP ZBook, Dell T1700, Dell M4800, Dell M6800, Lenovo x540, Lenovo E32, or Lenovo ThinCentre Edge 93Z. The v18.6 driver is included in the ISIS Installation Kit: \Drivers\ISIS Client. Note: Currently, the v18.6 driver has only been qualified with Windows v8.1.

Supported Upgrade Paths

If you have a previous version of ISIS software, you can upgrade to a newer version according to the following table.

The installer, AvidISISSetup.exe, determines the version of software currently on your System Director and prevents you from performing an unsupported upgrade. If applicable, a dialog box instructs you to upgrade to an intermediate version before upgrading to the current version. Make sure you correctly identify your ISIS hardware model in the table.

For instructions on upgrading your ISIS system, see the latest Setup Guide for your ISIS model.

ISIS Model	Starting Version	Upgrade Path
ISIS 7000, ISIS 7500	2.4  <i>For ISIS software releases older than v2.4, contact Avid support.</i>	To 4.2.2, then to 4.7 If you upgraded from 2.x, copy the metadata to the new location. See “Metadata Location On the System Director” on page 7 for more information. Also see “Change in Space Reporting in v4.5” on page 7
ISIS 5000, ISIS 5500	3.0 or 3.1	To 3.2, then to 4.2.2, then to 4.7 If you are running a version earlier than 3.2, as soon as you upgrade to 3.2 run the Node Analysis tool (see Avid ISIS 5000 v3.2 ReadMe). Also see “Change in Space Reporting in v4.5” on page 7
ISIS 5000, ISIS 5500	4.0 or 4.0.1	To 4.2.2, then to 4.7
ISIS 2000-240	Versions prior to 4.5	To 4.5, then to 4.7 During the upgrade to v4.5, a data conversion process occurs and must be allowed to complete before you then upgrade to v4.7. This conversion process can take up to several days. See “Change in Space Reporting in v4.5” on page 7
ISIS 2000-120	Versions prior to 4.5	To 4.6.1, then to 4.7 See “Change in Space Reporting in v4.5” on page 7
All	4.5 and 4.6.x	To 4.7



When installing the Avid ISIS | 7500 - 7000 software, you no longer need to open the Windows Control Panel on the System Director to uninstall the earlier version of the Avid ISIS System Director software. All of the previous Avid ISIS software is automatically uninstalled when installing a newer version.

Change in Space Reporting in v4.5

If you are upgrading to 4.5 or later, you may see a change in the amount of used space reported in Storage Groups. Starting with the v4.5 release, very small files are now reported as using at least the default chunk size of the system. Previously, the space used by very small files was not properly accounted for, resulting in the Storage Group reporting more free space than was actually available.

Metadata Location On the System Director

After doing an ISIS v4.x software upgrade, move the metadata. The upgrade instructions include moving the following files to a new location.

- Partition0
- Partition1
- PartitionDump.bin
- Old v2.x metadata location:
D:\Program Files\Avid Technology\AvidUnityISISSystem Directorx64
- New v4.x metadata location:
D:\Program Files\Avid\ISIS System Director

Intel Pro 1000 Network Adapter Settings

The AvidISISSetup.exe file configures the Intel Pro 1000 network adapter correctly for the ISIS environment; you do not need to make any adjustments. For reference, the installer sets the adapter as follows:

Intel Adapter Setting	ISIS 2500 and ISIS 2000	ISIS 5500 and ISIS 5000	ISIS 7500 and ISIS 7000	ISIS File Gateway
Flow Control	Disabled	Enabled	Disabled	Disabled
Interrupt Moderation	Disabled	Disabled	Disabled	Disabled
Interrupt Moderation Rate	OFF	OFF	OFF	OFF
Receive Descriptors	1024	1024	1024	1024
Transmit Descriptors	1024	1024	1024	1024

System Configuration Limits

The following table lists the system configuration limits for all ISIS platforms in the v4.7 release.

ISIS Model	Engines	Files and Folders	Users	Groups	Connected Clients	Workspaces
ISIS 7500, ISIS 7000	24	10 million files, 500,000 folders (25,000 files per folder)	5638	1000 (a user can be in 15 groups)	330	1024 for all ISIS platforms
ISIS 5500, ISIS 5000	12	8 million files and folders (combined total)	5638	1000 groups (a user can be in 15 groups)	90	
ISIS 2500, ISIS 2000	5	10 million files	5638	1000 (a user can be in 15 groups)	200 ISIS clients, unlimited CIFS clients	

Hardware and Software Requirements

To meet the stringent needs of media applications the ISIS family of storage solutions is built using patented intellectual property in ISIS software running on Avid ISIS hardware. Avid tests and qualifies configurations of Avid ISIS software deployed on Avid ISIS hardware. The ISIS System Director is designed to allow the binding of Avid ISIS storage *only*. Avid has not published its ISIS file system specifications, protocols, or ISIS file system API's used among the components of the file system (ISIS System Director, ISIS client, ISIS storage expansion engines) and these are subject to change without notice. Therefore, any connection of third party storage as part of an ISIS file system is not a licensed, approved or supported configuration.

The following table provides a list of product clients and infrastructure component software versions needed to work with Avid ISIS.



