



Avid® ISIS®

ReadMe Version 4.2

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<b>Date Revised</b>	<b>Release</b>	<b>Changes Made</b>
12/15/2012	v4.2/v4.0.3	<p>The ISIS v4.2 software kit includes an ISIS 7000 v4.0.3 and ISIS 5000 v4.0.3 infrastructure update. ISIS 7000 v4.0.3 includes a mandatory update needed for i4000 support. For details, see <a href="#">“Avid ISIS v4.0.3 Infrastructure Update” on page 14.</a></p> <p>Avid ISIS v4.2 Client Manager software now supports Apple® OS X Mountain Lion, v10.8 in the ISIS 7000, ISIS 5000, and ISIS 2000 infrastructures. This release also qualifies Media Composer v6.5, Symphony v6.5, and NewsCutter v10.5 Avid editing software releases. For details, see <a href="#">“New in Avid ISIS v4.2/v4.0.3” on page 12.</a></p> <p>The ISIS v4.2 release also introduces a configuration of the ISIS 2000 Engine using 42 media drives. This configuration of 42 media drives provides half the storage (120 TB) as the fully populated 82 media drives configuration.</p>

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### **Metadata Location On the System Director**

This is an important reminder to move the metadata after doing an ISIS v4.x software upgrade. 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

For full upgrade instruction, see [“Copying the Metadata to the New Default Location On the System Director” on page 26.](#)

## 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 in the ISIS 2000, ISIS 5000 and ISIS 7000 infrastructures. Individual ReadMes no longer exist. New installations and upgrades run the same Autorun.exe file in the kit for installing the ISIS 2000 System Director, ISIS 7000 System Director, ISIS 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.



*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](http://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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## If You Need Help

If you are having trouble using your Avid product:

1. 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.
2. Check the latest information that might have become available after the documentation was published.

New information would be found 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](http://www.avid.com/US/support).

3. Check the documentation that came with your Avid application or your hardware for maintenance or hardware-related issues.
4. Visit the online Knowledge Base at [www.avid.com/US/support](http://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.

## 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.



*The documentation describes the features and hardware of all models. Therefore, your system might not contain certain features and hardware that are covered in the documentation.*

**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.

# Avid Training Services

Avid makes lifelong learning, career advancement, and personal development easy and convenient. Avid understands that the knowledge you need to differentiate yourself is always changing, and Avid continually updates course content and offers new training delivery methods that accommodate your pressured and competitive work environment.

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

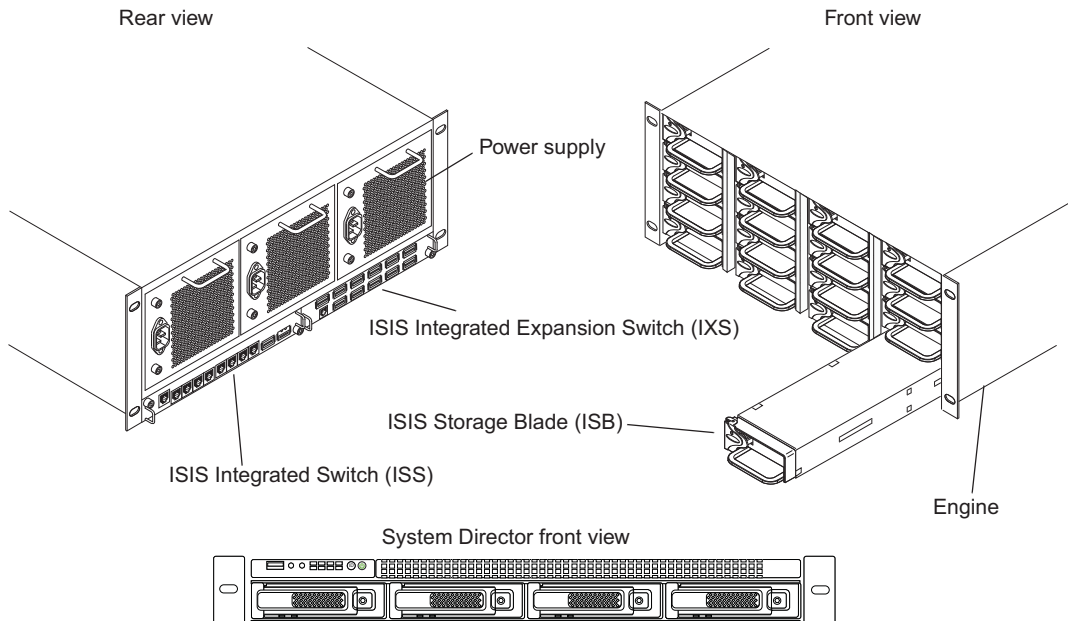
## Product Terminology

The following three sections give new users a brief description of ISIS component names.

### ISIS 7000 Terminology

The major components used to create the Avid ISIS 7000 shared storage network are a System Director, an engine containing ISIS Integrated Switch (ISS), ISIS Integrated Expansion Switch (IXS), ISIS Storage Blade (ISB), and one or more clients.

#### Avid ISIS 7000 Shared Storage Network Hardware





If you are unfamiliar with the names of the Avid ISIS 7000 components, the following table provides the terms used in this and other Avid ISIS 7000 documents.

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## Product Nomenclature

Product name	Term used and description
Avid ISIS® storage blade (labeled i500, i1000, i2000, i4000)	<p>ISIS Storage Blade (ISB)</p> <p>This hot swappable sled is accessible from the front of the ISIS engine and contains two SATA drives.</p>
Avid ISIS Integrated Ethernet switch blade	<p>ISIS Integrated Switch (ISS)</p> <p>This hot swappable switch is accessible from the rear of the ISIS engine and connects 1 Gb and 10 Gb clients. The ISS2000 indicates second generation hardware; first generation hardware is labeled ISS1000.</p>
Avid ISIS Integrated Expansion Ethernet switch blade	<p>ISIS Expansion Switch (IXS)</p> <p>This hot swappable switch is accessible from the rear of the ISIS engine is used to stack multiple ISIS Engines. The IXS switches are only found in configurations with three or more Engines. The IXS2000 indicates second generation hardware; first generation hardware is labeled IXS1000.</p>
Integrated power supply and cooling fans	<p>Power supplies</p> <p>Three hot swappable power supplies are accessible from the rear of the ISIS engine. Two power supplies are required to power the ISIS Engines.</p>
Avid ISIS engine	<p>Sometimes called Chassis in the Management Console interface</p> <p>Contains the ISBs, ISSs, IXSs, power supplies, and an internal midplane.</p>
Avid ISIS System Director (Active and standby)	<p>System Director, a server connected to the ISIS engine to manage the data and portions of the metadata</p>
Avid ISIS client	<p>Client, defined as a user's workstation or server with Avid ISIS client software that allows that system to mount workspaces</p>
Avid ISIS shared storage network	<p>System or shared network storage environment</p> <p>The Avid ISIS consist of the hardware, Avid software, and other hardware supplied by the customer, such as external Ethernet switches.</p>

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**Product Nomenclature (Continued)**

Product name	Term used and description
Zone 1, Zone 2, Zone 3, and Zone 4 Configurations	These are Avid-defined client configurations that connect the client to the Avid ISIS system. A complete explanation can be found in the <i>Avid ISIS 7000 Setup Guide</i> .

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## ISIS 5000 Terminology

A single Avid ISIS chassis provides System Director and Engine (Storage Server) functionality. Each Avid ISIS Engine is comprised of 16 media storage drives, two mirrored system drives, RAID controller, four 1 Gb Ethernet interfaces, plus redundant, power and fans.

Avid ISIS 5000 Engines are available in two configurations;

- ISIS 5000-16 — 16, 1 TB drives, optional 10 Gigabit Ethernet interface
- ISIS 5000-32 — 16, 2 TB drives, includes 10 Gigabit Ethernet interface installed

Either configuration supports an optional four port 1 Gb Ethernet Network Interface Card (NIC), providing up to eight 1 Gb Ethernet interfaces (four built in plus four port NIC). Up to six Engines are supported in the ISIS 5000, with 2 TB media storage drives can be combined to deliver 192 TB of shared storage. The first ISIS Engine provides System Director and Management Console functionality in addition to media storage.

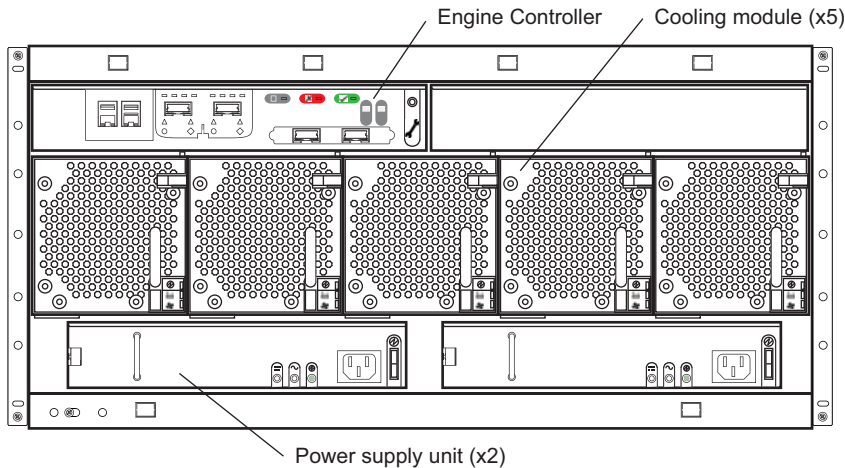
Engine connections are summarized in the following list.

- **Direct Connect Clients** — Four or eight 1 Gb Ethernet clients and one 10 Gb client connect directly into the System Director. Each client needs to be on a separate subnet and a common subnet mask.
- **Single Engine with 1 Gb Connection to the Switch** — If you are using the four 1 Gb Ethernet connections from the System Director to a switch, each 1 Gb port on the System Director uses an IP address on the same subnet and a common subnet mask.
- **Single Engine with 10 Gb Connection to the Switch** — If you are using the 10 Gb Ethernet connection from the System Director to a switch, the System Director uses one IP address.
- **Multi-Engine Connection to the Switch (10 Gb)** — If you are connecting multiple Engines, you must use the 10 Gb Ethernet connection from the Avid ISIS System Director to the switch, each Engine uses one IP address.

## ISIS 2000 Terminology

An Avid ISIS 2000 uses an external AS3000 System Director similar to the ISIS 7000 (see “[ISIS 7000 Terminology](#)” on page 8). Although the ISIS 2000 System Director is similar to the ISIS 7000 System Director, it is not the same System Director. Depending on your Avid ISIS 2000 Engine configuration, the Engine includes 82 or 42 media drives, an Engine controller with 10 Gb Ethernet connections, plus redundant power and cooling modules.

### Avid ISIS 2000 Engine



Avid ISIS 2000 Engines are available in two configurations:

- ISIS 2000-240 — 84, 3 TB drives, providing 240 TB of raw storage which equates to 192 TB of usable storage
- ISIS 2000-120 — 42, 3 TB drives, providing 120 TB of raw storage which equates to 96 TB of usable storage

The ISIS 2000 System Director connects to an ISIS qualified switch using either a 1 Gb or 10 Gb connection. The ISIS 2000 Engine connects to that same switch using a 10 Gb connection. Both models of Avid ISIS 2000 Engines are populated with 3 terabytes (TB) SAS drives. These media drives are configured for redundant array of independent disks (RAID) 6 storage protection. Clients access any combination of ISIS online systems (ISIS 5000 and ISIS 7000) and ISIS nearline systems (ISIS 2000) system through external switch connections. The ISIS 2000 Management Console provides the same workspace and user functionality offered in all ISIS environments.

The ISIS 2000 nearline system workflows provides basic video playback of low bit rate media and high-speed file transfers to online ISIS systems.

## Gold Disk Qualification

The following Avid ISIS systems comply with US Defense Information Systems Agency (DISA) Gold Disk requirements for network devices.

- Avid ISIS 7000 v4.x AS3000 System Director with Window Storage Server 2008 operating system
- Avid ISIS 5000 v4.x System Director with Window Storage Server 2008 operating system

## New in Avid ISIS v4.2/v4.0.3

The following is a list of new features that were added in the Avid ISIS v4.2/v4.0.3 release.

- Avid ISIS v4.2 Client Manager software is supported in the:
  - ISIS 7000 v2.4, v4.0, v4.0.1, and v4.0.3 infrastructures
  - ISIS 5000 v3.2, v4.0, v4.0.1, and v4.0.3 infrastructures
  - ISIS 2000 v4.1 and v4.2 infrastructures
- This release adds support for Mountain Lion OS X v10.8. For details, see [“Macintosh Mountain Lion Operating System” on page 13](#).

Along with the support for Mountain Lion clients, comes the qualification of the latest Avid editing software releases.

- Media Composer v6.5
- Symphony v6.5
- NewsCutter v10.5



*Support for clients with the Macintosh® Snow Leopard operating system (OS X v10.6.x) is not supported with Avid ISIS v4.2 client software.*

- The ISIS v4.2 release also introduces a half populated ISIS 2000 Engine. The ISIS 2000 now supports Engines with 42 media drives as well as Engines with 82 media drives when fully populated. For more information, see [“ISIS 2000-120 Engine” on page 14](#).
- This software kit also include an ISIS 7000 and ISIS 5000 infrastructure update. For details, see [“Avid ISIS v4.0.3 Infrastructure Update” on page 14](#).
- Avid has completed its characterization of Adobe Premiere Pro version CS6 64-bit clients in an Avid ISIS v4.x shared storage environment. For information on how many streams were qualified per client at various resolutions, see the Avid ISIS v4.0 Performance and Redistribution Guide on the Knowledge Base at [www.avid.com/US/support](http://www.avid.com/US/support).

- The Avid ISIS Benchmark Utility is a diagnostic utility that allows you to validate ISIS clients by checking the throughput of client I/O when accessing Avid ISIS workspaces. The Avid ISIS Benchmark Utility is the controller that drives multiple hosts running the Avid Benchmark Agent. The Avid Benchmark Agent is installed on all ISIS client systems when you install the ISIS client software.