Most Windows editing clients require the 1 Gb Intel Pro 1000 Ethernet board to connect to the Avid ISIS system. Macintosh clients and some Windows clients have been qualified to use the on-board 1 Gb ports. For instructions on installing the board and software, see for Avid ISIS Client Guide.

Qualified Editing Clients on Avid ISIS v4.7 Workspaces

Software	ISIS 2500	ISIS 5500	ISIS 7500
Media Composer® Software	v6.5.x, v7.0.x, v8.0	v6.5.x, v7.0.x, v8.0	v6.5.x, v7.0.x, v8.0
Media Composer® Symphony Option	v6.5.x, v7.0, v8.0	v6.5.x, v7.0, v8.0	v6.5.x, v7.0, v8.0
Media Composer® NewsCutter® Option	v8.0	v8.0	v8.0
NewsCutter®	v10.5.x, v11.0.x	v10.5.x, v11.0.x	v10.5.x, v11.0.x
Avid DS	No real-time support (push/pull only)	v11.1	v11.1 (mirrored only)
Interplay® Assist	v2.7.5, v3.0, v3.0.5	v2.7.5, v3.0, v3.0.5	v2.7.5, v3.0, v3.0.5
Interplay Low-Res Encode	Not supported	Not supported	Not supported
Avid iNews Instinct	v5.0.1	v5.0.1	v5.0.1
AirSpeed 5000	v2.5.x, v2.6	v2.5.x, v2.6	v2.5.x, v2.6
AirSpeed Multi Stream	v1.8.14	v1.8.14	v1.8.14
Pro Tools	10.x, 11.0 for Macintosh and Windows: <ul style="list-style-type: none"> • Push/pull only (no real-time support) For more information, see: http://avid.force.com/pkb/articles/en_US/compatibility/ISIS-2000-Pro-Tools-Compatibility	10.x, 11 for Macintosh and Windows: <ul style="list-style-type: none"> • Real-time: play/record up to 64 audio tracks • Disk Cached: unlimited track counts For more information, see: http://avid.force.com/pkb/articles/en_US/compatibility/e371639	8.1, 9 for Windows: <ul style="list-style-type: none"> • Real-time: play/record up to 64 audio tracks, mirrored workspaces only 10.x, 11 for Macintosh and Windows: <ul style="list-style-type: none"> • Real-time: play/record up to 64 audio tracks • Disk Cached: unlimited track counts For more information, see: http://avid.force.com/pkb/articles/en_US/compatibility/e353969

Supported ISIS | 7500 - 7000 System Directors

The following System Director servers are supported in Avid ISIS | 7500 - 7000 v4.x:

- AS3000 (Window Storage Server 2008 on v4.x, or Window Storage Server 2008 R2 on v4.5 and higher)



Automatic failover might not work correctly when using ISIS v4.2 (and older) on a System Director running Windows Storage Server 2008 R2.

- SR2500 (Window Storage Server 2003)



Avid ISIS v2.4 was the last release with support for the Intel SR2400 System Directors. If you have SR2400 System Directors, plan for System Director replacements before upgrading to this release.


System Director and Client Version Compatibility

The v4.7 Client software works with the System Director v4.2.2 kit (contains v4.2.2 for ISIS 2000, v4.0.3 for ISIS 5000 and v4.0.4 for ISIS 7000) and higher.

Supported ISIS Client Operating Systems

The following table lists the supported Avid client operating systems with Avid ISIS v4.7. All of the listed client operating systems support single or dual 10 Gb Ethernet network interface cards.

Supported Client Operating Systems and Service Packs

Operating System	Version and Notes
Windows 8.1	Latest Service Pack
Windows 7 (64-bit)	Latest Service Pack
Windows XP (32-bit)	Service Pack 3; For AirSpeed Multi Stream only
Windows Server 2012 R1 and R2 (64-bit)	Latest Service Pack
Windows Storage Server 2008 R1 and R2 (64-bit)	Latest Service Pack
Windows Storage Server 2003 (64-bit)	Service Pack 2
Windows Server 2008 R1 and R2 (64-bit)	Latest Service Pack
Windows Server 2003 (64-bit)	Latest Service Pack
 <i>ISIS 4.7 is the last release to support this OS.</i>	
Mac OS X Mavericks (64-bit kernel)	10.9.2 or earlier, with latest updates
Mac OS X Mountain Lion (64-bit kernel)	10.8.x with latest updates
Mac OS X Lion (64-bit kernel)	10.7.5 with latest updates
Red Hat Enterprise Linux (64-bit kernel)	6.2, 6.3, 6.5



Supported Browsers in an ISIS Environment

The following are the browsers qualified in ISIS v4.7. These browsers were qualified with the client operating systems supported in the current release.

Supported Client Browser per Operating System

Browser	Operating System
Internet Explorer 7 and Internet Explorer 8	Windows Storage Server 2003 only
Internet Explorer 9 and Internet Explorer 10	Windows Storage Server 2008 and later
Safari	Macintosh

Supported Client Browser per Operating System (Continued)

Browser	Operating System
Mozilla Firefox	Windows, Macintosh, and Linux  <i>If you plan to use the Firefox browser for FTP connections via the File Gateway, use the following format in your browser: username: virtual host name ftpuser</i>
Google Chrome	Windows and Macintosh  <i>If you plan to use the Chrome browser for FTP connections via the File Gateway, use the following format in your browser: ftp://ftpuser@virtual host name:password@ alias.domain.com</i>

Intel Ethernet Drivers

Intel Pro Ethernet adapter boards are recommended for most Windows based editing systems that connect to the Avid ISIS system. The Intel Pro 1000 PT and Intel i350 T2 are copper interfaces and the Intel Pro 1000 PF is an optical interface. The Intel driver qualified in this release is included in the Avid ISIS software installer kit (\Drivers\ISIS xxxx\Intel_Pro1000 folder). Check the driver version listed in the Windows Control Panel on your Windows clients and ISIS System Directors.

For ISIS | 5500 and ISIS 5000 Engines, the Intel Pro 1000 board requires Intel driver v14.7. The Intel driver is automatically updated and configured on the ISIS | 5500 System Director and Engines when you install the ISIS | 5500 Software.

If you are not running the Intel Pro v17.4 driver (v18.6 is required for Windows 8.1 on specific platforms), run the Intel_17.4_Winxxxx_xx.exe installer file.



Do not update the Intel drivers on Avid Interplay Engine cluster unless instructed to do so by the Interplay ReadMe or by Customer Support. Doing so could compromise the integrity of the cluster.

Intel Network Driver Per Operating System

Operating System	Driver installer
Windows 8 (64-bit)	Intel_17.4_Win2K8-8-7-Vista_64.exe
Windows 7 (64-bit)	Intel_17.4_Win2K8-8-7-Vista_64.exe
Windows XP (32-bit—for AirSpeed Classic only)	Intel_17.4_Win2K3-XP_32.exe
Windows Storage Server 2008 R2 (64-bit)	Intel_17.4_Win2K8-8-7-Vista_64.exe
Windows Storage Server 2008 (64-bit)	Intel_17.4_Win2K8-8-7-Vista_64.exe
Windows Storage Server 2003 (64-bit)	Intel_17.4_Win2K3-XP_64.exe
Windows Server 2003 (64-bit)	Intel_17.4_Win2K3-XP_64.exe
Windows Server 2012 R1 and R2	Intel_17.4_Win2K3-XP_64.exe

Loading or Updating the Intel Pro Driver on Windows Clients

To load the Intel Pro driver on a Windows system:

1. Copy the file titled Intel_xx.x driver to your system; found on the *Avid ISIS software kit* in (clients) \Drivers\ISIS Client\Intel_Pro1000\ folder.
2. Double-click the .exe file to expand the compressed file and run the installer.
3. Accept the default settings to install the driver.



The default Intel transmit and receive descriptors are set to 256 however, when loading the Avid ISIS client software the transmit and receive descriptors are set to 1024. For more information, see Avid ISIS Client Guide.

4. After the Intel driver is installed, restart the Windows system.

Qualified and Approved ISIS Switches

For a list of the current qualified and approved switches for use in the Avid Production Network (APN), see the *Avid Network and Switch Setup Guide* in the documentation folder of the Avid ISIS software kit [drive]:\AvidISISDocumentation.

Cascaded Switches

Limited cascaded switch configurations are supported in ISIS environments. For information on supported configurations, see the *Avid Network and Switch Setup Guide* in the documentation folder of the Avid ISIS software kit [drive]:\AvidISISDocumentation.

Known Issues

The following are known issues with the Avid ISIS software.

Common ISIS Infrastructure Issues

The following are known issues that could happen in all Avid ISIS infrastructures. When a workaround exists, it appears in the paragraph directly following the issue description.

- Deleting large numbers of files during a redistribution can result in some blocks not getting deleted correctly, resulting in a mismatch between the Workspace and Storage Group sizes.
Workaround: Performing a block rectify operation after the redistribution is complete resolves the issue and cleans up the undeleted blocks.
- At the end of a redistribution, depending on the number of blocks that have moved and the total number of blocks that exist, the Progress Bar flickers and the system sometimes appears to be stalled as the Storage Managers make their final pass across the data set.
Workaround: You can ignore the behavior of the Progress Bar. The redistribution will complete normally.
- Email notification settings are not replicated to the Standby System Director.
Workaround: Configure Notification Services on both the Active and the Standby System Director.

- In ISIS | 5500 and ISIS | 2500 environments, if you add another Engine to the system (which starts a redistribution) while clients are using AirSpeed, their capture or move operations can become extremely delayed. Captures might stop, but moves can continue, potentially overwriting new data blocks with old blocks that are still being moved by the redistribution process.

Workaround: To prevent old data overwriting new data during captures, start the Add redistribution before clients attempt to perform captures or moves.

- If you are unable to start the Management Console in a browser, log into the System Director and launch the Console from the Launch Pad.
- Chinese and Korean characters are not supported in the LDAP Sync Tool.
- When accessing the Storage Manager agent using a Chrome browser, you might receive a “This web page is not available” message.

Workaround: Press the F5 key. The page will reload. At the “Site’s Security certificate is not trusted” window click Proceed anyway.

- When attempting to view system log files (/var/log/messages*.gz) from the Storage Manager > Agent page > Logging tab, the Agent page stops functioning if you click View on a *.gz file. Do not view any *.gz logs through the Agent pages.



*To view *.gz files use the Management Console > ISIS Toolbox > Log Aggregator and save the logs to your local computer.*

Workaround: Restart the Engine Agent if you have attempted to view *.gz logs through the Agent page.