Although you can change the port setting used in the Avid ISIS Benchmark Utility the defaults have been changed:

- Server port: The previous default was 8777; the new default is 5017
- TCP port: The previous default was 7777; the new default is 5013
- UDP port: The previous default was 8888; the new default is 5014



*For information on using the software, see the Avid ISIS Benchmark Utility Guide that is included when you install the utility. The installer for the utility is located in the \AvidISISUtilities\ISIS Benchmark Utility folder on the software kit.*

- The Avid Log Utility is installed with the ISIS client software and used by Avid Customer Support to gather logs of the current state of ISIS client connection. This utility captures and saves logs on the client system to assist Avid personnel with troubleshooting client issues. For more information, see “ISIS Log Utility” on page 15.

## Macintosh Mountain Lion Operating System

The Avid ISIS 7000, Avid ISIS 5000, and Avid ISIS 2000 infrastructures now support Macintosh clients that use the Macintosh Mountain Lion OS X v10.8.2. Avid recommends a clean install of Mountain Lion but a Mac OS upgrade to your existing Lion system is supported.



*To use the ISIS Management Console, you need to have Adobe Flash Player installed on your system. Macintosh operating systems require the latest versions of Flash Player installed. You can download the Flash Player at <http://www.adobe.com>.*

### **To install ISIS v4.2 client software on your Macintosh Lion system:**

1. Remove the old version of the ISIS client software using the uninstaller in the Applications > Avid\_Uninstallers folder.
2. Perform a clean install, or upgrade to Macintosh Lion (see your Macintosh documentation).
3. Install ISIS client software v4.2.

## Macintosh Operating System Gatekeeper

Mountain Lion OS X v10.8 includes a security feature named Gatekeeper. It is designed to prevent users from installing unapproved applications. If you attempt to install this ISIS client software without first disabling Gatekeeper, errors will result.

**To disable Gatekeeper:**

1. From the Apple Menu click System Preferences.  
The System Preferences window opens.
2. Click Security & Privacy.
3. In the General tab, select Anywhere in the “Allow applications downloaded from” section.  
This allows you to install the ISIS client software.

## 10 Gb Myricom Board Driver Macintosh v10.8.x Clients

The Avid ISIS v4.2 software kit includes the 10 Gb Myricom driver for Ethernet Macintosh v10.8.x clients. The Myricom driver qualified in this release is included in the Avid ISIS software kit (\Drivers\ISIS Client\Myricom\myri10ge-macosx-1.3.3avid-1500.dmg).

Instructions for installing the 10-Gb adapter boards and installing the software are provided in the *Avid ISIS Client Guide*. Once the Myricom 10-Gb adapter board is installed, upgrade the driver as described in the guide.

## ISIS 2000-120 Engine

Avid now offers an ISIS 2000 Engine with 42 media drives. This 120 terabytes (TB), ISIS 2000 Engine is populated with 3 TB SAS drives providing 120 TB of raw storage which equates to 96 TB of usable storage. The media drives are configured for RAID 6 storage protection with two spares that automatically initiate a repair if a drive failure occurs.

The new ISIS 2000-120 Engine configuration functions exactly like the fully populated ISIS 2000-240 Engine. ISIS 2000 Engines use a 10 Gb connection to a switch in the ISIS 7000 and ISIS 5000 environments. The ISIS 2000 Management Console provides the same workspace and user functionality offered in all ISIS environments. Clients access any combination of ISIS online systems (ISIS 5000 and ISIS 7000) and ISIS nearline systems (ISIS 2000) system through external switch connections. The ISIS 2000 nearline system workflows provides basic video playback of low bit rate media and high-speed file transfers to online ISIS systems. The ISIS 2000-120 Engine has a unique drive placement between the two drawers. For instructions on installing the media drives Engines, see the *Avid ISIS 2000 Setup Guide*.

## Avid ISIS v4.0.3 Infrastructure Update

ISIS v4.0.3 is a software update to the Avid ISIS 7000 and Avid ISIS 5000 infrastructures and is included with the ISIS v4.2 release. The following two sections describe the updates. The ISIS v4.0.3 software requires Avid ISIS v4.1 or v4.2 Client Manager software.

## i4000 Memory Errors

An issue has been discovered with a small number of ISIS 7000 i4000 (4 TB ISBs). Avid ISIS 7000 v4.0.3 software includes adjustments to the i4000 memory controller hardware settings to avoid memory errors. These changes are required to ensure memory read and write operations are not performed during the memory refresh cycles. The changes adhere to the recommended number of processor wait cycles and avoids reading inconsistent memory locations. To protect data integrity, if the processor on the ISB detects an unrecoverable memory read error, the ISB automatically reboots to avoid writing corrupted media to disk or returning corrupted media to the client.

To reduce the chance of re-occurrence, Avid recommends replacing any ISB that has encountered this issue. Contact Avid Customer Success to arrange a replacement. The ISB should be removed from the Storage Group but participate in the remove redistribution. All media in mirror or RAID-6 Workspaces continues to be available. If this issue is encountered in a previous version (ISIS v4.0 or v4.0.1), the error is reported as a “Memory Error” status in the ISIS Management Console and the ISB continues to function normally.

Avid is mandating all ISIS 7000 systems with i4000s, upgrade to v4.0.3 as soon as possible. ISIS 7000 v4.0.3 requires ISIS v4.1 or ISIS v4.2 Client Manager software. For specific instructions for this upgrade, see [“ISIS 7000 Upgrades to v4.0.3” on page 24](#).

Avid is continuing to investigate the ECC memory issue to ensure all failure modes are identified and resolved.

## Media Verification When Capturing

The ISIS 7000 v4.0.3 and ISIS 5000 v4.0.3 software provides additional media verification when capturing media during a redistribution.

## ISIS Log Utility

The ISIS Log Utility used by Avid Customer Support shows the current state statistic of the ISIS client connection. This utility is installed with the ISIS client software and reports client issues. This updated utility has a common user interface for both Windows® and Macintosh® clients.

- The Log Utility has been updated to have a common user interface on all supported client operating systems.
- You can now select profiles which automatically load the correct trace filter settings based on common troubleshooting scenarios.
- The Log Utility automatically compresses and timestamps continuous logs.
- The Log Utility automatically saves to file when taking a snapshot.

**To run the Log Utility:**

1. Do one of the following:
  - ▶ (Windows) Click Start > Programs > Avid > ISIS Client > ISIS Log Utility.
  - ▶ (Macintosh) From the Finder, click the Go menu and select Application > AvidISIS > ISISLogUtility.app.
2. Based symptoms the client is experiencing, select a profile d from the Select Profile menu:
  - Client Hang
  - File or Workspace Access
  - I/O Timeouts
  - Redistribution Problems
  - Verbose Logging
3. Click Load.

The default configuration for the selected Profile is loaded.

4. (Option) Click “Current Settings” to change settings in the configuration.
5. Click “Take Snapshot” or “Start Continuous Log.”

If you started a continuous log you need to click Stop Continuous log before accessing the logs. The logs are automatically compressed and saved to your client system.

Depending on your operating system the default logging directories for the ISIS Log Utility are:

- Windows 7 and Windows 2008 servers — C:\Users\Administrator\Documents\ISISLogUtility
- Windows XP, Windows Vista 64 bit, and Windows 2003 servers — C:\Documents and Settings\Administrator\ISISLogUtility
- Macintosh OSX — /Users/Administrator/Documents/ISISLogUtility

6. Click “Show Display” or “Save Snapshot” to view or save the results.

**Fixed In This Release**

The following issues were fixed in Avid ISIS v4.2.

- ▶ In previous versions of ISIS client software, if you created a folder with the same virtual name as the System Director host name, it would not be accessible when mapped via UNC path. This issue no longer occurs.



- Some users experienced a resource clash between the Avid Benchmark Utility and Telestream® Vantage® and some versions of Adobe® After Effects® on the Macintosh client. Although you could always select different Server, TCP, and UDP network ports in the in the Avid Benchmark Utility Preferences, Avid is now using different network ports, see the Avid ISIS Benchmark Utility port setting change on [page 13](#).



*The resource clash between Avid Benchmark Utility and the Macintosh client was corrected with After Effects CS 5.5 and later.*

## New in Avid ISIS v4.1/v4.0.1

Avid ISIS 2000 v4.1 adds nearline shared storage in ISIS 7000 and ISIS 5000 online environments. ISIS v4.1 clients now have access to workspaces in multiple ISIS environments where you can browse media on nearline workspaces, then move that nearline media to online workspaces for editing. The ISIS 2000 is not intended to be used for real time editing of high resolution material, although you can have up to 100 clients doing real time playback of resolutions of up to 3 Mb/s or less.

Avid ISIS v4.1 Client Manager software is supported in the ISIS 7000 v2.4, v4.0, and v4.0.1 infrastructures and the ISIS 5000 v3.2, v4.0, and v4.0.1 infrastructures. The Avid ISIS 2000 v4.1 infrastructure software requires Avid ISIS v4.1 Client Manager software. The following is a list of new features that were added in the Avid ISIS v4.1 release:

- The ISIS v4.1 release includes an update to the Avid ISIS 7000 and Avid ISIS 5000 infrastructure. The version number of the ISIS 7000 and ISIS 5000 update is ISIS v4.0.1, see [“Avid ISIS v4.0.1 Infrastructure Update”](#) on [page 18](#).
- ISIS 2000 clients need to run ISIS Client Manager software v4.1 to access the ISIS 2000 environment. For information on the number of supported clients and client functionality, see [“ISIS 2000 Clients”](#) on [page 19](#).
- The initial release of Avid ISIS 2000 supports for a single Engine with 192 TB of usable storage in the nearline environment.
- In ISIS v4.0, new systems were only available with software licensing. If your existing ISIS system was already using an Avid application key (dongle), you did not need to convert to a software license and could continue using the application key. The application key is now available as an option and can be purchased to use with new ISIS 7000 and ISIS 5000 systems. If you purchased an application key you must install the key in a USB slot of the System Director before clients can log in and use the ISIS system.



*The ISIS 7000 and ISIS 5000 Setup Guides incorrectly state that you will receive a separate System ID and Activation ID for each System Director. That statement is misleading. If you have purchased a “Failover” System Director for the ISIS 7000 or a “Resilient” System Director for the ISIS 5000, both System Directors use the same System ID in a dual System Director configuration. You do need a separate Activation ID for each System Director.*

## Avid ISIS v4.0.1 Infrastructure Update

An update to the Avid ISIS 7000 and Avid ISIS 5000 infrastructure has been included with the ISIS v4.1 release. ISIS v4.0.1 includes the following enhancements and fixes for the ISIS 5000 Storage Server, ISIS 5000 System Director, ISIS 7000 System Director and ISIS 7000 ISB and ISS/IXS blades.

Avid ISIS v4.0.1 ISIS 7000 and ISIS 5000 software release is only available on the Avid Download Center. Avid ISIS 7000 v4.x and ISIS 5000 v4.x infrastructure software requires Avid ISIS v4.x Client Manager software.



*When you upgrade from v4.0 and earlier to v4.0.1 and later, you will notice that all the ISBs in the Management Console > Storage Manager page displays “no connection” in the Status column. You might also notice new ISBs appear with no Status. Once the upgrade enters phase 3, the status of “updating” is displayed and the extra ISB disappear. This is a normal one-time behavior when you upgrade from v4.0 and earlier to v4.0.1 and later.*

### Management Console Change

The Avid ISIS v4.0.1 ISIS 7000 and ISIS 5000 software release also includes color and layout changes. The Management Console for each of the ISIS systems have a unique color to help you identify what Management console you are logged into. In addition, the icons in the Management Home page are now displayed vertically instead of horizontally.

- ISIS 7000 has a emerald green hue Home page
- ISIS 5000 has a deep blue hue Home page
- ISIS 2000 has a hazel hue Home page

### Fixed In This Release

The following issues were fixed in Avid ISIS v4.0.1.

- When attempting to rectify files on an ISIS 7000 system that included a file that no longer existed, the ISBs could get stuck trying to rectify the missing file. The ISB had to rebooted to clear the issue. ISIS v4.0.1 now handles recently deleted files correctly.
- The client and the ISIS system were not properly maintaining data connection status. This has been corrected in ISIS v4.0.1.
- When under a significant write load from multiple clients, such as capture, transcode, render or other similar operations, the System Director would sometimes assert and failover to the Standby System Director. The issue that was causing this failover has been corrected in ISIS v4.0.1.

- Avid Low Resolution Encoder clients had problems connecting to ISIS 7000 environments and communicating with Interplay components with ISIS Client Manager v4.0 software. ISIS Client Manager v4.1 software corrects the issue with Avid Low Resolution Encoder clients on ISIS 7000.
- Previously if you selected multiple Workspaces and click mount, Workspaces would assign mount points to the first available driveletter. In ISIS client v4.1 software, whenever preferred mount points were assigned to Workspaces, they are mounted first. All other Workspaces are assigned to first available driveletter.

## ISIS 2000 Clients

Avid ISIS 2000 systems support 100 ISIS clients and require v4.1 of the ISIS Client Manager software. Windows and Macintosh clients can use either 1 Gb and 10 Gb connections at any client Type setting. ISIS 2000 clients must connect through a Zone 2 or Zone 3 switch network segment port.

The ISIS 2000 includes a File Gateway function that allows an unlimited number of clients to push and pull data to and from the ISIS 2000 through a CIFS or FTP connection without the ISIS Client Manager software.



*When the File Gateway is configured as a CIFS server, workspaces are mapped to drive letters on the File Gateway. Depending on the number of drives in the File Gateway, the maximum number of workspaces that can be shared out as a CIFS share is 22 workspaces.*

## ISIS 2000 Switches

Avid has qualified the Force10 S4810 and Cisco 4900M switches for Avid ISIS 2000 v4.1. The ISIS 2000 nearline storage is designed for workflows with your ISIS 7000 and ISIS 5000 online environments. Sample ISIS 7000 and ISIS 5000 configurations files are included in the software installer kit, see the [“Qualified ISIS Switches” on page 43](#).

## ISIS 2000 Engine

Avid ISIS v4.1 provides support for one Engine of nearline shared storage. The ISIS 2000 is not intended to be used for real time editing of high resolution material, although real time playback of resolutions of up to 3 Mb/s or less is supported.

## Moving ISIS 2000 Workspaces

The following sections list the supported methods for moving data between online (ISIS 7000 and ISIS 5000) and nearline (ISIS 2000) Workspaces.

## Interplay Workflows

Avid Interplay® v2.6 and v2.7 have been qualified in the Avid ISIS v4.0.1 and v4.1 ISIS environments. You can move assets from one ISIS system to another using Interplay workflows. The Interplay Media Services is required. Interplay workgroups where there is a single IP Database for multiple ISIS configurations can use the Interplay Transcode and Interplay Move services to move media. To move between Interplay workgroup configurations, Interplay Copy, Interplay Delivery, and Interplay Transfer can be used to move media.