To restart the agent without disrupting clients:

1. Install PUTTY or similar SSH Client on the System Director, any client on the network, or on a system connected to the management port.
<http://www.chiark.greenend.org.uk/~sgtatham/putty/>
2. Run SSH Client connecting to Storage Manager using an IP address listed in Management Console.
3. Login.
Username: **root**
Password: *<local admin password>* (Default **se-admin**)
4. Stop the Storage Manager web agent using the following command: **/etc/init.d/userveragent stop**
5. Wait approximately 30 seconds.
6. Restart the Storage Manager web agent using the following command: **/etc/init.d/userveragent start**
7. Wait approximately 30 seconds.
8. Verify the agent is running again by accessing the Management Console > Storage Manager > Agent page.
9. Close the SSH Client.

Client Issues

The following are known issues with the Avid ISIS v4.x client software. When a workaround exists, it appears in the paragraph directly following the issue description. The ISIS infrastructure issues are documented in the individual sections.

- On a Linux OS, right-clicking to access a context menu in the Management Console window does not work properly. The context menu does not stay open when you right-click and release the mouse button.

Workaround: Keep the right-click button applied while scrolling through the menu options.

- On a Red Hat Linux client, if the Management Console will not launch from the Client Manager, open a browser window to log into the ISIS.
- When installing the Client Manager on Mac OS X v10.9 you might receive the following message: “Kernel Extension is not from an identified developer.” The Client Manager will install successfully if you continue through the install process.
- When using Nautilus (the default file browser included with Red Hat Enterprise Linux v6.2), clients might experience long wait times browsing folders containing files that do not have a file extension.

Workaround: If using files without extensions, limit the number of files per folder.

- If one workspace in Client Manager is mounted by Mapping a Network drive in Windows, when you unmount the workspace and then mount a different workspace in Client Manager manually using the same drive letter, Windows Explorer displays the previous workspace name instead of the new workspace name.
- The estimated amount of space available (usually measured in an amount of time at a particular resolution) might differ between what Avid ISIS calculates and what the Avid editing system calculates.

Avid ISIS accurately reports the amount of space available for file storage.

The Avid editing application accounts for overhead in formatting of the media and is more conservative in reporting how much space is available.

- The Macintosh Finder might display the Avid ISIS folder contents incorrectly, such as the contents of folders containing items whose name includes a pound sign (#) followed by numeric characters. For example, “project # 12” might be erroneously displayed with some items duplicated and some items missing.

Workaround: Avid recommends avoiding the use of names that include a pound sign (#) followed by numeric characters.

- Do not disconnect the PCI interface cable from either a Nitris DX or Mojo DX while it is powered up on the Macintosh editing system. If Avid ISIS is running on this system and the cable is removed, the Macintosh produces a kernel panic and reports ISIS as the problem. You must power down Macintosh before removing the PCI interface cable between the Macintosh and the Nitris DX or Mojo DX. The only way to power down the Nitris DX or Mojo DX system is to shut down the client connected to it.
- If playing two streams of media during a non-symmetrical full redistribution on an Avid editor with a Nitris DX or Mojo DX attached, you will drop frames.

Workaround: You have the following options.

- Work with your media after the redistribution is finished.
- Start the Management Console Tool and suspend the redistribution. Finish working with your media and then resume the redistribution.



Do not leave the redistribution in a suspended state for an extended period of time.

- The Path Diagnostics customized setting for Posix tests does not work correctly on the Macintosh clients.

Workaround: Use the default option to automatically select the File Access Method instead.

ISIS | 7500 - 7000 Infrastructure Issues

The following are known issues with the Avid ISIS | 7500 - 7000 infrastructure. When a workaround exists, it appears in the paragraph directly following the issue description.

- In some circumstances, the Management Console can become unresponsive. To regain access, log into the System Director and restart the Avid ISIS Administration Server. Client connections will not be affected, but you must log back in to the Management Console.
- When reading media to do a mixdown on a “Westmere” Macintosh client with the Client Type set to Low Resolution in the Client Manager > Preferences > General settings, the Macintosh client might become unresponsive.

Workaround: Switch the Client Type setting to Medium Resolution or High Resolution.

- If the ISIS Management Console is opened from the Client Manager, and an Avid ISIS System Director failover occurs while the ISIS Management Console is open, the ISIS Management Console does not automatically reconnect to the new Active System Director.

Workaround: After the Client Manager reconnects to the new Active System Director, open the ISIS Management Console from the Client Manager to connect to the new Active System Director.

- When attempting to consolidate media from an Avid editing client on a RAID workspace that has a failed ISB, the consolidate function in the editing application might fail with an Exception error.

Workaround: If the ISB failure cannot be repaired within your time frame, retry the consolidation again. The failure is intermittent.

- When the maximum number of licensed users are logged in to the Avid ISIS environment and another client attempts to log in, a “User authentication failed” error is displayed.

The message should state that the maximum number of licenses has been reached.

- Removing a chassis from an ISIS | 7500 (or ISIS 7000) stack does not clear the engine configuration from the removed chassis.

Use the Reset Factory defaults button to clear stack configuration information on the removed chassis.

- When in the Advanced tab of the Switch Agent page, if you select Switch Blade > “Reset to factory defaults” and enter the password to confirm the reset, one of the two switches in the engine becomes the master and the other switch keeps restarting.

Workaround: Log into the ISS Agent on the new master, click the System tab and select Basic, then click Submit in the Chassis Configuration window.

- If a redistribution stops after a Storage Manager has failed, it can indicate that the system is trying to fix parity blocks that no longer exist.

Workaround: Suspend and resume an in-progress redistribution to do a Block Rectify, using the Advanced Commands options available on the Workspaces page. The following steps are summarized. For detailed instructions, see the *Avid ISIS Administration Guide*.



Do not allow the RAID 6 redistribution to stay suspended for indefinite periods of time. Once the rectify completes, immediately resume the redistributions across all Workspaces.

To suspend a redistribution and rectify blocks:

1. Suspend a redistribution: Management Console > Workspaces > Advanced Commands and select Suspend Redistribution.
2. Rectify files: Management Console > Storage Elements > Command and select Initiate Block Rectify.
3. Resume the redistribution: Management Console > Workspaces > Advanced Commands and select Resume Redistribution.

ISIS | 5500 - 5000 Infrastructure Issues

The following are known issues with the Avid ISIS | 5500 - 5000 infrastructure. When a workaround exists, it appears in the paragraph directly following the issue description.

- If your Avid ISIS experiences a fatal error to a blue screen, press and hold the power button until the system powers off and then power on the system again.
- When you make any changes in the storage group Details pane and click Close, you are asked if you want to save your changes. If you click Yes, your changes are not saved. You must re-apply the changes and click Apply before you click Close.

Workaround: Always click Apply before you click Close.

ISIS | 2500 - 2000 Infrastructure Issues

The following are known issues with the Avid ISIS | 2500 - 2000 infrastructure. When a workaround exists, it appears in the paragraph directly following the issue description.

- In the Management Console on the Engines page, the values in the Free Memory and Total Memory are reversed; the Free Memory column displays the total memory, and the Total Memory column displays the amount of free memory.

File Gateway Issues

The following are known issues with the Avid File Gateway. When a workaround exists, it appears in the paragraph directly following the issue description.

- Macintosh CIFS Clients connected to the Avid ISIS File Gateway clients using the Terminal application hang when attempting to create a filename with invalid characters. Invalid characters are as follows:

? * < > | : " \ /

This hang occurs on Mac OS 10.6.2 and later.

Workaround: You must force quit or restart the Macintosh Finder to clear the copy dialog box.

- If copying between the Avid ISIS File Gateway and a Macintosh CIFS client and the “share name” is renamed in the configuration file (on File Gateway server), the copy operation on the Macintosh client gets interrupted with an appropriate error message. Clicking OK closes the error message but the copy dialog remains displayed although nothing is being copied. Clicking cancel on the copy dialog also does not close the dialog box. The CIFS share cannot be ejected since it still appears to be in use.

Workaround: You must force quit or restart the Macintosh Finder to clear the copy dialog box.

- When ISIS File Gateway clients map ISIS Workspaces to their client systems, the Used and Free space values displayed in the Windows Properties window and the Macintosh Get Info window are not accurate.

New in Avid ISIS v4.6.1

Integrity Hardening

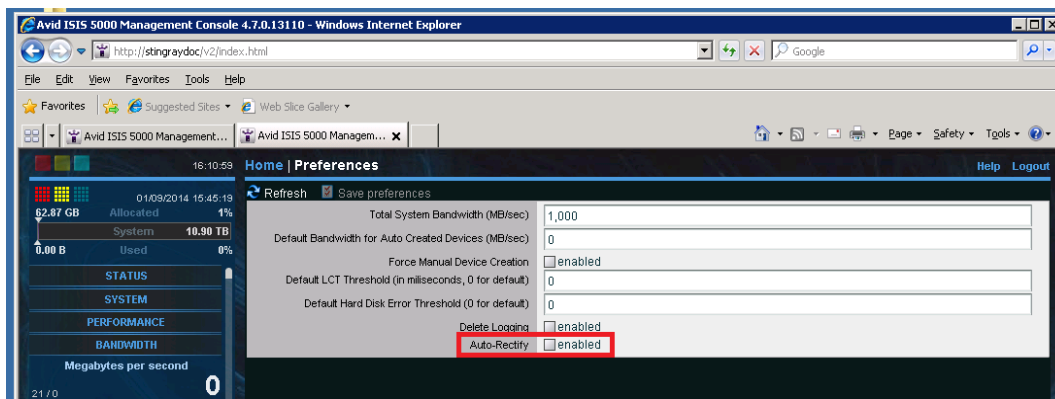
The ISIS v4.6.1 patch kit offers improvements in data protection when a Storage Manager cannot write to its peer and becomes unresponsive to the rest of the system.

Auto-Rectify Option

The ISIS v4.6.1 patch kit includes a new option in the Management Console. You can now enable Auto-Rectify, which automatically reconciles the actual amount of used space and the reported amount of used space on a system.

To enable Auto-Rectify, click Preferences under the Advanced heading. Click the check box, and then click Save Preferences.