## 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 v4.0.1 and v4.1 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 7000, ISIS 5000, and ISIS 2000 systems (this includes mirrored, RAID 5, RAID 6, and unprotected). 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 based on the ISIS system. For example, Workspaces migrated to ISIS 5000 inherits RAID 5 protection. Workspaces migrated to ISIS 2000 inherits RAID 6 protection. Workspaces migrated to ISIS 7000 inherits mirrored protection type by default.



*The Avid ISIS Client Guide currently does not list the ISIS 2000 in the ISIS to ISIS moves. Workspace moves including the ISIS 2000 is new feature in this release.*

## 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.

# Software Installation Instructions

Avid ISIS v4.1 Client Manager software is supported in the ISIS 7000 v2.4 infrastructure and the ISIS 5000 v3.2 infrastructure. Avid ISIS 7000 v4.0.1 and ISIS 5000 v4.0.1 infrastructure software requires Avid ISIS v4.1 Client Manager software. The following is a summarized version of the procedure. The *Avid ISIS Setup Guide* contains complete instructions for loading the software onto the system. You can access the documentation in the top-level AvidISISDocumentation folder on the Avid ISIS software installer kit.

- [“ISIS 7000 Software Installation on New Systems” on page 22](#)
- [“ISIS 7000 Upgrades to v4.0.3” on page 24](#)
- [“Avid ISIS 5000 Software Installation” on page 28](#)
- [“Avid ISIS 2000 Software Installation” on page 35](#)
- [“Avid ISIS Client Software Installation” on page 37](#)

The clients are defined as follows:

- Avid editing applications (see [“Avid ISIS Client Software Installation” on page 37](#))
- Interplay Assist and Instinct
- Interplay Access
- Avid Approved Applications Initiative such as Pro Tools and Final Cut Pro

The infrastructure is defined as follows:

- ISIS 7000 System Directors — System Director software and upgrade Storage Blades (ISBs) and Switch Blades (ISS/IXSs) in the Avid ISIS Engines to the latest firmware
- ISIS 5000 Engines — System Director and additional Engines
- ISIS 2000 System Directors — System Director software and upgrade Storage Managers in the Avid ISIS Engines to the latest code
- Interplay servers — Interplay Engine, Interplay Media Indexer, Interplay Transfer, and CaptureManager
- Capture devices — AirSpeed 5000, AirSpeed Multi Stream, and AirSpeed

## Avid ISIS 7000 Software Installation

To upgrade to this release, install Avid ISIS 7000 software on the System Director and Upgrade Storage Blades (ISBs) and Switch Blades (ISS/IXSs) in the Avid engines. The Avid ISIS clients must be at ISIS v4.x.



*When installing the Avid ISIS 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 another version.*

### Component Requirements From Previous ISIS 7000 Releases

The following is list of items outside the ISIS software that you might need to update depending on the current version of your ISIS software. If you are setting up a new ISIS system or updating an ISIS environment that is already at v4.0, continue with “[ISIS 7000 Upgrades to v4.0.3](#)” on [page 24](#).

- If updating from ISIS v2.4 – v4.0 — update the ISIS 7000 System Director software before installing this release of ISIS 7000 software, see *Avid ISIS v4.0 ReadMe*.



*Remember to copy your metadata to the new v4.x location, see “[Copying the Metadata to the New Default Location On the System Director](#)” on [page 26](#).*

- If updating from ISIS v2.0 – v2.0.6 to v2.4 — update the System Director Intel system BIOS on the 64-bit System Director (SR2500), see *Avid ISIS v2.2.2 ReadMe*.
- If updating from ISIS v2.0 – v2.0.6 to v2.4 — update the Intel RAID controller driver and registry key on the 64-bit System Director, see *Avid ISIS v2.2.2 ReadMe*.
- If updating from ISIS v2.0 – v2.0.3 to v2.4 — update the System Director to allow Windows Updates, see *Avid ISIS v2.2.2 ReadMe*.
- If updating from ISIS v2.0 – v2.0.1 to v2.4 — update the System Director application key (dongle), see *Avid ISIS v2.2.2 ReadMe*.
- If updating from ISIS v1.4 – v2.0.1 to v2.4 — you must first upgrade to Avid ISIS v2.1.1 before upgrading to v2.4, For instructions, see *Avid ISIS v2.1.1 ReadMe*.

### ISIS 7000 Software Installation on New Systems

New systems include the Avid ISIS 7000 software kit on a USB flash drive. If upgrading your software from an earlier release, download the software from the Avid Download Center ([www.avid.com/US/support/downloads](http://www.avid.com/US/support/downloads)) to your System Director.

The *Avid ISIS 7000 Setup Guide* contains complete instructions for loading the software onto the system. You can access the documentation in the top-level AvidISISDocumentation folder on the Avid ISIS software installer kit. The following is a summarized version of the procedure.



*In the past Avid has instructed you stop the Standby System director, upgrade the Standby, and restart the Standby. Once the Standby was running you were instructed to update the Active System Director.*

*Avid has revised the upgrade process to stop the Standby System Director and upgrade the Active System Director first, then upgrade the Standby System Director. This process avoids replicating metadata between ISIS software versions.*

**To install your ISIS 7000 software on new systems:**

1. Log in to the Avid ISIS 7000 System Director as Administrator (default password: **is-admin**).
2. Make a folder for the software kit on your root directory (C:\) of your Active System Director.
3. Insert the software USB flash drive into any of USB ports on your Active System Director.



*You can run the software installer from the USB flash drive. The advantage of copying the software kit to the Avid ISIS 7000 is that you have easy access to kit files if you should ever them in the future.*

If the USB flash drive does not automatically display:

- a. Double-click the computer icon on the desktop.
  - b. Double-click the USB flash drive icon in the window and copy the software kit into the new folder you created on the Avid ISIS 7000 system.
4. Double-click the Autorun.exe file in the root directory of software kit.  
The installer detects the existing version of the installed software (if any) and displays the components that need to be upgraded in the splash screen.
  5. Select ISIS 7000 System Director from the “Select Software Package” menu.  
The File Gateway selection is used when loading the Avid File Gateway server. The File Gateway software cannot be installed on the same server as the System Director software.
  6. Click Apply.
  7. Follow the screen prompts accepting the defaults and License agreement.
  8. Once the installation is complete, click Finish.
  9. Open the Avid License Control tool, click Start > Programs > Avid > Utilities > Avid License Control and activate your Avid ISIS license. For detailed license activation instructions, see the *Avid ISIS 7000 Setup Guide*.

You will need the System ID and Activation ID card included with your new System Director.

10. Load the ISBs and ISS/IXSs firmware. Using the ISIS Management Console, select all the ISBs and click Upgrade Storage Blades and then select all your ISS/IXSs and click Upgrade Switch Blades. You do not need to wait for the ISBs to be finished, you can upgrade ISBs and ISS/IXSs at the same time. For more information, see the *Avid ISIS 7000 Setup Guide*.

You can watch the upgrade progress in your Monitoring tool.

11. Run the Product Recovery tool to create a Product Recovery USB flash drive.



*For information on creating the Product Recovery USB flash drive, see the Avid ISIS 7000 Setup Guide. To open and use the ISIS Control Panel and Management Console see the Avid ISIS Administration Guide.*

12. Open the ISIS Control Panel.

13. Click Stop System Director.

14. Click Configure File System.

15. Open the Management Console.

Log in using the Administrator user name and the default password is blank.

16. Select Create Active File System and click OK.

17. Load the ISBs and ISS/IXSs firmware. Using the ISIS Management Console > Engines page, select all the Engines and click Upgrade Blades and then select all your ISS/IXSs and click Upgrade Switches. You do not need to wait for the blades (ISBs) to be finished, you can upgrade ISBs and ISS/IXSs at the same time. For more information, see the *Avid ISIS 7000 Setup Guide*.

You can watch the upgrade progress in your Monitoring tool.

18. Bind the ISBs. Using the ISIS Management Console > Storage Managers page, select your ISIS Storage Mangers in the list and click Bind.

19. Create a Storage Group, Workspaces, and add Users in the Management Console.

20. Repeat these steps if you are setting up a Standby System Director.

21. Install your Avid ISIS clients to the v4.0 software. For more information, see the *Avid ISIS Client Guide*.

### ISIS 7000 Upgrades to v4.0.3

The following process summarizes the upgrade process to v4.0.3. For additional information, see the *Avid ISIS 7000 Setup Guide*. You must first update your ISIS client to Avid ISIS v4.1 or later before you install the ISIS 7000 v4.0.3 software release. Avid ISIS 7000 v4.0.3 infrastructure software requires Avid ISIS v4.1 or v4.2 Client Manager software.



*If you have a 32-bit System Director, you must upgrade to a 64-bit System Director before loading your new ISIS v4.x software.*





*If you are upgrading from a version earlier than Avid ISIS v4.0.1, you must first perform the updates documented in “Component Requirements From Previous ISIS 7000 Releases” on page 22 before upgrading to v4.0.3.*

**To upgrade ISIS 7000 to v4.0.3:**

1. Download the ISIS v4.0.3 software kit from the Avid Download Center ([www.avid.com/US/support/downloads](http://www.avid.com/US/support/downloads)) to your System Director.
2. Log into Administrator account on the Standby System Director and Stop the Standby System Director using the ISIS Control Panel.
3. (Upgrade) Make a copy of your current metadata files. The following are the file names and where they are located:
  - v2.x metadata location  
D:\Program Files\Avid Technology\AvidUnityISISSystemDirectorx64
  - v4.x metadata location  
D:\Program Files\Avid\ISIS System Director
    - Partition0
    - Partition1
    - PartitionDump.bin
4. Load the ISIS v4.x software kit on the Active System Director.
5. Double-click the Autorun.exe file in the software kit.
 

The installer detects the existing version of the installed software (if any) and displays the components that need to be upgraded in the splash screen.
6. Select ISIS 7000 System Director from the “Select Software Package” menu.
 

The File Gateway selection is used when loading the Avid File Gateway server. The File Gateway software cannot be installed on the same server as the System Director software.
7. Click Apply.
8. Follow the screen prompts accepting the defaults and License agreement.
9. Once the installation is complete, click Finish.
10. If you have upgraded from ISIS 7000 v2.x, copy your metadata from the old location used in the previous release, to the new location on both the Active and Standby System Director, see [“Copying the Metadata to the New Default Location On the System Director” on page 26.](#)
11. Upgrade your ISBs (blades) and ISS/IXSs (switches), using the ISIS Management Console > Engines. Select all the Engines and click Upgrade Blades and then click Upgrade Switches. You do not need to wait for the ISBs to be finished, you can upgrade ISBs and ISS/IXSs at the same time.



When you upgrade from v4.0 and earlier to v4.0.1 and later, you will notice that all the Storage Managers in the Management Console > Storage Manager page displays “Install needed - No Connection” in the Status column. You might also notice new ISBs appear with no Status. Once the upgrade is finished, the extra ISB disappear. This is a normal one-time behavior when you upgrade from v4.0 and earlier to v4.0.1 and later.

Name	ISB Name	Status	Time	Status	Uptime	Temperature	State	Type	Capacity	Usable
SM020	isb-31-150	Install needed - No C			0		Bound	2000	1,858.41	1,858
SM021	isb-31-158	Install needed - No C			0		Bound	2000	1,858.41	1,858
SM022	isb-31-151	Install needed - No C			0		Bound	2000	1,858.41	1,858
SM023	isb-31-152	Install needed - No C			0		Bound	2000	1,858.41	1,858
SM024	isb-31-159	Install needed - No C			0		Bound	2000	1,858.41	1,858
SM025	isb-31-157	Install needed - No C			0		Bound	2000	1,858.41	1,858
SM026	isb-31-156	Install needed - No C			0		Bound	2000	1,858.41	1,858
SM027	isb-31-155	Install needed - No C			0		Bound	2000	1,858.41	1,858
SM028	isb-31-163	Install needed - No C			0		Bound	2000	1,858.41	1,858
SM029	isb-31-162	Install needed - No C			0		Bound	2000	1,858.41	1,858
SM030	isb-31-160	Install needed - No C			0		Bound	2000	1,858.41	1,858
SM031	isb-31-161	Install needed - No C			0		Bound	2000	1,858.41	1,858
	Unknown				0		Unknown	Unknown	0.00	0
	Unknown				0		Unknown	Unknown	0.00	0
	Unknown				0		Unknown	Unknown	0.00	0
	Unknown				0		Unknown	Unknown	0.00	0
	Unknown				0		Unknown	Unknown	0.00	0
	Unknown				0		Unknown	Unknown	0.00	0
	Unknown				0		Unknown	Unknown	0.00	0
	Unknown				0		Unknown	Unknown	0.00	0
	Unknown				0		Unknown	Unknown	0.00	0
	Unknown				0		Unknown	Unknown	0.00	0
	Unknown				0		Unknown	Unknown	0.00	0

You can watch the upgrade progress in your Monitoring tool.

- 12. Update your Standby System Director using repeating steps 3 to 8.

After upgrading the ISB and ISS/ISX during the Active System Director upgrade, you do not need to upgrade the ISB and ISS/ISX again when upgrading the Standby.

- 13. Update your Avid ISIS client software.
- 14. Stop both the Active and Standby System Directors.

**Copying the Metadata to the New Default Location On the System Director**

The ISIS v4.x software is installed in a different path and folders than in previous ISIS releases. After upgrading your System Director to the ISIS v4.x software, you must copy your metadata to the new location to get access to your existing data.

**To copy the existing metadata to the new installation directory:**

- 1. Install the ISIS 7000 v4.x software on your 64-bit System Director as previously described.
- 2. Stop the System Director Service.

3. Copy the files listed below from their old location and replace the files in the new location on drive D:
  - Partition0
  - Partition1
  - PartitionDump.bin

Old v2.x metadata location  
 D:\Program Files\Avid Technology\AvidUnityISISSystemDirectorx64

New v4.x metadata location  
 D:\Program Files\Avid\ISIS System Director
4. Start the System Director Service.