The following figure shows the location of the Auto-Rectify check box:



Final Supported Release Stream for Some Avid Products

The v4.6.x release stream is the last to officially support the following products:

- AirSpeed Classic
- Final Cut Pro 7.x
- Media Composer 5.5.x and 6.0.x
- NewsCutter 9.5.x and 10.0.x
- Symphony 5.5.x and 6.0.x
- Windows Vista 32 and 64
- Windows XP (AirSpeed Multi Stream will still be supported)

Fixed in v4.6.1

- If the scratch drive in Final Cut Pro was set to an ISIS Workspace and any video or audio effect was rendered, “error: not found” was displayed when the render completed. This was caused by a change in how the Finder Info is used for rendered media files between Final Cut Pro 6 and 7. ISIS now allows rendering to an ISIS workspace for both FCP 6 and FCP 7. Older FCP 6 projects may need to re-render effects if the rendered files reside in an ISIS workspace.
- Media write issue on the Mac client, seen when doing AS11 exports from Media Composer. The exported file had inconsistencies and AMA-linking displayed an error message saying the plug-in does not support the file.
- Issue on ISIS client installation of AirSpeed5000. Under some circumstances, the Performance Monitor database in the registry got corrupted, causing the installation of the ISIS Performance Monitor counters to fail.
- Removing an ISIS7000 blade and unbinding it before redistribution completed resulted in hung clients.
- Microsoft hotfix available for ISIS | 5500 - 5000 systems. The v4.6.1 Autorun installer contains Microsoft hotfix KB2685007, which corrects an issue with ISIS | 5500 - 5000 systems running Windows Storage Server R2. For details about the hotfix, see the following URL: <http://support.microsoft.com/kb/2685007/EN-US>.
- During board replacement, an ISB incorrectly advertised itself as an i500. Now the ISB displays a generic type until the metadata has been read and the actual ISB type is known to the system.
- Could not access all data on an ISIS | 7500 - 7000 with one failed drive. In v4.6.1 and later, if the Storage Manager is bound, it is allowed to run with only the one good drive (in the active but disk failed state) so that data can be retrieved from it.
- Upgrading a half-populated ISIS 2000 fails to complete the file system metadata conversion. This occurs when upgrading from v4.2 to v4.5 or v4.6.
- ISIS client hang introduced in ISIS v4.6. The hang occurred on both Mac and Windows clients while doing consolidates, transcodes, and playback, especially variable speed playback. In v4.6, to clear the error you had to reboot the system. This issue has been fixed.
- Could not perform Send-To-Playback operation on a sequence containing media being ingested. Job was static for several minutes then failed with “Transfer Cancelled” error message. This issue was found in v4.6 and fixed in v4.6.1.

New in Avid ISIS v4.6

The ISIS v4.6 software kit includes updates for the ISIS 7500 | 7000, ISIS 5500 | 5000, and ISIS 2000 System Directors, Engines, and clients. Once you update your infrastructure to ISIS v4.6, you cannot revert the infrastructure back to a previous release. Avid ISIS v4.6 Client Manager software is supported in the following infrastructures:

- ISIS | 7500 - 7000 v4.0.1, v4.0.3, v4.0.4, v4.5 and v4.6
- ISIS | 5500 - 5000 v4.0.1, v4.0.3, and v4.5, and v4.6
- ISIS 2000 v4.1, v4.2, v4.5 and v6

The following is a list of what's new in the Avid ISIS v4.6 release.

- This release supports the ISIS 7500 128TB Engine.
- Avid has added support for Windows v8.1 and Mac OSX v10.9.2 or earlier.



If you are running Windows v8.1, a new driver is required for configurations running with an Intel 1 Gb Network adapter. This driver v18.6 is included in the ISIS Installation Kit: \Drivers\ISIS Client. Note: Currently, the v18.6 driver has only been qualified with Windows v18.1.

- The Login Dialog. The login dialog has changed to eliminate the need to manually type in the protocol and port. The application will automatically figure out the connection settings based on the host name and type of application.
- Storage Manager Log Viewer: The Storage Manager Log Viewer is now incorporated into the ISIS Toolbox application. It is no longer a standalone application. As part of the Toolbox, you no longer have to log in to every single blade to view the log. All the logs for the blades within the ISIS system can be managed from this one location.

Special Notes

This section contains important information about the Avid ISIS environment.

User Permissions

A user account with Administrator privileges is required to install Avid ISIS client software on your workstations.

Avid Interplay Authentication

Avid Interplay Authentication requires the Avid ISIS System Director to use a virtual name. The System Director's virtual name must not match the actual host name and must be entered in the General Configuration Options dialog box. For instructions on adding the virtual name, search the *Avid ISIS Administration Guide* for General Configuration Options.

Avid Interplay Copy Service and Move Service in Zone 3

The Avid Interplay Copy Service and Move Service using an AS3000 or the SR2500 Interplay Copy/Move server with a single 10 Gb Myricom board installed has been qualified in Zone 3 of the ISIS | 7500 - 7000 and ISIS | 5500 environments. This qualification requires the ISIS 7000 v2.4, ISIS 5000 v3.2, or ISIS v4.x infrastructures with ISIS v3.5 and later client software.