*If there is an error upgrading the metadata, the System Director restarts and then fails again. Import the metadata as described in the following procedure.*

**To import the existing metadata to the new installation directory:**

1. Start the Avid ISIS and click System Director Control Panel from the Launch Pad or Start > Programs > Avid > ISIS System Director and select Control Panel.
2. Click Stop System Director.
  - The Configure File System button becomes active.
3. Click Configure File System.
  - The File System Configuration dialog box opens.
4. Select Create Active File System From Import and click OK.
5. You are prompted to navigate to the PartitionDump.bin file.
  - The old v2.x metadata location is:  
 D:\Program Files\Avid Technology\AvidUnityISISSystemDirectorx64
  - The file is copied to a location used by the Active System Director and its extension is changed from bin to import.  
 D:\Program\Avid\ISIS System Director\PartitionDump.import
  - The Active System Director creates a new file system and imports the metadata from the file. It may take a few minutes to import PartitionDump.bin depending on how much metadata you have. Once it finishes, you will see “COMPLETING SAVE AND IMPORT OPERATION (SUCCESS).”
6. Verify that the System Director is now running and Active. Start the Management Console and verify that all workspaces are listed. If not, call customer support before continuing.

## Avid ISIS 5000 Software Installation

New systems include the Avid ISIS 5000 software kit on a USB flash drive. If upgrading your software from an earlier release, download the software from the Avid Download Center ([www.avid.com/support/downloadcenter](http://www.avid.com/support/downloadcenter)) to your System Director using the software USB flash drive included with your Avid ISIS.



*When you initially install the Avid ISIS software, the RAID set is initialized automatically. With no client traffic on the system, this will take approximately 27 hours for the ISIS 5000-32 and 14 hours for the ISIS 5000-16. During this initialization, the system is functional and able to support a limited amount of client traffic. An Avid ISIS Engine during initialization should be able to support full bandwidth to one client. This should allow sufficient bandwidth to be able to test out the system before the initialization is complete by working with one client at a time. That client bandwidth during the initialization period should be kept to a minimum. Failure to do so can significantly increase the initialization time.*

The following procedure includes the general instructions for new installations and upgrades. When a particular instruction is only needed for one or the other, (New installs) or (Upgrade) proceeds the step. When neither of these words are in front, the step is needed for both a new installation and upgrade. You must first update your ISIS client to Avid ISIS v4.1 or later before you install the ISIS 5000 v4.0.3 software release. Avid ISIS 5000 v4.0.3 infrastructure software requires Avid ISIS v4.1 or v4.2 Client Manager software.



**Do not download and run the AvidISISStorageManager64.msi file shown in the Management Console Installer window to upgrade your Engines, because important configuration files are not included in the .msi file. The complete installation is only available in the ISIS installer splash screen.**

### To install your Avid ISIS 5000 software:

1. (Upgrade) When running a System Director Resiliency configuration, stop the Standby System Director and upgrade the Active System Director first.  
Update additional Engines after your Active and Standby System Directors are updated.
2. (Upgrade) Stop the Active System Director.
3. (Upgrade) Make a copy of your current metadata files. The following are the file names and where they are located:

```
D:\Program Files\Avid\ISIS System Director
- Partition0
- Partition1
- PartitionDump.bin
```

4. Update your Myricom driver on all Engines, see [“Updating the 10 Gb Myricom Board Driver on Engines” on page 35.](#)
5. Load the new software kit (new version) on the System Director from the USB flash drive.
6. Double-click the Autorun.exe file in the root directory of the software kit.

The installer detects the existing version of the installed software (if any) and displays the components that need to be upgraded in the splash screen. [“Avid ISIS Client Software Installation” on page 37](#)

7. Select the appropriate installer from the Software Package menu (Engine/System Director or Engine only) for the enclosure you are installing on.
8. Click Apply.



*The installer automatically stops the System Director and Storage Manager services and uninstalls the earlier version of software.*



*Direct Connect configurations need at least one client connected before the Storage Manager recognizes a valid configuration. With no clients connected, the status is invalid and displays “Not Connected.” As soon as you connect an operational client, all disk offline errors are cleared.*

9. (New installs) If this is a new installation, a Network Configuration Tool appears asking you to provide the IP Address of the Ethernet connections.”



*The Network Configuration Tool displays the supported 1 Gb ports or the 10 Gb port if it is being used.*



**You must use the Network Configuration Tool in the ISIS Launch Pad to set the Ethernet ports on the System Director. This tool sets the IP addresses in the registry. Manually setting the IP addresses on the System Director without using the Network Configuration Tool is not supported. You can set the Gateways for each network connection using Windows (outside of the Network Configuration Tool). This should only be done in a routed environment.**

10. Once the software is installed, the System Director service starts up. Verify this in System Director Control Panel.
11. (New installs) Open the Avid License Control tool, click Start > Programs > Avid > Utilities > Avid License Control and activate your Avid ISIS license. For detailed license activation instructions, see the *Avid ISIS 5000 Setup Guide*.

Locate the System ID and Activation ID card included with your new System Director.

12. Repeat step 1 to step 6 if installing or upgrading software on additional Engines. Do not install the System Director software on the addition Engines unless you have a System Director Resiliency configuration.

13. Exit the software installer splash screen and restart the Engine to make sure the new or updated network drivers and configuration is applied.
14. (New installs) Run the Product Recovery tool to create a Product Recovery USB flash drive.
15. (New installs) Click Control Panel from the ISIS Launch Pad.
16. (New installs) Click Stop System Director.
17. (New installs) Click Configure File System.
18. (New installs) Select Create Active File System and click OK.
19. (New installs) Click Management Console from the ISIS Launch Pad.  
Log in using the Administrator user name and the default password is blank.
20. (New installs) Click the Storage Managers icon.
21. (New installs) Select your ISIS Engines in the list and click Bind.
22. (New installs) Create a Storage Group, Workspaces, and add Users in the Management Console.
23. (Option) If connecting 10 Gb clients to a Force10 S25 switch, you need to enable Flow Control on that switch. For instructions on turning on Flow Control in the Force10 S25 switch, see [“Turning on Flow Control in the Force10 S25 Switch” on page 31](#).
24. On each Avid ISIS client, install or updated your ISIS client software.



*To get started with the client upgrades, you can manually copy the client installers to a USB flash drive. The installers on the System Director are located on [drive]:\Avid\ISISClientInstallers. You can also log into the Management Console and access the Installers link and download the appropriate client installer.*

- For Windows clients that are not using the Windows installer included on ISIS software installer splash screen menu, you need to uninstall the ISIS client using Windows Control Panel, restart, install ISIS client, and restart.



*Windows clients can select ISIS Windows Client software from the ISIS software installer splash screen menu. This installer detects the Windows client's operating system, and installs the appropriate client software. If a previous ISIS client software is installed, the old version is uninstalled and the new version is installed.*

- For Macintosh clients, installing the new client software updates the previous version. Preferences are saved and you do not need to restart the client.



**The Macintosh client software installs an uninstaller application located at Applications > Avid\_Uninstallers > AvidISIS. Use this application only when you want all Avid client files removed; including Client Manager preferences.**

- AirSpeed clients, require the placement of the software installation package on an HTTP server.

The AirSpeed user interface provides a window where you type the URL path in the Server text box where the AirSpeed upgrade is located. Select the AirSpeed ISO image from the Available Versions list. Click Update Version. For more information on upgrading AirSpeeds, see the *Avid AirSpeed Setup and Installation Guide*.

25. (ISIS v3.0 or v3.1 update) If you are upgrading from ISIS v3.0 or v3.1, check to see if you have any corrupted files, see [“Running the Node Analysis Tool” on page 33](#).

## Turning on Flow Control in the Force10 S25 Switch

The Avid default Force10 S25N and S25P (fiber) switch configurations do not have Flow Control turned on. Flow Control is needed to support ISIS 5000 10 Gb clients. Use the following procedure to turn on Flow Control in the Force10 switch.



*Avid is turning rx and tx on in the Force10 S25 switch, but the Force10 S60 and S4810 switches have rx on with tx off in the Avid default configuration.*

### To turn on Flow Control:

1. Telnet or HyperTerminal into switch.
2. Type **en**.
3. You are prompted for a password, type **avid**.
4. Type **conf**.
5. Type **Int range tengigabitethernet 0/25 - 28**.

Depending on your Force10 S25 switch module options, one of the following command would be used in place of this step.

- ▶ Left 10 Gb module installed (numbered right to left, facing rear) **Int range tengigabitethernet 0/27 - 28**.
- ▶ Right 10 Gb module installed (numbered right to left, facing rear) **Int range tengigabitethernet 0/25 - 26**.
- ▶ Right stacking module installed (numbered right to left, facing rear) **Int range tengigabitethernet 1/25 - 26**.

6. Type **flowcontrol rx on tx on threshold 1024 1024 1054**.



*The following steps turn the port off and back on so the end node renegotiates. Make sure this isn't an interface from which you are gaining remote access because you will be disconnected.*

7. Type **shut**.
8. Type **no shut**.

9. Type **exit**.
10. Type **exit**.
11. Type **wr mem**.
12. Type **exit**.

**To confirm the setting change, look for the “Flowcontrol rx on tx on” entry:**

1. Type **en**.
2. You are prompted for a password, type **avid**.
3. Type **sho int tengigabitethernet 0/25** (port number depends on optional modules).

Information similar to the following should display, verify Flowcontrol rx on tx (shown below in bold red) on is included in the configuration:

```
TenGigabitEthernet 0/25 is up, line protocol is up
Hardware is Force10Eth, address is 00:01:e8:d6:84:7b
    Current address is 00:01:e8:d6:84:7b
Pluggable media present, XFP type is 10GBASE-SR
    Medium is MultiRate, Wavelength is 850.00nm
    XFP receive power reading is -4.0994dBm
Interface index is 40436228
Internet address is not set
MTU 1554 bytes, IP MTU 1500 bytes
LineSpeed 10000 Mbit
Flowcontrol rx on tx on
ARP type: ARPA, ARP Timeout 04:00:00
Last clearing of "show interface" counters 4w5d1h
Queueing strategy: fifo
Input Statistics:
    4372398864 packets, 5575634120385 bytes
    645279553 64-byte pkts, 15320069 over 64-byte pkts, 30588757 over
127-byte pkts
    7206136 over 255-byte pkts, 59117205 over 511-byte pkts, 3614887144
over 10 23-byte pkts
    693485 Multicasts, 34501 Broadcasts
    0 runts, 0 giants, 682022 throttles
    0 CRC, 0 overrun, 0 discarded
```



## Output Statistics:

```

8393098546 packets, 12349453356270 bytes, 0 underruns
155227351 64-byte pkts, 26414194 over 64-byte pkts, 54970467 over
127-byte pkts
47132113 over 255-byte pkts, 8010284 over 511-byte pkts, 8101344137
over 10 23-byte pkts
151510 Multicasts, 283941 Broadcasts, 8392663095 Unicasts
0 throttles, 0 discarded, 0 collisions
Rate info (interval 299 seconds):
Input 00.00 Mbits/sec,          0 packets/sec, 0.00% of line-rate
Output 00.00 Mbits/sec,        1 packets/sec, 0.00% of line-rate

```

## Running the Node Analysis Tool

If you are upgrading your Avid ISIS 5000 from v3.0 or v3.1, Avid recommends that you run the Node Analysis Tool immediately after upgrading to ISIS v3.2 or later. This tool analyzes the data drives for a spot on your drive that could have corrupted data when written to, using v3.0 or v3.1. ISIS v3.2 does not have this concern. This tool only needs to be run once, preferably before the ISIS v3.2 upgrade. Whether or not files are identified, this issue does not exist when new data is written using ISIS v3.2 or later releases.



*This tool should be run immediately after upgrading to ISIS v3.2. If it is not, there is potential that some files returned by the NodeAnalysisTool as “suspect” may not have anything wrong with them. The NodeAnalysisTool returns a list of files located at the known bad locations, regardless of what version of ISIS was in place when the file was created. If a file was created after ISIS v3.2 was installed and it was written to the known bad location, it would still be reported by the NodeAnalysisTool. Only files located in the known bad location that were created prior to ISIS v3.2 would be corrupted.*

The extent of corrupted data is up to three files per Engine. If the corrupted file is a DNx220 video clip, the corrupted data is equivalent to about a single frame. You could play the video up-to and after the corrupted frame without issue.

### To run the Node Analysis Tool:

1. Copy the NodeAnalysisTool.exe file to any Avid ISIS Window client.

The Node Analysis Tool can be found on the Avid ISIS 5000 software kit in the \AvidISISUtilities\ folder.

2. Double-click the NodeAnalysisTool.exe file.

A Command window opens.

3. When prompted for the “ISIS name,” type in the *virtual name* of your ISIS 5000 System Director and press **Enter**.

The default name is AvidISIS.

4. When prompted for the “Admin password,” type in the *Administrator password* used to log into your ISIS 5000 Management Console and press **Enter**.

The default password is blank (no password).

The tool runs and displays the following possible results:

- Wrong ISIS Name specified  
asStatus = “AS\_UNKNOWN\_SYSTEM\_ID” (42)
- Bad Password specified  
asStatus = “AS\_ACCESS\_DENIED” (50)
- Unable to reach one or more Storage Managers in the system  
asStatus = “AS\_TIMEOUT” (65)
- No nodes found  
asStatus = “AS\_NO\_MORE\_ITEMS” (21)  
Found 0 corrupt nodes on ISIS AvidISIS



*If messages appear similar to the following, you have a corrupted data block that could affect one of your saved files. Make a note of the file name.*

- If nodes are found, each Engine could have 3 messages, for example:  
//AvidISIS/workspace1/temp/FSR\_full\_02740  
//AvidISIS/workspace1/temp/FSR\_full\_02739  
//AvidISIS/workspace1/temp/FSR\_full\_02741  
//AvidISIS/workspace2/temp/FSR\_full\_02537  
//AvidISIS/workspace2/temp/FSR\_full\_02612  
//AvidISIS/workspace2/temp/FSR\_full\_02554  
Found 6 corrupt nodes on ISIS AvidISIS



*These would only be corrupt if they were written prior to ISIS v3.2.*

5. Press **Enter** to quit the tool.

## Updating the 10 Gb Myricom Board Driver on Engines

The Avid ISIS v3.2 and earlier software release requires a driver update for the 10 Gb Myricom Ethernet adapter board installed in all Engines. After you install the driver, the Myricom 10-Gb adapter board settings are configured for you when you install the Avid ISIS software on the System Director and Engines. For more information see the *Avid ISIS 5000 Setup Guide*.



*If you have made a change to the Myricom settings and want to set them back to the Avid defaults, re-run the ISIS software installer (autorun.exe) and the Avid network settings are re-applied. If the network setting are not set to the Avid defaults, a message is displayed in the ISIS Management Console.*

## Avid ISIS 2000 Software Installation

New systems include the Avid ISIS 2000 software kit on a USB flash drive. You can also download the software from the Avid Download Center ([www.avid.com/US/support/downloads](http://www.avid.com/US/support/downloads)) to your System Director.

The *Avid ISIS 2000 Setup Guide* contains complete instructions for loading the software onto the system. You can access the documentation in the top-level AvidISISDocumentation folder on the Avid ISIS software installer kit. The following is a summarized version of the procedure.

### To install your ISIS 2000 software on new systems:

1. Log in to the Avid ISIS 2000 System Director as Administrator (default password: `is-admin`).
2. Make a folder for the software kit on your root directory (C:\) of your System Director.
3. Insert the software USB flash drive into any of USB ports on your System Director.



*You can run the software installer from the USB flash drive. The advantage of copying the software kit to the Avid ISIS 7000 is that you have easy access to kit files if you should ever them in the future.*

If the USB flash drive does not automatically display:

- a. Double-click the computer icon on the desktop.
  - b. Double-click the USB flash drive icon in the window and copy the software kit into the new folder you created on the Avid ISIS 2000 system.
4. Double-click the Autorun.exe file in the root directory of software kit.

The installer detects the existing version of the installed software (if any) and displays the components that need to be upgraded in the splash screen.

5. Select ISIS 2000 System Director from the “Select Software Package” menu.
6. Click Apply.

7. Follow the screen prompts accepting the defaults and License agreement.



*When uninstalling or upgrading the ISIS 2000 software, you might get prompted to confirm the removal of the File Gateway software. Type Y to confirm the removal.*

8. Once the installation is complete, click Finish.
9. After the ISIS 2000 software is installed, you must restart the System Director.
10. Open the Avid License Control tool, click Start > Programs > Avid > Utilities > Avid License Control and activate your Avid ISIS license. For detailed license activation instructions, see the *Avid ISIS 2000 Setup Guide*.

You will need the System ID and Activation ID card included with your new System Director.

11. Run the Product Recovery tool to create a Product Recovery USB flash drive.



*For information on creating the Product Recovery USB flash drive, see the Avid ISIS 2000 Setup Guide. To open and use the ISIS Control Panel and Management Console see the Avid ISIS Administration Guide.*

12. Open the ISIS Control Panel.
13. Click Stop System Director.
14. Click Configure File System.
15. Open the Management Console.  
Log in using the Administrator user name and the default password is blank.
16. Select Create Active File System and click OK.
17. Load the drive firmware. Using the ISIS Management Console > Storage Manager page, select all the Storage Managers and click Upgrade. For more information, see the *Avid ISIS 2000 Setup Guide*.
18. Bind the Storage Managers. Using the ISIS Management Console > Storage Manager page, select your ISIS Storage Managers in the list and click Bind.



*When setting up the System Director to the switch, you must use a static IP address. The ISIS 2000 System Director will not bind the Storage Manager if using DHCP.*

19. Create a Storage Group, Workspaces, and add Users in the Management Console.
20. Install your Avid ISIS clients to the v4.0 software. For more information, see the *Avid ISIS Client Guide*.

## Avid ISIS Client Software Installation

The software for this release is only available from the Avid Download Center ([www.avid.com/support/downloadcenter](http://www.avid.com/support/downloadcenter)).

The *Avid ISIS Setup Guides* contains complete instructions for loading the software onto the system. You can access the documentation in the top-level AvidISISDocumentation folder on the Avid ISIS software installer kit. The following is a summarized version for installing the client software.

The clients are defined as follows:

- Avid editing applications (see “[Hardware and Software Requirements](#)” on page 38)
- Interplay Assist and Instinct
- Interplay Access
- Avid Approved Applications Initiative such as Pro Tools

### To install your Avid ISIS Windows client software:

1. Log into your Windows client system as a user with Administrative privileges.
2. Load the new software kit on you Windows client system.
3. Double-click the `autorun.exe` file in the software kit.

The installer detects the existing version of the installed client software (if any) and displays the components that need to be upgraded in the splash screen.

4. Select the “ISIS Windows Client” installer from the Select Software Package menu.
5. Click Apply.



*The installer automatically uninstalls an earlier version of software.*

6. Repeat this procedure on each Avid ISIS Windows client.



*You can manually copy the client installers to a USB flash drive. The installers are in the Avid ISIS software kit located on `[drive]:\AvidISISClientInstallers`. You can also log into the Management Console and access the [Installers](#) link and download the appropriate client installer.*

### To install your Avid ISIS Macintosh client software:

1. Copy the new `AvidISISClient_MacOSX_x.x.x.dmg` file from the `[drive]:\AvidISISClientInstallers` folder in software kit to your Macintosh client system.
2. Double-click the `AvidISISClient_MacOSX_x.x.x.dmg` file.



*The installer replaces earlier versions of the software (if any).*

3. Repeat this procedure on each Avid ISIS Macintosh client.



*You can manually copy the client installers to a USB flash drive. You can also log into the Management Console and access the Installers link and download the appropriate client installer.*



**The Macintosh client software installs an uninstaller application located at Applications > Avid\_Uninstallers > AvidISIS. Use this application only when you want all Avid client files removed; including Client Manager preferences.**

**To install the Avid ISIS client installer software on your ISIS System Director:**

1. Load the new software kit (new version) on the System Director.
2. (Upgrade) When running a System Director Resiliency configuration, stop the Standby System Director and upgrade the Active System Director first.  
Update additional ISIS 5000 Engines after your Active and Standby System Directors are updated.
3. Double-click the Autorun.exe file in the software kit.  
The installer detects the existing version of the installed software (if any) and displays the components that need to be upgraded in the splash screen.
4. Select the appropriate installer from the Software Package menu for the ISIS infrastructure you are installing on (ISIS 7000, ISIS 5000, or ISIS 2000 System Director).
5. Click Apply.



*The installer automatically stops the System Director and Storage Manager services and uninstalls the earlier version of software.*

6. Once the software is installed, the System Director service starts up.  
You can download the latest Avid ISIS clients software from the Management Console and update your ISIS client software.

## 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 files 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 onboard 1-Gb ports. For instructions on installing the board and software, see for Avid ISIS Client Guide.*

### Avid ISIS v4.2 Qualified Clients

<b>Software</b>	<b>ISIS 2000 Workspaces</b>	<b>ISIS 5000 Workspaces</b>	<b>ISIS 7000 Mirrored Workspaces</b>	<b>ISIS 7000 RAID Workspaces<sup>a</sup></b>
Media Composer <sup>®</sup>	v6.x, v6.5.x (v5.5.x <sup>b</sup> v4.1 client)	v6.x, v6.5.x (v5.5.x <sup>b</sup> v4.1 client)	v6.x, v6.5.x (v5.5.x <sup>b</sup> v4.1 client)	v6.x, v6.5.x (v5.5.x <sup>b</sup> v4.1 client))
Media Composer 10-Gb client <sup>c</sup>	v6.x, v6.5.x (v5.5.x <sup>b</sup> v4.1 client)	v6.x, v6.5.x (v5.5.x <sup>b</sup> v4.1 client)	v6.x, v6.5.x (v5.5.x <sup>b</sup> v4.1 client)	v6.x, v6.5.x (v5.5.x <sup>b</sup> v4.1 client)
Avid Symphony <sup>™</sup>	v6.x, v6.5.x (v5.5.x <sup>b</sup> v4.1 client)	v5.5.x, v6.x (v5.5.x <sup>b</sup> v4.1 client)	v5.5.x, v6.x (v5.5.x <sup>b</sup> v4.1 client)	v6.x, v6.5.x (v5.5.x <sup>b</sup> v4.1 client)
Avid Symphony 10-Gb client <sup>c</sup>	v6.x, v6.5.x (v5.5.x <sup>b</sup> v4.1 client)	v5.5.x, v6.x (v5.5.x <sup>b</sup> v4.1 client)	v6.x, v6.5.x (v5.5.x <sup>b</sup> v4.1 client)	v6.x, v6.5.x (v5.5.x <sup>b</sup> v4.1 client)
NewsCutter <sup>®</sup>	v10.x, v10.5.x (v9.5.x <sup>b</sup> v4.1 client)	v10.x, v10.5.x (v9.5.x <sup>b</sup> v4.1 client)	v10.x, v10.5.x (v9.5.x <sup>b</sup> v4.1 client)	v10.x, v10.5.x (v9.5.x <sup>b</sup> v4.1 client)
NewsCutter 10-Gb client <sup>c</sup>	v10.x, v10.5.x (v9.5.x <sup>b</sup> v4.1 client)	v10.x, v10.5.x (v9.5.x <sup>b</sup> v4.1 client)	v10.x, v10.5.x (v9.5.x <sup>b</sup> v4.1 client)	v10.x, v10.5.x (v9.5.x <sup>b</sup> v4.1 client)
Avid DS	No real-time support (push/pull only)	v11.x	v11.x	Not supported
Avid Interplay <sup>®</sup> Central	v1.2.2, v1.3	v1.2.2, v1.3	v1.2.2, v1.3	v1.2.2, v1.3
Avid Interplay with Assist	v2.6, v2.7	v2.6, v2.7	v2.6, v2.7	v2.6, v2.7
Avid Interplay Low-Res Encode	Not supported	Not supported	v2.6, v2.7	v2.6, v2.7

**Avid ISIS v4.2 Qualified Clients (Continued)**

<b>Software</b>	<b>ISIS 2000 Workspaces</b>	<b>ISIS 5000 Workspaces</b>	<b>ISIS 7000 Mirrored Workspaces</b>	<b>ISIS 7000 RAID Workspaces<sup>a</sup></b>
Avid Instinct®	v2.6, v2.7	v2.6, v2.7	v2.6, v2.7	v2.6, v2.7
AirSpeed® 5000	v2.0 and later	v2.0 and later	v2.0 and later	v2.0 and later
AirSpeed Multi Stream	v1.8.6	v1.8.6	v1.8.6	v1.8.6
AirSpeed	v2.7.12	v2.7.12	v2.7.12	v2.7.12
Pro Tools®	v10.x No real-time support (push/pull only)	v10.x Real-time v8.1.x, v9.0.x No real-time support (push/pull only)	v10.x Real-time v8.1.x, v9.0.x Windows — Real-time streaming  Macintosh — No real-time support (push/pull only)	v10.x Real-time v8.1.x, v9.0.x No real-time support (push/pull only)

- ISIS 7000 RAID 6 Workspaces support only resolutions that draw 16 MB/s (50 Mb/s) or less.
- Media Composer and Symphony v5.5.x and NewsCutter v9.5.x editing software releases were not qualified with ISIS v4.2 client software. You must continue to use ISIS client software v4.1 with these editor releases.
- Ultra High Resolution Clients can mount RAID workspaces although, only resolutions that draw 16 MB/s (50 Mb/s) or less are supported.

**Supported ISIS 7000 System Directors**

The following is list of System Director servers supported in Avid ISIS 7000 v4.x.

- AS3000
- SR2500



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

**Supported ISIS Client Operating Systems**

The following table list the operating systems and Avid client software that are supported in Avid ISIS v4.2.



## Supported Software Client Operating Systems and Service Packs

Operating System	Version
Windows 7 (64-bit)	Service Pack 1
Windows Vista (64-bit)	Service Pack 2
Windows XP (32-bit)	Service Pack 3
Windows Storage Server 2008 R2 (64-bit)	Service Pack 2
Windows Storage Server 2008 (64-bit)	Service Pack 2
Windows Storage Server 2003 (32- and 64-bit)	Service Pack 2
Windows Server 2003 (32- and 64-bit)	Service Pack 2
Mac® OS X Mountain Lion (64-bit kernel)	10.8.2
Mac OS X Lion (32-bit and 64-bit kernels)	v10.7.4

The following table list the 10-Gb Avid clients that are supported in Avid ISIS.

## Supported Operating Systems with 10 Gigabit Ethernet Network Interface Cards

10-Gb Ethernet Network Interface Card	Supported Operating System
Myricom	Windows XP 32-bit, Windows Vista 64-bit, Windows Storage Server 2008, Windows 7 64-bit, and dual quad-core MacPro workstations running Mac OS v10.7.x (Lion) and Mac OS v10.8.x (Mountain Lion)
Chelsio — Chelsio cards are only supported in ISIS 7000 environments	Windows XP 32-bit, Windows Vista 64-bit, Windows Server 2003

## Intel Ethernet Ports and Driver

Intel Pro 1000 Ethernet adapter boards are recommended for most Windows based editing systems that connect to the Avid ISIS system.” The Intel Pro 1000 PT is a copper interface 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 Client\Intel\_Pro1000 folder). Check the driver version listed in the Windows Control Panel. You need to unzip the Intel\_Drivers\_Winxx\_16.8.exe file and run the autorun.exe.



**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.**

## Loading or Updating the Intel Pro Driver on Windows Clients

### To load the Intel Pro driver on a Windows client:

1. Double-click the `autorun.exe` executable file; found on the *Avid ISIS software kit* in the `\Drivers\ISIS Client\Intel_Pro1000\Intel_Drivers_Winxx_16.8.exe` file.
2. Accept the default settings to install the driver.
3. After the Intel driver is installed, restart the Windows client.

## HP Z400 and HP Z800 Integrated Network Port Not Supported

The integrated Broadcom BCM5764 gigabit Ethernet controller in HP Z400 and HP Z800 Workstation is not supported as an ISIS client connection. The HP Z400 and HP Z800 require the installation of the Intel Pro 1000 PT.

## HP Z200 and Z210 Integrated Network Port Is Supported

The integrated Intel 82578 gigabit Ethernet controller in HP Z200 and Z210 Workstations are supported as an ISIS client connection. The Z200 Z210 were qualified for use with Avid Assist, Avid Instinct®, and software-only Avid editing clients. The current Intel driver supported in this release is required. For specific details on Z200 and Z210 support on the Avid editing systems, see the Avid editor ReadMe and Avid Knowledge Base.

## HP xw8600 ISIS Client Support

The Intel Pro 1000 board slot in HP xw8600 with has changed in ISIS v3.2. The previous slot for the Intel Pro 1000 was slot 6; the new slot requirement is slot 5. For details on the slot location, search the Avid Knowledge Base for the “Avid Configuration Guidelines and Slot Configurations” at [www.avid.com/US/support](http://www.avid.com/US/support).