LDAP Requires Unicode User Names and Passwords

The Avid implementation of LDAP (Lightweight Directory Access Protocol) requires that you restrict LDAP user names and passwords to ASCII. The LDAP/ISIS Account Synchronizer searches for groups and their users on an LDAP server and synchronizes (reconciles) user and group accounts by adding or removing users and/or groups from ISIS,

Fast User Switching Not Supported

Fast User Switching is a Windows feature that allows multiple user accounts to log on to a computer simultaneously. Fast User Switching is enabled by default in Windows computers. The Fast User Switching feature and multiple concurrent logged on user modes are not supported in the Avid ISIS environment. The ISIS software does not distinguish the different drive letters mapped to the same workspaces on the same computer. Conflicts appear in the following two scenarios:

- When one user maps a drive letter to one workspace and another user maps the same drive letter to a different workspace
- When one user maps a workspace to one drive letter, and another user maps a different drive letter for the same workspace.

Avid ISIS Firewall

Avid ISIS ships with the Windows Firewall turned off. For a list of the ports used in the Avid ISIS, see the *Avid Network and Switch Guide*. This guide is available from the installer Documentation link, the Management Console Help link, and the \AvidISISDocumentation folder in the ISIS software kit.

Multiple ISIS Systems Must be on Separate Networks

If you are setting up multiple ISIS shared storage systems, make sure that each system is on a separate network.

Macintosh Resource Files and Windows Clients

If Macintosh files are copied to a Windows system with the Macintosh resource fork files, the resource fork files cannot be copied to mounted workspaces from a Windows client. Avid ISIS does not accept Macintosh resource fork files from Windows clients. Appropriate “properties” error messages are displayed if this is attempted.

Adobe Premiere Pro Software Approved

Avid has tested Adobe Premiere Pro as a client in the Avid ISIS | 7500 - 7000 and ISIS | 5500 - 5000 shared storage environments. The ISIS | 2500 - 2000 only supports Adobe Premiere Pro in push/pull workflows. The following guidelines and restrictions apply to Adobe Premiere clients.

- Adobe Premiere was qualified on Windows 7 64-bit and Macintosh v10.7.3 64-bit operating systems.
- Adobe Premiere 10 Gb clients are not supported.
- Avid ISIS supports Adobe Premiere Pro clients in Zones 1, 2, and 3.
- Media from both Adobe Premier and Avid Media Composer are able to co-exist in the same Storage Group. Although for optimal performance, you should not mix Avid and Adobe Premier editors in the same Storage Group.
- Adobe Premiere clients follow the same guidelines as for Avid editors in regards to the Avid ISIS Client Manager Preference settings. The default Client Type setting is set to Medium Resolution (limited to resolutions that draw 16 MB/s or less). Use the High Resolution setting when working with High Definition media (resolutions that draw higher than 16 MB/s). There are some HD resolutions that draw less than 16 MB/s for a single stream, but you should still use the High Resolution setting (for example, XDCAMHD 50). For information on how many streams were qualified per client at various resolutions, see the *Avid ISIS Performance Guide* on the Knowledge Base at www.avid.com/support.

Final Cut Pro X Software Approved

Avid has tested Final Cut Pro X as a client in the Avid ISIS | 7500 - 7000 and ISIS | 5500 - 5000 shared storage environments. The ISIS | 2500 - 2000 only supports Final Cut Pro in push/pull workflows. There is no Avid restriction on the QuickTime version. Use the QuickTime version recommended in the Final Cut Pro application. Avid ISIS supports Final Cut Pro X Macintosh clients in Zones 1, 2, and 3. For information on how many streams were qualified per client at various resolutions, see the *Avid ISIS Performance Guide* on the Knowledge Base at www.avid.com/support.



Avid Interplay Access supports the Mac OSX platform, and through this application Final Cut Pro QuickTime files and projects can be checked into Interplay. Any Interplay workstation can search for these files and edit their Interplay metadata, though there is currently no tightly integrated workflow between Avid Media Composer and Final Cut Pro within Interplay.

Virus Protection

Windows updates are not installed automatically on the System Director. If you are connected to the Internet, Avid recommends you manually select your Windows updates and install them during a scheduled maintenance intervals. Some updates require that you restart the System Director. In addition, anti-virus programs that contain autoscanning features (for example File System Auto-protect or scanning files on network drives) are not supported.

Access the Knowledge Base at www.avid.com/securityupdate and review the Microsoft Security Bulletin Addendum document. This link also includes anti-virus software support on Avid products which can be found in the Avid Security Guidelines and Best Practices document.



Virus protection software and Windows updates will result in workflow interruptions, and should be performed during a scheduled maintenance interval.

Uninterruptible Power Supply

Avid highly recommends using an Uninterruptible Power Supply (UPS) with all Avid ISIS components.

Without a UPS if you lose power while capturing media, some data loss for newly captured media will likely occur. The recently written data in the RAID controller that has not been written out to the data drives would be lost.

Avid ISIS | 7500 - 7000 Special Notes

The following list applies to Avid ISIS | 7500 - 7000 infrastructures:

Upgrading Unstacked Switches

If you need to upgrade switches that are not yet stacked, the Avid ISIS software kit includes the Avid ISIS Upgrade Utility. This stand-alone application allows field engineers to start and monitor the installation of switch and ISB upgrades from a laptop connected to Avid ISIS switch through the management port. This utility does not replace the current upgrade process. Its primary function is for upgrading a switch or a pair of switches that is incompatible with an existing stacked network. Insertion of these switches into the network before the upgrade could disrupt or compromise the network's operation. For instruction on using the utility, see the *Avid ISIS | 7500 - 7000 Setup Guide*.