The Intel driver for the Intel Pro 1000 board in slot 5 also requires Intel driver v14.7. This is the same version as previously supported. Do not update the Intel Pro 1000 driver to v16.8 as required for all other supported Windows clients. The Intel driver qualified in this release is included in the Avid ISIS software installer kit (`\Drivers\ISIS Client\Intel_Pro1000` folder).

## Small Tree Optical Adapters for Macintosh Clients

Avid has also qualified the Small Tree PEG1F single port or PEG2F dual port optical adapters in the slot 2 of a Macintosh Pro Nehalem system (2.66 GHz or 2.93 GHz) to be used in the Force10 S24P optical (fibre) switch.

## Qualified ISIS Switches

The following switches have been qualified with Avid ISIS environment. Each switch listed below specifies the ISIS environments they have been qualified in.



*All Force10 switches ship from Avid pre-configured for an Avid ISIS 5000 environment. The Avid ISIS 5000 Setup Guide includes information on the Force10 Networks switches. For information on configuring the ISIS 5000 switches, see the Avid ISIS 5000 Setup Guide in the documentation folder of the Avid ISIS 5000 software kit [drive]:\Avid\ISIS\Documentation.*



*When connecting 10 Gb clients in the ISIS 5000 environment, you must enable flowcontrol RX on the 10 Gb ports in the ISIS 5000 switches.*

Most Windows editing clients must use the 1-Gb Intel Pro 1000 PT or PF Ethernet board to connect to the Avid ISIS system. Macintosh clients can use the built-in Ethernet port or Small Tree® PEG1F or PEG2F optical adapters.

Avid has qualified the following layer 2 and layer 3 switches used in a Zone 2 and Zone 3 configurations.

- Cisco® Catalyst 4900M switch (qualified in the ISIS 7000, 5000, and 2000 environments) can be configured to meet a wide variety of combinations of 1 Gb Ethernet and 10 Gb Ethernet connections. The base unit can accommodate one or two modules offering a variety of ports. (Avid supports both LR and SR X2s)
- Cisco Catalyst 4948E switch (qualified in the ISIS 7000 and 5000 environments) contains 48 1-Gb ports and four alternative wired ports that can accommodate optional 1 Gb SFP or 10 Gb SFP+ optics.
- Cisco Catalyst 4948-10GE (qualified in the ISIS 7000 environment) contains 48 1-Gb ports and two X2 based 10-Gb ports (Avid supports both LR and SR X2s)
- Cisco Catalyst 4500-X Series (qualified in the ISIS 7000, 5000, and 2000 environments) is available in 32- and 16-port versions configured with optional network and uplink modules. The Small Form-Factor Pluggable Plus (SFP+) interface supports both 10 Gigabit Ethernet and 1 Gigabit Ethernet ports.
- Force10® Networks S25N switch (qualified in the ISIS 5000 environment) containing 24 1-Gb ports on the front, and two slots on the back for 10 Gb XFP modules or 12 Gb stacking modules. The 12 Gb stacking modules allow for interconnecting two S25N switches when more than 24 client connections are in use.



*If using the Force10 S25 switch for 10 Gb client connections, you must enable flow control in the switch, see the Avid ISIS 5000 Setup Guide for instructions. Flow control is disabled in the Avid default Force10 S25 switch configuration.*

- Force10 Networks S25P switch (qualified in the ISIS 5000 environment) containing 24 optical 1-Gb ports on the front, and two slots on the back for 10 Gb XFP modules or 12 Gb stacking modules. The 12 Gb stacking modules allow for interconnecting two S25P switches when more than 24 client connections are in use. A change to the Force10 S25 Avid default switch configuration is required with 10 Gb clients, see [“Turning on Flow Control in the Force10 S25 Switch” on page 31.](#)
- Force10 Networks S60N switch (qualified in the ISIS 7000 and 5000 environments) contains 48 1-Gb ports and two slots for 10 Gb Small Form-Factor Pluggable Plus (SFP+) modules or 24 Gb stacking modules. (One slot is on the front of the switch and the other is on the back.) The 24 Gb stacking modules allow for interconnecting two S60N switches when more than 48 client connections are in use.



*The Force10 S60N switch is only supported in the ISIS 7000 environment when clients are using ISIS Client v3.5 or later software.*



*There are Force10 S25 switch configuration files in the ISIS v4.0 software kit but that switch is not supported in the ISIS 7000 environment.*

- Force10 Networks S4810 switch containing 48 dual-speed 1/10 Gb (SFP+) ports as well as four 40 Gb QSFP+ uplinks.



*The Avid ISIS 5000 Setup Guide includes information on the Force10 Networks S4810 switch. Like all other Force10 switches, the S4810 ships from Avid pre-configured for an Avid ISIS 5000 environment. If you need to reload the Avid S4810 switch configuration file it is available on the Avid Download Center ([www.avid.com/support/downloadcenter](http://www.avid.com/support/downloadcenter)).*

- Arista Networks 7048T switch (qualified in the ISIS 7000 and 5000 environments) contains 48 1-Gb ports and four SFP+ based on 10-Gb ports
- Brocade®/Foundry Networks® FastIron® Edge X (FESX) 624 and 424 switches (qualified in the ISIS 7000 environment) contains 24 1-Gb ports and two XFPs based on 10-Gb ports (Avid supports both LR and SR XFPs)
- SMC 8724ML3 (now obsolete, was qualified in the ISIS 7000 environment) contains 24 1-Gb ports for routing only (no clients) and no 10-Gb ports

Avid has qualified the following external switches (EXS) for linking the Management Domains two stack ISIS 7000 configurations.

- Cisco Catalyst 4900M switch can be configured to meet a wide variety of combinations of 1 Gb Ethernet and 10 Gb Ethernet connections. The base unit can accommodate one or two modules offering a variety of ports. (Avid supports both LR and SR X2s)
- Cisco Catalyst 4500-X Series (qualified in the ISIS 7000, 5000, and 2000 environments) is available in 32- and 16-port versions configured with optional network and uplink modules. The Small Form-Factor Pluggable Plus (SFP+) interface supports both 10 Gigabit Ethernet and 1 Gigabit Ethernet ports.
- Force10 Networks S4810 switch containing 48 dual-speed 1/10 Gb (SFP+) ports as well as four 40 Gb QSFP+ uplinks.



*Access the Knowledge Base at [www.avid.com/US/support](http://www.avid.com/US/support) to download the Avid ISIS Switch Reference Guide and sample configuration files. This document provides configuration information on the Ethernet switches that are qualified with the Avid ISIS shared storage network.*

Navigate to \Switch Configuration folder, and select the folder for your model ISIS and switch.

#### Minimum Supported Switch Firmware and IOS Versions

Manufacturer	Model	Firmware/IOS	Description
Cisco Catalyst	4900M	Rommon: 12.2(44r)SG (and later)  IOS: 12.2 (46)SG (and later)	40 GigE (RJ-45), WS-X4920-GB-RJ45  or  8 10 Gb (X2/SC) WS-X4904-10GE 8 10 Gb (X2/SC)
Cisco Catalyst	C4500-X	ROM: 15.0(1R)SG6  IOS: 03.03.00.SG (minimum requirement)	32 dual-speed 1/10Gb ports (SFP+)
Cisco Catalyst	C4948E	Rommon: 12.2(44r)SG8 (and later)  IOS: 12.2 (54)SG (and later)	48 GigE (RJ-45), four 10 Gb (SFP+/LC)
Cisco Catalyst	4948 10GE	Rommon: 12.2(31r)SGA (and later)  IOS: 12.2 (25) EWA8 (and later)	48 GigE (RJ-45), two 10 Gb (X2/SC)

**Minimum Supported Switch Firmware and IOS Versions (Continued)**

<b>Manufacturer</b>	<b>Model</b>	<b>Firmware/IOS</b>	<b>Description</b>
Force10 Networks (ISIS 5000 only)	S25N	FTOS 8.3.1.1 (and later)	24 GigE (RJ-45), two slots for 10 Gb XFP modules (XFP/LC)
Force10 Networks	S60N	FTOS 8.3.3.4 (and later)	48 GigE (RJ-45), two slots for modules, two 10 Gb SFP+ ports per module (SFP+/LC)
Force10 Networks	S4810	FTOS 8.3.7.0 (and later)	48 dual-speed 1/10 Gb (SFP+) four 40 Gb QSFP+ uplinks
Arista Networks	7048T	Software image 4.8.6 (and later)	48 GigE (RJ-45), four 10 Gb (SFP+)
Brocade/Foundry	FESX624	Firmware v07.2.02aT3e3	24 GigE (RJ-45), 4 GigE (SFP), 2-10 Gb (XFP/LC)
Brocade/Foundry (Obsolete)	FESX424	Firmware v02.3.01T3e3 Boot ROM v02.3.01Te6 (and later)	24 GigE (RJ-45), 4 GigE (SFP), 2-10 Gb (XFP/LC)
SMC (Obsolete)	8724ML3	Loader v3.1.0.0 Boot ROM v3.1.0.0 Operation Code v3.1.1.56 (and later)	24 GigE (RJ-45) 4 GigE (SFP)



*This switch is approved for routing only data traffic to and from the corporate network. You cannot use this switch to do real-time video.*

## Special Notes (ISIS 7000, 5000, and 2000)

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 Windows and Macintosh workstations.

## Flash Player Software

To use the ISIS Management Console, you need to have the Adobe® Flash® Player (v11.x and later) installed on your system. If you encounter problems with the ISIS Management Console display, you might have an outdated version or multiple versions of the Flash Player installed. Uninstall any previous versions of Flash Player and install the Flash Player included on the Avid ISIS Management Console > Installers page.

## Internet Explorer 8

When using Internet Explorer 8 (IE8) with the ISIS Management Console, make sure you select the IE8 application without the “(64-bit)” in the Start menu (Start > All programs > Internet Explorer). The Windows 7 Start menu includes the 32-bit and 64-bit versions of IE8 but only the 32-bit version is supported with Avid ISIS.

## 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 7000 and ISIS 5000 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.

The Avid Interplay Copy Service and Move Service on the SR2500 server with the Chelsio 10 Gb network adapter is not qualified in Zone 3, and should only be connected as Zone 1.

## Illegal Characters in File, User, and Workspace Names

You must use Unicode characters in workspace names. The following is a list of 17 illegal characters you should not use in workspace names, workgroup names, filenames, user names, device names, and storage group names: \ / = @ [ ] % \* ? + | : " ; , < >. You also should not use a period (.) as either the first or last character in the names you create, and you should not include a space in workspace names when in an Avid Interplay environment. Some of these characters might appear to be safe to use, but in mixed environments with Macintosh, Windows, and various other clients and operating systems, these characters have resulted in unexpected behavior.



*The System Director does not support viewing regional language characters in the Management Console.*

## LDAP Requires Unicode User Names and Passwords

The Avid implementation of LDAP (Lightweight Directory Access Protocol) requires that you restrict LDAP usernames 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 AvidISISDocumentation folder or search the Avid Knowledge Base for the *Avid Products and Network Site Preparation Guide*.

## 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.

## Final Cut Pro Software Approved

Avid has tested Final Cut Pro as a client in the Avid ISIS 7000 and ISIS 5000 shared storage environments. The ISIS 2000 only supports Final Cut Pro in push/pull workflows. Testing was done with Final Cut Pro v7.0.3 with Mac OSX v10.6.8 and v10.7.x (32-bit). Final Cut Pro X has not been qualified. 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 v7.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](http://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.*

## Power Saving Modes

Do not use power saving modes on Avid ISIS clients. Your power saving options should be set to never go into low power mode and should be set to “Always On” (Windows) or High Performance (Macintosh). Is it critical that each client in a Direct Connect environment have the network board option “reduce link speed during standby power saving” disabled.

## 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, antivirus 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](http://www.avid.com/securityupdate) and review the Microsoft Security Bulletin Addendum document. This link also includes antivirus 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 7000 Special Notes

The following is a list of features for should keep in mind with Avid ISIS 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 7000 Setup Guide*.

The Avid ISIS Upgrade Utility (AvidUnityISISTools.msi) can be found on the Avid ISIS software kit in the \ISISUtilities\ISIS 7000 folder.

## ISIS 7000 System Director

The Avid ISIS System Director uses an Intel® SR2500 server with 9 GB of memory and a 64-bit Window operating system. The new 64-bit System Director provides the following support:

- 64-bit System Director — 10 million files
- 64-bit System Director — 500,000 folders (25,000 files per folder)
- 5638 users
- 1000 groups — a user can be in 15 groups

## ISIS 7000 Client Connections

Starting with ISIS v4.0, Avid ISIS 7000 automatically supports up to 330 ISIS client licenses.

## Storage Group Size

Storage Managers are combined to create Storage Groups in the ISIS file system. These Storage Groups can be configured to operate using either 512 KB (default) or 256 KB chunk sizes. Earlier Avid ISIS releases used 256 KB chunk sizes. For more information about setting the chunk size, see the *Avid ISIS Administration Guide*.



*Avid ISIS switch hardware shipped with v1.x (ISS1000 and IXS1000) does not support 512 KB chunk sizes. If you have Avid ISIS v2.x software running on v1.x switches, you must select the 256 KB chunk size when adding Storage Managers to the file system to create Storage Groups.*

You cannot change the chunk size of a Storage Group once the Storage Group has been created. To change the chunk size of an existing Storage Group, you must delete the Storage Group and create a new Storage Group with the desired chunk size. The chunk size selection is only available when adding the Storage Managers.

## Chunk Size Support With ISB

All ISBs (i500, i1000, i2000, and i4000) support the 512 KB chunk size, although you must have v2.x switch hardware (ISS2000 and IXS2000) to use the 512 KB chunk size. Only i500 and i1000 ISBs support 256 KB chunk sizes.

## 10 Gb Client Support in ISIS 7000

The following are guidelines as to the number of clients that are supported in Zone 1 (directly connected to an ISS in an ISIS 7000 Engine). When a 10 Gb device is connected to your ISS, some of the 1 Gb ports cannot be used:

- High Resolution 1 Gb clients — four or less with one Ultra High Resolution 10 Gb client
- Medium Resolution 1 Gb clients — five or less with one Ultra High Resolution 10 Gb client

## Chelsio 10-Gb Adapter Board Support (ISIS 7000 only)

The Chelsio™ 10-Gb adapter board is only supported on Windows XP and Windows Vista operating systems. The Chelsio adapter board is not supported on the Windows 7 operating system. There are no plans on qualifying this board on other operating systems in the future.

## RAID-6 Storage Groups, Single ISB Failure

When there is a single ISB failure in an ISIS Storage Group configured with RAID protection, the Storage Group continues to function normally at a lower bandwidth. For mirrored Storage Groups, see [“Mirrored Storage Groups, Single ISB Failure” on page 52](#).

After confirming the failure of an ISB, it is highly recommended that you initiate the remove redistribution process of the failed ISB immediately. There are two benefits to doing this:

- First, immediately upon initiation of the remove redistribution, all new writes to the Storage Group have the full benefit of RAID-6 protection (dual-parity protection).
- Second, upon completion of the remove redistribution process, existing data in the Storage Group is once again fully protected. Prior to completion, if another ISB were to fail, the Storage Group would be in an unprotected state (though no data would be lost).

## RAID-6 Storage Groups, Dual ISB Failure

It is considered an “unprotected state” if you are with two failed ISBs in a RAID-6 Storage Group. In an unprotected state with no additional failures, read operations continue to function normally at a lower bandwidth.

However, in an unprotected state, due to the distributed architecture of the ISIS file system (optimized for real-time performance), it is possible under certain circumstances that the system would not be able to correctly update the parity information when writing new data. As a result under these circumstances, the file system could return a failure status when writing. While the failure rate percentage on the total number of write operations is low, heavy workloads on the system would result in enough write failures to disrupt operations.

This issue only applies when the Storage Group is in an unprotected state and the remove redistribution process on the failed ISBs has not been initiated. Therefore, it is highly recommended that the remove redistribution process is initiated immediately upon confirmation of any ISB failure. This ensures immediate protection (RAID or mirroring) of new data being written, and full protection of all stored data at the earliest possible time.

## Mirrored Storage Groups, Single ISB Failure

It is considered an “unprotected state” if you have a single ISB failure in a mirrored Storage Group. In an unprotected state with no additional failures, read operations continue to function normally.

However, in an unprotected state a subsequent or infrastructure failure will cause operational issues which could result in failures when writing new data or prevent you from accessing data in the Storage Group. An additional ISB failure creates a situation in which data accessibility has been compromised. Networking issues, on the other hand, will not cause accessibility issues on previously written data but might prevent the successful completion of the active write operation.

This issue only applies when the Storage Group is in an unprotected state and the remove redistribution process on the failed ISBs has not been initiated. Therefore, it is highly recommended that the remove redistribution process is initiated immediately upon confirmation of any ISB failure. This ensures immediate protection (RAID or mirroring) of new data being written, and full protection of all stored data at the earliest possible time.

## Adding or Removing ISBs (Mirrored or RAID-6)

When permanently adding or removing ISBs from an ISIS Storage Group it is recommended to do a full redistribution for all workspaces in the Storage Group. The full redistribution should be done after the ISB add or remove is complete. Examples of permanent changes would be adding or removing an engine to the storage stack.

The full redistribution makes sure all blocks in the Storage Group are optimally distributed based on the new permanent configuration. Doing a full redistribution immediately after the permanent adds or removes minimizes the chances of running into issues if a full redistribution is required in the future. One potential issue would be the storage blades getting full during a full redistribution and requiring the user to delete files to allow the redistribution to complete.

This recommendation does not apply to the case of removing and then replacing failed storage blades. For other examples of symmetric and non-symmetric redistributions, see the *Avid ISIS Performance and Redistribution Guide* on the Knowledge Base at [www.avid.com/US/support](http://www.avid.com/US/support).

## Adding a Storage Manager (ISB) to the File System

If you add an Storage Manager (displays as an unbound Storage Manager) to your file system, make sure you match Chunk Size of the new Storage Manager to the Chunk Size of the existing Storage Group. New Storage Managers are added with a default chunk size of 512 KB on mirrored Storage Groups (256 KB with i1000 ISBs). You cannot mix Chunk Sizes within a Storage Group. To change the Chunk Size of an Storage Manager, you must remove the new Storage Manager from the file system and add the Storage Manager again and select the same Chunk Size of the existing Storage Group.

## Zone 1 Switches

The ISIS v2.x generation IXS and ISS switches install in the same Engines as earlier releases, the chassis has not changed. However, all the switches in the Engines need to be of the same generation. The two new switches are labeled with IXS2000 and ISS2000. The new switches cannot be mixed in ISIS Engines with earlier versions of the switches (labeled IXS1000 and ISS1000). If your IXS and ISS switches are not labeled, consider them the earlier versions. The ISS2000 switches are required for 10-Gb clients and 512 KB chunk size, see [“Storage Group Size” on page 50](#).

The Avid ISIS documentation refers to IXS2000 and ISS2000 switches as v2.x hardware and IXS1000 and ISS1000 switches as v1.x hardware.

## Full Redistribution

After updating the Avid ISIS server software, and the ISIS software on all the clients, Avid recommends you do a full redistribution (onetime full remapping redistribution) at your earliest convenience to take advantage of the performance optimization introduced with Avid ISIS v2.x. After the full remapping redistribution, full redistributions that might have taken several hours in earlier releases can be performed in a matter of minutes, depending on the system load.



**Once you do a full redistribution with v2.x, v1.x clients cannot read from, or write to, those workspaces. For more details, see [“Software Installation Instructions” on page 21](#).**

The faster full redistributions only apply to workspaces that have had symmetric configuration changes. This means that the same number of ISBs that were removed from a storage group need to then be added in a single configuration change. For examples of symmetric configuration changes search the Avid Knowledge Base for the *Avid ISIS Performance and Redistribution Guide*. As with all full redistributions, all workspaces in the storage group should be selected for the full redistribution.

A full redistribution is still recommended at 10 configuration changes. At 32 configuration changes the Avid ISIS software automatically performs a full redistribution.

## Automatic Redistribution on Disk Failure

Avid ISIS performs an automatic redistribution on Disk Failure notification. Storage Elements continuously monitors disk status and sends a “Disk Failed” notification to the System Director upon determination that a disk is not usable. The System Director then removes the Storage Element from its associated Storage Group. The removal of the Storage Element from the Storage Group initiates redistributions on all workspaces associated with that Storage Group. The System Director then prevents the Storage Element that reported the disk failure from being added to a Storage Group.

The Automatic Removal feature is controlled by a system preference that is configured using the ISIS Management Console Preferences tool. The preference is called “Auto Remove Redistribution on Disk Failure” The default setting is “enabled.” The Storage Element is only removed from the Storage Group. It is not unbound from the ISIS Systems for the following reasons:

- The Storage Element participates in the removal redistribution. This is required to prevent data loss when full redundancy has not been attained for all data blocks.
- The Storage Element continues to report status, such as physically replacing the blade.

Auto removal status is reported by way of the System Event Log. A sequence of event log entries are generated for the initial report of the failure, the decision to remove the Storage Element, and subsequent success or failure. Events are also logged for the start and stop of all the workspace redistributions.

The following are important considerations when using Automatic Redistribution:

- When automatic redistribution is enabled, be sure to keep at least 7% of your Storage Group unused at all times. Failure to do so can cause the system to run out of space after an automatic redistribution has initiated and cause a client outage. For more information on keeping 7% of your Storage Group available, see [“Minimum ISIS 7000 Storage Space Requirement” on page 56](#).
- If an automatic redistribution of a Storage Group is started during a critical time the overall system performance can degrade significantly and be disruptive. For more information on understanding the performance characteristics during remove redistribution, see the *Avid ISIS Performance and Redistribution Guide*.
- An automatic redistribution removes the Storage Element from the Storage Group but not from the file system. Once an automatic redistribution has occurred and completed, the removed Storage Element should be removed from the file system. You must first removed the Storage Element with the software and then physically replace it. A replacement ISB must then be added to the file system and then the Storage Group, triggering another redistribution.
- If unmirrored workspaces are in use, the data will be damaged on those workspaces in that Storage Group.

## Firmware Upgrade During a Redistribution

Do not perform an ISB firmware upgrade while a Redistribution is in process. Make sure all firmware upgrades are completed before any redistribution is started. The following events trigger redistribution:

- Moving a Workspace
- Clicking “Full Redistribution” on a Workspace
- Adding a Storage Element to a Storage Group
- Removing a Storage Element from a Storage Group
- Changing the state of a Workspace to mirrored or unmirrored

**If a firmware upgrade must be done and a redistribution in progress, do the following:**

1. Suspend the active redistribution using the Advanced Commands in Workspace window.
2. Verify that the Workspace displays “redistribution suspended” in the Status column and all other workspaces do not have “redistribution in progress” displayed.
3. Perform the firmware upgrade on the ISB(s) that must be upgraded.
4. Wait until the firmware upgrade is completed successfully.
5. Resume the redistribution using the Workspace window.

## 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 even if your Avid ISIS system configuration only has one System Director. For instructions on adding the virtual name, search the *Avid ISIS Administration Guide* for General Configuration Options.

## Workspace Names

You must use Unicode characters in workspace names. The following is a list of 16 illegal characters you should not use in workspace names, workgroup names, filenames, user names, device names, and storage group names: \ / = @ [ ] % \* ? + | : " ; , < > . You also should not use a period (.) as either the first or last character in the names you create, and you should not include a space in workspace names when in an Avid Interplay environment.



*The System Director does not support viewing regional language characters in the Management Console.*

Workspace names beginning or ending with a period are no longer valid in Avid ISIS v1.4 and later. If you already have workspace names with periods and upgrade to Avid ISIS v1.4, the original issues continue to exist as outlined below:

- Windows — Data is preserved and intact with display issues. A filename or directory with a period at the end is invalid in Windows. As a result the Avid ISIS client is trying to interpret a period at the end of a workspace into something Windows can understand. This interpretation appears as a graphic instead of a period.
- Macintosh — Data is preserved and intact, but any workspace with a name that starts with a period is treated as a hidden directory by Mac OS X. By default such a workspace cannot be accessed via the Desktop and cannot be seen in the “/Volumes” folder in the Finder.

**To access the contents of the Macintosh workspace:**

- ▶ Click Go > Go to Folder... menu in the Finder and type the path “/Volumes/” followed by the workspace name (for example, “/Volumes/.MyWorkspace”).

A window opens showing the contents of the workspace and make the workspace temporarily visible as a subdirectory of “/Volumes.”

## Network Connections

The ISIS network topology uses two separate domains, with one domain represented by the ISSs on the left side of the ISIS Engine and the second domain represented by the ISSs on the right side. The default network IP address configuration is shown in the following table:

**Default Network Addresses for Avid ISIS Engines**

Location	Network IP Addresses	Subnet Mask
Left side of engine	192.168.10.0	255.255.255.0
Right side of engine	192.168.20.0	255.255.255.0

For more addressing information, see “IP Addressing Overview” in the *Avid ISIS 7000 Setup Guide*.

Avid ISIS does not support Zone 1, 10/100 BASE-T network interface connections. 10/100 BASE-T clients must be attached as a Zone 2 or 3 client.

## Minimum ISIS 7000 Storage Space Requirement

Avid recommends that you maintain 7% of free space in each Storage Group. In other words, you should not fill Storage Group more than 93% full. Exceeding 93% used space can produce severe performance issues in some situations.



To calculate the right amount of free space, log into the ISIS management Console and navigate to the Storage Group window. For each Storage Group, take the Effective number and multiply by 0.07. This will be your recommended free space in GBs. To assure that your Storage Group never exceeds the recommended space, create a new workspace in this Storage Group with the same size and label it “Headroom” and do not give anyone access to this workspace.

## Enabling the Distributed File System on Windows Vista

Avid ISIS v2.0.4 and earlier disabled the Windows Vista Distributed File System (DFS) on Windows Vista clients. DFS was disabled because Avid ISIS clients running Windows Vista were experiencing delays when opening files over the shared storage network with DFS enabled. Windows Vista service pack 2 (SP2) corrects the delays experienced with DFS enabled. Avid ISIS v2.0.5 and later client software detects the service pack version installed on the Windows Vista client and leaves DFS enabled if using Windows Vista SP2. If you have Windows Vista SP1 installed, DFS is disabled. If you need to run DFS on your Windows Vista client, perform the Windows Vista update to install SP2 and reinstall the Avid ISIS v2.0.5 and later client software.

## 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 5000 Special Notes

The following is a list of features for should keep in mind with Avid ISIS 5000 infrastructures:

## ISIS 5000 System Director

The Avid ISIS Engine System Director provides the following support:

- System Director — 3 million files and folders (combined total)
- User Accounts — 5000
- User Groups — 1000 (a user can be in up to 15 groups)

## Up to Six Engines on ISIS 5000

The initial release of Avid ISIS 5000 supported one or two Engines. Avid ISIS 5000 v3.1 included support for four Engines, starting in ISIS v3.2 six Engines are supported. New Engines can be configured as separate Storage Groups or be added to existing Storage Groups. If you choose to add the new Engines to an existing Storage Group, a redistribution of the existing data is initiated to spread the data evenly across all drives in the storage group (see [“Redistributing Data on ISIS 5000” on page 59](#)). For instructions on adding new Engines, see the *Avid ISIS 5000 Setup Guide*.



*You can mix both 1 TB and 2 TB Engines in the same Storage Group, but if you do, the 2 TB drives are restricted to the same capacity as the smaller 1 TB drives.*

You can add unassigned storage Engines to a Storage Group to increase its storage capacity and bandwidth. This is typically done when adding a new Engine to your Avid ISIS system. Redistribution is an operation that ensures all files on a Workspace are balanced evenly across the Storage Elements in the Storage Group to provide optimal file system performance. For more information, see “Redistributing Data” in the *Avid ISIS Administration Guide*.

When redistributing files in a Storage Group, the redistribution applies to all Workspaces in that Storage Group. ISIS 5000 does not support client reading or writing to the Storage Group during the an “add” or “remove” redistribution of Engines to that Storage Group.

## ISIS 5000 Client Connections

Starting with ISIS v4.0, Avid ISIS 5000 supports up to 90 ISIS client licenses. Direct Connect configurations to support up to 9 clients. The ISIS 5000 connections are summarized in the [“ISIS 5000 Terminology” on page 10](#).

## 10 Gb Client Support in ISIS 5000

You can have one 10 Gb client per ISIS 5000 Engine. For example, in a six Engine configuration you can have six 10 Gb clients. These 10-Gb clients connect into a 10-Gb port on a qualified switch or can connect directly into the ISIS 5000 System Director 10-Gb port on a switch-less configuration.