The Avid ISIS Upgrade Utility (AvidUnityISISTools.msi) is in the Avid ISIS software kit in the \ISISUtilities\ISIS 7000 folder.

Spanning Tree PortFast Required with Dual Network Client Ports

If Spanning Tree PortFast is disabled when your system is recovering from a link failure using a dual network client port, a “semaphore time-out” error message appears.

Avid ISIS | 5500 - 5000 Special Notes

The following list applies to Avid ISIS | 5500 - 5000 infrastructures:

Applying the Microsoft HotFix KB2685007 on Windows 7

Windows Server 2008 R2 and Windows 7 are both affected by a UDP issue which restricts maximum throughput of ISIS clients connecting with ISIS| 7500 - 7000. This is relevant to all ISIS 4.x versions before March 2014, but has not been tested on earlier versions.

This situation exists in ISIS Client versions up to V4.6.x and may be addressed/applied in later ISIS client versions during the installation sequence.

Microsoft has issued a HotFix which is targeted to Windows Server 2008 R2, but can be applied to Windows 7 clients, and results in an approximate 45% maximum speed improvement.

The Microsoft Knowledge Base article (<http://support.microsoft.com/kb/2685007/EN-US>) is written from the perspective of Windows Server 2008 R2 and not Windows 7; hence it is not possible to follow the procedure given by Microsoft, but using the modified procedure below you can improve system performance.

To download the hotfix, you must supply a valid email address, to which the link will be sent.

Follow the instructions to download the hotfix. Do not click the “Fix it for me” link; this does not work on Windows 7. Instead, run the file named 447595_intl_x64_zip.exe and specify a path to a location on the client system.

Navigate to that path and run the file Windows6.1-KB2685007-x64.msu, then use the following procedure to create a new registry value.

To manually create a new registry value:

1. Click Start, and type regedit in the Search programs and files box, then press Enter. If prompted for an administrative password, enter it.
2. Locate and click the following registry sub key:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\BFE\Parameters\
3. On the Edit menu, click New, then click DWORD Value.
4. Type MaxEndpointCountMult, and then press Enter.
5. Right-click MaxEndpointCountMult, and then click Modify.
6. In the Value data box, type 10 (for Base, select Decimal), and then click OK.



The MaxEndpointCountMult registry value is a multiplication factor that applies to the default scavenge value of 15,000. You can set the MaxEndpointCountMult registry value from 1 to 50,000. The recommended value is 10.

7. Exit the Registry Editor.
8. Reboot the client system.

Single Engine Configurations with Routed Clients

For single engine ISIS | 5500 - 5000 configurations that include routed clients (Layer 3 to the ISIS 5500 | 5000), the Engine can be connected to the switch using either 10 Gb or 4 x 1Gb.

Avid ISIS | 2500 - 2000 Special Notes

The following list applies to Avid ISIS | 2500 - 2000 infrastructures:

Moving Workspaces

The following list describes the supported methods for moving data between online (ISIS | 7500 - 7000 and ISIS | 5500 - 5000) and nearline (ISIS | 2500 - 2000) Workspaces.

- Interplay Workflows

Avid Interplay v2.6 and v2.7 have been qualified in the Avid ISIS v4.5 ISIS environments. You can move assets from one ISIS system to another using Interplay workflows. The Interplay Media Services is required. Interplay workgroups with a single IP Database for multiple ISIS configurations can use the Interplay Transcode and Interplay Move services to move media. To move media between Interplay workgroup configurations, use Interplay Copy, Interplay Delivery, and Interplay Transfer.

- AirSpeed Workflows

Avid AirSpeed 5000 v2.1, AirSpeed Multi Stream v1.8.6 and AirSpeed v2.7.12 have been qualified in the Avid ISIS v4.5 ISIS environments. The AirSpeed 5000 can capture high resolution to online environments, and proxy to nearline environments (or proxy to online and high resolution on nearline). This allows you place material directly to where you need it and not have to move it.

- Editor Workflows

Editors can move clips and sequences between ISIS workspaces using the Consolidate/Transcode feature, In addition, with online and nearline workspaces mounted on a single client, you can drag files from one workspace to another.



Moving files in an Interplay shared storage environment from a client at the file system level could be detrimental to system operations. Use Interplay Media Services applications when moving files in an Interplay shared storage environment.

- Data Migration Utility Workflows

The Data Migration Utility can be used to move complete Workspaces between ISIS infrastructures. You can use the Data Migration utility to move Workspaces between any combination of ISIS 7500 | 7000, ISIS 5500 | 5000, and ISIS | 2500 - 2000 systems; this includes mirrored, RAID 6, HW RAID (ISIS 5500 RAID 5), SW RAID (ISIS | 2500 - 2000 RAID 6), and unprotected Workspace. For instructions on setting up and using the Data Migration Utility see the *Avid ISIS Client Guide*.

When Workspaces are migrated, the protection type is inherited from the ISIS system. For example, Workspaces migrated to ISIS | 5500 inherit RAID 5 protection. Workspaces migrated to ISIS | 2500 - 2000 inherit RAID 6 protection. Workspaces migrated to ISIS | 7500 - 7000 inherit mirrored protection by default.

- RichCopy Workflows

RichCopy is a free computer utility program developed by Microsoft to copy file directories. It performs faster than conventional copy and paste commands in the Windows operating system.

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