*Chelsio 10-Gb Ethernet adapters are not supported with ISIS 5000 clients.*

## Cascaded Switches

Limited support has been added for cascaded switches. Avid has provided a tech note explaining the support cascaded configurations. Search the Avid Knowledge Base for “Cascading Switches on ISIS 5000” for configuration information.

## Initialize RAID Set on ISIS 5000

Avid ISIS 5000 v3.1 has provided an alternative method of initializing the RAID set. You can initialize the RAID set on the 16 data drives without installing the ISIS 5000 software. This might be helpful if you want to create the RAID set in advance of setting up the ISIS 5000 shared storage network. An “Initialize Raidset” link has been added to the software installer splash screen.



*If you click the Initialize Raidset link and your RAID set is already configured, a “Raidset created” message is displayed.*

When you initially install the Avid ISIS software, the RAID set is initialized automatically. With no client traffic on the system, this will take approximately 27 hours. During this initialization, the system is functional and able to support a limited amount of client traffic. An Avid ISIS 5000 Engine can support full bandwidth to one client during initialization. This should allow sufficient bandwidth to be able to test out the system before the initialization is complete by working with one client at a time. Client bandwidth during the initialization period should be kept to a minimum. Failure to do so can significantly increase the initialization time.

### To initializing the RAID set:

1. Do one of the following:
  - ▶ Double-click the Autorun.exe file in Avid ISIS 5000 software kit.
  - ▶ Click the “Initialize Raidset” link on the lower right-side of the splash screen.

## Redistributing Data on ISIS 5000

You can add unassigned Storage Elements to a Storage Group to increase its storage capacity and bandwidth. When adding a new Engine to the ISIS system, a redistribution is required if adding the new Engine to an existing Storage Group. If adding a new Engine and creating a new Storage Group, no redistribution is performed. Redistribution is an operation that ensures all files on a Workspace are balanced evenly across the Storage Elements in the Storage Group to provide optimal file system performance. For more information, see “Redistributing Data” in the *Avid ISIS Administration Guide*.

ISIS 5000 v4.0 and later supports removing Storage Managers from a Storage Group.



*When redistributing files in a Storage Group, the redistribution applies to all Workspaces in that Storage Group. If you start a redistribution while clients are reading or writing to that Storage Group, client reads and writes to the Storage Group will fail until the redistribution finishes.*



**When a Workspace is deleted, a redistribution is initiated. If you start the delete during high client usage, it might cause a negative performance impact on your clients. This can include dropped frames, underruns, and failed captures. Delete Workspaces during periods of light client activity.**

## Minimum ISIS 5000 Storage Space Requirement

Avid recommends that you maintain 5% of free space in each Storage Group. In other words, you should not fill Storage Group more than 95% full. Exceeding 95% used space can produce severe performance issues in some situations.

To calculate the right amount of free space, log into the ISIS management Console and navigate to the Storage Group page. For each Storage Group, take the Effective number and multiply by 0.05. This will be your recommended free space in GBs. To assure that your Storage Group never exceeds the recommended space, create a new workspace in this Storage Group with the same size and label it “Headroom” and do not give anyone access to this workspace.

## Avid ISIS 2000 Special Notes

The following is a list of features for should keep in mind with Avid ISIS 2000 infrastructures:

### ISIS 2000 System Director

The Avid ISIS 2000 System Director uses an AS3000 server with 24 GB of memory and a 64-bit Window Storage Server 2008 operating system. The ISIS 2000 System Director provides the following support:

- 64-bit System Director — 10 million files
- 64-bit System Director — 500,000 folders (25,000 files per folder)
- 5638 users
- 1000 groups — a user can be in 15 groups

### ISIS 2000 Client Connections

The Avid ISIS 2000 supports up to 100 ISIS clients and unlimited Common Internet File System (CIFS) clients.

### One Engine

The initial release of Avid ISIS 2000 supports one Engine.

### Initialize RAID Set

When you initially install the Avid ISIS 2000 software, the RAID set is initialized automatically. With no client traffic on the system, this will take approximately 72 hours regardless if you have an ISIS 2000-240 TB or ISIS 2000-120 TB Engine configuration. During this initialization, the

system is functional and able to support a limited amount of client traffic. An Avid ISIS 2000 Engine can support full bandwidth to one client during initialization. This should allow sufficient bandwidth to be able to test out the system before the initialization is complete by working with one client at a time. Client bandwidth during the initialization period should be kept to a minimum. Failure to do so can significantly increase the initialization time.

## Minimum ISIS 2000 Storage Space Requirement

Avid recommends that you maintain 5% of free space in each Storage Group. In other words, you should not fill Storage Group more than 95% full. Exceeding 95% used space can produce severe performance issues in some situations.

To calculate the right amount of free space, log into the ISIS management Console and navigate to the Storage Group page. For each Storage Group, take the Effective number and multiply by 0.05. This will be your recommended free space in GBs. To assure that your Storage Group never exceeds the recommended space, create a new workspace in this Storage Group with the same size and label it “Headroom” and do not give anyone access to this workspace.

## Known Issues

The following are known issues with the Avid ISIS software.

### 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.

- The Client Manager application only supports ascii characters in user passwords.
- If using Client Manager with a Macintosh Client on any language setting other than the English setting, you must use the Cancel button to cancel an uninstall. Do not click the red “x” to close the client software uninstaller window. (The client software uninstaller application is located at Applications > Avid\_Uninstallers > AvidISIS).
- If you select the ISIS System Director or Engine software option from the ISIS software installer splash screen, on a Windows Vista 64 client workstation, an error indicating an application has failed might appear. This error can be safely ignored.

**Workaround:** Avoid selecting these install options on client workstations.

- When you Enable or Disable the Network Interface (check or uncheck the check box in the first column), and then click Apply, it forces a refresh. If you change the setting and click Apply several times in a minute, it might introduce a client system error.

**Workaround:** You need to restart the client by powering off the system to clear the condition.

- If Avid ISIS Windows clients assign a drive letter to a workspace in the Client Manager, an Avid Interplay client or virus protection software (programs running in the background) could obscure the displayed drive letter in the Client Manager window. The assigned drive letters are still mounted and fully accessible to the system, but are hidden from Client Manager's workspace list by the displayed UNC path.

If the UNC path is removed by the program running in background, your assigned drive letter re-appears.

**Workaround:** You can always verify the workspace is still mounted to a drive letter by confirming its presence in the My Computer window. You may also unmount the drive through the My Computer window by right clicking it and selecting Disconnect.

- If you attempt to initiate several file copies from workspace to workspace in parallel on a single client, you might experience “can not read and write” or “delayed write failure” error messages.

**Workaround:** A maximum of two parallel file copies from workspace to workspace per client is all that is supported. Any number of files can be in a single copy.

- Windows Vista 64-bit clients with SP2 might experience a 10 to 20 second delay when accessing workspaces from Windows Explorer.

**Workaround:** Disabling the WebClient service removes the delay.

**To change the WebClient service setting:**

1. Right click My Computer and select Manage.
2. Expand Services and Applications in the left pane and click on Services.
3. Right-click on WebClient in the right pane and select Properties.
4. In the General tab of the WebClient window, click Stop.
5. Select Disabled in the Start-up type menu.
6. Click Apply.
7. Click OK.



*You do not need to restart the client after this change.*

- If one workspace in Client Manager is mounted by Mapping 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 not the new workspace name.
- The estimated amount of space available (which is 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.

- When the Final Cut Pro Scratch Disk is saved to an ISIS workspace using the Autosave Vault feature, the copies of the project in Autosave Vault folder cannot be opened with Final Cut Pro. An error message is displayed stating “File error: Wrong type.”
- When the Final Cut Pro Scratch Disk is saved to an ISIS workspace using the Autosave Vault feature, more copies are automatically saved than is set in the Autosave Vault setting.
- The Final Cut Pro “Modify > Make Offline > Move them to the Trash” option is not supported with Avid ISIS workspaces.
- Final Cut Pro v6.0.5 sometimes stops functioning if you Eject the ISIS workspace using the Final Cut Pro Open menu. When you finish with the ISIS workspace unmount the workspace using the Client Manager window.
- The Avid ISIS client bandwidth allocation feature is not supported with Final Cut Pro.
- The Macintosh Finder might display the Avid ISIS folder contents incorrectly. For example, 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.

- Your Avid ISIS Macintosh Lion (v10.7.x) client might experience a kernel panic while attempting to uninstall the ISIS client software.

**Workaround:** You need to force the Macintosh client to restart by pressing and holding the power button until the Macintosh client powers down. Restart the Macintosh client and attempt to uninstall the client software again.

- If your Avid ISIS 10 Gb Macintosh Lion (v10.7.x) clients suddenly starts to experience delayed write failures, the Myricom driver might have switched the MTU size to 9000 or to Jumbo Frames.

**Workaround:** Verify the Myricom driver MTU setting is configured as “Standard 1500,” check the setting on the Macintosh client as follows:

1. On your Macintosh 10-Gb client, click Apple > System Preferences.
  2. In the Internet & Wireless section, click Network.
  3. In the left pane, select the Myricom entry and click Advanced.
  4. Click the Hardware tab.
  5. Select “Manually” from the Configure drop-down box to enable the MTU drop-down box.
  6. Select “Standard 1500” in the MTU setting.
- If your Avid ISIS Macintosh Lion (v10.7.x) client has a Workspace mounted, the client Disk Log open, and the ISIS 5000 is restarted, you could experience a kernel panic once the ISIS 5000 is back running and you attempt to access the Disk Log.

**Workaround:** You need to force the Macintosh client to restart by pressing and holding the power button until the Macintosh client powers down. Restart the Macintosh client and you can continue to working where you left off.

- 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 prior to 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<sup>®</sup> tests does not work correctly on the Macintosh clients.

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

- If you monitor the performance in the Windows Monitor counters, you will notice there is no Chelsio network interface board listed in the Windows Vista clients. The 10-Gb Chelsio driver has not been updated for the Windows Vista operating system. Chelsio needs to update their driver for the Windows Vista 64-bit operating system before these counters are displayed.

**To open the Performance Monitor:**

1. Click Start > Control Panel > Performance Information and Tools > Advanced Tools > Open Reliability and Performance Monitor.
2. Select Performance Monitor.
3. Click Add then select “Network Interface.” The Chelsio network interface board is not listed.

## Common ISIS Infrastructure Issues

The following are known issues that could be experienced in Avid ISIS 7000, ISIS 5000, and ISIS 2000 infrastructures. When a workaround exists, it appears in the paragraph directly following the issue description.

- 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:** If you have attempted to view a \*.gz logs through the Agent page. The Engine Agent needs to be restarted.

**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. Restart the Storage Manager web agent using the following command:

`/etc/init.d/userveragent start`

## 5. Wait approximately 30 seconds

## 6. Verify agent is running again by accessing the Management Console &gt; Storage Manager &gt; Agent page.

## 7. Close the SSH Client.

## ISIS 7000 Infrastructure Issues

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

- Consistency check errors have found when playing back media that has been transcoded while on RAID 6 Workspaces. The transcoded media appears to be fine until you attempt to play it back.

Projects and bins should not be shared on a RAID 6 Workspace. If you intend to share projects and bins, you need to store them on a mirrored Workspace.

**Workaround:** If you need to transcode media on a RAID 6 Workspace, close the project, move the project and bin files to a local drive, perform the transcode, then move them back to the RAID 6 Workspace.



*You cannot share bins and projects when they are saved on a local drive.*

- 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 Client Type setting to Medium Resolution or High Resolution.

- There is a limitation with the Windows XP 32-bit operating system that limits the line speed of 10 Gbps to display as 1.4 Gbps. This operating system limitation does not affect the actual network interface speed. This limitation is seen in the 10-Gb Chelsio driver Interface Status dialog box (Network Places > Properties > Chelsio > Status, the speed displays as 1.4Gbps).

- 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:** Once the Client Manager reconnects to the new Active System Director, you need to restart the ISIS Management Console within the Client Manager to connect to the new Active System Director.

- ISIS v2.x has a install status of “Downloading” when updating the ISB and switch firmware. While in the downloading state, the blade is downloading the firmware package from the FTP Publishing service on the System Director.

If a blade is in the downloading state for more than 15 minutes, it indicates that there is a problem retrieving the package or connecting to the FTP service.

**Workaround:** Open the Agent page for the blade and click the Statistics tab and click Network. Look for errors on either `eth0` or `eth1`. If there are errors:

- Select “offline ISB”
- If possible move the ISB to a new engine. If problem persists, the ISB should be replaced.
- If the ISB cannot be moved to a new engine, move it to a different slot. If the problem persists, reseal the switch associated with the network errors (`eth0` is associated with the right switch, `eth1` is associated with the left switch). If the problem persists the ISB should be replaced.

If no errors are displayed in the Network view of the Agent page, check cabling between the System Director and engine. Verify the FTP Publishing service is running on the System Director (right-click My Computer > Manage > Services).

- If a client has a workspace mounted and that workspace is deleted within the Management Console and then recreated using the exact same name, the mounted workspace becomes inaccessible to the client, although it displays a green icon within Client Manager indicating that it is still accessible.

**Workaround:** To access that workspace again, unmount the workspace using the client manager and then mount it again.

- 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.

- Deleting an ISS from a stack does not clear engine configuration.

Use the Reset Factory defaults button to clear stack configuration info.

- 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 to correct the restarting issue.

- If a redistribution stops after a Storage Element has failed, it could be caused by the system trying to fix parity blocks that no longer exist.

**Workaround:** Suspend and resume an in-progress redistribution to do a Block Rectify. Do this with 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 5000 Infrastructure Issues

The following are known issues with the Avid ISIS 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 the Close button, you are asked if you would like 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 the Close button.

**Workaround:** To avoid this issue, always click Apply before you click the Close button.

- If there is a power failure with no spare data drive, an assert error could appear in the Windows System Event logs similar to the following.

```
Assert Error from .\FScommLayer.cpp MAX_RESPONSE_SIZE
```

**Workaround:** The System Director typically would stop and automatically restart but if it does not, power off the System Director and then restart it.

## 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.

- The Avid ISIS File Gateway does not support Macintosh Common Internet File System (CIFS) clients that have non-ASCII usernames (including Asian and Diacritical characters). An error occurs on the Macintosh client indicating you have incorrect URL
- 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. You must force quit or restart the Terminal application to clear the condition.

- 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 actually copied. Clicking cancel on the copy dialog also does not close 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.

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